

CANADA

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# MEDICAL MANPOWER IN CANADA

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## PREFACE

This is a study of the supply and demand for medical manpower in Canada, its distribution and utilization, with physician-population projections until 1991. The statistical data used are subject to numerous limitations. Furthermore, economics as yet has not developed a theoretical framework for all aspects of medical manpower and, consequently, this study must be considered as a preliminary, containing some shortcomings that are inevitably present in a pioneering work, rather than a final contribution in this area.

A great deal of factual information useful in this analysis of the supply, demand and utilization of Canadian medical manpower was obtained from the surveys of physicians conducted by the Royal Commission on Health Services in 1962. Provincial Medical Boards and Colleges of Physicians and Surgeons, the Canadian Medical Association, the Royal College of Physicians and Surgeons of Canada, and medical schools provided additional valuable information. A research project, such as this, of course, depends heavily on the co-operation of the officials of various federal and provincial government departments in making available the factual information. Such co-operation, with a few exceptions, was generously provided.

In general, it may be said that many data on measurable characteristics of the supply of doctors in Canada are available, but they are not sufficiently precise and there is a lack in their continuity. On the other hand, qualitative data with respect to the degree of skill and efficiency of doctors, changing patterns of practice, etc., are inadequate. There is also insufficient information on the patterns of work of doctors and utilization of medical services, in particular, on the adequacy of such services for the purposes of diagnosis, prevention and therapy. With regard to the demand for medical manpower only a few studies have been made and there is no satisfactory methodology to serve as a basis for estimating the current and future demands. In addition, little research has been undertaken concerning the attitudes and motivations of medical students underlying the choice of a medical career.

It is apparent that more extensive research is required on the Canadian medical manpower problem. The demand outlook for various categories of doctors should be periodically examined. Surveys of the contents of medical training and of physical and teaching facilities available in our medical schools should be made. Periodical inventories should be made to measure the adequacy of the supply of doctors so that the medical schools can make long-term adjustments in their output. Furthermore, changes in supply from immigration and emigration,

retirement and other causes should be examined. Methods of improving the standards of performance should be devised in order to improve the quality of our physicians. More attention should be given to the problem of how far and in what directions medical specialization should be encouraged. In view of the geographic maldistribution of our medical manpower, the whole problem of how the local and regional supply of doctors is related to population size, medical teaching facilities, economic conditions, etc., should be thoroughly reviewed. A survey of medical market areas in Canada should be conducted periodically. It is necessary to have better analysis of functions and tasks of various categories of physicians and of factors influencing physicians' professional and geographic mobility. There is a need for more factual information on the demand for medical manpower. And, finally, there is a need for long-term national planning in the supply of physicians to meet the constantly growing demand for doctors in this country.

Because of his non-medical background an economist may be at a disadvantage in attempting to analyze and appraise the structure and functions of the medical profession in our society. On the other hand, however, medical care involves many aspects of an economic nature, such as the economic factors determining the demand for and supply of medical manpower, the assessment of the costs of medical care, the adequacy of medical services, the operating costs of medical practice, the problem of efficiency and many other problems. These interests of an economist in medicine are necessary if adequate social and economic national policy with respect to adequate medical care for Canadian society is to be evolved. Most of the economic aspects of medical care are outside the competence and professional experience of organized medicine. Needless to say, however, any reorganization of medical care must safeguard the legitimate interests of the medical profession and ensure its concurrence and co-operation, but any comprehensive medical care scheme does involve political, economic and social issues, which the society as a whole has the right and obligation to resolve.

I wish to acknowledge particularly the assistance provided by Professor B. R. Blishen, Director of Research, of the Royal Commission on Health Services, Dr. J. W. Macleod and Dr. A. Stukel, who read the manuscript in its earlier stages and offered valuable criticisms of many details of this study. I wish to state, however, that the interpretation of factual information is my own responsibility. I am also under a very real obligation to the clerical staff of the Commission who helped me in the very tedious and vast clerical aspects of this research work.

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University of Ottawa,  
March 1964.

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## CHAPTER I

# Introduction and Some Conclusions

### 1. Main Trends and Issues in Medical Care

The preamble to the Charter of the World Health Organization states that:

"Health is a state of physical, mental and social well-being and not merely the absence of disease and infirmity.

The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic and social conditions."

In very general terms, the purpose of medical care is to promote, preserve and restore health and to minimize the effects of sickness. It is generally accepted today that the health of the people is one of the most valuable assets of a society. During the last few decades, rapid social and scientific advances have greatly improved the health of our nation.

Since the health status of a society is a rather intangible thing, there are some obvious difficulties in measuring it directly. However, there are various indices which indirectly measure it. The more important include specific death rates for particular age and sex groups of the population, infant and maternal death rates, morbidity rates, rejection rates for military services, life expectancy, disability from disease and injuries, and a few others. All of them are subject to some limitations in interpretation. However, national long-term planning of medical care requires such health indices in order to formulate reliable standards by which past achievements in the provision of medical services can be analyzed and assessed and to arrive at some estimates of the actual medical needs of society, and to determine appropriate policy and methods to satisfy those needs. It is obvious that only a scientific assessment of society's health, together with an analysis of social and economic trends and scientific and technical progress of medicine will make it possible to provide balanced medical care for all sections of a society and all regions of a country.

Essentially, the total medical care problem consists of the maintenance of high quality of medical education, the satisfactory geographical and specialist distribution of the medical manpower, and the ability of the people to satisfy their medical needs. Consequently, the provision of medical services involves

considerations that are educational, social, political, economic, professional and administrative in nature. It is in this wide context that medical care and practice must be analyzed, particularly when far-reaching changes have taken place in the science and art of medicine and in the organization of medical practice. Medicine is a social institution that has a unique role in our society and, therefore, cannot be confined to a consulting room and laboratory, isolated from the main stream of social and economic changes of our time. The medical profession must be ready and willing to solve some of the social and economic problems facing a modern society. Modern medicine must keep pace with the changing and increasing medical needs of the people as well as with the scientific and political evolution of the present age. Since the beginning of this century medical services have become more complex, both in structure and function, and in their socio-economic basis. Consequently, medical economics of today is not only a problem of costs and methods of financing medical care, but it is also the problem of quality of medical services, adequacy and proper distribution of medical manpower and its efficient utilization.

Usually a distinction is made between technological and organizational aspects of medical practice. The technology of medicine implies scientific and technical advancement, professional skills and ability involved in prevention, diagnosis and treatment of diseases. Organization of medical practice implies economic and social arrangements, through which medical services are dispensed to individuals and socio-economic groups. It may, therefore, be useful to outline briefly some important general influences on technology and organization of medical care and indicate the implications therefrom.

Medical care is still an art but it is increasingly dependent on scientific and technical advancement. Medical science has applied new knowledge that has evolved in the fields of chemistry, physics, biology, electronics and many other sciences. The discovery and use of X-rays, radium and radio-isotopes, and new potent drugs like insulin, penicillin, and other antibiotics, paved the way for new developments and methods for prevention, diagnosis and treatment of diseases, which accelerated recovery and lessened disability. As a result of this impressive progress during the last half century, medical services today are of a greater variety and complexity. The medical profession is highly specialized and a physician requires specialized auxiliary staff, equipment and facilities. But, at the same time, new and complex techniques, larger capital investments, increased specialization of paramedical personnel mean increasing costs of medical services and medical research. Thus medicine must compete not only for the consumers' purchasing power but also medical science is forced to compete with other applied sciences and industry for scientific and technical personnel.

Another important trend in medical practice is the changing pattern of illnesses and diseases. As the methods of prevention, diagnosis and treatment have improved during the last half century, it has become possible to control, prevent and cure many illnesses that previously accounted for many deaths. Great progress has been made in controlling and curing communicable diseases such as tubercu-

losis; there is almost a complete eradication of such scourges as diphtheria, small-pox, typhoid fever and most recently poliomyelitis, and, of course, there has been considerable progress in public health measures and environmental sanitation such as supply of water, food control and sewage disposal.

Some of the chronic illnesses such as diabetes and pernicious anaemia no longer constitute a hopeless medical problem. In addition, surgical techniques have improved considerably. These impressive achievements have resulted in the decline in mortality, particularly of infants, mothers and persons in the middle-age groups. Life expectancy has increased by about twenty years in the last half century. This implies a longer period of productive activities for both men and women, but these very same achievements of medicine have created new medical, social and economic problems. Higher expectancy of life means that more individuals are exposed to chronic and degenerative diseases associated with old age such as cancer, heart diseases, arthritis, rheumatic diseases, mental and "psychophysiological" disorders. This shift in the character of illnesses presents a new problem to medical science.

It changes also the over-all medical care problem because medical needs of the older people are becoming increasingly more important, and this in the long run will require a change in the direction and training of personnel, more rehabilitation measures and will impose heavier economic burdens upon a society as a whole.

The structure and nature of the organization of medical practice are conditioned by the type of economic and political system of the country in which it operates. In a free enterprise and competitive system, medical practice with some exceptions such as public medical programmes which are financed from public funds and administered by public authorities, is carried out through private practice. Physicians rendering medical services under voluntarily organized programmes of medical insurance are usually private practitioners, who are compensated for their services on the basis of the fee-for-service method, the part-time system, or the flat-rate method. The minority of physicians employed by public health departments, medical insurance associations, industry, universities and medical research institutions, hold full-time salaried positions. Medical practice, however, is a social service and in the nature of a public utility, and since "... public utilities are by their nature monopolistic, while at the same time their services are needed by everybody, some governmental control of them is necessary".<sup>1</sup>

Medical practice and its organization in this country as elsewhere has been affected in recent decades by various socio-economic factors and trends.<sup>2</sup>

<sup>1</sup> Means, James Howard, *Doctor, People and Government*, An Atlantic Monthly Press Book, Boston: Little, Brown and Company, 1953, p. 9.

<sup>2</sup> These aspects of medical practice have been discussed in the articles of Willard, Joseph W., *The Effects of Socio-Economic Trends on the Practice of Medicine*, *Ontario Medical Review*, Vol. 26, October, 1959, pp. 935-36, and 958-970; and Greenhill, Stanley, *Preparing Today's Medical Student for Tomorrow's Society - A Role of a Department of Social Medicine in Medical School*, *CMA Journal*, Vol. 86, April 7, 1962, pp. 611-13.

Developments in transportation and communications have extended the physician's area of medical services distribution, made available to many communities a higher quality of medical services and increased productivity of the physician because in his working day he sees proportionately more patients in his office or hospital.

Since the First World War, one of the basic trends in the Canadian economy has been the shift from agriculture to industry and this change in the economic structure has been accompanied by a movement of the population from the rural areas to urban centres.

This trend towards urbanization has resulted in large numbers of physicians locating in urban areas and leaving rural areas relatively under-supplied. In this geographic movement the physician has only followed the general population trend. Economic, professional, and personal incentives account for this concentration of doctors in urban centres, particularly in the case of medical specialists. The problem of more equitable geographic distribution of physicians is, however, very difficult in this country because of its size, regional topographic and economic differences and scattered population.

Then, the increase in the numbers of paramedical personnel such as nurses, physiotherapists, laboratory technicians, dietitians, and many others, enables the physician today to utilize his time more efficiently than formerly.

The Canadian medical profession as elsewhere is characterized by increasing specialization, which has been imposed for scientific and technical reasons and by popular demand. This functional segmentation of medical manpower differs greatly from the almost homogeneous profession of several decades ago. In this specialization trend the status of a general practitioner has changed.

Another development, which is becoming increasingly more significant, has been the growth of medical group practice for economic and professional reasons.

Then the growing industrialization of our economy and efforts to raise the productivity of labour have had a decisive impact on the demand for industrial and occupational medical services by Canadian workers.

One of the most important trends in Canada during the last few decades has been the development of voluntary medical insurance plans in order to mitigate the growing costs of sickness, particularly for middle and lower income groups. There is a wide variety of such plans due to the federal form of the state in this country and regional social and economic differences.

A steadily rising standard of living, the broadening of fringe benefits, including medical care, of our working population, a tendency to early marriage and family formation, higher survival rate of middle-aged and elderly groups of our population, better health education and better knowledge of and greater expectations from a modern medicine have created growing medical needs. Scientific and technical progress of medicine has increased society's ability to meet them technically, if not actually, for financial and other reasons.



It is suggested that the organization and availability of medical care in its social and economic aspects seems to lag behind the more spectacular scientific and technical medical achievements and, consequently, our society, in fact, is deprived of the full potential benefits that modern medicine can provide. There appears to be a growing public concern about the inequitable distribution of medical services, medical personnel and facilities as well as medical costs, as between regions, urban and rural areas, and between various socio-economic groups. Our affluent society apparently has not as yet succeeded in providing equal opportunity for medical care to all its citizens. This evident shortcoming of our society must inevitably adversely affect the social and economic welfare of the people because of enforced idleness, reduced productivity and the need for public assistance.

Though, it is perhaps true that indigent patients are largely looked after by public authorities and well-to-do are able to look after themselves, still it is probably the middle and lower income groups that require consideration for their recognized and unrecognized medical needs that the modern medicine is capable of satisfying.

There is perhaps agreement that the best medical services our society can afford should be made available to all Canadians. The only controversy arises concerning how to accomplish this equitably, efficiently and economically. The solution of this problem imposes a necessity for an unbiased approach and an analysis that tries to reconcile the interests of society with legitimate professional principles.

## **2. Scope, Method and Organization of Study**

The main purposes of this study include an investigation of the short-and long-term trends in the supply and demand for medical manpower in Canada; an evaluation of the economic, social and educational problems and implications resulting from this analysis of supply and demand for physicians; an examination of some aspects of geographic and professional distribution of physicians and utilization of medical services; an analysis of professional characteristics of doctors and patterns of medical practice; an economic discussion of incomes, capital investments and operating expenses of private medical practitioners; and finally, a projection of future requirements for physicians in Canada.

The approach to the problem of medical manpower in Canada will be historical, statistical and theoretical or analytical. It is historical in the sense that both supply and demand for physicians will be treated in the context of historical developments over the last few decades in the provision of medical care in this country. A statistical approach implies a presentation of statistical evidence, whenever possible, obtained from existing sources and from special surveys conducted by the Royal Commission on Health Services, on which analysis and interpretation of the problems concerning Canadian medical manpower are based. Reliable statistical data are essential for satisfactory planning of the supply of medical



manpower in this country and for solving problems of medical care as a whole in the Canadian institutional and governmental setting and the economic, social and geographic environment. Some qualitative data and interpretation will have to be used since the statistical information is not always adequate, especially in the earlier periods.

There will also be a theoretical approach in the sense that an attempt will be made to provide a conceptual framework of supply and demand for physicians, on which a projection of medical manpower requirements and of supply of doctors in Canada will be made.

Chapter I contains a statement of the problem investigated, method and organization of the study as well as a summary of conclusions provided by the analysis of the medical manpower in Canada.

Chapter II presents factual information and an analysis of the historical and current trends in the supply of physicians in Canada, both on a national and provincial basis. It examines the procedures pertaining to the registration of graduates from Canadian and foreign medical schools. It is also concerned with migration of physicians into and out of Canada, in particular, with the United States physicians who graduate from Canadian medical schools. An attempt is made to estimate the rate of attrition of the physicians due to emigration, death and retirement.

An analysis of the national and regional trends and the supply of graduates from Canadian medical schools, during the last fifty years, is made in Chapter III. Total medical students' enrolment is examined in relation to total university students' enrolment as well as to college age groups in population and total population for the years 1947/48 to 1961/62, on a national and provincial basis. This chapter is also concerned with the geographic and national origin of medical students, and the problem of their recruitment. In addition, other aspects of medical students are discussed, such as their social and economic background, costs and methods of financing medical studies from the viewpoint of students. Similar consideration is also given to medical students from other countries studying in Canada.

The next chapter is concerned with an analysis of the distribution of Canadian medical manpower by age groups, years since first licensed to practise, duration of practice and length of time in present practice or employment. The problem of women in medicine is also reviewed. This is followed by an analysis of the geographical distribution of doctors, including an evaluation of the factors influencing location of practice and choice of location of first practice, the problem of medical care in rural areas and the geographical mobility of physicians. A special section is concerned with the patterns of types and auspices of work among Canadian doctors and their professional mobility. Then, the problem of specialization in the medical profession is discussed, including the reasons for and the duplications and limitations of such specialization. This is followed by an analytical and statistical examination of the distribution and location of specialists by specialty practised.

Chapter V contains an analysis of the patterns of service of doctors in private practice, including a brief discussion of the factors affecting doctors' efficiency and the significance of patient-visit loads of the doctors. This is followed by a description of the work-patterns of general practitioners, specialists and consultants engaged in private practice. Patient-visit loads are also related to years of practice and the size of community in which practice is located. The nature of medical services provided is examined with respect to type of major work of physicians. Then, the size of practice and number of patients under treatment of self-employed general practitioners are analyzed. An attempt is made to calculate the effective demand for services of physicians in private practice. Finally, the last section of this chapter is concerned with the trends in employment of doctors in hospitals, industry, medical schools, public health, armed forces and life insurance companies.

The following chapter is limited to the economics of medical practice. It begins with a brief discussion of a group medical practice. This is followed by an examination of earnings of physicians in 1960 showing income of doctors by province, type of major work, type of practice, size of community in which practice was located, years of experience and medical specialty practised. It also examines annual operating expenditures incurred in private practice during 1960, by items of expenditure, on a national and regional basis. In addition, this part of the study examines capital investments made by physicians. The last part of this chapter is concerned with the cost of establishing medical practice since 1956 and with the source and amount of funds used to establish private practice initially.

Chapter VII is confined to an appraisal of the supply of physicians in relation to requirements for medical manpower resources in Canada in terms of price of medical services, physician-population ratios, personal expenditures and family expenditures on medical care.

In the last chapter, Chapter VIII, an attempt is made to project future requirements for physicians in Canada up to 1991 and to analyze the future potential supply of doctors from Canadian medical schools as well as from immigration. This analysis is based on specific qualitative assumptions concerning future efficiency of physicians. It also includes an evaluation of the inflow of young Canadians into our medical schools.

### 3. Summary of Conclusions

#### *a. Canadians and Their Health During 1951-1961.*

- (i) *The People* - During the last decade the Canadian population has increased from 13,984 million to 18,238 million, i.e., by 30.4 per cent. Not only were there more Canadians but they were also different in their age composition. In 1961 34.0 per cent of the population consisted of children under 15 years as compared with 30.4 per cent in 1951. There were about as many older people over 65 years in 1961 (7.6 per cent) as in 1951 (7.7 per cent), but there were fewer people of working age between 15 and 65 years (58.4 per cent

in 1961 as compared with 61.9 per cent in 1951). Personal income per capita increased from \$978 in 1950 to \$1,156 in 1960, i.e. an 18.2 per cent increase per capita in constant dollars.

Canadians live longer. The average age at death increased from 56.8 years in 1950 to 61.1 years in 1960. Consequently, life expectancy increased from 64.6 years in 1941, to 68.6 years in 1951 and to 70.3 years in 1956.

Mortality has been reduced in several significant respects, particularly maternal, infant and pre-natal. The maternal mortality rate was reduced to 4.5 per 1,000 live births by 1960 from 11.1 in 1950. The infant mortality rate declined from 42 per 1,000 of infants under one year of age in 1950 to 27 in 1960. Similarly, in the same period, the pre-natal death rate has declined from 37.9 in 1950 to 28.4 in 1960.

- (ii) *Incidence of Diseases* – During the past decade more of the infectious diseases have been effectively controlled and, consequently, the rate of mortality from these diseases declined sharply from 34.6 per 100,000 population in 1951 to 8.7 in 1961. The tuberculosis mortality rate accounted for much of this decline as it decreased from 24.8 in 1951 to 4.2 in 1961. Its incidence has also continued to fall from 84.5 in 1950 to 35.7 in 1960. Smallpox is no longer a problem as an indigenous disease, while diphtheria mortality rate was substantially reduced to 0.5 by 1960 as compared with 3.1 in 1950. On the other hand, other infectious diseases have come to the fore, in particular, the venereal diseases, which have recently reversed their earlier downward trend and the mortality rate of infectious hepatitis rose from 2.8 in 1951 to 67.9 in 1961.

While many of the health hazards of the past are being controlled, new ones arise, partly resulting from man-made environmental conditions, and partly from more people being exposed to the diseases of old age. The rate of first admissions to mental hospitals doubled from 73 in 1950 to 143 in 1960. The rate of mortality from heart diseases remains on a high level, that is, 276 in 1960 as compared with 283 a decade earlier. Cancer mortality increased slightly from 128 to 130 in the same period. There has been a more pronounced increase in the mortality rate from certain respiratory cancers. The mortality rate from accidents as a whole shows little change (55 in 1950 and 53 in 1960), but motor vehicle accidents have increased as a cause of death from 17 in 1950 to 21 in 1960.

#### *b. Supply of Physicians*

- (i) The number of physicians between 1911 and 1931 did not keep pace with the growth of the Canadian population and hence in 1931 there were more people per physician (1:1,034) than in 1911 (1:972). This trend has been reversed since 1931, and the national physician-population ratio has steadily improved to 1:968 in 1941, and 1:857 in 1961.
- (ii) While the physician-population ratios varied considerably from province to province, all provinces have improved their ratios during the last five dec-

ades and, in particular, since 1951. During the entire period under consideration, Ontario and British Columbia have consistently had physician-population ratios more favourable than those for the country as a whole. As of June 1961, the following provinces had lower physician-population ratios than that for Canada as a whole: British Columbia - 1:758; Ontario - 1:776; Manitoba - 1:823 and Quebec - 1:853. The physician-population ratio in the Atlantic Provinces has always been less favourable than that for the whole country. In 1961 the population of this region amounted to 10.4 per cent of the total population in Canada, while the number of active civilian physicians constituted only 7.0 per cent of the total number of physicians in this country. The number of physicians in Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick in 1961 was 1,482, giving a ratio of 1:1,280 persons as compared with the national ratio of 1:857. While the relative improvement in physician-population ratio for the country as a whole was 12.2 per cent during the years 1951 to 1961, the Atlantic Provinces have improved their relative ratio by only 8.7 per cent.

- (iii) The considerable improvement in the national physician-population ratio between 1951 and 1961 was due to a great inflow of immigrant doctors during those years. Out of nearly 15,000 newly registered physicians in Canada during the years 1950-60, about one-third were immigrant physicians. Over the same years, the immigrant doctors were equal to about one-half of the total output of 9,300 graduates of Canadian medical schools.

Of the Atlantic Provinces, Newfoundland relied on foreign-trained physicians to the extent of three-quarters of all new registrants during the years 1950-60, Nova Scotia, one-third, while the other two provinces in that region were less dependent on this source of doctors' supply. All three Prairie Provinces were similar in their dependence on immigrant physicians to the extent of about one-half of their additions to the medical manpower. Ontario and British Columbia relied on foreign-trained doctors to the extent of approximately one-third. The Province of Quebec, however, did not attract many immigrant doctors.

- (iv) As of April 1962, there were 5,718 United States physicians trained in Canada, of whom 3,125 were born in Canada, 1,781 in the United States and 812 in other countries or not specified.

Approximately one-sixth of the total of Canadian-born and educated physicians in the United States served their internship and residency in that country. It is difficult to assess, however, to what extent this training in the United States is responsible for attracting Canadian physicians to remain permanently in that country.

### *c. Medical Graduates and Students*

- (i) During the years 1944/45 to 1961/62, the twelve medical schools in Canada have supplied 14,146 medical graduates or an average of 785 physicians per

annum. The largest contributions to this total have been made by the medical schools of Toronto, McGill, Laval and Montreal.

The Atlantic Provinces and British Columbia have experienced an inadequate supply of medical graduates from the medical schools located within their boundaries. This implies either the necessity of having a less favourable physician-population ratio or having this situation ameliorated through heavier reliance on immigrant physicians or dependence on a supply of physicians from other regions of Canada.

Since 1958 our medical schools have been producing relative to the size of population, almost the same number of doctors as that produced 50 years ago – despite changes in the demand for medical services. During the years 1958–62, there were 4.7 medical graduates per 100,000 population as compared with 4.3 in 1911.

- (ii) During the years 1947/48 to 1951/52, there were 37 graduates of Canadian medical schools annually who came from other countries or 5.5 per cent of the total Canadian medical graduates per year. The corresponding figures for the period 1957/58 to 1961/62 were 105 and 12.3 per cent respectively. This increase in foreign-born Canadian medical graduates from the middle of the 1950's corresponds to a relative decline of Canadian-born students entering medical schools. About 80.0 per cent of foreign-born medical graduates were from the U.S.A.
- (iii) It appears that the enrolment of medical students during the post-war years did not keep pace with the growing population of Canada. While the number of medical students remained relatively stable around 3,500 during the years 1947/48 to 1960/61, the number of medical students per 100,000 population steadily decreased from 25.4 in 1950/51 to 19.6 in 1960/61. Taking 1953/54 as a base year, the index of enrolment of medical students remained stationary at 96.3 in 1960/61, while total university student enrolment was at 174.4 in the same year. Total enrolment per 100,000 population of university age group, 20 – 24, increased from 7,143 in 1947/48 to 8,992 in 1960/61, while the medical student enrolment actually decreased from 353 to 328. Some improvement has taken place in recent years.
- (iv) The attrition rate of Canadian medical students for all years of the medical course during the years 1947/48 to 1959/60 was 10.0 per cent. Thus, for every 100 first-year medical students, approximately ten will withdraw for various reasons during their medical studies.
- (v) The average ratio of first-year medical students per 10,000 population of the university age group 20-24, for the country as a whole, during the years 1952/53 to 1961/62 was 7.5, and the corresponding ratios were for Newfoundland – 3.2, Nova Scotia – 5.0 and New Brunswick – 5.1. The provinces with the most unfavourable physician-population ratios were also at a disadvantage in recruiting entrants into medical schools.

- (vi) The number of Canadians studying medicine in the United States during the post-war years was insignificant. On the average, there were about 60 post-graduates and about 40 undergraduates in the United States medical schools.
- (vii) About 60.0 per cent of Canadian-born medical students in 1962 came from communities of 100,000 population and over. Approximately half of these students came from the socio-economic groups of owners and proprietors, managers and superintendents and professional occupations. About 10.0 per cent of students came from a physician family. Median parents' income of medical students in 1961 was \$6,439 as compared with \$3,646 for all taxpayers in this country. There appears to be an under-representation of medical students from lower socio-economic classes and lower representation from rural areas and smaller urban centres.
- (viii) Approximately one-quarter of male medical students held part-time work during a regular academic year and about 90.0 per cent had summer employment in 1961. A large proportion of this work was, however, related to their course of studies.
- (ix) Average expenditure per medical student amounted to \$2,250 in the 1961/62 school year, which was one of the highest of all university students. Average income per medical student in the same year amounted to \$2,344.

One-third to two-fifths of medical students, in each year of the medical course, were receiving bursaries or scholarships. The median award was \$300-350, which does not appear to be high enough if more able students are to be encouraged to enter medical schools.

#### *d. Distribution and Some Professional Characteristics of Canadian Doctors*

- (i) In Canada as a whole, 64.4 per cent of the active civilian physicians were under 45 years of age in 1961 as compared with 52.0 per cent in 1931, 51.9 in 1941 and 53.3 per cent in 1951. Thus there has been the trend toward an increased proportion of younger doctors in an over-all age distribution of the civilian medical manpower in this country.
- (ii) The number and proportion of women in the medical profession to total active civilian physicians have steadily increased since 1921, particularly after World War II. Female physicians constituted 6.8 per cent of the total medical manpower in 1961 as compared with 1.7 per cent in 1921.
- (iii) More than one-half of the reporting Canadian-born physicians indicated that their fathers' occupation was of professional (30.4 per cent) and managerial (25.8 per cent) nature, while these two occupational groups accounted for only 7.6 per cent and 10.2 per cent respectively of the total male labour force in 1961. Farmers and farm male workers accounted for 12.2 per cent of the total male labour force and this percentage is close to 13.0 per cent of the reporting physicians who indicated agriculture as the occupation of their father.
- (iv) A high proportion of the physicians tend to remain in the region where they started their first practice. This proportion ranged from 90.7 per cent in the



Atlantic Provinces to 41.2 per cent in British Columbia. For the remaining regions it was above 80.0 per cent. More than four-fifths of the reporting physicians in the Atlantic Provinces, Quebec and Ontario, and three-quarters in the Prairie Provinces and approximately one-third in British Columbia indicated that they resided in the region of present practice prior to entry into medical school and remained there after starting their first practice in the same region.

- (v) The Canadian-born physicians tend to start their first practice in communities larger than the ones they came from thus contributing to unequal geographical distribution of physicians as between rural and urban areas.
- (vi) There is a definite tendency of the physicians to establish their practice in the regions in which they have obtained their basic medical education. This suggests that an effective method of improving the physician-population ratio in a province or region would be the establishment of a medical school there or the expansion of the existing ones. This conclusion may be of particular significance in relation to the supply of medical manpower in the Atlantic Provinces.
- (vii) For the country as a whole, approximately one-fifth of the reporting physicians indicated that they were born and educated in regions other than those in which they were practising in 1962. This proportion probably constitutes a real measure of the geographical mobility of the Canadian-born doctors.
- (viii) Physicians in general private practice showed a concentration in urban centres similar to that for the general population. In contrast, physicians in specialist private practice showed a higher degree of urban concentration than the general population.

The proportion of physicians in urban centres of 10,000 or more population was 73.2 per cent for Canada as a whole and in 1962 it stood at 85.8 per cent. In contrast, only 48.2 per cent of the total population in 1951 was located within these centres and 58.7 per cent in 1962. The process of "urbanization" of physicians between these two years was somewhat lower (17.2 per cent) than that of the population generally (21.8 per cent).

As of June, 1961, 69.4 per cent of active civilian physicians were located within metropolitan areas, whereas only 47.2 per cent of the total population of Canada was so located. Consequently, while the metropolitan physician-population ratio was 1:581, it was only 1:1,474 for the population outside the metropolitan areas.

- (ix) Approximately 67.0 per cent of the reporting physicians for the country as a whole indicated they were engaged in private practice in 1962. Excluding interns and residents, private practitioners accounted for about three-quarters of the active civilian physicians. The balance of civilian physicians consisted of those engaged in medical research and teaching, public health, hospitals, industrial medicine and others.

- (x) Approximately one-third of the reporting physicians in private practice in 1962 were organized either in partnership or group practice.
- (xi) There was an insignificant degree of professional mobility of physicians from other types of major work towards a general private practice. On the other hand, there was a shift from a general private practice toward specialist private practice and other types of work based on salaried appointment.
- (xii) The trend towards medical specialization continued steadily during the last two decades. The population of Canada increased between 1947 and 1961 from 12.6 million to 18.3 million or by 45.2 per cent, while total medical manpower increased during the same period by nearly 55.0 per cent. But the total of specialist physicians (certified and non-certified) has increased by over three times.

The number of certified specialists rose from 3,795 in 1951 to 7,925 in 1961, i.e., by 127.4 per cent, accounting for 37.3 per cent of the total doctor population in 1961 as compared with 27.0 per cent in 1951. Similarly, the general practitioner has shown a greater interest in specializing as the non-certified specialists have increased from 984 in 1951 to 2,941 in 1961.

In 1961, there were 10,133 general practitioners and 7,925 certified specialists.

- (xiii) About 95.0 per cent of certified specialists were located in centres with population 10,000 and over, as of September 1, 1961. They provided specialist services directly to 58.5 per cent of the total Canadian population so located. Approximately 80.0 per cent of specialists in private practice and 75.0 per cent of specialist hospital staff were located in communities of 50,000 and over population.

#### *e. Demand for Medical Services*

- (i) The average working week of the reporting general practitioners in private practice in 1962 was 52 hours and the corresponding figures for specialists and consultants were 43 and 44 hours respectively.

A patient-visit load of the typical general practitioner was 159 per week, that of specialists was 104 and for consultants it was 94. Only 14.1 per cent of the weekly patient-visit load of the reporting general practitioner were home calls. The corresponding percentages for specialists and consultants were 5.2 and 0.7 respectively. About 60.0 per cent of the weekly patient-visit load of general practitioners was made at doctor's office. The corresponding percentages for specialists and consultants were 46.0 and 35.0 respectively. Hospital calls amounted to 24.4 per cent of the weekly patient-visit load of general practitioners and 45.8 and 60.5 per cent for specialists and consultants respectively. Other activities of physicians accounted for about 3.0 per cent of the weekly patient-visit loads.

- (ii) The volume of service performed by a physician in private practice varies naturally with his age and years of practice. The patterns of patient-visit



loads, based on years of practice, of general practitioners, specialists and consultants were very similar to those of their earnings, also based on the same criterion. The general practitioners in large urban centres of 50,000 population and over had lower patient-visit loads than those practising in smaller urban centres presumably because of a higher concentration of specialists in larger centres.

- (iii) The broad categories of services (physical examination of apparently well people for specific purposes or of preventive routine and other specific services, such as surgical and obstetrical procedures, referred consultations, special diagnostic and treatment procedures, etc.), performed by general practitioners, specialists and consultants were very similar. Naturally, however, the actual contents of these services will vary greatly according to the type of major work of a physician.
- (iv) The average size of practice in 1962 of general practitioners ranged from 1,367 persons in the Yukon and Northwest Territories to 3,166 persons in Newfoundland. The national average size of practice amounted to 1,709 persons per general practitioner as compared with general practitioner-population ratio of 1:1,800 in 1961.

In general, the size of practice tended to be larger in those provinces which had less favourable general practitioner-population ratios and less urbanized population such as Newfoundland, New Brunswick, Saskatchewan and Nova Scotia.

- (v) It is estimated that an annual (48 weeks) patient-visit load in 1962 per physician in private practice was 6,336, and, excluding hospital calls, it averaged about 4,300 patient-visits per year.
- (vi) On a per capita basis, each person in this country, irrespective of age, sex, income and location, received 5.4 physician-visits. The latter figure was composed of 2.9 office calls, 1.8 hospital visits, 0.6 home calls and 0.1 of other types of services. (A patient-visit is defined here as a consultation with a physician or his nurse, either in person, or by telephone, in his office, the hospital, clinic and the patient's home, for examination, treatment or advice.).
- (vii) The number of doctors employed in hospitals (general, mental, tuberculosis, federal and private) on a full-time or part-time basis increased from about 1,800 in 1950 to 4,500 in 1961, i.e. by nearly 150.0 per cent. At the end of 1961 there were about 1,800 full-time physicians in hospitals across the country. Approximately 100 established positions were not filled in provincially and federally operated hospitals as of June 1963.

As of June, 1963, there were 775 doctors employed on a full-time basis in non-hospital work by the three levels of government in Canada. There were 134 known unfilled established positions.

- (viii) With the increase in the number of medical schools to twelve and higher enrolment of students during the post-war years, but particularly due to a new

staffing pattern, there has been a gradual expansion of full-time faculty personnel until in the academic year of 1961/62 it amounted to 420 doctors.

- (ix) As of May, 1962, there were 261 physicians employed on a full-time basis in industry. The largest concentration was in manufacturing, transportation, service, and mining industry in that order.
- (x) A small proportion of Canadian physicians serve as advisors to insurance companies, and as of February 1962, there were 86 doctors of medicine associated with them.
- (xi) The Canadian Forces Medical Service, which was formed in January, 1959 through the unification of the medical branches of Navy, Army and Air Force, employed as of March 31, 1962, about 400 physicians.

*f. Economics of Medical Practice*

- (i) Average net income from private medical practice of general practitioners in Canada in 1960 was \$13,820 and that of specialists was \$18,730. Independent medical practice tends to be more lucrative than salaried medical employment as the incomes of doctors engaged in medical research amounted to only \$8,940 and in public health to \$10,750.

The average net income of private practitioners organized in group practice was higher than that of doctors in solo practice, amounting to \$19,420.

- (ii) In practically all regions of the country the incomes of general practitioners and specialists located in rural areas were lower compared with those in urban areas.
- (iii) The patterns of income vary with years in practice. The general practitioners in private practice reached their peak of earnings of \$15,000 only after five years in practice and maintained it for the next twenty-five years, while the specialists reached their peak of income of \$24,000 after ten years in practice and sustained it for only the next ten years.
- (iv) Average net income of various categories of salaried physicians increased gradually and steadily with the length of experience though less rapidly than that of general practitioners and specialists in private practice.
- (v) The highest earnings of specialists in private practice were in such specialties as therapeutic radiology (\$31,500), urology (\$29,900), thoracic surgery (\$26,000), plastic surgery (\$25,300), neuro-surgery (\$25,000) and ophthalmology and otolaryngology (\$24,200).
- (vi) Average incomes of interns and residents in 1960 were respectively \$1,740 and \$3,360. The low income of residents, who require four to five years of specialized training, might well constitute the most important economic barrier in the recruitment of young Canadians into the medical profession.
- (vii) The average annual total operating expenditures in 1960 of private general practitioners, in the country as a whole, amounted to \$7,450 and those of specialists were \$7,890. Similar expenditures of physicians working in group

practice were somewhat higher mainly because of higher expenses on paramedical personnel and equipment.

There were some differences in the patterns of operating expenditures between general practitioners and specialists. General practitioners spent proportionately more on medical and surgical supplies and relatively less on paramedical and clerical staff as well as on office rental as compared with similar operating expenditures made by specialists.

Relatively higher average annual total operating expenditures of specialists practising in diagnostic and therapeutic radiology, ophthalmology and otolaryngology and urology were due to proportionately higher expenses incurred by these specialists on medical supplies and on paramedical and clerical staff.

- (viii) There were only small differences in average annual operating expenditures of general practitioners whether located in rural or urban areas.
- (ix) Average depreciated value of capital assets of general practitioners in 1960 was \$8,840 per doctor and that of specialists was \$6,160. Physicians in group practice indicated a lower figure of \$4,460. This suggests that in group practice there is an economy in sharing equipment and buildings among physicians.
- (x) Average annual capital expenditure on purchase of new buildings and/or equipment in 1960 was \$3,060 per general practitioner, and the figures for a specialist and a doctor in group practice were \$2,750 and \$1,640 respectively.
- (xi) About 16.0 per cent of the reporting physicians, general and specialist, engaged in solo private practice since 1956, have taken over existing practices, nearly 80.0 per cent have established new practices and only a very insignificant proportion have started their practice under the contract with either community organization, like municipality, or partnership or group practice. On the other hand, approximately 80.0 per cent of the reporting doctors engaged in group practice have started their practice under the auspices of partnership or group practice.
- (xii) In general, the initial capital expenditure involved in starting a solo medical practice came to about \$5,000 (since 1957), in the second year of practice additional capital costs amounted to \$1,500 and it gradually declined to a few hundred dollars by the fifth year of practice (1962).

There appear to be no special differences in capital costs, initial and subsequent, because of the various sizes of community in which practices were located.
- (xiii) Approximately \$6,500 to \$7,500 were needed to establish a medical practice initially. This initial amount of funds needed was not perceptibly influenced by the size of community. Approximately three-quarters of the initial funds were obtained by way of a loan from relatives, bank or other

sources. Personal financial resources accounted for the remaining quarter of the initial funds needed.

- (xiv) A large proportion of the Canadian physicians have indicated that a group practice improves the quality and availability of medical services as well as the working conditions of doctors.

*g. Evaluation of Supply and Demand for Physicians in Canada*

- (i) If the national physician-population ratio of 1:857 were to prevail throughout the whole country and thus an equitable distribution of medical manpower were to take place, approximately 5.0 per cent of the physicians would have to move from provinces in central Canada and British Columbia to the Atlantic Provinces, Saskatchewan and Alberta.
- (ii) If all provinces of Canada were to have a supply of physicians similar to what existed in the provinces with the best physician-population ratios (i.e., Quebec, Ontario, Manitoba and British Columbia), there would be a shortage of about 1,400 doctors in Canada as of June 1961. All provinces, except Ontario and British Columbia, would have had a deficit in their 1961 supply of doctors on the foregoing criterion.
- (iii) In population per physician Canada compares less favourably with such countries as Western Germany, Italy and United States.
- (iv) The Atlantic Provinces, Saskatchewan and Alberta experienced also a shortage of physicians in private practice in comparison with other provinces of Canada.
- (v) It is suggested that if unmet demand for medical services were to be satisfied there would be an additional need for 3,900 physicians in private practice as of 1961.
- (vi) In making inter-professional comparison of earnings in Canada it appears that the three-year average annual professional income of consulting engineers and architects increased by 116.0 per cent between 1946-48 and 1958-60, and the corresponding percentage for dentists was 111.0, physicians-110.0 and lawyers-88.0. In terms of dollars, the physicians increased their three-year average annual income by \$7,630 in the period under review, consulting engineers and architects by \$6,915, dentists by \$5,650 and lawyers by \$5,562.
- (vii) Physicians decreased their percentage of total professional and technical groups from 4.2 per cent in 1931 to 3.4 per cent in 1961. On the other hand, doctors, as a percentage of the total labour force, increased from 0.26 per cent in 1931 to 0.32 per cent in 1961.
- (viii) The physicians' professional income between 1949 to 1960 increased by 77.4 per cent, which increase was almost identical with the increase in annual average weekly wages of people engaged in manufacturing and also in all other industries (industrial composite index). On the other hand, the indicated

increase in income of physicians was somewhat higher than that of average labour income per employee by about 16.0 per cent.

- (ix) Consumer price index increased from 100.0 in 1949 to an annual average of 130.7 in 1962, while doctors' fees index (weighted average of the four components: office call, home call, confinement and appendectomy) increased from 100.0 to 150.4 during the same period.
- (x) Canadian expenditures on personal medical care accounted for 1.56 per cent of total personal expenditures in 1961 as compared with 1.09 per cent in 1945. In the former year they amounted to \$393.2 million or \$21.0 per capita as compared with \$76.2 million and \$6.30 in 1945. The Canadian community tends to devote increasing proportions of its income to medical care as income increases.

*h. Physician-Population Projections, 1961-1991*

- (i) The annual average composite attrition rate of Canadian doctors during the years 1952-1960 amounted to 3.2 per cent. It includes a loss due to a natural cause like death or sickness, emigration, retirement and other departures.
- (ii) At the constant 1961 physician-population ratio of 1:857, which indicates only a current and static demand for medical services, the physician requirements to keep pace with the projected increased population (including 50,000 net immigration per year) will amount to 23,683 in 1966, 26,358 in 1971 and gradually increasing to 40,964 in 1991. At a progressively improving ratio of 1:857 in 1961 to 1:665 in 1991, based on the experience of the last decade, these requirements for physicians will progressively increase from 24,691 in 1966 to 28,714 in 1971 and by 1991 the total requirements would amount to 52,792 doctors.
- (iii) The expected supply of physicians under assumptions of 800 Canadian medical graduates per year between 1961-1965 and 900 and 950 during the years 1966-1970 and 1971-1990 respectively, and 350 immigrant doctors per year during the period of 1961-1970, and 250 thereafter and 3.2 per cent attrition rate will amount to 23,489 in 1966, 25,826 in 1971, increasing to 31,410 in 1991.

Thus the expected supply will be short of the requirements for doctors in this country.

- (iv) Annual average needed supply of Canadian medical graduates will increase from 848 during the projected period 1961/62 to 1965/66 to 1,825 during the years 1986/87-1990/91 on the assumptions of maintaining the 1961 physician-population ratio of 1:857 and 50,000 net immigration per year during the projected period. These requirements for medical graduates will be higher if this ratio is to improve gradually.

It appears that existing educational facilities and the present output of our medical schools will not be able to satisfy our future needs for doctors.

- (v) A statistical analysis made also indicates that to obtain the objective of adequate supply of physicians steps will have to be taken to encourage a higher proportion of our students to enroll in our medical schools because in the past not enough young Canadians were willing or able to choose a medical career.

## Supply of Physicians

### 1. Introduction

This chapter presents factual information and an analysis of the historical and current trends in the supply of medical manpower in Canada, both on a national and provincial basis. It examines the procedures pertaining to the registration of graduates from Canadian and foreign medical schools. An attempt is made to estimate the attrition of the physicians due to emigration, death and retirement. The above analysis will provide a basis for the projection of future requirements for physicians in Canada.

In an analysis of professional groups the quantities of manpower demanded and supplied may be considered as simply a function of "price", i.e., of expected net earnings. However, an analysis of a medical manpower market presents some obvious difficulties both with respect to definition of the appropriate "unit" of supply and to the fact that actually there is no one price but rather a range of prices as net incomes of physicians may vary according to place of practice, and type of work.

The starting point in the quantitative appraisal of the supply of physicians is the number of doctors because an individual practitioner may be considered to be the relevant "unit" of supply and because the total amount of medical services available to a society, with some qualifications, depends primarily on the number of medical practitioners.

It is necessary to establish and measure the main categories of inflow to and outflow from the total supply of medical manpower in order to obtain a picture of changes in the actual size of the supply. On the side of inflow we must include an annual output of medical graduates, immigrant and alien physicians as well as those who re-enter the medical profession after some years of withdrawal from active practice. On the side of outflow we must include physicians who emigrated, died or retired from active practice. An analysis of this kind must be accompanied by an evaluation of the various factors which determine the increments and decreases in the total supply of medical manpower in order to project a net change in this supply in the future.

It should be pointed out, however, that a mere size of physician population and an analysis of its various components are not really sufficient to

indicate the volume of potential supply of medical services. A further study will have to be made in the following chapters with respect to the actual utilization of medical manpower, its actual functions, demographic characteristics, geographic distribution, professional specialization, etc.

The supply of physicians in a short-run period is said to be relatively inelastic because principally only death and voluntary retirement are the reasons for withdrawal from medical practice. Similarly, the number entering the medical profession is largely determined by the number currently graduating from medical schools, and to a lesser extent by recruitment of foreign-educated physicians. The supply of medical graduates is in a short-run period inelastic because of the limitations of their production imposed by existing teaching personnel and facilities and the long duration of medical training. "Over long periods, the number of withdrawals from the profession, but not the number seeking to enter, is still almost completely determined by non-economic factors. The higher the economic prospects of one profession relatively to others the larger the number who may be expected to try to enter it. Over these longer periods, economic factors affect the supply of services offered, i.e., the total number of practitioners, primarily through their effect on the number who try to enter the profession."<sup>1</sup>

This general tendency applies to professions which are characterized by free entry. If the number permitted to enter is, however, regulated through licensing authorities, then the supply of practitioners will not be a function of the price or expected net income. In general, "If we abstract from all factors affecting the choice of a profession other than actuarial ones, the supply of new entrants depends solely on the relative arithmetic mean return and cost".<sup>2</sup> It should be pointed out that there is no consensus of opinion as to what really constitutes an adequate supply of physicians and hence the differences in views. It is generally acknowledged that one of the difficult problems of the medical profession is the lack of accurate determination of the number of practitioners needed and what form of control of supply to adopt to protect the interests of the public and of the profession.

## 2. Trends in the Supply of Physicians

### *a. The Physician-Population Ratio and Its Limitations*

It is customary and convenient to test the national and regional sufficiency or insufficiency of the supply of medical manpower and of the adequacy or inadequacy of local medical services in terms of a proportion of the population to the number of physicians. Some experts have expressed their personal opinions as to what this proportion ideally should be. There is, however, a wide range

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<sup>1</sup> Friedman, Milton and Kuznets, Simon, *Income from Independent Professional Practice*, National Bureau of Economic Research, New York: 1945, p. 155.

<sup>2</sup> *Ibid.*, p. 157.



of estimates and consequently no general conclusion can be drawn. The absence of an established optimum physician-population ratio, naturally, makes the projection of future requirements for physicians a more difficult task.

A simple physician-population ratio does not indicate completely the volume of medical services rendered or needed because it does not take into consideration the nature, scope and quality of the physicians' services nor the economic, social and physical characteristics of the people being served. As one writer observed: "The many social, economic and geographic factors involved prevent the determination of supply or demand for an economic good by the counting of noses".<sup>1</sup> The use of physician-population ratio simply means measuring supply and demand for medical manpower by counting sellers and potential buyers but the consumption of medical services, assuming that they are needed and readily available, varies with the income of the consumers and the cost of such services.

A comparison of the physician-population ratio over a long period of time should be viewed with caution because too many variables are involved and, therefore, it should be considered along with other factors. As already pointed out the "output per physician" has steadily increased. The physicians of today can supply more and better medical services as compared with those of fifty years ago. An increase in "output per physician", due to technological progress in the practice of medicine and an increase in demand, may roughly be measured by dividing the index of expenditures for physicians' services by its price index.<sup>2</sup>

Better organization of medical practice, improved methods of diagnosis, prevention and treatment, more and better hospitals, equipment and other facilities, larger numbers of paramedical personnel, which relieve the physician from many routine and time consuming tasks, easier access of doctor to patient, and patient to doctor due to the development of transportation and communication, all of these factors account for the fact that the physician can accomplish more in a given time and geographical area than formerly.

On the other hand, the physician-population ratio being a gross figure of medically qualified persons will include a larger proportion of physicians than formerly, who are engaged in administrative work, research, teaching and as such are not providing medical services. In addition, the increase of older people in the population, the higher standard of living, better health education of the public and hence higher awareness of medical requirements and greater expectations from medicine, all these factors imply greater demand for medical care than formerly. To argue that the physician-population ratio in Canada compares favourably with that in other countries or that this ratio has practically remained the same during the last few decades, while physicians became more productive, may mean nothing in itself. Such an argument overlooks the fact that our national

<sup>1</sup> Goldman, Franz, Editor and Leavell, Hugh, *Medical Care for Americans*, The Annals of the American Academy of Political and Social Science, January 1951, Vol. 273, p. 27.

<sup>2</sup> Dickinson, Frank G., "Supply of Physicians' Services," *The Journal of the American Medical Association*, April 21, 1951, Vol. 145, p. 1261.

income and standard of living have increased manyfold during these last decades and consequently in previous periods of lower national income and economic welfare that ratio might have been sufficient but not today.

In comparing the adequacy of medical services between regions and local areas, the physician-population ratio may be also of limited significance because people from one place may seek services of particular specialists in another place and there also may be differences in the productivity of doctors in various localities. The age characteristics of the physicians will influence their productivity. The peak of efficiency as measured in terms of the patient-load is reached at the age of 40 to 45 years. To the extent that average age is an index of productivity, an analysis of the availability of doctors in terms of age characteristics must modify an analysis of this availability in terms of the physician-population ratio. Then, one would have to consider also the proportion of general practitioners and specialists in a given physician population because of the difference in the scope and nature of medical services made available to the population by these two broad categories of physicians. There are also local differences with respect to the volume of patients treated, availability of out-patient departments, and availability of hospitals and travelling clinics, which will influence the usefulness of the physician-population ratio for comparative purposes.

In view of the above limitations, the physician-population ratio must be used with caution. It is useful, however, as a guide in comparing the supply of physicians between countries, provinces and large economic regions. But a shortage or surplus of medical manpower cannot be based or proved entirely on a simple physician-population ratio. It should perhaps be correlated with other indices already mentioned, which measure the progress in the general health of

TABLE 2-1  
PHYSICIAN-POPULATION RATIOS IN CANADA, 1901-61

Year	Active Civilian Physicians	Population <sup>1</sup>	Physician- Population Ratio
		('000)	
1901 .....	5,475	5,324	1: 972
1911 .....	7,411	7,191	1: 970
1921 .....	8,706	8,776	1:1,008
1931 .....	10,020	10,363	1:1,034
1941 .....	11,873 <sup>2</sup>	11,490	1: 968
1951 .....	14,325	13,984	1: 976
1961 .....	21,290	18,238	1: 857

<sup>1</sup> Exclusive of Yukon and Northwest Territories until 1960.

<sup>2</sup> The 1941 figure includes 1,150 armed forces' doctors because of wartime conditions.

Sources: 1901 to 1961, Census data; 1960, The Canadian Medical Association's Survey of Provincial Licensing Authorities, C.M.A.'s Brief on Future Requirements for Physicians in Canada, submitted to the Royal Commission on Health Services, October 27, 1961, p. 2.

the population. This ratio is even less useful in comparing the supply of medical services between local areas because of the differences in age characteristics and type of work of the physicians concerned.

*b. National Physician-Population Ratios, 1901-1961*

Table 2-1 shows in an historical perspective the statistical data concerning the number of physicians and population in Canada, from the beginning of this century until 1961, and the corresponding physician-population ratios.

Table 2-1 suggests that between 1911 and 1931 the number of physicians did not keep pace with the growth of population and hence in 1931 there were more people per physician than in 1911. This trend has been reversed since 1931. During the first five decades, the proportion of physicians to population has remained relatively stable and only during the last decade has the national physician-population ratio improved considerably. The table 2-1 shows also that, although the total number of physicians was increasing each decade, the rate of increase or the average annual increase has dropped from 193.6 physicians during 1901-11 to 131.4 physicians in the decade 1921-31. During the next two decades the corresponding figures were 185.3 and 245.2 physicians. During the 1951/61 years, the average annual increase amounted to 697 physicians. In 1961 the physician-population ratio was 1:857, which indicates that in that year there were approximately 120 persons less per physician as compared with the 1951 ratio of 1:976. During this period of 1951-61, the number of physicians in Canada increased by 48.6 per cent while the population of this country has increased by 30.4 per cent. This improvement in the physician-population ratio between 1951 and 1961 represents more than a 12 per cent change in the relative supply of physicians or, on an annual basis, the rate of improvement in medical manpower was more than 1 per cent.

Table 2-2 indicates the national physician-population ratios annually during the last decade.

The Canadian Medical Association has estimated that between 1951 and 1960 there was a total of 13,627 newly registered physicians in Canada, of whom 8,957 were graduates of Canadian medical schools and 4,670 or 34.3 per cent of the total were graduates of foreign medical schools.<sup>1</sup> Consequently, after making a due allowance for the normal rate of attrition of medical manpower during this period and in the absence of any significant increase in the number of graduates from Canadian medical schools, the ten per cent improvement in the physician-population ratio between 1951 and 1960 must be attributed to this substantial inflow of immigrant physicians. In fact, without this inflow of physicians from abroad, the physician-population ratio would have deteriorated. It may, therefore, be suggested that Canadian medical schools are not producing enough physicians to keep pace with the rapidly growing population.

<sup>1</sup> The Canadian Medical Association's brief on Future Requirements for Physicians in Canada submitted to the Royal Commission on Health Services, October 27, 1961, Appendix A, Tables A<sub>2</sub> and A<sub>3</sub>, p. 20.

TABLE 2-2  
ANNUAL NATIONAL PHYSICIAN-POPULATION RATIOS  
IN CANADA, 1951-61

Year	Estimated Number of Doctors <sup>1</sup> (Dec. 31)	Estimated Population Corresponding Year and Month <sup>2</sup>	Physician- Population Ratio
		('000)	
1951 (June) .....	14,325	13,984	1:976
1952 .....	15,135	14,649	1:968
1953 .....	15,829	15,195	1:960
1954 .....	16,431	15,698	1:955
1955 .....	17,221	16,081	1:934
1956 .....	17,871	16,589	1:928
1957 .....	18,523	17,048	1:920
1958 .....	19,096	17,284	1:905
1959 .....	19,800	17,678	1:893
1960 .....	20,517	18,041	1:879
1961 <sup>3</sup> .....	21,290	18,238	1:857

Sources: <sup>1</sup> C.M.A.'s Survey of Provincial Licensing Authorities except for 1951 which is based on census data; C.M.A.'s Brief on Future Requirements for Physicians in Canada, submitted to the Royal Commission on Health Services, October 27, 1961, p. 3.

<sup>2</sup> D.B.S.

<sup>3</sup> Census data.

### c. Provincial Physician-Population Ratios, 1911-1961

The supply of physicians, in the country as a whole, expressed in terms of population per physician has declined since the beginning of this century and, in addition, it did not cover the country evenly. The relative supply situation in certain provinces has deteriorated, while other provinces have always maintained a favourable position with respect to the supply of doctors. The factors which probably influence the provincial physician-population ratios include the level of personal income per person, the extent of urbanization of population within a province, the absence or presence of medical schools, and the extent of hospital facilities. The provinces characterized by an inadequate number of hospitals and low physician-population ratios will tend to have fewer interns and residents in relation to all active physicians indicating lower rates of increase in the supply of physicians in the future.

Appendix 2-1 shows, on a provincial basis, the number of physicians, the corresponding percentage of the total number of physicians in Canada and the physician-population ratios for the period 1911-61. It indicates the relative trends in the supply of physicians in each province. Table 2-3 presents the provincial physician-population ratios over the period under review.

Table 2-3 shows that while the physician-population ratios varied considerably from province to province, all provinces have improved their ratios

during the last five decades and, in particular, since 1951. During the entire period under consideration, Ontario and British Columbia have consistently had better physician-population ratios than those for the country as a whole. The ratio for the Province of Quebec in 1941 was also below the national figure, in 1951 it was only slightly above the Canadian average figure; and in 1961 it was almost equal to the national level. The Province of Manitoba in 1951 experienced a lower ratio than that for the country as a whole, while in 1961 it was below the national average figure. In the remaining provinces, the physician-population ratios have been higher than the national ratio.

TABLE 2-3  
PROVINCIAL PHYSICIAN-POPULATION RATIOS, 1911-61

Province	1911	1921	1931	1941	1951	1961
Newfoundland .....	—	—	—	—	1:2,524	1:1,991
Prince Edward Island.....	1:1,306	1:1,309	1:1,397	1:1,418	1:1,342	1:1,149
Nova Scotia .....	1:1,206	1:1,147	1:1,153	1:1,350	1:1,094	1:1,044
New Brunswick .....	1:1,253	1:1,448	1:1,517	1:1,693	1:1,445	1:1,314
Quebec .....	1:1,003	1:1,065	1:1,046	1:1,054	1: 990	1: 853
Ontario .....	1: 828	1: 848	1: 872	1: 903	1: 857	1: 776
Manitoba .....	1:1,065	1:1,095	1:1,051	1:1,108	1: 926	1: 823
Saskatchewan .....	1:1,298	1:1,445	1:1,579	1:1,700	1:1,278	1: 973
Alberta .....	1:1,014	1:1,073	1:1,256	1:1,320	1:1,118	1: 982
British Columbia.....	1: 945	1: 862	1: 952	1:1,010	1: 847	1: 758
Canada .....	1: 970	1:1,008	1:1,034	1:1,072	1: 976	1: 857

Sources: 1911-1961, Census data.

Table 2-4 suggests that the provinces, like Ontario, British Columbia, Manitoba and Quebec, which in 1961 had the most favourable physician-population ratios, were also the provinces with higher personal incomes per capita, the highest percentages of urbanization of their population, and some of them have had an advantage in the hospital bed-capacity per person.

The physician-population ratio in the Atlantic Provinces has always been less favourable than that for the whole country. In 1961 the population of this region amounted to over 10.0 per cent of the total population in Canada, while the number of physicians constituted only 7.0 per cent of the total number of physicians in this country. Consequently, the physician-population ratios in the Atlantic Provinces were lower than that for Canada as a whole. The number of active resident physicians in the four provinces in 1961 was 1,482, giving a ratio of 1,280 persons as compared with the national ratio of 857. There was a greater shortage of physicians in Newfoundland than in the other three Maritime Provinces.

The number of doctors practising in Newfoundland has increased substantially from 143 in 1951 to 230 in 1961, thus changing the physician-population ratio from 1:2,524 to 1:1,991 although outside the larger centres an individual

TABLE 2-4

PROVINCIAL PHYSICIAN-POPULATION RATIOS, PERSONAL INCOME AND  
HOSPITAL BED CAPACITY PER PERSON AND PER CENT OF  
URBANIZATION OF POPULATION, BY PROVINCE, 1961

Province	Physician- Population Ratios	Personal Income per Person <sup>1</sup>	Hospital Bed Capacity Per 1,000 Persons <sup>2</sup>	Per Cent of Urbanization of Population <sup>3</sup>
		\$		
British Columbia .....	1: 758	1,809	5.6	72.6
Ontario .....	1: 776	1,829	5.5	77.3
Manitoba .....	1: 823	1,476	6.0	63.9
Quebec .....	1: 853	1,332	5.0	74.3
Saskatchewan .....	1: 973	1,184	7.4	43.0
Alberta .....	1: 982	1,582	6.6	36.7
Nova Scotia .....	1:1,044	1,191	4.9	54.3
Prince Edward Island .....	1:1,149	952	6.8	32.4
New Brunswick .....	1:1,314	1,054	5.2	46.5
Newfoundland .....	1:1,991	904	3.8	50.7

Sources: <sup>1</sup> National Accounts, Income and Expenditure, 1961, Table 29, p. 38.

<sup>2</sup> Health and Welfare Division, D.B.S., (public hospitals only.)

<sup>3</sup> Census of Canada, 1961, Advance Report No. AP-4, Census (Demography) Division, D.B.S.

physician is serving sometimes about 6,000 people. Towards the end of 1961 a total of 295 doctors was reported in that province, approximately 50 of whom were full-time physicians with the Provincial Department of Health or in larger institutions.<sup>1</sup>

In New Brunswick the physician-population ratio has deteriorated from 1:1,253 in 1911 to 1:1,693 in 1941, but afterwards it has gradually improved until in 1961 it reached the level of 1:1,314. By the end of 1961 there was a total of 486 registered physicians, an improvement of about 10.0 per cent over the 1960 figure.<sup>2</sup> New Brunswick has no medical school and no research centre and therefore practically all the doctors are engaged in providing medical services directly to the public. This factor must be taken into consideration when evaluating the physician-population ratio. Nevertheless, as the New Brunswick Medical Society pointed out, the supply of doctors in the province is inadequate and some areas have no resident doctor because of their low economic standing.<sup>3</sup>

In Prince Edward Island the physician-population ratio has shown the same long-term trend as that in New Brunswick, declining from 1:1,306 in 1911 to 1:1,418 in 1941 and increasing gradually until in 1961 it reached the level

<sup>1</sup> A brief from the Department of Health of Newfoundland, October 16, 1961, submitted to the Royal Commission on Health Services, p. 8.

<sup>2</sup> A brief from the Department of Health of New Brunswick, November 9, 1961, submitted to the Royal Commission on Health Services, p. 6.

<sup>3</sup> A brief from the New Brunswick Medical Society, November 10, 1961, submitted to the Royal Commission on Health Services, p.p. 6-7.

of 1:1,149. The Medical Society of Prince Edward Island has reported 90 physicians in 1961 of whom 77 general practitioners and specialists were directly concerned with the provision of medical services to the people of the province, while 13 were salaried physicians employed full-time in various administrative or clinical posts of the different departments of the provincial government. It has been suggested that many private practitioners, especially in rural areas, were carrying an excessive work load.<sup>1</sup>

The Province of Nova Scotia, which has a medical school, has always shown the most favourable physician-population ratio amongst the Atlantic Provinces. This ratio was 1:1,206 in 1911 and 1:1,044 in 1961. In the latter year, there were 719 physicians reported, 66 of whom were employed in administrative and other capacities. The Government of Nova Scotia has reported that there is an insufficient number of doctors practising in Nova Scotia according to Canadian standards, and that there is an unequal distribution of physicians. As a result certain areas are not properly served.<sup>2</sup>

The Province of Quebec experienced a relatively stable long-term physician-population ratio until 1941, when it stood at 1:1,054 as compared with 1:1,103 in 1911. Since 1941 this ratio has gradually improved reaching 1:853 in 1961. In this latter year the population of the province accounted for 28.8 per cent of the Canadian population and the physicians for 29.0 per cent of the total number of doctors in this country, making the provincial ratio almost identical with the national ratio. The total number of doctors registered with the College of Physicians and Surgeons of the Province of Quebec increased from 5,863 in 1960 to 6,129 in July 1961. However, only 5,920 of these were actually practising in the province, giving a true ratio of 1:878. Many physicians devote all or part of their time to teaching, research or administrative work. It has also been suggested that about half of the districts of the Medical Association of the Province of Quebec feel that they have enough physicians for the needs of their population. It must, of course, be appreciated that the geography of the province is such that wide areas are sparsely populated and consequently unable to support a physician or to provide him with the facilities for satisfactory work.<sup>3</sup>

Ontario has always enjoyed the most favourable physician-population ratio in Canada and it has changed very little, 1:828 to 1:776, over the years 1911-61. In 1961 the population of the province accounted for 34.2 per cent of the total Canadian population and the doctors for 37.8 per cent of all active physicians in the country. The medical manpower as of January 31, 1962, included 9,182 doctors fully registered with the College of Physicians and Surgeons of Ontario (this figure does not include interns), over 1,000 of whom were not residing in the province, leaving 8,136 doctors registered and residing in Ontario. On that

<sup>1</sup> A brief from the Medical Society of Prince Edward Island, November 7, 1961, submitted to the Royal Commission on Health Services, p. 1, 1.

<sup>2</sup> A brief from the Government of Nova Scotia, October 1961, submitted to the Royal Commission on Health Services, p. 3.

<sup>3</sup> A brief from the Medical Association of the Province of Quebec, April 17, 1962, submitted to the Royal Commission on Health Services, p. 5.



date there was one doctor for every 764 persons. There were approximately 1,300 doctors who were on salary, the majority of whom were doing administrative, academic and research work. This was partially offset, however, by over 1,000 interns assisting physicians to render personal medical services in hospitals, the majority of whom were not registered with the College.<sup>1</sup>

The Prairie Provinces, with the exception of Manitoba in 1960 have had a lower physician-population ratio than that for Canada as a whole. Their population accounted for 17.4 per cent of the total Canadian population and their 3,427 doctors or 16.1 per cent of the total number of physicians in the country, giving a ratio of 928 persons per physician as compared with the national ratio of 857

The Manitoba ratio has remained fairly constant over the years 1911-1941 being 1:1,065 and 1:1,108 respectively and slightly above the national average ratio. Since 1941 there was a relative improvement in the province and by 1961 the provincial ratio was slightly better than the national one.

Saskatchewan consistently experienced a relatively higher physician-population ratio amongst the Prairie Provinces until 1961. A real improvement in the supply of medical manpower took place between 1951 and 1961 when the number of doctors increased from 662 to 951, diminishing the ratio from 1:1,278 in 1951 to 1:973 in 1961.

In Alberta, the physician-population ratio increased steadily from 1:1,014 in 1911 to 1:1,320 in 1941 and then it gradually declined to 1:982 in 1961. The relative improvement took place during the period 1951/61 when the number of physicians increased from 840 to 1,356, an average increase of 52 physicians per year.

TABLE 2-5  
RELATIVE IMPROVEMENT IN PHYSICIAN-POPULATION RATIOS,  
CANADA AND FOR PROVINCES, 1951-61

Province	Relative Improvement Per Cent
Newfoundland .....	21.1
Prince Edward Island .....	14.4
Nova Scotia .....	4.6
New Brunswick .....	9.1
Quebec .....	13.8
Ontario .....	9.5
Manitoba .....	11.1
Saskatchewan .....	23.9
Alberta .....	12.2
British Columbia .....	10.5
Canada .....	12.2

<sup>1</sup> A brief from the Ontario Medical Association, May 7, 1962, submitted to the Royal Commission on Health Services, p. 48.



For the period under review, British Columbia has always had a physician-population ratio below the national ratio. In 1911 this province had one doctor to every 945 persons. This position improved in 1921 with a ratio of 862 persons per physician, but became relatively less favourable in 1931 and 1941, with the ratios of 952 and 1,010 respectively. Since then, however, this ratio steadily improved until in 1961 it reached 758 persons per physician. The population of British Columbia in that year accounted for 9.0 per cent of the total Canadian population while its physicians for about 10.0 per cent of all Canadian doctors. As of December 1961, there were 2,101 physicians practising in the province.<sup>1</sup>

Table 2-5 illustrates a relative improvement in physician-population ratios over the period 1951-1961.

### 3. Registration and Licensing of Physicians<sup>2</sup>

#### *a. Provincial Licensing Authorities*

In Upper Canada the first legislative measure to control registration of physicians was introduced in 1795, but it was repealed in 1806 on the ground that people should be free in their choice of practitioners to cure their ailments. Soon afterwards a new medical act was passed in 1819. This and the earlier act established a medical board to examine professional qualifications of the physicians and grant licences. A College of Physicians and Surgeons was established in Lower Canada in 1847 and in Upper Canada in 1865. At the time of Confederation each province had its own system of assessing applicants and granting registration.

The British North America Act of 1867 assigned the jurisdiction over education and health to the provincial governments. Thus, it is within the constitutional power of each province to establish the necessary administrative machinery for the granting of a licence to practise medicine within its territory. Consequently, the Provincial Medical Acts or the Medical Profession Acts gave to a Provincial College of Physicians and Surgeons or a Provincial Council or Medical Board the right to determine the qualifications required prior to the entry of a medical school, and conditions required to obtain a licence to practise medicine in each particular province. The Executive Councils of these provincial licensing authorities are made up of representatives elected by the members of the medical profession, and in some provinces they are composed of elected representatives and persons appointed by the provincial government and by universities having a medical faculty within the province. The responsibility of administering the medical act is relegated to the medical profession itself. In

<sup>1</sup> A brief from the British Columbia Medical Association, February 20, 1962, submitted to the Royal Commission on Health Services, p. 2.

<sup>2</sup> See also: Moore, W. Bramley, "Medical Licensure in Canada," *C.M.A.J.*, Vol. 73, July 1955; and Taylor, Malcolm G., "The Role of the Medical Profession in the Formulation and Execution of Public Policy," *The Canadian Journal of Economics and Political Science*, Vol. 26, No. 1, Feb. 1960, p.p. 108-127.

order to protect the public interest, a provincial licensing authority assesses the professional qualifications of each applicant for a licence, evaluates moral and ethical character, maintains the necessary discipline within the profession and ensures through various committees as high a standard of medical care as possible. Before receiving a licence to practise, the candidate must have a medical degree and complete a satisfactory year of internship in an approved hospital. In most provinces, he must submit a certificate of registration with the Medical Council of Canada. The examinations of the M.C.C. ensure a uniform standard of educational attainment that is acceptable in all provinces.

The disciplinary powers of the Council or Medical Board vary in detail between different provincial licensing authorities but, generally, they include the power to examine complaints against a doctor's professional and moral conduct. A penalty may range from a reprimand, fine and suspension to expulsion from the profession. Erasure of the doctor's name from the provincial register automatically leads to a similar erasure from the Canadian Medical Register.

Interprovincial mobility of physicians is somewhat hampered by the fact that a licensure in one province does not imply the right to practise across the country. It is necessary to obtain a licence in each province in which the doctor's practice is extended.

#### *b. Medical Council of Canada*

This institution was established in 1912 by the Canada Medical Act. It is responsible for examinations in both French and English. The successful candidates receive the diploma of Licentiate of the Medical Council of Canada (L.M.C.C.) or Licence du Conseil Médical du Canada (L.C.M.C.) and are registered with the Canadian Medical Register. The licentiates are then eligible for registration in any province provided they satisfy provincial requirements concerning the payment of the fees, character and citizenship.

The Medical Council of Canada is composed of three members appointed by the Governor-in-Council, two members representing each provincial medical council, one member from each university having a medical faculty, and three elected by homeopathic practitioners in Canada. The Council appoints the board of examiners, excluding members of the Council itself, who set and mark written examination papers, and grant certificates of qualification. There are clinical and oral examinations as well on a local basis.

A practitioner licensed to practise in a Canadian province prior to the establishment of the M.C.C. on November 7, 1912, may obtain his registration without examination, but all other applicants are required to take examinations. To be eligible for M.C.C. registration a candidate must be a holder of a provincial licence or possess a certificate from the registrar of his own provincial medical council, and he must hold an acceptable medical degree plus proof that he has completed one year of satisfactory internship in a hospital approved by his provincial licensing authority. The five subjects of examination include: (1) medicine (and therapeutics), (2) surgery, (3) obstetrics and gynaecology, (4)

paediatrics and (5) public health and preventive medicine. The written and oral examinations are held twice a year, in the spring and the fall, at several centres across the country. The whole examination, or the written part only, may be taken before the period of internship when the student receives a medical degree. Most of the medical schools have accepted the M.C.C. examinations, in whole or in part, as their own final examinations. To be eligible for M.C.C. examination a candidate must have an Enabling Certificate from his provincial licensing authority or Interim Certificate, if he is completing a medical course of a university that has an arrangement with the M.C.C. about conjoint examinations. In order to pass, the candidate must obtain 60 per cent of the total marks in every subject, and he cannot be below 50 per cent in either the written or the oral and clinical part of an examination. Persons failing in more than two subjects must try the examinations again in all subjects. Persons failing in not more than two subjects, receive partial credit, and must pass the remaining subjects at a later date.

### *c. Foreign Medical Graduates*

Registration of foreign-trained physicians involves a difficult problem of assessing their medical education and training, verification of documents, acquaintance with English or French language and adoption of fair procedures in the screening process in order to protect the public and to safeguard the immigrant-physicians' right to practise in Canada.

Unfortunately, there is no recognized medical organization in Canada or in the United States for assessing the educational standards of foreign medical schools and, consequently, each provincial licensing authority must discharge this duty itself.

In general, foreign physicians in order to obtain a licence are required also to pass the examinations of the Medical Council of Canada and to satisfy other provincial specific requirements, which, in detail, vary amongst various provinces. The notable exception is made of practitioners registered on the "General List" of the General Medical Council of Great Britain, who may register by reciprocal arrangement without further examination in six Canadian Provinces, viz., Alberta, Saskatchewan, Manitoba, Nova Scotia, Prince Edward Island and Newfoundland.

The General Medical Council maintains three separate registration lists, viz:

1. The General List, which contains the names of physicians registered by the Branch Councils of England and Wales, Scotland and Ireland.
2. The Commonwealth List, which includes the physicians who are fully registered by virtue of recognized qualifications received in medical schools located in the Commonwealth.
3. The Foreign List, which is relatively insignificant, containing the names of physicians who are fully registered by virtue of recognized qualifications granted in foreign countries; for instance, Rangoon Medical College in Burma.

The reciprocity of the Provincial Medical Board of Nova Scotia extends to all three lists. Five other provincial licensing authorities in Canada extend it, in most cases, to the General List only. In Alberta, graduates from medical schools in the United Kingdom, South Africa, New Zealand and Australia receive licences without any examination. The same applies to doctors from the United States. In Saskatchewan, the reciprocity includes medical graduates from the Republic of Ireland. Manitoba requires a minimum of one year in a rotating internship in an approved hospital by the College, in Manitoba. Nova Scotia accepts internship being served outside the province. Prince Edward Island extends reciprocity to the "General List" only.

The reciprocity arrangement does not necessarily mean that this category of foreign physicians tends to settle mainly in these provinces. The Provincial Medical Board of Nova Scotia has reported that of the ten doctors registering by reciprocity, in 1951, all entered practice in that province, but in 1961, of 34 such doctors registering only nine entered practice there. "The purposes of registration in Nova Scotia for other registrants of the General Medical Council were (a) to obtain a Certificate of Eligibility to write the Medical Council of Canada examinations and go elsewhere in Canada when successful, (b) employment in military or Federal Government service, a requirement of which is the holding of registration in one province of Canada, (c) post-graduate training or certification as a specialist, which also requires possession of a provincial registration."<sup>1</sup>

Most of the provincial licensing authorities accept for consideration the graduates of medical schools approved by the Educational Council for Foreign Medical Graduates (E.C.F.M.G.), which is sponsored by the American Hospital Association, The Association of American Medical Colleges and the Federation of state Medical Boards of the United States. This institution certifies foreign medical graduates before they come to the United States of America as interns and residents on the basis of the educational standard of the foreign medical schools from which the graduates come. The E.C.F.M.G. sets the examinations comparable to those of American medical schools for the foreign students twice a year in various parts of the world. Graduates of medical schools in Canada and Puerto Rico are exempted from these examinations. Ontario College of Physicians and Surgeons accepts the graduates of medical schools approved by the E.C.F.M.G. as "First Class" graduates. Graduates of medical schools outside the list approved by the above institution but recognized by the World Health Organization's "World Directory of Medical Schools" may be accepted on the Educational Register to pursue post-graduate studies but they are not entitled to obtain an Enabling Certificate or to be accepted for full registration for practice at a later date. These graduates are classified in the "Second Class" category. In Nova Scotia alien physicians must also be approved by the E.C.F.M.G. In British Columbia alien physicians to be considered must come from the medical schools listed by the W.H.O.

<sup>1</sup> A brief from the Provincial Medical Board of Nova Scotia, submitted to the Royal Commission on Health Services, October 30, 1961, p. 9.

The registration of foreign-trained physicians has been approved in the following ways:

1. Documents are usually examined by the Credentials Committee of the provincial licensing authorities.
2. Alien physicians must pass basic science examinations, which include usually such subjects as anatomy, biochemistry, physiology, pathology, bacteriology and pharmacology. In British Columbia the graduates of the United States and United Kingdom are exempted from these examinations conducted by the Council of the College of Physicians and Surgeons of British Columbia. In Alberta, alien physicians, except those under reciprocity arrangement, must pass these examinations which are carried out by the University of Alberta. The same procedure is followed in Saskatchewan. In Manitoba, alien physicians, except British, American and usually also those who possess the Standard Certificate of the E.C.F.M.G., are obliged to sit these examinations. In Ontario, basic science examinations are required of the "Second Class" graduates, referred to above, and these examinations as of January 1963 will take place before a Conjoint Board of Examiners appointed by the universities and the provincial College.
3. In practically all provinces prior to the issue of Enabling Certificates the licensing authorities require of all immigrant physicians one or two years of a satisfactory rotating internship in a hospital located in the province and approved by the licensing authorities. The purpose of this requirement is to estimate the applicant's moral, social and ethical characteristics as well as to form an idea of his general and professional education. In some instances, the immigrant physicians are only able to obtain a position in a laboratory or as ward attendants. One College's statement observed that because of the fact that there are not enough desirable vacancies for them, "many are temporarily employed in menial work until they learn the English language and become more or less acquainted with our Canadian way of life. There may be a waiting period of several months before they could get a position that would be helpful in their medical training."<sup>1</sup> Most of the provinces require one year of internship, but New Brunswick and Ontario demand two years. Prince Edward Island requires no internship of physicians listed on the "General List" of the General Medical Council of the United Kingdom.
4. The requirement of passing basic science examinations and internship provides an opportunity for the provincial licensing authorities to assess the applicant's knowledge of English or French language. The immigrant physician is expected to read, write and speak in either of these two languages depending on the province.
5. Another requirement concerns Canadian citizenship. In most provinces, the provincial licensing authorities require documentary evidence regarding

<sup>1</sup> "The Problem of Refugee Doctors —" A statement of the College of Physicians and Surgeons of Ontario, 1951, *Canadian M.A.J.* Vol. 65, October 1951, p. 382.

the immigrant physician's intention of becoming a Canadian subject. Ontario demands proof of Canadian citizenship. In the Province of Quebec the potential registrants must be Canadian subjects, except foreign scholars teaching in the provincial medical schools. However, temporary registration allows no right to practise in the province.

6. Alien physicians, except those under reciprocity arrangement and in some cases United States physicians, must satisfy the above requirements before the provincial licensing authorities issue them Enabling Certificates granting permission to write the examinations of the Medical Council of Canada. In Ontario, New Brunswick, British Columbia and Quebec, all immigrant physicians are required to write these examinations before they are duly registered. In other provinces all alien physicians other than those under the reciprocity arrangement have the same requirement.

*d. Organized Medicine<sup>1</sup>*

There are two national organizations of the medical profession in Canada, The Canadian Medical Association, and L'Association des Médecins de Langue Française du Canada. The C.M.A. is a federation of provincial autonomous associations or "divisions". Membership is voluntary except in Saskatchewan, where the "division" merged with the provincial College of Physicians and Surgeons, and in Alberta and New Brunswick where the compulsory licence fee supports both the College and the "division". L'Association des Médecins de Langue Française du Canada comprises five divisions: Western Provinces, Ontario, Quebec, New Brunswick and Nova Scotia.

The functions of the C.M.A. are listed in the Act of Incorporation as amended in 1959:

"The objects of the Association shall be:

1. to promote the medical and related arts and sciences and to maintain the honour and the interests of the medical profession;
2. to aid in the furtherance of measures designed to improve the public health and to prevent disease and disability;
3. to promote the improvement of medical services however rendered;
4. to publish the "Canadian Medical Association Journal" and such other periodic journals as may be authorized, together with such transactions, reports, books, brochures or other papers as may promote the objects of The Association;
5. to assist in the promotion of measures designed to improve standards of hospital and medical services;
6. to promote the interests of the members of The Association and to act on their behalf in the promotion thereof;

<sup>1</sup> See the C.M.A.'s preliminary submission to the Royal Commission on Health Services, September 27, 1961: "Some Characteristics of the Medical Profession of Canada".



7. to grant sums of money out of the funds of The Association for the furtherance of these objects, and
8. to do such other lawful things as are incidental or conducive to the attainment of the above objects."

The work in the C.M.A. is carried out by various committees, whose functions range from advising the Federal Government on such matters as hospitals, and the training of interns, to studying the problems of cancer, traffic accidents, prepaid medical care, rehabilitation and public health.

The special and sectional interest of the medical profession are represented by various national medical societies, which are affiliated with the C.M.A., such as The Canadian Heart Association, the College of General Practice of Canada, the Royal College of Physicians and Surgeons of Canada, and many others reflecting the particular interests of specialist groups of physicians.

In addition, the C.M.A. co-operates with national organizations which are concerned with particular illnesses of social significance, such as the Canadian Cancer Society, and the Canadian Mental Health Association. Naturally, there is a close co-operation with the Association of Canadian Medical Colleges and the Canadian Hospital Association. The C.M.A. is affiliated with the World Medical Association.

#### 4. Migration of Physicians into and out of Canada

##### *a. Net Balance*

The composition and the pattern of educational background of Canadian medical manpower underwent a considerable change during the post-war years due to the importation of immigrant physicians, who came with the large wave of post-war immigrant population to this country. Table 2-6 indicates general trends in the migration of physicians into and out of Canada during the years 1946-61.

The record of immigration of physicians began in 1953, when the Department of Citizenship and Immigration started to publish statistics on intended occupations of all immigrants. These statistics do not indicate the occupations actually followed by immigrants in this country, nor do they indicate age, marital status, etc. Data on immigration are also inadequate because they are limited to those physicians who left Canada for the United States.

With these limitations, however, the foregoing table illustrates the steadily increasing annual number of immigrant physicians during the period under review. The rapid post-war economic growth and increased population as well as the increased demand for medical care required more physicians than the Canadian medical schools were able to supply. Until 1950, the number of immigrant physicians was relatively small because of the difficulties of overseas transportation, reliance on sponsored immigration and restrictions on the admission

of former enemy aliens. From 1950 to 1957 this number increased greatly because of a more liberal Canadian immigration policy that permitted unsponsored immigration. Also during this period, there was a great inflow of British doctors to Canada.

At the end of 1956 and in the early part of 1957 after the tragic events in Hungary, many Hungarians found new homes in this country. Since 1957, however, the annual number of immigrant physicians showed a tendency to decline. Presumably, improved economic conditions in Western Europe and the completed settlement of post-war political immigrants, diminished this external source of

TABLE 2-6  
MIGRATION OF PHYSICIANS INTO AND OUT OF CANADA, 1946-61<sup>1</sup>

Year	From U.S.A.	Immigra- tion From Other Countries	Total	Emigra- tion to U.S.A.	Total Difference Between Immigration and Emigration	Net Loss to U.S.A.
1946.....	—	56	56	—	56	—
1947.....	—	81	81	—	81	—
1948.....	—	95	95	—	95	—
1949.....	—	78	78	—	78	—
1950.....	—	68	68	260	-192	-260
1951.....	—	166	166	173	- 7	-173
1952.....	—	293	293	186	107	-186
1953.....	55	347	402	105	297	- 50
1954.....	39	272	311	135	176	- 96
1955.....	33	300	333	127	206	- 94
1956.....	29	386	415	96	319	- 67
1957.....	46	589	635	265	370	-219
1958.....	52	342	394	179	215	-127
1959.....	66	373	439	229	210	-163
1960.....	84	357	441	262	179	-178
1961.....	67	378	445	296	149	-229
Total...	471	4,181	4,652	2,313	2,339	-1,842

<sup>1</sup> Data for the period 1946 to 1952 have been estimated by the Department of Citizenship and Immigration.

Sources: (1) *The Migration of Professional Workers Into and Out of Canada, 1946-1960*, Bulletin No. 11, October 1961, Table 1, p. 9; Table 10, p. 29; Table 15, p. 39; Table 17, p. 42; Economics and Research Branch, Department of Labour.

(2) *Immigration 1961*, Table 4, p. 11; Statistics Section, Department of Citizenship and Immigration.

(3) *Immigrant Aliens Admitted to the United States, Whose Country of Last Permanent Residence was Canada, 1961*, Immigration and Naturalization Service, U.S. Department of Justice.



supply of medical manpower. There is evidence of a growing shortage of doctors in the United Kingdom, which provided about half the foreign-trained physicians in Canada during the post-war period.<sup>1</sup>

Table 2-6 indicates that while approximately 5,000 physicians immigrated into Canada, about half of that figure left this country for the United States. Although there is a positive net balance between over-all immigration and emigration, this country has lost approximately 2,000 doctors to the United States.

### *b. National Origin of Immigrant Physicians*

TABLE 2-7

PHYSICIAN IMMIGRANTS INTO CANADA, BY NATIONAL ORIGIN, 1953-61

National Origin	Number	Per Cent of Total
Austrian .....	45	1.2
British .....	1,764	46.2
Danish .....	11	0.3
French .....	43	1.1
German .....	179	4.7
Greek .....	48	1.3
Jewish .....	166	4.4
Hungarian .....	180	4.7
Italian .....	92	2.4
Polish .....	124	3.2
Dutch .....	77	2.0
Swiss .....	10	0.2
U.S.A. ....	471	12.4
Others .....	605	15.9
Total .....	3,815	100.0

Source: *The Migration of Professional Workers Into and Out of Canada 1946-1960*, Bulletin No. 11, October 1961, Table 4, pp. 14-15, Economics and Research Branch, Department of Labour, and *Immigration 1961*, Table 4, pp. 10-11, Department of Citizenship and Immigration, Statistics Section.

Nearly half of 3,815 immigrant physicians came from the United Kingdom and the Republic of Ireland. Approximately 500 doctors came from the United States, and other ethnic groups that contributed substantially to our medical manpower were German, Hungarian, Jewish, Polish, Italian and Dutch.

### *c. Female Immigrant Physicians*

Table 2-8 suggests that immigrant physicians contain a larger proportion of women doctors than the Canadian medical profession or the proportion of female medical students in our medical schools' total registration.

<sup>1</sup> "Shortage of Doctors," Editorial, *C.M.A.J.*, Vol. 86, February 10, 1962, p.p. 297-298; and a letter from the Secretary of the British Medical Association to the Royal Commission on Health Services, September 24, 1962.

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**TABLE 2-8**  
FEMALE PHYSICIANS ADMITTED TO CANADA IN 1953, 1954 AND 1956-61

Year	Number of Female Physicians <sup>1</sup>	Number of Total Physicians Admitted	Per Cent of Female Physicians to Total Physicians Admitted
1953 .....	47	402	11.7
1954 .....	33	311	10.6
1956 .....	51	415	12.3
1957 .....	89	635	14.0
1958 .....	54	394	13.7
1959 .....	58	439	13.2
1960 .....	52	441	11.8
1961 .....	92	445	20.7
Total .....	476	3,482	13.7

<sup>1</sup> No information available for 1955.

Source: *The Migration of Professional Workers Into and Out of Canada 1940-1960*, Bulletin No. 11, October 1961, Table 6, p. 19, Economics and Research Branch, Department of Labour.

**TABLE 2-9**  
NUMBER AND PER CENT DISTRIBUTION OF NEW REGISTRANTS  
BY GRADUATES OF CANADIAN AND FOREIGN MEDICAL SCHOOLS,  
CANADA AND FOR PROVINCES, 1950-60

Province	New Registrants				Total
	Graduates of Canadian Medical Schools		Graduates of Foreign Medical Schools		
	Number	% of Total	Number	% of Total	
Newfoundland .....	253	27.7	659	72.3	912
Prince Edward Island .....	44	77.2	13	22.8	57
Nova Scotia .....	484	60.3	319	39.7	803
New Brunswick .....	181	83.0	37	17.0	218
Quebec .....	2,949	92.9	224	7.1	3,173
Ontario .....	3,243	67.7	1,550	32.3	4,793
Manitoba .....	501	50.8	485	49.2	986
Saskatchewan .....	506	48.6	536	51.4	1,042
Alberta .....	619	50.7	603	49.3	1,222
British Columbia .....	1,025	70.0	440	30.0	1,465
Canada .....	9,805	66.8	4,866	33.2	14,671

Source: C.M.A. Survey of Provincial Licensing Authorities, December 31, 1960; C.M.A. Brief on *Future Requirements for Physicians in Canada*, submitted to the Royal Commission on Health Services, October 27, 1960, Appendix A, Tables A<sub>2</sub> and A<sub>3</sub>, p. 20.

*d. New Registrants of Foreign Medical Schools*

The survey of the provincial licensing authorities conducted by the Canadian Medical Association in 1961 provides revealing information on the importance of immigrant physicians in the over-all and provincial supply of physicians during the decade of 1950-60. The number of foreign-trained physicians issued licences to practise in this country increased markedly in that decade.

It appears that out of nearly 15,000 newly registered physicians in Canada during the years 1950-60, about one-third were immigrant doctors. However, some of the immigrant physicians register in more than one province and hence there is some duplication of immigrant doctor registrations. Of the Atlantic Provinces, Newfoundland relied on foreign-trained physicians to the extent of three-quarters of all new registrants, Nova Scotia over one-third, while the other two provinces in that region were less dependent on this source of doctors supply. All three Prairie Provinces were similar in their dependence on immigrant physicians to the extent of about one-half of their additions to the medical manpower. Ontario and British Columbia relied on foreign-trained doctors to the extent of approximately one-third. Presumably because of language differences the Province of Quebec did not attract immigrant physicians.

Table 2-10 shows the percentage share of additions to Canadian medical manpower attributable to foreign medical graduates.

Table 2-10 indicates that the proportion of immigrant physicians relative to the total number of new registrants of the medical profession has

TABLE 2-10

RATIOS OF FOREIGN MEDICAL SCHOOL GRADUATES TO THE TOTAL LICENTIATES REPRESENTING ADDITIONS TO THE MEDICAL MANPOWER, 1950-60

Year	Annual Licentiate Representing Additions to the Medical Manpower	Additions Representing Graduates of Foreign Medical Schools	Percentage of Additions Attributable to Foreign Medical Graduates
1950 .....	1,044	196	18.8
1951 .....	1,163	261	22.4
1952 .....	1,256	339	27.0
1953 .....	1,292	393	30.4
1954 .....	1,421	488	34.3
1955 .....	1,401	447	31.9
1956 .....	1,405	496	35.3
1957 .....	1,473	582	39.5
1958 .....	1,376	557	40.5
1959 .....	1,397	586	41.9
1960 .....	1,443	521	36.1
Total .....	14,671	4,866	33.2

shown a striking annual increase during the period under examination. In 1950, approximately 1,000 newly registered physicians were added; of these about 200 or one-fifth were graduated from foreign medical schools. In 1960, almost 1,500 were added to the medical profession and immigrants accounted for more than one-third.

The heavy dependence on foreign-trained physicians becomes even more striking when a comparison is made between new registrants, immigrant physicians and the output of Canadian medical schools. This is shown in Table 2-11.

**TABLE 2-11**  
NEW REGISTRANTS, GRADUATES OF FOREIGN SCHOOLS AND OUTPUT OF  
CANADIAN MEDICAL SCHOOLS COMPARED, 1950-60

Year	Canadian Medical Graduates	New Registrants, Graduates of Foreign Medical Schools	
		Number	Per Cent of Canadian Graduates
1950 .....	791	196	24.8
1951 .....	858	261	30.4
1952 .....	783	339	43.3
1953 .....	825	393	47.6
1954 .....	896	488	54.5
1955 .....	894	447	50.0
1956 .....	816	496	60.8
1957 .....	893	582	65.2
1958 .....	836	557	66.6
1959 .....	859	586	68.2
1960 .....	863	521	60.4
Total .....	9,314	4,866	52.2

Over the years 1950 to 1960, the immigrant physicians constituted slightly more than half of the total output of graduates of Canadian medical schools. This proportion is even higher if an allowance is made for the fact that approximately 10.0 per cent of Canadian medical graduates were from foreign lands and they would not likely remain in this country. It should be pointed out that to an unknown extent the figures of immigrant doctors' registration are inflated for various reasons. One of these is that the Royal College of Physicians and Surgeons of Canada accepts, for its certification examinations, only physicians who are licensed to practise in one of the Provinces of Canada. This has led to foreigners' registration in one of the provinces with no particular desire to practise there. A number of graduates from medical schools in China, Formosa, the Phillipines and Malaya come to Canada for the purpose of obtaining a Commonwealth qualification such as the Certificate of the Medical Council of Canada in order to obtain registration with the Medical Council of Hong Kong.

TABLE 2-12  
EXAMINATION RESULTS OF THE MEDICAL COUNCIL OF CANADA, BY COUNTRY WHERE QUALIFIED, 1945-61

Country Where Qualified	Number of Candidates	Results of Examinations											
		Failure		Partial Credit		Pass		No.	%	No.	%		
		No.	%	No.	%	No.	%						
Canada.....	10,464	—	9	—	0.1	—	469	—	4.5	—	9,986	—	95.4
United Kingdom & Eire.....	1,680	—	24	—	1.4	—	195	—	11.6	—	1,461	—	87.0
United Kingdom.....	1,457	17	—	1.2	—	148	—	10.2	—	1,292	—	88.7	—
Republic of Ireland.....	223	7	—	3.1	—	47	—	21.1	—	169	—	75.8	—
British Commonwealth.....	118	—	—	—	—	—	14	—	11.9	—	104	—	88.1
United States.....	429	—	12	—	2.8	—	117	—	27.3	—	300	—	69.9
Other Countries.....	2,740	—	392	—	14.3	—	889	—	32.8	—	1,449	—	52.9
Austria.....	243	32	—	13.2	—	83	—	34.2	—	128	—	52.7	—
China.....	195	28	—	14.4	—	68	—	34.9	—	95	—	48.7	—
Czechoslovakia.....	104	17	—	16.3	—	39	—	37.5	—	48	—	46.2	—
France.....	88	2	—	2.3	—	17	—	19.3	—	69	—	78.4	—
Germany.....	501	61	—	12.2	—	165	—	32.9	—	275	—	54.9	—
Hungary.....	356	50	—	14.0	—	117	—	32.9	—	189	—	53.1	—
Italy.....	164	35	—	21.3	—	57	—	34.8	—	72	—	43.9	—
Netherlands.....	178	8	—	4.5	—	51	—	28.7	—	119	—	66.9	—
Poland.....	177	35	—	19.8	—	62	—	35.0	—	79	—	44.6	—
Switzerland.....	79	2	—	2.5	—	26	—	32.9	—	51	—	64.6	—
U.S.S.R. ....	61	19	—	31.1	—	22	—	36.1	—	20	—	32.8	—
Others.....	594	102	—	17.2	—	194	—	32.7	—	298	—	50.2	—

Source: Computed from the files and *Annual Announcements* of The Medical Council of Canada.

Notes: Examination includes five subjects.  
“Failure” — failing in more than two subjects; requires re-examination.  
“Partial Credit” — failing in not more than two subjects; candidates receive credit for the subject, passed and they must pass the remaining subjects later.  
“Pass” — passing in all subjects previously failed.

This table does not distinguish fresh candidates from those undergoing re-examination.

This analysis raises a question with serious educational and political implications. Is it really proper and in the national interest for a country to become progressively dependant for the supply of medical manpower upon graduates of foreign medical schools? There now seems to be a slow falling off in medical immigration, and if the present physician-population ratio is to be maintained, more medical students must be trained in Canada.

*e. Examination Results of the Medical Council of Canada*

The records of the examinations of the Medical Council of Canada during the post-war years, 1945 to 1961, have been examined to show the failure rates of graduates of Canadian and foreign medical schools. The Council examines professionally persons sponsored by provincial medical councils and certified by them as eligible for examination. This examination, if successful, leads to enrolment on the Canadian Medical Register as Licentiate of the Medical Council of Canada and consequently eligibility for registration as a doctor in the sponsoring province. Thus the Council protects the public by ensuring medical competence and assists the immigrant physicians to achieve the necessary qualifications.

Table 2-12 illustrates the results of these examinations of Canadian and foreign-trained candidates, by country where qualified.

**5. U.S. Physicians who Graduated from Canadian Medical Schools.**

Most of the data concerning American physicians who graduated from Canadian medical school, have been obtained from the master files of the Circulation and Records Department of the American Medical Association, as of April, 1962.

At that date there were 5,718 American doctors, about 2.0 per cent of the total medical manpower in the United States, who have received their training in Canada. Out of this total, there were 3,125 Canadian-born and trained doctors. This figure of emigrant physicians constitutes approximately 15.0 per cent of the current medical manpower in Canada or the four-year output of graduates of all the medical schools in this country.

There were 1,781 American-born physicians who completed their basic medical education in Canada, and 456 doctors trained in Canada but born outside Canada. In addition, there were 356 physicians whose country of birth is not given. Most of the foreign-born doctors who were trained in Canada were at one time, presumably, immigrant physicians in this country. This figure of 456 is relatively small when one considers that during the years, 1950-60, there were 4,866 immigrant physicians registered by the provincial licensing authorities in Canada. In fact, the immigrant physicians who left Canada for the United States constitute less than 10.0 per cent of the total figure of immigrant physicians in this country. This percentage is lower than that of the Canadian-born physicians who emigrated to the U.S.A.

*a. Movement of U.S. Physicians from Canada*

Table 2-13, which records the distribution of the U.S. physicians, trained in Canada, by years since first licensed to practise medicine in the United States, indicates roughly the periods during which they left this country for the United States.

TABLE 2-13  
DISTRIBUTION OF U.S. PHYSICIANS TRAINED IN CANADA, BY YEARS  
SINCE FIRST LICENSED IN THE U.S.A., 1962

Years Since First Licensed in U.S.	Number and Per Cent Distribution and Country of Birth									
	Canada		U.S.A.		Other Countries		Country Not Given		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less Than 5 .....	253	8.1	237	13.3	43	9.4	7	2.0	540	9.4
5-9 .....	315	10.1	224	12.6	41	9.0	55	15.4	635	11.1
10-14 .....	400	12.8	148	8.3	46	10.1	16	4.5	610	10.7
15-19 .....	297	9.5	199	11.2	29	6.4	6	1.7	531	9.3
20-24 .....	240	7.6	302	17.0	28	6.1	3	0.8	573	10.0
25-29 .....	230	7.4	224	12.6	34	7.5	—	—	488	8.5
30-34 .....	245	7.8	133	7.4	51	11.2	7	2.0	436	7.6
35-39 .....	430	13.8	73	4.1	69	15.1	33	9.3	605	10.6
40 and over .....	279	8.9	53	3.0	37	8.1	92	25.8	461	8.1
Not Specified .....	436	14.0	188	10.5	78	17.1	137	38.5	839	14.7
Total .....	3,125	100.0	1,781	100.0	456	100.0	356	100.0	5,718	100.0

Source: A.M.A., Circulation and Records Department, Chicago, April 24, 1962.

As for Canadian-born doctors, it appears from Table 2-13 that there was a relatively stable outflow of these doctors from Canada during the last forty years, although there was a somewhat larger emigration of 400 Canadian doctors in the late 1940's. Since then their number has slightly decreased. On the other hand, the number of American-born doctors who were trained in Canada has steadily increased during the post-war period. The above table also reveals that their number reached a peak during the "Great Depression" of the 1930's. As for the U.S. foreign-born physicians who received their medical qualifications in Canada, their number is rather insignificant and it has been constant during the post-war years.

*b. Age Distribution*

Table 2-14 provides a distribution of the United States physicians, trained in Canada, by age group.

The median age of the Canadian-born physicians is, for practical purposes, almost the same as that of the total physician population in Canada and that of the American-born doctors, who, after graduating from Canadian medical schools,

left for the United States. About half of the Canadian-born physicians are below the age of 45 years, the age when they are capable of carrying the heaviest patient-load. It would appear then that there is no particular evidence that only young Canadian physicians emigrate to our neighbour in the South. Foreign-born physicians, who were trained in Canada, show a slightly higher median age because of the fact that it took some years before they obtained the necessary medical qualifications in Canada prior to their departure for the United States.

TABLE 2-14

DISTRIBUTION OF UNITED STATES PHYSICIANS, TRAINED IN CANADA BY AGE GROUP AND COUNTRY OF BIRTH

Age Group	Number and Per Cent Distribution and Country of Birth									
	Canada		U.S.A.		Other Countries		Not Given		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Under 25 .....	3	0.1	—	—	—	—	—	—	3	0.1
25-34 .....	787	25.2	458	25.7	99	21.7	164	46.1	1,508	26.4
35-44 .....	761	24.4	348	19.5	104	22.8	49	13.8	1,262	22.1
45-54 .....	519	16.6	554	31.1	66	14.5	9	2.5	1,148	20.1
55-64 .....	673	21.5	322	18.1	114	25.0	36	10.1	1,145	20.0
65-69 .....	207	6.6	51	2.9	43	9.4	28	7.9	329	5.7
70 & Over .....	175	5.6	48	2.7	30	6.6	70	19.6	323	5.6
Total .....	3,125	100.0	1,781	100.0	456	100.0	356	100.0	5,718	100.0
Median Age ...	45.2		46.5		48.8		37.9		45.8	

Source: A.M.A., Circulation and Records Department, Chicago, April 24, 1962.

### c. Distribution by Sex

Table 2-15 shows the distribution of these physicians by sex:

TABLE 2-15

DISTRIBUTION OF UNITED STATES PHYSICIANS TRAINED IN CANADA BY SEX

Country of Birth	Number and Per Cent Distribution				
	Male		Female		Total
	Number	%	Number	%	Number
Canada .....	2,926	93.6	199	6.4	3,125
U.S.A. ....	1,708	95.9	73	4.1	1,781
Other Countries .....	415	91.0	41	9.0	456
Country Not Given .....	346	97.2	10	2.8	356
Total .....	5,395	94.4	323	5.6	5,718

Source: A.M.A., Circulation and Records Department, Chicago, April 24, 1962.



Canadian-born women physicians accounted for 6.4 per cent of the total number of Canadian-born emigrant physicians to the U.S.A. This percentage is almost identical with the 6.6 per cent that the female medical graduates accounted for in the total output of Canadian medical schools during the period 1947-48 to 1960-61. Evidently, sex is no barrier in the emigration of physicians from Canada. A slightly higher percentage of female physicians, born outside Canada but trained in this country, is due to the fact that immigrant physicians in Canada show also a relatively higher proportion of women doctors.

#### *d. Type of Employment*

Appendix 2-2 illustrates the distribution of physicians by the type of practice and by sex. A summary of this is given in Table 2-16.

It is noticeable that a high proportion of the American physicians trained in Canada engaged in specialty practice or were being trained as residents and fellows in some fields of medical specialization. This proportion is higher than that for medical manpower in Canada.

TABLE 2-16  
DISTRIBUTION OF UNITED STATES PHYSICIANS TRAINED IN CANADA,  
BY TYPE OF PRACTICE

Type of Practice <sup>1</sup>	Number and Per Cent Distribution and Country of Birth									
	Canada		U.S.A.		Other Countries		Not Given		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
No Specification ...	8	0.3	5	0.3	2	0.4	—	—	15	0.3
Full-time Specialty Practice .....	1,690	54.1	1,101	61.8	227	49.8	89	25.0	3,107	54.3
Part-time Specialty Practice .....	120	3.8	106	6.0	13	2.9	6	1.7	245	4.3
Intern .....	53	1.7	61	3.4	22	4.8	2	0.6	138	2.4
Resident or Fellow ..	543	17.4	227	12.7	75	16.4	204	57.3	1,049	18.3
Other Full-time Staff in Hospital ..	300	9.6	148	8.3	57	12.5	14	3.9	519	10.1
Full-time Medical School Faculty ...	90	2.9	29	1.6	11	2.4	1	0.3	131	2.3
Administrative Medicine .....	29	0.9	13	0.7	6	1.3	1	0.3	49	0.9
Preventive Medicine ..	106	3.4	32	1.8	14	3.1	4	1.1	156	2.7
Research .....	41	1.3	17	1.0	6	1.3	1	0.3	65	1.1
Retired .....	105	3.7	26	1.5	16	3.5	32	9.0	179	3.1
Not in Practice ....	40	1.3	16	0.9	7	1.5	2	0.6	65	1.1
Total .....	3,125	100.0	1,781	100.0	456	100.0	356	100.0	5,718	100.0

<sup>1</sup> These figures include 967 general practitioners (Canada — 457; U.S.A. — 398; Other Countries — 73; and Country Not Given — 39) who were not shown separately.

Source: A.M.A., Circulation and Records Department, April 24, 1962.

Approximately one-sixth of the total of Canadian-born and educated physicians in the U.S.A. served their internship and residency in that country. Most of them have a non-immigrant status. It is difficult to assess, however, to what extent this training in the United States is responsible for attracting Canadian physicians to remain permanently in that country. It is of interest to observe from Table 2-17 that the number of Canadian interns and residents trained in the U.S. hospitals has remained substantial throughout the years:

**TABLE 2-17**  
CANADIAN PHYSICIANS TRAINING IN THE UNITED STATES HOSPITALS  
1954-1962<sup>1</sup>

Year	Interns	Residents	Total
1954-55 .....	—	—	520
1955-56 .....	44	540	584
1956-57 .....	60	516	576
1957-58 .....	66	469	535
1958-59 .....	50	513	563
1959-60 .....	52	487	539
1960-61 .....	75	583	658
1961-62 .....	67	659	726

<sup>1</sup> Non-immigrant status.

Source: *Open Doors Reports*, the Institute of International Education, New York, U.S.A.

There has been a steadily increasing outflow of Canadian physicians into the United States medical school faculties, while the number of American doctors teaching in Canadian medical schools is almost nil, probably due to salary differentials, inadequate research facilities, and licence problems. This can be seen from Table 2-18.

**TABLE 2-18**  
CANADIAN PHYSICIANS IN UNITED STATES MEDICAL SCHOOLS AND AMERICAN  
PHYSICIANS TEACHING IN CANADA, 1955-62

Year	Canadian Physicians Teaching in the U.S.A.	American Physicians Teaching in Canada
1955-56 .....	12	2
1956-57 .....	15	1
1957-58 .....	20	—
1958-59 .....	34	—
1959-60 .....	32	—
1960-61 .....	69	1
1961-62 .....	72	n. a.

Source: *Open Doors Reports*, the Institute of International Education, New York, U.S.A.

### e. Distribution of Specialists

Appendix 2-3 indicates the number and per cent distribution of the physicians by specialty practised.

Out of 3,125 Canadian-born physicians, 2,364 were classified as specialists. The largest number were in the following specialties: Internal Medicine (352), Psychiatry (349), General Surgery (334), Obstetrics and Gynaecology (209), Anaesthesiology (148), General Paediatrics (126), Pathology (125), Ophthalmology (114), Radiology (108), and Otolaryngology (104).

Out of 1,781 American-born physicians who were trained in Canada, 1,222 were practising as specialists. Their pattern of specialization follows roughly that of Canadian-born physicians. Approximately one-half of U.S. foreign-born doctors who received training in Canada have been classified as specialists.

Out of the total of 5,718 U.S. physicians who graduated from Canadian medical schools, excluding general practitioners (967), and those who retired or are not in practice (578), 4,173 were practising specialties. It is evident that for economic and other reasons the United States attracts mainly specialists.

### f. Source of Medical Education Received in Canada

Appendix 2-4 illustrates in detail where the U.S. physicians received their basis medical education in Canada and the years since graduation. Some aspects of this problem are illustrated in Table 2-19.

TABLE 2-19

DISTRIBUTION OF U.S. PHYSICIANS, TRAINED IN CANADA, BY COUNTRY OF BIRTH AND PLACE OF MEDICAL EDUCATION RECEIVED IN CANADA, APRIL 1962

Medical School	Number and Per Cent Distribution of Physicians and Country of Birth							
	Canada		U.S.A.		Other Countries		Country Not Given	
	No.	%	No.	%	No.	%	No.	%
Dalhousie .....	148	4.7	116	6.5	32	7.1	14	3.9
Laval .....	117	3.8	113	6.3	15	3.3	19	5.4
Montreal .....	112	3.6	58	3.3	20	4.4	21	5.9
McGill .....	580	18.6	1,121	62.9	159	34.9	45	12.6
Ottawa .....	140	4.5	74	4.2	14	3.1	7	2.0
Queen's .....	276	8.8	71	4.0	28	6.1	95	26.8
Toronto .....	907	29.0	85	4.8	104	22.8	65	18.4
Western Ontario .....	248	7.9	79	4.4	24	5.3	27	7.6
Manitoba .....	360	11.5	32	1.8	36	7.9	27	7.6
Saskatchewan .....	21	0.7	2	0.1	1	0.2	1	0.3
Alberta .....	168	5.4	21	1.2	10	2.2	20	5.6
British Columbia .....	48	1.5	9	0.5	13	2.7	14	3.9
Total .....	3,125	100.0	1,781	100.0	456	100.0	356	100.0

Source: A.M.A., Circulation and Records Department, April 24, 1962.

The medical schools of the University of Toronto and McGill University, which have the highest output of medical graduates in Canada, were the two schools from which almost half the Canadian-born physicians who left for the United States, graduated. Because of the language barrier the medical schools of the University of Montreal and Laval University have supplied a relatively small number of Canadian-born physicians for the United States. The same observations apply to these medical schools with respect to training of foreign-born physicians who emigrated to the U.S.A. The above statistics indicate that about two-thirds of American-born physicians trained in this country were graduates of McGill University.

Table 2-20 examines the distribution of physicians by years since graduation from Canadian medical schools.

**TABLE 2-20**  
DISTRIBUTION OF U.S. PHYSICIANS TRAINED IN CANADA  
BY COUNTRY OF BIRTH AND YEARS SINCE GRADUATION

Graduation	Number and Per Cent Distribution and Country of Birth							
	Canada		U.S.A.		Other Countries		Country Not Given	
	No.	%	No.	%	No.	%	No.	%
Less than 5 .....	450	14.4	303	17.0	78	17.1	25	7.0
5-9 .....	483	15.4	282	15.8	64	14.0	160	44.9
10-14 .....	374	12.0	112	6.3	45	9.9	24	6.8
15-19 .....	315	10.0	191	10.8	39	8.6	10	2.8
20-24 .....	250	8.0	329	18.5	30	6.6	2	0.6
25-29 .....	225	7.2	259	14.5	27	5.9	2	0.6
30-34 .....	270	8.8	160	9.0	57	12.5	5	1.4
35-39 .....	449	14.4	84	4.7	67	14.7	29	8.1
40 and Over .....	309	9.8	61	3.4	49	10.7	99	27.8
Total .....	3,125	100.0	1,781	100.0	456	100.0	356	100.0

Source: A.M.A., Circulation and Records Department, April 24, 1962.

Table 2-20 suggests that there has been a relatively stable outflow of Canadian-born medical graduates into the United States, with a somewhat accelerated rate during the post-war years. This latter trend is in contrast with the previously established finding of decreasing registration of Canadian-born and educated doctors in U.S.A. during the last ten years. This may be explained by the growing number of Canadian interns and residents going to the United States and who, after completing their training, return to Canada. As for the American-born physicians who have studied in Canada, and who presumably after graduation leave for the United States, there has been a steadily increasing number of them since the 1920's, except during the years of the Second World War.

*g. Registration Policies for Citizens of Canada by  
Licensing Boards in the United States*

Medical licensure in the United States, as in Canada, is a "state right", i.e., it is entirely under the jurisdiction of the state governments. The power to license physicians is exercised through the medical licensing board of each state. In addition, there is the National Board of Medical Examiners, corresponding in some ways to the Medical Council of Canada, which also issues certificates after special examination. The National Board admits to its examinations only students from approved medical schools in the United States and Canada. This Board is not, however, a licensing body.

Appendix 2-5 highlights the principal features and requirements for licensure of Canadian physicians and shows the location of the U.S. physicians, who graduated from Canadian medical schools, as of mid-1959.

There are 55 legally constituted medical examining boards, which have an authority to issue medical licences.

All but two (Alabama and Illinois) state medical boards accept graduates of Canadian medical schools for licensure by written examination on the same basis as graduates of approved medical schools in the United States. Eleven states accept Canadian registration to practise medicine by reciprocity and endorsement of credentials. Some differences exist between state licensing boards with respect to American citizenship requirements for candidates from Canada. Twenty states require full U.S. citizenship, 18 states require a candidate to declare his intention of becoming an American citizen (two of which issue a temporary licence renewable for five years or until full citizenship is obtained) and 15 state licensing boards have no citizenship requirement.<sup>1</sup>

It is of interest to note that in 1961, out of 198 candidates from medical schools in Canada, 175 passed and 23 or 11.6 per cent failed the state boards' examinations. The percentage of failure for students from the U.S. medical schools was 2.8 per cent. There were no failures among the 75 Canadian candidates who took the examinations in 1961 before the National Board of Medical Examiners.<sup>2</sup>

## 6. Deaths of Canadian Physicians

An analysis of deaths of physicians has a direct bearing on the problem of replacement in the profession and it may indicate the extent to which physicians, while protecting the health of their patients, have not succeeded in protecting themselves. The untimely death of physicians constitutes a considerable social and economic loss to a community because of the large investment in their education.

<sup>1</sup> "Medical Licensure Statistics," *The Journal of the A.M.A.*, Vol. 180, June 9, 1962, p. 856.

<sup>2</sup> *Ibid.*, p. 848.

TABLE 2-21  
FIVE-YEAR ANNUAL AVERAGE NUMBER AND PER CENT DISTRIBUTION OF DEATHS OF CANADIAN PHYSICIANS, 1926-61,  
AND OF CANADIAN MALE POPULATION OF 20 YEARS AND OVER, 1941-61, BY AGE GROUP AT DEATH

Age Group	1926-30			1931-35			1936-40			1941-45			1946-50			1951-55			1955-61 <sup>1</sup>		
	Physi- cians			Physi- cians			Physi- cians			Physi- cians			Physi- cians			Physi- cians			Physi- cians		
	No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%	
20-24 .....	0.2	0.1		0.2	0.1		—	—		—	—		0.2	0.1		—	—		—	—	
25-34 .....	8.8	5.2		8.4	4.4		5.8	2.7		3.8	1.8		6.4	2.7		3.8	1.7		3.8	1.5	
35-44 .....	14.2	8.3		11.6	6.1		12.0	5.7		14.0	6.2		12.8	5.5		10.8	4.9		15.0	5.8	
45-54 .....	29.8	17.5		26.0	13.7		25.8	12.2		25.8	11.4		29.2	12.5		23.6	10.7		29.5	11.4	
55-64 .....	42.0	24.7		49.8	26.3		56.4	26.8		49.0	21.6		47.6	20.4		45.2	20.4		50.7	19.7	
65-74 .....	42.6	25.1		54.4	28.7		59.2	28.1		73.4	32.3		73.2	31.3		65.4	29.6		68.5	26.6	
75 and over .....	32.4	19.1		39.2	20.7		51.6	24.5		60.6	26.7		64.4	27.5		72.4	32.7		90.2	35.0	
Total .....	170.0	100.0		189.6	100.0		210.8	100.0		226.6	100.0		233.8	100.0		221.2	100.0		257.7	100.0	

<sup>1</sup> Six-year annual average.

Source: Physicians — 1926-1945, *Vital Statistics* references, D.B.S.,  
1946-1954, Physicians Register, C.M.A., and *News Note* sources,  
1955-1961, Canadian Medical Directory's listings and bulletins. Original data have been provided by the Research and Statistics  
Division, Department of National Health and Welfare.

Male Population: D.B.S., Health and Welfare Division, Vital Statistics Section.

*a. Deaths of Physicians by Age Group at Death*

In order to show the reduction in the medical manpower each year through death, the recorded number and percentage distribution of deaths, by age groups at death, for the years 1926-61 inclusive, are set out in Appendix 2-6 and Appendix 2-7 respectively.

Table 2-21 summarizes the statistical data of the above appendices and provides a comparison with the Canadian male population of 20 years and over.

The physicians, like the population in general, now live longer than forty or fifty years ago. Consequently, with the aging physician population, the percentage of deaths in the younger age groups, 20-24 and 45-54, has dropped in most of the five-year periods during the years under examination, while in the older age groups, 65 and over, there has been a rise in the percentage of deaths. This was particularly noticeable in the age group of 75 and over, whose percentage has increased from 19.1 in 1926-30 to 35.0 in 1956-61. The same trend of a rising age at death applies to the male population in general.

The average age at death of physicians has been steadily increasing from 60.8 years in the period 1926-30 to 66.4 in 1956-61. The latter figure was below the 67.8 years for the male population of 20 years and over during the same period, 1956-61. Thus, an over-all mortality experience of physicians is, by no means, more favourable than that of male population in general. It would appear that the physicians give their patients the same quality of medical care as they receive from their own professional colleagues.

Table 2-21 also reveals that the percentage of deaths of physicians in the lower age groups at death, 20-24 and 25-34, is below that of the male population. This part may reflect better physical conditions and more favourable social and economic status of the physicians as compared with those of male population in general. Later in life, physicians have slightly higher death rates probably because of irregular hours and strain involved in their work.

*b. Death Rates*

Table 2-22 examines the death rates of physicians and male population of 20 years and over during the years 1951-1961.

Once again these data suggest that physicians enjoy no particular advantage in counteracting the law of nature as compared with the male population in general. In fact, the data available indicate a slightly higher death rate of physicians. The eleven-year annual average rate of death per 1,000 physicians amounted to 14.6 persons as compared with 13.4 persons for the male population of 20 years and over in Canada. These data indicate that Canadian medical manpower is reduced by 1.5 per cent per annum, or about 300 new physicians must be provided a year to satisfy the replacement needs of the medical profession. This figure amounts to one-third of our current output of medical graduates in Canada.



**TABLE 2-22**  
**DEATH RATES PER 1,000 CANADIAN PHYSICIANS AND MALE POPULATION**  
**OF THE AGE OF 20 AND OVER, 1951-61**

Year	Estimated Number of Doctors <sup>(1)</sup> (Dec. 31)	Number of Deaths of Physicians	Death Rates per 1,000	
			Physicians	Male Population of 20 Years and over <sup>(2)</sup>
1951 (June).....	14,325	226	15.8	13.6
1952.....	15,135	236	15.6	13.4
1953.....	15,829	254	16.1	13.4
1954.....	16,431	249	15.2	13.0
1955.....	17,221	277	16.1	13.2
1956.....	17,871	295	16.5	13.3
1957.....	18,523	264	14.3	13.6
1958.....	19,096	250	13.1	13.3
1959.....	19,800	221	11.2	13.5
1960.....	20,517	252	12.3	13.5
1961.....	21,290	309	14.5	13.5
Average .....		257.5	14.6	13.4

Sources: <sup>(1)</sup> C.M.A.'s Survey of Provincial Licensing Authorities except for 1951 and 1961, which were based on Census data;

<sup>(2)</sup> D.B.S., Health and Welfare Division, Vital Statistics Section.

### c. Causes of Death Among Physicians

The principal causes of death among male population of 20 years and over in Canada include cardio-vascular disease, cancer, accidents and violence, influenza, bronchitis, pneumonia, tuberculosis, cirrhosis of liver, and diabetes mellitus.<sup>1</sup> The order of importance of these diseases varies with age group.

American studies<sup>2</sup> show that the leading causes of death among physicians are somewhat different from those among the male population. Thus, one author suggests that physicians have high mortality as compared with males from: leukemia, biliary calculi, gall bladder disease, cerebral hemorrhage, diseases of the heart and coronary arteries, arteriosclerosis, cirrhosis of liver, pneumonia and influenza, and diabetes mellitus. Compared with the male population<sup>3</sup> the physicians have lower death rates from most infectious diseases, surgical conditions, cancer, hernia and accidents.

The differences in causes of death among physicians compared with those of the general male population may be due to the physicians' special knowledge

<sup>1</sup> D.B.S., Vital Statistics 1960, Table L., p. 35

<sup>2</sup> Frank G. Dickinson and Everett L. Walker, "The Leading Causes of Death Among Physicians," *The Journal of the A.M.A.*, Vol. 139, April 23, 1949, pp. 1129-31; Louis I. Dublin and Mortimer Spiegelman, *Longevity and Mortality of American Physicians, 1938-1942*, *The Journal of the A.M.A.*, Vol. 134, August 9, 1947, pp. 1211-15; and Louis I. Dublin, Mortimer Spiegelman and Roscoe G. Leland, "Longevity and Mortality of Physicians," *Post-graduate medicine*, Vol. 2, September 1947, pp. 188-202.

<sup>3</sup> Dublin, Spiegelman and Leland, *op. cit.*, p. 193.

and skills, early recognition of some diseases, like tuberculosis or cancer, their willingness to follow the therapeutic procedures required, and also to certain occupational hazards, no doubt. This experience of physicians emphasizes the importance of the early diagnosis of an illness for the public in general. A comprehensive study of the leading causes of death among Canadian physicians may lead to the discovery of effective preventive measures.

## 7. Retirement of Physicians

It is difficult to establish the total number of physicians, who have retired from "active" medical practice, and to indicate, even approximately, an annual rate of retirement from the medical profession. A doctor may retire partially and still continue to practise for many years on a part-time basis; he may retire temporarily; or he may pursue other than medical activities. In addition, the reporting of retirement is often delayed because though a doctor is not "active" he has not revoked his provincial registration. Besides, the number of doctors retiring depends on factors such as economic conditions, the secular trend towards a larger proportion of older physicians, and a deduction of contributions made to registered pension plans for income tax purposes.

Probably, the age of 65 may be considered to be a normal retirement age. Thus, approximately, the proportion of physicians in that age group to the total physician population would indicate this retired group at a particular point of time. Whatever the proportion may be, there is some statistical evidence which suggests that 6.0 per cent of the total physicians in Canada may constitute a group of retired physicians.<sup>1</sup>

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<sup>1</sup> Canadian Medical Procurement and Assignment Board in its "Report of the National Health survey" has indicated that out of a total of 9,244 physicians in civilian life in Canada in March, 1943, 615 or 6.7 per cent were retired; Department of National Health and Welfare in its 1946 and 1947 "Survey of Physicians in Canada" has reported 5.0 and 5.6 per cent respectively; and, on a provincial basis only, the data provided by the Provincial Medical Board of Nova Scotia in its brief to the Royal Commission on Health Services, would indicate a figure of 7.1 per cent as of mid-1961.

## Canadian Medical Graduates and Students

As medical schools are the principal source of production of doctors, their activities from the quantitative viewpoint are important in an analysis of the past trends in enrolment of students, in output of medical manpower and in projecting future supply of medical graduates in relation to the size of population and other factors. In general, the number of physicians available at any time depends primarily upon the balance between the number of medical graduates each year and the loss in medical manpower due to retirement, migration and death. It should be noted that the number of medical graduates fluctuates from year to year because the number of students entering medical schools at any time is influenced by social, economic and other considerations. Consequently, the current number of medical graduates largely depends upon these factors as they operated when these graduates entered medical school.

### 1. Graduates of Canadian Medical Schools

#### *a. Trends in Output of Medical Schools*

Appendix 3-1 shows the number and percentage distribution of graduates of Canadian medical schools, by school, during the post-war years, 1944-45 to 1961-62. It should be noted that the University of Ottawa produced its first medical graduates in 1951, the University of British Columbia in 1954 and the University of Saskatchewan in 1957. Appendix 3-2 provides a detailed breakdown of the number of graduates of medical schools for the period 1910 to 1961 and, by sex, for the years 1947-48 to 1960-61.

Table 3-1 indicates the relative output of the twelve medical schools during the post-war years.

During the period under review, the 12 medical schools have supplied 14,146 medical graduates or an average of 785 physicians per annum. The largest contributions to this total have been made by the medical schools of Toronto, McGill, Laval and Montreal.

The average annual output of medical graduates and the corresponding percentages indicate the actual productive capacity per year of the medical schools

**TABLE 3-1**  
**NUMBER AND PER CENT DISTRIBUTION OF GRADUATES**  
**OF CANADIAN MEDICAL SCHOOLS, BY SCHOOL, 1944-45 TO 1961-62**

Medical School	Number of Graduates	Per Cent of Total	Annual Average Output	Per Cent of Total Annual Average Output
Dalhousie .....	847	6.0	50	5.9
Laval .....	1,869	13.2	104	12.1
Montreal .....	1,616	11.4	90	10.6
McGill .....	1,924	13.6	107	12.5
Ottawa .....	544	3.8	45	5.3
Queen's .....	891	6.3	52	6.1
Toronto .....	2,763	19.5	154	18.0
Western Ontario ....	1,019	7.2	57	6.7
Manitoba .....	1,140	8.2	63	7.4
Saskatchewan .....	181	1.3	30	3.5
Alberta .....	894	6.3	50	5.9
British Columbia ...	458	3.2	51	6.0
Canada .....	14,146 (785 annual average)	100.0	853	100.0

Source: Education Issues of the *Journal of the American Medical Association*.

during the post-war years. The same four medical schools show the highest productive capacity.

On the assumption that the medical graduates have located in the regions in which medical schools are situated and ignoring the fact that American and other foreign medical graduates, who completed their training in Canada, left this country, Table 3-1 would indicate that Dalhousie University, serving mainly the Atlantic region, provided 6.0 per cent of the total medical graduates in Canada during the period of 1945 to 1962. With an annual average of 5.9 per cent of actual productive capacity of the 12 Canadian medical schools during the same period, it serves the population of this region, which ranged from 9.7 per cent of the total Canadian population in 1945 (excluding Newfoundland's population) to 10.4 per cent in 1962.

The three medical schools (Laval, Montreal and McGill) located in the Province of Quebec provided 38.2 per cent of the total medical graduates during the period under review and with an annual average of 35.2 per cent productive capacity, served the population of the province, which ranged from 29.8 per cent of the total population of Canada in 1945 to 28.8 per cent in 1962.

The four medical schools (Ottawa, Queen's, Toronto and Western Ontario) located in Ontario provided 36.8 per cent of the total medical graduates during the years 1945 to 1962 and with an annual average productive capacity of 36.1 per cent, met the demand for new physicians of the province, which ranged

from 33.1 per cent in 1945 to 34.2 per cent in 1962 of the total population of the country.

The three medical schools in the Prairie Provinces provided 16.0 per cent of the total medical graduates of Canada during the years 1945 to 1962 and with an annual average productive capacity of 16.8 per cent, served the population of Manitoba, Saskatchewan and Alberta, which ranged from 19.5 per cent in 1945 to 17.5 per cent in 1962, of the total Canadian population.

Finally, the medical school of the University of British Columbia provided 3.2 per cent of the total medical graduates of Canada and with an annual average of 6.0 per cent of the actual productive capacity of medical manpower in Canada, met the demand for new physicians of the population of British Columbia, Yukon and Northwest Territories, which ranged from 8.0 per cent in 1945 to 9.1 per cent in 1962, of the total Canadian population.

This analysis would suggest that the Atlantic Provinces and British Columbia have experienced an inadequate supply of medical graduates from the medical schools located within their boundaries. This implies either the necessity of having a less favourable physician-population ratio or having this situation ameliorated through a greater reliance on immigrant physicians or dependence on a supply of physicians from other regions of Canada. These observations apply also to the Prairie Provinces though to a lesser extent.

Partially coincident with a population increase from 7.2 millions in 1911 to 18.5 millions in 1962, the annual output of graduates of 8 medical schools in Canada in 1911 numbered about 300, and in 1962 from 12 medical schools about 850. During the last few years our medical schools have been producing, relatively to the size of population, almost the same number of doctors as that produced 50 years ago when the effective demand for medical services was determined by a lower standard of living and by the lower status of medical science. It seems that the production of medical graduates is related to the physical and financial capacity of existing medical schools rather than to the requirements of our society. The association of Canadian Medical Colleges finds that "... the medical schools of Canada do not graduate the number of physicians necessary to provide adequate medical service for our citizens, and that there is no current provision of increasing the volume of graduates as the population expands."<sup>1</sup>

Table 3-2 shows the number of medical graduates of Canada per 100,000 population over the period of 1911 to 1962.

In 1943 the medical schools accelerated their time-tables to meet the war-time demand for more physicians. Under this accelerated teaching programme each medical school, on the average, graduated one class every eight months. The speed-up plan did not increase the total student registration because the schools were still enrolling one first-year class in each calendar year, but it did produce trained doctors in a shorter period of time. The growing demand for doctors in the

<sup>1</sup> A brief from the Association of Canadian Medical Colleges, April 1962, submitted to the Royal Commission on Health Services, p. 1.

**TABLE 3-2**  
**GRADUATES OF CANADIAN MEDICAL SCHOOLS**  
**PER 100,000 POPULATION, 1911-1962**

Year	Medical Graduates	Population ( <sup>1</sup> 000)	Medical Graduates per 100,000 Population
1911 .....	307 <sup>1</sup>	7,207 <sup>2</sup>	4.3
1921 .....	364 <sup>1</sup>	8,788 <sup>2</sup>	4.1
1931 .....	475 <sup>1</sup>	10,377 <sup>2</sup>	4.6
1941 <sup>3</sup> .....	562	11,507 <sup>2</sup>	4.9
1942 .....	539	11,637	4.6
1943 .....	496	11,795	4.2
1944 .....	523	11,958	4.4
1945 .....	769	12,102	6.4
1946 .....	513	12,283	4.2
1947 .....	567	12,558	4.5
1948 .....	632	12,859	4.9
1949 .....	679	13,447	5.1
1950 .....	791	13,712	5.8
1951 .....	858	14,009 <sup>2</sup>	6.1
1952 .....	783	14,459	5.4
1953 .....	825	14,845	5.6
1954 .....	896	15,287	5.9
1955 .....	894	15,618	5.7
1956 .....	816	16,080	5.1
1957 .....	893	16,610	5.4
1958 .....	836	17,080	4.9
1959 .....	859	17,483	4.9
1960 .....	863	17,870	4.8
1961 .....	834	18,238 <sup>2</sup>	4.6
1962 .....	838	18,570	4.5

<sup>1</sup> Three-year average (including preceding and following year).

<sup>2</sup> Census data: 1942-1950 and 1952-1960 population figures are based on Dominion Bureau of Statistics intercensal estimates of population as at June 1 for the years concerned: *Population Estimates, Age and Sex, September, 1962*, DBS, Census (Demography) Division, Reference Paper, Catalogue No. 91-506.

<sup>3</sup> Medical graduates as reported in Education Issues of the *Journal of the American Medical Association*.

armed forces was facilitated through the introduction of the Army enlistment plan, under which the future medical officers were financially assisted during their medical studies. In 1945 as a result of this programme five medical schools graduated two classes of physicians in one calendar year. In that year there were 6.4 medical graduates per 100,000 population, which was the usual average output of the Canadian medical schools.

Table 3-2 indicates that from 1950 to 1955 the figures of medical graduates per 100,000 population were generally higher than in the preceding and following years. This evident increase in productivity of our medical schools was the result of the backlog of six years of veterans that was imposed on the normal number of graduates during other periods. This would suggest that with the disappearance of this factor, there were not enough young Canadians applying for admission to medical schools in more recent years, i.e., the post-war influx of students subsided in the early 1950's.

#### *b. Female Medical Graduates*

Table 3-3 indicates the number and percentage of female medical graduates in Canada during the pre-war decade 1929-30 to 1939-40 and during the post-war period, 1947-48 to 1960-61.

**TABLE 3-3**  
DISTRIBUTION OF GRADUATES OF CANADIAN MEDICAL SCHOOLS  
BY SEX, 1929-30 TO 1938-39 AND 1947-48 TO 1960-61

Year	Medical Graduates				
	Male	Per cent of Total	Female	Per cent of Total	Total
1929-30 .....	497	95.0	26	5.0	523
1930-31 .....	544	96.8	18	3.2	562
1931-32 .....	528	96.5	19	3.5	547
1932-33 .....	538	95.5	25	4.5	563
1933-34 .....	526	96.1	21	3.9	547
1934-35 .....	453	96.4	17	3.6	470
1935-36 .....	450	95.1	23	4.9	473
1936-37 .....	486	95.7	22	4.3	508
1937-38 .....	477	97.0	15	3.0	492
1938-39 .....	468	94.9	25	5.1	493
1947-48 .....	583	92.2	49	7.8	632
1948-49 .....	621	91.5	58	8.5	679
1949-50 .....	746	94.3	45	5.7	791
1950-51 .....	795	92.7	63	7.3	858
1951-52 .....	747	95.4	36	4.6	783
1952-53 .....	779	94.4	46	5.6	825
1953-54 .....	836	93.3	60	6.7	896
1954-55 .....	835	93.4	59	6.6	894
1955-56 .....	763	93.5	53	6.5	816
1956-57 .....	829	92.8	64	7.2	893
1957-58 .....	793	94.9	43	5.1	836
1958-59 .....	808	94.1	51	5.9	859
1959-60 .....	798	92.5	65	7.5	863
1960-61 .....	771	92.4	63	7.6	834

Sources: Canadian Medical Procurement and Assignment Board, Report of National Health Survey 1945, Appendices 9 and 10.

Education Issues of the *Journal of the American Medical Association*.



During the pre-war decade of 1929–30 to 1938–39, the total number of graduates of Canadian medical schools was 5,178, of which 211 were females. This constituted 4.1 per cent of the total medical graduates. From 1947–48 to 1960–61 there were 11,459 graduates, of which women accounted for 755 or 6.6 per cent.

*c. Country of Residence of Medical Graduates*

A survey of Canadian medical schools conducted by the Royal Commission on Health Services provided some information as to the country of residence at the time of graduation of medical graduates over the period 1948 to 1962. Appendix 3–3 contains detailed statistical data on the number and per cent distribution of medical graduates, Canadian and foreign, by medical school from 1947–48 to 1961–62. An analysis of these data clearly indicates a steady increase in absolute and relative figures of graduates of Canadian medical schools, who came from other countries. Table 3–4 summarizes this finding.

TABLE 3–4  
FIVE-YEAR AVERAGE NUMBER AND PER CENT DISTRIBUTION OF  
GRADUATES OF CANADIAN MEDICAL SCHOOLS WHO CAME FROM  
OTHER COUNTRIES, 1947–48 TO 1961–62

Five-Year Period	Graduates of Canadian Medical Schools who came from Other Countries	
	Average Number	Average per cent of Total Medical Graduates in Canada
1947–48 to 1951–52 .....	37	5.5
1952–53 to 1956–57 .....	74	8.6
1957–58 to 1961–62 .....	105	12.3

This increase in foreign-born Canadian medical graduates from the middle of the 1950's corresponds to a relative decline of Canadian-born students entering medical schools. In other words, the medical schools have filled the existing vacancies with foreign students. Presumably, this trend need not continue provided that there is an increase in applications from Canadian-born candidates.

Table 3–5 shows the extent to which various medical schools in Canada provided education to graduates who came from other countries over the whole period under review.

Out of 12,218 medical graduates of Canadian medical schools during the period from 1948 to 1962, there were 1,078 graduates, or 8.8 per cent of the total who came from other countries, of whom nearly 800 were from the United States. The two French-language medical schools, Laval and Montreal, accounted for a very high proportion of graduates whose country of residence was Canada. Almost half of the graduates who came from other countries received their education at McGill University. The University of Ottawa was next in providing its facilities for foreign graduates.

**TABLE 3-5**  
**NUMBER AND PER CENT DISTRIBUTION OF GRADUATES**  
**OF CANADIAN MEDICAL SCHOOLS, BY COUNTRY OF RESIDENCE**  
**AT THE TIME OF GRADUATION AND BY SCHOOL, 1947-48 TO 1961-62**

Medical School	Country of Residence								
	Canada		U.S.A.		British Commonwealth		Other Countries		
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	Total
Dalhousie .....	694	93.2	27	3.6	24	3.2	—	—	745
Laval .....	1,621	96.9	52	3.1	—	—	—	—	1,673
Montreal .....	1,423	97.9	18	1.2	—	—	13	0.9	1,454
McGill .....	977	59.2	513	31.1	114	6.9	45	2.8	1,649
Ottawa .....	469	85.3	69	12.5	7	1.3	5	0.9	550
Queen's .....	687	94.5	38	5.3	1	0.1	1	0.1	727
Toronto .....	2,222	97.1	29	1.3	33	1.4	4	0.2	2,288
Western Ontario .	863	98.4	14	1.6	—	—	—	—	877
Manitoba .....	812	95.6	9	1.1	28	3.3	—	—	849
Saskatchewan ..	172	94.0	7	3.8	1	0.5	3	1.7	183
Alberta .....	750	99.5	2	0.3	1	0.1	1	0.1	754
British Columbia	450	95.9	9	1.9	9	1.9	1	0.3	469
Canada ...	11,140	91.2	787	6.4	218	1.8	73	0.6	12,218

Source: Survey of Medical Schools by the Royal Commission on Health Services, 1962.

It is generally accepted that foreign graduates do not remain in Canada to practise medicine. On the assumption that a four-year medical course costs a medical school approximately \$12,000 per student, it would appear that Canadian medical schools have spent between \$12.0 to \$15.0 million in training foreign medical graduates over the last 15 years.<sup>1</sup>

## 2. Medical Students

This section is concerned with an analysis of the trends in the enrolment of medical students during the post-war years, 1947-48 to 1961-62. This enrolment is related to the total university student enrolment, total population of Canada and to the population of the University age group, 20-24. It is followed by a discussion of the distribution of medical students by sex and year of course. A special survey of Canadian medical schools provided useful data concerning the geographical source of first-year medical students by province and country of origin.

<sup>1</sup> Briefs from the Faculty of Medicine, Dalhousie University, p. 3, and the C.M.A., British Columbia Division, p. 38, submitted to the Royal Commission on Health Services, reported that medical education, being the costliest of all types of university education, now averages approximately \$3,250 to \$4,000 per year per student. In the above calculation an average figure of \$3,000 per student was taken.

### a. Trends in Student Enrolment

Table 3-6 indicates trends in enrolment of medical students and other university students per 100,000 population in Canada.

**TABLE 3-6**  
MEDICAL STUDENT ENROLMENT AND TOTAL UNIVERSITY STUDENT ENROLMENT  
PER 100,000 POPULATION, CANADA, 1947-48 to 1960-61

Year	Medical Student Enrolment <sup>1</sup>		Total University Student Enrolment		Total University Student Enrolment Minus Medical Student Enrolment		Population '000
	No.	Per 100,000	No.	Per 100,000	No.	Per 100,000	
1947-48 .....	3,100	24.7	78,205	623.1	75,105	598.4	12,551
1948-49 .....	3,233	25.2	74,797	583.3	71,564	558.1	12,823
1949-50 .....	3,278	24.4	68,480	509.3	65,202	484.9	13,447
1950-51 .....	3,489	25.4	63,942	466.3	60,453	440.8	13,712
1951-52 .....	3,458	24.7	59,634	425.7	56,176	401.0	14,009
1952-53 .....	3,444	23.8	59,826	413.8	56,382	390.0	14,459
1953-54 .....	3,643	24.5	60,737	408.9	57,094	384.4	14,845
1954-55 .....	3,589	23.5	64,669	423.0	61,080	399.5	15,287
1955-56 .....	3,651	23.3	68,768	438.0	65,117	414.8	15,698
1956-57 .....	3,655	22.7	72,624	451.6	68,969	428.9	16,081
1957-58 .....	3,686	22.2	80,443	484.3	76,757	462.1	16,610
1958-59 .....	3,668	21.5	88,006	515.3	84,338	493.8	17,080
1959-60 .....	3,549	20.3	94,928	542.9	91,379	522.6	17,483
1960-61 .....	3,508	19.6	105,911	592.7	102,403	573.1	17,870

<sup>1</sup> Excludes pre-medical, postgraduate students and fifth year undergraduate interns (at Dalhousie, Laval, and Montreal).

Source: Medical student enrolment has been computed from the Educational Issues of the *A.M.A. Journal*. Total university student enrolment has been computed from the files of Higher Education Section, Education Division, DBS.

This table indicates that while the number of medical students remained relatively stable around 3,500 during the last decade, the number of medical students per 100,000 population steadily decreased from 25.4 in 1950-51 to 19.6 in 1960-61. Thus the recruitment of medical students did not keep pace with the growing population of Canada. In fact, since 1957-58 the absolute number of medical students has declined although in the last few years there was an increase in the number of students entering medical schools, but it is not possible as yet to determine whether or not this increase represents the beginning of a new trend towards higher registration in our medical schools.<sup>1</sup> However, a noticeable increase in arts and science students, which began some years ago, reached the professional schools in 1960 and 1961. Consequently, one can expect some increase in medical student enrolment in the coming years. The immediate post-war years showed a

<sup>1</sup> First year enrolment has increased from 946 in 1959-60 to 1061 in 1962-63 and 1086 in the 1963-64 academic year.

relatively high ratio of total university student enrolment per 100,000 population. This ratio gradually declined from 623.1 in 1947-48 to 408.9 in 1953-54, but since then it increased very rapidly until in 1960-61 it reached almost the immediate post-war years' level, being 592.7. Taking 1953-54 as a base year, Table 3-7 shows by way of an index of enrolment the trends in medical student registration as contrasted with total university student registration in the period under review.

**TABLE 3-7**  
INDEX OF MEDICAL STUDENT AND TOTAL UNIVERSITY STUDENT ENROLMENT  
(1953-54 = 100)

Year	Medical Student Enrolment	Total University Student Enrolment	Total University Student Enrolment Minus Medical Student Enrolment
1947-48 .....	85.1	128.8	131.6
1948-49 .....	88.8	123.1	125.3
1949-50 .....	90.0	112.8	114.2
1950-51 .....	95.8	105.3	105.9
1951-52 .....	94.9	98.4	98.5
1952-53 .....	94.5	98.5	98.8
1953-54 .....	100.0	100.0	100.0
1954-55 .....	98.5	106.5	107.0
1955-56 .....	100.2	113.2	114.1
1956-57 .....	100.3	119.6	120.8
1957-58 .....	101.2	132.4	134.4
1958-59 .....	100.7	144.9	147.7
1959-60 .....	97.4	156.3	160.1
1960-61 .....	96.3	174.4	179.4

Total university student enrolment increased by almost 75.0 per cent by 1960-61 as compared with the total registration of the university students in 1953-54. Medical student enrolment, however, actually declined being almost 4.0 per cent less than in 1953-54. It appears obvious that a medical career is becoming less attractive to university students. It may be difficult to estimate accurately what the actual number of medical students should be to satisfy the nation's needs for doctors, but, it seems clear that some means must be devised to attract young men and women of suitable intellectual and other characteristics to study medicine. The problem of recruitment of medical students becomes one aspect of the over-all requirement for additional physicians.

Appendix 3-4 indicates the percentage of medical student enrolment to total university student enrolment by sex, for the years 1947-48 to 1960-61. It shows that from 1953-54 this percentage has gradually declined from 6.0 to 3.1 in 1960-61. This decline is particularly pronounced in the case of men. In 1953-54, male medical students accounted for 7.2 per cent of total male university student

enrolment, while in 1960-61 this percentage declined to 4.4. As for female medical students this percentage remained relatively stable, i.e., about 1.5 of the total female university student registration in Canada.

Another way to assess the trends in the registration of medical and total university students is to relate such registration to the population of the university age group, 20-24. Appendix 3-5 shows medical student enrolment and total university student enrolment per 100,000 population of university age group, by sex, for the years 1947-48 to 1960-61. These data are essential in projecting the future supply of medical students in this country.

Enrolment of male and female medical students per 100,000 population of university age group 20-24, decreased from 353.2 in 1947-48 to 328.1 in the 1955-56 academic year and then it has steadily declined, particularly in 1959-60 and 1960-61 to 297.9 in the latter year. There has been, however, some increase in female medical student enrolment. In 1947-48 there were 233 female medical students or 42.3 per 100,000 female population of the university age group and the figures for 1960-61 were 379 and 64.2 respectively. This trend was in line with a general increase in total female university student enrolment, which has increased from 2,573.6 per 100,000 female population of the university age group in 1947-48 to 4,457.9 in 1960-61. As for male medical students their enrolment in 1953-54 amounted to 617.0 per 100,000 total male population of the university age group and it gradually declined to a level below 600 in 1960-61. This trend was in sharp contrast with the enrolment of the total male university students. In 1953-54 there were 8,587 university students per 100,000 male population of the university age group, but in 1960-61 the figure stood at 13,545 persons. These findings confirm the conclusions arrived at relating the enrolment of medical and total university students to the total population in Canada.

#### *b. Distribution of Medical Students by Sex*

Table 3-8 shows the number and per cent distribution of medical students by sex for the years 1947-48 to 1960-61. It confirms a slightly decreasing proportion of male students and increasing proportion of female students. The latter accounted, on the average, for 6.9 per cent of the total number of medical students during the period under review. During the years 1959-60 and 1960-61, the corresponding figures were 8.9 and 9.8.

It seems that women have greater difficulties in gaining admission to medical schools than men although in more recent years more women have been admitted. This may be due to the fact that a smaller proportion of men are applying to medical school. One writer mentioned some of the prejudices against female medical students. "There is a widespread feeling that women medical students do not make as good use of their medical training as do men because of marriage and child-bearing. This tends to make standards for acceptance of women more vigorous than for men; grades must be excellent; there is a tendency to accept only those women of attractive appearance and to reject girls who appear immature or women older than the usual age of admission. Little

**TABLE 3-8**  
**NUMBER AND PERCENTAGE DISTRIBUTION OF MEDICAL STUDENTS BY SEX**  
**1947-48 TO 1960-61**

Year	Male		Female		Total
	Number	Per Cent	Number	Per Cent	
1947-48 .....	2,867	92.5	233	7.5	3,100
1948-49 .....	3,017	93.3	216	6.7	3,233
1949-50 .....	3,249	94.3	198	5.7	3,447 <sup>1</sup>
1950-51 .....	3,469	94.2	214	5.8	3,683 <sup>2</sup>
1951-52 .....	3,247	93.9	211	6.1	3,458
1952-53 .....	3,220	93.5	224	6.5	3,444
1953-54 .....	3,410	93.6	233	6.4	3,643
1954-55 .....	3,365	93.7	224	6.3	3,589
1955-56 .....	3,449	93.7	232	6.3	3,681 <sup>3</sup>
1956-57 .....	3,419	93.5	236	6.5	3,655
1957-58 .....	3,427	93.0	259	7.0	3,686
1958-59 .....	n.a.	—	n.a.	—	3,668
1959-60 .....	3,379	91.1	331	8.9	3,710 <sup>4</sup>
1960-61 .....	3,478	90.2	379	9.8	3,857 <sup>5</sup>

<sup>1</sup> 50 additional year students at Queen's University and 119 at Laval University are included.

<sup>2</sup> 50 additional year students at Queen's University and 144 at Laval University are included.

<sup>3</sup> 60 additional year students at Queen's University are included and 30 third-year students at the University of Saskatchewan are excluded.

<sup>4</sup> 108 pre-medical students at Queen's University and 53 at the University of Ottawa are included.

<sup>5</sup> A total of 349 pre-medical students at Queen's University and the Universities of Ottawa and Saskatchewan are included.

Source: Educational Issues of the *A.M.A. Journal*.

encouragement is given to married women, especially those with children. This whole approach is unfortunate."<sup>1</sup> On the other hand, it has been argued that in view of the limited accommodations in medical schools and rather heavy investment by the universities per medical student, there is a natural tendency to admit male students who may be expected to remain active physicians without temporary withdrawals from the profession for the rest of their lives. Some women students may not apply for admission to medical schools because of the impression that the medical profession is primarily men's domain, furthermore that it demands long and expensive training and requires an adequate knowledge of the basic sciences.

#### *c. Medical Student Enrolment by Year of Course*

Table 3-9 shows the total registrations in Canadian medical schools by the year of course over a period of 14 years.

First-year medical students accounted for 27.1 per cent of the total enrolment over the period under review. This implies that for every first-year medical

<sup>1</sup> Boucot, Katharine R., "Special Problems of Women Medical Students", *Canad. M.A.J.*, vol. 86, April 7, 1962, pp. 614-15.

**TABLE 3-9**  
**MEDICAL ENROLMENT IN CANADA BY YEAR OF COURSE**  
**1947-48 TO 1960-61**

Year	Year of Course				Total Enrolment	Medical Graduates
	First	Second	Third	Fourth		
1947-48 .....	827	842	756	675	3,100	632
1948-49 .....	887	765	842	739	3,233	679
1949-50 .....	897	798	761	822	3,278	791
1950-51 .....	960	880	844	805	3,489	858
1951-52 .....	873	891	858	836	3,458	783
1952-53 .....	918	809	865	852	3,444	825
1953-54 .....	982	901	844	916	3,643	896
1954-55 .....	968	903	881	837	3,589	894
1955-56 .....	1,035	883	877	856	3,651	816
1956-57 .....	1,001	934	855	865	3,655	893
1957-58 .....	1,012	916	928	830	3,686	836
1958-59 .....	986	911	867	904	3,668	859
1959-60 .....	946	882	863	858	3,549	863
1960-61 .....	970	842	853	843	3,508	834
Total .....	13,262	12,157	11,894	11,638	48,951	
Each year as per cent of Total	27.1	24.8	24.3	23.8	100.0	

Source: Educational Issues of the *A.M.A. Journal*.

student approximately 2.7 student places must be provided in the three subsequent years of medical studies, although this percentage is somewhat lower for each subsequent year because of the withdrawals for academic and non-academic reasons.

A rough estimate of the attrition rate from one course year to another can be obtained from Table 3-9. The total number of first-year course students in a given year becomes a somewhat smaller total number in the second-year course of the subsequent academic year. Expressing the difference between the total number of the first-year students during the years 1947-48 to 1956-57 and the total number of second-year students during the years 1948-49 to 1957-58, as a percentage of the first total, the attrition rate is 8.1 per cent. In a similar way the attrition rates for subsequent years have been calculated. The results are shown in Table 3-10.

This rough analysis would suggest that for every 100 first-year medical students, approximately 10 will withdraw for various reasons during their medical studies. In other words, one can expect that about 90 per cent will become medical graduates.

#### *d. Geographical Source of First-Year Medical Students*

A survey of Canadian medical schools provided useful information with respect to the geographical source of the first-year medical students. This infor-



**TABLE 3-10**  
**ATTRITION RATES OF CANADIAN MEDICAL**  
**STUDENTS 1947-48 TO 1959-60**

Year of Course	Attrition Rates
First .....	8.1%
Second .....	1.2%
Third .....	0.2%
Fourth .....	0.4%
Total .....	9.9%

mation, summarized in Table 3-11, shows the number and per cent distribution of these students, by province and country of residence and by medical school during the years 1947-48 to 1961-62.

This table shows that over the last 15 years, 10.5 per cent of the first-year students in Canadian medical schools were from other countries, with over two-thirds of these coming from the United States and the remainder mainly from the countries of the British Commonwealth. It may be said that the total number of foreign first-year medical students during the period under review was almost equal to the total first-year enrolment of one of the larger medical schools in Canada, like McGill or Montreal or of two of the smaller medical schools. The relatively higher percentage of foreign first-year students may indicate a shortage of suitable Canadian students. On the average, the students from outside the country have filled about 100 vacant places per year.

The medical schools of McGill University and the University of Ottawa have provided accommodation for first-year Canadian medical students to the extent of 52.7 and 84.9 per cent respectively. It is these two schools which have had the highest percentages of first-year medical students from the United States. The students from the Commonwealth countries have mainly concentrated at McGill, Manitoba, British Columbia and Dalhousie Universities.

Table 3-11 also illustrates that the medical schools mainly serve the provinces or regions in which they are located. Thus Dalhousie accepted about 85.0 per cent of its first-year medical students from the Atlantic Provinces. Montreal and Laval universities show that over 90.0 per cent of their first-year medical students came from the Province of Quebec, while McGill's percentage was only 30.6. In Ontario, the University of Toronto and Western Ontario accepted over 90.0 per cent of their first-year students from their own province, Queen's three-quarters and the University of Ottawa about one half. The latter university being bilingual also partly serves the Province of Quebec. The medical schools in the Prairie Provinces accept mainly the students from their respective provinces. The University of British Columbia shows that 85.0 per cent of its first-year medical students came from its own province.

Appendix 3-6 indicates the annual number and per cent distribution of first-year medical students, Canadian and foreign, by medical school for the same

TABLE 3-11  
NUMBER AND PER CENT DISTRIBUTION OF FIRST-YEAR MEDICAL STUDENTS, BY PROVINCE AND COUNTRY OF  
RESIDENCE AND MEDICAL SCHOOL, 1947-48 TO 1961-62

Medical School	Nfld.		P.E.I.		N.S.		N.B.		Que.		Ont.		Man.		Sask.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Dalhousie .....	113	12.6	104	11.6	376	42.0	172	19.2	10	1.1	8	0.9	1	0.1	—	—
Laval .....	—	—	3	0.2	14	0.7	47	2.4	1,740	90.8	25	1.3	11	0.6	17	0.9
Montreal .....	—	—	—	—	—	—	8	0.4	1,769	96.5	15	0.8	2	0.1	—	—
McGill .....	8	0.4	9	0.5	20	1.2	68	4.0	522	30.6	122	7.1	9	0.5	29	1.7
Ottawa .....	6	0.6	4	0.4	20	2.0	27	2.8	236	24.2	474	48.7	13	1.3	18	1.8
Queen's .....	1	0.1	1	0.1	1	0.1	10	1.1	53	6.0	690	78.3	19	1.0	46	5.2
Toronto .....	3	0.1	1	—	—	—	5	0.2	16	0.7	2,163	93.0	—	—	5	0.2
Western Ontario .....	—	—	—	—	—	—	3	0.3	5	0.6	849	94.8	—	—	3	0.3
Manitoba .....	—	—	—	—	—	—	—	—	6	0.7	17	2.1	609	74.2	83	10.1
Saskatchewan .....	—	—	—	—	—	—	—	—	7	1.3	4	0.8	5	0.9	471	89.2
Alberta .....	—	—	—	—	—	—	—	—	7	0.8	6	0.7	—	—	21	2.6
British Columbia <sup>1</sup> .....	—	—	—	—	—	—	1	0.1	16	2.2	8	1.1	4	0.6	5	0.7
Total .....	131	0.9	122	0.8	431	3.0	341	2.4	4,387	30.6	4,381	30.6	663	4.6	698	4.9

  

Medical School	Alta.		B.C.		Yukon & N.W.T.		Canada		U.S.A.		British Comm.		Other Country		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Dalhousie .....	2	0.2	2	0.2	—	—	788	87.9	60	6.8	44	4.9	4	0.4	896	100.0
Laval .....	2	0.1	3	0.2	—	—	1,862	97.3	51	2.7	1	0.1	—	—	1,914	100.0
Montreal .....	1	—	—	—	—	—	1,795	97.9	23	1.3	—	—	16	0.8	1,834	100.0
McGill .....	15	0.9	99	5.8	—	—	901	52.7	629	36.8	126	7.4	54	3.1	1,710	100.0
Ottawa .....	12	1.2	17	1.7	—	—	827	84.9	112	11.5	23	2.3	12	1.2	974	100.0
Queen's .....	4	0.5	20	2.3	—	—	835	94.7	44	5.0	2	0.3	—	—	881	100.0
Toronto .....	6	0.2	35	1.5	—	—	2,234	96.0	30	1.3	48	2.1	14	0.6	2,326	100.0
Western Ontario .....	3	0.3	11	1.2	—	—	874	97.5	18	2.0	3	0.3	1	0.1	896	100.0
Manitoba .....	18	2.2	8	1.0	—	—	741	90.3	15	1.8	61	7.4	4	0.5	821	100.0
Saskatchewan .....	6	1.1	2	0.4	—	—	495	93.8	15	2.8	17	3.2	1	0.2	528	100.0
Alberta .....	770	92.3	16	1.9	—	0.2	822	98.5	7	0.8	5	0.6	1	0.1	835	100.0
British Columbia <sup>1</sup> .....	8	1.1	607	84.8	—	—	649	90.6	18	2.5	48	6.8	1	0.1	716	100.0
Total .....	847	5.9	820	5.8	2	—	12,823	89.5	1,022	7.1	378	2.6	108	0.8	14,331	100.0

<sup>1</sup> Data for University of British Columbia from 1950-51 only.

Source: Survey of Medical Schools by the Royal Commission on Health Services, 1962.

TABLE 3-12

AVERAGE ANNUAL NUMBER OF FIRST-YEAR MEDICAL STUDENTS PER 100,000  
POPULATION, CANADA AND BY PROVINCE, 1952-53 TO 1961-62

Province	Average Number of First-year Medical Students per Year	Average Ratio per 100,000 Population
Newfoundland .....	9.4	2.3
New Brunswick .....	18.9	3.4
Nova Scotia .....	24.4	3.5
British Columbia, Yukon and Northwest Territories .....	56.0	3.9
Saskatchewan .....	44.1	5.0
Alberta .....	57.6	5.0
Ontario .....	284.9	5.2
Manitoba .....	48.3	5.6
Quebec .....	306.6	6.5
Prince Edward Island .....	7.2	7.2
Canada .....	857.4	5.2

period of 1947-48 to 1961-62. It shows that the peak of 1,025 first-year medical student enrolment was reached in the academic year, 1955-56, which gradually declined to 938 in 1959-60, but since then it showed some improvement and it remained at 1,001 in 1961-62. Excluding foreign students, the enrolment of Canadian first-year medical students shows the same pattern; that is to say, it reached a peak of 948 in 1955-56, then it declined to 802 in 1959-60 and improved to 871 in 1961-62. This trend in the enrolment of first-year medical students was in sharp contrast with the rapid increase in the registration of university students in general in Canada since the middle of the 1950's. There was a definite increase in foreign first-year medical students beginning 1952-53, which showed itself in a higher proportion of medical graduates, who completed their basic education in Canada, in the second part of the 1950's as suggested elsewhere in this study. During the last two academic years under review, when medical schools seem to operate at full capacity, the proportion of foreign first-year medical students remained constant due to a slight increase of Canadian students.

The same trend in the enrolment of first-year medical students is indicated in Appendix 3-7, which examines the ratio of these students per 100,000 population for Canada and provinces, for the years 1952-53 to 1961-62. For the country as a whole, there were 5.9 first-year medical students per 100,000 population in 1952-53. The rate gradually declined to 4.6 in 1959-60, and since then it has increased slightly to 4.8 in 1961-62.

Table 3-12 shows the average number per year of first-year medical students and its relation to 100,000 population for Canada and the provinces during the years, 1952-53 to 1961-62.

Because of the small number of cases observed it is difficult to establish a definite relationship between the relative number of doctors in a province and the

relative number of students from the province who enter medical school. However, two provinces, Newfoundland and New Brunswick, had the most unfavourable physician-population ratios in 1960. It is possible that the same factors of an economic, educational and cultural nature, which attract doctors to a province also stimulate the young person's interest in the medical profession. It is also interesting to note that these two provinces lack medical schools. However, the previous findings, that the medical schools take mainly first-year students from the provinces in which they are located, would suggest that provincial boundaries are of some importance in planning the location of any new medical school or the expansion of an existing one to offset regional and provincial maldistribution of physicians.

Appendix 3-8 shows the relationship between the number of first-year medical students and the population of the university age group, 20-24, for Canada and the provinces, during the same period of 1952-53 and 1961-62. A summary of this analysis is shown in Table 3-13.

The usefulness of this table lies in making a projection of the enrolment of medical students from Canada in relation to the future size of the population of university age group.

TABLE 3-13

AVERAGE ANNUAL NUMBER OF FIRST-YEAR MEDICAL STUDENTS PER 10,000 POPULATION OF UNIVERSITY AGE GROUP, 20-24, CANADA AND FOR PROVINCES, 1952-53 AND 1961-62

Province	Average Ratio of First-year Medical Students per 10,000 Population of University Age Group 20-24
Newfoundland .....	3.2
Nova Scotia .....	5.0
New Brunswick .....	5.1
British Columbia, Yukon and Northwest Territories ...	6.2
Alberta .....	6.9
Saskatchewan .....	7.4
Ontario .....	7.6
Manitoba .....	8.3
Quebec .....	8.6
Prince Edward Island .....	11.7
Canada .....	7.5

#### *e. Student Admissions to Canadian Medical Schools*

It is apparent from the examination of statistics on numbers of applications for medical studies that the recruitment of medical students constituted a rather difficult problem during the last 12 years. Most of the Canadian medical schools have experienced a gradual decrease in the number of applicants.

It is reasonable to assume that some candidates applied to more than one university and, therefore, they appear in the application statistics of more than one university. Appendix 3-9 contains the number of applicants from all sources, Canadian and foreign, for medical studies, by medical school, at three-year intervals, for the period of 1949-50 to 1961-62. Amongst the larger institutions, McGill University's applications in 1961-62 were only about half the total of 1,700 received in the 1949-50 academic year. The University of Toronto experienced a drop from 304 in 1949-50 to 276 in 1961-62. Amongst the smaller medical schools a similar trend can be observed. For Queen's University and the University of British Columbia the corresponding figures were 199 and 153, and 285 and 233 respectively. The Prairie universities show some increase in the number of applications received during the last year reported.

Table 3-14 shows the ratios of applicants offered places at medical schools to the total number of applications received, at three-year intervals, for the reporting medical schools during the period under review.

The acceptance rate remained relatively stable over the period of the last 12 years, i.e., approximately half of the applicants were offered places in the medical schools. No statistical information is available, however, as to the main reasons for this relatively high rejection ratio. Such information would be extremely useful in overcoming the difficulties experienced in the recruitment of medical students.

TABLE 3-14  
ACCEPTANCE RATE AND VACANCIES AT START OF TERM IN  
CANADIAN MEDICAL SCHOOLS, 1949-50 TO 1961-62  
(at three-year intervals)

Year	Number of Applicants	Acceptance Rate <sup>1</sup>	Official Class Size	Vacancies at Start of Term <sup>2</sup>
		%		
1949-50 .....	1,105	41.0 <sup>3</sup>	347 <sup>8</sup>	1
1952-53 .....	1,067	53.7 <sup>4</sup>	467 <sup>9</sup>	† 1
1955-56 .....	1,327	52.3 <sup>5</sup>	482 <sup>10</sup>	† 2
1958-59 .....	2,392	44.9 <sup>6</sup>	733 <sup>11</sup>	23
1961-62 .....	2,852	35.8 <sup>7</sup>	1,022 <sup>12</sup>	16
Average .....		45.5		

<sup>1</sup> Per cent of applicants offered places by medical schools to total number of applications received.

<sup>2</sup> Sign † indicates the number of students registered exceeding the official class size.

<sup>3</sup> Six schools reporting.

<sup>8</sup> Six schools reporting.

<sup>4</sup> Seven schools reporting.

<sup>9</sup> Seven schools reporting.

<sup>5</sup> Eight schools reporting.

<sup>10</sup> Seven schools reporting.

<sup>6</sup> Nine schools reporting.

<sup>11</sup> Ten schools reporting.

<sup>7</sup> Twelve schools reporting.

<sup>12</sup> All Twelve schools reporting.

Source: MacFarlane, J.A., et. al., *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer, 1964.

Table 3-14 also suggests that despite a decline in the number of applications and difficulties in recruitment, the medical schools reporting have had, for all practical purposes, no vacancies. In other words, the official capacity of medical schools has been filled. This point is important for it suggests that to some extent the supply of medical graduates in Canada is really determined by the physical and financial limitations of our medical schools and not by the society's requirements.

#### *f. Attrition Rates in Medical Schools*

An analysis of the medical student enrolment, by year of course, suggests that approximately 90.0 per cent of first-year students may be expected to become medical graduates. This finding is confirmed by Table 3-15 showing attrition rates in Canadian medical schools over a five-year period.

Table 3-15 indicates that of all medical students admitted during the years 1951-1955 to Canadian medical schools, 87.5 per cent ultimately became medical graduates. Thus the over-all attrition rate was 12.5 per cent. This rate varies somewhat between different schools, the highest, 27.8 per cent, at the University of Ottawa and lowest, 6.5 per cent, at the University of Western Ontario.

TABLE 3-15  
ATTRITION RATES IN CANADIAN MEDICAL SCHOOLS OVER  
FIVE-YEAR PERIOD, 1951 TO 1955

Medical School	Proportion of Students admitted and who graduated <sup>1</sup>						Attrition Rate over Five-Year Period by Year of Course				
	1951 %	1952 %	1953 %	1954 %	1955 %	Average %	I %	II %	III %	IV %	Total %
Dalhousie ...	87.0	87.5	88.0	91.0	90.0	88.7	12.0	4.0	0.8	0	16.8
Laval .....	93.8	93.6	92.6	96.8	87.4	92.8	13.0	3.5	1.6	0	18.1
Montreal ....	71.3	75.6	78.7	81.8	82.9	78.1	7.9	0.6	1.0	0.2	9.7
McGill .....	87.0	91.0	87.0	91.0	83.0	87.8	11.0	2.0	1.5	0.4	14.9
Ottawa .....	80.0	60.1	76.6	61.0	78.6	71.3	16.7	11.1	0	0	27.8
Queen's ....	95.0	95.0	83.0	89.0	92.6	90.9	8.4	6.8	1.1	0.6	16.9
Toronto .....	—	—	85.0	84.0	88.0	85.7	8.0	5.0	1.0	0.1	14.1
Western Ontario ...	96.6	95.0	91.6	98.3	85.9	93.5	4.0	1.0	0	0	5.0
Manitoba ....	93.0	97.3	86.9	85.5	94.5	91.4	7.9	1.4	2.8	0	12.1
Saskatchewan	93.6	93.7	96.6	98.5	83.5	93.2	—	—	—	—	—
Alberta .....	82.0	87.0	82.0	87.0	88.0	85.2	9.4	4.0	1.0	0.3	14.7
British Columbia ..	93.0	96.0	88.0	86.0	86.0	89.8	8.0	1.6	0.7	0	10.3
Average	88.4	88.4	86.3	87.5	86.7	87.5	9.7	3.8	1.1	0.1	14.7

<sup>1</sup> Including students who took time out, or who were allowed to repeat a year.

Source: MacFarlane, J.A., *et al.*, *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer, 1964.

As might be expected, the highest attrition rate occurred during the first year of the medical course; it was 9.7 per cent on the average, over a five-year period for all medical schools reporting. This rate gradually declined to 3.8 per cent for the second year, 1.1 per cent for the third year, and 0.1 for the fourth year of the medical course. Again these particular rates vary somewhat between different medical schools.

Table 3-16 summarizes the views of the deans of medical schools as to the causes of withdrawal of students from medical schools.

TABLE 3-16

CAUSES OF WITHDRAWALS, BY YEAR OF COURSE, FROM CANADIAN MEDICAL SCHOOLS, 1961-62 (ORDER OF MENTION)<sup>1</sup>

Causes of Withdrawals	Year of Course																Total Order of Mention			
	I				II				III				IV							
	Order of Mention				Order of Mention				Order of Mention				Order of Mention							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Academic .....	9	1	—	—	9	—	—	—	5	2	1	—	3	—	—	—	26	3	1	—
Personal reasons, environmental problems .....	—	4	—	1	—	2	1	—	1	1	1	—	1	1	—	—	2	8	2	1
Illness .....	—	—	4	—	—	1	3	—	1	1	—	1	—	1	—	—	1	3	7	1
Change or lack of interest .....	1	2	3	1	—	2	—	2	1	1	—	—	—	—	—	—	2	5	3	3
Psychiatric disorders .....	—	1	—	—	—	1	—	—	1	—	—	—	1	—	—	—	2	2	—	—
Death .....	—	—	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	3	—
Finance .....	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Not known or miscellaneous ...	—	1	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	2	—	1
Marriage .....	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—
Moved away .....	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	2	—	—

<sup>1</sup> Ten medical schools reporting.

Source: MacFarlane, J.A., et al., *Medical Education in Canada*, a study prepared for the Royal Commission on Health Services, Ottawa: Queen's Printer, 1964.

It is apparent that academic reasons are the principal factor for withdrawal at each level of the medical course. Other more significant reasons include personal and environmental problems, illness and changes or lack of interest. It is to be noted that financial difficulties, so often emphasized by the spokesmen of the medical profession and students' organizations as deterrent to more successful recruitment of medical students, appear to be of no real significance.

### 3. Canadians in United States Medical Schools

There are a very small number of Canadian medical students in the United States as compared with other Canadian students acquiring higher education in



that country. Table 3-17 indicates the number of Canadian medical students in the U.S., by sex and academic ranking, over the last few years.

**TABLE 3-17**  
**CANADIANS STUDYING MEDICINE IN THE UNITED STATES, BY ACADEMIC STATUS AND SEX, 1952-53 TO 1961-62**

Total Number of Canadians in U.S. Universities and Colleges		Canadians in U.S. Medical Schools									Per cent of all Canadian Students in U.S.
		Post Graduates			Under Graduates			Total			
		Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total	
1952-53	4,572 ....	—	—	—	—	—	—	—	—	152	3.3
1953-54	4,775 ....	—	—	—	—	—	—	—	—	79	1.7
1954-55	4,655 ....	—	—	—	—	—	—	—	—	85	1.8
1955-56	4,990 ....	—	—	—	—	—	—	—	—	58	1.2
1956-57	5,379 ....	83	4	87	35	4	39	118	8	126	2.3
1957-58	5,271 ....	87	1	88	36	4	40	123	5	128	2.4
1958-59	5,432 ....	82	4	86	39	4	43	121	8	129	2.4
1959-60	5,679 ....	46	—	46	31	2	33	77	2	79	1.4
1960-61	6,058 ....	78	5	83	39	4	43	117	9	126	2.1
1961-62	6,552 ....	54	4	58	37	5	44	91	9	100	1.5

Source: *Directory of Canadians Studying in the United States*, Economics and Research Branch, Department of Labour.

Approximately two-thirds of these medical students were post-graduates, who registered for further courses in specialized medical education. Undergraduates include pre-medical students and those enrolled in medical schools. They constituted approximately 1.0 per cent of the total number of Canadians studying in the United States. This percentage is considerably below the proportion of medical student enrolment to total university student enrolment in Canada. If this trend continues American medical schools will play an insignificant role in the future supply of Canadian medical manpower.

#### 4. Recruitment of Medical Students

The previous analysis clearly indicated a relative decline in the registration in Canadian medical schools as contrasted with an upsurge in general university enrolment across the country. Some anxiety has been expressed in medical schools and in the profession because of fewer medical applicants in relation to the available vacancies. There appears to be a shortage of applicants with suitable qualifications. Some experts in medical education have observed that "... there are still many rejected applicants each year, but these are almost invariably individuals who, in the eyes of the admission committees, do not have a reasonable chance of success in medical schools".<sup>1</sup>

<sup>1</sup> Macleod, J.W., and Thompson, J.S., "The Changing Scene in Canadian Medical Education, the *Journal of Medical Education*, 36:1079-1091, September 1961, p. 1079 (Special International Issue.)

The admission committees usually appraise the following attributes of medical school applicants: scholastic achievement, ability, character and personality, industry, resourcefulness and general cultural and social background.

It is rather difficult to assess, without a special study, the relative importance of various factors involved in the motivation of young people to enter a medical school. In general, these factors include a special interest in medical science, a humanitarian service motive, a family tradition, the social and economic status of the medical profession and the relative attractiveness of other professions. Even if a young man or woman is formally qualified and personally interested in medicine, he or she may still be deterred from a medical career because of various reasons, economic and others. These, often suggested by educators and doctors, can only be mentioned here, without any analytical evaluation as to their validity, magnitude and significance.

Our civilization, which is characterized by very rapid technological progress, incessantly requires an ever increasing number of students of high intellectual ability and an interest in the sciences to meet the demand for scientific and professional manpower. Medicine is no exception. Thus, the difficulties experienced in the recruitment of medical students constitute only one aspect of the recruitment for scientific and professional manpower. In fact, there are indications of similar difficulties in engineering faculties of Canadian universities. The need for scientists has been stressed as a national problem, and employment possibilities for them have been represented as very attractive. Consequently, the number of graduates in physical sciences has steadily been rising over the last two decades while graduates of medical schools have remained relatively constant. In brief, medicine as a career is in competition with the prestige, social status and economic opportunities offered to university-trained people in the natural sciences by industry, business and governments. It has been suggested that the prestige and social status of the medical profession and, in particular, of the general practitioner, may be somewhat declining in the eyes of the public and potential doctors.

Another factor responsible for the lowering of the number of applicants is the high cost of medical education. This high cost is made up not only of the relatively higher university fees of medical students compared with those of other university students, but also because bursaries and fellowships are less readily available to medical students than to post-graduate students of other faculties. Finally, medical education requires long years of unpaid training (the least time required after obtaining senior matriculation is seven years as compared with four years in most of the other university courses). Moreover, a medical graduate must spend one to six years in internship and residency or fellowship training, before he is ready to practise, while it takes three to four years for most of the Ph.D. students. Thus, a specialist medical education still further accentuates this problem of high cost in terms of both money and time.

Some have claimed that the public image of a physician, working long and irregular hours, deprived of leisure time for recreation, family and community life, is another factor discouraging our young people from choosing a medical career.

In order to appraise these various factors, it would seem necessary to conduct a special survey, otherwise it is difficult to suggest corrective measures. Such a study should include an over-all investigation of the factors determining career interests of Canadian students of all regions and socio-economic groups, as well as deterrents to the study of medicine.

The provincial licensing authorities and provincial governments, the spokesmen of the medical schools and the national organization of medical students, have made numerous and specific recommendations with respect to improvements in the recruitment of medical students, in their submissions to the Royal Commission on Health Services, the more significant of which are summarized below.

Most of the recommendations agree on the need for financial assistance to the undergraduate medical students if a relatively satisfactory supply of physicians in Canada is to be secured. There is a divided opinion on the question of whether more loan funds or more bursaries and scholarships are needed. There is a fear that a large debt militates against the choice of a medical career. The Canadian Association of Medical Students and Interns has recommended that "the Government of Canada make available to a central fund or foundation appropriate grants of money to be used as interest-free loan capital in the support of the undergraduate medical students".<sup>1</sup> The College of Medicine, University of Saskatchewan, suggested that "a grant of at least \$500 per medical student per year be made to universities from federal sources to permit free tuition for students of medicine".<sup>2</sup> The Faculty of Medicine, University of Alberta, suggested the following financial assistance measures:

- "i) Free Tuition: To all students in their third and fourth years of medicine.
- "ii) Scholarships: In the amount of \$1,000 per year to those in the upper third of the class in the last three years.
- "iii) Loan Funds: Available to any student in any year with a proven need in an amount not exceeding \$5,000 during his undergraduate study period. Such loans would be interest-free until 12 months after graduation. Interest would then be at the prevailing bank interest rates."<sup>3</sup>

The Faculty of Medicine, University of Toronto, recommended as follows:

- "a) that students with Grade A standing receive free tuition plus one-half loan and one-half bursary to carry on their maintenance;
- "b) that students with Grade B standing should receive one-half free tuition and their maintenance in half loan and half bursary; and

<sup>1</sup> A brief from the Canadian Association of Medical Students and Interns, submitted to the Royal Commission on Health Services, March 20, 1962, p. 2.

<sup>2</sup> A brief from the College of Medicine, University of Saskatchewan, submitted to the Royal Commission on Health Services, January 25, 1962, p. 5.

<sup>3</sup> The College of Physicians and Surgeons, Province of Alberta; The C.M.A. Alberta Division and the Faculty of Medicine, University of Alberta, February 13, 1962, p. 60.

"c) that students with Grade C standing should be evaluated and supported in accordance with their individual situations."<sup>1</sup>

This Faculty of Medicine also suggested some general principles in this area of financial assistance to medical students, viz., it should be in proportion to demonstrated financial need, loans should not exceed \$1,200 upon graduation and be interest-free until two or three years after graduation and then repayable by installments. In addition, it suggested some specific federal assistance be provided for the medical students from Asia, Africa and the West Indies.

Some provinces have a scheme of financial assistance. For example, Newfoundland has instituted a plan whereby an annual bursary of \$1,200 is made available to residents of Newfoundland during the medical course. After graduation the student must serve two years in an area to which he is assigned by the Provincial Government and an additional two years practising in a community of his choice in the province which may include post-graduate training in St. John's.

A special plea has been submitted on behalf of medical students from rural areas to recognize their greater costs of attending medical school as compared with urban students who can live at home. This special consideration may mean more physicians for rural areas.

Most students rely in part on summer earnings to finance their medical education. From an educational point of view it seems desirable that they should work in their own professional or scientific field, e.g., clinical science, basic medical science, research and hospital practice. A plea has been made for more funds and bursaries for summer professional employment. For example, the Canadian Association of Medical Students and Interns recommended that "the Medical Research Council of Canada be encouraged and enabled to increase the grants available to Canadian Universities for the summer employment of capable undergraduate students in research fellowships".<sup>2</sup>

Another recommendation concerns interns and residents. It has been suggested that the economic status of this category of medical trainee be improved. The last mentioned association has recommended that "minimum standards of remuneration for first-year interns should be established in Canada at a rate no less than \$2,600 per annum"<sup>3</sup> subject to periodical review in accordance with changes in the purchasing power of money.

A number of recommendations submitted to the Royal Commission on Health Services stressed the importance of aggressive recruitment programmes, which should incorporate "Open Houses" in medical schools to inform the public about work in such schools, publication of information on the opportunities for studying medicine, its cost and other aspects, visiting high schools on "Career Days", and use of mass media, radio, television and the press.

<sup>1</sup> A brief from the Faculty of Medicine, University of Toronto, submitted to the Royal Commission on Health Services, May 14, 1962, p. 6.

<sup>2</sup> Brief of the Canadian Association of Medical Students and Interns, *op. cit.*, p. 2.

<sup>3</sup> *Ibid.*, p. 8.

With the increase in university-age population over the next decade, it can be expected that the medical schools will increase their number of applicants and students. Nevertheless, some special efforts, financial and educational, will have to be made to attract more medical students for it seems that this expected increase in applicants will not keep pace with the increased need for the medical care of our growing population. Perhaps also some special considerations should be given to the recruitment of female medical students.

## 5. Social and Economic Characteristics of Medical Students in Canada, 1961-62

This part of the study is based mainly on factual information provided in the publication "University Student Expenditure and Income in Canada 1961-62" by the Education Division of the Dominion Bureau of Statistics. Most of the information was gathered by the use of a questionnaire sent to a sample of students. The survey covered the fall and spring terms of the academic year 1961-1962 and activity during the summer vacation in 1961. This survey included a sample of 1,000 medical undergraduate Canadian-born students, and the total number of graduate medical students as well as medical students from other countries.

The following sections include social background and economic and other characteristics of Canadian-born medical undergraduate students, cost analysis of attending medical school as well as an examination of sources of income to finance their medical education. This is followed by a brief analysis of foreign medical students in Canada and of graduate medical students.

### *a. Social Background and Economic and Other Characteristics of Canadian-born Medical Undergraduate Students.<sup>1</sup>*

#### *(i) Age, Year of Graduation Expected, Residence at College, and Marital Status*

The DBS survey of a sample of undergraduate medical students excludes pre-medical students of Queen's and Toronto universities but it includes the fifth-year undergraduate interns of medical schools of Dalhousie, Laval and Montreal, who receive medical degrees after one year's internship. The DBS universe of Canadian medical undergraduate students, excluding 354 non-Canadian medical undergraduate students, amounted to 3,472, of whom 1,000 provided a sample and, therefore, the following statistical data mainly expressed in percentages are fairly representative. The data available are organized into two parts, namely, the social and economic background of the students, while the rest of the information covers the problem of expenditures and incomes of the students.

The medical undergraduate students in the sample indicated the expected year of graduation in the following percentages: 20.4 in 1962, 21.0 in 1963,

<sup>1</sup> "Canadian-born" includes also immigrants who subsequently became Canadian citizens.

23.4 and 24.3 in the next two years, and 10.9 in 1966 or later.<sup>1</sup> The latter percentage applies to those students, who obtain their M.D. degrees only after the required internship.

Admission requirements to medical school stipulate some previous university training and, therefore, the median age of medical undergraduates was somewhat higher than that of undergraduate students in most other faculties except law and dentistry. The median age of medical students was 23 years and three months; 12.8 per cent of medical students were within the age group of 18–20 years, 65.7 per cent within the next age group of 21–24 years, and 21.5 per cent were 25 years or older.<sup>2</sup>

Table 3–18 shows marital status of medical students and residence at college for regions and Canada.

TABLE 3–18  
MEDICAL STUDENTS' MARITAL STATUS AND RESIDENCE AT COLLEGE,  
FOR REGIONS AND CANADA, 1961–62

	East	Quebec	Ontario	West	Canada
			Per Cent		
<i>Single students</i>					
In parents' home .....	14.4	48.2	29.7	36.8	37.1
In rented house or apartment .....	6.2	11.7	11.4	12.6	11.4
Rooming or boarding:					
Private house or boarding house .....	20.6	14.1	19.0	20.3	17.5
College operated residence .....	25.8	11.4	17.3	6.0	13.5
<i>Married, living with spouse</i> .....	29.9	14.3	20.3	24.0	19.3
<i>All other</i> .....	3.1	0.3	2.3	0.3	1.2

Source: *University Student Expenditure and Income in Canada, 1961–62, Part II – Canadian Undergraduate Students*, DBS, Education Division, Table 7, p. 21.

About one-third of medical students in the country as a whole were living in parents' home. This proportion was one-half in the Province of Quebec but only one-sixth in Eastern Canada, due to the fact that only one medical school serves the whole region. This, no doubt, constitutes an additional economic barrier against recruitment of medical students from that part of the country. Only one-sixth of the medical students in Canada were able to live in university operated residences.

Approximately one-fifth of the medical undergraduate students were married. This proportion was slightly exceeded by law students, while in case of dentistry students almost one-third were married. There is apparently no marked regional trend towards marriage among medical students in the

<sup>1</sup> *University Student Expenditure and Income in Canada, 1961–62, Part II—Canadian Undergraduate Students*, DBS, Education Division, Table 2, p. 18.

<sup>2</sup> *Ibid.*, Table 4, p. 19.

different areas of Canada but the proportion of married students was somewhat higher in the East and lower in the Province of Quebec as compared with the national proportion. With advancing age it is natural to assume that more students will get married. Among those married, 46.1 per cent indicated 1962 as the year of expected graduation, 26.9 per cent expected to finish university training in 1963, and this percentage gradually declined to 16.2 in 1964, 9.3 in 1965 and 1.5 in 1966 or later.<sup>1</sup> Table 3-19 indicates the percentage of marriages among Canadian medical students, by year of the course, as of September 1958.

TABLE 3-19  
PER CENT OF MARRIED CANADIAN MEDICAL STUDENTS,  
BY YEAR OF COURSE, 1958

Year of Course	Percentage of Married Students
1	8.0
2	14.0
3	19.0
4	31.0
All years	18.0

Source: Thompson, J.S., "Canadian Medical Education - Its Cost and Personnel", *Canada, M.A.J.*, vol. 82, April 2, 1960, Table II, p. 727.

The fact that approximately one-fifth of medical undergraduate students are married should have some bearing on the university administrators in planning student residencies. Moreover, family responsibility of married medical student may curtail a number contemplating post-graduate careers. It is difficult to discharge this responsibility when a junior intern in Canada in 1960 made an income of \$1,740 and a senior intern \$3,360. However, about three-quarters of married male medical students in 1961-1962 had no children and the remainder had one or more.<sup>2</sup>

(ii) *Home Residence, Parents' Education,  
Father's Occupation and Parents' Income.*

Table 3-20 provides information on undergraduate medical students, by region, showing percentages living on farms and in centres of population from less than 1,000 to those of more than 100,000. These data should be compared with the percentage distribution of the population for the same regions which live in the same sizes of centres.

Only 9.8 per cent of the reporting undergraduate medical students come from farms and communities of less than 1,000 population, while 30.4 per cent of the Canadian population were so located. When the metropolitan areas

<sup>1</sup> *Ibid.*, Table 3, p. 19

<sup>2</sup> *Ibid.*, Table 8, p. 21.



TABLE 3-20

PER CENT DISTRIBUTION OF HOME RESIDENCE OF MEDICAL STUDENTS  
AND OF CANADA'S POPULATION, BY SIZE OF COMMUNITY,  
FOR REGIONS AND CANADA, 1962

Region	Size of Community					
	on a farm	Less than 1,000	1,000— 9,999	10,000— 29,999	30,000— 99,999	100,000 and over
<i>Medical Students</i>						
East .....	5.0	7.0	27.0	16.0	26.0	19.0
Quebec .....	6.7	3.4	13.5	15.1	9.8	51.5
Ontario .....	4.4	3.0	8.7	7.0	13.0	63.9
West .....	8.8	4.7	10.6	2.4	9.2	64.3
Canada .....	6.1	3.7	12.0	9.7	11.9	56.6
<i>Population</i>						
East .....	8.6	41.6	14.2	9.4	11.6	14.6
Quebec .....	10.7	15.0	11.5	5.3	7.3	50.2
Ontario .....	8.1	14.5	10.1	4.8	15.0	47.5
West .....	17.5	19.9	10.4	6.2	3.4	42.6
Canada .....	11.4	19.0	11.1	5.8	9.3	43.4

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 11, p. 22.

of 100,000 and over are considered, it appears that the percentages of medical students enrolled from these areas were higher in all regions than the proportion of their population was of the total. This is particularly evident in the case of Western Canada where 64.3 per cent of the medical undergraduates come from metropolitan areas while only 42.6 per cent of the population were so located. The intermediate population centres of 1,000 to 99,999 population, which accounted for 26.2 per cent of Canada's population had 33.6 per cent of medical students. It is apparent that a location of a person's home in relation to the location of medical school has some bearing whether or not he becomes a medical student.

Table 3-21 shows the level of education of parents of medical students and of the labour force.

Over one-third of the fathers of the medical students had received a formal education above the high school level in contrast with about one-tenth of the Canadian male labour force who have attained a comparable level of schooling. Nearly one-half of the mothers of these students had received a formal education mostly at a high school level and university level in contrast to one-third of the Canadian female labour force who have also obtained this extent of education.

It is apparent then that, in general, enrolment of the medical students is correlated to parents' formal education.

TABLE 3-21

LEVEL OF SCHOOLING OF THE FATHERS AND MOTHERS OF MEDICAL STUDENTS,  
CANADA, 1962

Level of Schooling	Fathers	Labour Force (men) <sup>1</sup>	Mothers	Labour Force (women) <sup>1</sup>
		Per Cent		
University degree .....	29.3	4.9	9.6	2.8
Some University .....	5.3	4.3	4.9	5.0
High school graduation .....	14.7	15.3	32.0	26.3
Some high school .....	19.5	31.1	24.9	36.0
Elementary school plus trade training ....	7.1	44.4	2.5	29.9
Elementary school	24.1		26.1	

<sup>1</sup> Census 1961.

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Tables 14 and 15, p. 23.

TABLE 3-22

OCCUPATION OF THE FATHERS OF MEDICAL STUDENTS AND MALE  
LABOUR FORCE, CANADA, 1962

Occupation of Father	Medical Students	Male Labour Force
	Per Cent	
Owners and proprietors .....	12.3)	9.9
Managers and superintendents .....	9.9)	
Professional occupations: .....	29.5	7.6
Engineers .....	2.6	0.9
Teaching professions .....	2.3	1.4
Physicians and surgeons .....	10.8	0.4
Dentists .....	1.1	0.1
Pharmacists .....	1.0	0.1
Legal professions .....	1.2	0.3
Religious professions .....	1.7	0.5
Accountants and auditors .....	3.6	0.6
Other professional .....	5.2	3.3
Commercial and financial occupations .....	7.5	5.6
Clerical occupations .....	5.7	6.9
Manufacturing and mechanical occupation .....	9.5	22.0
Transportation and communication occupations .....	4.5	8.0
Construction occupations .....	3.7	6.3
Service and recreation occupations .....	2.3	8.5
Farmers .....	7.0	8.2
Other primary occupations .....	2.4	3.8
Farm and non-farm labourers .....	2.9	9.6
All other and not stated .....	2.8	3.6

Source: *University Student Expenditure and Income in Canada 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 16, p. 24.

Table 3-22 indicates the percentage distribution of fathers' occupation of the Canadian undergraduate medical students and a similar distribution of male labour force.

Over half of the fathers of medical students were owners and proprietors or were employed in managerial and professional occupations in comparison with 17.5 per cent of Canada's male labour force. It is interesting to note that 10.8 per cent of the students listed the father's occupation as physician or surgeon, whereas doctors represented only 0.4 per cent of the total male labour force of the country. Table 4-15 shows that 12.4 per cent of Canadian-born physicians have indicated that their fathers were doctors. This survey simply confirms the fact that only half the expected number of students come from farms and farm workers. The same is true of manufacturing, transportation and communication, construction and service and recreation occupations.

Family income is also related to attendance at medical school. This is shown in Table 3-23.

TABLE 3-23  
PARENTS' INCOME LEVEL OF MEDICAL STUDENTS, 1961

Parents' Income Level	All Medical Students	Single Medical Students		Income of Taxpayers <sup>1</sup>
		At Home	Away from Home	
		Per Cent		
Less than \$5,000 .....	35.1	27.0	41.4	78.2
\$5,000 - 5,999 .....	11.2	11.5	13.1	9.4
\$6,000 - 7,999 .....	14.7	15.5	13.8	7.1
\$8,000 - 9,999 .....	11.9	13.2	11.8	2.3
\$10,000 - 14,999 .....	12.8	14.7	10.3	1.8
\$15,000 or more .....	14.3	18.1	9.6	1.2
Median income .....	\$6,439	\$7,183	\$5,655	\$3,646

<sup>1</sup> Adapted from 1961 Taxation Statistics.

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Tables 7 and 18, p. 24-25.

Ninety-four point seven per cent of the taxpayers in Canada made an income of less than \$8,000 but only 61.0 per cent of medical students reported family income being of this level. On the other hand, 5.3 per cent of taxpayers made an income of \$8,000 or more, while 39.0 per cent medical students reported their parents' income of \$8,000 or more. Forty-one point four per cent of single medical students who reported residing away from home, had parents whose income was less than \$5,000. A median income of parents of single students residing away from home was somewhat lower than that of parents of students residing at home.

All these references to socio-economic background of medical students, the under-representation of those from lower socio-economic classes and lower

representation from rural areas and smaller urban centres, would suggest that there is a financial deterrent to attendance at medical schools. However, entry into a medical profession is likely to depend not only on the possession of adequate financial resources, but also on the availability of educational facilities, a young man's social background, his cultural environment, etc.

(iii) *Part-time and Summer Work*

Medical students accept part-time work while attending college probably in order to meet growing expenses. The extent of part-time work amongst the students is indicated in Table 3-24.

TABLE 3-24  
PART-TIME WORK AND YEAR OF EXPECTED GRADUATION  
OF MALE MEDICAL STUDENTS, 1961-62

Graduation Year Expected	Per Cent of Male Students with Part-time Work
1962	43.9
1963	28.9
1964	23.1
1965	15.7
All years <sup>1</sup>	24.8

<sup>1</sup> Includes some graduating in 1966 or later.

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 26, p. 28.

It appears that one out of four medical students had part-time work during a regular academic year. The extent of part-time work varied with the year of course. Thus in the final year of studies almost one out of two had part-time employment, while only one out of six in the first year. This may partly be explained perhaps by a larger proportion of married students in later years of studies and the family responsibilities of the older students. Some general picture of the variety of types of part-time jobs can be obtained from the Table 3-25. More than half of the reporting students had jobs that were related to their studies, and another one-tenth worked for a university. This would suggest that, apart from economic reasons, part-time jobs may also be sought in order to further academic training.

Table 3-26 provides information on regional distribution of medical students with part-time jobs and hours worked per week.

It appears that approximately one-third of medical students in Eastern Canada had part-time jobs as compared with one-sixth in Western Canada. This regional differential is probably due to greater economic need of the medical students in the eastern part of the country, which is relatively poorer. It also appears that a larger proportion of the reporting students

**TABLE 3-25**  
PART-TIME WORK AND TYPE OF JOB OF MEDICAL STUDENTS, 1961-62

Type of Part-time Job	Per Cent of Students
Worked for university .....	10.2
Jobs related to course .....	53.3
R.O.T.C. etc. ....	18.7
Jobs requiring special skills <sup>1</sup> .....	5.3
Store clerk, cashier, receptionist, etc. <sup>2</sup> .....	2.7
Service occupations <sup>3</sup> .....	1.1
Recreation worker, entertainer, etc. ....	2.6
Labourer, Factory worker, delivery service, etc. <sup>4</sup> .....	2.6
Baby sitter, odd jobber .....	—
Worked for parents .....	0.5
Other and not reported .....	3.0

<sup>1</sup> Includes stenographers and other office workers, craftsmen and repairmen.

<sup>2</sup> Includes stockroom keepers, purchasers, etc.

<sup>3</sup> Includes such occupations as waiter, maid, bellboy, bartender, guard, watchman and orderly.

<sup>4</sup> Includes truck and bus drivers, seamen, railway and highway workers, etc.

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 28, p. 29.

**TABLE 3-26**  
PART-TIME WORK AND HOURS WORKED PER WEEK  
BY CANADIAN MALE MEDICAL STUDENTS, 1961-62

Region	Percentage with Part-time Job	Per Cent Distribution by Number of Hours Worked per Week			
		Less than 10	10-19	20-29	30 or more
East .....	36.0	50.0	3.1	18.8	28.1
Quebec .....	29.3	37.5	23.6	11.1	27.8
Ontario .....	23.8	67.2	19.7	8.2	4.9
West .....	17.6	75.0	20.4	2.3	2.3
Canada .....	25.4	56.4	20.3	8.8	14.5

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 30, p. 30.

having part-time jobs, in that part of Canada, worked 30 hours or more per week, in comparison with the better-off parts of the country.

Summer employment of medical students appears to be an important aspect of their university years and a means of financing their studies. The summer job opportunities may vary from year to year depending partly on the general economic condition of the country and since most Canadian students seek summer employment the competition is becoming stronger because of the rapid increase in the Canadian student population. However, the medical students do not seem to lack these opportunities as in 1956 only 5.8 per

cent of them were without summer jobs and in 1961 only 2.6 per cent of single male students were unable to find work. Eighty-nine point seven per cent of single male medical students and 95.6 per cent of married ones worked for pay in the summer of 1961. About 8.0 per cent of the single male and 4.0 per cent of the married medical students reported that they did not look for work.<sup>1</sup>

The type of summer work of the medical students is indicated in Table 3-27.

TABLE 3-27  
SUMMER WORK 1961 - TYPE OF WORK OF MEDICAL STUDENTS

Type of Work	Per Cent of Students
Worked for university .....	3.2
Jobs related to course .....	46.7
R.O.T.C., etc. ....	5.2
Jobs requiring special skills <sup>1</sup> .....	15.9
Store clerk, cashier, receptionist, etc. <sup>2</sup> .....	3.8
Service occupations <sup>3</sup> .....	3.9
Recreation worker, entertainer, etc. ....	5.1
Factory worker, truck or bus driver .....	4.6
Labourer, seaman, railway or highway worker, etc. ....	10.6
Worked for parents .....	0.3
Other and not reported .....	0.7

<sup>1</sup> Includes stenographers and other office workers, craftsmen and repairmen.

<sup>2</sup> Includes stockroom keepers, purchasers, etc.

<sup>3</sup> Includes such occupations as waiter, maid, bellboy, bartender, guard, watchman and orderly.

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 22, p. 27.

It is very pleasing to an educationist to note that about half of the reporting medical students, having summer work, had jobs related to their academic training or at university.

Earnings from summer work are indicated in Table 3-28.

The median monthly rate was \$242 and on the assumption that most of the medical students have a four-month summer employment, an average student was able to earn about \$1,000 towards his education.

It is difficult to assess the academic value of part-time work and of summer jobs and it is equally difficult not to conclude that evidently there is an economic need, on the part of the medical students, to seek additional sources of income to finance their university training.

<sup>1</sup> *Ibid.*, Table 21, p. 26.

TABLE 3-28

SUMMER WORK 1961 - MONTHLY RATE OF PAY OF MEDICAL STUDENTS

Monthly Rate of Pay	Per Cent of Students
Less than \$100 .....	4.2
\$100 - 149 .....	8.4
\$150 - 199 .....	10.8
\$200 - 249 .....	31.7
\$250 - 299 .....	18.6
\$300 - 349 .....	15.5
\$350 - 399 .....	5.4
\$400 - 499 .....	3.9
\$500 or more .....	1.5
Median monthly rate .....	\$242

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 23, p. 27.

(iv) *Financial Difficulties*

There are a variety of reasons for a break in the continuity of university training. The DBS data provide some information on those medical students who withdrew for financial reasons but eventually returned to resume their medical training. These students reported the effects which the financial difficulties had on their academic careers. Table 3-29 provides this information.

TABLE 3-29

MALE MEDICAL STUDENTS REPORTING A BREAK IN THEIR SCHOOLING, 1961-62

Percentage of Students who, Because of Insufficient Money:	East	Quebec	Ontario	West	Canada
Postponed entrance to university .....	8.0	3.0	5.7	11.7	6.0
At some time withdrew from university ....	7.0	—	3.3	4.7	2.5
Attended university part-time .....	1.0	2.3	1.3	1.0	1.6
Enrolled in extramural courses .....	—	0.7	1.7	0.7	1.0
Percentage with some interruption in their education .....	14.6	5.3	7.9	13.9	8.5

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 31, p. 30.

It appears that 8.5 per cent of the reporting medical undergraduates encountered some financial difficulties that forced them to interrupt a regular course of training. Six point zero per cent indicated that they had to postpone entrance to university. Of course, these statistics do not indicate the extent to which financial problems prevented some potential students from entering medical school altogether.



(v) *Students' Plans Following Graduation*

The medical students were asked specific questions concerning their plans following graduation. Fifty-four point four per cent of them indicated that they would practise, 5.0 were offered special jobs elsewhere and 38.1 per cent would continue post-graduate studies, presumably leading towards specialization. The latter percentage is almost identical with that of the distribution of physicians in Canada as between specialists and non-specialists. Less than 1.0 per cent expressed a desire to teach<sup>1</sup> at the university level. Of course, these are tentative plans; some students might change them before the end of their university training.

b. *Cost Analysis of Attending Medical School*

(i) *Distribution of Students by Level of Expenditure*

What is the cost of medical education to the student? What are his sources of income while in medical school? Answers to these questions were sought through the DBS questionnaire on expenditures and incomes of the students. The factual information that is given in the following tables may be of some importance to the many students interested in the study of medicine, to their parents as well as to their college advisors, and the various other groups interested in costs to the student becoming a physician.

The figures given are for the academic year 1961-62 and they may not necessarily be applicable to the current academic year either because of an increase in cost of living or because tuition and other fees have been increased.

The students surveyed provided information with respect to their annual expenditures on specific items and a total for the academic year. Naturally, these expenditures differ from student to student because of spending habits, availability of funds, educational requirements, faculty, place of residence, etc.

Table 3-30 shows average expenditure of the Canadian medical undergraduate students by regions, and, for comparative purposes, averages for students from other faculties.

It appears that the average annual expenditure of \$2,246 of medical students was the second highest after that of dental students. On a regional basis the highest average annual expenditure of medical students was in eastern Canada. This probably was due to the fact that only a small proportion of the students in that part of Canada resided in parents' home and almost one-third of them were married, living with spouse.

About half of the reporting medical students indicated that their total expenditure per annum was \$2,000 or more as compared with about one-tenth proportion of students from Arts and Science.

<sup>1</sup> *Ibid.*, Table 34, p. 31.

TABLE 3-30  
MEDICAL AND OTHER STUDENTS' EXPENDITURE, BY LEVEL OF EXPENDITURE, FOR REGIONS AND CANADA, 1961-62

Faculty and Region	Less than \$800	\$800 999	\$1,000-1,199	\$1,200-1,399	\$1,400-1,599	\$1,600-1,799	\$1,800 1,999	\$2,000-2,999	\$3,000 or more	Average Expenditure
Medicine										
East .....	-	3.0	3.0	3.0	11.0	10.0	14.0	25.0	31.0	2,606
Quebec .....	0.3	4.7	12.3	8.0	12.3	10.3	11.7	23.4	17.0	2,205
Ontario .....	-	0.6	3.0	6.7	10.3	13.0	15.7	36.0	14.7	2,272
West .....	-	1.3	6.3	8.3	17.4	15.7	12.3	21.3	17.4	2,162
Canada .....	0.1	2.4	7.1	7.3	12.5	12.3	13.4	27.8	17.1	2,246
Canada - Arts and Science .....	12.1	15.0	16.6	17.9	16.4	8.8	4.8	5.8	2.6	1,352
Education .....	13.5	15.9	21.5	15.6	9.7	6.2	2.9	10.1	4.6	1,415
Engineering .....	4.6	10.7	12.9	18.1	17.2	13.6	9.2	9.5	4.2	1,553
Law .....	2.8	1.0	10.0	11.5	11.4	12.8	11.6	17.2	15.7	2,050
Dentistry .....	0.2	0.8	3.0	8.7	9.6	9.7	10.4	35.0	22.6	2,465
Pharmacy .....	5.2	9.3	18.4	18.9	14.0	11.9	7.9	9.2	5.2	1,550

Source: University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students, DBS, Education Division, Table 35, p. 36.

(ii) *Expenditure and Marital Status*

Annual total expenditure of married students, living with spouse, was twice as high as that of single male students living away from home. This was due to the fact that married students with dependents spent a greater proportion of their money on capital and consumer-durable goods. The differences in average annual expenditure between married and single students are shown in Table 3-31.

**TABLE 3-31**  
AVERAGE EXPENDITURE OF MARRIED MEDICAL STUDENTS, AND SINGLE MALE STUDENTS LIVING AT HOME AND AWAY FROM HOME, FOR REGIONS AND CANADA, 1961-62

Region	Single Students		Married Students Living with Spouse
	Living at Home	Living away from Home	
	\$	\$	\$
East .....	1,458	2,003	4,119
Quebec .....	1,572	2,061	4,660
Ontario .....	1,864	2,018	3,594
West .....	1,603	1,875	3,546
Canada .....	1,652	1,989	3,871

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 36, p. 37.

Average expenditures of married male students were highest in the Province of Quebec and in Eastern Canada, by about \$800 and \$250 respectively more than compared with the national average of about \$3,900. There were smaller regional differences between average expenditures of single male students living away from home. For those living at home, the highest average expenditure was incurred by students in Ontario and in Western Canada, while this average was lowest in Halifax and then slightly higher in Montreal and Quebec City.

(iii) *Educational and Living Costs*

The various items of expenditure incurred by the students may be classified under educational costs and living costs. The former include fees, books, fraternity dues, transportation from home town to dwelling in college town, and other current expenses on school supplies and equipment related to university work. All other expenses are included under living costs.

Table 3-32 gives average expenditure, by items of expenditure, and per cent of medical students reporting having made a particular expenditure. For comparative purposes educational costs of students from other faculties are also given.

**TABLE 3-32**  
**AVERAGE EDUCATION AND LIVING COSTS OF MEDICAL AND**  
**OTHER STUDENTS, CANADA, 1961-62**

Items of Expenditure	Medicine		Dent- istry	Law	Engi- neering	Pharm- acy
	Average Expend.	Per Cent of Students Reporting				
	\$		\$	\$	\$	\$
Fees (tuition, etc.) .....	572		524	401	452	397
Dues (Fraternity, etc.) .....	41	62.9	55	39	33	38
Text-books .....	106	99.1	79	70	80	71
School supplies and equipment .	70	79.6	30	28	32	26
Transportation .....						
(other than local) .....	85	52.5	39	88	67	65
Total education costs ....	802		744	551	610	543
Transportation (local) .....	31	60.9				
Room and board or household operating costs .....	854	77.3				
Recreation, refreshments, cigarettes, etc. ....	185	96.4				
Grooming (haircuts, laundries, etc.) .....	61	98.1				
Clothing .....	143	96.0				
Health .....	53	77.3				
Durable items .....	354	61.7				
Church and charitable donations .....	36	55.5				
Total living costs .....	1,444					
Total expenditures	2,246					

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 37, p. 38.

The average education costs of \$802 of medical students were the highest in comparison with the similar costs incurred by the students from other faculties mainly because of higher fees and higher expenses on school supplies. An average of total education costs constituted approximately one-third of an average medical student's annual total expenditure. Fees alone accounted for one-quarter of the total expenditure. The increasing cost of medical education falls heavily on a lower income family and it may be beyond their financial possibility.

Room and board or household operating costs also constituted about one-third of the total expenditure. The other more important expenses were on durable items, presumably mainly incurred by married students, and on cars, then on recreation and smoking and on clothing.

(iv) *Median Expenditure and Age*

Expenses tend to increase with the age of the students and the year of course. This is evident from Table 3-33.

TABLE 3-33

MEDIAN EXPENDITURE OF MEDICAL STUDENTS, BY AGE AND EXPECTED YEAR OF GRADUATION, CANADA, 1961-62

Age of Students		Year of Graduation Expected	
	\$		\$
Under 21	1,619 .....	1962	2,510
21	1,728 .....	1963	2,016
22-24	1,937 .....	1964	1,936
25 and over	2,548 .....	1965	1,758
		1966 and later	1,638

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 41, p. 39.

The probable reason for the higher median expenditure of older students is that a higher proportion of them were married as compared with other students.

TABLE 3-34

PER CENT OF MEDICAL AND OTHER STUDENTS RECEIVING FUNDS FROM CONTRIBUTING SOURCES, CANADA, 1961-62 (weighted)

Source of Income	Medicine	Dentistry	Law	Engineering	Pharmacy
			Per cent		
Fellowships and Assistantships .....	3.3	0.5	0.8	1.4	0.5
Scholarships and Bursaries .....	41.9	31.0	33.2	39.3	28.6
D.V.A., National Defence, R.O.T.P. ....	5.9	8.5	1.6	6.3	1.6
Other Grants-in-Aid .....	3.0	3.5	3.1	4.1	3.0
Leave of Absence with Pay .....	0.1	0.3	0.3	0.4	1.7
Loans:					
(a) from Parental Family.....	22.9	23.5	18.8	21.4	14.3
(b) from College.....	7.4	8.1	4.0	4.1	4.6
(c) from Bank or Insurance Co. ....	6.5	6.8	8.4	6.2	2.9
(d) from Provincial Government.....	22.2	23.0	22.1	18.6	10.9
(e) from Other Sources .....	10.7	10.6	8.5	7.0	7.6
Funds from Parental Family.....	53.4	43.8	55.0	47.8	51.7
Funds from Spouse .....	13.4	21.2	15.4	6.8	4.9
Gifts from Relatives, Friends.....	18.5	13.2	16.8	14.6	14.1
Savings from Summer Employment .....	78.3	77.4	76.3	83.4	80.2
Earnings from Part-time Jobs					
during School Year .....	20.7	18.4	30.3	15.7	45.5
Personal Savings (other than above).....	19.5	20.5	18.2	23.6	23.0
Investments, Endowments, Insurance ....	6.6	5.4	10.0	5.2	3.8
Other Sources .....	3.4	4.8	7.2	4.3	4.5

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 44, p. 45.

c. *Sources and Amounts of Income of Canadian Medical Students*

The medical student, like other students in Canada, gets his income from a great variety of sources. There are some students, of course, who depend entirely on parents' income, others earn enough from part-time and summer work, still others receive adequate scholarships.

(i) *Per Cent of Students, by Source of Income*

Table 3-34 shows the per cent of medical and other students who received income from the various sources listed. Each item is separate and, therefore, the percentages do not add up to 100.

Grants-in-aid, including scholarships, etc., were reported by 54.2 per cent of medical students as compared with 43.8 per cent in Dentistry, 51.5 per cent in Law, 51.5 per cent in Engineering and 35.4 per cent in Pharmacy. Loans from various sources were reported by about 70.0 per cent in Medicine and Dentistry as compared with approximately 60.0 per cent in Law and Engineering and only 40.0 per cent in Pharmacy.

About 50.0 per cent of students reported receiving financial assistance from their parents, and, as previous analysis has shown a greater proportion of students in Medicine and Dentistry and Law were married; these students received in slightly higher proportion some funds from their working wives.

Savings from summer employment were reported by about four-fifths of the students from all the faculties considered here. The percentage of students reporting earnings from part-time work during the academic year was highest for the students in Pharmacy as compared with one-sixth to one-third in other faculties. About one-fifth of the students in all faculties considered reported using personal savings, other than those from summer employment.

(ii) *Average Income, by Source*

Table 3-35 indicates the average amounts of revenue received by Canadian undergraduate medical students from the same items as in the previous table and the percentage of the total income received which each of the contributing sources represented.

On the average, students who reported fellowships and assistantships received about \$550 and those who received scholarships and bursaries reported \$400. Those who borrowed money, on the average, were able to get about \$900 from the banks or \$800 from their parents. The earnings of wives of the married students of about \$2,100 covered about half of their annual expenditures. Students were able to save about \$550 from their summer employment and the same amount was reported by those who had part-time work during the school year.

An average medical student relied on funds from home to an extent of about one-fifth of his revenue, another one-fifth of savings from summer employment, while grants-in-aid and loans contributed approximately one-sixth each of his total revenue.

TABLE 3-35

AVERAGE AMOUNTS OF INCOME RECEIVED BY MEDICAL STUDENTS FROM CONTRIBUTING SOURCES AND PERCENTAGE OF TOTAL INCOME RECEIVED, BY SOURCE, CANADA, 1961-62

Source of Income	Average Amount Received	Percentage of Total Income Received by Source
	\$	%
Fellowships and Assistantships .....	545	1 7.8
Scholarships and Bursaries .....	384	
D.V.A., National Defence, R.O.T.P. ....	2,062	
Other Grants-in-Aid .....	311	
Leave of Absence with Pay .....	227	—
Loans		
(a) From Parental Family .....	794	7.8
(b) From College .....	255	0.9
(c) From Bank or Insurance Company .....	890	2.6
(d) From Provincial Government .....	422	3.8
(e) From Other Sources .....	479	2.2
Funds from Parental Family .....	955	22.0
Funds from Spouse .....	2,086	11.9
Gifts from Relatives and Friends .....	224	1.8
Savings from Summer Employment .....	549	18.4
Earnings from Part-time Jobs		
During School Year .....	555	5.2
Personal Savings (other than above) .....	400	3.1
Investments, Endowments, Insurance, etc. ....	749	2.6
Other Sources .....	502	0.7
Income Needed .....	—	3.5
Income from All Sources .....	2,344	

<sup>1</sup> Fellowships and Assistantships included here as in all cases they accounted for 1.0 per cent or less.

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 45, p. 45.

### (iii) Importance of Scholarships

Table 3-36 relates scholarships to age and year of expected graduation of medical students.

It appears that the availability of scholarships is fairly evenly distributed amongst students in all years of the medical course and the median scholarship does not vary substantially between either age groups of students or year in course. The implication of this fact is that once a student enters a medical school he can count on some financial help from the scholarships available to him. One-third to two-fifths of medical students were receiving scholarships. Although the median scholarship of \$300-350 does not appear to be high enough if more able students are to be encouraged to enter medical schools; however, the median



**TABLE 3-36**  
**SCHOLARSHIP AND AGE OF MEDICAL STUDENTS AND YEAR OF EXPECTED GRADUATION, CANADA, 1961-62**

Age of Students	Per Cent with Scholarship	Median Scholarship	Year of Expected Graduation	Per Cent with Scholarship	Median Scholarship
	%	\$		%	\$
18 - 20 .....	38.5	325	1962	32.0	349
21 - 24 .....	41.6	335	1963	42.2	326
25 and over .....	40.2	329	1964	43.2	350
			1965	43.7	313
			1966		
			and later	43.1	342

Source: *University Student Expenditure and Income in Canada, 1961-62, Part II - Canadian Undergraduate Students*, DBS, Education Division, Table 48, p. 47.

scholarships available to students in other faculties do not differ substantially from those for medical students.

**d. Foreign Students in Canadian Medical Schools, 1961-62**

During the academic year 1961-62 there were 7,900 non-Canadian students enrolled in Canadian universities and colleges, who constituted 6.1 per cent of the total university student population in this country. Canadian medical schools in the same academic year had 354 undergraduate medical students from other countries, which number accounted for about 10.0 per cent of the total medical undergraduates in Canada. In addition, there were 32 foreign graduate medical students. Table 3-37 shows the distribution of these students by country or area of birth.

Three-fifths of foreign medical undergraduate and two-fifths of foreign medical graduate students were from the United States. A total of 213 undergraduate students came from the United States and thus some 50 students in any one year of graduation may be expected to be American. Approximately one-third of all non-Canadian medical students came from the countries of the British Commonwealth.

Table 3-38 indicates the distribution of foreign medical students between medical schools located in the various regions of Canada.

This table indicates that approximately two-thirds of foreign medical students in Canada were in the medical schools located in the Province of Quebec and Ontario.

Out of 354 foreign undergraduate medical students 127 received grants-in-aid from Canadian and non-Canadian sources, amounting, on the average, to \$920. The corresponding figures for foreign graduate medical students were 19 and \$3,305.<sup>1</sup>

<sup>1</sup> *University Student Expenditure and Income in Canada, 1961-62, Part I - Non-Canadian Students*, DBS, Education Division, Table 22, p. 24.

TABLE 3-37

COUNTRY OR AREA OF BIRTH OF FOREIGN UNDERGRADUATE AND GRADUATE STUDENTS IN CANADIAN MEDICAL SCHOOLS, 1961-62

Country or area of birth	Undergraduate Students		Graduate Students	
	Number	Per Cent	Number	Per Cent
United States of America .....	213	60.2	13	40.5
Central and South America .....	9	2.5	—	—
West Indies .....	59	16.7	2	6.3
United Kingdom .....	5	1.4	1	3.1
Continental Europe .....	6	1.7	3	9.4
Asia .....	49	13.8	11	34.4
Republic of China .....	11	3.1	—	—
Hong Kong .....	22	6.2	1	3.1
Other Asia <sup>1</sup> .....	16	4.5	10	31.3
Australia and New Zealand .....	1	0.3	—	—
Africa .....	11	3.1	2	6.3
Not Stated .....	1	0.3	—	—
Total .....	354	100.0	32	100.0
Students from British Commonwealth <sup>2</sup> .....	103	29.1	9	28.1

<sup>1</sup> Includes Malaya, India, Pakistan and other Asian countries.<sup>2</sup> Includes United Kingdom, Australia, India, Pakistan, Malaya, Hong Kong, Ghana, Nigeria, and British West Indies.Source: *University Student Expenditure and Income in Canada, 1961-62, Part I - Non-Canadian Students*, DBS, Education Division, Table 6, p. 19.

TABLE 3-38

DISTRIBUTION OF FOREIGN UNDERGRADUATE AND GRADUATE MEDICAL STUDENTS IN CANADIAN MEDICAL SCHOOLS, BY REGION, 1961-62

Region	Foreign Medical Students			
	Undergraduate		Graduate	
	Number	Per Cent	Number	Per Cent
East .....	56	15.8	7	21.9
Quebec .....	151	42.7	10	31.2
Ontario .....	87	24.6	11	34.4
West .....	60	16.9	4	12.5
Canada .....	354	100.0	32	100.0

Source: *University Student Expenditure and Income in Canada, 1961-62, Part I - Non-Canadian Students*, DBS, Education Division, Table 7, p. 20.

e. *Canadian Graduate Students in Medicine*<sup>1</sup>

During the academic year 1961-62 there were 7,900 non-Canadian students 14 women, post-graduate medical students enrolled in the Canadian medical schools. All of them had M.D. degrees and were working towards the M.A. or Ph.D. degrees in medical sciences, particularly, in physiology and biochemistry, or diplomas in medicine and surgery. These students in large measure constitute a pool of future medical teachers and scientists. Forty-eight of them have indicated intention to work in this area.

Thirty students reported their father's occupation as professional (10 were physicians and surgeons) and 14 as proprietors and managers. Forty-four of the reporting medical graduate students were married and their average income was \$5,436 as compared with \$3,621 of 7 single students living at home and \$3,275 of 21 single students living away from home. Their income was mainly derived from fellowships of about \$3,000 each. There were only a few students receiving scholarships. About three-quarters of the married students indicated total education and living costs per year of \$4,000 and over, while three-quarters of the single students incurred total cost of \$2,000 and over.

About half of the total 75 students were within the age group of 25-29 years and almost another half were over 30 years old. Most of these graduate students, if they were in private practice, would be earning an income of \$10,000 or more at this age. It seems that if our medical schools are to secure the necessary recruitment of the medical teaching personnel adequately, to meet the growing demand with the expected expansion of medical schools, higher fellowships and scholarships will have to be provided for the medical graduates in Canada.

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<sup>1</sup> Reference: *University Student Expenditure and Income in Canada, 1961-62, Part III - Canadian Graduate Students*, DBS, Education Division.

## CHAPTER IV

# Distribution and Some Professional Characteristics of Canadian Doctors

### 1. Introduction

In order to assess the relative availability of medical services in different regions and centres in Canada, it is necessary to analyse the distribution of physicians by various criteria such as age, location, specialization, etc.

The first part of this chapter is concerned with an analysis of the distribution of Canadian medical manpower by age groups, years since first licensed to practise, years of practice, length of time in present practice or employment, and degree of retirement. It also includes a section on women in medicine.

Another part deals with the geographical distribution of physicians, including an evaluation of the factors influencing location of practice and choice of location of first practice, the problem of medical care in rural areas and the geographical mobility of doctors.

This is followed by an examination of the patterns of types and auspices of work among Canadian doctors and their professional mobility.

The last section of this chapter is concerned with the problem of specialization in the medical profession, including reasons for and implications and limitations of such specialization. This is followed by an analytical and statistical examination of the distribution of specialists by specialty practised and their location.

In some sections, the above analysis is made separately for Canadian-born and immigrant physicians for comparative purposes.

The statistical data employed in this chapter have mainly been drawn from the replies of the doctors to a Questionnaire on Medical Practice, which was mailed in the spring of 1962 to all doctors in Canada, including salaried physicians, interns and residents. A sample questionnaire is reproduced as Appendix 4-1. A mailing list of physicians, compiled mainly from the Canadian Medical Directory, was supplied by the Department of National Health and Welfare. The survey of physicians has been conducted to provide information concerning the distribution and utilization of physicians in Canada and to obtain doctors'

opinions about current plans of medical insurance and possible future developments.

From an initial mailing list of over 21,000 doctors nearly 12,000 usable replies were received, of which not all applied to the different parts of the analysis. Consequently, the number of respondents in various parts of this survey varied slightly, thus reducing the effective response rate for various sections of the analysis.

The effective response rate of active physicians to the Questionnaire on Medical Practice is shown in Table 4-1.

TABLE 4-1  
PER CENT RATE OF RESPONSE TO 1962 QUESTIONNAIRE ON MEDICAL PRACTICE  
OF ACTIVE PHYSICIANS, FOR PROVINCES AND CANADA

Province	Physicians, 1962		Questionnaire Response		
	Number	Per Cent	Number of Usable Replies	Per Cent of Canada	Per Cent Rate of Response
Newfoundland.....	296	1.4	150	1.3	50.7
Prince Edward Island .....	88	0.4	51	0.4	58.0
Nova Scotia .....	728	3.4	427	3.7	58.7
New Brunswick .....	462	2.1	248	2.1	53.7
Quebec .....	6,067	28.3	2,841	24.5	46.8
Ontario .....	8,120	37.9	4,378	37.8	53.9
Manitoba .....	1,126	5.2	699	6.0	62.1
Saskatchewan.....	847	4.0	551	4.8	65.1
Alberta .....	1,455	6.8	843	7.3	57.9
British Columbia .....	2,245	10.5	1,385	12.0	61.7
Canada <sup>1</sup> .....	21,434	100.0	11,573 <sup>1</sup>	100.0	54.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Directory of Canadian Mailings Ltd., October 1, 1962, and Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

The survey data may be considered as fairly representative since the percentage distribution of respondents, by province, is, within a narrow percentage margin, in agreement with the actual distribution of the medical manpower in Canada by province. The response rate of the Province of Quebec is the lowest with less than half of the physicians replying to the questionnaire, and approximately half of the physicians in the provinces of Newfoundland, Nova Scotia and Ontario replied. As for the remaining provinces, about three-fifths of their physicians provided usable replies.

The survey data are supplemented by statistical information contained in the periodical reports of the "Survey of Physicians in Canada" published since 1946 by the Research and Statistics Division of the Department of National Health and Welfare in the Directory of Canadian Mailings Limited and in the various briefs of the provincial and national medical organizations submitted to the Royal Commission on Health Services.

## 2. Age of Physicians

The age distribution of active physicians is an important factor in considering the supply of doctors in the various regions as well as in the country as a whole because of its relation to the effectiveness of the physicians and its bearing on retirement and death. The fact that some regions have a comparatively higher proportion of older physicians, whose efficiency naturally decreases with age, still further reduces the available supply of medical services as indicated by crude numbers of living physicians in the regions concerned.

Table 4-2 compares the age distribution of active civilian physicians in Canada over a period of thirty years. Regional data concerning age distribution are given in Appendix 4-2.

TABLE 4-2  
PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS,  
BY AGE GROUP, CANADA, 1931-1961

Age Group	1931	1941	1951	1961
Under 25.....	1.9	2.7	0.2	2.4
25 - 34.....	25.2	23.9	25.2	29.3
35 - 44.....	24.9	25.3	27.9	32.3
45 - 54.....	23.7	20.0	21.6	19.0
55 - 64.....	16.0	17.3	13.7	11.4
65 - 69.....	8.3	10.8	4.9	2.7
70 and over.....			5.6	2.9
Not given.....	—	—	0.9	—
Median age <sup>1</sup> .....	44.2	44.2	43.7	42.1

<sup>1</sup> Based on total for whom age is known.

<sup>2</sup> Excludes Yukon and Northwest Territories.

Source: 1931-51, *Survey of Physicians in Canada, 1954*, Research Division, Department of National Health and Welfare, Table 5, p. 13; 1931, 1941, and 1961 Census data; 1951, Physicians Register, Department of National Health and Welfare.

In Canada as a whole, 64.0 per cent of active civilian physicians were under 45 years of age in 1961 as compared with 52.0 per cent in 1931, 51.9 per cent in 1941 and 53.3 per cent in 1951. Thus there has been the trend toward an increased proportion of younger doctors in the over-all age distribution of the civilian medical manpower in this country.

The increasing longevity enjoyed by the general population seems to be shared by the physicians as well, and this is indicated by the larger percentages in the age groups 65 and over. In 1931, the per cent of active civilian physicians who were aged 65 and over amounted to 8.3 as compared with 10.8 and 10.5 in 1941 and 1951 respectively. Increased longevity of physicians implies larger professional resources through increased years of practice for individual physicians that is equally advantageous to all regions and areas.

The median age, which had ranged between 44.2 and 43.7 years during the period of 1931 to 1951, dropped to 42.1 in 1961.

The regional variation in age distribution of physicians in 1962 is quite apparent.<sup>1</sup> In the Atlantic region, 55.4 per cent of active civilian physicians were under 45 years of age, in Ontario – 58.9 per cent, in British Columbia – 59.9 per cent as compared with 60.6 per cent national figure. Quebec had a particularly high percentage of 64.0 of physicians in this age category and the Prairie region had the next highest percentage of 62.3. It will be noted from Appendix 4–2 that Ontario had a particularly high percentage (7.0) of physicians in the age group 65 and over. The Atlantic region had the next highest percentage (5.3) of physicians in this age category, while British Columbia, the Prairie region and Quebec had 2.9, 4.3 and 5.0 per cent respectively.

Appendix 4–3 shows the number and percentage distribution of active civilian immigrant physicians, by age group, for regions and Canada as based on the survey of physicians in 1962. The same data for the country as a whole are shown in Table 4–3.

TABLE 4–3  
NUMBER AND PER CENT DISTRIBUTION OF  
ACTIVE CIVILIAN IMMIGRANT PHYSICIANS,  
BY AGE GROUP, CANADA, 1962<sup>1</sup>

Age Group	Immigrant Physicians	
	Number Reporting	Per Cent
Under 25.....	3	0.1
25–34.....	642	21.6
35–44.....	1,329	44.6
45–54.....	572	19.2
55–64.....	334	11.2
65–69.....	66	2.2
70 and over.....	31	1.1
Total .....	2,977	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962,  
Royal Commission on Health Services.

It is of interest to note that 66.3 per cent of active civilian immigrant physicians were under 45 years of age as compared with 60.6 per cent of the total Canadian civilian medical manpower. The higher percentage of younger immigrant physicians must be related to the considerable influx of these physicians during the 1950's as shown in the chapter on supply of physicians. The additional training requirements in Canada and language barrier in some cases act probably as a deterrent against the potential supply of middle-aged immigrant physicians.

<sup>1</sup> See Appendix 4–2.



Appendix 4-4 indicates number and per cent distribution of active civilian specialist physicians by age group, for regions and Canada, in 1962. The same data for the country as a whole are shown in Table 4-4.

TABLE 4-4  
NUMBER AND PER CENT DISTRIBUTION OF  
ACTIVE CIVILIAN SPECIALIST PHYSICIANS,  
BY AGE GROUP, CANADA, 1962<sup>1</sup>

Age Group	Physicians	
	Number	Per Cent
25-34 .....	434	10.7
35-44 .....	1,764	43.4
45-54 .....	1,035	25.5
55-64 .....	633	15.6
65-69 .....	104	2.6
70 and over .....	82	2.0
Total .....	4,052	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962,  
Royal Commission on Health Services.

Out of 4,052 reporting specialists, 54.1 per cent were under 45 years of age as compared with 60.6 per cent of the total civilian medical manpower in Canada. This differential is the result of longer training required for the specialists. Only one-tenth of the reporting specialists were under 35 years of age as compared with one-quarter of the total active civilian reporting physicians. As of June 1954, only 13.8 per cent of specialists in private practice were under 35 years of age as compared with 27.1 per cent of physicians engaged in general private practice.<sup>1</sup>

### 3. Degrees of Retirement

Table 4-5 shows the degree of retirement reported by physicians who considered themselves partially or fully retired. The total number of this category of physicians amounted to 334, which constituted 2.9 per cent of the reporting active civilian physicians. This percentage is almost equal to the percentage distribution of active civilian physicians who were aged 70 and over. This part of the analysis would suggest that probably the physicians reaching the age of 70 years might be considered arbitrarily as retired. Consequently, it may be argued that the retirement rate of Canadian physicians, working under the existing conditions, amounts to three per cent of the medical manpower.

<sup>1</sup> "Active Civilian Physicians, June 1954, by Age Group and Nature of Major Work", a memorandum from the Research and Statistics Division, Department of National Health and Welfare, April 1962.

An American study on medical manpower in the United States indicated that out of 257,035 physicians in 1962 there were 9,851 retired doctors, not in medical practice, i.e., 3.8 per cent.<sup>1</sup>

TABLE 4-5

RETIREMENT OF PHYSICIANS, BY DEGREE OF RETIREMENT, CANADA, 1962<sup>1</sup>

Degree of Retirement	Number Reporting	Per Cent of Total Reporting
100 per cent.....	97	29.0
75-99 " " .....	36	10.8
50-74 " " .....	60	18.0
25-49 " " .....	16	4.8
1-24 " " .....	6	1.8
Not stated .....	119	35.6
Total number reporting .....	334	100.0
Active civilian physicians reporting.....	11,560	2.9

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

#### 4. Years of Practice

Appendices 4-5A and 4-5B show the number and per cent distribution of Canadian-born and immigrant active civilian physicians respectively, by years since first licensed to practise in Canada, for regions and Canada, in 1962. Table 4-6 summarizes the above data for the country as a whole.

This table indicates that approximately four-fifths of immigrant active civilian physicians obtained their licence to practise medicine in Canada during the last 15 years as compared with only one-half of Canadian-born physicians. This comparison confirms the previous finding of heavy reliance of Canadian medical manpower on the supply from outside sources during the post-war years.

Table 4-7 shows the distribution of active civilian immigrant physicians by years of residence in Canada.

It is difficult to establish a time lag between the years of residence and years since first licensed to practise in Canada for the immigrant physicians. An examination of the last two tables indicates, however, that 81.9 per cent the reporting immigrant physicians obtained their licences during the last 15 years as compared with 80.4 per cent of these physicians having resided in this country during the same period. Looking only at the last five years it can be seen that 30.2 per cent of the immigrant physicians obtained their licences while only 18.3 per cent of these physicians resided in Canada during the same period. This would suggest that about half of them resided longer than five years.

<sup>1</sup> Health Manpower Source Book, Section 14, Medical Specialists, U.S. Department of Health, Education, and Welfare, Public Health Service, Washington, D.C., 1962.

**TABLE 4-6**  
**NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN**  
**AND IMMIGRANT ACTIVE CIVILIAN PHYSICIANS,**  
**BY YEARS SINCE FIRST LICENSED TO PRACTISE IN CANADA, 1962<sup>1</sup>**

Years Since First Licensed to Practise in Canada	Canadian-born Physicians		Immigrant Physicians		Total	
	Number Reporting	Per Cent of Total Number Reporting	Number Reporting	Per Cent of Total Number Reporting	Number Reporting	Per Cent of Total Number Reporting
Less than 5 .....	1,195	14.7	826	30.2	2,021	18.6
5 - 9 .....	1,558	19.1	937	34.2	2,495	22.9
10 - 14 .....	1,407	17.3	479	17.5	1,886	17.3
15 - 19 .....	1,079	13.3	138	5.0	1,217	11.2
20 - 24 .....	869	10.7	88	3.2	957	8.8
25 - 29 .....	733	9.0	92	3.4	825	7.6
30 - 34 .....	514	6.3	81	3.0	595	5.5
35 - 39 .....	395	4.8	53	1.9	448	4.1
40 and over .....	388	4.8	44	1.6	432	4.0
Total Number Reporting.	8,138	100.0	2,738	100.0	10,876	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

**TABLE 4-7**  
**NUMBER AND PER CENT DISTRIBUTION OF**  
**ACTIVE CIVILIAN IMMIGRANT PHYSICIANS,**  
**BY YEARS OF RESIDENCE IN CANADA, 1962<sup>1</sup>**

Years of Residence	Number Reporting	Per Cent of Total Reporting
Less than 5 .....	474	18.3
5 - 9 .....	866	33.4
10 - 14 .....	744	28.7
15 - 19 .....	84	3.2
20 - 24 .....	85	3.3
25 - 29 .....	30	1.2
30 - 34 .....	57	2.2
35 - 39 .....	76	2.9
40 and over .....	177	6.8
Total .....	2,593	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

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**TABLE 4-8**  
**NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN**  
**IMMIGRANT PHYSICIANS, BY BIRTHPLACE, FOR REGIONS AND CANADA, 1962**

Birthplace	Atlantic Provs.		Quebec		Ontario		Prairie Provs.		British Columbia		Total Reporting	
	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent
<i>United Kingdom</i> .....	100	9.4	52	4.9	350	32.8	354	33.2	211	19.7	1,067	35.8
Per cent of region .....		40.2		12.8		31.3		44.9		50.5		
<i>Commonwealth</i> .....	47	14.3	40	12.2	105	31.9	100	30.4	37	11.2	329	11.0
Per cent of region .....		18.9		9.8		9.4		12.7		8.9		
<i>North America</i> .....	18	6.7	79	29.4	94	34.9	46	17.1	32	11.9	269	9.0
Per cent of region .....		7.2		19.4		8.4		5.8		7.7		
<i>Africa</i> .....	5	11.9	7	16.7	15	35.7	11	26.2	4	9.5	42	1.4
Per cent of region .....		2.0		1.7		1.3		1.4		0.9		
<i>Asia</i> .....	16	9.4	16	9.4	71	41.8	38	22.4	29	17.0	170	5.7
Per Cent of region .....		6.4		3.9		6.3		4.8		6.9		
<i>Europe</i> .....	61	5.7	204	19.1	473	44.2	233	21.8	99	9.2	1,070	35.9
Per cent of region .....		24.5		50.2		42.3		29.5		23.7		
<i>Other</i> .....	2	5.7	9	25.7	11	31.4	7	20.0	6	17.2	35	1.2
Per cent of region .....		0.8		2.2		1.0		0.9		1.4		
<i>Canada</i> <sup>1</sup> .....	249	8.4	407	13.6	1,119	37.5	789	26.5	418	14.0	2,982	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Table 4-8 indicates the distribution of active civilian immigrant physicians, by birthplace, for regions and Canada.

Approximately half of the reporting immigrant physicians came from the United Kingdom and Commonwealth countries and one-third from Europe. The Commonwealth physicians were mainly located in Ontario, the Prairie Provinces and British Columbia, while immigrant physicians from Europe were located principally in the Province of Quebec, Ontario and the Prairie Provinces. In the Province of Quebec about half of immigrant physicians have a European background but only one-fifth came from the United Kingdom and Commonwealth countries.

Table 4-9 shows the distribution of immigrant physicians by place of undergraduate medical training.

**TABLE 4-9**  
**NUMBER AND PER CENT DISTRIBUTION OF**  
**ACTIVE CIVILIAN IMMIGRANT PHYSICIANS,**  
**BY PLACE OF UNDERGRADUATE MEDICAL TRAINING, CANADA, 1962**

Place of Undergraduate Medical Training	Immigrant Physicians	
	Number Reporting	Per Cent of Total Reporting
United Kingdom and Commonwealth Countries .....	1,227	60.5
Europe .....	724	35.7
North America .....	47	2.4
Africa .....	29	1.4
Total Reporting .....	2,027	100.0

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Only 2.4 per cent of the reporting immigrant physicians indicated North America (i.e., United States and Mexico) as their place of basic medical training as compared with 9.0 per cent of the reporting immigrant physicians who indicated North America as their birthplace. This difference in the above percentages is probably due to the fact that some of the U.S. graduates of Canadian medical schools remain in this country.

Table 4-10 illustrates the distribution of active civilian physicians by years of practice in Canada.

This table shows a fairly even distribution of active civilian physicians by years of practice as between various regions of Canada. Sixty-one point nine per cent of the reporting physicians in the country had less than fifteen years of practice. This percentage corresponds to 60.6 per cent of active civilian physicians who were under 45 years of age. Regional distribution of physicians by years of practice generally follows the pattern of age distribution for the various regions.

**TABLE 4-10**  
**NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN**  
**PHYSICIANS, BY YEARS OF PRACTICE IN CANADA,**  
**FOR REGIONS AND CANADA, 1962**

Region	Years of Medical Practice <sup>1</sup>									Total
	Less Than 5	5- 9	10- 14	15- 19	20- 24	25- 29	30- 34	35- 39	40 and Over	
<i>Atlantic Provinces</i>										
No. Reporting .....	167	164	145	98	60	69	48	34	27	812
Per Cent .....	20.6	20.1	17.9	12.1	7.4	8.5	5.9	4.2	3.3	100.0
<i>Quebec</i>										
No. Reporting .....	519	530	392	227	165	187	136	101	74	2,331
Per Cent .....	22.4	22.7	16.8	9.7	7.1	8.0	5.8	4.3	3.2	100.0
<i>Ontario</i>										
No. Reporting .....	751	900	681	427	240	305	192	180	185	3,861
Per Cent .....	19.5	23.2	17.6	11.1	6.2	7.9	5.0	4.7	4.8	100.0
<i>Prairie Provinces</i>										
No. Reporting .....	439	461	340	222	146	99	88	54	50	1,899
Per Cent .....	23.1	24.4	17.9	11.7	7.7	5.2	4.6	2.8	2.6	100.0
<i>British Columbia</i>										
No. Reporting .....	241	317	260	153	94	104	65	35	13	1,282
Per Cent .....	18.8	24.8	20.3	11.9	7.3	8.1	5.1	2.7	1.0	100.0
<i>Canada<sup>2</sup></i>										
No. Reporting .....	2,117	2,372	1,818	1,127	705	764	529	404	349	10,185
Per Cent .....	20.8	23.3	17.8	11.1	6.9	7.5	5.2	4.0	3.4	100.0

<sup>1</sup> Years of practice or medical employment exclude internship, post-graduate studies, or service in the Regular Armed Forces.

<sup>2</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Table 4-11 provides a distribution of active civilian physicians by length of time in present practice or employment and type of work.

This table indicates that approximately half of the reporting general practitioners and specialists in private practice were in their present employment less than ten years as compared with two-thirds of consultants in private practice. The latter usually assume consulting responsibilities after some years of practice as specialists or general practitioners. Two-thirds of doctors working in hospitals were also in their present employment less than ten years. This high proportion may indicate the fact that some young physicians start their medical career in hospitals before they establish themselves financially to open a private practice.

Nearly 85.0 per cent of doctors in research work were less than ten years in their present employment. This is probably due to an inflow of young doctors in this type of work and to a more recent increase in medical research activities. Over 60.0 per cent of doctors engaged in teaching were in their present work less

TABLE 4-11  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS,  
BY LENGTH OF TIME IN PRESENT PRACTICE OR EMPLOYMENT AND TYPE OF WORK, CANADA, 1962<sup>1</sup>

Type of Major Work	Length of Time in Present Practice or Employment (Years)										Total Reporting
	1-9		10-19		20-29		30-39		40 and over		
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	
<i>Private Practice</i>											
General . . . . .	2,146	53.9	932	23.4	441	11.1	287	7.2	177	4.4	3,983
Specialist . . . . .	1,507	48.2	931	29.8	395	12.6	222	7.1	72	2.3	3,127
Consultant . . . . .	393	66.2	161	27.1	25	4.2	11	1.8	4	0.7	594
Total . . . . .	4,046	52.5	2,024	26.3	861	11.2	520	6.7	253	3.3	7,704
<i>Hospital Staff</i>											
Specialist . . . . .	584	65.7	206	23.2	63	7.0	30	3.4	6	0.7	889
Other . . . . .	112	54.6	59	28.8	21	10.2	11	5.4	2	1.0	205
Total . . . . .	696	63.6	265	24.2	84	7.7	41	3.8	8	0.7	1,094
<i>Research</i>											
Research . . . . .	223	84.8	29	11.0	6	2.3	5	1.9	—	—	263
Teaching . . . . .	124	60.8	52	25.5	20	9.8	6	2.9	2	1.0	204
Public health . . . . .	226	52.3	115	26.6	57	13.2	28	6.5	6	1.4	432
Industrial Medicine . . . . .	59	48.8	44	36.4	10	8.2	7	5.8	1	0.8	121
Other <sup>2</sup> . . . . .	1,357	91.0	89	6.0	28	1.9	12	0.8	5	0.3	1,491
Total . . . . .	6,731	59.5	2,618	23.2	1,066	9.4	619	5.5	275	2.4	11,309

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Includes over 1,200 interns and residents.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



than ten years. This high proportion may reflect the fact of recent expansion in medical school staffs, of teaching positions becoming more attractive financially, and of becoming a university teacher after some years of practice in hospitals or private practice.

## 5. Female Physicians

Table 4-12 shows the number and per cent distribution of active civilian physicians in Canada by sex for the census years 1911 to 1961. It will be noted that the number and proportion of women in the medical profession to total active civilian physicians in the country have steadily increased since 1921, particularly, after World War II. Female physicians constituted 6.8 per cent of the total medical manpower in 1961 as compared with 1.7 per cent in 1921. During the pre-war decade of 1929-30 to 1939-40, female graduates constituted 4.1 per cent of the total medical graduates in Canada as compared with 6.6 per cent during the years of 1947-48 to 1960-61.

TABLE 4-12  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS,  
BY SEX, CANADA, 1911-1961

Year	Males		Females		Total
	Number	Per Cent	Number	Per Cent	
1911 .....	7,215	97.4	196	2.6	7,411
1921 .....	8,554	98.3	152	1.7	8,706
1931 .....	9,817	98.0	203	2.0	10,020
1941 .....	11,489	96.8	384	3.2	11,873 <sup>2</sup>
1951 <sup>1</sup> .....	13,576	95.9	587	4.1	14,163
1961 <sup>1</sup> .....	19,835	93.2	1,455	6.8	21,290

<sup>1</sup> Yukon and Northwest Territories included.

<sup>2</sup> The 1941 figure includes 1,150 armed forces' doctors because of wartime conditions.

Source: *Survey of Physicians in Canada, 1954*, Research Division, Department of National Health and Welfare, Table 4, p. 12; 1911-41, Census data; *1951 Physicians Register*, Department of National Health and Welfare; 1961 Census data, *1961 Census of Canada*, Labour Force, Occupations by Sex, Bulletin 3.1-3, DBS.

This closeness in percentages of female graduates of Canadian medical schools and of female medical practitioners suggests that there is no "waste" because of marriage, involved in training female doctors. On the basis of this analysis it would seem that Canadian medical schools might well consider accepting a higher percentage of women in the future, particularly when the numbers of male applicants are inadequate. Canadian medical schools have accepted women more freely in the last two decades and more female graduates have gone into the medical profession. It is also perhaps true that the attitude of the public to the woman doctor has changed in more recent decades.

Admittedly, there are problems of the personal domestic nature, relationship with patients and relations with professional men, with which married female physicians have to deal. It has been pointed out, however, that "A change of attitude with more realism and understanding of the married women physicians' problems would materially decrease the period of inactivity or the abandonment of the work entirely by the medically trained women".<sup>1</sup> About half of our population are women and it is only natural that their physical and emotional needs can better be dealt with by scientifically trained women doctors. Efforts should be made to provide part-time employment to married women physicians in laboratory and research establishments, in community health centres, etc., during the interval when they must devote much time to the rearing of children. Special refresher courses should be organized by medical schools for married women doctors after they renew their professional activities on a full-time basis.

The slightly higher percentage (6.8) of active female civilian physicians in 1961 as compared with the percentage (6.6) of female graduates of Canadian medical schools during the post-war years is probably due to a somewhat higher proportion of female doctors amongst active civilian immigrant physicians. The latter fact is apparent from Table 4-13.

TABLE 4-13

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN IMMIGRANT PHYSICIANS, BY SEX, FOR REGIONS AND CANADA, 1962

Region	Males		Females		Total
	Number Reporting	Per Cent	Number Reporting	Per Cent	
Atlantic Provinces .....	227	91.2	22	8.8	249
Quebec .....	367	90.2	40	9.8	407
Ontario .....	1,018	91.0	101	9.0	1,119
Prairie Provinces .....	727	92.1	62	7.9	789
British Columbia .....	384	91.9	34	8.1	418
Canada <sup>1</sup> .....	2,723	91.3	259	8.7	2,982

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

In Chapter II it was shown that female immigrant doctors constituted 13.7 per cent of total immigrant physicians admitted to this country during the years 1953-1961. Approximately 80.0 per cent of immigrant physicians were admitted during the post-war period. It would seem that female immigrant physicians have encountered some difficulties in establishing themselves professionally in this country.

The distribution of active female civilian physicians in Canada, by province, is set out in Table 4-14. It will be noted that in June 1961, over 600 or

<sup>1</sup> Thelander, Hulda E. and Weyrauch, Helen B., "Women in Medicine", *The Journal of the A.M.A.*, Vol. 148, February 16, 1952, p. 535.

nearly half of the total active female physicians in the country were located in the province of Ontario constituting approximately 8.0 per cent of the active civilian physicians in this province. Another quarter of the female physicians were located in the Province of Quebec constituting about 6.0 per cent of the active civilian physicians there.

TABLE 4-14

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS,  
BY SEX, FOR PROVINCES, 1961

Province	Males		Females		Total
	Number	Per Cent	Number	Per Cent	
Newfoundland .....	219	95.2	11	4.8	230
Prince Edward Island .....	87	95.6	4	4.4	91
Nova Scotia .....	673	95.3	33	4.7	706
New Brunswick .....	434	95.4	21	4.6	455
Quebec .....	5,817	94.3	350	5.7	6,167
Ontario .....	7,408	92.1	632	7.9	8,040
Manitoba .....	1,046	93.4	74	6.6	1,120
Saskatchewan .....	889	93.5	62	6.5	951
Alberta .....	1,251	92.3	105	7.7	1,356
British Columbia .....	1,990	92.6	160	7.4	2,150
Yukon and N.W.T. ....	21	87.5	3	12.5	24
Canada .....	19,835	93.2	1,455	6.8	21,290

Source: 1961 Census of Canada, Labour Force, Occupations by Sex, Bulletin 3.1-3, DBS.

## 6. Father's Occupation of Physicians

Appendix 4-6 records the number and per cent distribution of Canadian-born and immigrant physicians by father's occupation at time of entering university training, for regions of present practice and Canada. This appendix reveals a fairly even distribution of Canadian-born physicians, by father's occupation, in all the regions of the country in which the physicians were located in 1962. The only understandable exception from this uniform pattern of father's occupational background were the physicians in the Prairie Provinces, where about one-fifth of doctors reported agriculture as father's occupation as compared with approximately one-tenth of physicians of the same background located in other regions of the country.

Table 4-15 shoes the same data of the reporting Canadian-born and immigrant physicians for the country as a whole.

This table indicates a similar pattern of father's occupational background of Canadian-born and immigrant physicians. Small differences appear, however, in a few cases. Thus, for instance, a higher proportion of reporting

immigrant physicians came from professional (including medical) classes and a smaller proportion from agricultural occupational groups as compared with Canadian-born doctors.

As for the distribution of the reporting Canadian-born physicians by father's occupation, the largest number fell into the professional (including medical) class, followed by the proprietors and managerial group, agriculture, manufacturing and construction, commercial and financial, and clerical occupational groups.

More than half of the reporting Canadian-born physicians indicated that their father's occupation was of a professional (30.4 per cent) and managerial (25.8 per cent) nature, while these two occupational groups accounted for only 7.6 per cent and 10.2 per cent of the total male labour force in 1961 respectively. Farmers and male farm workers accounted for 12.2 per cent of the total male labour force and this percentage is close to 13.0 per cent of the reporting physicians who indicated agriculture as the occupation of their father.<sup>1</sup>

As in the case of most other professions, there is in the medical profession a relationship between father's occupation and that followed by his children. One-eighth of the Canadian-born physicians reported father's occupation as physicians and surgeons.

TABLE 4-15

NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN AND IMMIGRANT ACTIVE CIVILIAN PHYSICIANS, BY FATHER'S OCCUPATION, CANADA, 1962<sup>1</sup>

Father's Occupational Groups <sup>2</sup>	Canadian-born Physicians		Immigrant Physicians	
	Number Reporting	Per Cent of Total	Number Reporting	Per Cent of Total
Proprietors and managers .....	2,203	25.8	807	27.5
Physicians and surgeons .....	1,052	12.4	417	14.2
Other professional .....	1,529	18.0	776	26.5
Clerical .....	393	4.6	187	6.4
Transportation and communication .....	293	3.4	46	1.5
Commercial and financial .....	456	5.4	94	3.2
Service .....	151	1.8	88	3.0
Agriculture .....	1,103	13.0	188	6.4
Fishing, trapping, logging and mining ....	94	1.1	11	0.3
Manufacturing, mechanical and construction .....	829	9.7	186	6.4
Unskilled workers .....	180	2.1	31	1.1
Retired .....	133	1.6	46	1.6
Not stated <sup>3</sup> .....	92	1.1	58	1.9
Total .....	8,508	100.0	2,935	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Father's occupation at time of entering university training or earlier if father then deceased.

<sup>3</sup> Includes some who were unemployed.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

<sup>1</sup> Census of Canada, 1961, Labour Force, Occupation by Sex, Bulletin 3.1-3, DBS

## 7. Geographical Distribution of Medical Manpower

### a. *Problems and Factors Influencing Location of Practice*

The medical care market is, in general, of local nature and, consequently, the availability of medical services depends primarily on the geographical distribution of physicians. A regime of private medical practice implies the doctors' freedom to choose the type and location of their practice. In exercising this freedom the physicians naturally are motivated by personal, professional and economic considerations. In recent decades there has been a decline in the number of physicians in rural communities and in the smaller cities because the urbanization trend of our general population has also affected the medical profession. Consequently, it is becoming increasingly more difficult to attract physicians to rural and sparsely populated areas. It has been argued that the maldistribution of medical manpower between urban centres and rural areas is perhaps the major problem facing organized medicine in Canada today. For in communities badly provisioned the better-off people may still be able to obtain adequate medical care but poorer families cannot overcome financially this geographic maldistribution of doctors. On the other hand, it has also been argued that this "urbanization" of the medical profession may not necessarily be in conflict with public interest because of the fact that the progress of medicine requires a concentration of physicians in metropolitan areas where there are medical schools, big hospitals, medical research institutions, laboratories, clinics, etc., which serve the entire nation. Moreover, the maldistribution of medical manpower is to some extent offset by the greater productivity of today's physicians, by the increased mobility of both doctors and patients due to improved transportation and communication, which may provide the citizens of understaffed areas with superior service at an adjacent medical centre. Then, it is also said that a shortage of medical personnel and facilities is not the only deficiency in the over-all provision of health services in the rural communities.

Despite these reservations, an analysis of the choice of place of practice, the geographical distribution of general practitioners and specialists and of the various factors influencing it, is important in assessing the adequacy of the local supply of medical services as well as in finding a solution for a more equitable distribution of such services on a geographic basis, for the undirected market forces in a free society cannot be relied upon to bring this about.

There are many interrelated variables of personal, professional, cultural, social and economic nature, which are involved in the choice of a location of medical practice. Very likely these variables are not especially different from those considered by any other profession, although, perhaps, a physician will evaluate more carefully other factors than just the "availability of position". It may be difficult to establish a causal relationship between these variables and the actual local physician-population ratio, and thus to isolate the more important factors and to measure their impact on doctors' choice of a place of practice. Moreover, some of these factors, like cultural characteristics of an area, are really intangible and do not lend themselves to a statistical measurement. Hence

a considerable difference of opinions as to the required measures to affect a more equitable territorial distribution of physicians.

Among the generally recognized factors, and not necessarily in order of importance, which influence the choice of a place of practice are as follows: population density, level of income per capita, since it measures ability of individuals to purchase professional services, effective demand for medical services, the location of medical school attended, place of residence before entering medical school, the place where internship and residency was served, the methods and availability of transportation and communications, the ready accessibility of hospital and consultation facilities, climate, topography, availability of good schools, cultural and social environment, recreational facilities, housing and many other personal, social and economic factors. Thus the number of physicians practising in any community is a function of the above factors which tend to direct them to specific localities in which they can maintain a satisfactory professional service and enjoy adequate cultural and social life.

Some studies have been made, particularly in the United States, to assess quantitatively and qualitatively, the relative importance of these variables.<sup>1</sup> One writer suggested that the relative importance of the factors which he examined were in this order: place of residence prior to entering medical school, then place of internship and location of medical school.<sup>2</sup> There is a strong tendency for interns and residents to start practice in the locality where they were trained and so became known to the hospital and medical staffs. The hospitals, approved by licensing authorities as suitable for training, are of necessity located in the larger cities. Consequently, larger cities, because clinical and diagnostic facilities are concentrated in hospitals, tend to attract a disproportionately larger number of doctors. The fact that a place of residence before admission to medical school is one of the influencing factors would suggest that an increase in the number of medical students from smaller communities would probably result in an increased number of physicians in rural communities.

Effective demand for medical services may be considered as a function of population density and of economic status of a given community. It is generally accepted that the regions with low per capita income tend to receive less than their proportionate share of new medical registrants as compared with regions with high per capita income. It has been suggested that communities with the

<sup>1</sup> See the following studies: Weiskotten, H.G., Wiggins, W.S., Altenderfer, M.E., Gooch, M., and Tipner, A. — "Trends in Medical Practice — An Analysis of the Distribution and Characteristics of Medical College Graduates, 1915—1950", *The Journal of Medical Education*, vol. 35, No. 12 December 1960, pp. 1071—1121; McGibony, John R. and Johnston, Helen L. — "Prospects for Rural Health Care", *Rural Sociology*, vol. 19, 1954, pp. 337—348; Dickinson, Frank G. — "Distribution of Physicians by Medical Service Areas", A.M.A., Bureau of Medical Economics, Chicago, Bulletin No. 94, 1954, P. 162; Roemer, Milton I. — "Hospital Utilization and the Supply of Physicians", *The Journal of the A.M.A.*, vol. 178, December 9, 1961, pp. 989—993; and Ciocco, Antonio, and Altenderfer, M.E. — "Birth Statistics as an Index of Interdependence of Counties with regard to Medical Services", *Public Health Reports*, vol. 60, August 24, 1945, pp. 973—985; Mountin, J.W., Pennell, E.H. and Nicolay, V. — "Location and Movement of Physicians, 1923 and 1938 — Effect of Local Factors Upon Location", *Public Health Reports, U.S. Public Health Service*, vol. 57, December 18, 1942, pp. 1945—53; Mountin, J.W. et al. — "Location and Movement of Physicians, 1923 and 1938 — General Observations", *Public Health Reports*, vol. 57, Sept. 11, 1942, pp. 1363—75.

<sup>2</sup> Weiskotten, H.G., et al., *op. cit.*, p. 1086.



population in the low income groups are at a disadvantage in attracting physicians although their needs for medical service are greater as compared with better-off communities because "underprivileged groups experience illness more frequently than those higher on the economic scale".<sup>1</sup> On a narrow local basis there seems to be less evident correlation of this nature, at least, as far as general practitioners are concerned.<sup>2</sup> For it is doubtful if a physician can determine the relative levels of income per capita in several communities under his consideration.

Adequate hospital accommodation and facilities constitute an asset in attracting physicians to a given locality and district. A hospital reduces the inconvenience of a house-to-house practice, enables a doctor to avail himself of consulting services of other doctors and to economize his time through the use of paramedical personnel at a hospital. It has been suggested that utilization of hospitals in rural areas with a low number of doctors tends to be higher because overworked physicians tend to send more patients to the hospital. This practice has been described as "a reasonable adjustment to the problem of providing good medical care in the face of a relative shortage of medical personnel".<sup>3</sup> The question still remains whether from the economic point of view it is really a reasonable adjustment for the increased supply of physicians and greater investment in medical personnel "might yield great savings in the national expenditures for hospital care, not to mention improvements in the health services generally".<sup>4</sup>

A convenient method in determining the sufficiency of the supply of physicians and of the adequacy of their distribution in any area or locality is the physician-population ratio. This ratio is, however, somewhat deficient because of the relative mobility of patients between regions and localities. In fact, it is argued, that a comparative analysis of the availability of medical care on a local basis must disregard administrative and political boundaries. For it is feasible to assume that a community with adverse physician-population ratio, inadequate number of nurses, etc., may be able to satisfy its effective demand for medical and health care because it utilizes superior and more adequate medical and other health resources located in nearby places.

To obtain a more correct assessment of medical resources available to a local community some adjustments would have to be made both in population and number of physicians, i.e., in demand and supply of medical care. This would mean the use of statistical information with respect to births and deaths, which would indicate the number of persons who go outside their own community to have babies and to receive medical care for serious illness. Such statistics would roughly indicate the extent of reliance of a given community on medical resources located elsewhere and also would show the main centres for dispensing medical services.<sup>5</sup>

<sup>1</sup> Mountin, J.W., et al. — "Location and Movement of Physicians, 1923 and 1938 — General Observations", *op.cit.*, p. 1363.

<sup>2</sup> Dickinson, Frank G., *op.cit.*, p. 135.

<sup>3</sup> Roemer, Milton I. *op.cit.*, p. 992.

<sup>4</sup> *Ibid.*

<sup>5</sup> Ciocco, Antonio, and Altenderfer, M.E., *op.cit.*, pp. 973—985.



TABLE 4-16  
CHOICE OF REGION OF FIRST PRACTICE  
BY CANADIAN-BORN PHYSICIANS,  
FOR REGIONS, 1962

	Regions and Present Practice and Number of Reporting Physicians				
	Atlantic Provinces 537	Quebec 1,837	Ontario 2,726	Prairie Provinces 1,092	British Columbia 848
	%	%	%	%	%
(a) Per cent of reporting physicians who remained since first practice in the region of present practice . . . .	90.7	87.4	85.2	81.3	41.2
(b) Per cent of reporting physicians who resided in the region of present practice before entry to medical school and who remained since first prac- tice in the region of present practice . . . . .	87.9	86.4	81.8	77.4	38.8
Difference between (a) and (b) . . . . .	2.8	1.0	3.4	3.9	2.4
(c) Per cent of reporting physicians who resided in the region of present practice before entry to medical school . . . . .	94.2	95.3	91.9	90.4	76.0
Difference between (c) and (b) . . . . .	6.3	8.9	10.1	13.0	37.2
(d) Per cent of reporting physicians who resided in other regions before entry to medical school and who started their first practice in other regions . . . . .	3.0	3.7	4.7	5.7	21.6

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

The movement of patients between communities will occur if there are differentials in physician-population ratios between them. Another suggestion has been that the distribution of physicians should be related to "medical service areas", defined as "areas in which populations depend upon physicians located in these circumscribed territories for most of their physician service".<sup>1</sup>

b. *Choice of Location of First Practice*

(i) *Regional Analysis*

Appendix 4-7 provides a statistical information on choice of region of first practice by Canadian-born physicians for regions and Canada. A summary analysis of this information is presented in Table 4-16.

This table indicates a high proportion of the reporting physicians remaining in the region where they started their first practice. This proportion ranged from 90.7 per cent in the Atlantic Provinces to 41.2 per cent in British Columbia. For the remaining regions it was above 80.0 per cent. More than four-fifths of the reporting physicians in the Atlantic Provinces, Quebec and Ontario, and three-quarters in the Prairie Provinces and approximately one-third in British Columbia indicated that they resided in the region of present practice prior to entry into medical school and remained there after starting their first practice in the same region. Only a small proportion of the reporting doctors came from other regions of residence and remained in the region of present practice, where they started their first practice. This proportion was 2.8 per cent in the Atlantic Provinces, 1.0 per cent in Quebec, and 3.4 and 3.9 per cent in Ontario and the Prairie Provinces respectively. In British Columbia it was 2.4 per cent.

A very high proportion of the reporting physicians resided, prior to entry into medical school, in the regions of their present practice. This proportion ranged from 95.3 per cent in the Province of Quebec to 76.0 per cent in British Columbia. Some of these physicians started their first practice in other regions or abroad but have returned to the region of their residence. This is particularly pronounced in case of the reporting physicians in British Columbia, where approximately one-third started their first practice elsewhere, mainly in the Prairie Provinces, and then came back to their own region. It is also interesting to note that approximately one-fifth of the reporting doctors in British Columbia moved into that region from other regions of residence and of first practice. This type of interregional mobility of physicians is rather insignificant for other regions of Canada.

Twelve point two per cent of the reporting physicians (576), who indicated the Atlantic Provinces as their region of residence prior to entry into medical school, were in 1962 practising in other regions of the country. The corresponding percentages for other regions were as follows: Quebec - 4.8; Ontario - 6.4; the Prairie Provinces - 20.0 and British Columbia - 9.9. Probably because of language problems, only a small proportion of the doctors from the Province of Quebec

<sup>1</sup> Dickinson, Frank G., *op. cit.*, p. 13.

moved to other regions of Canada. On the other hand, the physicians from the Prairie Provinces moved in substantial proportion to British Columbia and Ontario.

Out of the total 7,040 reporting Canadian-born physicians, 8.2 per cent indicated the Atlantic Provinces as their region of residence before entry to medical school but only 7.6 per cent indicated this region as their location of present practice. This latter percentage includes physicians who resided in the Atlantic Provinces prior to entry to medical schools as well as those who moved from other regions of Canada. Thus the Atlantic Provinces experienced a net loss. The corresponding percentages for the Province of Quebec were 26.1 in both cases. This means that the interregional movement just balances. For Ontario the percentages were 38.0 and 38.7 and thus this province gained slightly. The Prairie Provinces showed a loss from 17.5 to 15.5 per cent, while British Columbia showed a gain as its percentages were 10.2 and 12.1 respectively. It is these two regions, the Atlantic and Prairie Provinces, which showed less favourable physician-population ratios as compared with other regions of Canada.

Table 4-17 illustrates a similar statistical information with respect to immigrant physicians, for regions and Canada.

**TABLE 4-17**  
**CHOICE OF REGION OF FIRST PRACTICE BY IMMIGRANT PHYSICIANS,**  
**FOR REGIONS AND CANADA, 1962**

Region of Present Practice	Region of First Practice										Total Reporting	
	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		B.C.			
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Atlantic Provinces	171	85.1	6	3.0	6	3.0	14	7.0	4	1.9	201	9.0
Quebec .....	8	3.2	214	88.1	15	6.2	6	2.5	—	—	243	10.9
Ontario .....	28	3.4	8	1.0	720	87.6	57	6.9	9	1.1	822	36.8
Prairie Provinces	33	5.1	1	0.2	14	2.2	588	91.7	5	0.8	641	28.7
British Columbia .	5	1.5	3	0.9	22	6.7	51	15.6	246	75.3	327	14.6
Canada <sup>1</sup> . . .	245	10.9	232	10.4	777	34.8	716	32.1	264	11.8	2,234	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Immigrant physicians, like the Canadian-born doctors, tend to remain in the region of their first practice. Ninety-one point seven per cent of the reporting immigrant physicians in the Prairie Provinces remained there having established their first practice in that region. The corresponding percentages for other regions were as follows: Quebec — 88.1; Ontario — 87.6; the Atlantic Provinces — 85.1; and British Columbia — 75.3.

Out of 2,234 total reporting immigrant physicians, 10.9 per cent indicated the Atlantic Provinces as their region of first practice but 9.0 per cent stated that they were working in 1962 in that region. Thus, the Atlantic Provinces also

experienced a net loss with respect to immigrant physicians. The corresponding percentages for the Province of Quebec were 10.4 and 10.9, indicating a slight gain. Ontario's percentages were 34.8 and 36.8, suggesting this province to be a gainer. Similarly, British Columbia was also a gainer because its percentages were 11.8 and 14.6. Again the Prairie Provinces were the losers having the corresponding percentages 32.1 and 28.7.

It appears again that the Atlantic and Prairie Provinces lost some immigrant physicians in favour mainly of British Columbia and Ontario.

*(ii) Effects of Size of Community*

Appendix 4-8 provides statistical information on the relationship between the size of community of residence at time of entry to medical school and size of community of first practice with respect to Canadian-born physicians, for regions and Canada. Table 4-18 summarizes the above data for the country as a whole.

**TABLE 4-18**  
NUMBER AND PER CENT DISTRIBUTION  
OF CANADIAN-BORN ACTIVE CIVILIAN PHYSICIANS,  
BY SIZE OF COMMUNITY OF RESIDENCE AT TIME OF ENTRY TO MEDICAL SCHOOL  
AND SIZE OF COMMUNITY OF FIRST PRACTICE, CANADA<sup>1</sup>

Size of Community of First Practice	Size of Community of Residence at Time of Entry to Medical School							
	Under 10,000 Population		10,000 and under 100,000 Population		and over 100,000 Population		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Number reporting . . . . .	2,394	29.7	1,295	16.1	4,362	54.2	8,051	—
Under 10,000 population . . .	1,119	46.7	256	19.8	805	18.5	2,180	27.1
10,000 and under 100,000 population . . .	588	24.6	648	50.0	1,065	24.4	2,301	28.6
100,000 and over population . . .	687	28.7	391	30.2	2,492	57.1	3,570	44.3

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Out of 8,051 total reporting Canadian-born physicians, 29.7 per cent came from communities of less than 10,000 population at the time they entered medical schools, 16.1 per cent from communities of 10,000 and under 100,000, and 54.2 per cent from cities of 100,000 and over population. Approximately one-half of those who came from communities of less than 10,000 population started their first practice in communities of the same size and about one-third in cities of 100,000 and over population. The remainder started their practice also in larger communities than the ones they came from. Again about half of the reporting physicians who came from communities of 10,000 and under 100,000 population started their practice in similar sized communities, while about one-third moved

to cities of 100,000 and over population after the completion of medical training and only one-quarter moved to communities of less than 10,000. Finally, 57.1 per cent of the reporting physicians, who came from metropolitan areas of 100,000 and over population, started their first practice in similar metropolitan areas. Less than one-quarter moved to communities of less than 10,000 population, while one-quarter went to intermediate communities.

While 29.7 per cent of the total reporting physicians indicated coming from communities of less than 10,000 population, only 27.1 per cent of them indicated starting their practice in similarly sized communities. Rural and urban population living in communities of less than 10,000 population together accounted for 41.5 per cent of total population of Canada in 1961.<sup>1</sup> This disparity in the above percentages gives a rough indication of unequal geographical distribution of Canadian-born physicians, by location of first practice, as between rural and urban areas.

TABLE 4-19

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN  
IMMIGRANT PHYSICIANS, BY SIZE OF COMMUNITY OF FIRST  
PRACTICE, FOR REGIONS AND CANADA

Region of Present Practice	Size of Community of First Practice						Total Reporting
	Less than 10,000 Population		10,000—49,999 Population		50,000 and over Population		
	Number	Per Cent	Number	Per Cent	Number	Per Cent	
Atlantic Provinces .....	97	48.3	28	13.9	76	37.8	201
Quebec .....	24	9.9	13	5.3	206	84.8	243
Ontario .....	157	19.1	104	12.6	562	68.3	823
Prairie Provinces .....	259	40.3	90	14.0	293	45.7	642
British Columbia .....	93	28.2	40	12.1	197	59.7	330
Canada <sup>1</sup> .....	630	28.1	275	12.3	1,334	59.6	2,239

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Sixty-point two per cent of the total reporting physicians indicated coming from communities of 10,000 and over population, while 72.9 per cent of them started their first practice in similar areas. Urban population living in such communities accounted for 68.5 per cent of total population of Canada in 1961.<sup>2</sup>

Table 4-19 provides an analysis of immigrant physicians by size of community of first practice.

It is interesting to note the similarity in the pattern of distribution of Canadian-born and immigrant physicians, by size of community of first practice.

<sup>1</sup> Census of Canada, 1961, Advance Report No. AP-4, Census (Demography) Division, DBS, p. 1.

<sup>2</sup> Ibid.

**TABLE 4-20**  
**DISTRIBUTION OF CANADIAN-BORN ACTIVE CIVILIAN PHYSICIANS, BY SCHOOL OF UNDERGRADUATE MEDICAL TRAINING IN CANADA, FOR REGIONS AND CANADA, 1962**

Medical School	Region of Present Practice										Total	
	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		No. Reporting	% of All Medical Schools
	No. Reporting	% of Medical School	No. Reporting	% of Medical School	No. Reporting	% of Medical School	No. Reporting	% of Medical School	No. Reporting	% of Medical School		
Dalhousie.....	413	76.6	19	3.5	61	11.3	21	3.9	25	4.7	539	6.4
Laval.....	36	3.7	881	90.9	32	3.3	17	1.8	3	0.3	969	11.5
Montreal.....	8	0.9	860	95.3	29	3.2	5	0.6	—	—	902	10.6
McGill.....	92	9.5	456	47.2	175	18.1	75	7.8	169	17.4	967	11.4
Ottawa.....	7	5.3	25	18.9	82	62.1	8	6.1	10	7.6	132	1.6
Queen's.....	12	1.9	42	6.6	457	71.3	59	9.2	71	11.0	641	7.6
Toronto.....	18	0.8	52	2.4	1,782	83.8	115	5.4	161	7.6	2,128	25.2
Western Ontario.....	—	—	33	5.6	487	83.3	34	5.8	31	5.3	585	6.9
Manitoba.....	3	0.4	19	2.3	87	10.6	527	64.5	181	22.2	817	9.7
Saskatchewan.....	—	—	2	2.8	7	9.9	51	71.8	11	15.5	71	0.8
Alberta.....	2	0.4	8	1.5	27	5.0	355	65.9	147	27.2	539	6.4
British Columbia.....	1	0.6	8	5.1	10	6.3	3	1.9	136	86.1	158	1.9
Canada <sup>1</sup> .....	592	7.0	2,405	28.5	3,236	38.3	1,270	15.0	945	11.2	8,448	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories  
Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Thus, 28.1 per cent of the total reporting immigrant physicians indicated starting their practice in communities of less than 10,000 population as compared with 27.1 per cent of Canadian-born doctors, and 71.9 per cent of immigrant doctors started their practice in urban areas of 10,000 and over population as compared with 72.9 per cent of the total reporting Canadian-born physicians.

*c. Regional Distribution of Canadian-born Doctors and Medical Schools*

Appendix 4-9 shows the distribution of Canadian-born active civilian physicians, by school of undergraduate medical training in Canada and years since graduation, for regions and Canada. Table 4-20, which is based on the above appendix, illustrates the relationship between the regional geographical distribution of these physicians and the location of the medical schools.

This table indicates a definite tendency of the physicians to establish their practices in the regions in which they have obtained their basic medical education. Thus, 76.6 per cent of the reporting physicians, who were medical graduates of Dalhousie University, remained in the Atlantic Provinces, others moved to Ontario and Western Canada. This medical school accounted for 70.0 per cent of the reporting physicians in the Atlantic region, while McGill and Laval medical schools provided 15.5 and 6.1 per cent respectively.

In the Province of Quebec, reporting doctors indicated that 91.4 per cent of them were the graduates of the three medical schools (Laval, Montreal and McGill) located in that province. The remainder came mainly from the medical schools in Ontario. Ninety point nine per cent of the reporting physicians, who were medical graduates of Laval University remained in the Province of Quebec. The corresponding percentages for University of Montreal and McGill University were 95.3 and 47.2. Most of McGill University's medical graduates were practising in Ontario, British Columbia and the Prairie Provinces.

The four medical schools (Ottawa, Queen's, Toronto and Western Ontario) located in Ontario provided 86.8 per cent of the total reporting physicians practising in that province. Others came mainly from McGill, Manitoba and Dalhousie medical schools. Eighty-three point eight per cent of the reporting physicians, who were graduates of Toronto University, remained in the Province of Ontario. The corresponding percentages for medical schools of Western Ontario, Queen's and Ottawa were 83.3, 71.3 and 62.1 respectively. The University of Ottawa served also the Province of Quebec, while Queen's University's medical graduates were also located in the Prairie Provinces and British Columbia.

The three medical schools in the Prairie Provinces provided 73.5 per cent of the total reporting physicians practising in that region. The remainder came mainly from the medical schools of Toronto, McGill, Queen's and Western Ontario. It is interesting to note that smaller proportions of the medical graduates of Manitoba, Alberta and Saskatchewan universities remained in the Prairie region. Thus, 71.8 per cent of the reporting physicians, who were graduates of the University of Saskatchewan, remained in that region, while the corresponding



percentages for Alberta and Manitoba universities were 65.9 and 64.5 respectively. Most of the other medical graduates of the latter two universities were practising in British Columbia and Ontario.

Finally, the medical school of the University of British Columbia, established only in recent years, provided 14.4 per cent of the total reporting physicians practising in that province. Most of other reporting physicians came from the Prairie Provinces and Ontario medical schools. Differential earnings of physicians in British Columbia and the Prairie Provinces are principally responsible for this movement of doctors to British Columbia.

The medical schools located in the Province of Quebec and Ontario accounted for 33.5 and 41.3 per cent respectively of the total reporting physicians, while 28.5 and 38.3 per cent of this total indicated practising in Quebec and Ontario. Medical schools in these two provinces and, in particular, McGill, and partly also schools in the Prairie Provinces supplement the output of medical schools in other regions of Canada.

This analysis would suggest that the Atlantic Provinces and British Columbia have experienced an inadequate supply of medical graduates from the medical schools located within their boundaries. In the latter region the medical school of the U.B.C. is only a few years old. Because of a strong relationship between regional distribution of physicians and the location of a medical school, it seems that the most effective method of improving the physician-population ratio in a province or region is the establishment of a medical school there or the expansion of the existing ones. This conclusion may be of particular significance in relation to the supply of medical manpower in the Atlantic Provinces.

#### *d. Geographical Mobility of Canadian-born Physicians*

There is no information available on the movement of physicians from one locality to another over the period of time after entry into practice. There is also no information as to the actual motivation involved in such a movement. It is, however, generally accepted that economic benefits and professional opportunities as well as adequacy of facilities for practice are essential motives in the movement of doctors from one region to another or one community to another. Obviously such geographical mobility of physicians affects physician-population ratios in different areas just as these ratios are affected by changes in population.

Table 4-21 gives a general idea of the interregional movement of Canadian-born active civilian physicians for various regions of Canada.

This table indicates that approximately three-quarters of the total reporting Canadian-born civilian physicians practised in the regions in which they were born. This proportion varied somewhat as between the various regions. It ranged from 84.6 per cent in the Province of Quebec to 28.3 per cent in British Columbia. It stood at 71.3 per cent in the Atlantic Provinces and 80.4 per cent in Ontario and 56.2 per cent in the Prairie Provinces. Approximately three-fifths of the total reporting physicians were born and educated in the region of their present practice. Again this proportion varied considerably as between regions.



TABLE 4-21  
NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN ACTIVE CIVILIAN PHYSICIANS,  
BY REGION OF BIRTH AND BY REGION OF UNDERGRADUATE MEDICAL TRAINING RECEIVED,  
FOR REGIONS AND CANADA, 1962

Birth and Undergraduate Medical Training Received	Region of Present Practice										Canada <sup>1</sup>	
	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		No. Reporting	Per Cent
	No. Reporting	Per Cent	No. Reporting	Per Cent	No. Reporting	Per Cent	No. Reporting	Per Cent	No. Reporting	Per Cent		
Total number of physicians .....	627		2,434		3,259		1,304		967		8,591	
Physicians born in the region .....	447	71.3	2,059	84.6	2,618	80.4	733	56.2	274	28.3	6,131	71.4
(1) who completed their medical training in region .....	211	33.7	2,007	82.5	2,495	76.6	545	41.8	80	8.3	5,338	62.1
(2) educated in other regions .....	236	37.6	52	2.1	123	3.8	188	14.4	194	20.0	793	9.3
Physicians born in other regions but educated in the region of present practice .....	60	9.6	190	7.8	314	9.6	178	13.6	56	5.8	798	9.3
Physicians born and educated in other regions .....	120	19.1	185	7.6	327	10.0	393	30.2	637	65.9	1,662	19.3

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Thus, it stood at 82.5 per cent in the Province of Quebec and only 8.3 per cent in British Columbia. In the latter province, of course, this low ratio was due to the lack of a medical school until recently. The corresponding percentages for the Atlantic Provinces, Ontario and the Prairie Provinces were 33.7, 76.6 and 41.8 respectively. Approximately one-tenth of the reporting doctors were born in other regions but educated in the regions of their present practice.

For the country as a whole, approximately one-fifth of the reporting physicians indicated that they were born and educated in regions other than those in which they were practising in 1962. This proportion probably constitutes a real measure of the geographical mobility of the Canadian-born doctors. This interregional movement is very substantial in the case of British Columbia (65.9 per cent), the Prairie Provinces (30.2 per cent) and the Atlantic Provinces (19.1 per cent). This migration of doctors may suggest a shortage of regionally trained doctors due to inadequate medical school capacities and the attraction of higher earnings, particularly in British Columbia.

#### *e. Medical Care in Rural Areas*

There are important social, cultural and economic differences between rural and urban areas, which create special problems in the provision of medical services to sparsely populated parts of the country. Along with the long-term movement of population to urban centres there has been a departure of various industries and services, including medical, from rural areas. Consequently, the rural areas experience a deficiency in the supply of medical personnel and health facilities. And as the rural population very likely will continue to decline, the need of providing medical and health services for those who will remain in rural areas may become even greater, for as one writer observed: "Rural population trends which drain off those in the most productive years and leave behind young children and older people seem likely to lead to a continued rural need for medical care at least equal to that among urban residents. The opportunities for improvement in rural infant mortality rates and the relatively high farm accident rate also show at least equal medical care need in rural areas. In addition, the rural rate of chronic illness apparently equals that of city population, but in rural areas the care of chronically ill poses problems of peculiar difficulty".<sup>1</sup>

The bulk of medical services in rural areas is being provided by general practitioners since, for professional and economic reasons, there has been no movement of specialists to the communities of less than 10,000 population. The rural general practitioners are usually deprived of the advantages of a modern hospital, laboratory, clinic and specialist facilities and consulting services and, consequently, rural practitioners may not be adequately informed about more recent advances in medical science and practice, particularly if they do not take refresher courses. For the above reasons a rural practitioner has naturally to be more self-sufficient and may sometimes assume responsibilities, like clinical care, which may be beyond his training and skill or assume some duties like those of a

<sup>1</sup> McGibony, John R., and Johnston, Helen L. — *op.cit.*, p. 342.

sanitary engineer or health inspector, which may be beyond his scope of work. Consequently, the quality and quantity of medical care in rural areas may, in some cases, be lower than in urban areas.

Rural areas not only have fewer physicians but they are older than those in urban areas. This implies not only a reduced service capacity of rural doctors but also an accelerated rate of loss through retirement and death. The reasons for this trend of concentration of older practitioners in rural communities are not difficult to establish. Rural areas are characterized generally by a lower economic status. A young doctor, after having made a considerable investment in his training, may be reluctant to start his practice in areas where the fees, by necessity, must be lower as compared with those in larger cities. Then, fewer people in rural areas can afford expensive medical training and since, generally, physicians establish their practice where they came from, it follows that rural areas will continue to attract a smaller number of newly registered doctors.

This adverse situation in the rural areas with respect to medical manpower is to some extent offset by the fact that due to improved transportation and communication rural areas today are less isolated than they used to be and, consequently, there is an increasing tendency of people in sparsely populated areas to avail themselves of medical and other health services concentrated in larger cities.

This brief analysis suggests that medical care in rural areas is a complex problem involving professional and economic considerations and, therefore, it would seem that, apart from specific remedies, the conditions of practice in rural areas should partly be altered in order to provide the professional incentives to young physicians to locate in such areas.

Acknowledging the principle of the doctors' freedom to select the location of their practice and the importance of factors, mentioned elsewhere, that influence the location of practice, the problems of proper geographical distribution of physicians and of more uniform provision of medical care to all people are, indeed, difficult ones to solve, consequently, the need for offsetting factors will likely persist in the future.

Various suggestions have been made, and in some cases practical steps have been taken though within so restricted an area that their effectiveness has not been tested, as to how an improved geographical distribution of physicians should be achieved. The following are the principal remedial measures recommended, though not necessarily in order of their importance:

1. Construction of small hospitals (12-20 bed capacity), strategically located in rural areas, and of small clinics to attract some specialists, and the establishment of diagnosis and treatment centres with access to consulting services from larger medical centres, or in association with near-by medical schools. These would be organized along group medical practice lines.
2. Educational and professional efforts should be made to raise the status of general practitioners, for whom there is a demand in rural areas. Something

of this nature has already been done by the establishment of the College of General Practice of Canada some years ago. A higher status, for a general practitioner may direct medical students towards a general practice rather than a specialty.

3. The establishment of physicians' placement services under the auspices of Provincial Medical Associations or Colleges of Physicians and Surgeons, which would assist rural communities in obtaining doctors or indicate alternative sources of supply of medical care.
4. Medical schools should provide refresher courses particularly to rural physicians and larger and modern hospitals should be made accessible to them in order to keep the rural physicians in close and constant contact with larger medical centres. (At the Tufts Medical School a broad post-graduate educational programme has been set up in order to extend medical education to physicians practising in small communities. This programme operates through the medical school and affiliated hospitals and thus a rural physician is integrated with the metropolitan medical centres and assimilates the most recent advances in medical science and practice.)<sup>1</sup>
5. Rural communities themselves should assume greater responsibility in attracting doctors through citizens' health councils or community health centres construction of adequate living quarters and office space for doctors supply a minimum of standard medical equipment, and make them available to doctors at a reasonable rent. A young doctor may not have the financial resources to do this himself.
6. Medical schools, in selecting students, should give special consideration to those from rural areas and provincial governments should offer scholarships to such students under the condition that the recipients would commit themselves to practise medicine for a specified period of time in the indicated rural areas.
7. Provincial and municipal governments should subsidize physicians' income in rural areas, because of the lower economic status of these areas as compared with urban centres, or these governments should directly employ physicians and assign them to specified areas at an agreed salary.

Implementation of some of these remedial measures would certainly improve to supply of comprehensive medical care to a still substantial portion of our population living in rural areas.

#### *f. Urban Concentration*

Concentration of physicians within the larger urban centres is greater than that of the population generally. In 1947, 70.8 per cent of the physicians in Canada were located in urban centres of 10,000 or more population, ranging

<sup>1</sup> Proger, Samuel, "Distribution of Medical Care — A Postgraduate Program to Fit a Pattern of Medical Practice", *The Journal of the A.M.A.*, vol. 124, March 25, 1944, pp. 823-26.

TABLE 4-22  
DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS, BY SIZE OF COMMUNITY  
IN WHICH LOCATED, FOR PROVINCES AND CANADA, 1951 AND 1962

Province	Total Number of Reporting Physicians	Size of Community, 1962							10,000 and over Population, 1951 <sup>2</sup>	
		Less than 10,000 Persons			10,000 and over					
		Physicians		Per Cent of Total Population <sup>1</sup>	Physicians		Per Cent of Total Population <sup>1</sup>	Per Cent of Active Civilian Physicians	Per Cent of Total Population	
		Number Reporting	Per Cent		Number Reporting	Per Cent				
Newfoundland.....	149	62	41.6	70.9	87	58.4	29.1	43.4	18.7	
Prince Edward Island .....	51	14	27.5	82.5	37	72.5	17.5	43.1	16.1	
Nova Scotia .....	425	124	29.2	55.9	301	70.8	44.1	52.1	33.0	
New Brunswick .....	244	57	23.4	66.9	187	76.6	33.1	55.0	25.7	
Quebec .....	2,825	332	11.8	37.3	2,493	88.2	62.7	76.8	51.6	
Ontario .....	4,370	412	9.4	32.8	3,958	90.6	67.2	78.6	58.2	
Manitoba .....	695	110	15.8	43.9	585	84.2	56.1	75.4	48.2	
Saskatchewan.....	547	156	28.5	68.8	391	71.5	31.2	48.1	20.0	
Alberta .....	838	181	21.6	48.6	657	78.4	51.4	65.1	37.4	
British Columbia .....	1,384	188	13.6	37.3	1,196	86.4	62.7	76.8	56.4	
Canada <sup>3</sup> .....	11,528	1,636	14.2	41.3	9,892	85.8	58.7	73.2	48.2	

<sup>1</sup> Census of Canada, 1961, Advance Report No. AP-4, Census (Demography) Division, DBS.

<sup>2</sup> Survey of Physicians in Canada, 1951, Research Division, Department of National Health and Welfare, Table 7, p. 13.

<sup>3</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

provincially from 40.6 per cent for Prince Edward Island to 79.1 per cent for British Columbia.<sup>1</sup>

Table 4-22 illustrates the distribution of active civilian physicians, by size of community in which located, for Provinces and Canada, in 1951 and 1962.

By 1951, the proportion of physicians in urban centres of 10,000 or more population had risen to 73.2 per cent for Canada as a whole and in 1962 it stood at 85.8 per cent. In contrast, only 48.2 per cent of the total population in 1951 was located within these centres and 58.7 per cent in 1962. The process of "urbanization" of physicians between these two years was somewhat lower (17.2 per cent) than that of the population generally (21.8 per cent).

Provincial variation in the proportion of physicians in urban centres of 10,000 or more population in 1962 was between 58.4 per cent for Newfoundland and 90.6 per cent for Ontario.

Approximately one-sixth of the reporting active civilian physicians were located in the communities of less than 10,000 population for the country as a whole. Provincial variation ranged from 41.6 per cent for Newfoundland to 9.4 per cent for Ontario.

Table 4-23 provides similar statistical information for immigrant physicians.

The pattern of geographical distribution of immigrant active civilian physicians was very similar to that of the total Canadian medical manpower though a slightly higher proportion of immigrant doctors tended to be located in areas of less than 10,000 population as compared with the national pattern. It is interesting

TABLE 4-23  
DISTRIBUTION OF ACTIVE CIVILIAN IMMIGRANT PHYSICIANS,  
BY SIZE OF LOCATION, FOR REGIONS AND CANADA, 1962

Region	Total Number of Reporting Physicians	Size of Community and Physicians			
		Less than 10,000 Population		10,000 and over Population	
		Number Reporting	Per Cent	Number Reporting	Per Cent
Atlantic Provinces .....	246	96	39.0	150	61.0
Quebec .....	406	16	3.9	390	96.1
Ontario .....	1,118	134	12.0	984	88.0
Prairie Provinces .....	784	221	28.2	563	71.8
British Columbia .....	417	64	15.3	353	84.7
Canada <sup>1</sup> .....	2,971	531	17.9	2,971	82.1

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

<sup>1</sup> Survey of Physicians in Canada, 1954, Table 8, p. 16, Research Division, Department of National Health and Welfare.

to note, however, that 96.1 per cent of the reporting immigrant physicians in the Province of Quebec were located in communities of 10,000 and over population as contrasted with 88.2 per cent of all the reporting doctors in that province.

In 1954, 52.5 per cent of general practitioners in private practice in Canada were located in urban centres of 10,000 or more population. The corresponding percentages for specialists in private practice and for salaried doctors were 93.4 and 86.3 respectively.<sup>1</sup> Physicians in general private practice showed a similar concentration to that for the general population. In contrast, physicians in specialist private practice showed a higher degree of urban concentration than that for the general population. The same was true of other doctors, who included physicians in hospital and government services, medical school teaching staffs, etc. Thus, the specialists in private practice and other doctors not in private practice accounted for the disproportionate concentration of the total supply of physicians in the larger urban centres.

Table 4-24 provides census statistical information on a concentration of physicians in metropolitan areas, for Provinces and Canada, in 1961.<sup>2</sup>

As of June 1961, 69.4 per cent of active civilian physicians were located within metropolitan areas, whereas only 47.2 per cent of the total population of Canada was so located. Consequently, while the metropolitan physician-population ratio was 1:581, it was only 1:1,474 for the population outside the metropolitan areas, and the over-all national ratio was 1:857.

In Newfoundland the St. John's metropolitan area accounted for 19.8 per cent of the provincial population, while the doctors located in that city constituted more than half of the total provincial medical manpower. In the metropolitan area there were 763 persons per doctor as compared with 3,306 persons per doctor in non-metropolitan areas and the over-all provincial physician-population ratio of 1:1,991. The provincial government is heavily involved in the provision of medical services. The Cottage Hospital Service, initiated in 1933, provides hospitalization and medical services in the sparsely populated areas and the Children's Health Service provides medical services in hospitals, at public expense, for all children up to the age of 16. The Cottage Hospital Service has been described by the medical profession as "... a necessary and effective means of providing medical services in outlying areas. It has not, however, provided a sufficient number of doctors to allow necessary improvements in the quality of medical care".<sup>3</sup> Approximately one-third of the province's physicians held salaried posts with the Newfoundland Department of Health and, of the remainder, many perform professional service on behalf of the department, either on a retainer or a fee-for-service arrangement. In fact, in the Province of Newfoundland two distinct

<sup>1</sup> *Ibid.*, Table 9, p. 17.

<sup>2</sup> While the Census (Demography) Division, Occupation and Employment Section, of the Dominion Bureau of Statistics has available the 1961 census data on population and number of doctors of incorporated cities of 10,000 and over population, these data cannot be used, however, because they exclude both population and doctors located in the suburban districts. This does not apply to metropolitan areas designated by the DBS.

<sup>3</sup> A brief from the Newfoundland Medical Association, submitted to the Royal Commission on Health Services, November 2, 1961, p. B.



**TABLE 4-24**  
**ACTIVE CIVILIAN PHYSICIANS LOCATED IN METROPOLITAN AREAS,**  
**FOR PROVINCES AND CANADA, 1961**

Province and City	Metropolitan Areas <sup>1</sup>					Provincial Physician- Population Ratio	Provincial Non-metro- politan Physician- Population Ratio
	Population		Physicians				
	Number	Per Cent of Prov.	Number	Per Cent of Prov.	Physician- Population Ratio		
<i>Newfoundland</i> . . . . . St. John's . . . . .	90,838	19.8	179	51.7	1:763	1:1,991	1:3,306
<i>Nova Scotia</i> . . . . . Halifax . . . . .	183,946	25.0	338	47.9	1:544	1:1,044	1:1,503
<i>New Brunswick</i> . . . . . Saint John . . . . .	95,563	16.0	135	29.7	1:708	1:1,314	1:1,570
<i>Quebec</i> . . . . . Montreal . . . . . Quebec City . . . . . Sherbrooke . . . . . Trois Rivières . . . . . Total . . . . .	2,109,509 357,568 70,253 86,659 2,623,989	40.1 6.8 1.3 1.6 49.8	3,728 683 105 97 4,613	60.5 11.1 1.7 1.6 74.9	1:568 1:524 1:669 1:893 1:569	1:853	1:1,696
<i>Ontario</i> . . . . . Hamilton . . . . . Kingston . . . . . Kitchener-Waterloo . . . . . London . . . . . Ottawa City and Eastview . . . . . Oshawa . . . . . Sudbury . . . . . Toronto . . . . . Windsor . . . . . Total . . . . .	395,189 63,419 154,864 181,283 292,761 80,918 110,694 1,824,481 193,365 3,296,974	6.3 1.0 2.5 2.9 4.7 1.3 1.8 29.3 3.1 52.9	520 220 185 433 577 91 129 3,157 280 5,592	6.5 2.7 2.3 5.4 7.2 1.1 1.6 39.3 3.5 69.6	1:760 1:288 1:837 1:419 1:507 1:889 1:858 1:578 1:691 1:590	1:776	1:1,201
<i>Manitoba</i> . . . . . Winnipeg . . . . .	475,989	51.6	887	79.2	1:537	1:823	1:1,913
<i>Saskatchewan</i> . . . . . Regina . . . . . Saskatoon . . . . . Total . . . . .	112,141 95,526 207,667	12.1 10.3 22.4	235 281 516	24.7 29.5 54.2	1:477 1:340 1:402	1:973	1:1,650
<i>Alberta</i> . . . . . Calgary . . . . . Edmonton . . . . . Total . . . . .	279,062 337,568 616,630	21.0 25.3 46.3	331 576 907	24.4 42.5 66.9	1:843 1:586 1:680	1:982	1:1,593
<i>British Columbia</i> . . . . . Vancouver . . . . . Victoria . . . . . Total . . . . .	790,165 154,152 944,317	48.5 9.5 58.0	1,352 231 1,583	62.9 10.7 73.6	1:584 1:667 1:597	1:758	1:1,229
Canada <sup>2</sup> . . . . .	8,535,913	47.2	14,690	69.4	1:581	1:855	1:1,474

<sup>1</sup> Metropolitan areas except Regina, Saskatoon and Ottawa, which excludes Hull and other cities within the Province of Quebec, Metropolitan areas include suburban parts and cities.

<sup>2</sup> Excludes Yukon and Northwest Territories and Prince Edward Island.

Source: 1961 Census data, DBS, Census (Demography) Division, Occupation and Employment Section.



groups of physicians have developed, namely doctors still practising essentially as private practitioners in relatively populated areas and another group of physicians engaged in the Cottage Hospital Service and as Medical Health Officers under contract with the Department of Health. It has been estimated that approximately one-third of the provincial population reside in the private practice — and more densely populated areas, while the remaining population live in the Cottage Hospital Service areas of Newfoundland. The private practice areas were served by about two-thirds of the physicians registered in the province. Consequently, the physician-population ratio in the private practice areas was 1:899 in comparison with a ratio of 1:5,600 in the Cottage Hospital Service areas.<sup>1</sup> Specialist physicians are mainly located in the former areas and, therefore, patients from less populated areas requiring services of specialists must be referred to private specialists in larger centres.

In Prince Edward Island 46 doctors out of the total number of 91 in the province were located as of June 1961 in Charlottetown serving a population of 18,000 while the remaining doctors served the other 86,000 residents. In Charlottetown there were 398 persons per doctor as compared with 1,918 people per doctor outside Charlottetown. The over-all provincial physician-population ratio was 1:1,150.<sup>2</sup>

In Nova Scotia nearly half of the physicians were located in the Halifax-Dartmouth metropolitan area, but its population constituted only one-quarter of the provincial population. The corresponding physician-population ratios were 1:544 in the metropolitan area, and 1:1,503 for the rest of the province; while the over-all provincial ratio was 1:1,044. It has been stated that over 70.0 of Nova Scotia's specialists in 1961 were in the Halifax city area with consequent thin specialist coverage throughout the rest of the province, the Halifax-Dartmouth metropolitan area, with a population of 180,000 had 165 practising specialists, while the Sydney area with a population of 125,000 had only 37 specialists.<sup>3</sup>

Saint John metropolitan area in New Brunswick had nearly one-third of the province's doctors, while its population accounted for one-sixth of that of the province. The metropolitan physician-population ratio was 1:708, the provincial ratio was 1:1,314, but outside of the metropolitan area there were 1,696 persons per physician.

The metropolitan area of Greater Montreal, with 60.5 per cent of the physicians of the Province of Quebec, had a ratio of one physician for 568 persons, leaving a ratio of 1:1,402 for the rest of the province. This ratio was further reduced to 1:1,696 for smaller centres and rural regions by virtue of the appreciable concentration of physicians in Quebec City, Sherbrooke and Trois Rivières metropolitan areas. These four large centres comprised three-quarters of the province's physicians but their population constituted only about a half of that of the province.

<sup>1</sup> *Ibid.*, p. 21.

<sup>2</sup> 1961 Census data.

<sup>3</sup> A brief from the Government of Nova Scotia, submitted to the Royal Commission on Health Services, October 30, 1961, p. 5.

The over-all provincial physician-population ratio was 1:853 and that of the four metropolitan areas was 1:569. The geographical distribution of general practitioners outside metropolitan areas was more equitable. However, it has been stated that there is an urgent need for general practitioners in many rural areas of the province.<sup>1</sup> In order to improve somewhat this situation in the remote rural areas, the provincial government maintains a number of nurses in smaller localities to dispense elementary medical care. As of October 1961, there were over 100 country nurses across the province.<sup>2</sup>

A similar pattern of geographical distribution of physicians prevailed in Ontario where 40.0 per cent of the province's doctors were concentrated in the Toronto metropolitan area but its population accounted for 29.3 per cent of that of the province. In Toronto there were 578 people per doctor, leaving a ratio of 1:904 for the rest of the province. This ratio was further reduced to 1:1,201 for smaller centres and rural regions because of the concentration of doctors in other metropolitan areas such as Hamilton, Kingston, Kitchener-Waterloo, London, Ottawa City and Eastview, Oshawa, Sudbury, and Windsor. All metropolitan areas in Ontario comprised about 70.0 per cent of the province's physicians but their population constituted only 52.9 per cent of the provincial population. The provincial physician-population ratio was 1:776 in 1961 as compared with the over-all metropolitan areas ratio of 1:590.

In Manitoba about 80.0 per cent of the physicians were located in the Winnipeg metropolitan area but its population accounted for only one-half that of the province. Consequently, there were 537 persons per physician in Greater Winnipeg while in the rest of the province there were 1,913 people per doctor. The over-all provincial ratio was 1:823. This concentration of medical practitioners in Winnipeg metropolitan area is expected to persist in future years because further medical advances "... require elaborate technical equipment and the skilled technical and professional staff which cannot be economically justified outside the larger centres".<sup>3</sup>

The disparity between community size and physician distribution in Saskatchewan was even more evident than in Manitoba as more than half of Saskatchewan doctors resided in Regina and Saskatoon, while these two cities accounted for about one-fifth of the provincial population. There were 400 persons per doctor in the two cities as compared with 1,650 persons per physician for the rest of the provincial population. The provincial physician-population ratio was 1:913. It has been stated that in 1959, 76.0 per cent of Saskatchewan's population lived in communities of less than 10,000 population whereas only 33.0 per cent of the province's doctors were so located.<sup>4</sup>

<sup>1</sup> A brief from the Collège des Médecins et Chirurgiens de la Province de Québec, submitted to the Royal Commission on Health Services, April 1962, p. 76.

<sup>2</sup> *Ibid.*

<sup>3</sup> A brief from the Government of Manitoba, submitted to the Royal Commission on Health Services, January 15, 1962, p. 42.

<sup>4</sup> A brief from the College of Medicine, University of Saskatchewan, submitted to the Royal Commission on Health Services, January 25, 1962, p. 31.

A very similar situation existed in Alberta, where Calgary and Edmonton together comprised two-thirds of the provincial medical manpower and accounted for less than half of the province's population. In these two cities combined there were 680 people per doctor as contrasted with 1,593 persons per physician in the rest of the province. The over-all provincial physician-population ratio was 1:982 in 1961. It has been stated that there are a few areas in the province in which the population has increased to the point where there is a need for a resident physician. In particular, there are areas where there is a considerable distance to the nearest physician and where the roads do not permit easy transportation.<sup>1</sup>

Finally, in British Columbia the two metropolitan areas, Vancouver and Victoria, comprised three-quarters of the physicians registered in the province and about half of the provincial population. The metropolitan area's physician-population ratio was 1:597 while that of the rest of the province was 1:1,229. The over-all provincial ratio in 1961 was 1:758. It has been stated that many medical services of great importance are not "... easily accessible to a proportion of our residents".<sup>2</sup>

Admittedly, the high metropolitan physician-population ratios do not necessarily reflect the actual availability of medical care to the general population since many doctors in the metropolitan areas devote all or part of their time to medical teaching and research, hospital work and administrative tasks and treat many patients who are referred or come to them from non-urban areas. Nevertheless, the above analysis suggests that even making allowance for this, there is a disproportionate geographic distribution of the medical manpower as between large centres and less populated areas throughout all the provinces. Apart from the system of granting bursaries to medical students who agree to work later in rural areas for a specified period, another scheme should be explored fully, namely, promoting the construction of community-type hospitals in the rural areas to induce doctors to serve in the more isolated regions.

#### *g. Distribution of Physicians by Counties and Census Divisions, 1961*

Appendix 4-10 shows active civilian physicians in relation to population and size of geographical area, by county and census divisions, for provinces as of June 1961. The study of counties and census divisions, according to the percentage of urbanization of population, reveals that for the most part, in the more highly urbanized counties and census divisions, the proportion of active physicians to population was more favourable than in the largely rural areas. If the counties in more urbanized provinces such as Ontario and British Columbia, are considered, the same situation existed, but the differences in physician-population ratios between the more highly urbanized and the more rural counties were much less pronounced.

<sup>1</sup> A brief from the College of Physicians and Surgeons, Province of Alberta; the Canadian Medical Association, Alberta Division; and the Faculty of Medicine, University of Alberta, submitted to the Royal Commission on Health Services, February 13, 1962, p. 7.

<sup>2</sup> A brief from the Canadian Medical Association, B.C. Division, submitted to the Royal Commission on Health Services, February 20, 1962, p. 10.

TABLE 4-25  
COUNTIES AND CENSUS DIVISIONS OF CANADA, CROSS-CLASSIFIED BY DEGREE OF URBANIZATION OF POPULATION  
AND CIVILIAN POPULATION PER ACTIVE PHYSICIAN<sup>1</sup>,  
JUNE, 1961

Population per Physician	Percent of Urbanization of Population										Total Number Counties	Population
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90+		
250 - 499 .....	-	-	-	-	-	-	-	2	1	-	3	434,802
500 - 749 .....	-	-	-	-	-	-	-	2	3	5	10	6,419,855
750 - 999 .....	1	1	1	-	2	2	4	5	6	1	23	2,856,423
1,000 - 1,249 .....	-	-	2	5	2	13	2	4	2	2	32	2,197,368
1,250 - 1,499 .....	1	1	7	6	8	4	6	3	1	1	38	1,950,144
1,500 - 1,749 .....	1	4	3	6	7	3	8	3	-	-	35	1,415,001
1,750 - 1,999 .....	1	8	7	1	5	2	2	1	1	-	28	922,543
2,000 - 2,249 .....	2	4	3	5	2	1	2	2	-	-	21	597,321
2,250 - 2,499 .....	2	3	4	2	2	2	-	-	-	-	15	482,998
2,500 - 2,749 .....	1	1	4	2	2	-	-	-	-	-	10	349,222
2,750 - 2,999 .....	2	3	1	1	-	-	-	-	-	-	7	180,821
3,000 - 3,249 .....	1	-	-	1	1	-	-	-	-	-	3	55,430
3,250 - 3,499 .....	1	3	1	-	-	-	-	-	-	-	5	84,073
3,500 - 3,749 .....	-	-	-	1	1	-	-	-	-	-	2	85,621
3,750 - 3,999 .....	-	-	-	-	-	-	-	-	-	-	-	-
4,000 and Over .....	1	2	1	1	-	1	-	-	-	-	6	168,999
Total Counties .....	14	30	34	31	32	28	24	22	14	9	238	18,200,621
Av. Population Per Physician	2,412	2,080	1,721	1,690	1,557	1,281	1,195	834	737	571	857	

<sup>1</sup> Excludes the Yukon and Northwest Territories

Source: Census of Canada, 1961, Advance Report No. AP-4, June 28, 1962, DBS, Census (Demography) Division and Occupations and Employment Section for basic data, see Appendix 4-10.

The physician-population ratios for county and census divisions as such should not be considered as an adequate index for the purpose of determining the degree of sufficiency in the supply of medical personnel because in the more highly urbanized counties some physicians were not engaged in directly dispensing medical care within their respective communities. In the larger cities many physicians were engaged in teaching, research, industry and public health, and administration work. Nevertheless, the physician-population ratios for census and county divisions indicate a broadly unequal geographic proportional distribution of medical personnel throughout the country.

Table 4-25 indicates a cross-classification of counties and census divisions, for the country as a whole, by degree of urbanization of population and the size of physician-population ratios.

The relative concentration of physicians in counties and census divisions containing urban centres is apparent from the rapid decrease in average population per physician with increase of urbanization of population. In counties and census divisions which were 70.0 or more per cent urban, the physician-population ratios were more favourable than that for the country as a whole.

In terms of population numbers, a total of 9,711,080 persons or 53.2 per cent of the total Canadian population in 1961, were living in counties and census divisions which had physician-population ratios of less than 1:1,000; another 4,147,512 or 23.7 per cent experienced physician-population ratios of 1:1,000 to 1:1,499 and the remaining one-quarter of our population had one physician per 1,500 or more persons.

Variation in the physician-population ratio between counties and census divisions grouped by percentage of urbanization of population is shown by regions in Table 4-26.

TABLE 4-26

POPULATION PER ACTIVE CIVILIAN PHYSICIAN, FOR COUNTIES AND CENSUS DIVISIONS, GROUPED ACCORDING TO PER CENT OF URBANIZATION OF POPULATION, FOR REGIONS AND CANADA, 1961

Per cent of Urbanization of Population	Atlantic Region	Quebec	Ontario	Prairie Region	British Columbia	Canada <sup>1</sup>
0 - 9 .....	2,182	2,441	2,232	2,438	—	2,412
10 - 19 .....	2,122	1,950	1,866	2,160	—	2,080
20 - 29 .....	1,536	2,175	1,615	1,787	—	1,773
30 - 39 .....	2,043	2,397	1,524	1,547	1,405	1,690
40 - 49 .....	1,352	1,942	1,220	1,561	1,941	1,557
50 - 59 .....	1,402	1,679	1,167	1,079	1,202	1,281
60 - 69 .....	1,218	1,567	1,130	2,027	894	1,195
70 - 79 .....	777	1,216	868	550	—	834
80 - 89 .....	1,066	945	770	753	615	737
90 and Over .....	—	557	593	537	—	571
Total .....	1,280	852	776	928	758	857

<sup>1</sup> Excludes Yukon and Northwest Territories.

The extent to which the geographical distribution pattern of physicians is not adequately represented by the over-all regional physician-population ratios is clearly indicated. Thus, the Province of Quebec, with the third lowest over-all average ratio among the regions, experienced group average ratios higher than those for any other region in all but the 10-19, 60-69, 80-89 and 90 plus groups of degree of urbanization of population.

## 8. Types and Auspices of Medical Work

### a. Types of Work

In addition to geographical distribution, age and years of practice of physicians, type and auspices of medical work must be taken into account when attempting to assess the availability of medical services to the general public in particular regions and communities. A concentration of doctors engaged in medical research and teaching, and of interns and residents in training hospitals, in larger cities, does not greatly increase the availability of medical services to the general public in these communities as the main source of these services is provided by general practitioners and specialists in private practice.

A historical analysis of medical manpower suggests that some changes have occurred in the patterns of medical services in recent decades, particularly, in terms of new types of medical services and specialization. Perhaps a major change has been the increased employment of physicians in hospital services, teaching, research, industry, administration and other types of institutional practice. This has also been associated with a relative reduction in the propor-

TABLE 4-27  
ACTIVE CIVILIAN PHYSICIANS BY TYPE OF WORK, MARCH 1943<sup>1</sup>

Type of Work	Physicians	
	Number	Per cent
General practice.....	5,894	68.4
Specialist practice .....	1,437	16.7
Industrial medicine .....	135	1.6
Medical teaching .....	111	1.3
Medical research .....	13	0.1
Insurance or other corporation .....	24	0.3
Hospital service.....	447	5.2
Public health .....	292	3.4
Other government service.....	170	2.0
Medical administration.....	62	0.7
Other.....	29	0.3
Total <sup>2</sup> .....	8,614	100.0

<sup>1</sup> Excluding 615 retired physicians.

<sup>2</sup> Excluding Yukon and Northwest Territories.

Source: Report of the National Health Survey, 1945, Canadian Medical Procurement and Assignment Board, Table 17, p. 36.

TABLE 4-28  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS,  
BY TYPE OF WORK, FOR REGIONS AND CANADA, 1962

Region	Private Practice			Internship		Hospital Staff			Teach- ing	Public Health	Indus- trial Med- icine	Other	Total
	General Practi- tioner	Spe- cialist	Con- sult- ant	Total	Jun- ior	Sen- ior	Total	Spe- cial- ist	Other	Total	Re- search		
<i>Atlantic Provinces</i>													
Number reporting	321	230	27	578	4	49	53	82	32	114	5	14	874
Per cent of total	36.7	26.3	3.1	66.1	0.5	5.6	6.1	9.3	3.7	13.0	0.6	1.6	56 6.4
<i>Quebec</i>													
Number reporting	816	940	67	1,823	46	390	436	226	53	279	89	42	2,841
Per cent of total	28.7	33.1	2.4	64.2	1.6	13.7	15.3	8.0	1.9	9.9	3.1	1.5	29 1.0
<i>Ontario</i>													
Number reporting	1,551	1,052	340	2,943	119	353	472	350	55	405	122	75	4,373
Per cent of total	35.5	24.1	7.8	67.3	2.7	8.1	10.8	8.0	1.2	9.2	2.8	1.7	60 1.4 3.4
<i>Prairie Provinces</i>													
Number reporting	769	590	63	1,422	49	137	186	149	49	198	26	59	2,087
Per cent of total	36.8	28.3	3.0	68.1	2.3	6.6	8.9	7.1	2.4	9.5	1.2	2.8	8 0.4 4.7
<i>British Columbia</i>													
Number reporting	559	353	103	1,015	17	83	100	88	20	108	24	21	1,385
Per cent of total	40.4	25.5	7.4	73.3	1.2	6.0	7.2	6.4	1.4	7.8	1.7	1.6	5 0.4 4.0
<i>Canada<sup>1</sup></i>													
Number reporting	4,016	3,165	600	7,781	235	1,012	1,247	895	209	1,104	266	211	11,560
Per cent of total	34.7	27.4	5.2	67.3	2.0	8.8	10.8	7.7	1.8	9.5	2.3	1.8	121 387 1.0 3.4

<sup>1</sup>Excludes Yukon and Northwest Territories.  
Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



tion of physicians in private practice. Moreover, some physicians in private practice give part of their time to one or more of these activities. An increase in the number of medical schools or an expansion of the existing ones will require more teaching physicians. Demands for physicians for research and administrative work are also growing and can be expected to increase in future.

The 8,614 active civilian physicians (excluding 3,006 in the Armed Forces) in Canada as of March 1943 are classified according to the nature of their work in Table 4-27.

Appendices 4-11A and 4-11B show the distribution of the reporting Canadian-born and immigrant active civilian physicians respectively by type of major work in 1962 for regions and Canada. Table 4-28 provides the above information for all active civilian physicians.

Physicians categorized as in general, specialist and consultant private practice included all those who reported this type of service "on their own account", whether this was accomplished in solo practice, partnership or group, and regardless of the method of payment within the partnership or group. Separation of physicians in private practice into specialist, consultant and general practitioner relates to that which the physician said he was doing regardless of formal requirement, held or not held.

Internship group included junior and senior interns and residents being trained in the hospitals. The "hospital staff" category included all those employed by hospitals as specialists, general practitioners and in administration on full-time basis, excluding interns and residents.

The balance of active civilian physicians consisted of those engaged in medical research and teaching, public health, industrial medicine and others, employed mainly in an administrative capacity by insurance companies, national and provincial professional associations and voluntary health organizations.

Sixty-seven point three per cent of the reporting physicians for the country as a whole indicated they were engaged in private practice in 1962. Excluding interns and residents, private practitioners accounted for 75.4 per cent of the reporting active civilian physicians. In 1951, general practitioners and specialists in private practice constituted 74.3 per cent of the total medical manpower in Canada, excluding interns and residents.<sup>1</sup> Thus, in the latter year about 3 out of 4 physicians were in private practice as compared with 2 out of 3 physicians in 1962. The latter proportion was almost identical with that prevailing in the United States where in 1962, 66.4 per cent of the total actual number of doctors were in private practice.<sup>2</sup> Thus it appears that in Canada the proportion of physicians in private practice has been decreasing. In actual numbers, physicians in private practice have increased. The same trend is to be observed in the United States, where in 1931 about 86.0 per cent of the physicians were private practitioners.<sup>3</sup>

<sup>1</sup> *Survey of Physicians in Canada, 1951*, Research Division, Department of National Health and Welfare, Table 8, p. 14.

<sup>2</sup> *Health Manpower Source Book, op.cit.*, Table 1, p. 3.

<sup>3</sup> *Ibid.*



Interns and residents constituted 10.8 per cent of the total reporting physicians in 1962 in this country. As of October 1, 1962, there were 2,614 interns, assistant residents and residents, comprising 12.2 per cent of the total medical manpower in the country.<sup>1</sup> In addition, there were 596 reported Canadian-born interns and residents being trained in the United States in the spring of 1962,<sup>2</sup> some of whom will return to this country. Including the latter category of interns and residents with the figure of 2,614 interns and residents trained in Canada, the total constituted 15.0 per cent of the Canadian medical manpower in 1962. The corresponding percentage for the U.S.A., excluding Canadian and foreign interns and residents, in 1962 was 13.9.<sup>3</sup> Making allowance for those Canadian-born residents and interns in the U.S.A., who probably will not return to Canada, it would seem that the immediate supply of doctors in this country is relatively the same as in the U.S.A.

Physicians, specialists and others, working in hospitals accounted for 9.5 per cent of the total reporting physicians as compared with 5.2 per cent in 1943. In 1951, the "hospital staff" category (including interns and residents) constituted 15.0 per cent of the total number of physicians as compared with 20.3 in 1962. All these percentages suggest a relative increase of physicians working in hospitals on a full-time basis.

Doctors engaged in medical research and teaching in 1962 accounted for 4.1 per cent of the total reporting physicians as compared with 1.4 per cent in 1943. A similar trend has also taken place in the U.S.A. during recent decades.

A slight increase of physicians working in the public health area also seems to have occurred between 1943 and 1962. During the latter year 3.9 per cent of the reporting physicians indicated this type of work as compared with 3.4 per cent in 1943.

A breakdown of the reporting physicians between Canadian-born and immigrant doctors, by type of work, as shown in the Appendices 4-10A and 4-10B, indicates a smaller proportion of immigrant physicians in private practice (59.1 per cent), particularly as specialists, in comparison with the Canadian-born doctors (70.1 per cent). On the other hand, proportionately more immigrant physicians are working in hospitals (13.3 per cent) and in public health (4.9 per cent) as compared with the Canadian-born doctors, whose corresponding percentages were 8.3 and 3.6 respectively. Also, 5.9 per cent of the reporting immigrant physicians indicated working in medical research and teaching as compared with only 3.5 per cent of the reporting Canadian-born doctors.

#### *b. Auspices of Work*

Appendices 4-12A and 4-12B show employing agencies (for major source of income) of Canadian-born and immigrant physicians respectively. Table 4-29 provides this information for all reporting physicians for regions and Canada.

<sup>1</sup> Canadian Mailings Limited, 1962, Toronto, List No. 6.

<sup>2</sup> See Chapter II, Table 2-17.

<sup>3</sup> Health Manpower Source Book, *op.cit.*, Table 1, p. 3.

**TABLE 4-29**  
**DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS, BY AUSPICES OF EMPLOYMENT, FOR REGIONS AND CANADA, 1962**

Auspices of Work	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada <sup>1</sup>	
	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent	Number Reporting	Per Cent
<i>Private practice:</i>												
Self-employed.....	421	51.5	1,495	54.8	2,166	52.4	592	29.3	535	40.0	5,209	47.2
Partnership.....	77	9.4	184	6.8	461	11.1	443	22.0	313	23.4	1,478	13.4
Group practice.....	77	9.4	151	5.6	316	7.6	387	19.2	169	12.7	1,100	10.0
Total.....	575	70.3	1,830	67.2	2,943	71.1	1,422	70.5	1,017	76.1	7,787	70.6
<i>Federal Government</i> .....	28	3.4	54	2.0	97	2.3	65	3.2	51	3.8	295	2.7
<i>Provincial Government</i> ...	129	15.8	62	2.3	198	4.8	141	7.0	60	4.5	590	5.3
<i>County or Municipality</i> ...	4	0.5	25	0.9	69	1.7	59	2.9	22	1.6	179	1.6
<i>University or College</i> .....	20	2.4	95	3.5	148	3.6	98	4.9	42	3.1	403	3.7
<i>Industry</i> .....	5	0.6	36	1.3	46	1.1	4	0.2	4	0.3	95	0.9
<i>Hospital</i> <sup>2</sup> .....	48	5.9	593	21.8	554	13.4	213	10.6	122	9.2	1,530	13.8
<i>Other</i> .....	9	1.1	26	1.0	82	2.0	15	0.7	18	1.4	150	1.4
Total.....	818	100.0	2,721	100.0	4,137	100.0	2,017	100.0	1,336	100.0	11,029	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Includes personnel in hospitals of auspices not shown above.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

This table indicates that 70.6 per cent of the total reporting physicians, who provided information on employing agency for their major source of income were in private practice. Approximately one-third of them were organized either in partnership or group practice. However, in the Prairie Provinces and British Columbia about half of the reporting private practitioners were working under this arrangement. Table 4-30 gives a further breakdown of the reporting private practitioners for the country as a whole by type of service and type of practice.

TABLE 4-30

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE PHYSICIANS  
IN PRIVATE PRACTICE, BY TYPE AND AUSPICES OF WORK, CANADA, 1962

Auspices of Work	Type of Work						Total	
	General Practitioner		Specialist		Consultant		Number Report- ing	Per Cent
	Number Report- ing	Per Cent	Number Report- ing	Per Cent	Number Report- ing	Per Cent		
Self-employed..	2,686	67.0	2,055	65.3	469	78.6	5,210	67.2
Partnership....	820	20.4	567	18.1	80	13.4	1,467	18.9
Group practice .	504	12.6	522	16.6	48	8.0	1,074	13.9
Total <sup>1</sup> ...	4,010	100.0	3,144	100.0	597	100.0	7,751	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

From Table 4-30 it appears that approximately four-fifths of the reporting consultants were in solo practice as compared with two-thirds of general practitioners and specialists. The partnership form of medical practice appears to be somewhat more prevalent amongst general practitioners, while group practice is more characteristic amongst specialists.

Outside private practice about one-eighth of the total reporting physicians were working in hospitals that were not operating under the auspices of public authorities. This proportion was somewhat higher in the Province of Quebec amounting to about one-fifth. Another important employing agency were provincial governments particularly in the Atlantic Provinces, where about one-sixth of the reporting physicians indicated being employed by this level of government. This high proportion in that region is due to the fact that the provincial government of Newfoundland employs a substantial number of doctors in the Cottage Hospital Service.

An examination of the Appendices 4-12A and 4-12B indicates that a higher proportion (40.9 per cent) of immigrant physicians are salaried physicians as compared with Canadian-born doctors (25.2 per cent). Eighteen point one

TABLE 4-31  
DISTRIBUTION OF ACTIVE PHYSICIANS NOT IN PRIVATE PRACTICE, BY TYPE AND AUSPICES OF MAJOR WORK, CANADA, 1962

Auspices of Work	Type of Work										Total		June, 1951 Per Cent <sup>5</sup>	
	Hospital Staff						Re- search	Teach- ing	Public Health	Indus- trial Med- icine	Other	Number Report- ing		Per Cent
	Admini- stration	Junior Interns	Senior Interns Residents Fellows	Spe- cialist	Other	Other								
<i>Federal Government</i>	4	—	2	11	9	7	—	41	3	42	119			
Dept. of Nat. Health and Welfare	20	—	86	73	11	3	—	—	—	8	201			
Dept. of Veterans Affairs . . . . .	1	2	19	1	—	9	—	—	2	24	58			
Other <sup>1</sup> . . . . .											378	9.8	14.7	
<i>Provincial Government</i>														
Dept. of Health . . . . .	25	5	83	207	25	8	—	210	6	74	643			
Other <sup>2</sup> . . . . .	2	3	18	14	2	2	—	12	2	65	120			
											763	19.8	20.2	
<i>County or Municipality</i> . . . . .	6	8	13	13	5	—	—	170	3	41	259	6.7	7.5	
<i>University or College</i> . . . . .	2	3	49	13	1	14.5	203	6	1	11	434	11.3	18.4	
<i>Industry</i> . . . . .	1	—	—	1	—	5	—	1	104	10	122	3.2	4.5	
<i>Hospital</i> <sup>3</sup> . . . . .	48	214	712	543	46	36	6	—	—	1	1,606	41.7	26.6	
<i>Other</i> <sup>4</sup> . . . . .	—	—	17	16	2	51	2	4	—	115	207	5.4	3.8	
<i>Unspecified</i> . . . . .	—	1	68	—	—	5	—	2	1	2	79	2.1	4.3	
Total . . . . .	109	236	1,067	892	101	271	211	446	122	393	3,848	100.0	100.0	
Per Cent . . . . .	2.8	6.1	27.8	23.2	2.6	7.0	5.5	11.6	3.2	10.2		100.0		
June 1951, Per Cent . . . . .	4.1	26.4		28.0		1.4	5.9	—	4.5	29.7		100.0		

<sup>1</sup> Includes personnel of the Canadian Pension Commission, Defence Research Board and other departments.

<sup>2</sup> Includes personnel of the Provincial Insurance Administration, Workmen's Compensation Boards and other departments.

<sup>3</sup> Excludes physicians in hospitals under federal or provincial government or county or municipality auspices.

<sup>4</sup> Includes personnel of the Medical Research Council (mainly research personnel).

<sup>5</sup> Survey of Physicians in Canada, 1951, Research Division, Department of National Health and Welfare, Table 11, p. 17.

per cent of the reporting immigrant physicians were employed by the three levels of government compared with only 6.6 per cent of the reporting Canadian-born doctors. This is particularly evident in the Atlantic Provinces where the corresponding percentages were 42.6 and 9.1. A somewhat higher proportion of immigrant physicians were employed by hospitals compared with Canadian-born physicians, particularly in the Province of Quebec where about one-third of immigrant physicians were working in hospitals operated by non-government organizations.

The nature of the work of active civilian physicians not in private practice is shown in some detail in Table 4-31.

Postgraduates, fellows, senior interns and residents formed the largest proportion (33.9 per cent) of those not in private practice. These categories of physicians together with hospital staff physicians accounted for nearly two-thirds of the total reporting physicians not in private practice in 1962 as compared with three-fifths in 1951. The remainder were engaged in medical research, teaching, industrial medicine, public health, and other types of work. Public hospitals, non-governmental, employed more physicians (41.7 per cent) than any other type of agency listed in the above table, while governments at the federal, provincial and county or municipal levels together employed 36.3 per cent of all reporting physicians who were not in private practice. In 1951 these governments employed 42.4 per cent of physicians not in private practice.

About half of the reporting physicians engaged in medical research were employed by the universities.

## 9. Changes in Physicians' Careers

The physician's career is not static for apart from geographical mobility when doctors move from one province to another or from rural areas to cities, there is also some shifting from general practice to specialization and from one type of work to another. Several studies have been made in the United States of medical graduates at various intervals after graduation to determine changing patterns and method of practice, type of work, etc.<sup>1</sup> One of these studies suggested the following changes as most significant: as time goes on after graduation, medical graduates tend to change their type of practice from a more general to a more specialized practice; the proportion of graduates in private practice tends to increase with the length of time after graduation; the over-all change from individual practice to partnership or group practice tends to be greater than changes in the opposite direction; and those physicians leaving

<sup>1</sup> See the following references: Weiskotten, H.G., and Altenderfer, M.E., "Trends in Medical Practice: An Analysis of the Distribution and Characteristics of Medical College Graduates, 1915-1940", *The Journal of Medical Education*, Supplement, vol. 27, September 1952, pp. 3-41; and Weiskotten, H.G., Wiggins, W.S., Altenderfer, M.E., Gooch, M., and Tipner, A., "Changes in Professional Careers of Physicians Who Were Graduated from Medical College in 1935, 1940, and 1945", *The Journal of Medical Education*, vol. 36, No. 11, November 1961, pp. 1565-1585.

teaching and/or research activities tended to go into private practice while those entering these fields of professional activities tended to come from other kinds of salaried positions.<sup>1</sup>

Appendices 4-13A and 4-13B illustrate professional mobility of Canadian-born and immigrant physicians respectively, for regions and Canada.

A statistical analysis of professional mobility of the reporting Canadian-born and immigrant physicians, for the country as a whole, is shown in Table 4-32.

This table reveals that 95.5 per cent of the reporting Canadian-born general practitioners in private practice in 1962 started their medical careers in the same type of major work. The corresponding percentage for the immigrant physicians is 85.4. Thus, it would appear that there was an insignificant degree of professional mobility of physicians from other types of major work towards a general private practice. On the other hand, there was a shift from a general private practice towards specialist private practice and other types of work based on salaried appointment. Thus, 25.9 per cent of the reporting Canadian-born specialists and 22.9 per cent of the reporting immigrant specialists came from the ranks of general practitioners. There has been a definite trend from a general to specialized private practice and to other types of work. Out of 4,000 reporting Canadian-born doctors, who started as general practitioners in private practice, only 72.7 per cent remained in their original type of work, others shifted mainly to specialist private practice, hospital specialist work and to public health work. Out of 1,100 reporting immigrant doctors, who also started as general practitioners in private practice, about three-quarters remained in this type of work, while the remainder shifted to specialist private practice and the public health area. Out of the total of 7,466 reporting Canadian-born physicians, 53.8 per cent started as general practitioners in private practice, after shifting to and from other types of work, only 40.9 per cent of the total reporting were in this type of work in 1962. The corresponding percentages for the immigrant physicians were 44.0 and 38.6 respectively.

Approximately three-quarters of Canadian-born and immigrant specialists in private practice in 1962 indicated that this was also their first type of practice.

Out of 2,025 Canadian-born doctors, who started as specialists in private practice about 10.0 per cent became consultants in private practice, others became specialists in hospitals or teachers of medicine. Out of 655 immigrant doctors, who also started as specialists in private practice about 90 shifted to consulting private practice and 100 to specialist hospital staff.

As for consultant private practitioners about 40.0 per cent of Canadian-born doctors and about 60.0 per cent of immigrant physicians came from private specialist work and only 13.9 per cent and 16.7 per cent respectively from private general practitioners. It should be noted that 40.0 per cent of the reporting

<sup>1</sup> Weiskotten, H.G., et al. "Changes in Professional Careers of Physicians" *op.cit.*, pp. 1584-1585.

TABLE 4-32  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CANADIAN-BORN AND IMMIGRANT PHYSICIANS,  
BY TYPE OF MAJOR WORK OF FIRST PRACTICE AND TYPE OF MAJOR WORK IN WHICH ENGAGED IN 1962, CANADA<sup>1</sup>

Type of Major Work of First Practice	Type of Present Major Work									
	Private Practice				Consultant			Hospital staff		
	General Practice		Specialist		Specialist		Per Cent of Present Work	Specialist	Other	Per Cent of Present Work
	Number Report- ing	Per Cent of Present Work	Number Report- ing	Per Cent of Present Work	Number Report- ing	Per Cent of Present Work	Per Cent of Present Work	Number Report- ing	Number Report- ing	Per Cent of Present Work
Canadian-born Physicians										
Private practice:										
General.....	2,921	95.5	653	25.9	63	13.9	128	22.0	47	33.1
Specialist.....	23	0.8	1,718	68.0	184	40.7	46	7.9	9	6.3
Consultant.....	-	-	3	0.1	181	40.0	1	0.2	-	-
Hospital Staff.....	5	0.2	17	0.7	6	1.3	382	65.7	70	49.3
Other.....	108	3.5	132	5.3	18	4.1	24	4.2	16	11.3
Total.....	3,057	100.0	2,523	100.0	452	100.0	581	100.0	142	100.0
Per Cent of Total Reporting .....	40.9		33.8		6.1		7.8		1.9	
Immigrant Physicians										
Private practice:										
General.....	825	85.4	148	22.9	25	16.7	25	7.6	18	26.5
Specialist.....	13	1.3	420	65.0	89	59.4	100	30.6	2	2.9
Consultant.....	-	-	3	0.5	20	13.3	-	-	-	-
Hospital staff.....	21	2.2	27	4.2	5	3.3	168	51.4	40	58.8
Other.....	107	11.1	48	7.4	11	7.3	34	10.4	8	11.8
Total.....	966	100.0	646	100.0	150	100.0	327	100.0	68	100.0
Per Cent of Total Reporting .....	38.6		25.7		6.0		13.1		2.7	



TABLE 4-32 (Concl.)

Type of Major Work of First Practice	Type of Present Major Work								Total Number Reporting	
	Research		Teaching		Public Health		Industrial Medicine			
	Number Report- ing	Per Cent of Present Work	Number Report- ing	Per Cent of Present Work	Number Report- ing	Per Cent of Present Work	Number Report- ing	Per Cent of Present Work	Number	Per Cent
Private practice: General ..... Specialist ..... Consultant ..... Hospital staff ..... Other ..... Total ..... Per Cent of Total Reporting ....	Canadian-born Physicians									
	17	10.2	10	6.9	122	40.3	55	56.7	4,016	53.8
	2	1.2	28	19.3	11	3.6	4	4.1	2,025	27.1
	3	1.8	2	1.4	—	—	—	—	190	2.5
	1	0.6	7	4.8	17	5.6	1	1.0	506	6.8
	143	86.2	98	67.6	153	50.5	37	38.2	729	9.8
	166	100.0	145	100.0	303	100.0	97	100.0	7,466	100.0
	2.2		1.9		4.1		1.3			
	Immigrant Physicians									
	14	12.8	5	7.5	32	22.1	8	33.3	1,100	44.0
Private practice: General ..... Specialist ..... Consultant ..... Hospital staff ..... Other ..... Total ..... Per Cent of Total Reporting ....	12	11.0	10	14.9	7	4.8	2	8.3	655	26.1
	1	0.9	—	—	—	—	—	—	24	1.0
	4	3.7	4	6.0	13	9.0	1	4.2	283	11.3
	78	71.6	48	71.6	93	64.1	13	54.2	440	17.6
	109	100.0	67	100.0	145	100.0	24	100.0	2,502	100.0
	4.4		2.7		5.8		1.0		100.0	

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

Canadian-born consultants started their medical profession in this capacity as compared with only 13.3 per cent of the reporting immigrant consultants.

Approximately two-thirds (65.7 per cent) of the reporting Canadian-born specialists working on a full-time basis in hospitals and about half (51.4 per cent) of the reporting immigrant specialists working in hospitals started their careers in hospital staff. One-third of the immigrant hospital staff specialists came from private specialist practice as compared with less than 10.0 per cent of the Canadian-born hospital staff specialists. However, it should be noted that about one-fifth of the Canadian-born hospital staff specialists came from private general practice. Out of 506 Canadian-born doctors, who started as specialists in hospitals, 382 or 75.5 per cent remained in that work and out of 283 immigrant physicians only 168 or 59.4 per cent remained. About half of non-specialist hospital staff, both of Canadian-born and immigrant doctors, started their medical careers in the same capacity. Another quarter came from private general practice.

Most of the reporting Canadian-born and immigrant physicians engaged in research and teaching activities evidently started their professional careers along the same lines or moved in from other salaried appointments. Only one-quarter of these physicians indicated a shift from general or specialist private practice to research and teaching.

As for physicians engaged in public health and industrial medicine fields approximately half of the Canadian-born as well as of immigrant physicians started their work along the same lines and most of the others came from general private practice.

Out of the total 7,466 reporting Canadian-born doctors, 83.4 per cent indicated having started their medical careers in private practice and 80.8 per cent indicated that they were in private practice in 1962. The corresponding figures for the immigrant physicians are 71.1 and 70.3 per cent. There was an insignificant shift from private practice towards salaried medical appointment. The above percentages also suggest that a somewhat higher proportion of the immigrant physicians were and are working as salaried physicians.

## 10. Specialization in Medical Profession

### *a. Causes and Implications of Specialization*

It is, perhaps, inevitable that in a highly organized and technologically progressive society like ours, there should be a strong tendency towards specialization in various professions and occupations, including the medical. In fact, continued technical progress largely depends on specialization and division of labour as evidenced in industry and trade.

Specialization in medicine is a characteristic development of the recent decades. Towards the end of the last century there were only a few specialties recognized such as surgery, ophthalmology, otolaryngology, dermatology, obstetrics, psychiatry, and a few others. During the last thirty or forty years

there was a particularly rapid increase in scientific medicine, diagnosis and treatment techniques, which development imposed specialty training programmes on our medical schools. Thus the whole structure of medical manpower underwent a change.

It is said that the body of medical knowledge today is far too great to be mastered by any one individual doctor, and hence the physician specialist is a necessity. In fact, specialists are indispensable in order to provide high quality of service in medical care.

H.E. Rawlinson sees three main factors that operate to produce specialists.<sup>1</sup> Firstly, as knowledge and technical skills grow and develop, there are always those whose intellectual urge is to do a few things very well, rather than many things merely adequately. The frontiers of any science, including medicine, are expanded through concentration of a few specialists on limited areas of research and practice. Different specialties will attract different personalities. Secondly, there has gradually developed in the medical profession a sense of public responsibility and a desire to see that the public have available the highest level of service which is ensured by allowing into the profession only those who can meet the required standards of performance. Thirdly, there is the economic motive. These three factors are not mutually exclusive; they usually operate together, but at a particular time any one may predominate.

It is not the purpose of this study to assess the pros and cons of medical specialization. There seems to be a considerable difference of opinion amongst the physicians themselves on this subject. Thus some doctors have strongly criticized the increasing tendency towards specialization as being dangerous for the status of the general practitioners.<sup>2</sup> One author expressed the view that "... the main justification for specialization among clinicians is the necessity for mastering difficult techniques..." and that "... in the field of medicine, as opposed to surgery, ... there is little to be said in favour of specialization, and much to be said against it".<sup>3</sup> On the other hand, another authority argued that a branch of a specialization should be delimited within medical science whenever our diagnostic and therapeutic knowledge has reached such a point that a physician must devote himself entirely to the subject if he is to master it.<sup>4</sup>

One writer following A. Smith's list of advantages of the division of labour, summarized the benefits of medical specialization such as (a) increased productivity by separating tasks; (b) facilitating the acquisition of accuracy, speed and skill; (c) better distribution of tasks among doctors endowed with

<sup>1</sup> Rawlinson, H.E. "The History of Specialism and Its Implications for Today", *The Canad. M.A.J.*, vol. 67, September 1952, p. 267.

<sup>2</sup> Joubert, J.D., *S. Afr. Med J.*, vol. 28, 1954, p. 133 and Schultz, H.H., *S. Afr. Med J.*, vol. 28, 1954, p. 855, quoted in the W.H.O. publication on *Medical Specialization: A Survey of Existing Legislation*, Geneva, 1958, p. 5.

<sup>3</sup> Todd, G.W., *The Lancet*, vol. 1, 1951, p. 462, quoted in the above W.H.O. publication, pp. 5-6.

<sup>4</sup> Fog, M., *Ugeskr. Laeg.*, vol. 117, 1955, p. 863, quoted in the above W.H.O. publication, p. 6.

specific abilities; (d) economy in utilization of material and equipment; and (e) specialization tends to increase dissemination of knowledge and provides opportunities for development of new techniques.<sup>1</sup>

Among the adverse effects of specialization may be included as follows: (a) an increase in the disparities in the physician-population ratio and in the variety of services available between rural and urban areas; (b) medical specialization raises costs of medical care; (c) intensive specialization makes a physician a better craftsman or technician, while the essential humanistic nature of the practice of medicine might have suffered a little; and (d) the specialist is often faced with the end results of disease, and the narrowness of his specialized training may not permit him to perceive its earlier stages in the fields outside his own specialty, and so we "... reach the trend reciprocal to specialization, which is the growing recognition that it is merely possible to think of a disease in terms of a particular organ or anatomical system".<sup>2</sup>

#### *b. Balanced Medical Manpower*

An overemphasis on training of specialists has disturbed the balance between general practitioners and specialists in medical manpower. A medical organization has stated that "A disproportionately large number of high calibre physicians have entered the specialties because they have been influenced and taught to be specialists and have seen little of either general practitioners or their work during the years of training; rather than because of any need for more specialists or of any specific interest in the specialty chosen".<sup>3</sup> It also suggested that at least half of Canada's medical graduates are entering specialties.<sup>4</sup>

Indeed, one of the basic problems facing medical schools and the profession is — what percentage of the medical manpower should be specialists?

In attempting to answer this difficult question it is necessary to consider the scope of work of general practitioners and that of specialists as well as the pattern of practice. There is almost a general agreement amongst medical experts as to the scope of work of general practitioners. Thus, it has been suggested that "General practice encompasses the art and science of medicine in the diagnosis and treatment of 85 per cent of the ills of mankind, and this includes the knowledge of when and where to obtain help for the remaining 15 per cent",<sup>5</sup> and similarly that "... about 80 per cent of illnesses can be treated satisfactorily by general practitioners".<sup>6</sup>

<sup>1</sup> Le R.W.H. "The Character of the Physician in Relation to Social and Economic Consequences of Specialization", *The Canad. M.A.J.*, vol. 83, October 22, 1960, p. 413.

<sup>2</sup> Brain, Sir Russell, "Osler and Medicine Today", *The Canad. M.A.J.*, vol. 83, August 20, 1960, p. 351.

<sup>3</sup> A brief from the College of General Practice of Canada, submitted to the Royal Commission on Health Services, May 1962, p. 13.

<sup>4</sup> *Ibid.*

<sup>5</sup> Johnston, W.V., *The General Practitioner of Today*, *The Canad. M.A.J.*, vol 61, August 1949, p. 169.

<sup>6</sup> A.M.A., Bureau of Medical Economics, *Factual Data on Medical Economics*, Revised Edition, 1940, p. 15.

It should be pointed out that such figures are only estimated averages and, as such, are meaningless when applied to an individual doctor. What these figures do, however, is to indicate the importance of the general practitioner in the distribution process of medical care. As for the pattern of practice, it can be said that if specialists do general practice or unreferral practice then the demand for general practitioners is somewhat reduced. This development is, however, economically unsound and medically wrong because it cannot be argued that all physicians are basically general practitioners since specialists were trained to deal with specific ailments or patients belonging to a specific age group. If, on the other hand, specialists do mainly consulting work, then, obviously, more general practitioners are needed. The demand for specialists increases if the general practitioners refrain from certain types of services.

The general practitioners have always been the bulwark of the medical profession; they determine both when the services of a specialist are needed and who of the available specialists is best qualified, and they probably know better the social, economic and family circumstances of their patients and they maintain a more continuous personal relation with them.

A balanced medical manpower would require a distribution of physicians among the various specialties and in general practice so that the variety of medical services would be available to the local community. Various surveys suggest that "... the distribution of physicians in such a community should be from 30 to 40 per cent specialists, and from 60 to 70 per cent general practitioners".<sup>1</sup>

It is very likely that the present trend of the declining proportion of general practitioners in relation to the total medical manpower will continue for some years to come. In view of the important role of general practitioners in the distribution of medical services throughout the country, the establishment of the College of General Practice of Canada in 1954 is welcomed because this institution has been instrumental in encouraging more hospitals to develop a special internship designed to meet the requirements of today's advanced general practice. This may result in a larger number and a better quality of general practitioners, particularly because, at the present time, approximately one-third of our population lives in communities where the general practitioner is the only doctor available.

### *c. Training and Formal Requirements of Specialists*

Training in a medical specialty is readily available in medical schools and major hospitals in Canada and the United States and entrance to a specialty has been formalized and special certification is now required, though the laws and regulations scarcely provide a definition of "specialist" or define his functions mainly because it is difficult in practice to delineate a demarcation line between the functions of the general practitioner and those of the specialist.

<sup>1</sup> Truman, Stanley R., "Balanced Medical Community", *General Practitioner*, vol. 6, December 1952, p. 106.

Organized specialist training in Canada is relatively new having started in 1929, when the Royal College of Physicians and Surgeons of Canada was established. Prior to this, physicians practised a specialty without formal recognition, and some still do today, or sought formal specialist diploma from the Royal College of the United Kingdom or from similar institutions in the United States.

The Royal College of Physicians and Surgeons of Canada, a national body concerned with graduate medical education, sets the standards of training, approves hospitals and medical schools in which such training may be taken in this country. The Royal College is not directly responsible for the organization and supervision of specialist training. As of 1962, there were 82 approved training hospitals, affiliated with medical schools, and 56 not so affiliated. The number of approved resident posts on establishment was 2,391, of which 2,125 were filled.<sup>1</sup> A few universities also offer graduate programmes and diplomas in certain specialties. In most cases, however, faculty members of the medical schools are involved in specialty training through their hospital staff positions.

There are two standards of training and examination for specialists of the Royal College: (a) Fellows of the R.C.P.S. in either medicine or surgery within various sub-specialties.<sup>2</sup> In 1962, there were 2,402 Fellows of the Royal College, 959 physicians and 1,443 surgeons.<sup>3</sup> (b) Specialty classification by the way of Certification Examinations, is also regulated by the Royal College, with advice of its various specialty committees. The examinations for certified specialists, introduced since 1939, are somewhat less exacting than those for the Fellows. Actual examination programmes were not started until 1942 because of the dislocation of physicians at the beginning of World War II. Certificates were granted without examination to a selected group of Canadian physicians and surgeons. Certification without examination came to an end December 31, 1947. By that time approximately 3,500 specialist certificates had been issued without examination.<sup>4</sup> As of 1962 there were 8,319 Royal College specialist certificates in effect in Canada, which figure includes also the Fellows, who automatically are granted such certificates. The scope of specialist certificates is the same as that for Fellows plus the specialty in public health.

It is due to this two-level arrangement that the accelerated production of specialists took place in Canada. It is estimated that approximately 90.0 per cent of specialists in this country hold formal recognition from the Royal College.

As far as the Province of Quebec is concerned, the provincial College of Physicians and Surgeons has since 1950 autonomous jurisdiction over the certification of specialists under an arrangement somewhat similar to that under

<sup>1</sup> A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, March 21, 1962, p. 14.

<sup>2</sup> Fellowship examinations are conducted in eleven medical specialties: internal medicine, anaesthesia, bacteriology, dermatology, neurology, paediatrics, pathology, physical medicine and rehabilitation, psychiatry, diagnostic radiology and therapeutic radiology and in nine surgical specialties: general surgery, cardiovascular and thoracic surgery, neuro-surgery, obstetrics and gynaecology, ophthalmology, orthopaedic surgery, otolaryngology, plastic surgery and urology.

<sup>3</sup> Brief of the Royal College of Physicians and Surgeons of Canada, *op.cit.*, p.3.

<sup>4</sup> *Ibid.*

which the Royal College certificates are granted, i.e., completion of a prescribed course of study and the passing of an examination. However, most physicians in the Province of Quebec who hold a certificate from the College of Physicians and Surgeons of Quebec also hold the corresponding certificate from the Royal College of Physicians and Surgeons of Canada.

In the Province of Alberta, which has recognized the formal requirements for specialists since 1926, a specialist must be legally approved by the University of Alberta, and up to 1948 it did recognize specialists though they were not certified by the Royal College.

#### d. Specialization Trends

Table 4-33 provides statistical information on the trend to specialization in Canadian medical manpower during the period of 1947-61. The number of specialists include those who were in specialist private practice as well as those not in private practice, i.e., employed by hospitals, medical schools, industry, the various levels of government, etc. Some certified specialists in smaller urban centres do not restrict their practice to a specific specialty but are also engaged in general practice to some extent. On the other hand, some general practitioners practice a specialty on a part-time or full-time basis as non-certified specialists. Consequently, the category of non-specialist physicians is not necessarily identical with general practitioners in private and non-private practice. Because the non-certified specialists devote probably a major part of

TABLE 4-33  
RATIO OF CERTIFIED AND NON-CERTIFIED ACTIVE CIVILIAN SPECIALISTS  
TO TOTAL CIVILIAN PHYSICIANS, CANADA, 1947-1961<sup>1</sup>

Year	Specialists						Non-Specialists		Total <sup>2</sup>
	Certified		Non-certified		Total		Number	Per Cent	
	Number	Per Cent	Number	Per Cent	Number	Per Cent			
1947 <sup>a</sup> .....	—	—	—	—	3,064	23.1	10,672	76.9	13,736
1951 <sup>b</sup> .....	3,795	27.0	984	7.0	4,779	34.0	9,263	66.0	14,042
1954 <sup>c</sup> .....	4,182	26.7	2,064	13.2	6,246	39.9	9,405	60.1	15,651
1961.....	7,925 <sup>d</sup>	37.3	2,941	13.8	10,866	51.1	10,400	48.9	21,266 <sup>e</sup>

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Includes junior and senior interns.

Source: a *Survey of Physicians in Canada, 1947*, Department of National Health and Welfare, Table 15, p. 23.

b *Survey of Physicians in Canada, 1951*, Research Division, Department of National Health and Welfare, Table 15, p. 21.

c *Specialists in Canada, 1954*, Research and Statistics Division, Department of National Health and Welfare, p. 1.

d A brief from the Royal College of Physicians and Surgeons of Canada, Submitted to the Royal Commission on Health Services, February 1962, Appendix I, Table 2.

e 1961 Census data.

Note: Specialists include those certified by the Royal College of Physicians and Surgeons of Canada, the College of Physicians and Surgeons of the Province of Quebec and by provincial authority in the Province of Alberta.



their work to general practice, these doctors should be considered for all practical purposes as general practitioners. The non-specialist category includes junior and senior interns.

Table 4-33 clearly indicates that the trend to specialization continued steadily during the last two decades. The population of Canada has increased between 1947 and 1961 from 12.6 million to 18.3 million or by 45.2 per cent, while total medical manpower has increased during the same period by nearly 55.0 per cent. But the total specialist physicians (certified and non-certified) have increased by over three times.

The number of certified specialists has risen from 3,795 in 1951 to 7,925 in 1961, i.e., by 127.4 per cent, accounting for 37.3 per cent of the total doctor population in 1961 as compared with 27.0 per cent in 1951. Similarly, the general practitioner has shown a greater interest in specializing as the non-certified specialists have increased from 984 in 1951 to 2,941 in 1961. Non-certified specialists as a group accounted for only 7.0 per cent of the total physician population in 1951 as compared with 13.8 per cent in 1961.

This trend in specialization has not been accompanied by corresponding gains in the number of non-specialists.

A measure of the growth in specialist practice in Canada may also be seen from figures showing the number of specialist certificates granted by the Royal College of Physicians and Surgeons of Canada, which are presented in Table 4-34.

TABLE 4-34  
SPECIALIST CERTIFICATES GRANTED BY THE R.C.P.S., 1942-1960

Period (to Dec. 31)	Number of Years	Number of Certificates Granted	Cumulative Total	Average Number per Annum
1942 - 1944 .....	3	1,221	1,221	407
1945 - 1949 .....	5	3,029	4,250	606
1950 - 1954 .....	5	2,185	6,435	437
1955 - 1956 .....	2	934	7,369	467
1957 - 1958 .....	2	1,070	8,439	535
1959 - 1960 .....	2	1,051	9,490	523
Total .....	19	9,490 <sup>1</sup>		499

<sup>1</sup> Includes 511 individuals certificated in more than one specialty.

Source: A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, February 1962, Table I, p. 28.

The higher average number of certificates issued per annum for the period 1945-1949 is attributable to the large number of certificates granted without examination in the years 1945-1947. Of the total 8,971 physicians certified by the R.C.P.S., 7,157 or about 80.0 per cent were in active civilian practice

in Canada as of September 1, 1961, 58 were in the Armed Forces, and 432 or about 5.0 per cent resided outside Canada. The remainder were retired, working outside specialty or deceased. The number of certified specialists resident outside of Canada include those from other countries who have obtained their training and certification in Canada and who have subsequently returned to their own countries, as well as those Canadians who may be undertaking further specialist training abroad. Thus the figure of 432 specialists residing outside of Canada does not indicate emigration of these specialists from Canada.

Appendix 4-14 shows an increase in certified and non-certified specialists for provinces during the years 1951-1961. Among the provinces, the greatest number of specialists were located in Ontario, followed by the Province of Quebec and British Columbia, although the most striking relative increases between 1951 and 1961 occurred in Newfoundland and Alberta.

Table 4-35 presents the distribution of general practitioners and certified specialists by provinces, showing the general practitioner-population ratio with the certified specialist-population ratio in 1961.

It is noteworthy that the provincial ratios of certified specialists to total physicians were above the national ratio in New Brunswick, British Columbia, Quebec and Alberta, in that order; while this ratio was lowest in Newfoundland despite a relatively high increase in certified specialists in recent years. It is evident that the autonomous programme of certification of specialists by the College of Physicians and Surgeons of Quebec has played an important role in the supply of specialists in that province.

It appears from this table that general practitioners accounted for about half of the total medical manpower in Canada in 1961. The World Health Organization recommended a ratio of 66.6 of general practitioners per 100,000 population.<sup>1</sup> This ratio has been approached only in two provinces, Ontario and Alberta. The most unfavourable ratios prevailed in New Brunswick, Quebec and Newfoundland. The general practitioner-population ratios ranged from 1:1,508 in Ontario to 1:2,588 in New Brunswick. The supply of medical services, as measured in terms of the general practitioner-population ratios, in the country as a whole and by provinces was much less favourable than it would appear from the national and provincial over-all physician-population ratios. On the other hand, the differences in the provincial general practitioner-population ratios were less pronounced than the differences in the provincial over-all physician-population ratios.

The provinces which experienced the most favourable certified specialist-population ratios were British Columbia, Ontario, Quebec, Alberta and Manitoba in that order. It was also these provinces which has the most advantageous over-all physician-population ratios. The most adverse ratio prevailed in Newfoundland where there were over 7,000 persons per certified specialist as

<sup>1</sup> Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, Report on the First Session, 1950, Technical Report Series No. 22, W.H.O., Geneva, 1950 (quoted in "The Location of British Columbia Physicians" - Anderson, D.O., and Clough, A.F., the *British Columbia Medical Journal*, vol. 2, No. 9, September 1960, pp. 558-564).

TABLE 4-35  
RATIOS OF GENERAL PRACTITIONERS AND CERTIFIED SPECIALISTS TO POPULATION,  
FOR PROVINCES AND CANADA, 1961

Province	General Practitioners <sup>a</sup>			Certified Specialists <sup>b</sup>			
	Number	General Practitioners- Population Ratio	Per 100,000 Population	Number	Per Cent of Total Physicians in Province	Per Cent of Total Specialists	Certified Specialist- Population Ratio
Newfoundland.....	186	1:2,462	40.62	64	27.8	0.8	1:7,154
Prince Edward Island.....	53	1:1,974	50.66	29	31.9	0.4	1:3,608
Nova Scotia.....	402	1:1,833	54.54	236	33.4	3.0	1:3,123
New Brunswick.....	231	1:2,588	38.63	199	43.7	2.5	1:3,005
Quebec.....	2,506	1:2,099	39.09	2,443	39.6	30.8	1:2,153
Ontario.....	4,135	1:1,508	66.31	2,912	36.2	36.7	1:2,142
Manitoba.....	523	1:1,762	56.74	357	31.9	4.5	1:2,582
Saskatchewan.....	471	1:1,964	50.91	293	30.8	3.7	1:3,158
Alberta.....	816	1:1,632	61.26	529	39.0	6.7	1:2,518
British Columbia.....	793	1:2,054	48.68	863	40.1	10.9	1:1,888
Yukon & N.W.T.....	17	1:2,213	45.18	n.a.	n.a.	n.a.	n.a.
Canada.....	10,133	1:1,800	55.67	7,925	37.3	100.0	1:2,297

Sources: <sup>a</sup> A brief from the College of General Practice of Canada, submitted to the Royal Commission on Health Services, May 1962, p. 12. These figures were compiled in June 1961 and were made up of lists supplied by Provincial Chapters of the College. They include certified physicians doing general practice and exclude non-certified physicians confining their work to a specialty.

<sup>b</sup> A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, February 1962, Appendix I, Table 2. These figures were as of September 1, 1961. Population 1961 Census.

compared with the national ratio of 1:2,288. This would suggest that in general the factors which influence the distribution of physicians as a whole affect the distribution of specialists in a similar manner.

It would appear that if the present trend to specialization continues, the medical manpower in Canada in the next decade will show as many certified specialists as general practitioners. This trend may be, of course, modified by changes in economic conditions and medical education as well as by government policy that makes all medical services universally available which would result in an improved economic and professional status of a general practitioner.

This rapid increase in specialists is not limited to Canada alone. In the United States in 1931, about 16.0 per cent of physicians were full-time specialists but by 1962 this proportion had increased to 50.0 per cent, including specialists in private practice, in hospital service (other than interns and residents), in teaching, administration, research, and preventive medicine. This proportion was even higher for physicians in private practice, namely, 58.6 per cent.<sup>1</sup> Physicians in private practice are now almost equally divided in their choice between general practice and specialization, whereas 30 years ago there were five general practitioners to every full-time specialist. Between 1940 and 1962 the number of full-time specialists in private practice tripled from 33,000 to 99,000 (out of 170,000 doctors in private practice). On the other hand, the number of general practitioners (including part-time specialists) decreased from 61.2 per cent of the total physicians in private practice in 1940 to 27.2 per cent in 1962.<sup>2</sup>

The same trend towards specialization has been even more marked in Denmark, where in 1955, two-thirds of the physicians were specialists or had applied for specialist training.<sup>3</sup>

#### *e. Location of Specialists*

Since a specialist limits the scope of his practice to a narrow field it is necessary that he must practise in larger centres. In smaller areas the number of patients requiring his specific services may be too small to provide an economic basis for his practice, to justify the years of training, and expensive equipment he requires. Besides in larger centres he is near the medical schools, modern hospitals, laboratories, X-ray facilities, etc. and thus has at his disposal special diagnostic and treatment facilities. It has been suggested that the least number of people that can fully support any specialist by providing him with sufficient work in his own specialty is "... in the neighbourhood of 10,000. Some types of specialists require a population of 25,000 or more".<sup>4</sup> In smaller centres there are some specialists, for example, general surgeons. Others serve mainly in the capacity of

<sup>1</sup> Health Manpower Source Book, *op. cit.*, Table 1, p. 3.

<sup>2</sup> *Ibid.*, Table 4, p. 5.

<sup>3</sup> Fog, M., Ugeskr. Laeg., 1955, 117, p. 863; quoted in the W.H.O. publication on "Medical Specialization: A Survey of Existing Legislation", Geneva, 1958, p. 5.

<sup>4</sup> A brief from the C.M.A., British Columbia Division, submitted to the Royal Commission on Health Services, February 20, 1962, p. 44.

consultants and a relatively high proportion of their work consists of referral cases from the general practitioners located in rural areas and smaller cities. It is said that in this capacity a specialist may serve an area of 40,000 and more population. In larger centres, where specialists are more numerous, they directly establish relations with their patients without intermediary general practitioners.

Improvements in transportation and communication have greatly increased the mobility of both patients and physicians, with the result that a larger proportion of rural and non-urban patients have access to specialists' services than was the case in an earlier period. It should be pointed out that a more equitable distribution of specialists throughout the sparsely populated parts of the country would require the development and extension of hospital facilities and other ancillary services. It may be that group medical practice would provide a means of bringing more specialists to smaller communities.

Table 4-36 presents the distribution of civilian certified specialists (R.C. P.S. only) by provinces and the three sizes of urban centres.

TABLE 4-36  
DISTRIBUTION OF CERTIFIED SPECIALISTS BY PROVINCE  
AND SIZE OF URBAN CENTRE, SEPTEMBER 1, 1961

Province	Total Certified Specialists	Urban Centre Size Group						Total in Urban Centres of 10,000 and over Population	
		10,000— 24,999 Population		25,000— 49,999 Population		50,000 and over Population			
		Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Newfoundland.....	64	—	—	9	14.1	55	85.9	64	100.0
Prince Edward Island	29	22	75.9	—	—	—	—	22	75.9
Nova Scotia .....	236	16	6.8	19	8.1	155	65.6	190	80.5
New Brunswick .....	198	34	17.1	44	22.2	79	40.0	157	79.3
Quebec .....	1,697	73	4.3	27	1.6	1,521	89.6	1,621	95.5
Ontario .....	2,912	184	6.3	181	6.2	2,434	83.6	2,799	96.1
Manitoba .....	357	4	1.1	17	4.8	334	93.5	355	99.4
Saskatchewan.....	293	34	11.6	25	8.5	220	75.1	279	95.2
Alberta .....	508	24	4.7	31	6.1	427	84.1	482	94.9
British Columbia .....	863	78	9.0	—	—	742	86.0	820	95.0
Canada <sup>1</sup> .....	7,157	469	6.6	353	4.9	5,967	83.4	6,789	94.9

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, February 1962, Table V, p. 32.

It emerges from this table that 95.0 per cent of certified specialists were located in centres with population of 10,000 and over, as of September 1, 1961. They provided specialist services directly to 58.5 per cent of the total Canadian population. In the three Maritime Provinces of New Brunswick, Nova Scotia and Prince Edward Island, the percentage of certified specialists located in

urban centres of 10,000 population and over was significantly less than in all other provinces. This is due to the fact that these provinces have fewer urban centres in the larger population categories and a correspondingly greater number of urban centres of under 10,000 population.

A survey of physicians in the spring of 1962, conducted by the Royal Commission on Health Services, confirms the above conclusions with respect to the location of certified and non-certified specialists. According to that survey 94.3 per cent of the reporting specialists working in private practice and hospitals were located in communities of 10,000 population and over. In the Atlantic region, however, this proportion was somewhat lower being 80.0 per cent. These data on a regional basis are presented in Table 4-37.

The distribution of certified and non-certified specialists in private practice and hospital work by size or locality and specialty practised is shown in Table 4-38

This table indicates that specialists in general surgery, neurology and psychiatry, internal medicine and tuberculosis were present in a slightly higher proportion in communities of less than 10,000 population than the over-all proportion of specialists so located. Partly this is due to institutional work of these categories of specialists in mental and general hospitals. In most of other specialties, however, 80.0 to 90.0 per cent of the reporting specialists were located in the large urban areas of 50,000 population and over.

#### *f. Distribution by Specialty*

Appendix 4-15 shows the distribution of certified specialists by the Royal College of Physicians and Surgeons of Canada, the College of Physicians and Surgeons of the Province of Quebec and by provincial authority in the Province of Alberta as of September 1, 1961, for provinces and Canada. The major clinical specialties of Internal Medicine, General Surgery, and Obstetrics and Gynaecology constituted 47.5 per cent of the total active civilian certified specialists. Paediatrics, Neurology and Psychiatry, and Ophthalmology and Otolaryngology comprised 23.3 per cent of the total, while the supportive specialty services, Anaesthesia, Radiology and Pathology, accounted for an additional 18.8 per cent. Specialists certified in Public Health constituted only 1.9 per cent. The remaining 8.5 per cent of the total is made up of those certified in the other medical and surgical clinical sub-specialties.

The distribution of active civilian certified and non-certified specialists, by specialty practised in 1961, for regions and Canada is shown in Table 4-39.

It is apparent from this table that 45.0 per cent of physicians in specialist work in the country as a whole were engaged in the specialties of Internal Medicine, General Surgery and Obstetrics and Gynaecology. Regional variations in this category of specialists were not extensive ranging from 43.2 per cent in British Columbia to 48.2 in the Province of Quebec. Those engaged in Paediatrics, Neurology and Psychiatry, and Ophthalmology and Otolaryngology comprised 20.4 per cent of the total civilian specialists. Again regional differences were insignificant as this proportion ranged from 19.5 per cent in Quebec to 21.3 per

TABLE 4-37  
NUMBER AND PERCENTAGE DISTRIBUTION OF SPECIALIST PHYSICIANS IN PRIVATE PRACTICE AND HOSPITAL WORK,  
BY SIZE OF LOCALITY, FOR REGIONS AND CANADA, 1962

Size of Locality & Type of Work	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada	
	Number Report- ing	Per Cent	Number Report- ing	Per Cent	Number Report- ing	Per Cent	Number Report- ing	Per Cent	Number Report- ing	Per Cent	Number Report- ing	Per Cent
<i>Less than 10,000 population</i>												
Private practice.....	43	18.8	39	4.2	30	2.9	19	3.2	17	4.8	148	4.7
Hospital staff.....	19	23.5	16	7.1	13	3.7	22	14.9	13	14.8	83	9.3
Total.....	62	20.0	55	4.8	43	3.1	41	5.6	30	6.8	231	5.7
<i>10,000 to 49,999 population</i>												
Private practice.....	82	35.8	105	11.3	176	16.7	61	10.3	56	15.9	480	15.2
Hospital staff.....	13	16.0	14	6.2	82	23.4	32	21.6	13	14.8	154	17.3
Total.....	95	30.6	119	10.3	258	18.4	93	12.6	69	15.6	634	15.7
<i>50,000 and over population</i>												
Private practice.....	104	45.4	787	84.5	845	80.4	510	86.5	280	79.3	2,526	80.1
Hospital staff.....	49	60.5	195	86.7	255	72.9	94	63.5	62	70.4	655	73.4
Total.....	153	49.4	982	84.9	1,100	78.5	604	81.8	342	77.6	3,181	78.6
<i>All areas</i>												
Private practice.....	229		931		1,051		590		353		3,154	
Hospital staff.....	81		225		350		148		88		892	
Total.....	310		1,156		1,401		738		441		4,046	

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



TABLE 4-38  
NUMBER AND PERCENTAGE DISTRIBUTION OF SPECIALIST PHYSICIANS IN PRIVATE PRACTICE AND HOSPITAL WORK,  
BY SIZE OF LOCALITY AND SPECIALTY PRACTISED, CANADA, 1962

Specialty Practised	Size of Locality and Type of Work															Total Number Reporting	
	Less than 10,000 Population					10,000 — 49,999 Population					50,000 and over Population						
	Pri- vate Prac- tice	Hosp. Staff	Total	Per Cent of Spe- cialty	Per Cent of Loca- lity	Pri- vate Prac- tice	Hosp. Staff	Total	Per Cent of Spe- cialty	Per Cent of Loca- lity	Pri- vate Prac- tice	Hosp. Staff	Total	Per Cent of Spe- cialty	Per Cent of Loca- lity		
Anaesthesia . . . . .	18	—	18	4.2	7.8	55	—	55	12.9	8.7	336	19	355	82.9	11.2	428	10.6
Dermatology & Syphilology . . . . .	—	—	—	—	—	5	—	5	7.6	0.7	59	2	61	92.4	1.9	66	1.6
General Surgery . . . . .	78	4	82	13.4	35.5	136	2	138	22.6	21.8	377	14	391	64.0	12.3	611	15.1
Internal Medicine & T.B. . . . .	12	24	36	6.4	15.6	62	12	74	13.1	11.7	365	89	454	80.5	14.3	564	13.9
Neurology & Psychiatry . . . . .	2	30	32	9.1	13.9	4	53	57	16.3	9.0	134	127	261	74.6	8.2	350	8.7
Neurosurgery . . . . .	—	—	—	—	—	1	—	1	5.9	0.2	15	1	16	94.1	0.5	17	0.4
Obstetrics & Gynaecology . . . . .	8	1	9	2.1	3.9	65	—	65	15.4	10.2	348	1	349	82.5	11.0	423	10.4
Orthopaedic Surgery . . . . .	1	—	1	0.9	0.4	11	—	11	9.6	1.7	100	2	102	89.5	3.2	114	2.8
Ophthalmology & Otolaryngology . . . . .	17	—	17	4.6	7.4	64	—	64	17.4	10.1	286	1	287	78.0	9.0	368	9.1
Paediatrics . . . . .	4	—	4	1.4	1.7	36	2	38	13.1	6.0	235	13	248	85.5	7.8	290	7.2
Pathology & Bacteriology . . . . .	1	6	7	3.2	3.0	4	34	38	17.4	6.0	8	165	173	79.4	5.4	218	5.4
Diagnostic & Therapeutic Radiology . . . . .	2	14	16	5.0	6.9	14	49	63	19.6	9.9	76	167	243	75.4	7.6	322	8.0
Urology . . . . .	—	—	—	—	—	15	—	15	17.6	2.4	70	—	70	82.4	2.2	85	2.1
Other & Not Stated <sup>1</sup>	5	4	9	4.7	3.9	8	2	10	5.3	1.6	117	54	171	90.0	5.4	190	4.7
Total . . . . .	148	83	231	5.7	100.0	480	154	634	15.7	100.0	2,526	655	3,181	78.6	100.0	4,046	100.0

<sup>1</sup> Includes Hospital Administration, Allergy, Cardiology, Cardiovascular Diseases, Gastroenterology, Haematology, Proctology, Biochemistry, Physical Medicine and Rehabilitation, Plastic Surgery, Public Health, Thoracic Surgery and Industrial Medicine.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

cent in the Atlantic Provinces. The supportive specialty services, Anaesthesia, Radiology and Pathology accounted for 17.2 per cent of the total civilian specialists in the country. Regional variations in this category of specialists ranged from 16.3 per cent in the Province of Quebec to 19.0 per cent in British Columbia.

Table 4-39 indicates a particularly high degree of non-certified specialization in Public Health, Internal Medicine, General Surgery, Psychiatry (physicians working in mental hospitals) and Obstetrics and Gynaecology.

Comparison of non-certified specialists with the total specialists shows that approximately one-third of the civilian specialists in the Atlantic region and the Prairie Provinces were non-certified, while Quebec and British Columbia had the relatively high proportion of four-fifths of their civilian certified specialists.

In Appendix 4-16, the ratio of some specialists to regional population is compared with the empirical estimates of medical requirements made by the World Health Organization in 1950. The same analysis for the country as a whole is presented in Table 4-40.

The specialist distribution, in the country as a whole, by service was, in general, at the recommended W.H.O. standard in such specialties as General Surgery, Obstetrics and Gynaecology, Paediatrics, Dermatology, Orthopaedic Surgery and Urology. In other specialties such as Internal Medicine, Psychiatry, Pathology and Radiology, however, there were too many doctors, while in Ophthalmology and Otolaryngology there were not enough specialists. It should be pointed out, however, that the W.H.O. recommended standard may not be exactly applicable to the Canadian conditions because of the long geographic distances and wide-spread distribution of population and hence the real difficulty in determining the number of specialists required to meet adequately the needs of our population for specialist care.

The Royal College of Physicians and Surgeons of Canada stated that shortages exist in the following specialties: Anaesthesia, Bacteriology, Dermatology, Ophthalmology, Otolaryngology, Obstetrics and Gynaecology, Pathology, Paediatrics, Physical Medicine and Rehabilitation, Psychiatry, and Diagnostic and Therapeutic Radiology. The extent of these shortages varies between different provinces.<sup>1</sup> The same source indicated that the percentage of certified specialists in the upper age groups was much higher in such specialties as Bacteriology, Ophthalmology, Otolaryngology and Public Health than for the specialist group as a whole. It was also the case that there has been a decline in the average annual entry to these specialties. Consequently, a worsening of the already critical shortage in these fields may be anticipated in the years ahead.

An examination of Appendix 4-16 would suggest that in the Atlantic Provinces shortages existed in such specialties as Ophthalmology and Otolaryngology, Obstetrics and Gynaecology, Paediatrics, Urology and Dermatology. In Prince Edward Island, it has been reported, there were no specialists in Neurology, Neurosurgery and

<sup>1</sup> A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, February 1962, p. 37.

TABLE 4-39

NUMBER AND PERCENTAGE DISTRIBUTION OF ACTIVE CIVILIAN SPECIALIST PHYSICIANS,  
CERTIFIED AND NON-CERTIFIED, BY SPECIALTY PRACTISED,  
FOR REGIONS AND CANADA, 1961

Specialty Practised	Atlantic Provinces				Quebec				Ontario			
	Cert.	Non-Cert.	Tot.	Per Cent of Region	Cert.	Non-Cert.	Tot.	Per Cent of Region	Cert.	Non-Cert.	Tot.	Per Cent of Region
<i>Medical Specialties</i>												
Internal Medicine <sup>1</sup> .....	70	37	107	13.4	513	176	689	22.0	472	215	687	16.9
Anaesthesia .....	42	17	59	7.4	191	56	247	7.9	247	91	338	8.3
Dermatology & Syphilology .....	4	1	5	0.6	40	7	47	1.5	53	13	66	1.6
Paediatrics .....	29	9	38	4.8	165	28	193	6.2	219	45	264	6.5
Physicial Medicine & Rehabilitation .....	3	—	3	0.4	11	—	11	0.4	11	—	11	0.3
Public Health .....	9	60	69	8.7	59	95	154	4.9	38	205	243	6.0
<i>Surgical Specialties</i>												
General Surgery .....	160	33	193	24.2	461	67	528	16.7	631	135	766	18.8
Neurosurgery .....	3	—	3	0.4	20	—	20	0.6	15	—	15	0.4
Orthopaedic Surgery .....	12	3	15	1.9	83	6	89	2.8	54	12	66	1.6
Plastic Surgery .....	—	—	—	—	14	—	14	0.4	13	—	13	0.3
Thoracic Surgery .....	3	—	3	0.4	6	—	6	0.2	3	—	3	0.1
Urology .....	10	2	12	1.5	52	1	53	1.7	61	4	65	1.6
<i>Medical Specialties-Complexes</i>												
<i>Neurology &amp; Psychiatry</i>												
Neurology .....	3	—	3	0.4	25	—	25	0.8	16	—	16	0.4
Psychiatry .....	35	—	35	4.4	138	—	138	4.4	212	—	212	5.2
Neurology & Psychiatry...	4	22	26	3.3	15	31	46	1.5	18	76	94	2.3
<i>Pathology &amp; Bacteriology</i>												
Bacteriology .....	1	—	1	0.1	28	—	28	0.9	17	—	17	0.4
Pathology .....	14	—	14	1.8	46	—	46	1.5	66	—	66	1.6
Pathology & Bacteriology .....	2	16	18	2.3	16	19	35	1.1	33	42	75	1.8
<i>Radiology</i>												
Diagnostic .....	22	—	22	2.8	41	—	41	1.3	116	—	116	2.9
Therapeutic .....	5	—	5	0.6	5	—	5	0.2	19	—	19	0.5
Diagnostic & Therapeutic .....	15	7	22	2.8	98	8	106	3.4	59	21	80	2.0
<i>Surgical Specialties-Complexes</i>												
<i>Obstetrics &amp; Gynaecology</i>												
Gynaecology .....	—	—	—	—	26	—	26	0.8	2	—	2	—
Obstetrics .....	—	—	—	—	59	—	59	1.9	12	—	12	0.3
Obstetrics & Gynaecology .....	31	29	60	7.5	131	81	212	6.8	278	100	378	9.3
<i>Ophthalmology &amp; Otolaryngology</i>												
Ophthalmology .....	15	—	15	1.9	72	—	72	2.3	106	—	106	2.6
Otolaryngology .....	10	—	10	1.3	93	—	93	3.0	93	—	93	2.3
Ophthalmology & Otolaryngology .....	26	15	41	5.2	35	7	42	1.3	48	21	69	1.7
Industrial Medicine <sup>2</sup> .....	—	15	15	1.9	—	109	109	3.5	—	174	174	4.3
Total .....	528	266	794	100.0	2,443	691	3,134	100.0	2,912	1,154	4,066	100.0
Per Cent of Total...			7.3				28.8				37.4	

TABLE 4-39 (Concl.)

Specialty Practised	Prairie Provinces				British Columbia				Canada <sup>3</sup>			
	Cert.	Non-Cert.	Tot.	Per Cent of Region	Cert.	Non-Cert.	Tot.	Per Cent of Region	Cert.	Non-Cert.	Tot.	Per Cent of Region
<i>Medical Specialties</i>												
Internal Medicine <sup>1</sup> . . . .	195	74	269	15.1	129	41	170	15.3	1,379	543	1,922	17.8
Anaesthesia . . . . .	106	49	155	8.8	87	14	101	9.2	673	227	900	8.3
Dermatology & Syphilology . . . . .	13	11	24	1.4	16	4	20	1.8	126	36	162	1.4
Paediatrics . . . . .	86	20	106	6.0	53	11	64	5.8	552	113	665	6.1
Physical Medicine & Rehabilitation . . . . .	5	—	5	0.3	5	—	5	0.5	35	—	35	0.3
Public Health . . . . .	21	124	145	8.2	23	50	73	6.6	150	534	684	6.3
<i>Surgical Specialties</i>												
General Surgery . . . . .	235	91	326	18.4	181	28	209	18.8	1,668	354	2,022	18.7
Neurosurgery . . . . .	14	—	14	0.8	9	—	9	0.8	61	—	61	0.6
Orthopaedic Surgery . . . . .	43	12	55	3.1	29	1	30	2.7	221	34	255	2.3
Plastic Surgery . . . . .	6	—	6	0.3	2	—	2	0.2	35	—	35	0.3
Thoracic Surgery . . . . .	6	—	6	0.3	1	—	1	0.1	19	—	19	0.2
Urology . . . . .	33	2	35	2.0	29	3	32	2.9	185	12	197	1.8
<i>Medical Specialties — Complexes</i>												
Neurology & Psychiatry	5	—	5	0.3	5	—	5	0.5	54	—	54	0.5
Neurology . . . . .	74	—	74	4.2	46	—	46	4.2	505	—	505	4.6
Psychiatry . . . . .	3	51	54	3.1	6	14	20	1.8	46	194	240	2.2
Neurology & Psychiatry	3	51	54	3.1	6	14	20	1.8	46	194	240	2.2
<i>Pathology &amp; Bacteriology</i>												
Bacteriology . . . . .	5	—	5	0.3	5	—	5	0.5	56	—	56	0.5
Pathology . . . . .	38	—	38	2.1	14	—	14	1.3	178	—	178	1.6
Pathology & Bacteriology . . . . .	7	22	29	1.6	7	13	20	1.8	65	112	177	1.6
<i>Radiology</i>												
Diagnostic . . . . .	47	—	47	2.7	37	—	37	3.4	263	—	263	2.4
Therapeutic . . . . .	14	—	14	0.8	5	—	5	0.5	48	—	48	0.4
Diagnostic & Therapeutic . . . . .	18	12	30	1.7	20	5	25	2.3	210	53	263	2.4
<i>Surgical Specialties — Complexes</i>												
<i>Obstetrics &amp; Gynaecology</i>												
Gynaecology . . . . .	—	—	—	—	—	—	—	—	28	—	28	0.3
Obstetrics . . . . .	1	—	1	0.1	—	—	—	—	72	—	72	0.7
Obstetrics & Gynaecology . . . . .	106	66	172	9.7	70	31	101	9.1	616	307	923	8.5
<i>Ophthalmology &amp; Otolaryngology</i>												
Ophthalmology . . . . .	48	—	48	2.7	48	—	48	4.4	284	—	289	2.7
Otolaryngology . . . . .	27	—	27	1.5	24	—	24	2.2	247	—	247	2.3
Ophthalmology — Otolaryngology . . . . .	23	24	47	2.7	12	5	17	1.5	144	72	216	2.0
Industrial Medicine <sup>2</sup> . . . . .	—	32	32	1.8	—	20	20	1.8	—	350	350	3.2
Total . . . . .	1,179	590	1,769	100.0	863	240	1,103	100.0	7,925	2,941	10,866	100.0
Per Cent of Total			16.3				10.2					

<sup>1</sup> Non-certified internal medicine also includes physical medicine.<sup>2</sup> Not included in certified specialties.<sup>3</sup> Excludes Yukon and Northwest Territories.Source: Submission to the Royal Commission on Health Services by the Royal College of Physicians and Surgeons of Canada, February, 1962, Appendix I, Table 2 provides data for certified specialists. Data for non-certified specialists taken from *Canadian Mailings Limited*, 1961.

TABLE 4-40  
RATIOS OF SPECIALISTS PER 100,000 POPULATION, CANADA,<sup>1</sup> 1961

Specialty	W.H.O. Recommended Ratio per 100,000 Population <sup>a</sup>	1961 Canadian Certified Specialist Ratio per 100,000 Population <sup>b</sup>	1961 Canadian Certified and Non-certified Specialist Ratio per 100,000 Population <sup>c</sup>
General Surgery .....	10.0	9.16	11.10
Ophthalmology and Otolaryngology ..	6.6	3.74	4.13
Obstetrics and Gynaecology .....	5.0	3.93	5.62
Internal Medicine .....	3.3	7.58	10.56 <sup>2</sup>
Paediatrics .....	3.3	3.03	3.65
Radiology .....	1.7	2.86	3.15
Urology .....	1.6	1.02	1.08
Pathology .....	1.0	1.34	1.95 <sup>3</sup>
Orthopaedic Surgery .....	1.0	1.21	1.40
Dermatology .....	1.0	0.69	0.89
Psychiatry .....	1.0	3.03	4.09 <sup>4</sup>

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Includes non-certified physical medicine.

<sup>3</sup> Includes non-certified bacteriologists.

<sup>4</sup> Includes non-certified neurologists and psychiatrists.

Sources: <sup>a</sup> Adapted Services are calculated at the rate of 2,000 hours per annum. Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, Report on the First Session, 1950, Technical Report Series No. 22, World Health Organization, Geneva, 1950 (quoted in "The Location of British Columbia Physicians" - Anderson, D.O., and Clough, A.F., Department of Preventive Medicine, University of British Columbia, *The British Columbia Medical Journal*, vol. 2, No. 9, September 1960, pp. 558-564).

<sup>b</sup> A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, February 1962, Appendix I, Table 2.

<sup>c</sup> Non-certified specialist, *Canadian Mailings Limited*, 1961, Toronto.

Cardiovascular Surgery. In these cases the patients are referred to Halifax and other places.<sup>1</sup> In the Provinces of Ontario and Quebec shortages existed in Ophthalmology and Otolaryngology and Urology. In the Prairie Provinces as a whole there were not enough specialists in Ophthalmology and Otolaryngology, Urology and Dermatology. It has been stated that in Alberta, the specialties of Psychiatry, Physiatriy and Pathology were the three in which there were deficiencies.<sup>2</sup> Manitoba indicated a need for additional psychiatrists, radiologists and pathologists.<sup>3</sup> In

<sup>1</sup> A brief from the Medical Society of Prince Edward Island, submitted to the Royal Commission on Health Services, November 7, 1961.

<sup>2</sup> A brief from the College of Physicians and Surgeons, Province of Alberta; the Canadian Medical Association, Alberta Division and the Faculty of Medicine, University of Alberta, submitted to the Royal Commission on Health Services, February 13, 1962, p. 11.

<sup>3</sup> A brief from the Manitoba Medical Association, submitted to the Royal Commission on Health Services, January 16, 1962, p. A 2.

the Province of Saskatchewan there were shortages of pathologists, ophthalmologists, psychiatrists and specialists in Rehabilitation Medicine.<sup>1</sup> Finally, in British Columbia there was a shortage of specialists in Ophthalmology and Otolaryngology, and it has been suggested that there was a need for pathologists and physicians in the field of occupational health.<sup>2</sup>

Another method to indicate regional maldistribution of specialists and to assess deficiencies in particular specialties is to compare regional certified and non-certified specialist-population ratios with the similar national ratios. These ratios are shown in Appendix 4-17.

In the Atlantic Provinces these ratios were below the Canadian average ratios in the following major specialties: Internal Medicine, Anaesthesia, Dermatology, Paediatrics, Neurosurgery, Urology, Obstetrics and Gynaecology. In the Province of Quebec the more important shortages were in Public Health, Neurology and Psychiatry, Obstetrics and Gynaecology. As for Ontario these ratios would suggest a need for specialists in Neurosurgery and Radiology, while in the Prairie Provinces, as a whole, there existed shortages of specialists in Physical Medicine and Rehabilitation, Neurology and Radiology. Finally British Columbia indicated a need for specialists in Plastic and Thoracic Surgery, Ophthalmology and Otolaryngology.

Appendix 4-18 gives a distribution of the reporting specialists, by type of work and specialty practised, for the country as a whole. In private practice the major fields of specialist concentration were in General Surgery, Internal Medicine, Anaesthesia, Obstetrics and Gynaecology, Ophthalmology and Otolaryngology and Paediatrics, while in hospital work the specialties mainly represented were Radiology, Neurology and Psychiatry, Pathology and Bacteriology, and Internal Medicine (tuberculosis). A similar pattern of distribution, by type of work and specialty practised, emerges from Appendix 4-19, which gives the same data with respect to immigrant civilian specialists. One-third of the reporting immigrant specialists were working in hospitals as compared with one-fifth of all the reporting specialists in the country.

<sup>1</sup> A brief from the College of Medicine, University of Saskatchewan, submitted to the Royal Commission on Health Services, January 25, 1962, p. 31.

<sup>2</sup> A brief from the Canadian Medical Association, B.C. Division, submitted to the Royal Commission on Health Services, February 20, 1962, p. 45.

## **Demand for Medical Services**

The first part of this chapter is an analysis of the patterns of service of doctors in private practice, based on the statistical information drawn from the replies of the doctors to the Questionnaire on Medical Practice, conducted by the Royal Commission on Health Services in the spring of 1962. This analysis includes a brief discussion of the factors affecting doctors' efficiency, and the significance of patient-visit loads of doctors, which is followed by a description of work-patterns of general practitioners, specialists and consultants engaged in private practice. Patient-visit loads are also related to years of practice and the size of the community in which practice is located. The nature of medical services provided is examined with respect to type of major work of physicians. Finally, the size of practice and number of patients under treatment of self-employed general practitioners are analysed.

The next part deals with the demand for medical services and the factors affecting it. An attempt is made to calculate the effective demand for services of physicians in private practice.

The last section of this chapter is concerned with the trends in employment of doctors in hospitals, industry, medical schools, public health, armed forces and life insurance companies.

Accurate measurement of work of physicians is essential to an understanding of the nature of the activities and efficiency of medical practitioners. Such information is valuable in establishing quantitative criteria to determine the availability of medical services in relation to the effective demand and to the needs for them by the community.

### **1. Patterns of Service in Private Practice**

#### *a. Doctor's Efficiency*

Progress in medical technology, improved diagnostic equipment, a greater use of paramedical personnel, the telephone, better transportation, greater concentration of patients and medical and hospital facilities in urban areas, more efficient organization of practice, and other factors enable doctors to see



more patients and to treat them more rapidly than in the past. A doctor's efficiency is measured by the quality of his service and by the number of patients he is able to see and treat per day, week or year.

Can doctors continue to increase their efficiency to an extent which will make possible substantially larger patient loads in private practice and thus reduce the urgency of increasing the present supply of doctors? This is not likely according to authoritative opinions. "Continued improvement in physician productivity, however, will probably be more difficult to achieve in the future. Such individual efficiency factors as reduction in travel time, in home visits, and in time per patient, have probably been pushed as far as they can go without serious ill effects".<sup>1</sup> In fact, it has been suggested, that there is not likely to be any more progress in this direction. "The pressures, rather, are building in the opposite direction. Hopes for the development of programmes for the home care of the aged and other efforts to deemphasize institutional care of the ill, rest on the possibility of more medical service to patients in the home."<sup>2</sup> Perhaps, the major remaining areas for increasing physician productivity lie in a more rational organization of medical practice, more mechanical diagnostic and treatment equipment, more institutional health facilities, and greater use of the paramedical personnel, which can be trained more cheaply and quickly than doctors.<sup>3</sup> But even allowing for these factors to improve somewhat the efficiency of doctors in the future, it is unlikely that they alone will be able to offset the anticipated shortage in the supply of physicians.

#### *b. Significance of Patient-visit Loads of Physicians<sup>4</sup>*

The size of patient-visit loads per doctor is an important and useful index for measuring the extent to which physicians are able to meet the demand for medical services. A patient load of physicians is said to be "... a function of both the supply of physicians and the demand made upon them".<sup>5</sup> In general, the number of patients seen by the doctors in a given unit of time depends on three main variables, namely, the number of persons who demand medical services, the volume of services they actually require and the physicians' efficiency in supplying those services.

Naturally, the physicians differ in the amount of patient-visit loads because of the differences in age or duration of practice, location of practice, nature of

<sup>1</sup> Somers, Herman Miles, and Somers, Anne Ramsay, *Doctors, Patients, and Health Insurance*, The Brookings Institution, Washington D.C., 1961, p. 127.

<sup>2</sup> U.S. Department of Health, Education, and Welfare, Public Health Service, *Physicians for a Growing America*, A Report of the Surgeon General's Consultant Group on Medical Education, 1959, p. 11.

<sup>3</sup> Somers, Herman Miles, and Somers, Anne Ramsay, *op. cit.*, pp. 127-128.

<sup>4</sup> References: Ciocco, Antonio, and Altman, Isidore, "The Patient Load of Physicians in Private Practice - A comparative Statistical Study of Three Areas", *U.S. Public Health Reports*, vol. 58, September 3, 1943, pp. 1329-51; Ciocco, Antonio, Altman, Isidore, and Truan, T. David, "Patient Load and Volume of Medical Services", *U.S. Public Health Reports*, vol. 67, June 1952, pp. 527-34; and Ciocco, Antonio, and Altman, Isidore, "Statistics on the Patient Load of Physicians in Private Practice", *The Journal of the A.M.A.*, vol. 121, February 13, 1943, pp. 506-13.

<sup>5</sup> Ciocco, Antonio, and Altman, Isidore, "The Patient Load of Physicians in Private Practice". *op. cit.*, p. 1345.

work or the specific characteristics of the individual physician. Consequently, the physician-population ratio in a given area or region is only a rough measure of the availability of medical care and the volume of services provided. It has been said that the small correlation between patient-visit loads and the number of physicians reflects the absence of association between patient-visit loads and per capita income in particular areas or regions. Low patient-visit loads are evidently found in both wealthy and poor areas because the rich areas tend to have a large number of physicians while in poor areas there is a relatively low demand for medical services for economic reasons.<sup>1</sup> However, the number of doctors indicate the medical personnel potentially available, while patient-visit loads of physicians measure the degree of activity of these doctors. The two together are necessary in order "... to obtain a measure of service actually received and should constitute the basis for appraising the effective demand to be expected from a population".<sup>2</sup> Hence it is necessary to analyse the factors which are related to the size of the patient-visit loads and to examine the relationship between them and the supply of physicians, as utilization of the full working capacities of physicians may be achieved at different levels of ratio of physicians to population.

Data on the patient-visit loads of physicians provide also a direct approach to arriving at a measure of the demand for medical services, if it is assumed that this effective demand does not exceed the ability of the physicians to meet it. It is possible to estimate the total volume of services rendered by private practitioners in a year expressed in terms of patient-visit loads. The latter may be related to the actual size of population served by doctors in order to measure the actual demand, but not the need, for medical services provided by private practitioners.

Total volume of services rendered by doctors may also be reduced to a per capita basis of population, which may be used for purposes of comparison of demand for services on a regional basis as well as for calculating future requirements for medical manpower.

#### *c. Work-Patterns of General Practitioners, Specialists and Consultants*

Table 5-1 illustrates weekly average services, in terms of patient-visit per doctor and work-hours per doctor, of general practitioners, specialists and consultants and a percentage distribution of patient-visit loads and work-hours by type of activity. In computing weekly average services an allowance of five per cent was made on account of seasonal variations as the utilization of medical services reported by the doctors was probably greater in the early spring of 1962 than in other seasons of the calendar year.

This table indicates some differences in the average weekly patient-visit loads and in the weekly work-hours of general practitioners, specialists and consultants. The average working week of the reporting general

<sup>1</sup> Ciocco, Antonio, *et al.*, "Patient Load and Volume of Medical Services", *op cit.*, p. 530.

<sup>2</sup> *Ibid.*, pp. 530-531.

**TABLE 5-1**  
**AVERAGE WEEKLY SERVICES OF PHYSICIANS IN PRIVATE PRACTICE,**  
**BY TYPE OF MAJOR WORK AND ACTIVITY, CANADA, 1962**

Type of activity	General Practitioner	Specialist	Consultant
Number of reporting doctors .....	3,833	2,936	578
<i>Office calls</i>			
Per cent of total patients .....	59.2	45.7	35.2
Per cent of total hours .....	50.0	40.5	33.1
Time per patient.....	0:16	0:22	0:26
<i>Hospital calls</i>			
Per cent of total patients.....	24.4	45.8	60.5
Per cent of total hours.....	21.7	39.1	44.9
Time per patient.....	0:17	0:21	0:21
<i>Home visits:</i>			
<i>Day</i>			
Per cent of total patients .....	11.3	4.6	0.7
Per cent of total hours .....	17.2	4.8	0.9
Time per patient.....	0:30	0:26	0:35
<i>Night</i>			
Per cent of total patients .....	2.8	0.6	0.0
Per cent of total hours .....	6.0	2.1	0.9
Time per patient.....	0:42	1:20	—
<i>Teaching and/or research</i>			
Per cent of total hours .....	0.6	5.8	8.8
<i>Other activities<sup>1</sup></i>			
Per cent of total patients .....	2.3	3.3	3.6
Per cent of total hours .....	4.5	7.7	11.4
Time per patient.....	0:37	0:58	1:29
Weekly number of patient-visits per doctor ....	159	104	94
Weekly hours per doctor .....	51:34	42:42	44:03

<sup>1</sup> Includes such activities as work at clinics, preparation of medical papers, attendance at medical meetings, telephone consultations, work connected with medical insurance, etc.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

practitioners was 52 hours and the corresponding figures for specialists and consultants were 43 and 44 hours respectively. According to an American source, the average working week of physicians in private practice in the United States in 1956 was 60 hours.<sup>1</sup> A survey of general practitioners conducted in British Columbia indicated that the average general practitioner works about 62 hours per week.<sup>2</sup>

<sup>1</sup> *Medical Economics*, February 1957, p. 116, quoted in Somers, H.M., and Somers, A.R., "Doctors, Patients, and Health Insurance", 1961, footnote p. 49.

<sup>2</sup> A brief from the Canadian Medical Association, B.C. Division, submitted to the Royal Commission on Health Services, February 20, 1962, p. G.P.-2; time "on call" was not included in the estimate of the hours worked per week.

General practitioners used half their working time for attending patients at office as compared with two-fifths for specialists and one-third for consultants. On the other hand, general practitioners used only one-quarter of their working week for hospital calls as compared with two-fifths for specialists and consultants. About one-quarter of the working week of general practitioners was used for attending patients at home, while specialists and consultants gave insignificant proportions of their time for this type of activity. In addition to the above activities, physicians also spent some time on routine work such as keeping medical records, filling in forms, office supervision, telephone consultations, medical insurance, hospital committees, medical society meetings, etc.

The average time a general practitioner attended a patient in his office amounted to 16 minutes as compared with 22 and 26 minutes per patient for specialists and consultants respectively. The average time per patient-visit at home by a general practitioner lasted about half an hour. The type of patient who in the past needed many hours of close attention in his home is now, in most cases, sent to the hospital and consequently there is less waste of the doctor's time for transportation purposes, to see patients separately in their homes.

A patient-visit load of the typical general practitioner was 159 per week. This load amongst physicians who limit their practice to special fields of medicine was somewhat lower being 104 patient-visits per week. The corresponding figure for consultants was 94. It has been stated that in the United States thirty years ago the average physician saw about 50 patients a week as compared with 125-165 patients per general practitioner in 1955.<sup>1</sup> The B.C. survey indicated that the average general practitioner in each working day sees 18-20 patients in his office, 2 patients at home, and 4-9 patients (including operations) in hospital.<sup>2</sup> This latter statistical information is in agreement with the survey data obtained by the Royal Commission on Health Services, which also indicated that on the average, a general practitioner saw 16-20 patients in his office, 6-8 patients in hospital, and 1-4 patients at home. Percentage distribution of weekly patient-visit loads and weekly work-hours of physicians, by day of the week and type of major work, is shown in Table 5-2.

It appears that physicians reported having more work from Monday to Friday inclusive. Some doctors naturally were also busy during week-ends though less than during other days of the week.

Other differences between general practitioners and specialists and consultants were observed with regard to the relationship of office, hospital and home calls to total calls. Until a few decades ago a large proportion of patients were attended by physicians in their homes. It has been reported that as late as 1928-1931 in the United States about 40.0 per cent of out-patient visits were made in the home.<sup>3</sup> According to the data in Table 5-1, only 14.1 per cent of

<sup>1</sup> Somers, H.M., and Somers, A.R., *op.cit.*, p. 49.

<sup>2</sup> Brief from B.C. Division, C.M.A., *op.cit.*, p. G.P.-2.

<sup>3</sup> Somers, H.M. and Somers, A.R., *op.cit.*, p. 48.

**TABLE 5-2**  
**PERCENTAGE DISTRIBUTION OF WEEKLY PATIENT-VISIT LOADS**  
**AND WEEKLY WORK-HOURS OF PHYSICIANS, BY DAY OF WEEK**  
**AND TYPE OF MAJOR WORK, CANADA, SPRING 1962**

Day of Week	General Practitioner		Specialist		Consultant	
	Per cent of		Per cent of		Per cent of	
	weekly patient-visit load	weekly work hours	weekly patient-visit load	weekly work hours	weekly patient-visit load	weekly work hours
Sunday.....	8.7	9.7	10.3	9.1	10.6	17.4
Monday .....	16.0	15.6	15.8	15.9	15.2	14.9
Tuesday .....	16.0	15.6	14.4	15.3	15.2	15.3
Wednesday .....	14.6	15.3	15.1	15.3	15.9	13.8
Thursday.....	15.5	15.2	16.3	15.6	14.4	14.1
Friday .....	15.5	15.3	14.4	15.4	17.3	14.2
Saturday .....	13.7	13.3	13.7	13.4	11.4	10.3

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

the weekly patient-visit load of the reporting general practitioner in Canada was home calls. The corresponding percentages for specialists and consultants were 5.2 and 0.7 respectively. About 60.0 per cent of the weekly patient-visit load of general practitioners was made at doctor's office. The corresponding percentages for specialists and consultants were 46.0 and 35.0 respectively. Out-patient hospital calls amounted to 24.4 per cent of the weekly patient-visit load of general practitioners and 45.8 and 60.5 per cent for specialists and consultants respectively. Other activities of physicians accounted for about 3.0 per cent of the weekly patient-visit loads. In recent decades, there has been a trend towards the increased utilization of hospitals by private medical practitioners because of superior facilities, equipment and paramedical personnel in hospitals and also because family nursing care has decreasingly become available.

"Moreover, hospitalization of his patients conserves the time of the practising physician. As demands for physician services have increased, home visits have dropped off and both office and hospital visits have increased."<sup>1</sup> A somewhat similar pattern of the distribution of patient-calls prevailed in the United States. According to the 1957 National Health Survey only 8.0 per cent were home calls, 68.0 per cent were made at doctor's office, 13.0 per cent out-patient clinic visits and 11.0 per cent other calls.<sup>2</sup>

Appendix 5-1 shows average weekly services of specialists in private practice, by type of activity, in terms of patient-visit loads and doctor's working time, for some major specialties. These data are separated for specialists in

<sup>1</sup> U.S. Department of Health, Education, and Welfare, Public Health Service, *Physicians for a Growing America*, a Report of the Surgeon General's Consultant Group on Medical Education, 1959, p. 8.

<sup>2</sup> Somers, H.M., and Somers, A.R., *op.cit.*, p. 48.

solo and partnership or group practice respectively. In general, a weekly patient-visit load of specialists in partnership or group practice was higher than that of solo specialists. Specialists in dermatology, obstetrics and gynaecology, orthopaedic surgery, general surgery and paediatrics see more patients than other specialists.

Appendix 5-2 provides statistical information on the average weekly patient-visit load of reporting general practitioners by type of activity and method of medical practice organization. The larger weekly patient-visit loads of general practitioners operating under partnership or group practice arrangement suggest superior efficiency of these types of practice over a solo practice though the average working week of a general practitioner in solo practice appears somewhat lower than that of general practitioners working under these other arrangements.

#### *d. Years of Practice and Patient-visit Loads*

The volume of service performed by a physician in private practice varies naturally with his age or years of practice. In general, the activity of an average medical practitioner reaches a peak in the age interval between 30 and 35 and continues on a plateau for the next twenty years. After that a doctor faces, with advancing years, a continuous decline in patient-visit load which is closely connected with his capacity to work. Another generalization applies to the practice of a young doctor, which undergoes an initial process of building up when he has fewer patients than he could handle, until he has made a reputation for himself and gained the confidence of his community.

Table 5-3 illustrates the above general observations with respect to general practitioners, specialists and consultants in private practice in Canada.

The patterns of patient-visit loads, based on years of practice, of general practitioners, specialists and consultants are very similar to those of their earnings, also based on the same criterion, as shown in Table 6-9. On the assumption that a general practitioner begins to practise around the age of 25, it can be seen from the foregoing table that he will maintain his peak of weekly patient-visit load of about 170 as well as that of his earnings until the age of 50-55 years, while a specialist begins to practice around the age of 30 and will maintain his peak of weekly average patient-visit load of 110 and of income until the age of approximately 50 years.

The differences in the patient-visit loads of physicians of the several age groups may be of some significance in considering the problem of meeting the demand for medical services at a local community level since the physicians in predominantly rural areas are believed to be somewhat older than those located in urban centres.

There are apparently not only differences with regard to patient-visit loads but also in weekly working time and in office working time of physicians. In general, the proportion of the working week of general practitioners spent on office calls tends to increase slightly with age, while that spent on hospital

**TABLE 5-3**  
**AVERAGE WEEKLY SERVICES OF PHYSICIANS IN PRIVATE PRACTICE, BY TYPE OF MAJOR WORK AND**  
**ACTIVITY, AND DURATION OF PRACTICE, CANADA, 1962**

Type of Activity	General Practitioner								Specialist				
	Less Than 5 Years	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 Years and Over	Less Than 5 Years	5-9	10-14	15-19
Number of Reporting Doctors . . .	1,148	934	528	383	217	203	138	125	148	781	640	570	308
Office Calls													
Per cent of Total Patients . . .	57.1	58.9	60.7	58.9	57.7	58.1	59.3	63.7	64.3	42.1	43.5	52.0	49.9
Per cent of Total Hours . . . . .	47.1	48.4	50.9	50.9	53.0	52.2	51.4	57.1	56.6	35.2	38.0	41.8	41.0
Hospital Calls													
Per cent of Total Patients . . .	25.0	23.5	24.2	26.5	24.2	22.6	22.2	22.7	14.3	47.3	47.9	40.0	41.7
Per cent of Total Hours . . . . .	23.1	22.2	22.6	22.5	21.0	19.5	17.1	17.6	11.8	42.9	43.4	37.4	36.6
Home Visits													
Day													
Per cent of Total Patients . . .	10.7	11.8	9.1	8.8	12.1	12.9	11.1	13.6	21.4	5.3	4.3	4.0	4.2
Per cent of Total Hours . . . . .	17.1	17.5	15.3	15.8	16.0	18.6	22.5	17.6	23.7	3.8	4.4	4.3	5.4
Night													
Per cent of Total Patients . . .	3.6	2.9	3.0	2.9	3.0	3.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Per cent of Total Hours . . . . .	6.8	6.3	5.6	5.8	5.0	6.2	4.5	3.3	6.6	1.9	1.8	2.6	2.7
Teaching and/or Research													
Per cent of Total Hours . . . . .	0.8	0.8	0.8	0.8	0.8	0.0	0.9	1.1	0.0	6.7	5.3	6.1	5.4
Other Activities <sup>1</sup>													
Per cent of Total Patients . . .	3.6	2.9	3.0	2.9	3.0	3.2	3.7	0.0	0.0	5.3	4.3	4.0	4.2
Per cent of Total Hours . . . . .	5.1	4.8	4.8	4.2	4.2	3.5	3.6	3.3	1.3	9.5	7.1	7.8	8.9
Weekly Number of Patient—													
Visits per Doctor . . . . .	146	178	172	178	172	162	141	115	73	90	109	119	114
Weekly Hours per Doctor . . . . .	50:57	54:52	53:59	52:15	51:49	49:12	48:20	39:37	33:05	41:34	44:44	45:31	44:20



TABLE 5-3 (Concld.)

Type of Activity	Specialist (Cont.)				Consultant									
	20—24	25—29	30—34	35—39	40 Years and Over	Less Than 5 Years	5—9	10—14	15—19	20—24	25—29	30—34	35—39	40 Years and Over
Number of Reporting Doctors.....	185	169	112	72	48	211	173	110	47	13	8	6	4	3
Office Calls														
Per cent of Total Patients .....	54.1	56.6	54.6	57.8	66.6	27.8	35.0	33.3	43.5	44.4	38.9	31.6	50.0	50.0
Per cent of Total Hours .....	48.2	44.1	49.1	53.5	58.8	30.9	33.3	36.0	33.3	42.7	30.3	43.5	39.0	45.0
Hospital Calls														
Per cent of Total Patients .....	37.5	39.1	40.9	31.6	26.7	66.6	60.0	61.9	52.2	55.6	61.1	68.4	25.0	50.0
Per cent of Total Hours .....	33.3	34.9	30.6	30.2	30.0	48.2	41.3	43.8	43.7	40.0	31.4	40.6	15.6	55.0
Home Visits														
Day														
Per cent of Total Patients .....	4.2	4.3	4.5	5.3	6.7	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
Per cent of Total Hours .....	6.5	7.3	7.1	5.8	8.8	0.9	0.9	1.8	1.7	1.7	0.0	0.0	0.0	0.0
Night														
Per cent of Total Patients .....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Per cent of Total Hours .....	1.8	1.8	2.0	1.2	1.2	0.9	0.9	1.8	0.8	4.3	2.0	0.0	0.0	0.0
Teaching and/or Research														
Per cent of Total Hours .....	4.6	6.4	4.1	3.5	0.0	9.1	9.6	7.0	7.7	9.6	22.2	2.9	3.9	0.0
Other Activities <sup>1</sup>														
Per cent of Total Patients .....	4.2	0.0	0.0	5.3	0.0	5.6	5.0	0.0	4.3	0.0	0.0	0.0	25.0	0.0
Per cent of Total Hours .....	5.6	5.5	7.1	5.8	1.2	10.0	14.0	9.6	12.8	1.7	14.1	13.0	41.5	0.0
Weekly Number of Patient—Visits per Doctor .....	114	109	104	90	71	86	95	100	109	128	86	90	57	38
Weekly Hours per Doctor .....	42:45	43:09	38:47	34:02	31:40	43:32	45:08	45:08	46:19	45:31	39:11	27:19	30:29	15:50

<sup>1</sup> Includes such activities as work at clinics, preparation of medical papers, attendance of medical meetings, telephone consultations, work connected with medical insurance, etc.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

calls tends to decrease with age. The same observations apply to specialists and consultants in private practice. The younger physicians see greater numbers of patients and also see more patients in a given unit of time than do the older doctors. There is definite decline in the length of the working week with advancing age of all types of doctors.

**TABLE 5-4**  
AVERAGE WEEKLY SERVICES OF GENERAL  
PRACTITIONERS IN PRIVATE PRACTICE,  
BY SIZE OF CENTRE IN WHICH LOCATED AND  
TYPE OF ACTIVITY, CANADA, 1962

	Size of centre in which located		
	Less than 10,000 population	10,000 49,999 population	50,000 population and over
Number of doctors reporting.....	1,499	502	1,835
<i>Office calls</i>			
Per cent of total patients.....	58.0	56.2	61.0
Per cent of total hours.....	49.8	48.2	50.9
Time per patient.....	0:16	0:15	0:17
<i>Hospital calls</i>			
Per cent of total patients.....	28.0	29.6	19.5
Per cent of total hours.....	23.7	29.2	18.1
Time per patient.....	0:16	0:17	0:19
<i>Home visits:</i>			
<i>Day</i>			
Per cent of total patients.....	10.3	9.0	12.7
Per cent of total hours.....	15.7	13.1	19.3
Time per patient.....	0:29	0:25	0:31
<i>Night</i>			
Per cent of total patients.....	2.8	2.6	2.9
Per cent of total hours.....	6.2	5.2	6.1
Time per patient.....	0:42	0:35	0:42
<i>Teaching and/or research</i>			
Per cent of total hours.....	0.6	0.6	0.6
<i>Other activities<sup>1</sup></i>			
Per cent of total patients.....	0.9	2.6	3.9
Per cent of total hours.....	4.0	3.7	5.0
Time per patient.....	1:22	0:25	0:26
Weekly number of patient-visits per doctor....	160	174	153
Weekly hours per doctor.....	51:12	49:53	51:45

<sup>1</sup> Includes such activities as work at clinics, preparation of medical papers, attendance at medical meetings, telephone consultation, work connected with medical insurance, etc.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

*e. Size of Community and Patient-visit Loads of General Practitioners*

Table 5-4 provides information on average weekly services, by type of activity, supplied by reporting general practitioners in private practice in various sizes of community in which their practices were located.

Table 5-4 indicates that general practitioners in large urban centres of 50,000 population and over had lower patient-visit loads than those practising in urban centres of 10,000 to 49,999 population or in communities of less than 10,000 population. The latter communities include also predominantly rural areas. The fact that the weekly patient-visit load of general practitioners in large urban centres was relatively lower may be explained by a concentration of specialists in such centres and hence a somewhat smaller demand of the population in such centres for the services of general practitioners. The highest patient-visit load of general practitioners practising in urban centres of 10,000 to 49,999 population was probably due to the flow of patients from surrounding rural areas to those urban centres. General practitioners in communities of less than 10,000 population experienced relatively high patient-visit loads because of fewer physicians being located in less densely populated areas and also because of the absence of specialists in these communities and, therefore, a stronger demand for services of general practitioners.

*f. Nature of Services Performed*

The nature of services rendered and particular procedures carried out by general practitioners, specialists and consultants are of some importance to medical schools because they must know whether their students are being taught those procedures which they will subsequently most frequently use in their practice. It is also important to know whether the nature of medical services provided is changing under the impact of pharmaceutical and technological progress. This type of information is of equal value to tariff committees of medical insurance associations, which are interested in various patterns of medical services in order to assess the effects of tariff changes, in the fee-for-service payment of medical services.<sup>1</sup>

Table 5-5 illustrates the percentage distribution in broad categories of the nature of work of the reporting general practitioners, specialists and consultants as measured by weekly load of patients attended by doctors.

Physical examinations of apparently well people for specific purposes included medical examinations of patients for insurance, employment purposes, while preventive routine examinations included annual check-ups, well baby care, etc.

Table 5-5 suggests that the patterns of broad categories of services performed by general practitioners, specialists and consultants are very similar. Naturally, however, the actual contents of these services will

<sup>1</sup> LeRiche, Harding and Stiver, W.B., "The Work of Specialists and General Practitioners in Ontario", *Canad. M.A.J.*, vol. 81, July 1, 1959, p. 37.

TABLE 5-5

AVERAGE WEEKLY LOAD OF PATIENTS PER PHYSICIAN IN PRIVATE PRACTICE,  
BY TYPE OF MAJOR WORK AND NATURE OF SERVICE, CANADA, 1962

Nature of Service	General Practitioner	Specialist	Consultant
Number of doctors reporting.....	4,344	1,289	936
A. Physical examination of apparently well people:			
(1) For specific purposes.....	9.3	8.0	10.2
(2) Preventive routine.....	18.7	18.5	18.0
B. Other specific services:			
(1) Surgical and Obstetrical procedures . . .	14.7	17.2	17.9
(2) Referred consultations.....	13.3	10.3	11.5
(3) Special diagnostic and treatment procedures.....	26.6	25.4	24.5
(4) Immunizations.....	10.7	10.3	7.7
(5) Other services <sup>1</sup> .....	6.7	10.3	10.2
Weekly load of patients.....	56	59	53

<sup>1</sup> Includes routine treatment of colds, etc.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

vary greatly according to the type of major work of the physician. There is some variation in the nature of services performed between different specialists in the same field depending to some extent on where they practise. It has been suggested that in a medium-sized town and rural area, surgeons, obstetricians, and internists tend to do more general practice than the same specialists in large cities. Then, in large cities, general practitioners will do less surgical work than their colleagues located in rural areas. Consequently, it is difficult to draw representative samples of any type of major work.<sup>1</sup>

Appendix 5-3 provides information on the weekly average load of patients of specialists in private practice, by specialty practised, method of practice and nature of service rendered. It is apparent that the specialists working in partnership or group practice are able to carry out a somewhat larger patient load than their colleagues practising solo.

A job analysis study of physicians in Ontario was made in 1957. It shows the estimated number of procedures in a year of 2,000 working hours in the various specialties and general practice. The basis data for this study were derived from one month's experience of Physicians' Services Incorporated. P.S.I. procedures are those carried out by physicians for which there is a separate payment. They also include office, home and hospital visits. In a number of instances each major procedure is regarded as one service by P.S.I., irrespective of the number of times the physician may treat or visit the patient for the

<sup>1</sup> *Ibid.*, p. 37.

particular condition. For example, a normal delivery counts as one service but, in fact, a physician will see the patient 6 to 12 times. Consequently, the P.S.I.'s "services" are an underestimate of the patient-visit loads.<sup>1</sup>

Table 5-6 provides a comparison of the findings of the study on job analysis in Ontario and the estimated annual patient-visit loads of physicians and volume of services supplied, in terms of numbers of patients, in the country as a whole in the spring of 1962.

In comparing the data for Ontario with those for the country as a whole in 1962, it should be borne in mind, that the former figures may be somewhat higher than the national averages since greater utilization of medical services is probably made in the province of Ontario than in most other provinces of Canada.

*g. Size of Practice and Number of Patients*

*Under Treatment of Self-employed General Practitioners*

Table 5-7 indicates the average size of practice and average number of patients under active or continuing treatment of the reporting self-employed general practitioners for provinces and Canada. In addition, for analytical purposes, general practitioner-population ratios and degree of urbanization of population for provinces and Canada are included.

The average size of practice ranged from 1,367 in Yukon and Northwest Territories to 3,166 in Newfoundland. The national average size of practice amounted to 1,709 persons per general practitioner as compared with the general practitioner-population ratio of 1:1,800 in 1961. In great Britain, each general practitioner is allowed a total of 3,000 patients but it must be remembered that he has no hospital patients to attend and many of the minor investigations carried out by a general practitioner in Canada are in Britain referred to a specialist, a clinic or a hospital. The average number of the potential patients, who were under active or continuing treatment by a reporting general practitioner in solo private practice, ranged from 61 in Yukon and Northwest Territories to 366 in Newfoundland. The national average was 194 patients under actual treatment. More significant is, however, the percentage of patients to the size of practice. This varied from 4.5 per cent in Yukon and Northwest Territories to 16.1 in New Brunswick, while the national percentage was 11.3.

In general, the size of practice tended to be larger in those provinces which had less favourable general practitioner-population ratios and less urbanized population such as Newfoundland, New Brunswick, Saskatchewan and Nova Scotia.

Average size of practice and average number of patients under active treatment varied with the age or years of practice of physicians. This is shown in Table 5-8.

Once again the above data indicate that a general practitioner reaches the peak of the size of his practice after an initial building-up period of five years

<sup>1</sup> *Ibid.*, pp. 37-38.

**TABLE 5-6**  
**ESTIMATED ANNUAL PATIENT-VISIT LOADS OF PHYSICIANS**  
**IN PRIVATE PRACTICE AND VOLUME OF SERVICES RENDERED, CANADA, 1962**

Specialty Practised	Estimated Number of Services carried out in a Standard 2,000 Hours by Physicians in Ontario, 1957 <sup>1</sup>	Estimated annual Patient-visit Loads of Reporting Physicians on the Assumption of 48 weeks Working Year, Canada, 1962 <sup>2</sup>		Estimated Annual Examinations and Specific Services Performed by Reporting Physicians on Assumption of 48 Weeks Working Year, Canada, 1962 <sup>2</sup>	
		Solo	Partnership or Group Practice	Solo	Partnership or Group Practice
Anaesthesia.....	2,295	1,728	1,824	1,344	1,824
Dermatology.....	5,349	7,676	8,640	3,168	4,320
General surgery.....	3,683	5,520	6,144	1,824	2,064
Neurosurgery.....	3,104	5,520	4,800	1,584	1,824
Orthopaedic surgery.....	2,390	7,008	7,776	1,824	1,824
Internal medicine.....	5,396	5,280	5,952	1,824	2,496
Psychiatry.....	4,229	3,024	4,320	2,584	2,584
Obstetrics and gynaecology.....	2,851	5,520	6,816	2,736	3,168
Ophthalmology and otolaryngology ..	5,046	5,280	5,712	3,168	3,168
Paediatrics.....	6,795	7,296	7,056	4,128	3,408
Urology.....	2,501	5,280	5,952	2,064	1,824
General practice.....	5,251	7,104	8,592 — 8,304	2,688	

<sup>1</sup> leRiche, Harding and Stiver, W.B., "The Work of Specialists and General Practitioners in Ontario, 1957", C.M.A.J., vol. 81, July 1, 1959, Table V, p. 41.

<sup>2</sup> Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

TABLE 5-7  
AVERAGE SIZE OF PRACTICE AND AVERAGE NUMBER OF PATIENTS CURRENTLY UNDER  
TREATMENT OF SELF-EMPLOYED GENERAL PRACTITIONERS FOR PROVINCES AND CANADA, 1962

Province	Response Count	Average Size of Practice	Average Number of Patients Currently Under Active or Continuing Treatment	Per cent of Patients to Size of Practice	General Practitioner Population Ratios, 1961 <sup>1</sup>	Degree of Urbanization of Provincial Population 1961 <sup>2</sup>
Newfoundland.....	20	3,166	366	11.6	1:2,462	50.7
Prince Edward Island.....	11	1,473	220	14.9	1:1,974	32.4
Nova Scotia.....	90	1,804	163	9.1	1:1,833	54.3
New Brunswick.....	44	2,017	325	16.1	1:2,588	46.5
Quebec.....	569	1,868	133	7.1	1:2,099	74.3
Ontario.....	767	1,509	219	14.5	1:1,508	77.3
Manitoba.....	88	1,919	256	13.3	1:1,762	63.9
Saskatchewan.....	80	1,985	194	9.8	1:1,964	43.0
Alberta.....	105	1,687	188	11.1	1:1,632	63.3
British Columbia.....	190	1,584	214	13.5	1:2,054	72.6
Yukon and Northwest Territories	3	1,367	61	4.5	1:2,213	36.8
Canada .....	1,967	1,709	194	11.3	1:1,800	69.6

<sup>1</sup> A brief from the College of General Practice of Canada, submitted to the Royal Commission on Health Services, May 1962, p. 12. Figures of general practitioners were compiled in June 1961 and were made up of lists supplied by Provincial Chapters of the College. They include certified physicians doing general practice and exclude non-certified physicians confining their work to a specialty.

<sup>2</sup> Census of Canada 1961, *Advance Report No. AP-4*.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



**TABLE 5-8**  
**AVERAGE SIZE OF PRACTICE AND AVERAGE NUMBER OF PATIENTS**  
**UNDER ACTIVE TREATMENT OF SELF-EMPLOYED GENERAL PRACTITIONERS,**  
**BY DURATION OF PRACTICE, CANADA, 1962**

Duration of Practice	Number of Doctors Reporting	Average Size of Practice	Average Number of Patients Under Treatment
Less than 5 years .....	482	1,190	131
5 - 9 .....	597	1,497	155
10 - 14 .....	412	1,388	168
15 - 19 .....	260	1,292	159
20 - 24 .....	193	1,397	179
25 - 29 .....	188	1,254	156
30 - 34 .....	155	1,010	103
35 - 39 .....	140	980	114
40 and over .....	178	661	70

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

and it remains on a plateau for the next twenty years and thereafter it gradually declines with the advancing years of a doctor. A somewhat similar pattern emerges from the average number of patients attended by physicians.

Table 5-9 shows the relationship between size of practice and number of patients under treatment and size of community in which practice was located for provinces and Canada.

It appears that in communities of less than 10,000 population general practitioners had larger practices than those located in greater urban centres. This is explained by the fact of a greater concentration of specialists in the latter size of communities. On the other hand, in smaller communities general practitioners had a lower number of patients under active treatment. This fact explains the lower income of general practitioners in rural and smaller communities as compared with those in larger urban centres. It would also appear that in smaller communities for economic and other reasons the demand for general practitioners' services is somewhat lower.

Appendix 5-4 provides detailed statistical information with respect to the distribution of general practitioners in solo private practice by size of practice and size of community in which practice was located for regions and the country as a whole. Approximately half of the reporting doctors in Canada practising in communities of less than 10,000 population had a practice of 2,000 persons or more as compared with about one-third proportion of physicians located in larger urban centres.

Appendix 5-5 gives similar information with respect to the distribution of general practitioners by number of patients under active treatment. For the country as a whole, about 30.0 per cent of the reporting general practitioners located in communities of less than 10,000 population had 200 or more patients under active

TABLE 5-9  
AVERAGE SIZE OF PRACTICE AND AVERAGE NUMBER OF PATIENTS CURRENTLY UNDER TREATMENT OF SELF-EMPLOYED  
GENERAL PRACTITIONERS BY SIZE OF CENTRE IN WHICH LOCATED, FOR PROVINCES AND CANADA, SPRING 1962

Province	Less Than 10,000 Population				10,000 - 49,999 Population				50,000 Population and Over			
	No. of Doctors Report- ing	Average Size of Practice	Average No. of Patients Under Treat- ment	Per Cent of Patients to Size of Practice	No. of Doctors Report- ing	Average Size of Practice	Average No. of Patients Under Treat- ment	Per Cent of Patients to Size of Practice	No. of Doctors Report- ing	Average Size of Practice	Average No. of Patients Under Treat- ment	Per Cent of Patients to Size of Practice
Newfoundland.....	11	3,375	426	12.6	2	2,100	113	5.4	7	3,143	345	11.0
Prince Edward Island ...	8	1,713	265	15.5	3	835	100	12.0	—	—	—	—
Nova Scotia .....	67	1,915	145	7.5	7	1,736	124	7.1	12	1,825	347	19.0
New Brunswick .....	29	2,348	449	19.1	9	2,072	134	6.5	2	1,000	26	2.6
Quebec .....	237	2,284	105	4.6	58	1,838	157	8.5	214	1,912	192	10.1
Ontario .....	223	1,531	168	10.9	103	1,607	265	16.5	395	1,643	261	15.9
Manitoba .....	39	2,062	141	6.9	1	2,000	250	12.5	43	2,012	390	19.4
Saskatchewan... ..	56	2,203	185	8.4	3	967	53	5.5	15	2,137	333	15.6
Alberta .....	40	1,803	166	9.2	2	1,050	47	4.4	57	1,805	228	12.6
British Columbia .....	52	1,659	218	13.2	9	1,250	429	34.3	121	1,682	210	12.5
Yukon & N.W.T.....	3	1,367	61	4.5	—	—	—	—	—	—	—	—
Canada .....	765	1,956	165	8.4	194	1,664	220	13.2	866	1,765	244	13.8

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

treatment, while the corresponding percentages for physicians located in communities of 10,000 to 49,999 population and 50,000 population and over were 34.0 and 36.0 respectively.

## 2. Nature of Demand for Physicians' Services

The adequacy of medical manpower at any time depends to a large extent upon the degree of utilization of physicians in private practice by the general public, and on the demand for physicians' services on the part of hospitals, public health, agencies, industry, the armed forces, life insurance companies, medical research and teaching institutions.

A distinction must be made between "need" and "effective demand" for medical services. "Medical need is composed of the actual physical and emotional requirements of a patient for a physician or for other services."<sup>1</sup> This need can only be determined professionally by a physician through a medical history, a physical examination, laboratory test, etc., and the kind, extent and quality of medical services needed are, of course, determined by the nature of diagnosis and by the methods of treatment available at the time. A "need" for medical care, however, does not lead to "demand" for it unless the need is recognized by the patient, the physicians' services are accessible and the consumer of these services is able to purchase them. Hence, areas of relative neglect in meeting medical needs. This distinction between the demand and the actual need for medical care leads to much of the differences with respect to the adequacy or shortage of physicians.

There are certain specific characteristics of medical services as compared with demand for other commodities or most of other services because need for them is universal, it is not regular, and cost of meeting them are not within the consumers' control unless a consumer joins a pre-payment insurance scheme. Buyers' motivations are also different. In general, people spend all they feel they can afford on other goods and services, including luxuries, while for medical and similar services they spend only as much as they feel they must. Medical needs and costs are not usually known in advance and, therefore, it is difficult to save for what one does not know or even desire.

There are some inherent difficulties in defining demand for medical services because "... the more important factors affecting change in demand lack the immediate direct, and easily measurable relationships to it. ..."<sup>2</sup> Total demand for medical care and for medical manpower at any given time is the net result of a number of variables, the more important of which are population growth and its age and sex structure, economic growth that influences personal disposable income and standard of living, including demand for medical care, urbanization which reflects the fact that city people use more medical services than rural people, the level, content

<sup>1</sup> Clark, Dean A., "Problems in the Distribution of Medical Care" — Symposium on Medical Sociology, the *New England Journal of Medicine*, vol. 234, January 10, 1946, p. 55.

<sup>2</sup> National Science Foundation, *A Program for National Information on Scientific and Technical Personnel*, U.S.A., August 1958, p. 25.

and quality of education, which familiarizes a person with good health and turns existing needs into recognized medical needs as well as increasing social awareness of the value of healthy and able human resources, and government policies with respect to health and other welfare measures. Because of the complex interrelationships between these factors it may be impossible to measure exactly their impact on the demand for medical services though certain broad conclusions are possible. For instance, there is a direct relationship between income, age and place of residence and utilization of physicians' services. The dimensions of demand for medical care, on the whole, are rationally related to psychological and educational characteristics of the people, to availability of physicians, but, principally, these dimensions are conditioned by economic factors, costs and ability to pay of patients. Removal of financial barriers to hospitalization revealed a substantial unsatisfied need for hospital services. A similar removal of financial barriers with respect to medical care would very likely substantially increase the effective demand for it, particularly, in use of the financially most vulnerable group of families in the middle and lower income ranges.

It is necessary to measure the quantity, if not quality, of medical services actually consumed, in order to understand actual and potential demand for them, to appraise the extent to which the demand is related to the supply of physicians, to provide a basis from which to project future requirements for medical manpower, to identify the population groups, which do not use extensively medical care for one or another reason and to be able to determine priorities.

There are objective measures of demand for medical services like, for instance, units of service rendered (i.e., patient-visit loads) and in money terms, the cost of care for one illness, or family medical expenditure for a year or such expenditure for the society as a whole, adjusted for price and population growth.

### 3. Utilization of Services of Physicians in Private Practice, Canada, 1961

It is estimated that in 1961 there were 15,450 general practitioners, specialists and consultants in private practice.<sup>1</sup> They accounted for nearly three-quarters of the Canadian civilian medical manpower. The weighted weekly average patient-visit load per doctor in private practice, irrespective of the type of major work, was 132, making an annual (48 weeks) patient-visit load of 6,336 per physician. A physician in private practice, excluding hospital calls, averaged about 4,300 patient-visits a year. A patient-visit is defined here as a consultation with a physician, either in person, or by telephone, in his office, the hospital, clinics, and the patient's home, for examination, diagnosis, treatment, or advice. The medical service could be provided by the physician himself, or by nurses acting under a physician's supervision.

<sup>1</sup> This figure has been computed by subtracting from 21,265 physicians in Canada (excluding Yukon and Northwest Territories) as reported by the 1961 Census, 2,470 interns and residents, 1,800 full-time physicians in hospitals, 775 full-time doctors employed in non-hospital work by all levels of government, 420 full-time physicians in medical schools, 260 full-time industrial physicians and 90 doctors employed by life insurance companies.

The total annual volume of medical services supplied by all the physicians in private practice in Canada in 1961 amounted to 97,891,200 patient-visits. Thus, on a per capita basis, each person in this country, irrespective of age, sex, income and location, received 5.378 physician-visits. The latter figure was composed of 2.9 office calls, 1.8 hospital visits, 0.6 home calls and 0.1 of other types of services. The Canadian average physician-visit of 5.4 may be compared with 5.3 physician-visits per person (all ages and both sexes) per year in the United States (average of July 1957 – June 1958), which figure does not include visits made to persons while they were in-patients in a hospital.<sup>1</sup>

#### 4. Hospital Medical Personnel

After the physicians in private practice the second largest group of doctors is composed of full- and part-time medical personnel in hospitals. Appendix 5–6 indicates numbers of such physicians and interns and residents working in hospitals, by type of hospital, for regions and Canada, during the years 1950–1961. It also includes the number of operating and reporting hospitals for the country as a whole for the same period. Table 5–10 shows these data for the whole country.

The number of doctors employed in hospitals on a full-time or part-time basis increased from about 1,800 in 1950 to 4,500 in 1960, that is by nearly 150.0 per cent. There has been a steady increase in full-time medical personnel working in general hospitals and the number of doctors so employed increased from about 400 to over 900 in the period under review. A similar increase also occurred in part-time physicians associated with general hospitals. The rising incidence of mental disturbances is reflected in a larger number of mental institutions and in the number of doctors working in these hospitals. The mental hospitals' full-time medical staff increased from 230 in 1950 to 450 in 1961, while part-time doctors associated with these hospitals increased five times over the same period. In TB hospitals, however, the employment of full-time medical personnel remained relatively stable until the later part of the 1950's and it has gradually declined since then. The same trend is noticeable with respect to part-time doctors working in TB hospitals.

Approximately one-half of the full-time hospital medical personnel in 1961 was working in general hospitals, including public and allied special hospitals such as chronic, convalescent and maternity hospitals. Another quarter of these doctors were working in mental hospitals, while the remainder practised in tuberculosis, federal and private hospitals. With the hospitalization insurance in operation in Canada one can reasonably expect that this trend of rising employment of doctors in hospitals, particularly in general and mental, will continue in the future. A large proportion of hospital medical staff consists of radiologists, pathologists, who are certified specialists in most cases, and medical superintendents.

There has been also a steady increase in the number of interns and residents being trained in various types of hospitals. This increase is partly related to

<sup>1</sup> U.S. Department of Health, Education, and Welfare, Public Health Service, "Medical Care, Financing and Utilization," *Health Economic Series*, No. 1, Table 175, p. 218.

TABLE 5-10  
FULL-AND PART-TIME MEDICAL STAFF AND INTERNS AND RESIDENTS, EMPLOYED IN HOSPITALS, CANADA 1950-1961<sup>1</sup>

Type of Hospitals	1950			1951			1952			1953			1954			1955		
	Physicians		I & R	Physicians		I & R	Physicians		I & R	Physicians		I & R	Physicians		I & R	Physicians		I & R
	F-t	P-t		F-t	P-t		F-t	P-t		F-t	P-t		F-t	P-t		F-t	P-t	
General <sup>2</sup> .....	396	383	1,618	431	578	1,773	394	423	1,582	442	485	1,666	510	475	1,722	548	564	2,035
Mental.....	229	84	45	238	83	37	276	85	71	233	226	91	265	327	72	276	319	50
Tuberculosis.....	228	155	39	249	159	35	261	183	55	295	182	41	290	147	36	268	157	35
Federal.....	271		—	331		—	192		—	277		—	282		—	290		—
Private.....	64		—	77		—	43		—	38		1	53		7	49		4
Total.....	1,810		1,702	2,146		1,845	1,857		1,708	2,178		1,799	2,349		1,837	2,471		2,124
Minus medical graduates of Dalhousie, Laval and Montreal who receive degrees after internship....			273			288			203			253			286			273
Total Interns & Residents ..			1,429			1,557			1,505			1,546			1,551			1,851
<b>1956</b>																		
General <sup>2</sup> .....	624	643	2,087	676	778	2,403	755	771	2,601	929	1,131	2,573	936	1,411	2,993	908	1,482	3,101
Mental.....	316	362	69	364	352	69	344	404	124	339	464	116	397	486	122	449	514	120
Tuberculosis.....	262	175	30	272	169	32	248	159	25	239	132	19	236	135	19	223	132	26
Federal.....	292		—	288		—	304		—	190	257	251	207	510	315	191	455	321
Private.....	84		13	86		16	64		12	10	38	31	7	43	4	20	77	9
Total.....	2,758		2,199	2,985		2,520	3,049		2,762	1,707	2,022	2,990	1,783	2,585	3,453	1,791	2,660	3,577
Minus medical graduates of Dalhousie, Laval and Montreal who receive degrees after internship....			225			262			289			273			292			261
Total Interns & Residents ..			1,974			2,258			2,473			2,717			3,161			3,316

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> General hospital includes public, general and allied special hospitals (chronic, convalescent, maternity and others).  
Source: Health and Welfare Division, Institution Section, DBS.

increasing specialization, as greater amounts of graduate training and experience are required for specialty certification and because of a tendency to specialization on the part of larger numbers of doctors. The figures of interns and residents in hospitals as reported by the DBS Institutions Section do not agree with those quoted by the Canadian Mailings Limited. This is due to the fact that the DBS figures include medical graduates of Dalhousie, Laval and Montreal universities, who receive medical degrees only after internship. They are excluded, however, in the listings of the Canadian Mailings Limited. Moreover, despite efforts to eliminate duplication of the interns and residents reported by the hospitals there is very likely some such duplication as some interns rotate in a few hospitals and all of them report having them on their staff. Then, some interns and residents may be working on a full-time basis in one hospital and on a part-time basis somewhere else. Finally, the DBS data contain a number of immigrant-doctors, who work in hospitals prior to their obtaining Enabling Certificates.

As of June 1963, provincial governments indicated that in provincially operated hospitals there were 67 unfilled established positions for full-time physicians and in federally operated hospitals there were 19 unfilled positions.<sup>1</sup>

## 5. Non-Hospital Medical Staff Employed by Governments

Governmental health activities in Canada play a fundamental role in supplying medical and other health services. Public health services are provided at all levels of government. In most provinces these services, at a local government level, are to a large extent rendered by part-time medical officers, while the personnel of the provincial and federal health services consists of full-time medical practitioners. The federal government assumed responsibility for maritime quarantine, the medical examination of immigrants and the control of food, drugs and narcotics, as well as health care services for certain groups like Indians, Eskimos, war veterans and others, advisory services to the provinces in specialized health fields, research development, etc. In the main, however, public health activities are considered as provincial responsibilities under interpretation of the "property and civil rights" clause of the British North America Act of 1867. These responsibilities include health education, care for chronic diseases such as tuberculosis and mental illness, medical services to specified indigent groups, regulatory measures to control the spread of disease, consultative or assistance services, such as public health laboratories, and other services. Seven provinces have separate departments of health and the remaining three have combined departments of health and welfare. Local governments assumed regulatory health activities and the general preventive services – diagnosis, education, and personal health supervision through clinics and home visits. Public health units operate in large municipalities or, in rural areas, serve counties or groups of municipalities.

<sup>1</sup> Information obtained directly from the provincial departments of health by the Royal Commission on Health Services, June 1963. No information was available from the Province of Quebec.



**TABLE 5-11**  
**PHYSICIANS EMPLOYED FULL-TIME BY GOVERNMENTS, FOR**  
**PROVINCES AND CANADA, 1963<sup>1</sup>**

Province	Provincial Governments <sup>2</sup>		Local Governments <sup>3</sup>	
	Positions Filled	Total Known and Established Vacancies	Positions Filled	Total Known and Established Vacancies
Newfoundland.....	32	9	— <sup>4</sup>	—
Prince Edward Island.....	9	4	— <sup>5</sup>	—
Nova Scotia.....	25	2	3	1
New Brunswick.....	31	15	— <sup>6</sup>	—
Quebec <sup>7</sup> .....	50	n.a.	89	n.a.
Ontario.....	70	11	86	12
Manitoba.....	27	6	2	—
Saskatchewan.....	24	9	4	n.a.
Alberta.....	19	9	23	5
British Columbia.....	28	3	15	15
Canada.....	315	68	219	33
<i>Federal Government</i>				
Department of National Health and Welfare.....	164	22		
Canadian Pension Commission.....	58	7		
Department of Veterans Affairs.....	14	4		
Medical Research Council.....	2	—		
Atomic Energy of Canada.....	3	—		
Total.....	241	33		

<sup>1</sup> Exclusive of hospital appointments and of Yukon and Northwest Territories.

<sup>2</sup> Includes full-time physicians employed by Provincial Departments of Health (Tuberculosis Prevention Branch, Industrial Hygiene Branch, Mental Health Branch, Central Laboratories, etc.) and other branches of the Provincial Governments (Reform Institutions, Public Welfare, etc.) and Provincial Government agencies (Cancer Treatment and Research Foundation, Hospital Services Commission, Cancer Institute, Alcoholism and Drug Addiction Research Foundation, etc.).

<sup>3</sup> Physicians employed full-time either by municipal health departments or by county health units.

<sup>4</sup> Newfoundland employs public health nurses, sanitary inspectors and medical officers in the St. John's area, but these are not under the unified direction of a full-time medical health officer. Elsewhere in the province, only partial public health services are available.

<sup>5</sup> Prince Edward Island has a district nursing service and some sanitary inspectors, but these are under the part-time supervision of a medical health officer.

<sup>6</sup> New Brunswick's medical health officers service a few districts each, and thus each health district receives only part-time attention.

<sup>7</sup> Estimated figure for full-time physicians employed by the Department of Health and 1956 figure for full-time physicians employed in local health units ("The Administration of Public Health in Canada", Research and Statistics Division, Department of National Health and Welfare, *Health Care Series No. 3*, 1958, Table 4, p. 67).

Source: Information obtained directly by the Royal Commission on Health Services from the Provincial Departments of Health and Federal Government Departments, June, 1963.

The extent of full-time local health services in this country was surveyed in 1938 by the Canadian Public Health Association. At that time, there were 85 communities, urban and rural, which employed a full-time medical officer. The population of these communities represented approximately half of the total estimated population of Canada. The other half of the population, chiefly in rural areas, was served by a medical officer on a part-time basis. As of March 1943, the communities having full-time medical officers of health employed 118 physicians.<sup>1</sup> By 1948, there were 157 local health units or districts and urban health departments employing 155 full-time medical health officers and the corresponding figures for 1956 were 191 and 188 respectively.<sup>2</sup> The 28 urban health departments in 1956 covered 4.9 million persons, and 163 local health units or districts covered 7.1 million persons.<sup>3</sup> Thus, approximately two-thirds of Canada's population were covered by public local health services. In 1960, a survey of health unit services in eight provinces, excluding Newfoundland and the Province of Quebec, was made which covered only health units and city health departments with a full-time medical officer of health. Twenty of the 116 units in that survey were classified as city health departments while most of the remainder were regional, country or township units. The estimated population served by these health units was over 9,000,000, of which about 6,500,000 or 75 per cent lived in urban areas. The 116 health unit services employed 186 full-time physicians as of January 1, 1960.<sup>4</sup>

Table 5-11 shows the number of full-time physicians, exclusive of full-time hospital appointments, employed by different levels of government, for Provinces and Canada, as of June 1963.

As of June 1963, there were 775 doctors employed on a full-time basis in non-hospital work by the three levels of government in Canada. There were 134 known unfilled established positions. Presumably, lower salaries of doctors in this type of employment accounted for this relatively high number of vacancies.

## 6. Teaching Staff of Canadian Medical Schools

In September 1939, the peacetime medical personnel in the nine medical faculties included 173 full-time and 890 part-time instructors. By March 1943, because of the strong demand for doctors in the armed forces, the corresponding figures decreased to 141 and 796 respectively.<sup>5</sup> The medical schools were compelled to call back a number of retired physicians to assist them in teaching.

<sup>1</sup> Canadian Medical Procurement and Assignment Board, *Report of the National Health Survey, 1945*, pp. 112-113.

<sup>2</sup> "The Administration of Public Health in Canada", Research and Statistics Division, *Health Care Series No. 3*, 1958, Tables 2 and 4, pp. 65 and 67.

<sup>3</sup> *Ibid.*, p. 64.

<sup>4</sup> *Report of the Survey of Health Unit Services in Eight Provinces of Canada, 1960* - Department of National Health and Welfare, 1961, pp. 5 and 11.

<sup>5</sup> Canadian Medical Procurement and Assignment Board, *Report of the National Health Survey, 1945*, Table 43, p. 105.

With the increase in the number of medical schools to 12 and higher enrolment of students during the post-war years, there has been a gradual expansion of full-time faculty personnel until in the academic year of 1961-62 it amounted to 763 teachers.

It is convenient to divide faculty members into those in the basic pre-clinical sciences like anatomy, biochemistry, biophysics, physiology, and others, about 60.0 per cent of whom possess an M.D. degree (this compares with only 35.0 per cent in the United States), and those in clinical departments<sup>1</sup> who are physicians. A characteristic feature of Canadian post-war medical education was the rapid growth of full-time staff in clinical departments, particularly of so-called "geographic full-time" members who account for about four-fifths of the staff in these departments. This latter term refers to the clinical teachers receiving a large portion of their income from university salary and over and above this share a limited earning from consulting practice associated with the medical schools. In some schools these surplus earnings from private practice are used to support medical research and teaching. It has been estimated that these medical practitioners give about half of their time to teaching duties and another half to private practice. Consequently, approximately two-thirds of them must be considered as being available in private practice.

During the academic year 1961-62 there were over 400 full-time faculty members in pre-clinical basic science departments, of whom about 60.0 per cent or 250 were physicians. In clinical departments there were about 70 full-time medical personnel and about 300 "geographic full-time" members, of whom 100 may be considered as being available for teaching purposes.<sup>2</sup> Thus, approximately 420 physicians may be counted as being employed in the 12 medical schools. As of that year there were 23 budgeted vacant positions in basic science departments and 15 in clinical departments.<sup>3</sup> These vacancies evidently existed during the last few years, particularly, in the basic science fields.

The full-time faculty members are supported in teaching by the selected part-time medical staff of about 1,500, who, as a rule, receive only a nominal remuneration. One medical school reported that the part-time teachers actually undertake six to ten hours of undergraduate teaching per week plus a large portion of the post-graduate education programmes. Many of them spend more time in clinical research as well as many hours per month in administration. It has been estimated that the part-time teachers spend 400 to 450 hours per year in the university and teaching hospital.<sup>4</sup>

Table 5-12 shows the median salary scale prevailing in basic medical science departments in the 12 Canadian medical schools as of November 1961.

It has been stated that the current annual income of the professional man in a department of basic medical science is about two-thirds the income of a man of

<sup>1</sup> "Medical Education", *The Journal of A.M.A.*, vol. 171, November 14, 1959, Table 10, p. 1529.

<sup>2</sup> "Medical Education", *The Journal of the A.M.A.*, vol. 182, November 17, 1962, Table 2, p. 804.

<sup>3</sup> *Ibid.*

<sup>4</sup> A brief from the Faculty of Medicine, University of Toronto, submitted to the Royal Commission on Health Services, May 14, 1962, p. 8.

**TABLE 5-12**  
**SALARIES OF TEACHING STAFF IN BASIC SCIENCES**  
**OF CANADIAN MEDICAL SCHOOLS, 1961-62**

Professor and Head of Department.....	\$14,200
Professor.....	\$12,700
Associate Professor.....	\$10,100
Assistant Professor.....	\$ 7,800
Lecturer.....	\$ 6,600

Source: A brief from the Association of Canadian Medical Colleges, submitted to the Royal Commission on Health Services, May 11, 1962, Exhibit A: Staff and Facilities in the Basic Medical Sciences in Canadian Medical Schools, p. 3.

similar training and experience in medical practice in the same community and that this fact constitutes a critical barrier in the recruitment of medical personnel in the Canadian medical schools.<sup>1</sup>

The income of clinical teachers is considerably higher than that of basic medical scientists because it depends partly on fees derived from practice. It has been stated that in a typical Canadian medical school, the income of a clinical teacher may exceed \$25,000 per annum.<sup>2</sup> This income, however, does not apply to full-time teachers in clinical departments who limit their activities to teaching only.

Modern scientific developments have resulted in an increased need for undergraduate teaching of small groups and increased clinical and laboratory research, which activities impose a requirement for larger teaching staffs in medical schools. Expected expansion of the medical services will create a stronger demand for medical personnel, which, in turn, will create an equally strong demand for doctors and medical scientists to train future physicians.

## 7. Industrial Physicians<sup>3</sup>

Occupational health service has been defined by the International Labour Organization as "... a service organized in or near a place of employment for the purposes of protecting the workers against any health hazards which may arise out of their work or the conditions in which it is carried on, of promoting the optimum

<sup>1</sup> A brief from the Association of Canadian Medical Colleges, submitted to the Royal Commission on Health Services, May 11, 1962, Exhibit A: Staff and Facilities in the Basic Medical Sciences in Canadian Medical Schools, p. 3.

<sup>2</sup> *Ibid.*, p. 6.

<sup>3</sup> References: Charron, K.C., "Health Services for Industry", *Canadian Journal of Public Health*, vol. 39, August 1948, pp. 320-324; Cruickshank, W.H., "The Changing Status of Industrial Medicine", *Canad. M.A.J.*, vol. 59, December 1948, pp. 536-539; Mallery, O.T., "The Industrial Physician - Past, Present, and Future", *Industrial Medicine and Surgery - The Journal of Medicine in Industry*, vol. 21, June 1952, pp. 296-288; and Robson, R.B., "Medical Care of the Industrial Worker", *Canad. M.A.J.*, vol. 52, February 1945, pp. 143-147; *Occupational Health Services in Industry in Canada, 1954*, Memorandum No. 13, Research and Statistics Division, Department of National Health and Welfare, June 1956; and *Working Conditions in Canadian Industry, 1962*, Report No. 6, Economics and Research Branch, Department of Labour, 1963.

workers' physical and mental adjustment, in particular by their assignment to jobs for which they are suited, and of contributing to the establishment and maintenance of the highest possible degree of physical and mental well-being of the workers".<sup>1</sup> Industrial medicine was stimulated by the development of workmen's compensation boards, which became the basis for services to workers injured or contracting occupational sickness, and with changing social and economic conditions. It has been steadily expanding in scope to include preventive medicine, treatment service, promotion of health, services for diagnosis, and rehabilitation services.

Industrial medicine is justified on humanitarian and economic grounds because its results may be appraised in terms of improved welfare of workers, better employer-employee relations, reduced rates of accidents and occupational diseases, lower compensation premiums, more steady production and higher productivity of labour.

In Canada there is no certified specialty in occupational medicine recognized as such by the Royal College of Physicians and Surgeons of Canada. In the United States, however, industrial physicians receive specialist certification. In practice occupational medicine in Canada has also become a recognized specialty although many other sections of the medical profession are concerned with the health of workers apart from industrial physicians. In addition, an industrial physician works with paramedical personnel such as occupational health nurses, industrial hygienists, medical attendants and technicians specialized in occupational medicine. There is a gradual change in the status of industrial physicians in relation to organized medicine, management and labour parallel to the growing scope and objectives of industrial medicine under the modern and complex industrial structure of our economy. The working population constitutes a large proportion of our population but only a relatively small proportion of workers, mostly employees of large establishments, do in fact enjoy occupational health services. Any extension of such services will require more trained paramedical personnel and, probably, official recognition of industrial medicine as a specialty.

In general, Canadian industry is composed largely of small establishments employing less than 500 workers, which probably are too small to require the services of a full-time industrial physician. Consequently, most of the production units employ a part-time doctor or one "on call". The part-time industrial physician is usually a general practitioner.

The organization of supply of industrial medicine services depends on such factors as type of industry, size of industrial and commercial establishment and its location. Consequently, there are a variety of methods that may be used to provide occupational health services. There may be the co-operative arrangement under which a group of small firms share in financing a full- or part-time physician and other personnel. More often, however, a small establishment will use a local medical practitioner who will supply medical services on a part-time basis. In larger industrial centres, there may be an industrial clinic operated and financed

<sup>1</sup> International Labour Organization, Forty-Third Session, Geneva, 1959, quoted in the brief from the Canadian Medical Association, B.C. Division, submitted to the Royal Commission on Health Services, February 20, 1962, Occupational Health, p. 1.

by physicians themselves and its services made available to all local industrial and commercial establishments. These private efforts are supplemented by governmental activities in occupational medicine through provincial industrial health units, and the Division of Industrial Health and an Industrial Health Laboratory in the Federal Department of National Health and Welfare.

During the war in 1943, there were 112 full-time and 229 part-time physicians on salary, employed in 220 factories with 200 or more workers, totalling 413,000 workers. An additional 63 physicians were employed on a fee basis, and 110 doctors, engaged in industrial contract practice serving workers in logging, mining and construction works away from centres of population, for which services the physician was paid out of wage deductions.<sup>1</sup> In 1947, there were 200 full-time and about 750 part-time physicians engaged in occupational health services. Nearly half of the full-time and two-thirds of the part-time industrial physicians were employed by manufacturing industries. The largest concentration of full-time physicians was in the establishments employing 500 or more workers.<sup>2</sup>

More extensive information on the qualitative and quantitative aspects of the occupational health services provided to employees by Canadian industrial and business establishments is available in the 1954 Survey of Occupational Health Services in Canada.<sup>3</sup> This survey covered a total of 12,265 establishments employing 386,177 office and 1,256,051 non-office workers. The railways and telegraph companies were omitted. There were 272 full-time and 704 part-time physicians employed in the establishments reviewed.<sup>4</sup> About 80.0 per cent of the physicians were employed in the heavily industrialized provinces of Ontario and Quebec. Again the largest concentration of these physicians was in manufacturing, followed by public utilities and mining industries. Establishments employing 100 workers or more accounted for four-fifths the employment of both full-time and part-time industrial physicians.

More recent information on the number of industrial physicians, the extent of availability of industrial medical services and medical personnel in selected Canadian industries is available in the publication on Working Conditions in Canadian Industry, 1962, of the Department of Labour. The survey covered about 80.0 per cent of establishments having 15 or more employees. Table 5-13 shows the number of establishments that employed doctors and the number of doctors, by major industries, as of May 1, 1962.

The Canadian labour force has increased from 5.493 million in 1954 to 6.590 million in 1962 but the actual number of physicians employed in industry on a full-time basis has remained the same between these two years. No importance can be

<sup>1</sup> Canadian Medical Procurement and Assignment Board, *Report of the National Health Survey, 1945*, Table 75, p. 163.

<sup>2</sup> *Survey of Pension and Welfare Plans in Industry, 1947*, DBS, Reference Paper No. 4, 1950, Health and Welfare Division, p. 97.

<sup>3</sup> Research and Statistics Division, Department of National Health and Welfare, June 1956.

<sup>4</sup> The number of physicians employed is open to a margin of error since in certain firms, one doctor may service two or more establishments. Hence some duplication may be inherent in the total figures.

TABLE 5-13  
DOCTORS EMPLOYED IN INDUSTRY, CANADA, MAY 1, 1962

Industry	Number of Establishments that Employed Doctors	Number of Employees in Establishments that Employed Doctors	Physicians		
			Employed full-time	Employed part-time	On call
Manufacturing. ....	1,489	511,533	88	570	1,318
Mining .....	113	42,302	30	26	134
Transportation .....	172	167,054	66	74	1,520
Public utilities.....	40	27,694	6	10	91
Service.....	169	36,381	37	52	159
Trade.....	516	135,112	18	112	494
Finance.....	48	33,559	16	24	41
All industry.....	2,547	953,635	261	868	3,757

Source: *Working Conditions Survey* (May 1, 1962), Economics and Research Branch, Department of Labour, June 12, 1963.

attached to the small increase in part-time industrial physicians because of the duplication involved in their numbers as one doctor may service a few establishments all of which will report having a physician on a part-time basis. The largest concentration of full-time industrial physicians was in manufacturing, transportation, service, and mining industries, in that order.

Appendix 5-7 indicates the extent of availability of industrial medical services and medical personnel in selected Canadian industries in 1962.

Only 1.0 per cent of the total reporting units of 8,618 in manufacturing had one or more physicians in attendance full-time as compared with 6.0 and 12.0 per cent one or more physicians in attendance part-time and "on call" respectively. Since, in general, only larger establishments employ physicians, the corresponding percentages indicating a coverage of plant and office employees by industrial physicians were naturally higher. Approximately one-quarter of the manufacturing workers had available the services of industrial physicians. This proportion was somewhat lower in the mining industry but it varied considerably between different types of mining. A somewhat higher proportion of the available medical personnel prevailed in the transportation industry, public utilities sector and for life insurance employees.

The costs of occupational health services are borne entirely by the industries concerned. These costs vary with the nature, size and, location of the industry as well as the type and extent of such services provided. It has been suggested that the costs per employee vary from a minimum of \$5.00-8.00 per year to a maximum of \$35.00-40.00.<sup>1</sup>

<sup>1</sup> CMA's Committee on Occupational Medicine, A Report submitted to the Royal Commission on Health Services, January 2, 1962, p. 1.



The Canadian economy is still subject to extensive industrialization and, therefore, it can be expected that in years to come occupational medicine will pay an increasingly important role in the provision of medical care to our growing working population and hence the demand for industrial physicians is likely to increase in the future.

### 8. Life Insurance Medical Officers

A small proportion of Canadian physicians serve as advisors to insurance companies, which provide the health insurance coverage at present in force. As of February 1962, there were 86 doctors of medicine associated with such insurance companies.<sup>1</sup> They are organized in the Canadian Life Medical Officers Association, which is an affiliate of the Canadian Medical Association.

### 9. Canadian Forces Medical Service<sup>2</sup>

The provision of medical services to the members of Canada's armed forces and, in certain localities, to their dependents is the responsibility of the Canadian Forces Medical Service, which was formed in January 1959 through the unification of the medical branches of Navy, Army and Air Force under the direction of the Surgeon General, Canadian Forces.

At the end of World War II there were 3,387 doctors serving in the Canadian armed forces as compared with 33 in 1939. After the war and demobilization of the armed forces the number of military physicians again declined to a peacetime level of 110 in 1947.<sup>3</sup> Military medical personnel expanded somewhat with the Korean War to keep pace with the size of the armed forces. Table 5-14 indicates the number of physicians in the armed forces during the years 1951 to 1962.

Because of the early retirement age of military personnel, medical officers fall within low age groups as shown in Table 5-15.

The total of 393 military physicians consisted of 65 certified specialists, holding specialist certificates of the Royal College of Physicians and Surgeons of Canada, 18 other specialists, 51 graded specialists, 65 specialist trainees and 194 others. A distribution of certified and non-certified specialists, by specialty, is shown in Appendix 5-8, which also indicates the extent of vacancies in the various specialties. Specialties mainly represented were those in General Surgery, Internal Medicine, Anaesthesia, Psychiatry and Diagnostic Radiology.

<sup>1</sup> A brief from the Canadian Life Insurance Medical Officers Association, submitted to the Royal Commission on Health Services, February 10, 1962, p. 1.

<sup>2</sup> Statistical data concerning military medical personnel were obtained by the Royal Commission on Health Services from the Department of National Defence: Surgeon General, Canadian Forces, July 20, 1962, File ref. HQ2-6030-2DSG (PTS).

<sup>3</sup> *Ibid.*, Table I.

**TABLE 5-14**  
**DISTRIBUTION OF CANADIAN FORCES MEDICAL SERVICE, BY SEX, 1951-1962**  
 (as of March 31)

Year	Male	Female	Total
1951.....	185	1	186
1952.....	265	1	266
1953.....	347	2	349
1954.....	377	2	379
1955.....	429	2	431
1956.....	442	1	443
1957.....	457	1	458
1958.....	393	1	394
1959.....	402	1	403
1960.....	415	1	416
1961.....	412	2	414
1962.....	392	1	393

Source: Department of National Defence, Surgeon General, Canadian Forces, July 20, 1962, File ref. HQ2-6030-2DSG (PTS), Table I.

**TABLE 5-15**  
**AGE DISTRIBUTION OF CANADIAN FORCES MEDICAL SERVICE, 1962**

Age group	Certified specialists	Other
25-34.....	1	42
35-44.....	40	241
45-54.....	24	45
Total .....	65	328

Source: Department of National Defence, Surgeon General, Canadian Forces, July 20, 1962, File ref. HQ2-6030-2DSG (PTS), Table II.

It had been pointed out in the evidence to the Royal Commission on Health Services that the appointment of qualified physicians as medical officers in sufficient numbers, has been a problem since World War II.<sup>1</sup> This deficiency was partly overcome through short service commissions of doctors from the United Kingdom, (in 1962 there were 141 immigrant physicians in the Canadian Forces Medical Service) and the subsidy of Canadian medical students during the final forty-five months of their medical training by the army authorities in return for three years' service as medical officers. This particular programme was started in 1959 and accounted for an annual enrolment of 50 in that year, 63 in 1960 and 65 in 1961. Average cost of subsidization amounted to \$16,386 per student over the period of 45 months training.

<sup>1</sup> A brief from the Canadian Medical Association, submitted to the Royal Commission on Health Services, May 15, 1962, p. 41.

As of March 1962, there were 195 medical officers who entered military service by various subsidization plans. The World War II Subsidization Scheme accounted for 14.9 per cent of the above figure: unclassified early post-war scheme — 3.1 per cent; Reserve Officers Training Plan — 8.7 per cent; 21 Months Plan — 70.2 per cent; and finally, 45 Months Plan for 3.1 per cent. From the records maintained since 1954 it appears that of 361 subsidized entrants under the above plans, 43.4 per cent relinquished their contractual option for release to become regular officers. Approximately one-third of so subsidized physicians became career medical officers with the armed forces.

It appears that in Canada, as in the United States, the voluntary procurement of physicians into the armed forces is difficult, partly, because of the routine nature of the work of medical officers who are dealing with a young and selected group of healthy men and, partly also, because of lower earnings in the forces than in private practice.

Arrangements are made to enable medical officers of the CFMS to keep abreast of medical research and to improve their skills through the post-graduate training programme which, however, is restricted to regular officers, and through attendance of professional conventions and refresher training by way of short clinical and technical courses.

Appendix 5-9 shows the scale of salaries in existence in 1962 for physicians in the armed services by categories of physicians and duration of service. The minimum for the unmarried doctor was \$7,056 and the married \$7,896. The corresponding maxima, after 25-34 years of service, by which time all ranks reach maximum active service age limits, were \$17,160 and \$18,000 respectively. These initial salaries were approximately one-third less than an average earning of physicians in private practice in 1960. Progressive increase in salaries of medical officers with duration of service is at a much lower rate than that of general practitioners and specialists in private practice. On the average, the private general practitioners reach their peak of earnings only after five years in practice and maintain it for the next twenty-five years and the specialists reach their somewhat higher peak after ten years and sustain it for the next ten years. It is interesting to note that there are no separate allowances paid to specialists. The scale of salaries is based on rank, minimum and maximum scales, and includes medical officer allowance, marriage and subsistence allowance and progressive pay in rank.

## Economics of Medical Practice

This chapter is limited to a brief discussion of a group medical practice and an analysis of the statistical data obtained from a special survey of the economics of medical practice in Canada in 1960, carried out by the Royal Commission on Health Services in the spring of 1962. It includes an examination of earnings of physicians in 1960 showing incomes of doctors by province, type of major work, type of practice, size of community in which practice was located, years of experience and medical specialty practised. It also examines annual operating expenditures incurred in practice during 1960 by items of expenditure on a national and regional basis, size of community, type of major work, type of practice and specialty practised. In addition, this section examines the depreciated value of capital assets owned by doctors at the end of 1960 and the problem of capital costs of buildings and/or equipment purchased in the same year. The last part of this chapter is concerned with the cost of establishing a medical practice since 1956 and with the source and amount of funds used to establish practice initially.

### 1. Description of Procedure of the Survey

A mailing list of active civilian physicians, compiled mainly from the Canadian Medical Directory, was supplied by the Department of National Health and Welfare and a questionnaire was mailed to all doctors in Canada, including salaried physicians, interns and residents. To ensure the confidential nature of replies, the respondents were asked to mail the completed and unsigned questionnaire to the Royal Commission on Health Services. A sample questionnaire is reproduced as Appendix 5-1.

From an initial mailing list of over 20,000 doctors the Commission received about 7,000 usable replies. The survey did not cover those doctors who were in practice in 1960 but who left the profession by 1962, nor most of those who started their practice after 1960. Some of the questionnaires were not usable, however, and of the usable ones not all applied to the different parts of the analysis. Consequently, the number of respondents in various parts of this survey varied considerably, thus reducing the effective response rate for various sections of the analysis. No sampling of non-respondents was carried out and, therefore, it is not

possible to say with definite certainty that the various averages of income, operating expenditures and cost of establishing practice shown in this chapter are typical of the profession as a whole. However, all the evidence available to the Commission suggests that the group of doctors from which the averages shown in this study are drawn is fairly representative of the medical profession in Canada. Thus, for instance, the per cent distribution of respondents by province is generally in agreement with the actual per cent distribution of the total medical population in Canada by province. The same is true of the distribution of physicians between general practitioners and specialists. The evidence for the representativeness of the income figures was a general comparison of the returns which were received from the doctors in the survey with income tax returns for 1960.

## 2. Group Medical Practice<sup>1</sup>

### a. Definition

G.H. Hunt and M. Goldstein define group practice as "... a formal association of three or more physicians providing services in more than one medical field or specialty, with income from medical practice pooled and redistributed to the members according to some prearranged plan".<sup>2</sup> This definition puts emphasis on the integration of the work of specialists.

Group medical practice refers to a system of practising medicine, and not to a method of paying for medical care. It entails professional co-operation, rather than competition, of the physicians within a particular group practice. It includes three or more doctors representing various specialties as well as general practice, with joint ownership of buildings, office facilities, and equipment. There is a pooling of medical skill, knowledge and experience through consultations, and the collective use of technical, administrative and other auxiliary personnel. Income is distributed to members of the group according to agreed principles.

<sup>1</sup> References, Bowler, J.P., "Group Practice Is One Answer to the Problem of Distribution", *Modern Hospital*, vol. 62, May 1944, p. 46-49; Clark, Dean A., "Group Medical Practice", *American Journal of Public Health*, vol. 39, No. 3, March 1949, p. 321-328; Clark, Dean A. and Clark, Katharine G., "Organization and Administration of Group Medical Practice", Joint Committee of the Twentieth Century Fund and the Good Will Fund and Medical Administration Service, Inc., October 1941, p. 109; Clark, Dean A. and Hapney, Cozette, "Group Practice", *The Annals of the American Academy of Political and Social Science* - "Medical Care for Americans", January 1951; Collings, Joseph S., "Group Practice, Existing Patterns and Future Policies", *The Lancet*, vol. 265, July 4, 1953, p. 31-33; Jordan, Edwin P., "The Business Side of Group Practice", *The Journal of the A.M.A.*, vol. 155, August 7, 1954, p. 1371-72; Jordan, Edwin P., "The Physician and Group Practice", *The Year Book Publishers, Inc., Chicago*, p. 238; Rorem, C. Rufus, "Pattern and Problems of Group Medical Practice", *American Journal of Public Health*, vol. 40, December 1950, p. 1521-28; Rorem, C. Rufus, "Economics of Private Group Practice", *Canadian M.A.J.*, vol. 70, April 1954, p. 462-66; Sanders, J.P. and Nyberg, Charles E., "Integration of the General Practitioners into Well-Organized Private Group Practice Clinics", *General Practitioner*, vol. 1, May 1950, p. 71-75; Thorlakson, P.H.T., "Group Practice and Medical Education", *Canadian M.A.J.*, vol. 63, October 1950, p. 336-39; Thorlakson, P.H.T., "Provision of Medical Services Through Group Practice", a Report submitted to the Royal Commission on Health Services, April 16, 1962, and Research and Statistics Division, Department of National Health and Welfare, *A Survey of Medical Groups in Canada, 1954*, Memorandum No. 7, November 1958.

<sup>2</sup> Hunt, G.H. and Goldstein, M., *The Journal of the A.M.A.*, vol. 135, 1947, p. 904, quoted by Joseph S. Collins in "Group Practice, Existing Patterns and Future Policies", *The Lancet*, vol. 265, July 4, 1953, p. 32.

Because of the voluntary nature of group practice there exists a wide variety of forms of organization, sizes, methods of proprietorship and distribution of income. Some groups provide comprehensive medical care involving specialties and general practice while others are limited to purely diagnostic services and referred cases. Some groups are limited to special classes of clientele, such as contract patients, while others are sponsored by industries and non-profit foundations.

*b. Reasons for the Development of Group Practice and a Few Historical Comments*

Group practice is a natural outgrowth of the evolution in medical techniques and sciences, which allows a measure of flexibility in medical organization. During the last 50 years or so there has been a gradual but continuous change in medicine resulting from rapid scientific advances, specialization, development of new professions and vocations allied to physicians, greater reliance upon capital investment in expensive equipment, changes in the pattern of illness, composition of population, and requirement for closer co-operation among physicians in the provision of diagnostic and therapeutic services. Some of these factors have contributed to the greatly improved medicine of today but, at the same time, have resulted in the complexity and higher operating costs of medical practice making a solo practice somewhat obsolete. A doctor practising independently may not always be able financially to acquire all the modern equipment necessary for good medicine or to perform each professional and technical service because of incomplete knowledge, inadequate auxiliary staff, lack of opportunity for consultation with his colleagues or because of the pressure of time.

The effective utilization of diversified medical manpower, expensive equipment and the economic provision of medical services are, therefore, the principal reasons for the development of group practice.

The American Medical Association's Committee on Research in Medical Economics published the booklet: "Group Medical Practice" in 1940 and indicated the following four main objectives of group practice:<sup>1</sup>

- "1. Increased professional efficiency in health conservation, and in the diagnosis and treatment of disease, secured through professional association, adequate equipment, and the co-ordination of the activities of physicians possessing differentiated skills.
- "2. Satisfaction of patients through continuity of relations with physicians, and through the convenience of obtaining medical services at a single center.
- "3. Realization of economy by means of efficient organization to furnish medical services and supplies at the lowest cost consistent with high standards of service.
- "4. Proper compensation for physicians, adequate facilities for their work, and systematic opportunities for professional education and advancement".

<sup>1</sup> Quoted by Clark, Dean A. and Clark, Katharine G., in : "Organization and Administration of Group Medical Practice", p. 18.

Thus the specific objectives of group practice include personal convenience, economy, improved medical service to patients and better professional opportunities, improvement of working conditions and stabilization of income to physicians. Group practice is not only a method for providing proper distribution of adequate medical care on an efficient basis, but it is much more than an economic device, for it provides a means through which diverse skills and achievements of modern medicine are made available to the general public.

Group practice is a unique medical organization confined to the United States of America and Canada following a general trend here towards larger enterprises and mass-production methods. It can be traced back to charitable and teaching hospitals and clinics. It had its origin in the dispensaries established in Philadelphia, New York and Boston in the latter part of the eighteenth century, which provided medical services to the poor. Later hospitals operated out-patient departments for indigent patients, in which a number of physicians were working together. However, the basis upon which group practice developed in the early twentieth century was the development of hospital staffs and the use of the out-patient departments by medical schools, which showed the advantages of team work by doctors. The Mayo Clinic, established at the end of the nineteenth century, played a dominant influence in establishing group practice, but the new groups that developed began to differ in their professional aims as well as in the economic aspects of organized medicine.

Further incentive to the development of group practice was provided by the experience of doctors in the armed forces during World War II, who worked together in larger medical units and were impressed by the advantages of group medical practice. In the United States the number of medical groups of three or more physicians increased three-fold between 1946 and 1959.<sup>1</sup> In Canada there were 127 groups in 1949 as compared with 187 in 1955.<sup>2</sup> The greatest increases were in the provinces of Ontario, Saskatchewan and Manitoba. A survey of medical groups in this country, conducted by the Department of National Health and Welfare in 1954, revealed that about a quarter of physicians engaged in private practice in that year were associated in various types of groups.<sup>3</sup> There were 877 groups which have been classified as follows: "Clinic groups" (109), "Specialist groups" (197), "General practitioner groups" (345) and "Other groups" (226).<sup>4</sup> There were 518 groups or over half of all 877 groups which had two doctors, and they comprised over a 1,000 physicians or just over a third of all doctors practising in groups. Approximately three-quarters of all groups had less than five members, and the physicians in these groups numbered under two-thirds of all physicians practising in groups. They were mainly general practitioners while the larger groups comprised mainly specialists.<sup>5</sup> A

<sup>1</sup> Thorlakson, P.H.T., a Report on "Provision of Medical Services Through Group Practice", submitted to the Royal Commission on Health Services, April 16, 1962, p. 13.

<sup>2</sup> *Ibid.*

<sup>3</sup> Department of National Health and Welfare, Research and Statistics Division, *A Survey of Medical Groups in Canada, 1954*, Memorandum No. 7, November 1958, p. 2.

<sup>4</sup> *Ibid.*, p. 5.

<sup>5</sup> *Ibid.*, p. 6.



large proportion of all groups were located in urban centres and the actual number of physicians in groups tended to increase with the size of locality. These findings are confirmed in Appendix 6-2, which shows geographic distribution of group medical practice, by size of group and size of community, for regions and Canada in 1960. These limited data were obtained from a survey of the Economics of Medical Practice conducted by the Royal Commission on Health Services in 1962.

Small communities of less than 10,000 population in general can support only small groups of three to four doctors. Different sizes of group practice fit, however, into rural and urban communities and when strategically located may improve the supply of medical services, on a regional basis, because the group practice having specialists can serve patients from far away places.

### *c. Types of Group Practice and Methods of Distributing Income*

Group medical practices may be classified according to the type of principal activity and scope of medical services provided, the ownership of buildings, facilities and equipment used and the categories of patients served.

With the principal activity as a criterion, medical groups can be classified as follows:

1. Complete service groups, or clinic groups which provide complete medical care encompassing the services of both general practitioners and specialists in the home, the office, and the hospital, to a continuing clientele. This form of group practice tends to be established in densely populated centres with good transport facilities. The number of specialties within a group is influenced by such factors as the size of community and the degree to which the group utilizes auxiliary personnel for routine diagnostic and treatment procedures.
2. Reference groups, which mainly deal with referred cases by outside physicians, usually for a single illness. They are usually multiple specialty groups or clinics and ordinarily they do not provide complete medical care to a continuing clientele and limit their scope to the provision of diagnostic and consultant services.
3. Diagnostic groups, which consist of specialists and give little or no treatment service. Thus the physicians in such groups do not follow the progress of their patients. The public in general does not distinguish between functions of diagnosis and treatment and, as a rule, desires to receive complete medical care from the same medical organization.
4. Single specialty groups, which consist of three or more full-time specialists of the same category, or related fields such as internists, radiologists, orthopaedic surgeons, paediatricians, etc. For economic reasons these groups tend to locate in larger cities.
5. General practice groups, which consist of general practitioners only.

From the viewpoint of the categories of patients served medical groups may be classified as follows:

1. Private group clinics, including physicians of several specialties, which are opened to the general public but also accept referrals from other doctors. They depend mainly on prepayment programmes.
2. Full-time hospital staff groups, which combine the out-patient and in-patient services at the hospitals owned by the groups, and render services to the general public as well as to patients having prepayment insurance.
3. Medical groups, which provide medical care to the employees and their dependents of a particular enterprise or to organized consumers' co-operative groups, and the capital assets are owned by the employer or consumer.

From the point of view of ownership of capital assets, groups may be classified into three major categories:

1. Legal partnership with some physicians accepting the role of partners while others accept employee status. The provisions of the partnership include sharing of income, obligations of partners, vacations, sick leave etc. There are also departmentalized partnerships, where each department of a clinic operates as a team of two or more members, using the same facilities and sharing the net income.
2. Sole proprietorship where one doctor owns all the assets and controls the practice while other physicians are employees and remunerated generally on a salary or percentage basis.
3. Corporation — an association of physicians under which a corporation owns the buildings and equipment while a medical group conducts and controls the medical practice of the clinic. The principal reason for this arrangement is a legal restriction against medicine organized along the lines of a corporation. Usually, the members who found the group are the main shareholders of such a corporation. The medical group leases the building and equipment from the corporation, which is governed by its by-laws and selects its management. In some cases, a medical foundation or institute may own all the capital assets. This corporation-medical group association ensures the continuity of the group in case of death, resignation, dismissal or retirement of member-doctors.

Physicians do not usually have equal status within a private medical group from the standpoint of administration, ownership and income. Thus, senior members who originate a group, make decisions on administrative and personal matters, promotions, etc., while junior partners participate to a limited extent in the determination of business and professional policies. Employee-physicians are usually excluded from management and receive straight salaries only.

Some groups operate on the basis of fee-for-service only, while others receive mainly regular payments for services rendered to patients who have medical insurance under voluntary prepayment programmes or an industrial labour contract. However, a combination of the two sources of income is common. Since medical groups can, in

many cases, provide complete medical care for a substantial number of people, pre-payment plans which are based on a broad population foundation, are a natural concomitant of group practice.

It is generally accepted that group practice is less remunerative than a successful solo practice, general or specialist, though income of physicians in group practices tends to be more stable. In addition they have other benefits such as financial security in case of illness, paid vacations and access to modern and expensive equipment.

Incomes of individual physicians in group practice are influenced by such factors as type of specialty, doctor's experience, length of service with a group, volume of services performed as measured by total consultations, examinations or treatments, popularity with patients and ability to attract new patients, degree of administrative responsibility, contribution to quality of service through research and additional education and mere skills, etc. Any financial arrangement within a medical group must aim at rewarding ability and effort, avoiding financial competition within the group and stimulating co-operation.

The following are the main methods of income distribution:

1. Sharing net income among members of a group based either on the equality principle or according to a point rating system. The latter takes into consideration some of the factors mentioned above in determining the size of income of a particular physician. The latter system also provides the necessary incentive, but it is difficult to set up and may cause dissatisfaction among the members of the group.
2. Salary system, under which a salary is paid to new members of a group until they become partners or full members. It may fail to provide the required incentive for the more enterprising and well qualified junior partners unless advancement is given readily by the senior members.
3. Fee-for-service method, under which each member of the group receives his own earnings less his share of the operating expenditures. This method tends to introduce an element of competition within a particular group.

In practice, the above three main methods may be combined in various ways.

It has been reported that in Canada in 1954 over one-half of reporting physicians (74 per cent was the response rate of all physicians in group practices) in any one type of group pooled their income; on the average, for all reporting group physicians, 20 per cent were on salaried basis, and another 5 per cent partly on salaried basis, and 20 per cent received "receipts from own practice".<sup>1</sup>

#### *d. Advantages and Disadvantages of Group Practice*

Group medical practice, as a relatively recent development in the distribution of medical services, must be critically assessed from the viewpoint of both patients and doctors. More complete empirical studies of group practice in Canada are needed to provide a proper basis of evaluation as to its efficiency, professional desirability,

<sup>1</sup> *Ibid.*, p. 74.

and its role in any reorganization of medical manpower to meet a future increase in demand for medical care in this country. The following comments are made with reference to group practice in general.

Group practice offers some benefits to the patients that are professional, economic and sociological in nature. Complete treatment of a patient requires cognizance of his personal problems and social environment. It is claimed that "... the medical group can provide the most favorable environment for the consideration of health service in its entirety. Comprehensive health examinations, health education, solution of social and emotional problems, vocational advice, and special types of therapy call for resources and personnel which cannot be readily provided by the busy solo practitioner in his private office. Group practice of medicine can assume total responsibility for the individual patient and fulfil its complete obligation".<sup>1</sup> Improved medical service is made available to a patient because he gets the pooled scientific knowledge and varied skills of all the members in a medical group; a larger group usually comprises the younger, recently trained physicians, and the senior, more experienced doctors, making collective experience and up-to-date training available to the patients; special diagnostic and therapeutic skills, facilities and methods are immediately provided when required; physicians are stimulated to follow modern medical achievements being subjected to the informal appraisal of their colleagues. Team-work is required because of the complexities of modern medicine. Fees charged to patients tend to be in line with fees charged by other physicians in the same community, but since group practice appears to be more efficient in the utilization of resources, personnel and material, the patients very likely benefit from a higher quality of service. In addition, patients save time and perhaps money, if they have to consult a few specialists. Group practice yields itself to various forms of prepayment plans and it may be located in smaller centres, thus increasing the availability of services, in particular, of specialists, to the patients in rural and small urban areas.

These potential advantages are, to some extent, offset by certain drawbacks of group practice. The patient's freedom of choice in the selection of his own doctor is somewhat impaired since he is limited to physicians within a given medical group. On the other hand, it may be argued that, in fact, the patient is rather helped in making a rational choice of a doctor because under group practice he will be diverted to the physician who is best qualified to take care of his particular ailment. It is alleged that group practice implies "mechanized" and "assembly-line" medicine where every patient is exposed to long and expensive referrals, consultations, laboratory and technical procedures that may not always be required. This would imply misuse of science resources. Being treated by a team of physicians, the patient is exposed to a scattered approach of each individual doctor for whom he is just a "case" while in fact, the patient's personality is not really divisible. On the other hand, it is said, that a group usually assigns one of the doctors as the patient's "personal physician" and the fact that several doctors are able to discuss the patient's case with one another or with the family doctor ensures continuity and uniformity of medical care.

<sup>1</sup> Clark, Dean A. and Hapney, Cozette, "Group Practice", p. 2.

Physicians in group practice gain professional, educational, economic and practical benefits. A group can more easily afford to employ auxiliary personnel such as nurses, secretaries, managers, technicians and others, who relieve physicians of routine, time-consuming and "unproductive" work. Thus they can spend more time on their professional functions. They improve professionally by contact with each other and by sharing experience. They limit their work to those medical procedures for which they are most qualified.

Group physicians having regular working hours can enjoy more time for leisure, undertake post-graduate studies, conduct research, attend conferences and plan vacations, without any loss of income. A group physician is under less economic pressure to take more patients than he can handle satisfactorily since, in most cases, his income does not depend directly on the number of patients he attends.

Operating expenditures per group doctor tend to be relatively less than per individual specialist in the same community although group practice tends to have higher capital expenditures. Expensive equipment is used to its full capacity and duplication of facilities is avoided. A young doctor in solo practice cannot be expected to purchase initially all the modern equipment required, to the disadvantage of his patients, while a group practice offers an opportunity to enter modern practice without a heavy professional capital investment and delay in establishing practice. It has been suggested that: "The usual spread between the individual practitioner's gross intake and his net income is 40 per cent. Group practice can lower this spread to 30 per cent, sometimes more".<sup>1</sup>

The economic incentives of a group doctor tend to merge with those of the group as a whole and hence he has no direct financial concern with the amount and quality of services he gives to patients. His professional incentives are relatively more free from financial considerations. Moreover, he is assured of a relatively stable income throughout his professional life unlike a solo practitioner who usually experiences wide variations in professional income during his active medical career. In addition, group physicians usually have retirement provision, security for disability due to illness and group insurance plans.

There are also some disadvantages to doctors engaged in group practice. Group practice may lead to a narrow over-specialization; it may attract physicians seeking professional and economic security rather than excellence of independent practice, and it tends to restrict the individuality of the physician. He must abide by the decisions of the majority because team work requires conformity to group rules. These factors may adversely affect the independence of professional judgment and discourage professional progress.

The salary method or sharing net earnings may not attract superior doctors who will probably do better financially in solo practice.

The list of potential drawbacks of group practice both to patients and physicians suggests that this method is by no means a panacea for all problems involved in modern medicine. Despite this reservation, however, group practice may be considered as an alternative to a solo practice particularly in larger areas.

<sup>1</sup> Davis, Michael M., "Medical Care for Tomorrow", Harper & Bros., New York, 1955, p. 146-47.

*e. Canadian Doctors' Views on Group Practice*

The Royal Commission on Health Services in its questionnaire on Medical Practice, asked the doctors to indicate "yes" or "no" to three questions on group practice, whether it tends to:

- (a) Improve the quality of medical services?
- (b) Improve the availability of medical services?
- (c) Improve the working conditions of doctors?

A statistical analysis of opinions on group practice expressed by the reporting physicians is shown in Table 6-1.

This table suggests that Canadian physicians have firmly established views on group practice, as only a small proportion of the reporting physicians were undecided in their assessment of the various aspects of group practice.

Sixty-five point five per cent of over 10,000 doctors replying to the first question have indicated that group practice improves the quality of medical services. It is of interest to note, however, that only approximately half of the physicians in solo private practice gave a positive answer to this question. Over 90.0 per cent of physicians working in group practice were affirmative in their opinions on this aspect of group practice.

Four-fifths of the respondents believed that group practice improves the availability of medical services and even almost three-quarters of the physicians in solo private practice were of the same view. It is interesting to observe that over 90.0 per cent of the reporting doctors thought that group practice improves the working conditions of doctors. This high proportion would suggest probably that group practice will further develop in this country.

The views of doctors on group practice were also related to their age or years of practice. In general, the views of older doctors did not differ much from those of the younger ones though the older doctors seemed to be a little doubtful whether group practice improves the quality and availability of medical services and the working conditions of doctors.

Finally, it appears from the table that a location of practice, by size of community, had really no bearing on the opinions of the doctors with respect to these three aspects of group practice.

*f. Conclusions*

The patterns of medical practice develop with the evolution of medical science and techniques as well as with the changes in the scope and type of medical needs. It is, therefore, difficult to predict the future development of group practice. Its success will be determined by the attainment of a high standard of service, satisfactory doctor-patient relationship, efficient administration, research and educational achievements and a socially acceptable policy with regard to ownership of capital assets and physicians' income.



TABLE 6-1  
STATISTICAL ANALYSIS OF OPINIONS ON GROUP PRACTICE EXPRESSED BY CIVILIAN CANADIAN DOCTORS, 1962

Type and Auspices of Work, Duration of Practice and Size of Community in Which Located	Group Practice Tends to:											
	(a) Improve the Quality of Medical Services				(b) Improve the Availability of Medical Services				(c) Improve the Working Conditions of Doctors			
	Per Cent				Per Cent				Per Cent			
	No. Re- porting	Yes	No	Unde- cided	No. Re- porting	Yes	No	Unde- cided	No. Re- porting	Yes	No	Unde- cided
<i>Type and Auspices of Work</i>												
Private Practice:												
Self-employed .....	4,739	46.5	49.9	3.6	4,737	70.1	27.1	2.8	4,860	87.5	10.2	2.3
Partnership .....	1,428	81.3	17.6	1.1	1,430	91.4	8.1	0.5	1,435	96.1	3.5	0.4
Group practice .....	1,081	91.0	7.8	1.2	1,069	95.5	3.9	0.6	1,085	98.1	1.5	0.4
Total .....	7,248	60.0	37.2	2.8	7,236	78.1	19.9	2.0	7,380	90.7	7.6	1.7
Interns and Residents .....	1,064	78.5	18.9	2.6	1,070	88.9	9.5	1.6	1,085	96.6	2.5	0.9
Hospital Staff .....	951	79.6	17.5	2.9	944	88.0	9.4	2.5	964	96.4	2.2	1.4
Research and Teaching .....	373	72.9	22.3	4.8	377	87.5	11.4	1.1	382	93.2	5.0	1.8
Other .....	783	77.7	20.3	2.0	788	90.1	8.6	1.3	793	96.1	2.8	1.1
Grand Total .....	10,419	65.5	31.7	2.8	10,415	81.3	16.8	1.9	10,604	92.3	6.1	1.6
<i>Duration of Practice</i>												
Less than 10 years .....	4,170	65.7	32.3	2.0	4,179	82.7	16.0	1.3	4,245	93.6	5.2	1.1
10 - 19 years .....	2,702	62.9	33.9	3.2	2,700	80.7	17.2	2.1	2,754	92.4	6.1	1.4
20 - 39 years .....	2,094	63.3	33.0	3.7	2,090	77.6	19.6	2.8	2,133	89.2	8.3	2.5
40 years and over .....	298	60.7	35.2	4.0	290	71.4	24.5	4.1	293	84.0	12.3	3.7
<i>Size of Community in which Located</i>												
Less than 10,000 population .....	1,938	71.7	26.1	2.2	1,919	80.2	17.8	2.0	1,965	93.4	5.0	1.6
10,000 - 49,999 population .....	1,251	68.6	28.9	2.5	1,240	81.0	16.7	2.3	1,256	91.6	6.4	2.0
50,000 population and over .....	7,195	63.2	33.8	3.0	7,223	81.7	16.4	1.9	7,349	92.1	6.4	1.5

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



The co-ordination of a medical insurance plan with a group medical practice would offer financial security to physicians, overcome the economic barriers that exist to the demand for medical services, increase availability of medical care in all geographical areas, and ensure efficient use of medical manpower and allied resources.

Group practice may prove to be an important method in planning the supply and distribution of medical care on a local and regional basis. General practice groups located in geographically strategic communities would ensure more equal distribution of medical manpower between rural and urban areas, and meet a major part of the medical needs of the average patient. More complex groups, including specialists, could be planned on a regional basis. The size of any group would depend on such factors as population density, transportation and communication facilities, hospital facilities and others. Local planning and regional integration of medical markets would involve some adjustment in training of medical manpower and paramedical personnel, in order to equalize supply and demand for various categories of physicians and other auxiliary personnel.

It has been suggested that a medium-sized clinic comprising approximately 30 physicians could serve a centre of 25,000 to 30,000 population on the assumption that there should be one physician for 750 to 1,000 people and that a physician averages 300 working days a year.<sup>1</sup> The following distribution of physicians according to type of practice has been recommended:<sup>2</sup>

General practice .....	17
Obstetrics and gynaecology .....	2
Surgery .....	2
Ophthalmology .....	2
Radiology .....	1
Dermatology .....	1
Cardiology .....	} 3
Gastro-enterology .....	
Otolaryngology .....	2
Paediatrics .....	1
Orthopaedic surgery .....	1
Pathology .....	1
Total .....	33

<sup>1</sup> Sanders, J.P. and Nyberg, Charles E., "Integration of the General Practitioners into Well-organized Private Group Practice Clinics", p. 74.

<sup>2</sup> *Ibid.*

### 3. Earnings of Physicians in Canada

#### *a. Some Economic Aspects to be Considered*

The adequate remuneration of physicians is a necessary condition for a sufficient supply of medical manpower and for the maintenance of high standards of medical care. Physicians, like other professional groups, are motivated not only by professional, but also by financial incentives in their activities.

In a comparative analysis of professional incomes of physicians and those of other professional groups, it is perhaps necessary to stress certain specific features of the medical profession. The long and intensive training of physicians involves not only direct personal investment in education but also an inevitable postponement of earnings. It is difficult, however, to estimate exactly to what extent the higher earnings of physicians are due to these "extra costs". In addition, the medical profession requires persons of relatively rare personal and intellectual abilities and it demands a development of special skills and long experience before a peak in earnings is achieved. The practice of medicine involves numerous occupational hardships, hazards and specific mode of living. For "Medicine, indeed, involves less regular and longer hours, less personal freedom, the inconvenience of 'home' calls at any hour of the day or night, and, consequently, greater physical and mental strain."<sup>1</sup> Physicians, generally, are obliged to postpone marriage and the attainment of financial independence. It is perhaps impossible to assess quantitatively the importance of the above factors and their impact on physicians' earnings.

Medical practice provides no economies of scale though some economic advantages are offered through a group medical practice. The medical market is of a local nature and characterized by imperfect competition. There are real economic barriers and institutional factors governing entry into the medical profession, which may account for the slow adjustment of supply of medical manpower to a rapidly growing demand for medical services. Restriction of entry into medicine is open to different interpretations. "It may reflect, first, a public policy of raising the standards of medical practice to levels that create a shortage in the relative supply of 'innate abilities' needed for the medical profession; . . . second, a related public policy of raising the standards of medical training to levels that are difficult for medical schools to meet and that make it impossible for the accredited schools to handle large numbers of students; or, third, a deliberate policy of limiting the number of entrants in order to keep down the total number of physicians, that is, to prevent 'overcrowding' of the profession."<sup>2</sup> Thus, the length of medical training required, financial barriers in the case of some potential doctors, a licensing policy which implicitly aims at limiting the number of practitioners, and inadequate knowledge of the real conditions of the medical market, may account for its imperfections of competition and maladjustment of supply and demand for medical manpower.

<sup>1</sup> Friedman, Milton, and Kuznets, Simon, *Income from Independent Professional Practice*, National Bureau of Economic Research, New York, 1945, p. 130.

<sup>2</sup> *Ibid.*, p. 395.

The medical market differs from other markets because of the unique value of medical services to the individual and the community. These services are greatly "differentiated" because of the heterogeneous nature of the medical profession and also because medical services are highly "personalized". Hence the considerable differences in the prices of medical services and the variability of incomes amongst physicians.

Differences in earnings within the medical profession reflect a number of factors. The more important factors are: location of practice, type of major work, type of practice, length of experience, doctor's reputation, personality, ability, social connections and the organization of practice. Adequate statistical analysis is possible for only a few of these factors. Differences in earnings caused by location, type and organization of practice tend to persist and they account for the stability of relative income status amongst particular groups of physicians. On the other hand, length of experience causes variability of annual income over the physicians' working lifetime.

The relative increase in physicians' income during the last decade or so is probably due to the general economic improvement of our society that resulted in greater demand for medical services, population growth, the higher productivity of physicians resulting from increased use of auxiliary personnel, modern equipment and improved transportation that enables physicians to see a higher proportion of patients in the office.

Economic analysis of medical practice involves two basic problems, namely, the methods of payment for services rendered by physicians and setting of fees, and the level of income as affected by the various factors mentioned above.

#### *b. Factors Affecting Medical Fees and Methods of Earning*

In general, the effective range of medical fees is determined at the lower level by the operating costs of medical practice, and at the upper limit by the ability to pay plus the unique value of medical service to an individual. In exceptional cases a doctor may give free service.

Medical fees, like most of other professional fees, tend to remain stable for a considerable period of time irrespective of changes in the cost of living, the general state of the economy and actual changes in the medical services market. The Canadian Medical Association publishes a schedule of fees as a guide to the profession. The latest one became effective as of January 1962 and, for the first time, fees were established not only for general practitioners but also for specialists. The schedule is used by practitioners as well as by the organizations which insure the cost of medical services.

J. Backman, after having made a survey of the various professions, suggested that the fee charged usually is determined by some combination of the following main factors: cost of service rendered (i.e., expenses incurred and time involved), ability to pay, value of service rendered (i.e., amount of money involved,

savings to client, convenience to client and success or failure of producer's performance, establishment of precedent), customary or fixed nature of fee, casual or established relationship with client and, finally, legal limitations.<sup>1</sup>

The precise combination of these factors will vary amongst physicians and with the same doctor it will vary over time as well as with respect to his particular patients. The fee charged the average patient must be adequate to cover the pro rata share of operating expenditures that will include the cost of medical supplies, office rental, wages paid to auxiliary personnel, amortization of equipment and other capital assets and an adequate compensation for the time spent by a doctor. Moreover, a physician may use a sliding scale of fees, depending on the patient's ability to pay as measured by size of family income and by size of community. The criterion of value of service rendered to a patient is closely related to ability to pay. Convenience to the patient (i.e., doctor's visit at home) also determines the size of fee. In general, the customary fee or fees suggested by the association within geographic areas and specialties practised may provide a list of minimum fees with the actual level determined by the various factors mentioned above.

In evaluating and comparing the financial arrangements between physicians and patients, attention must be given not only to the fee schedules, but also to the method of payment which may affect the type, quality and quantity of medical services as well as the professional income of the physician. In practice, it may be difficult to assess the connection between the method of payment and the doctor-patient relationship because the quality of medical care depends upon the doctor's training, ability and experience. Nevertheless, he is susceptible to the conditions or auspices under which he works, or at least, his energy and interest are influenced by economic incentives.

Basically, there are three methods of payment: fee-for-service, which is the principal method of remuneration of physicians in Canada, salary or salary plus fee-for-service, and the capitation or panel system under a national health scheme where the doctor is paid a fixed rate per annum for each patient on his panel whether he is required to render service or not. This latter method is used in Great Britain. Some three-quarters of physicians in Canada obtain their earnings by fee-for-service method.

It is argued that the fee-for-service system fosters a higher standard of service provided by physicians since it ensures a financial return in proportion to ability, training and the experience of the doctor. Moreover, it "... allows the evaluations of the market place as expressed by the actions of patients, the widest scope..." because the popular doctor will have many patients and a larger income and "... if the judgment of patients reflects a true evaluation of the relative professional skill..." then the fee-for-service method operates "... to reward efficiency and promotes high standards."<sup>2</sup> In other words, it is claimed, that the pricing of

<sup>1</sup> Backman, Jack, "Professional Fees: Factors Affecting Fee Setting in the Several Professions," *The Journal of Accountancy*, vol. 95, May 1953, p. 555.

<sup>2</sup> Davis, Michael M., *op. cit.*, p. 332.

medical services under the fee-for-service system, is determined by the forces of supply and demand mitigated but not removed by the occasional charity of physicians and the sliding scale of fees. In addition, the proponents of this payment system argue that this method is an important factor in the preservation of the personal relationship between patient and doctor, that it protects professional independence, and ensures freedom of choice to the patients.

These probable advantages of the fee-for-service method are offset somewhat by a number of disadvantages. Thus, for instance, it may be argued that this system places a premium on quantity rather than quality of medical services because the financial incentive "...meets the counteracting force of the doctor's professional standards which define what services the patient's best interests would require; but there are cases where professional judgment about required services is evenly balanced and where the economic motive may enter unconsciously".<sup>1</sup> It may be difficult to identify the price and value of medical services because some people believe that the best services always cost more and, therefore, are prepared to pay more for them. The sliding scale of fees, based on the ability to pay, implies an indirect form of taxation and, in fact, there is no public participation in the determination of the equitable distribution of the financial burden of illness. One writer has observed that "the sliding scale has the basic limitation that it can distribute costs only among sick persons of different economic groups, not among both the well and the sick. Furthermore, it places upon the physician the responsibility for deciding the patient's ability to pay — a task frequently difficult and often invidious for the physician".<sup>2</sup> It is also said that the fee-for-service method constitutes a barrier to preventive medicine because in the absence of a real physical distress there is no compelling reason to seek the doctor's services. For many individuals and families, under the fee-for-service method, the cost of medical care raises two major problems; namely, the high cost of illness and the lack of care or delay in obtaining needed medical services. Needless to say, this adversely affects their efficiency. In some cases, physicians stand ready to offer free services, but charity can only mitigate the burden of sickness costs; it provides no real remedy. "The spirit of charity is not disparaged by asking to what extent the principle of charity is sufficient to deal with the problem of sickness costs, which affects not only the destitute and those on the borderline of poverty, but also families of all income groups except the well-to-do."<sup>3</sup>

It is estimated that 20 to 25 per cent of all active physicians in Canada are mainly remunerated on a salary basis although in addition to salary they may have also an opportunity to provide medical services on a fee-for-service basis. These salaried physicians are engaged in public health and preventive medicine at all levels of government service, in the armed forces, in industrial medicine, in hospitals as pathologists, bacteriologists, biochemists, radiologists or administrative posts, in research and teaching, in sanatoria, in rehabilitation centres or in medical

<sup>1</sup> *Ibid.*

<sup>2</sup> *Ibid.*, p. 26.

<sup>3</sup> *Ibid.*, p. 25.

group practice. The salary is fixed on the basis of qualification, experience, age and ability. As a rule the salaries of physicians are lower than the professional incomes of independent practitioners because of the latter's large capital investment in building and equipment and the expenses of building up a practice. On the other hand, salaried physicians have certain advantages which are not reflected in their salaries, such as paid vacations, sick leave, insurance and pension benefits and periodic educational leave. The salary system of remunerating doctors may be said to promote high standards of medical care because by ensuring a predictable income the physician concentrates on the continuity of high quality medical care.

### *c. Average Total Net Income of Active Civilian Physicians*

The effective response rate of active civilian physicians to the Questionnaire on the Economics of Medical Practice with respect to their earnings is shown in Table 6-2.

A breakdown of reporting physicians between those in group medical practice and those not in group medical practice is made because the major part of the subsequent analysis of doctors' earnings is confined to those not in group practice. The survey data may be considered as fairly representative since the percentage distribution of respondents, by province, for both the total number of physicians and for those not in group practice is within a narrow percentage margin in agreement with the actual distribution of medical manpower in Canada by province. The response rate of the Province of Quebec is the lowest with only about one-quarter of the physicians replying to the Commission's questionnaire, while that of Prince Edward Island is the highest with approximately half of the province's physicians replying. As for the remaining provinces, approximately one third of their physicians provided usable replies concerning doctors' remunerations.

As a measure of the level of income of physicians, classified by different variables, the arithmetic mean is used because the arithmetic mean, by definition, is the income each doctor of a particular category would receive if the total income of each category of doctors as a whole were divided equally; it provides, therefore, a convenient method for establishing patterns in the distribution of incomes.

Average total net income is defined here as net income before taxation, earned from independent medical practice, from salaried professional employment, plus other professional income such as income from a fellowship. Net income from independent practice represents gross income from medical practice less the operating costs connected with the practice.

Appendix 6-3 shows average annual total net incomes of active civilian physicians, by source of income and by type of major work in which the reporting physicians were engaged in 1960 for provinces and Canada. These data exclude physicians in group medical practice. For each province, the actual total number of doctors in active civilian practice may be compared with the number from whom replies to the questionnaire were received, but there is no way of knowing whether

TABLE 6-2  
PER CENT RATE OF RESPONSE TO 1962 QUESTIONNAIRE ON EARNINGS OF ACTIVE CIVILIAN  
PHYSICIANS IN 1960, FOR PROVINCES AND CANADA

Province	Physicians, 1962		Questionnaire Response					
	Number	Per cent	Number of Respondents			Per cent Rate of Response		Per cent of Canada
			Not in Group Practice	In Group Practice	Total	Not in Group Practice	Total	
Newfoundland .....	296	1.4	78	11	89	26.4	30.1	1.3
Prince Edward Island .....	88	0.4	22	21	43	25.0	48.9	0.4
Nova Scotia .....	728	3.4	233	44	277	32.0	38.0	3.8
New Brunswick .....	462	2.1	146	3	149	31.6	32.3	2.4
Quebec .....	6,067	28.3	1,561	52	1,613	25.7	26.6	25.3
Ontario .....	8,120	37.9	2,414	288	2,702	29.7	33.3	39.1
Manitoba .....	1,126	5.2	259	124	383	23.0	34.0	4.2
Saskatchewan .....	847	4.0	225	74	299	26.6	35.3	3.6
Alberta .....	1,455	6.8	348	205	553	23.9	38.0	5.6
British Columbia .....	2,245	10.5	616	214	830	27.4	37.0	10.0
Not Stated .....			277	-	277			4.4
Canada .....	21,434	100.0	6,179	1,036	7,215	28.8	33.7	100.0
								3.8
								100.0

Source: *Directory of Canadian Mailings Limited, 1962*, and *Questionnaire on The Economics of Medical Practice, 1962*, Royal Commission on Health Services.



TABLE 6-3  
AVERAGE ANNUAL TOTAL NET INCOME FROM MEDICAL PRACTICE AND SALARIED APPOINTMENT OF ACTIVE CIVILIAN PHYSICIANS, BY TYPE OF MAJOR WORK IN WHICH ENGAGED DURING 1960, FOR PROVINCES AND CANADA<sup>1</sup>

Type of Major Work	Province										Not Stated	Canada
	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia		
Private Practice: <sup>2</sup>												
General.....\$	13,880	11,360	13,820	13,490	10,990	14,930	14,390	13,810	13,340	16,220	14,030	13,820
Specialist.....\$	17,670	14,930	18,390	19,640	16,340	20,660	16,550	17,480	19,320	18,030	20,350	18,730
Internship:												
Junior.....\$	400	—	1,780	—	1,430	2,010	1,110	1,040	1,530	2,060	1,840	1,740
Senior.....\$	4,920	—	3,840	3,220	3,100	3,470	3,910	3,460	2,570	3,670	2,320	3,360
Hospital Staff:												
Specialist.....\$	19,000	—	14,580	10,580	12,900	15,490	12,300	10,050	11,730	11,320	11,200	13,590
Other.....\$	9,860	—	8,850	15,000	12,360	13,300	9,750	9,080	9,270	11,800	9,550	11,560
Research.....\$	—	—	9,160	—	9,020	8,150	10,420	20,000	10,300	10,880	7,990	8,940
Teaching.....\$	—	—	16,330	—	10,450	15,190	14,490	13,500	14,730	14,890	14,860	13,870
Public Health.....\$	10,430	10,350	12,590	10,610	10,400	10,350	12,860	12,000	9,360	11,200	11,200	10,750
Industrial Medicine.....\$	15,000	—	6,250	11,250	12,720	14,200	12,500	7,500	11,410	13,960	11,600	13,170
Other.....\$	7,610	—	12,190	12,590	13,070	14,650	14,090	11,530	15,960	11,860	12,770	13,470
Not Stated.....\$	8,500	—	16,470	—	17,270	15,380	5,000	—	18,750	11,260	10,440	15,110
Average Net Income of Physicians in Group Practice.....\$	9,100	14,910	20,450	19,380	17,230	18,890	26,710	17,420	17,780	19,460	—	19,420

<sup>1</sup> Average income includes net income from practice, salaried appointment and other professional activities.

<sup>2</sup> Excludes partnership or group medical practice.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

the responding doctors are a representative sample of all doctors practising in a particular province. An additional limitation arises from the fact that there is no information on the actual distribution of physicians as between the various types of major work.

Table 6-3 summarizes the data of the above appendix and it shows the average total net income of doctors in 1960, by type of major work, for provinces and Canada.

Several important conclusions emerge from Table 6-3 subject to the above-mentioned limitations. The average income of specialists engaged in independent private practice, in the country as a whole, was approximately \$5,000 higher than the average income of general practitioners. This differential is due to the fact that the specialists have foregone income during additional years of training required and most of them live in larger cities where the costs of living tend to be higher than those prevailing in smaller localities. The average salary of specialists working in hospitals was lower than the average income of specialists in private practice. The differential between the salaries of specialists and non-specialists working in hospitals amounted to \$2,000.

Incomes of physicians in private practice depend, in general, on the level of personal income of the people they serve, the degree of utilization of medical services and the level of fees. Incomes of general practitioners in British Columbia, Ontario and Manitoba, the provinces which had the highest personal income per capita in Canada in 1960, were higher than those in other provinces. This correlation is less evident in the case of specialists. The three provinces mentioned also have had the most favourable physician-population ratios in 1960 as compared with those of other provinces. The provincial differences in incomes of general practitioners were, however, smaller than the differences in incomes of general practitioners between sizes of community in which practice was located. This would suggest a greater geographical mobility of general practitioners between provinces contrasted with such mobility within a province. The incomes of general practitioners in the Province of Quebec were the lowest in the country and, probably, the language barrier hampers their inter-provincial mobility.

Table 6-3 also indicates that independent medical practice tends to be more lucrative than salaried medical employment. Thus the incomes of doctors engaged in medical research amounted to only \$8,940, in public health to \$10,750, far below the average net income of general practitioners in the country as a whole. The incomes of physicians engaged in teaching and in industrial medicine approximated that of general practitioners.

It has been reported to the Commission that salaried physicians in the United States receive salaries approximately 50 to 70 per cent higher than Canadian salaried physicians.<sup>1</sup> This fact is probably the main reason why Canadian physicians in the salaried group seek employment in the United States.

<sup>1</sup> A brief from Ontario Medical Association, May 7, 1962, submitted to the Royal Commission on Health Services, Appendix No. 4, p. 113.

It is of special interest to note the very low incomes of interns and residents in all provinces. The fact that the income of residents, who require four to five years of specialized training does not exceed \$4,000 per annum might well constitute the most important economic factor in the recruitment of young Canadians into the medical profession.

Table 6-3 also indicates that the average net income of physicians working in group medical practice in most of the provinces was higher than that of general practitioners. This is due to the fact that group practices are composed mainly of specialists.

Appendix 6-4 indicates the average net income of physicians in group practice and number of practices/doctors, by size of group, for provinces and Canada. Table 6-4 summarizes some of these data.

TABLE 6-4  
AVERAGE TOTAL NET INCOME OF PHYSICIANS IN GROUP PRACTICE  
AND NUMBER OF PRACTICES/DOCTORS, BY SIZE OF GROUP, CANADA, 1960<sup>1</sup>

Size of Medical Group (Number of Physicians)	Number of Practices/Doctors	Average Net Income
		\$
3 .....	90/ 270	18,490
4 .....	33/ 132	17,710
5 .....	21/ 105	18,430
6 .....	13/ 78	19,460
7 .....	10/ 70	15,480
8 .....	3/ 24	18,500
9 .....	4/ 36	17,860
10 .....	2/ 20	28,510
10 and Over .....	16/ 301	21,910
Total .....	192/1,036	19,420

<sup>1</sup> Includes only those practices that responded.

Sources: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

The number of practices reported is perhaps too small to draw any definite conclusions. It appears, however, that physicians working in a group medical practice comprising 10 or more doctors enjoyed the highest average net incomes. Most of these practices were located in Western Canada.

Appendix 6-5 shows the number reporting and average net income of general practitioners and specialists, whose income was derived from independent practice only, for provinces and Canada. It appears that most of the reporting physicians confined their activities to private practice only.

Table 6-5 illustrates the extent to which some reporting physicians depended for their incomes on both private practice and salaried professional appointment.

TABLE 6-5

PER CENT OF ACTIVE CIVILIAN PHYSICIANS IN PRIVATE PRACTICE AND ON SALARIED APPOINTMENT TO TOTAL NUMBER OF REPORTING PHYSICIANS BY TYPE OF MAJOR WORK AND AVERAGE NET INCOME, CANADA, 1960<sup>1</sup>

Type of Major Work	Response Count		Average Net Income From Practice	Average Income for Salaried Appointment	Total Average Income
	No.	Per Cent of Total Count			
		%	\$	\$	\$
Private Practice:					
General.....	293	15	11,230	3,680	14,910
Specialist.....	616	26	17,160	4,610	21,770
Internship:					
Junior.....	2	1	2,050	2,900	4,950
Senior.....	7	1	3,490	5,130	8,620
Hospital Staff:					
Specialist.....	11	6	10,090	7,360	17,450
Other.....	3	4	5,990	8,460	14,450
Research.....	6	4	4,970	9,490	14,460
Teaching.....	19	19	7,220	10,240	17,460
Public Health.....	8	3	6,000	6,180	12,180
Industrial Medicine.....	8	9	5,920	10,160	16,080
Other.....	26	12	14,350	6,420	20,770

<sup>1</sup> Excludes partnership or group medical practice.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

Approximately one-sixth of the general practitioners and one-quarter of the specialists reporting combined private practice with some kind of salaried professional appointment. Their incomes were mainly derived, however, from private practice and were slightly higher than those of the general practitioners and the specialists shown in Table 6-3.

It also appears that approximately one-fifth of reporting doctors engaged in teaching supplemented their regular salaries through private practice. The combined incomes of the physicians working in private practice and salaried appointment were invariably higher than those shown in Table 6-3.

#### *d. Distribution of Doctors by Total Net Income Classes*

Appendix 6-6 shows the number and per cent distribution of the reporting doctors by total net income level in 1960 for provinces and Canada. Table 6-5 summarizes these data by total net income classes.

About 1,230 doctors, or one-fifth of the total reporting physicians in 1960 earned a total net income of \$5,000 or less. Nearly 60.0 per cent of this income

TABLE 6-6  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS, BY TOTAL NET INCOME RANGE,  
FOR PROVINCES AND CANADA, 1960<sup>1</sup>

Average Income Group	Province										Not Stated	Canada
	New- found- land	Prince Edward Island	Nova Scotia	New- Brun- swick	Quebec	Ontario	Man- itoba	Saskat- chewan	Alberta	British Colum- bia		
\$5,000 or Less - Number Reporting ...	10	3	26	16	391	490	53	37	70	87	54	1,237
Per Cent of Total Reporting in Province	13	14	11	11	25	20	20	16	20	14	19	
Per Cent of Total Reporting in Canada .	1	0	2	1	32	40	4	3	6	7	7	20
\$5,001 - \$10,000 - Number Reporting ..	18	3	50	37	381	389	52	52	60	123	59	1,224
Per Cent of Total Reporting in Province	23	14	21	25	24	16	20	23	17	20	21	
Per Cent of Total Reporting in Canada .	1	0	4	3	31	32	4	4	5	10	5	20
\$10,001 - \$15,000 - Number Reporting .	26	11	65	31	349	531	67	62	89	150	63	1,444
Per Cent of Total Reporting in Province	33	50	28	21	22	22	26	28	26	24	23	
Per Cent of Total Reporting in Canada .	2	1	5	2	24	37	5	4	6	10	4	23
\$15,001 - \$20,000 - Number Reporting .	12	4	46	23	203	389	51	38	60	122	36	984
Per Cent of Total Reporting in Province	15	18	20	16	13	16	20	17	17	20	13	
Per Cent of Total Reporting in Canada .	1	0	5	2	21	40	5	4	6	12	4	16
\$20,001 - \$25,000 - Number Reporting .	9	-	28	17	112	265	16	19	32	65	24	587
Per Cent of Total Reporting in Province	12	-	12	12	7	11	6	8	9	11	9	
Per Cent of Total Reporting in Canada .	2	-	5	3	19	45	3	3	5	11	4	9
Over \$25,000 - Number Reporting. ....	3	1	18	22	125	350	20	17	37	69	41	703
Per Cent of Total Reporting in Province	4	5	8	15	8	14	8	8	11	11	15	
Per Cent of Total Reporting in Canada .	0	0	3	3	18	50	3	2	5	10	6	11
Total Number Reporting .....	78	22	233	146	1,561	2,414	259	225	348	616	277	6,179
Median.....\$	12,000	13,000	13,000	14,000	11,000	14,000	12,000	12,000	13,000	14,000	12,000	

<sup>1</sup> Excludes partnership or group medical practice.  
Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

group were interns and residents located mainly in Ontario and the Province of Quebec. Another one-fifth of the total reporting physicians earned a total net income within a range of \$5,001 to \$10,000. One-quarter of the reporting physicians in the Province of Quebec, Newfoundland, New Brunswick and Saskatchewan were within this income range. Approximately one-quarter of the total reporting physicians in Canada had a total net income within the \$10,001–\$15,000 income range. Another 16.0 per cent of the reporting physicians were within the \$15,001–\$20,000 income class and the remaining one-fifth of the reporting physicians earned over \$20,000. One-quarter of the reporting doctors in the provinces of Ontario and New Brunswick were in that income class, while for British Columbia, Nova Scotia and Alberta this proportion was one-fifth and for other provinces it was lower than that for the country as a whole.

Table 6–7 illustrates the number and per cent distribution of the reporting physicians by total net income classes and type of major work.

Approximately one-tenth of the reporting general practitioners and specialists in private practice earned a total net income of \$5,000 or less, and about half of general practitioners and one-third of specialists in private practice were within a range of \$5,001–\$15,000. Approximately one-fifth of the reporting general practitioners and over one-third of the specialists earned more than \$20,000. In fact, more than half of the reporting specialists showed a total net income above \$15,000 as compared with only one-third of the reporting general practitioners.

Nine-tenths of the reporting interns and residents had a total net income of \$5,000 or less. Two-thirds of the reporting physicians working in hospitals were in the range of \$5,001–\$15,000 and only approximately one-tenth earned more than \$20,000.

It is of interest to note that approximately one-quarter of the reporting doctors engaged in medical research and teaching earned \$5,000 or less, approximately half of this category of physicians had a total net income ranging from \$5,001–\$15,000 and only 6.0 per cent earned more than \$20,000.

Four-fifths of the reporting doctors engaged in the public health sector and two-thirds of the doctors working in the field of industrial medicine were within the income range of \$5,001–\$15,000.

It is clear from the above analysis that private medical practice is more remunerative than other types of medical activities based on salaries.

#### *e. Effects of Location on Incomes of Doctors*

It has already been stated that the provincial and regional differences in average total net incomes of the various categories of physicians tend to be less pronounced than the differences in incomes of the same categories of physicians, classified by the size of community in which their practice is located. It appears that the size of community has a greater influence on doctors' incomes than the province or region in which the practice is located. It may be argued,

TABLE 6-7  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS, BY TOTAL NET INCOME RANGE  
AND TYPE OF MAJOR WORK, CANADA, 1960<sup>1</sup>

Average Income Group and Per cent Distribution	Private Practice		Interns and Residents	Hospital Staff	Research and Teaching	Public Health	Indus- trial & Not Medicine Stated	Total Report- ing
	General	Special- ist						
\$5,000 or Less - Number Reporting . . . .	222	184	691	25	59	21	6	1,237
Per cent of Count by Income . . . . .	18	15	56	2	5	2	-	
Per cent of Count by Practice . . . . .	11	8	90	10	23	8	7	
\$5,001 - \$10,000 - Number Reporting . .	515	328	64	71	69	98	19	1,224
Per cent of Count by Income . . . . .	42	27	5	6	6	8	2	
Per cent of Count by Practice . . . . .	27	14	8	27	27	38	21	
\$10,001 - \$15,000 - Number Reporting . .	517	521	9	98	69	111	38	1,444
Per cent of Count by Income . . . . .	36	36	1	7	5	8	3	
Per cent of Count by Practice . . . . .	27	22	1	37	27	43	42	
\$15,001 - \$20,000 - Number Reporting . .	332	492	2	33	44	22	19	984
Per cent of Count by Income . . . . .	34	50	-	3	4	2	2	
Per cent of Count by Practice . . . . .	17	21	-	13	17	9	21	
\$20,001 - \$25,000 - Number Reporting . .	180	342	2	22	12	3	6	587
Per cent of Count by Income . . . . .	31	58	-	4	2	1	1	
Per cent of Count by Practice . . . . .	9	15	-	8	5	1	7	
Over \$25,000 - Number Reporting . . . . .	174	491	-	14	3	1	2	703
Per cent of Count by Income . . . . .	25	70	-	2	-	-	-	
Per cent of Count by Practice . . . . .	9	21	-	5	1	-	2	
Total . . . . .	1,940	2,358	768	263	256	256	90	6,179

<sup>1</sup> Excludes partnership or group medical practice.  
Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.



therefore, that the geographic mobility of physicians between provinces and regions has a levelling-off effect on physicians' incomes throughout the country. Even more important in this levelling-off process is the choice of province by the new medical registrants.

There is less geographic mobility of doctors between various sizes of community once a physician has chosen his location. It is, of course, true that with urbanization physicians have concentrated their practices in urban areas. There are some practical deterrents against a movement from one locality to another. It has been suggested that: "The uncertainties attached to beginning anew elsewhere, the capital needed to cover living expenses during the period of adjustment, and the direct costs of moving combine with inertia and habit to keep professional men from moving to new and possibly more advantageous locations. These obstacles are especially serious for men in independent practice because of the capital value represented by an established practice, and the inevitably low level of earnings during the initial period in a new location."<sup>1</sup> Besides, lower incomes are characteristic of the older physicians who, for social and psychological reasons, do not move to a new community, and of the younger doctors who, for economic reasons, are often unable to move. On the other hand, physicians with ten to twenty years' experience and earning higher incomes, have less incentive to change a place of practice.

Appendix 6-7 shows average total net income from medical practice and salaried appointment of active civilian physicians, by type of major work in which they were engaged in 1960 and by the size of community in which their practices were located, for regions and the country as a whole. The same data for Canada are shown in Table 6-8.

An examination of the appendix and table indicates that in practically all regions of the country the incomes of general practitioners and specialists located in rural areas were lower compared with those in urban areas. It also appears that the professional incomes of general practitioners in middle-sized (10,000 to 100,000 population) centres were higher than in very large cities. In part this can be explained by the fact that greater health facilities in large cities attract more physicians, and particularly, the younger ones. As for the specialists in private practice, their average total net income appears to increase consistently with the size of community.

The differences in average income due to the size of community in which practice is located may also be explained by higher costs of living in larger cities as compared with rural and semi-rural areas. Physicians' incomes are also likely to be affected by the level of incomes of their patients. In general, wages and salaries in larger centres tend to be higher than in smaller cities. In fact, higher incomes of people in larger centres account, in part, for higher incomes of physicians located in the same centres. In the absence of inter-community geographic mobility of physicians, higher incomes will not lead to an influx of practitioners that would reduce incomes.

<sup>1</sup> Friedman, Milton and Kuznets, Simon, *op. cit.*, pp. 175-176.

## TOTAL 6-8

AVERAGE TOTAL NET INCOME FROM MEDICAL PRACTICE AND SALARIED  
 APPOINTMENT OF ACTIVE CIVILIAN PHYSICIANS, BY TYPE OF MAJOR  
 WORK IN WHICH ENGAGED IN 1960 AND SIZE OF COMMUNITY  
 IN WHICH LOCATED, CANADA<sup>1</sup>

Type of Major Work	Average Net Income and Size of Community				
	Canada	Rural Areas	Urban Areas		
			Less than 10,000 Population	10,000— 100,000 Population	Over 100,000 Population
	\$	\$	\$	\$	\$
Private Practice:					
General .....	13,750	12,350	14,020	15,540	13,280
Specialist .....	18,560	13,420	14,030	18,710	18,990
Internship:					
Junior .....	1,680	2,780	1,830	1,640	1,700
Senior .....	2,890	2,420	6,830	3,280	2,790
Hospital Staff:					
Specialist .....	13,380	9,860	8,740	15,110	13,510
Other .....	11,330	4,300	7,710	10,940	12,200
Research .....	7,920	14,250	15,000	6,070	8,000
Teaching .....	13,250	8,280	—	13,350	13,440
Public Health .....	10,640	10,180	8,130	9,870	11,550
Industrial Medicine .....	13,110	12,240	11,410	14,850	13,050
Other .....	13,260	9,640	12,220	12,140	14,190
Not Stated .....	14,800	1,160	8,120	24,790	15,280

<sup>1</sup> Average net income excludes income from other professional activities. These data exclude partnership or group practice.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

In case of interns, residents and physicians engaged in medical research and teaching, the variability of incomes shows a less consistent relation to size of community. This is due to the fact that their income, being based on a salary system, is largely independent of the community they live in. The same observation applies to physicians working in the public health field. The incomes of specialists working in hospitals are higher in middle-sized centres than either in smaller or in larger cities. The incomes of non-specialists also working in hospitals appear to increase consistently with the size of community.

Appendix 6-8 indicates number and per cent distribution of general practitioners and specialists in solo private practice in rural and urban areas by total net income classes for regions and Canada. The same data for the country as a whole are shown in Table 6-9.

TABLE 6-9

NUMBER AND PER CENT DISTRIBUTION OF GENERAL PRACTITIONERS  
AND SPECIALISTS IN SOLO PRIVATE PRACTICE IN RURAL AND  
URBAN AREAS, BY TOTAL NET INCOME RANGE, CANADA, 1960

Average Income Range	General Practitioner		Specialist	
	Rural	Urban	Rural	Urban
<i>\$5,000 and less</i>				
Number reporting .....	55	161	3	110
Per cent of total reporting .....	13	11	8	6
<i>\$5,001 - 10,000</i>				
Number reporting .....	125	370	11	218
Per cent of total reporting .....	30	25	28	12
<i>\$10,001 - 15,000</i>				
Number reporting .....	121	378	11	329
Per cent of total reporting .....	29	26	28	18
<i>\$15,001 - 20,000</i>				
Number reporting .....	68	257	8	378
Per cent of total reporting .....	15	18	21	21
<i>\$20,001 - 25,000</i>				
Number reporting .....	24	153	2	301
Per cent of total reporting .....	6	11	5	17
<i>\$25,001 and over</i>				
Number reporting .....	30	138	4	466
Per cent of total reporting .....	7	9	10	26
Total number reporting .....	423	1,457	39	1,802

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

Of the total 423 reporting general practitioners practising in rural areas almost three-quarters earned \$15,000 or less compared with less than two-thirds of the total of 1,457 reporting general practitioners located in urban areas. One-fifth of the latter physicians had a total net income above \$20,000 compared with only one-seventh of the general practitioners practising in rural areas. In the Province of Quebec 84.0 per cent of the general practitioners in rural areas earned \$15,000 or less.

A very small proportion of the reporting specialists were practising in rural areas and, therefore, no conclusions can be drawn from these limited data. But of the total 1,802 reporting specialists located in urban areas only one-third earned \$15,000 or less while a little more than two-fifths had a total net income above \$20,000.

TABLE 6-10

AVERAGE TOTAL NET INCOME OF ACTIVE CIVILIAN PHYSICIANS IN PRIVATE PRACTICE, BY TYPE OF MAJOR WORK IN WHICH ENGAGED DURING 1960 AND LENGTH OF EXPERIENCE IN PRIVATE PRACTICE, CANADA<sup>1</sup>

Type of Major Work and Years in Private Practice	Number Reporting	Average Net Income
		\$
<i>General</i>		
Less than 5 .....	278	10,840
5 - 9 .....	424	15,450
10 - 14 .....	290	15,870
15 - 19 .....	233	15,830
20 - 24 .....	141	15,640
25 - 29 .....	153	15,910
30 - 34 .....	146	11,400
35 - 39 .....	89	11,130
40 and Over .....	141	7,980
Not Stated .....	22	14,330
Total and Average .....	1,917	13,870
<i>Specialist</i>		
Less than 5 .....	275	12,910
5 - 9 .....	409	20,570
10 - 14 .....	386	24,560
15 - 19 .....	221	24,470
20 - 24 .....	122	21,390
25 - 29 .....	155	21,090
30 - 34 .....	109	20,490
35 - 39 .....	77	17,600
40 and Over .....	77	12,930
Not Stated .....	35	16,290
Total and Average .....	1,866	20,300

<sup>1</sup> Excludes partnership or group practice.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

#### f. Pattern of Income and Years in Practice

After spending many years in training, physicians and particularly specialists begin to earn relatively late in life; their highest lifetime earnings are received in a comparatively short period after training. The early years of their professional activities are characterized by relatively low earnings. This is due to the fact that some years usually elapse before a doctor builds up his practice, acquires experience and reputation. After this initial period he probably can charge higher fees and will, no doubt, increase the number of his patients. The upper limits to his earnings are determined by the number of patients he can handle, the size of the community he serves, the competition of other physicians and, above all, his age. Modern medicine demands extensive and up-to-date knowledge as well as physical dexterity and skill and, therefore, the physicians in the prime of professional life are at an advantage. Consequently, after a brief

interlude of low earnings, their remuneration rises rapidly and tends to remain level for a number of years and then gradually declines.

In larger communities, where the patients have a choice of doctors, a young physician may appeal to some because of a presumption that he has the latest medical education and knowledge; a middle-aged doctor may attract other patients because of his experience and an older one because of his established reputation. Thus, "the relative income status of physicians in varying practice periods depends on the relative strength of these motives; the general preference for middle-aged men leads to their receiving higher income".<sup>1</sup>

Appendix 6-9 illustrates average total net income of general practitioners and specialists in private practice, by years of experience, for regions and Canada. The patterns of income and years in practice for these two categories of doctors for the country as a whole are shown in Table 6-10.

It appears from this table that the pattern of income and years in practice tend to vary according to whether a physician is a general practitioner or specialist. During the initial period of practice of less than five years, average incomes of these two categories of physicians differed by only \$2,070, being \$10,840 and \$12,910 respectively. After this period, however, the average incomes diverge considerably and the difference amounted to over \$8,000 at the peak of earning. The rise of \$7,660 in average income of a specialist during the next five years in practice was proportionately greater than the \$4,610 in the average income of a general practitioner. But, the general practitioners reached their peak of earnings only after five years in practice and maintained it for the next twenty-five years. The specialists on the other hand reached their peak after ten years and sustained it for only the next ten years.

On the assumption that a general practitioner begins to practice around the age of 25, it can be said that he will maintain his peak of earnings until the age of approximately 55 years, while a specialist begins to practice around the age of 30 and will maintain his peak of income until the age of approximately 50 years. However, it is of interest to note that a specialist continues to earn more than a general practitioner to the very end of his active medical practice.

Appendices 6-10 and 6-11 show respectively average total net income of specialists in private practice and of those not in private practice, by specialty practised and years of experience, for the country as a whole.

Table 6-11 shows the patterns of income and years of experience of salaried physicians by type of major work.

The sample basis of Table 6-11 is perhaps too small to draw any definite conclusion. It appears, however, that average net income of each category of salaried physicians increased gradually and steadily with the length of experience though less rapidly than that of general practitioners and specialists in private practice.

<sup>1</sup> *Ibid.*, p. 256.

TABLE 6-11  
AVERAGE TOTAL NET INCOME OF SALARIED PHYSICIANS BY TYPE OF MAJOR WORK  
IN WHICH ENGAGED DURING 1960 AND YEARS OF EXPERIENCE, CANADA

Type of Major Work	Years of Experience					
	0-4		5-9		10-14	
	Number Reporting	Average Net Income	Number Reporting	Average Net Income	Number Reporting	Average Net Income
<i>Internship:</i>		\$		\$		\$
	138	1,680	4	3,480	2	800
	399	3,010	165	3,650	28	4,410
<i>Hospital Staff:</i>			45			
	6	4,670		11,080	40	12,340
	4	4,980	11	8,040	19	11,500
<i>Research</i>	38	4,550	39	7,050	33	10,410
			17	11,870	14	13,180
	9	3,830				
<i>Teaching</i>	10	7,240	33	10,820	31	9,350
			8	11,650	10	12,030
	5	9,270				
<i>Public Health</i>	20	5,360	34	11,190	26	14,510
<i>Industrial Medicine</i>						
<i>Other</i>						

TABLE 6-11 (Concl.)

Type of Major Work	Years of Experience									
	20-24		25-29		30-34		35-39		40 and over	
	Number Reporting	Average Net Income	Number Reporting	Average Net Income	Number Reporting	Average Net Income	Number Reporting	Average Net Income	Number Reporting	Average Net Income
<i>Internship:</i>		\$		\$		\$		\$		\$
Junior.....	—	—	—	—	—	—	—	—	—	—
Senior.....	4	12,620	2	8,900	1	3,900	—	—	—	—
<i>Hospital Staff:</i>										
Specialist.....	25	16,270	16	16,680	12	12,030	4	9,370	3	18,570
Other.....	7	12,440	11	14,410	7	11,560	6	12,400	3	11,500
<i>Research</i> .....	11	13,020	6	14,330	—	—	2	15,150	6	12,470
<i>Teaching</i> .....	10	18,400	17	16,240	9	19,340	2	10,930	4	11,070
<i>Public Health</i> .....	29	11,580	41	11,060	25	11,840	26	12,000	11	10,910
<i>Industrial Medicine</i> .....	22	17,020	19	10,920	6	10,890	8	14,930	2	13,270
<i>Other</i> .....	30	14,810	23	15,700	23	13,640	23	14,220	9	7,460

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.



### g. *Income of Specialists*

The technical and economic reasons for a rapid extension of specialization in medicine during the last few decades and the geographic distribution of specialists have already been discussed in Chapter IV.

The higher financial remunerations of specialists provide an economic incentive for this trend towards specialization to continue in the future. The specialists earn a higher average income than general practitioners because they tend to concentrate in larger cities, possess higher qualifications and skills and begin their active professional career a few years later than general practitioners.

Appendix 6-12 shows average total net income of specialists in private and non-private practice, by specialty practised, for regions and Canada. Table 6-12 illustrates the income of the full-time specialists in various branches of medical practice, private and non-private, who reported in this survey.

TABLE 6-12  
AVERAGE TOTAL NET INCOME OF CIVILIAN ACTIVE PHYSICIANS  
IN SPECIALIST WORK, BY SPECIALTY PRACTISED AND PRIVATE  
AND NON-PRIVATE PRACTICE, CANADA, 1960<sup>1</sup>

Specialty Practised	Private Practice		Not in Private Practice	
	Number Reporting	Average Net Income	Number Reporting	Average Net Income
		\$		\$
Anaesthesia .....	139	16,600	21	9,600
Dermatology and Syphilology .....	38	16,500	—	—
General Surgery .....	410	20,200	18	6,980
Internal Medicine and Tuberculosis.....	266	18,540	46	11,860
Neurology and Psychiatry.....	125	18,870	91	10,970
Neurosurgery.....	21	25,040	1	5,000
Obstetrics and Gynaecology.....	227	20,770	4	7,630
Orthopaedic Surgery.....	52	23,100	1	4,000
Ophthalmology and Otolaryngology.....	163	24,190	8	8,140
Paediatrics .....	158	17,810	13	9,340
Pathology and Bacteriology .....	14	19,250	88	14,480
Plastic Surgery.....	13	25,300	3	2,830
Diagnostic and Therapeutic Radiology <sup>2</sup> ...	42	24,260	59	16,820
Other and Not Stated <sup>3</sup> .....	198	22,810	127	13,720
Total and Average .....	1,866	20,280	480	12,740

<sup>1</sup> Excludes partnership or group practice.

<sup>2</sup> Includes 17 doctors in Therapeutic Radiology in private practice with an average total net income of \$31,520.

<sup>3</sup> Includes such specialties as Physical Medicine and Rehabilitation, Public Health, Thoracic Surgery, Urology (50 doctors reporting in private practice with an average total net income of \$29,900), Industrial Medicine, Allergy, Cardiology, Cardiovascular Diseases, Gastroenterology, Haematology, Proctology and Biochemistry.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

Table 6-12 shows that the incomes of specialists in non-private practice were, in every specialty practised, lower than the incomes of specialists in private practice.

The highest earnings of specialists in private practice were in the following specialties: therapeutic radiology (\$31,520), urology (\$29,900), thoracic surgery (\$25,960), plastic surgery (\$25,330), neuro-surgery (\$25,060), and ophthalmology and otolaryngology (\$24,190).

#### 4. Operating Expenditures and Capital Costs of Medical Practice

On its survey of the Economics of Medical Practice, the Commission received over 4,200 usable replies concerning annual operation expenditures incurred during 1960 by general practitioners and specialists engaged in solo medical practice and over 1,000 usable replies from physicians practising in medical groups. As in the case of replies dealing with earnings, not all replies concerning operating expenditures could be used in the different parts of the subsequent analysis thus reducing the effective response rate for various sections of the analysis of annual operating expenditures of medical practice in Canada. This rate is shown in Table 6-13.

TABLE 6-13  
PER CENT RATE OF RESPONSE TO 1962 QUESTIONNAIRE ON  
ANNUAL OPERATING EXPENDITURES INCURRED BY ACTIVE  
CIVILIAN PHYSICIANS IN 1960, FOR REGIONS IN CANADA

Region	Physicians, 1962		Questionnaire Response						
	Number	Per Cent	Number of Respondents			Per Cent Rate of Response		Per Cent of Canada	
			Not in Group Practice	In Group Practice	Total	Not in Group Practice	Total	Not in Group Practice	Total
Atlantic Provinces . . . . .	1,574	7.3	341	75	416	21.6	26.4	8.0	7.9
Quebec . . . . .	6,067	28.3	1,022	50	1,072	16.8	17.7	24.3	20.3
Ontario . . . . .	8,120	37.9	1,680	309	1,989	20.7	24.5	39.9	37.6
Prairie Provinces . . . . .	3,428	16.0	521	433	954	15.2	27.8	12.3	18.1
British Columbia . . . . .	2,245	10.5	450	203	653	20.0	29.1	10.7	12.3
Not Stated . . . . .	—	—	199	—	199	—	—	4.8	3.8
	21,434	100.0	4,213	1,070	5,283	19.7	24.5	100.0	100.0

Source: *Directory of Canadian Mailings Limited*, 1962, and Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

The survey data may be considered as fairly representative because the percentage distribution of respondents, by region, is within reasonable limits in agreement with the actual distribution of physicians in Canada by region. The noticeable exception is that of Quebec. The response rate of this province is the lowest with only about one-sixth of the physicians replying to this part of the Commission's questionnaire, while the remaining regions provided usable replies concerning doctors operating expenditures to the extent to one-fifth or more of their actual number of physicians.

A breakdown of reporting physicians between those in group medical practice and those in solo medical practice could not be made for all sections of the analysis of operating expenditures because of the difficulties in the interpretation of composite returns supplied by individual doctors on behalf of partnerships or groups with which they were associated and, therefore, individual doctor's expenditures could not be determined in all cases. Consequently, only a partial comparison is made of operating expenditures of physicians in group medical practice with those in solo medical practice.

All physicians were asked to indicate their annual operating expenditures on specific items in accordance with their bookkeeping records and to provide total current operating expenses incurred in 1960.

#### *a. Operating Expenditures of General Practitioners and Specialists*

Appendix 6-13 indicates average annual total operating expenditures of general practitioners in solo private practice and average expenditures on specific items incurred by reporting physicians in 1960 for regions and Canada. The average annual total operating expenditures of general practitioners, in the country as a whole, amounted to \$7,450. They were \$6,560 in the Province of Quebec, \$6,700 in the Atlantic Provinces, \$7,080 in the Prairie Provinces, while in British Columbia and Ontario they were highest being \$8,510 and \$8,060 respectively. The principal factor accounting for the lower operating expenditures incurred by general practitioners in the Province of Quebec and the Atlantic Provinces were the relatively smaller expenses on the paramedical and clerical staff. These expenses accounted for 5.5 per cent in Quebec and 11.0 per cent in the Atlantic Provinces of the average annual total operating expenditures as compared with 27.2 per cent in British Columbia and 19.1 per cent in Ontario. Wages paid to clerical staff per physician were somewhat lower in Quebec and the Atlantic Provinces as compared with those in British Columbia and Ontario. Expenses connected with office rental were also considerably lower in the two former regions as compared with those in British Columbia and Ontario.

Table 6-14 indicates average annual total operating expenditures of active civilian physicians, by items of expenditures and by type of major work in which the reporting physicians were engaged in 1960 for the country as a whole.

TABLE 6-14  
AVERAGE ANNUAL OPERATING EXPENDITURES INCURRED BY GENERAL PRACTITIONERS AND SPECIALISTS IN SOLO PRIVATE PRACTICE AND BY PHYSICIANS IN GROUP PRACTICE, BY ITEMS OF EXPENDITURES, CANADA, 1960

Items of Operating Expenditures	General Practitioners Response Count-1,940			Specialists Response Count-1,889			Group Medical Practice Response Count-1,070		
	Number Report- ing	Average Operat- ing Expend- iture	Per Cent of Total Average Expend- iture	Number Report- ing	Average Operat- ing Expend- iture	Per Cent of Total Average Expend- iture	Number Report- ing	Average Operat- ing Expend- iture	Per Cent of Total Average Expend- iture
Medical, surgical supplies and services . . .	1,704	\$ 1,610	18.9	1,458	\$ 1,020	10.0	1,070	\$ 1,250	11.0
Salaries or Wages to staff:									
Nursing . . . . .	488	2,470	8.3	471	2,610	8.2	607	1,740	8.7
Technical . . . . .	85	1,850	1.1	109	2,260	1.7	443	1,520	5.6
Clerical and other . . . . .	666	1,580	7.3	813	1,970	10.8	658	2,540	13.8
Assistant's fees . . . . .	493	980	3.4	428	1,150	3.3	514	2,790	11.8
Office rental . . . . .	1,357	1,170	11.0	1,557	1,520	15.8	1,028	1,930	16.3
Depreciation allowance:									
Medical equipment . . . . .	1,125	350	2.7	1,015	360	2.4	503	290	1.2
Office furniture . . . . .	954	240	1.6	924	310	1.9	396	190	0.6
Automobile . . . . .	1,579	730	8.1	1,504	710	7.2	n.a.	n.a.	n.a.
Building . . . . .	615	620	2.7	278	690	1.3	140	340	0.4
Automobile operating expenses . . . . .	1,879	920	11.9	1,830	880	10.8	n.a.	n.a.	n.a.
Interest on borrowed capital . . . . .	739	390	2.0	597	390	1.5	n.a.	n.a.	n.a.
All other expenses <sup>1</sup> . . . . .	1,913	1,590	21.0	1,862	2,010	25.1	1,070	3,470	30.6
Total average expenditure <sup>2</sup> . . . . .		\$7,450				\$7,890			\$11,350

<sup>1</sup> Residual expenditure, convention expenses, association fees, miscellaneous office expenses, etc.  
<sup>2</sup> Total average expenditure was obtained by dividing total operating expenditures by total response count.  
Source: Royal Commission on Health Services, Questionnaire on the Economics of Medical Practice, 1962.

Table 6-14 indicates a small difference of about \$400 in the average annual total operating expenditures incurred by general practitioners and specialists being \$7,450 and \$7,890 respectively. There are, however, some differences in the patterns of operating expenditures between these two categories of physicians. Thus, for instance, general practitioners spent proportionately more on the medical and surgical supplies and services and relatively less on paramedical and clerical staff as well as on office rental as compared with similar operating expenditures made by specialists. Average expenditure on technical and clerical staff per reporting general practitioner was lower than that made by reporting specialist, reflecting the demand for less qualified personnel on the part of general practitioners. Average office rental expense per reporting general practitioner was also lower than that of specialist, reflecting a general practitioner's requirement for a smaller office space.

Appendix 6-14 illustrates average expenditure on specific items per reporting specialist physician and shows the average annual total operating expenditures for certain categories of specialists. The latter data are shown in Table 6-15.

TABLE 6-15  
AVERAGE ANNUAL TOTAL OPERATING EXPENDITURES OF SPECIALISTS BY  
SPECIALTY PRACTISED, CANADA, 1960<sup>1</sup>

Specialty Practised	Average Total Operating Expenditures <sup>2</sup>
	\$
Anaesthesia .....	4,400
Dermatology and syphilology .....	8,240
General surgery .....	7,680
Internal medicine and tuberculosis .....	7,690
Neurology and psychiatry .....	5,950
Neurosurgery .....	7,460
Obstetrics and gynaecology .....	8,560
Orthopaedic surgery .....	8,950
Ophthalmology and otolaryngology .....	9,930
Paediatrics .....	8,130
Pathology and bacteriology .....	6,140
Diagnostic and therapeutic radiology .....	11,610
Urology .....	9,750
Other and not stated <sup>3</sup> .....	8,200
All specialties .....	7,890

<sup>1</sup> Excludes partnership or group practice.

<sup>2</sup> Average annual total operating expenditures were obtained by dividing total operating expenditures by response count.

<sup>3</sup> Includes such specialties as allergy, cardiology, cardiovascular diseases, gastroenterology, proctology and biochemistry, physical medicine and rehabilitation, plastic surgery, public health, thoracic surgery and industrial medicine.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

Relatively high average annual total operating expenditures of specialists practising in diagnostic and therapeutic radiology, ophthalmology and otolaryngology and urology were due to proportionately higher expenses incurred by these specialists on medical supplies and services and on paramedical and clerical staff.

Table 6-16 shows the reported total practice expenditures per doctor in group medical practice, by size of group, for Canada in 1960.

**TABLE 6-16**  
REPORTED TOTAL PRACTICE EXPENDITURES PER DOCTOR, BY SIZE OF GROUP,  
FOR CANADA, 1960

Group Size	Number of Practices	Number of Doctors	Mean Reported Expenditures Per Doctor	Median Reported Expenditures Per Doctor	Range
No. of doctors			\$	\$	\$
3	96	288	9,190	8,550	2,370 - 32,470
4	31	124	10,480	8,040	1,290 - 39,810
5	23	115	12,750	8,300	5,500 - 36,230
6	10	60	11,130	10,850	5,520 - 24,500
7	10	70	12,970	11,930	7,430 - 23,570
8	2	16	7,410	7,410	5,810 - 9,010
9	3	27	10,430	9,700	6,640 - 14,950
10	3	30	14,280	14,770	12,930 - 15,140
10+	17	340	13,120	14,490	8,570 - 22,830
All group sizes ...	195	1,070	11,350	10,810	1,290 - 39,810

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

The figures used to prepare this table were taken from the "total current operating expenses" reported in a composite return supplied by an individual doctor on behalf of the medical group with which he was associated. There were reasons to believe that automobile operating expenses were not included in a number of replies because of differing methods of allocating such costs of medical practice. On the other hand, in other cases, assistant's fees reported obviously included salaries paid for physicians regularly employed by a medical group. In view of these discrepancies it is difficult to make a really valid comparative analysis of operating expenditures and relative economic efficiency of physicians in group practices and of those engaged in solo medical practice.

Tables 6-14 and 6-16 show that the average annual total operating expenditures of physicians in group practice were higher than those of solo specialists. This was mainly due to proportionately higher expenses on para-medical and clerical staff as well as on office rental incurred by physicians in group practice as compared with the similar expenditures made by specialists. Average absolute expenditures on nursing and technical staff per reporting physician in group

TABLE 6-17  
AVERAGE ANNUAL OPERATING EXPENDITURES INCURRED BY GENERAL PRACTITIONERS IN SOLO MEDICAL PRACTICE,  
BY ITEM OF EXPENDITURES AND SIZE OF COMMUNITY IN WHICH LOCATED, CANADA, 1960<sup>1</sup>

Items of Operating Expenditures	Rural Areas			Urban Areas					
	Response Count-430			Less than 10,000 Population Response Count-352			10,000 - 100,000 Response Count-440		
	Num- ber Report- ing	Average Operat- ing Expend- iture	Per Cent of Total Average Expend- iture	Num- ber Report- ing	Average Operat- ing Expend- iture	Per Cent of Total Average Expend- iture	Num- ber Report- ing	Average Operat- ing Expend- iture	Per Cent of Total Average Expend- iture
Medical, surgical supplies and services .....	377	\$ 2,150	27.1	309	\$ 1,970	23.7	379	\$ 1,540	16.4
Salaries or wages to staff:									
Nursing .....	79	2,210	5.9	72	2,260	6.3	123	2,820	9.7
Technical .....	19	1,790	1.2	16	1,280	0.8	18	1,810	0.8
Clerical and other .....	124	1,330	5.5	118	1,620	7.4	171	1,710	8.5
Assistant's fees .....	95	950	3.0	101	1,100	4.4	124	1,170	4.1
Office rental .....	218	750	5.5	188	1,110	7.4	350	1,310	12.8
Depreciation allowance:									
Medical equipment .....	246	370	3.0	191	350	2.6	256	360	2.6
Office furniture .....	198	220	1.4	175	230	1.5	226	270	1.7
Automobile .....	350	820	9.7	283	760	8.3	351	720	7.0
Building .....	185	650	4.0	133	610	3.1	113	650	2.1
Automobile operating exp. ...	408	970	13.3	326	980	12.4	423	860	10.2
Interest on borrowed capital ..	168	380	2.2	125	420	2.1	191	390	2.1
All other expenses <sup>2</sup> .....	414	1,300	18.2	336	1,530	20.0	426	1,850	22.0
Total average expenditure <sup>3</sup> ..			\$6,930			\$7,310			\$8,130
									\$7,470

<sup>1</sup> Excludes physicians in partnership or group practice.

<sup>2</sup> Residual expenditure, convention expenses, association fees, miscellaneous office expenses, etc.

<sup>3</sup> Total average expenditure was obtained by dividing total operating expenditures by total response count.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.



practice were lower than those made by reporting specialists, probably, reflecting some economies in utilization of paramedical personnel employed by group medical practices.

*b. Operating Expenditures and Location of Practice*

Table 6-17 shows average annual operating expenditures incurred by general practitioners in solos medical practice according to size of community in which their practice was located.

Table 6-17 indicates only small differences in average annual operating expenditures of general practitioners whether located in rural or urban areas. There are, however, some differences in the pattern of expenditures. Thus, for example, average absolute operating expenditures and the percentage of average total expenditure on medical, surgical supplies and services decline consistently with the increasing size of community in which practice was located. This would suggest that a general practitioner in smaller localities, where there are fewer drug stores, distributes the required medical supplies. Salaries and wages paid by general practitioners to paramedical and clerical staff increase proportionately with the size of community of practice suggesting a greater use of auxiliary personnel by physicians in larger centres. It is also apparent from Table 6-17 that office rental expenses increase relatively and absolutely with the larger sizes of localities in which practice was located.

Appendix 6-15 indicates the number and percentage distribution of general practitioners and specialists engaged in solo private practice, by level of annual operating expenditures in 1960 and by rural and urban areas, for regions and Canada.

Table 6-18 summarizes the main data of this appendix for the country as a whole.

**TABLE 6-18**

NUMBER AND PERCENTAGE DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS IN SOLO PRIVATE PRACTICE, BY LEVEL OF ANNUAL TOTAL OPERATING EXPENDITURES AND RURAL AND URBAN AREAS, CANADA, 1960

Level of Operating Expenditures	General Practitioner				Specialist			
	Rural Areas		Urban Areas		Rural Areas		Urban Areas	
	Response Count	Per Cent	Response Count	Per Cent	Response Count	Per Cent	Response Count	Per Cent
Less than \$2,000 ...	26	6	43	3	3	9	71	4
\$ 2,001 - \$ 5,000 ..	127	30	387	26	8	24	387	21
\$ 5,001 - \$10,000 ..	178	41	684	46	17	50	852	46
\$10,001 - \$15,000 ..	70	16	250	17	5	15	355	19
\$15,001 - \$20,000 ..	22	5	63	4	1	3	96	5
\$20,001 and over	7	2	44	3	—	—	73	4
Total .....	430	100	1,471	100	34	100	1,834	100

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

Approximately three-quarters of reporting general practitioners and specialists located in rural areas or urban areas incurred \$10,000 or less operating expenditures in running their medical practices and approximately half of the reporting physicians were within \$5,001 to \$10,000 range.

*c. Employment of Paramedical and Clerical Staff*

Table 6-19 shows the number of paramedical and clerical staff employed by general practitioners and specialists in solo private practice and by physicians in group practice.

TABLE 6-19

EMPLOYMENT OF NURSING, TECHNICAL, CLERICAL AND OTHER STAFF  
BY GENERAL PRACTITIONERS AND SPECIALISTS IN SOLO PRIVATE  
PRACTICE AND BY PHYSICIANS IN GROUP PRACTICE, CANADA, 1960

Type of Major Work	Response Count	Staff			
		Nursing	Technical	Clerical and Other	Total
<i>General Practitioner</i> .....	1,940				
Number of staff .....		571	91	806	1,468
Mean number employed per doctor <sup>1</sup> .....		0.3	0.05	0.4	0.8
<i>Specialist</i> .....	1,889				
Number of staff .....		531	132	959	1,622
Mean number employed per doctor <sup>1</sup> .....		0.3	0.07	0.5	0.8
<i>Group Practice</i> .....	953				
Number of staff .....		478	272	744	1,494
Mean number employed per doctor <sup>1</sup> .....		0.5	0.3	0.8	1.6

<sup>1</sup> Number of staff employed divided by response count.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

It is evident from this table that physicians in group medical practice rely to a larger extent on the services of the auxiliary personnel than do general practitioners and specialists. For each doctor in solo private practice there was nearly one person assisting him in dispensing medical services, while for each doctor engaged in medical group practice there were one and a half persons. This confirms the previous finding that physicians in group practice incurred relatively greater expense on paramedical and clerical staff.

Appendix 6-16 illustrates the number and mean number of auxiliary staff employed by general practitioners by various sizes of community in which their

practice was located. It appears that general practitioners in larger centres rely to a greater extent on such staff than those located in rural areas and small cities.

Appendix 6-17 indicates mean number of auxiliary staff employed per specialist by specialty practised, for Canada as a whole. Specialists in the fields of orthopaedic surgery, ophthalmology and otolaryngology, paediatrics and diagnostic and therapeutic radiology employed one person per doctor.

#### *d. Capital Costs Involved in Medical Practice*

Due to technical development in modern medicine large capital investments became necessary. Such investments have been made partly by physicians themselves, if they are engaged in solo practice, partly by commercial organizations, which supply buildings, offices, laboratories to physicians on a commercial basis, and partly by religious and other non-profit organizations, which provide hospital, clinical and laboratory facilities to many private doctors.

Table 6-20 illustrates the average depreciated value of capital assets of general practitioners and specialists in solo private practice and of physicians in group practice at the end of 1960 for the country as a whole.

**TABLE 6-20**  
AVERAGE DEPRECIATED VALUE OF CAPITAL ASSETS USED IN  
MEDICAL PRACTICE AT END OF 1960, CANADA

Type of Major Work	Number Reporting	Average Depreciated Value of Assets per Reporting Physician
General practitioner .....	1,070	\$ 8,840
Specialist .....	1,003	6,160
Group practice .....	683	4,460

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

It is of interest to note relatively higher average depreciated value of capital assets per reporting general practitioner than that of the specialists and of physicians practising in group practice. Table 6-20 suggests that in group practice there is an economy in sharing equipment and buildings among physicians.

Table 6-21 shows the average depreciated value of capital assets of general practitioners by size of centre in which practice was located.

Actually there appear to be no large differences in the average capital investments made by general practitioners because of location of practice.

Appendix 6-18 shows average depreciated value of capital assets of specialists in solo private practice, by specialty practised, at the end of 1960 for

TABLE 6-21

AVERAGE DEPRECIATED VALUE OF CAPITAL ASSETS OF GENERAL PRACTITIONERS IN SOLO PRIVATE PRACTICE AT END OF 1960, BY SIZE OF COMMUNITY IN WHICH LOCATED, CANADA

Size of Community	Number Reporting	Average Depreciated Value of Capital Assets
Rural .....	265	\$ 8,920
Urban, less than 10,000 .....	204	9,530
Urban 10,000 - 100,000 .....	252	9,160
Urban over 100,000 .....	331	8,150

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

the country as a whole. The largest capital investments were made by specialists in the following fields: diagnostic and therapeutic radiology, anaesthesia, obstetrics and gynaecology, general surgery and urology.

Table 6-22 indicates the average annual capital expenditure made by physicians in 1960.

TABLE 6-22

AVERAGE ANNUAL CAPITAL EXPENDITURE ON PURCHASE OF NEW BUILDINGS AND/OR EQUIPMENT BY GENERAL PRACTITIONERS AND SPECIALISTS IN SOLO PRIVATE PRACTICE AND BY PHYSICIANS IN GROUP PRACTICE, CANADA, 1960

Type of Major Work	Response Count	Number Reporting	Average Expenditure per Doctor <sup>1</sup>	Average Expenditure per Reporting Doctor
General practitioner .....	2,102	640	\$ 930	\$ 3,060
Specialist .....	2,080	504	670	2,750
Group practice .....	1,070	468	720	1,640

<sup>1</sup> Total capital expenditures reported divided by response count.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

This table confirms the previous finding that general practitioners were making the largest capital investments in operating their medical practice, while physicians in group practice were making the lowest capital expenditures. This, once again, suggests some economies in operating group practices.

## 5. Methods and Costs of Establishing Private Practice

This section is concerned with the methods and cost of establishing practice and source and amount of funds used to establish practice initially. The statistical data used in the subsequent analysis apply only to medical practices that were established since 1956.

**TABLE 6-23**  
**METHODS OF ESTABLISHING PRACTICE BY PHYSICIANS IN SOLO PRIVATE PRACTICE AND BY PHYSICIANS IN GROUP PRACTICE, BY TYPE OF MAJOR WORK AND SIZE OF COMMUNITY, CANADA, SINCE 1956**

Type of Major Work and Size of Community of Present Practice	Solo Private Practice				Group Medical Practice				Total
	Methods of Establishing Practice			Total	Methods of Establishing Practice				
	Taking over Practice	Establishing New Solo Practice	Starting Practice Under Contract With		Taking over Practice	Establishing New Solo Practice	Starting Practice Under Contract With		
			Com-munity Organi-zation					Partner-ship or Group	
<i>General Practitioner</i>									
Rural areas .....	29	42	3	3	10	3	—	25	38
Urban areas — under 10,000 population ..	18	28	1	—	5	3	4	30	42
10,000 — 100,000 .....	22	69	—	1	4	8	2	63	77
over 100,000 .....	21	86	—	5	1	14	—	39	54
Total .....	90	225	4	9	20	28	6	157	211
<i>Specialist</i>									
Rural areas .....	—	1	—	1	—	—	—	2	2
Urban areas — under 10,000 population ..	2	7	1	—	—	1	—	4	5
10,000 — 100,000 .....	6	84	2	3	1	7	—	41	49
over 100,000 .....	4	163	7	6	1	19	1	87	108
Total .....	12	255	10	10	2	27	1	134	164
<i>Total</i>									
Rural areas .....	29	43	3	4	10	3	—	27	40
Urban areas — under 10,000 population ..	20	35	2	—	5	4	4	34	47
10,000 — 100,000 .....	28	153	2	4	5	15	2	104	126
over 100,000 .....	25	249	7	11	2	33	1	126	162
Total .....	102	480	14	19	22	55	7	291	375

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

### a. *Methods of Establishing Practice*

Table 6-23 indicates the way general practitioners and specialists in solo and group private practice have started their practice.

Table 6-23 indicates that out of 615 reporting physicians, general and specialist, engaged in solo private practice in 1962, about 100 or 16.0 per cent have taken over existing practice, 480 or nearly 80.0 per cent have established new practice and only a very insignificant number of about 30 have started their practice under a contract with either community organizations, like municipality, industry, etc., or partnership or group practice. On the other hand, out of 375 reporting doctors, engaged in group practice in 1962, approximately 80.0 per cent have started their practice under the auspices of partnership or group.

It appears also that the tendency to move from solo practice to group practice is stronger than the opposite tendency. Out of 375 reporting physicians in group practice, 77 or 20.0 per cent gravitated from solo to group practice, while only 19 doctors or 3.0 per cent of the total 615 in solo practice in 1962 started their professional career under the auspices of group practice.

### b. *Costs of Establishing Practice*

Appendix 6-19 shows the average initial capital cost of establishing practice and additional net cost in subsequent years incurred by general practitioners and specialists in solo private practice, by item of expenditure and size of community, for the country as a whole, commencing in 1957. Table 6-24 summarizes the main data contained in this appendix.

TABLE 6-24

AVERAGE TOTAL INITIAL CAPITAL COST AND AVERAGE ADDITIONAL COST OF ESTABLISHING PRACTICE BY GENERAL PRACTITIONERS AND SPECIALISTS IN SOLO PRIVATE PRACTICE, BY SIZE OF COMMUNITY, CANADA, COMMENCING 1957<sup>1</sup>

Year of Practice	General Practitioner			Specialist		
	Rural Areas	Urban Areas Under 100,000 Population	Urban Areas 100,000 and over Population	Rural Areas	Urban Areas Under 100,000 Population	Urban Areas 100,000 and over Population
	\$	\$	\$	\$	\$	\$
First year . . . . .	5,530	5,740	5,540	—	5,030	4,030
Second year . . . . .	1,640	1,300	1,720	—	1,690	1,190
Third year . . . . .	1,040	1,220	2,150	—	900	1,290
Fourth year . . . . .	620	680	1,580	—	420	790
Fifth year . . . . .	340	250	380	—	530	410

<sup>1</sup> These averages were obtained by dividing total expenditures reported by total response count. Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice, 1962.

TABLE 6-25  
SOURCE AND AMOUNT OF FUNDS USED TO ESTABLISH PRACTICE INITIALLY BY GENERAL PRACTITIONERS AND SPECIALISTS IN PRIVATE PRACTICE BY SIZE OF LOCALITY, CANADA, 1957-1961

Type of Major Work and Source of Funds	Rural Areas			Urban Areas Under 100,000 Population			Urban Areas of 100,000 and Over Population		
	Total Re- sponse Count	Number Report- ing	Average (a) (b)	Total Re- sponse Count	Number Report- ing	Average (a) (b)	Total Re- sponse Count	Number Report- ing	Average (a) (b)
<i>General practitioner</i> .....	71	—	\$ —	121	—	\$ —	101	—	\$ —
Personal resources .....		36	2,582 1,309	—	64	3,453 1,826		73	2,841 2,053
Gift .....		2	800 23	—	5	1,210 50		11	1,645 179
Credit or loan from:									
Family or relatives .....		27	4,093 1,556	—	38	3,725 1,169		44	3,089 1,346
Bank .....		47	3,040 2,013	—	85	4,235 2,975		66	3,166 2,069
Other .....		26	4,362 1,597	—	36	4,690 1,395		20	4,124 817
Total average amount .....	—	—	— 6,498	—	—	7,415	—	—	6,464
<i>Specialist</i> .....		—	—	98	—	—	159	—	—
Personal resources .....		—	—	—	55	3,355 1,883		90	2,599 1,471
Gift .....		—	—	—	2	6,000 122		15	2,407 227
Credit or loan from:									
Family or relatives .....		—	—	—	31	3,539 1,119		68	4,611 1,972
Bank .....		—	—	—	73	4,083 3,041		87	3,156 1,727
Other .....		—	—	—	9	7,111 653		26	4,650 760
Total average amount .....	—	—	—	—	—	6,818	—	—	6,157

(a) This average was obtained by dividing total source amount of fund by number reporting.

(b) This average was obtained by dividing total source amount of fund by total response count.  
Source: Royal Commission on Health Services, Questionnaire on the Economics of Medical Practice, 1962.



Table 6-24 suggests that there are no special differences in initial and subsequent capital costs in establishing medical practice as between general practitioners and specialists. In general, the initial capital expenditure involved in starting a medical practice came to about \$5,000, in the second year of practice additional capital costs amounted to \$1,500 and it gradually declined to a few hundred dollars by the fifth year of practice.

There appear to be no special differences in capital costs, initial and subsequent, because of the various sizes of community in which practices were located.

*c. Financing the Opening of Practice*

Table 6-25 shows the source and amount of funds used to establish practice initially by general practitioners and specialists in private practice by size of community, for the country as a whole, during the years 1957-61.

It appears from Table 6-25 that approximately \$6,500 to \$7,500 were needed to establish a medical practice initially. This initial amount of funds needed was not perceptibly influenced by the size of community. Approximately three-quarters of the initial funds were obtained by way of a loan from relatives, bank or other sources. Personal financial resources accounted for the remaining quarter of the initial funds needed. A debt of about \$5,000 per physician in starting a practice does not seem to be particularly burdensome in view of the level of income indicated in the early part of this chapter.

## Evaluation of Supply and Demand for Physicians in Canada

### 1. Adequacy of Medical Manpower

"In the field of medical care, a shortage in personnel or in facilities is conceived of as the difference between the numbers available to render service and the numbers needed. The use of need as the standard of adequacy is common to all discussions of medical care, both technical and popular, and is adhered to with remarkable consistency."<sup>1</sup> There is almost universal agreement that adequate and good medical care should be available to all people, regardless of economic status. The care of the medically indigent attests to the validity of this general proposition.

Appraisal of medical manpower requirements, current and future, is a controversial subject because there is a wide range of premises which can be set forth with some degree of logic and acceptability as a basis for measuring the national physician requirement. Moreover, there is no theoretical framework for the analysis of medical manpower demand. The very concept of adequate medical care and hence adequate medical manpower does not mean any precisely defined quantity or quality because it is "... in a continuous state of flux varying with what is being achieved and what is generally thought to be available."<sup>2</sup> For these reasons there is no really definite and generally acceptable estimate of the current adequacy of doctors in Canada.

There is the "medical" approach to adequacy of medical care, i.e., a "conservative and reasonable standard which members of the medical profession regard as sufficient and appropriate".<sup>3</sup> According to this method, it is necessary to estimate the probable incidence of injuries and diseases for each age and sex group in the population and the quantity of services required for each category of sickness. This

<sup>1</sup> Klarman, Herbert E., "Requirements for Physicians, Economics of Medical Care," *The American Economic Review*, vol. XLI, No. 2, May 1951. Papers and Proceedings of the Sixty-third Annual Meeting of the American Economic Association, December 27-30, 1950, p. 633.

<sup>2</sup> Somers, H.M., and Somers, A.R., *op. cit.*, p. 138.

<sup>3</sup> Lee, Roger L., and Jones, Lewis Webster, *The Fundamentals of Good Medical Care*, Chicago: 1933, p. 111.

can be then translated into a medical manpower requirement. It has further been argued that "The need for medical care is a medical, not an economic concept... It can be defined only in terms of the physical conditions of the people and the capacities of the science and art of medicine to deal with them".<sup>1</sup>

In fact, however, economic considerations cannot be disregarded. Medical care, useful as it is, cannot by itself be the only object of consumption. Equally important are adequate nutrition, good housing, health education, etc., all of which make positive contributions to people's health. Economic allocation of resources is as essential in health and medical services as in other industries. Further, it may be argued that from the standpoint of national economic welfare, medical personnel and facilities cannot be, under the present conditions, given an absolute priority because our society needs more scientists, technicians and other highly skilled personnel. Thus, it would appear that to calculate adequacy of medical care and of medical manpower simply in terms of medical needs may not be entirely satisfactory. On the other hand, actual current utilization of medical personnel and facilities may be used as a basis of calculations, on the assumption that this utilization is determined by the economic capacity of a community. This does not mean, however, that a standard of need must be abandoned because "... the most practical method of ascertaining a standard of need today is to study the utilization experience of known populations who receive comprehensive medical services by paying moderate insurance premiums" and, if need is accepted as a standard, it "... implies a willingness on the part of physicians, hospitals, or the community to underwrite a level of demand corresponding to the standard of need".<sup>2</sup> Otherwise it would involve maladjustment in the allocation of resources.

Requirements for physicians are usually estimated on the basis of physicians to population at selected points of time. Apart from the difficulties of using the physician-population ratio discussed elsewhere, there is a question as to what do we know of the adequacy of medical manpower at any selected date? However, the estimates of shortages may be made using the provinces with the best physician-population ratios as a yardstick for the rest of the country. Naturally, if a system which will provide greater medical insurance coverage is introduced, or if physicians are subsidized in "under-doctored" regions and areas, a physician-population ratio which would have been adequate under present conditions would not be adequate under the changed circumstances.

The medical profession tends to make estimates of the shortages of doctors on the basis of counting communities capable economically of supporting more. However, if need is accepted as the basis for determining requirements for medical services, then the market mechanism cannot perform the test of adequacy of medical manpower because, as shown in previous chapters, there exist shortages of physicians in rural areas.

Other methods in evaluation adequacy of medical manpower include an intra-professional comparison of supply and of earnings, as well as of relative change in

<sup>1</sup> *Ibid.*

<sup>2</sup> Klarman, Herbert E., *op. cit.*, pp. 644-45.

physicians' earnings with those of gainfully employed people; a comparison of medical fees with consumers' price index; an analysis of the proportion of family expenditure made for the physicians' services to total of such expenditures, and, finally, personal medical care expenses may be analysed with respect to the aggregate consumer expenditures, and other aggregates of the national income accounts.

It has been suggested that if the standard of need for medical services (including preventive, diagnostic and therapeutic services) is accepted then it is best measured under these conditions: (1) services are comprehensive in scope; (2) they are available to a population; (3) they are freely used by patients; (4) total services are subject to over-all supervision by physicians; (5) the limit on total services rendered is set by the available medical resources that can be purchased at reasonable prices by a known outlay; and (6) the size of the outlay must be related to the economic capacity of the population served.<sup>1</sup>

## 2. First Approach – Physician-Population Ratios

Many numerical estimates of the need of physicians are framed in physician-population ratios as a measure of the medical manpower needed in proportion to the

TABLE 7-1  
ESTIMATED REQUIREMENTS FOR PHYSICIANS,  
FOR PROVINCES AND CANADA, 1961

Province	Number of Physicians 1961 <sup>1</sup>	Required Number of Physicians at National Physician- Population Ratio 1:857	Deficit or Surplus	Required Number of Physicians at Ratio 1:804 <sup>2</sup>	Deficit or Surplus
Newfoundland .....	230	535	- 305	570	- 340
Prince Edward Island .....	91	122	- 31	130	- 39
Nova Scotia .....	706	861	- 155	917	- 211
New Brunswick .....	455	699	- 244	744	- 289
Quebec .....	6,167	6,138	+ 29	6,541	- 374
Ontario .....	8,040	7,278	+ 762	7,755	+ 285
Manitoba .....	1,120	1,076	+ 44	1,146	- 26
Saskatchewan .....	951	1,080	- 129	1,151	- 200
Alberta .....	1,356	1,555	- 199	1,657	- 301
British Columbia .....	2,150	1,902	+ 248	2,026	+ 124
Yukon and Northwest Territories .....	24	44	- 20	47	- 23
Canada .....	21,290	21,290	±1,083	22,684	-1,394

<sup>1</sup> Census data.

<sup>2</sup> Average physician-population ratio of Quebec, Ontario, Manitoba and British Columbia, whose ratios were more favourable than the national ratio of 1:857.

<sup>1</sup> *Ibid.*, pp. 636-37.

size of the community. The physician-population ratio implies a static situation of demand and use of medical services. The present ratio may be considered as a minimum essential to maintain the health of the Canadian people although it does not make allowance for actual volume of services and it assumes a degree of homogeneity of both physicians and population, which, in fact, they do not possess.

Table 7-1 indicates the maldistribution of physicians in Canada and shows deficits in medical manpower as they existed in 1961.

It is clear that if the national physician-population ratio of 1:857 were to prevail throughout the whole country and thus an equitable distribution of medical manpower were to take place, approximately 5.0 per cent of the physicians would have to move from provinces in central Canada and British Columbia to the Atlantic Provinces, Saskatchewan and Alberta.

If the present pattern of distribution is allowed to continue, it is perhaps true that there will be a gradual improvement in some parts of the country but, in general, the gains will come in those provinces which already have a relatively advantageous physician-population ratio while the present shortage of doctors in less developed regions of Canada will continue as in the past. It should be obvious

TABLE 7-2  
PHYSICIAN-POPULATION RATIOS IN SELECTED COUNTRIES,  
1950 - 1962

Year	France <sup>1</sup>	Germany <sup>2</sup>	Italy <sup>3</sup>	United Kingdom <sup>3</sup>	United States <sup>4</sup>	Canada <sup>5</sup>
1950 .....	1:1,290	1:755	—	—	1:756	—
1951 .....	1:1,180	—	1:816	1:1,143	1:770	1:976
1952 .....	1:1,132	1:762	—	—	—	1:968
1953 .....	1:1,124	1:753	—	—	1:766	1:960
1954 .....	1:1,091	1:743	—	—	—	1:955
1955 .....	1:1,056	1:742	—	—	1:758	1:934
1956 .....	1:1,034	1:733	1:691	—	—	1:928
1957 .....	1:1,018	1:729	—	—	1:755	1:920
1958 .....	1:1,004	1:734	—	1:1,035	—	1:905
1959 .....	1:1,003	1:725	—	—	1:749	1:893
1960 .....	—	1:715	1:608	1: 932	1:754	1:879
1961 .....	—	—	—	—	—	1:857
1962 .....	—	—	—	—	1:736	1:866

Sources: <sup>1</sup> Statistical Year Books of France.

<sup>2</sup> Excluding Eastern Germany and Berlin, Statistical Year Books of Germany.

<sup>3</sup> U.N. Statistical Year Books.

<sup>4</sup> 1950-1953, U.N. Statistical Year Books, 1955-1962, Health Manpower Source Book, Section 14, Medical Specialists, U.S. Department of Health, Education, and Welfare, Public Health Service, 1962, Table 1, p.3.

<sup>5</sup> 1951 and 1961, Census data; 1952-1960, C.M.A.'s Survey of Provincial Licensing Authorities; C.M.A.'s brief on Future Requirements for Physicians in Canada, submitted to the Royal Commission on Health Services, October 27, 1961, p.3; 1962, Canadian Mailings Ltd., Toronto, 1962.

by now that we require some planning, on a regional or national level, if all our people are to have access to medical services on an equitable basis. It might be necessary to institute a planned use of physician resources through subsidization of doctors in less economically developed parts of the country.

If all provinces of Canada were to have a supply of physicians similar to what existed in the provinces with the best physician-population ratios, there would be a shortage of about 1,400 doctors in Canada as of June, 1961. All provinces, except Ontario and British Columbia would have had a deficit in their 1961 supply of doctors on the foregoing criterion.

For a nation with one of the world's highest living standards, our medical manpower seems to be inadequate and its distribution is far from equitable. To argue that there is no deficiency in the national supply of physicians or that it is not likely to occur in the future because of rapid increase in productivity of doctors, is to fail to acknowledge that any increase in the individual doctor's efficiency is more than offset by increased demand for his services.

Comparative physician-population ratios for major countries of the western world are shown in Table 7-2.

Even if one allows for sparseness of settlement in Canada, it appears that in population per physician Canada compares less favourably with other countries except the United Kingdom and France.

### 3. Second Approach – Volume of Services

To supplement the physician-population ratio approach, refinements in the form of patient-visits load approach may be used in assessing the present and future requirements for physicians. The physician's performance is measured by counting patient-visits per annum and no attempt is made to assess quality of his performance. Quality of service is related to how well the job is done and to the skills and specialized training of a physician. As such it does not render itself to a statistical interpretation. This fact creates a reasonable objection to using demand for services as a basis for estimating physician requirements.<sup>1</sup>

Patient-visits load, however, is a useful index for determining the demand for medical care and medical manpower because it indicates the number of individuals seen by a private practitioner and measures his performance under modern standards of diagnosis, therapy and prevention.

It is somewhat difficult to apply national averages of volume of medical services received and provided by a doctor in private practice for regions and areas because of economic and other differences in the characteristics of regions and local areas. For this approach attempts to measure actual utilization of physicians

<sup>1</sup> Bachman, George W., "Method of Measuring Physician Requirements, with Appraisal of Former Methods," The Brookings Institution, Washington 6, D.C., May 1955, Reprint No. 5, from the *Journal of the American Medical Association*, June 4, 1955, vol. 158, pp. 375-81, p. 10.

TABLE 7-3  
ESTIMATED REQUIREMENTS FOR PHYSICIANS IN PRIVATE PRACTICE, FOR PROVINCES AND CANADA, 1961

Province	Per Cent Distribution of Physicians Census 1961	Distribution of Physicians in Private Practice	Private Practice Physician- Population Ratio	No. of Doctors in Private Practice Required to Meet Demand at 1961 National Standard <sup>1</sup> (5,3784 patient-visits)	Deficit or Surplus of Physicians in Private Practice	No. of Doctors in Private Practice Required to Meet Demand at Improved National <sup>2</sup> Standard <sup>2</sup> (6,7230 patient-visits)	Shortage of Doctors, 1961
Newfoundland.....	1.08	167	1:2,742	389	-222	486	- 319
Prince Edward Island..	0.43	66	1:1,585	89	- 23	111	- 45
Nova Scotia .....	3.32	513	1:1,437	626	-113	782	- 269
New Brunswick .....	2.14	331	1:1,806	508	-177	634	- 303
Quebec .....	29.00	4,480	1:1,173	4,464	+ 16	5,579	-1,100
Ontario .....	37.80	5,840	1:1,068	5,293	+547	6,615	- 776
Manitoba .....	5.27	814	1:1,132	782	+ 32	978	- 164
Saskatchewan .....	4.47	691	1:1,339	785	- 94	982	- 292
Alberta .....	6.38	986	1:1,350	1,131	-145	1,413	- 428
British Columbia .....	10.11	1,562	1:1,043	1,383	+179	1,728	- 166
Canada <sup>3</sup> .....	100.00	15,450	1:1,178	15,450	±774	19,312	-3,862

<sup>1</sup> On the assumption that each person in Canada received 5,378 physician-visits and that each doctor in private practice was able, on the average, to dispense 6,336 patient-visits per year.

<sup>2</sup> Improved national standard of 6,7230 has been computed by adding 1,3446 physician-visits or 25% to the national standard of 5,3784 because approximately 25% of the Canadian population have had complete medical insurance coverage and 50% have had partial coverage. The 25% addition represents the unmet demand for medical services.

<sup>3</sup> Excludes Yukon and Northwest Territories.



and it assumes that all provinces are comparable in their education, economic and social composition and, therefore, the demand for medical services will be similar. In fact, it must be acknowledged, not all members of a regional community are recipients of medical services. The extent and type of services received vary because of age, sex, income and other characteristics of the regional population.

It may be useful to calculate physician requirements with reference to the actual effective demand (volume of services received) as well as to non-effective demand (or need). Table 7-3 summarizes the calculations of requirements for physicians in private practice, for provinces and Canada, as of June 1961, both with respect to effective and non-effective demand.

Table 7-3 clearly indicates an inequitable distribution of physicians in private practice as between provinces. The deficit provinces include the Atlantic Provinces and Saskatchewan and Alberta.

If unmet demand for medical services were to be satisfied, it would appear, that there were 3,900 more physicians needed in private practice in 1961, assuming that economic and other barriers were to be eliminated and equitable distribution of physicians in private practice were to take place throughout the whole country.

#### 4. Inter-Professional Comparison of Earnings and Supply in Canada

An inter-professional comparison of the average incomes of various professions over a period of time may lead to evidence of a national shortage of manpower in a particular profession whose income has increased more than that of other professions. This fact would suggest a maladjustment in the conditions of supply and demand. Professional income differentials may be accounted for by the difficulty of entry into a profession or may indicate that monetary remunerations are necessary to compensate for some professional disadvantages (long training) or to induce an adequate supply of qualified persons to satisfy a strong demand for given professional services or that productivity of a given professional group has increased disproportionately.

Net incomes of physicians, lawyers, dentists, consulting engineers and architects and accountants during the years 1946-1960 are shown in Appendix 7-1. The information is taken from "Taxation Statistics," published by the Department of National Revenue. For the purposes of this comparative analysis of earnings of various professions, professional income means income or fees received from the independent practice of a profession for profit. In the case of physicians these statistics apply only to those in private practice.

All five professions are characterized by a considerable degree of stability of relative income status. However, while the average annual income of physicians and dentists invariably increased every year between 1946 and 1960, indicating that, generally, demand for dental and medical services does not seem to fluctuate with the general economic conditions of the country, the average annual incomes of the three professions, being more sensitive to economic conditions, fluctuated slightly. Taking 1951 earnings as a base, dentists increased their income by 100.0 per cent

between 1951–1960, consulting engineers and architects by 90.0 per cent, physicians by 72.0 per cent, while accountants and lawyers by only 46.0 per cent and 50.0 per cent respectively.

Table 7–4 shows the three-year average annual professional income of the five occupations being examined.

The three-year average annual professional income of consulting engineers and architects increased by 116.0 per cent between 1945–48 to 1958–60, and the corresponding percentage for dentists was 111.0, physicians – 110.0, and lawyers – 88.0. These were relative changes in respective professional incomes. Absolute change may be measured in dollars. Thus, physicians increased their three-year average annual income by \$7,630 in the period under review, consulting engineers and architects by \$6,915, dentists by \$5,650 and lawyers by \$5,562. It should be noted that the three-year average annual professional income of physicians was highest in both the 1946–48 and 1958–60 periods amongst the professions considered.

TABLE 7–4

THREE-YEAR AVERAGE ANNUAL PROFESSIONAL INCOME  
EARNED BY SELF-EMPLOYED PHYSICIANS, LAWYERS, DENTISTS,  
CONSULTING ENGINEERS AND ARCHITECTS AND ACCOUNTANTS, CANADA,  
1946–1960<sup>1</sup>

	1946–48	1949–51	1952–54	1955–57	1958–60
	\$	\$	\$	\$	\$
<i>Medical Doctors &amp; Surgeons ...</i>	6,945	8,667	10,014	11,761	14,575
Change .....		1,722	1,344	1,750	2,814
% Change .....		24.8%	15.5%	17.5%	23.9%
<i>Lawyers .....</i>	6,350	8,421	8,435	10,637	11,912
Change .....		2,071	14	2,202	1,275
% Change .....		32.6%	0.2%	26.1%	12.0%
<i>Dentists .....</i>	5,077	5,575	6,638	8,465	10,727
Change .....		498	1,063	1,827	2,262
% Change .....		9.8%	19.1%	27.5%	26.7%
<i>Consulting Engineers &amp; Architects .....</i>	5,960	8,793	9,247	11,682	12,875
Change .....		2,833	454	2,435	1,193
% Change .....		47.5%	5.2%	26.3%	10.2%
<i>Accountants .....</i>	–	–	6,953	8,764	9,876
Change .....		–	–	1,811	1,112
% Change .....		–	–	26.0%	12.7%

<sup>1</sup> For purposes of these statistics, the Department of National Revenue has defined professional income as income or fees received from the independent practice of a profession for profit. Thus, professionally-qualified persons employed on an annual salary basis by a company, government or institution are excluded. Income figures were derived by dividing the total professional income by the number of taxable returns.

Source: *Taxation Statistics, Annual Reports, 1948 to 1962*, Department of National Revenue.

Table 7-5 shows the percentage distribution of the five professions under consideration, by average annual professional income classes, for 1960.

It appears from Table 7-5 that physicians and surgeons in private practice have proportionately more representatives in the higher income brackets than the other comparable professions. This is especially true for the group in the \$20,000 and under \$25,000 net income per annum bracket. In the income group of over \$25,000 the proportion of physicians, consulting engineers and architects is approximately the same. Nearly half of the reporting physicians earned a net professional income of \$15,000 or more as compared with one-third of the reporting lawyers and consulting engineers and architects, and less than one-third of the other two professions.

TABLE 7-5

PER CENT DISTRIBUTION OF PHYSICIANS, LAWYERS, DENTISTS, CONSULTING ENGINEERS AND ARCHITECTS AND ACCOUNTANTS, BY AVERAGE ANNUAL PROFESSIONAL INCOME RANGE, CANADA, 1960

Professional Income Class	Physicians	Lawyers	Dentists	Consulting Engineers & Architects	Accountants
	%	%	%	%	%
Less than \$5,000 .....	9.6	17.2	12.3	17.8	24.5
\$5,000 to under \$10,000 .....	23.6	31.2	30.8	29.0	34.8
\$10,000 - under \$15,000 .....	20.1	20.1	28.5	20.2	18.5
\$15,000 - under \$20,000 .....	18.1	11.6	17.2	11.2	9.3
\$20,000 - under \$25,000 .....	11.9	6.9	7.0	6.5	5.1
\$25,000 & Over .....	16.7	13.0	4.2	15.3	7.8
Number of Taxable Returns ...	14,013	7,195	4,381	2,019	4,119

Source: *Taxation Statistics, 1962*, Department of National Revenue.

Appendix 7-2 illustrates the growth of selected professional and technical occupations in Canada between 1931-1961. Professional and technical occupations, as a whole, steadily increased in absolute numbers as well as a proportion of the total labour force. Physicians and surgeons decreased their percentage of total professional and technical groups from 4.2 per cent in 1931 to 3.4 per cent in 1961. On the other hand, doctors, as a percentage of the total labour force, increased from 0.26 per cent in 1931 to 0.32 per cent in 1961. The professions which showed a more pronounced growth include nurses and teachers.

##### 5. Physicians' Professional Income and Wages and Personal Income Per Capita Compared

A comparison of changes in annual average professional income of physicians with changes in personal income per capita as well as in labour income may be used in an assessment of the adequacy of medical manpower.

The three-year annual average professional income earned by self-employed physicians increased from \$6,945 during the years 1946-1948 to \$14,575 in 1958-1960, i.e., by 109.9 per cent, while personal income per capita in Canada increased during the period under consideration from \$849 to \$1,484, i.e., by only 74.8 per cent.<sup>1</sup>

Appendix 7-3 shows index numbers of physicians' professional income, workers' average weekly wages and salaries and labour income per employee, based on 1949 as 100.0, during the years 1946-1960.

It appears that the physicians' professional income between 1949-1960 increased by 77.4 per cent, which increase was almost identical with the increase in annual average weekly wages of people engaged in manufacturing and also in all other industries (industrial composite index). On the other hand, the indicated increase in income of physicians was somewhat higher than that of average labour income per paid worker or employee by about 16.0 per cent.

## 6. Cost of Living and Prices of Medical Services

The problem of medical care costs may be discussed with reference to total personal medical care costs incurred by a nation or per capita or the price of a particular service. A change in total expenditures reflects the change in population size as well as the change in per capita costs and in prices of medical services. Medical care expenditure per capita reflects both the change in prices of medical services and the extent and character of average utilization of such services.

The analysis of prices of medical services is limited to the post-war period because it is now long enough to show significant contemporary trends and also because in terms of economic and social developments the post-war era should be viewed differently from the war and pre-war years.

Prices of medical services since the end of World War II have spiralled upward more rapidly than the general cost of living, but "price changes, at best, are no measure of what the purchaser of medical care gets from the doctors for his money."<sup>2</sup> No adjustment in prices is made because of the change in quality of medical services due to advances in medical knowledge and art, growing specialization, the development of new drugs and treatment and surgical procedures, etc. This rise in prices of medical services reflects the impact of inflation and a growing demand for more medical care in contrast to a relatively inelastic supply of medical services.

As the Canadian standard and cost of living rose in recent decades, a parallel rise in medical care prices was to be expected. But the fact is that the rise in the latter prices during the post-war years has far outstripped the general increase in the consumer price index. And, it should be pointed out, the figures

<sup>1</sup> *National Accounts, Income and Expenditure*, D.B.S.

<sup>2</sup> Davis, Michael M., *Medical Care for Tomorrow*, Harper & Bros., New York: 1955, p. 311.

reflect only effective demand and not unrecognized and unmet needs. It should also be pointed out that both on the demand and supply side there is no single "price" of medical services. The latter covers a wide variety of services differing in quality and quantity. Besides a physician may use a sliding scale.

Appendix 7-4 records index numbers of cost of living, doctors' fees, and other components of medical care, for urban areas in Canada, during the years 1945-1962. At the national level, price indexes are available for office consultations, home calls and confinements from 1935-1962, and for appendectomies from 1949-1962. The above items were selected as representative of the major expenditures on doctors' care.<sup>1</sup>

Consumer price index increased from 100.0 in 1949 to an annual average of 130.7 in 1962, while doctors' fees index (weighted average of the four components of medical care) increased from 100.0 to 150.4 during the same period. The largest increase occurred in prices of confinements and the smallest in the case of appendectomies.

This comparison between relative changes in consumer price index and doctors' fees index would indicate that prices of medical care have risen either because of improvement in its quality or because the supply of medical care did not keep pace with the increased demand for it.

## 7. Expenditure on Personal Medical Services

Appendix 7-5 shows total and per capita expenditures on personal medical services and the percentage of total to gross national expenditure and personal expenditure during the years 1945-1961. Personal expenditures have been adjusted to include expenditures on personal health care as reported in the National Accounts, the cost of providing hospital care in public, mental, tuberculosis and federal hospitals, and the administrative costs of public insurance programmes.

Canadian expenditures on personal medical care accounted for 1.56 per cent of total personal expenditures in 1961 as compared with 1.09 per cent in 1945. This percentage was steadily rising between the two periods. Similarly, the percentage of these expenditures to gross national expenditure has increased from 0.64 in 1945 to 1.02 in 1961. In the latter year they amounted to \$393.2 million, or \$21.0 per capita as compared with \$76.2 million and \$6.30 in 1945. These figures are expressed in current dollars. Per capita expenditure on personal medical care is the combination of price and utilization that determine the comparative costs of medical care over periods of time.

<sup>1</sup> Four items of doctors' care (office consultation, home calls, confinement and appendectomies) have been priced since September 1953 in 11 major Canadian cities (Halifax, Saint John, Montreal, Ottawa, Toronto, Winnipeg, Regina, Saskatoon, Calgary, Edmonton and Vancouver) and prior to 1953, fees were priced in only eight cities. Price information is obtained by personal contact with a sample of doctors in each city. Each doctor is asked to report the fee which he charges to the majority of his patients in the month during which the fees are obtained. A judgement sample of doctors in each city is selected with care being taken to select doctors who would be concerned with the target group of the consumer price index which is basically concerned with middle income groups. As a result doctors who would charge on the high side, are generally excluded. A sample of approximately five doctors is covered in each city.

Expenditures on personal medical services increased by 416 per cent over the period under consideration as compared with a 210 per cent increase of gross national expenditure and a 248 per cent increase of personal expenditures over the same period. This would suggest that the Canadian community tends to devote increasing proportions of its income to medical care as income increases and prices of medical services rise. However, to take a percentage of medical care expenses to total consumers' expenditures is not entirely a measure of a trend indicating greater concern with health. This percentage may reflect a large proportion of the population with small outlays for medical care and a small proportion of the population with large expenditures on medical services.

The total sum that consumers are willing to spend on medical services depends in part on the total number of doctors, i.e., on the degree of availability of medical practitioners, though the medical care market is characterized by the almost complete absence of direct price competition.

No comparison of expenditure on medical fees and total family expenditure over a period of time can be made because of the difficulties of maintaining comparability of data obtained from expenditure surveys carried out by the Dominion Bureau of Statistics. There were differences in survey criteria and definitions as well as in the sizes of city samples. City samples were not large enough to produce a reliable estimate of actual medical fees. The surveys of family expenditure in metropolitan areas carried out by the D.B.S. between 1937/38-1959 suggest that average expenditure per family on medical care (medical fees exclusive of amounts paid by health care plans) constituted 0.99 to 1.20 per cent of the total family expenditure.

The medical needs and hence medical costs of an individual are unpredictable. The average of medical cost per family is somewhat misleading because in a group of families of similar income levels, the majority, having no serious illness in a family, will have their medical costs below the average, while at the other extreme there will be a few families who have one or more health problems and their medical care expenditure will be naturally very high. The large families, and especially those with only one wage-earner, are at a particular disadvantage. And if a wage-earner is ill himself then the loss of wages is an additional burden to the family. Various studies indicate that expenditures on medical care as a percentage of family income decrease as income increases.

It may be argued that by the very nature of the medical services, consumer expenditures on medical care when consumers exercise free choice are bound to be low because the return is uncertain. Besides consumers will tend to economize by seeking medical attention only when they think they are really ill.

## Physician-Population Projections, 1961-1991

### 1. Introduction<sup>1</sup>

Almost invariably there exist wide variations in estimates of future requirements for physicians in any country because there is as yet no generally acceptable theoretical framework for the analysis of the medical manpower problems, no defined standard of medical care or an agreement as to the number of doctors needed to supply a given demand for medical care. "However significant present estimates may be, their use in determining future requirements is seriously open to question — if for no other reason than because of changing medical practices, the lack of acceptable standards of measurement, and the changing social and physical structure of the population."<sup>2</sup> Moreover, the term "physician" changes with respect to training and ability, the content and efficiency of medicine, particularly, in a dynamic country where medicine itself is constantly progressing. Consequently, differences in numerical estimates result, giving contradictory impressions of shortages or surplus of doctors, which make planning for current and future medical manpower requirements difficult.

The statistical problem of projecting the supply of physicians into the future involves determination of the existing number of doctors in the current or some other base year and the establishment, if possible, of various trends in inflow (re-entry, transfer, immigration, medical graduates) and outflow (emigration, retirement, mortality, other departures), which should be projected to a given future year, and the total net estimate for that year is computed after the appropriate additions and subtractions.

Another approach is to assess the expansion likely to occur in various fields of medical practice (general and specialist private practice, hospital medical personnel, medical research and teaching, public health, industrial

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<sup>1</sup> See also Clarkson, Guy C., "Future Requirements for Physicians in Canada," *C.M.A.J.*, November 18, 1961, vol. 85, pp. 1162-69; and Bachman, George W., "A Method of Measuring Physician Requirements with Appraisal of Former Methods," The Brookings Institution, Washington 6, D.C., May, 1955, Reprint No. 5, from the *Journal of the A.M.A.*, June 4, 1955, vol. 158, pp. 375-81, p. 21.

<sup>2</sup> Bachman, George W., *op. cit.*, pp. 2-3.



medicine, etc.), evaluating existing shortages or surpluses, and then to estimate additional medical requirements to meet this assessed expansion.

In this study only the first approach will be attempted because of inadequate statistical data needed for the second method.

It has been pointed out, however, that no precise estimates are possible because of many uncertainties and also of many imponderables.<sup>1</sup> At best, it has been suggested that estimates can be made for a 10-year period and beyond that estimates should be regarded with caution because over a longer period the output of medical schools varies considerably, the incidence of losses, by death and retirement of doctors, may change and there is great uncertainty with respect to migration of doctors, the organization of medical practice is flexible, utilization of paramedical personnel increases, etc.

A similar approach must be followed with respect to the projection of the demand for physicians. The principal factors in projecting demand for doctors include population growth and changes in its age structure. Not only does the increase in total population necessitate more physicians but also the greater proportions of younger and older people create additional demand for medical services. Then, the socio-economic structure of a society is subject to constant change. The process of urbanization of the population can be expected to continue and to add to the demand for medical services as people in cities tend to see doctors more often. Improved economic status and a higher standard of living will also increase demand for medical care as people with higher incomes demand more services. Improved levels of education of the people will mean a greater health consciousness and hence a greater demand for physicians' services. Medical research and technical development in medical practice will widen the doctor's scope of work and skills and, it is said, the more doctors can do for the people the larger becomes the demand, and increased demand in turn creates still further demand. In addition, the utilization of physicians' services in research, teaching, industrial health, hospitals, and public health may be expected to increase in the future.

On the other hand, more effective drugs, better organization of practice, changes in medical techniques and therapeutic methods, more widespread knowledge of hygiene, as well as changes in the incidence of illness, all of these may decrease the demand for doctors' services.

Total demand at a particular time is the net result of the above determinants and, it may simply not be possible to forecast the precise effect of future changes in these factors, some of which are so unpredictable that in estimating the future requirements for physicians the right course is to make no allowance for them one way or another. However, it has been argued that "it is safe to assume that health needs will not

<sup>1</sup> Great Britain, Ministry of Health, *Report of the Committee to Consider the Future Number of Medical Practitioners and the Appropriate Intake of Medical Students*, London, H.M.S.O. 1957, pp. 1-2.

diminish and that better utilization of physicians' services can effect only modest savings in professional time. Therefore a substantial decline in the physician-population ratio will be reflected in lessened quantity or quality of health services".<sup>1</sup>

A minimum estimate may be made by reference to current demand for medical services; and a maximum estimate on the basis of "needed" services by all people, and thus future requirements for doctors to meet the "need" for these services can be calculated. Since doctors prefer to locate their practices where opportunities, professional and financial, exist, i.e., the cities and industrial centres, the higher production of doctors cannot possibly solve the problem of medical care in the smaller and rural communities. The better geographic distribution of physicians will require more hospitals, medical facilities and auxiliary personnel in the latter areas.

## 2. Attrition Rate of Canadian Doctors

In order to project the supply of physicians into the future it is necessary to estimate the loss or attrition in medical manpower each year or each projected period. This loss may be due to a natural cause like death or sickness, emigration, retirement and other departures. Because of the lack of statistical data, the extent of loss from each of these causes cannot be estimated, and, therefore, only a composite or gross attrition can be suggested. While death rate of Canadian doctors has been calculated as being 1.4 per cent, the situation concerning physicians designated as retired and not in practice is different. These physicians are for the most part advanced in years and, although retirement is voluntary or the result of disability associated with age their effective capacity has greatly diminished. Relatively few physicians formally retire until they are well advanced in age. With longer life and work expectancy probably the average retirement age is 72. But, this is only a conjecture and no data are available to indicate the number of doctors in Canada of 72 years and over. There is also a lack of complete data with respect to emigration of the new Canadian medical graduates who leave Canada in order to continue their studies or to practise outside this country.

The calculation of the gross attrition rate is presented in Table 8-1.

In the above calculation only Canadian medical graduates are considered, on the assumption, that most of the other graduates of Canadian medical schools who came from other countries did not remain in Canada. In view of the difficulty in establishing a time lag between the entry of immigrant doctors and their actual registration, the figures of immigrant physicians, who registered with Provincial Licensing Authorities during the years under consideration,

<sup>1</sup> Peterson, Paul Q. and Pennell, Maryland Y., "Physician-Population Projections, 1961-1975: Their Causes and Implications," *A.J.P.H.*, vol. 53, No. 2, February, 1963, p. 171.

TABLE 8-1  
AVERAGE COMPOSITE ATTRITION RATE OF CANADIAN DOCTORS, 1952-1960

Year	Estimated Number of Physicians at Beginning of Year	Canadian Graduates of Canadian Medical Schools <sup>1</sup>	Immigrant Physicians <sup>2</sup>	Theoretical Total	Loss	Average Number of Physicians During Year	Composite Attrition Rate
1952 .....	14,520	757	339	15,616	481	14,828	3.24
1953 .....	15,135	771	393	16,299	470	15,482	3.04
1954 .....	15,829	836	488	17,153	722	16,130	4.48
1955 .....	16,431	817	447	17,695	474	16,826	2.82
1956 .....	17,221	734	496	18,451	580	17,546	3.30
1957 .....	17,871	806	582	19,259	736	18,197	4.04
1958 .....	18,523	730	557	19,810	714	18,810	3.80
1959 .....	19,096	765	586	20,447	647	19,448	3.33
1960 .....	19,800	777	521	21,098	581	20,158	2.88
Average 1952-1960 .....	17,421				600		3.44

<sup>1</sup> Canadian graduates exclude medical graduates of Canadian medical schools who were from foreign countries.

<sup>2</sup> Immigrant physicians who registered with Provincial Licensing Authorities.

have been used. This latter procedure implies, very likely, some duplication since an immigrant doctor might have registered in more than one province. However, such duplication is probably not very significant.

On January 1, 1952, there were 14,520 registered physicians. During the year there were 757 Canadian-born graduates of Canadian medical schools plus 339 immigrant physicians, who registered throughout the whole calendar year, making a theoretical total of 15,616 at the end of 1952. In actual fact, however, there were only 15,135 doctors registered at the beginning of 1952. The net loss, therefore, was 481 physicians, which expressed as a percentage of the average number of physicians during the year, gives a gross attrition rate of 3.24 per cent. This process has been repeated for the subsequent years until 1960. The average gross attrition rate for the years 1952-1960 was 3.44 per cent as derived from the actual experience of the last decade. The 3.5 per cent attrition factor has been suggested for Canada elsewhere.<sup>1</sup> In all the subsequent calculations of expected supply of doctors in Canada and required output from Canadian medical schools to meet future requirements for physicians the 3.2 per cent attrition rate is being used to make allowance for some duplication of registration of immigrant doctors.

<sup>1</sup> "Medical Economics: Are There Too Many Doctors in Canada?", *C.M.A.J.*, vol. 78, June 15, 1958, p. 967.

### 3. Future Requirements and Supply of Physicians in Canada, 1961-1991

The purpose of this section is to determine physician requirements with the use of measurable factors such as the physician-population ratio and the volume of medical services received per capita, and to estimate the expected supply of doctors until 1991.

Appendices 8-1 and 8-2 show the projected physician requirements in Canada, 1961-1991, with projected populations, on the assumptions of a net immigration of 10,000 and 100,000 persons respectively. Further calculations were not made with respect to these two physician requirements because the recent Canadian experience with net immigration did not warrant them.

Appendix 8-3 provides information on the expected supply of physicians in Canada per annum between the years 1961 to 1991. The annual attrition rate of 3.2 per cent was used with respect to the number of doctors at the beginning of each year. It was assumed that during the years 1961 to 1971 there will be 350 immigrant physicians added to the Canadian medical manpower per annum, and thereafter only 250 per year. Output of Canadian medical schools was assumed to be 800 Canadian graduates per year (excluding graduates of Canadian medical schools who come from other countries) during the projected period of 1961 to 1965, thus making 4,000 for the whole period. The annual output of 900 Canadian graduates was assumed for the period 1966 to 1970, and 950 (including the graduates of the proposed medical school in Sherbrooke) per year for the remaining projected five-year periods.

Table 8-2 shows the projected five-year requirements and expected supply of physicians in Canada between the years 1961 and 1991, and surpluses or deficits between requirements and supply. These requirements were calculated on the assumption of constant 1961 physician-population ratio of 1:857 and the same improving ratio of constant volumes of medical services per capita of 5.3784 and 6.7230 physician-visits. As for projected populations, three variables were assumed, namely, net immigration 0 per annum, 25,000 and 50,000 persons per year.<sup>1</sup>

Total requirements for physicians were computed by applying either a static physician-population ratio of 1:857, assuming thus the current demand for medical services, or a progressively improving physician-population ratio of 1:857 in 1961 to 1:665 in 1991<sup>2</sup>, to the projected populations, on the assumptions of net immigration of 0 per annum, 25,000 and 50,000 persons per year.

<sup>1</sup> Population projections were prepared for the Royal Commission on Health Services by Dr. A. Stukel.

<sup>2</sup> Physician-population ratio improved from 1:976 in 1951 to 1:897 in 1961 (excluding the actual improvement to 1:857 due to immigrant new registrants who were additions to Canadian medical manpower during the years 1950-1960. These immigrants accounted for about one-third of the total new registrants during the same period). Thus the rate of improvement equalled 8.8 per cent over the 10-year period or at a compound rate of 0.85 per cent per annum. This rate was used to calculate the five-year improved ratios.

TABLE 8-2  
PROJECTED FIVE-YEAR REQUIREMENTS AND EXPECTED SUPPLY OF PHYSICIANS, CANADA, 1961-1991  
Population: net immigration - 0; 25,000 and 50,000 per annum

Year	Population assuming: (1) net immigration - 0 p.a. (2) " " 25,000 p.a. (3) " " 50,000 p.a. ( '000)	Expected Supply of Physicians	Constant Physician- Population Ratio - 1:857 <sup>1</sup>		Improving Physician- Population Ratio - 1:857 <sup>2</sup>		Constant 5,3784 Physician-Visits per Capita		Constant 6,7230 Physician-Visits per Capita	
			Total Require- ments for Physicians	Surplus or Deficit in Supply	Total Require- ments for Physicians	Deficit in Supply	Total Require- ments for Physicians	Deficit in Supply	Total Require- ments for Physicians	Deficit in Supply
1961	(1) 18,238.2		21,290	-	21,290	-	21,290	-	21,290	-
	(2) 18,238.2	21,290	21,290	-	21,290	-	21,290	-	21,290	-
	(3) 18,238.2		21,290	-	21,290	-	21,290	-	21,290	-
1966	(1) 20,021.5		23,362	127	24,357	- 868	23,441	48	29,302	- 5,813
	(2) 20,159.0	23,489	23,522	- 33	24,524	- 1,035	23,602	- 113	29,503	- 6,014
	(3) 20,296.5		23,683	- 194	24,691	- 1,202	23,764	- 275	29,705	- 6,216
1971	(1) 21,983.8		25,652	174	27,933	- 2,107	25,739	87	32,174	- 6,348
	(2) 22,286.7	25,826	26,005	- 179	28,318	- 2,492	26,094	- 268	32,618	- 6,792
	(3) 22,589.5		26,358	- 532	28,714	- 2,888	26,448	- 622	33,060	- 7,234
1976	(1) 24,253.6		28,300	- 721	32,123	- 4,544	28,397	- 818	35,496	- 7,917
	(2) 24,743.5	27,579	28,872	- 1,293	32,772	- 5,193	28,971	- 1,392	36,212	- 8,633
	(3) 25,233.5		29,443	- 1,864	33,421	- 5,842	29,545	- 1,966	36,929	- 9,350
1981	(1) 26,858.5		31,340	- 2,271	37,148	- 8,097	31,447	- 2,378	39,309	- 10,240
	(2) 27,522.6	29,069	32,150	- 3,081	38,108	- 9,039	32,259	- 3,190	40,324	- 11,255
	(3) 28,246.7		32,959	- 3,890	39,068	- 9,999	33,071	- 4,002	41,340	- 12,271
1986	(1) 29,714.9		34,673	- 4,338	42,878	- 12,543	34,791	- 4,456	43,489	- 13,154
	(2) 30,630.4	30,335	35,741	- 5,406	44,199	- 13,864	35,863	- 5,528	44,829	- 14,494
	(3) 31,545.9		36,809	- 6,474	45,520	- 15,185	36,935	- 6,600	46,168	- 15,833
1991	(1) 32,785.9		38,256	- 6,846	49,302	- 17,892	38,387	- 6,977	47,983	- 16,573
	(2) 33,946.3	31,410	39,610	- 8,200	51,047	- 19,637	39,746	- 8,336	49,681	- 18,271
	(3) 35,106.7		40,964	- 9,554	52,792	- 21,382	41,104	- 9,694	51,380	- 19,970

<sup>1</sup> 1961 physician-population ratio, based on 1961 Census data.

<sup>2</sup> On assumption that physician-population ratio will maintain the 0.85 per cent average annual improvement registered between 1951 and 1961 during the projected periods. The physician-population ratio becomes 1:822 in 1966; 1:787 in 1971; 1:755 in 1976; 1:723 in 1981; 1:693 in 1986 and 1:665 in 1991.

<sup>3</sup> The total annual volume of medical services supplied by an estimated 15,450 physicians in private practice in Canada in 1961 amounted to 97,891,200 patient-visits. The weighted weekly average patient-visit load per doctor in private practice, irrespective of the type of major work, was 132, making an annual (48 weeks) patient-visit load of 6,336 per physician. A patient-visit is defined here as a consultation with a physician either in person, or by telephone in his office, in hospital, or the patient's home for examination, diagnosis, treatment or advice. On a per capita basis, each person in this country irrespective of age, sex, income and location, received 5.3784 physician visits. This figure is not comparable with "services" received by persons under full medical insurance coverage.

The volume of medical services required per capita, 6,7230 physician visits, has been estimated by adding 25 per cent to 5,3784 to meet the total medical need per person on the assumption that only 25 per cent of population of Canada had full medical insurance coverage in 1961 and 50 per cent population of Canada had partial coverage. Elimination of an economic barrier between patients and physicians would raise the effective demand to the level suggested.

At the constant ratio of 1:857 the physician requirements simply indicate the numbers of doctors needed to keep pace with the projected increases in population.

Total requirements for physicians were also computed by applying the previously calculated 1961 utilization of private practitioners' services of 5.3784 physician-visits per capita and of 6.7230 physician-visits per capita, which volume of services would meet the unsatisfied demand for medical services, to projected populations. The volume of services (population multiplied by constant required volume of services) was divided by a private practitioner's Work-load of 6,336 patient-visits per year. Private practitioners constituted 72.5 per cent of the total medical manpower in Canada in 1961. This constant proportion was used to calculate the requirements for the total number of doctors in the projected periods.

It will be noticed that the calculations of future requirements have been based on the whole population of physicians, without regard to the nature of their employment. This was done because doctors change their jobs and calculations on a sectional basis would be liable to be upset by future changes in relative demand for different types of doctors.

#### **4. Required Supply of Medical Graduates and First-Year Enrolment of Canadians in Medical Schools**

Appendices 8-4A, 4B, 4C and 4D show the detailed calculations of required supply of Canadian medical graduates (excluding those who come from other countries) and of first-year enrolment of Canadian students in medical schools during the whole projected period.

Needed supply of medical graduates has been computed on the basis of theoretical requirements assuming different physician-population ratios or constant volume of medical services required per capita and different net immigration per annum. The attrition rate of 3.2 per cent per annum was applied to the mid-value of the theoretical requirements during two successive five-year projection periods. This annual attrition was multiplied by five in order to obtain the total attrition over the five-year projected period. To this total attrition the net increase in the physician-population requirement during the period was added. From the sum of the total attrition and net increase the expected five-year influx of immigrant doctors was deducted. The remainder reflects the number of physicians that Canadian medical schools should supply to achieve the estimated requirement. This makes it possible to calculate an annual average needed supply of medical graduates during projected periods.

On the assumption that 10.0 per cent of first-year medical students do not reach graduation, the needed supply of medical graduates has been inflated by 11.1 per cent to determine first-year enrolment requirements. As it takes four years to



become a doctor enrolment must take place four years prior to graduation. Therefore, the yearly average of first-year enrolment pertains to a five-year period, beginning four years prior to that on which the first set of graduates are expected to appear. Thus, for example, to get 3,894 medical graduates over the five-year period 1961-62 1965-66 enrolment must total 4,322 over the five-year academic period 1957-58 to 1961-62.

Estimates of first-year enrolment were made of the population of the university age group, 20-24 years, from which in the past came 7.5 first-year medical students per 10,000 persons per annum. For the first projected period the actual figure of the population of university age group in 1959 was used. For each of the remaining projected periods a figure for average population was used. The computation of which was as follows: the mid-point of the projected periods were determined to be June, 1964, June, 1969, etc. Population estimates were made, however, for June, 1966, June, 1971, etc. The difference between two successive population estimates was computed and two-fifths of this difference was deducted from the latter (higher) population projection. This was done because the mid-point of our projection period is two years earlier than that for which the actual population estimates were made.

From these projected populations of the university age group the number of expected first-year Canadian students per year were calculated.

The difference between the yearly averages of needed first-year enrolment and the number of expected first-year students indicates the deficit or surplus in the recruitment of first-year Canadian medical students.

Table 8-3 summarizes the computations made under the various assumptions already indicated.

The table clearly indicates that existing educational facilities and certainly the present output of our medical schools cannot satisfy our future needs for physicians. Some increments in future output have been allowed, but it is unlikely that the present facilities will permit further increases indicated. Moreover, the required increased output of our medical schools introduces the problem of enrolment in Canadian medical schools.

Building or expanding medical schools is not only a question of constructing facilities, but it is a matter of long-term financing, recruiting the necessary teaching personnel, acquiring training hospitals, developing research personnel. Even if complete training and teaching facilities could be provided quickly, a number of years will be needed to produce new doctors. On the average, a doctor requires from 7 to 10 years to complete his education.

In view of the above findings with respect to almost immediate requirements for additional output of Canadian medical schools, there appears to be an urgent need to plan now the foundation of new medical schools and the immediate expansion of the existing ones.

It is also obvious that to obtain the objective of adequate supply of physicians it will be necessary in the first instance to encourage a higher proportion of our students to enroll in medical schools.



TABLE 8-3  
REQUIRED SUPPLY OF MEDICAL GRADUATES AND FIRST-YEAR ENROLMENT OF CANADIANS IN MEDICAL SCHOOLS  
Constant Physician-Population Ratio - 1:857  
Projected Population, Net Immigration:

0 Per Annum						25,000 Per Annum						50,000 Per Annum					
Can. Medical Grads.		First-Year Enrolment		Deficit or Surplus		Can. Medical Grads.		First-Year Enrolment		Deficit or Surplus		Can. Medical Grads.		First-Year Enrolment		Deficit or Surplus	
Projected Yrs.	Annual Aver. Needed Supply of Grads.	Projected Enrolment Yrs.	Annual Aver. Required Enrolment	Deficit or Surplus		Projected Enrolment Yrs.	Annual Aver. Needed Supply of Grads.	Projected Enrolment Yrs.	Annual Aver. Required Enrolment	Deficit or Surplus		Projected Enrolment Yrs.	Annual Aver. Needed Supply of Grads.	Projected Enrolment Yrs.	Annual Aver. Required Enrolment	Deficit or Surplus	
1961/62-1965/66	779	1957/58-1961/62	864	35		1957/58-1961/62	813	1957/58-1961/62	903	-4		1957/58-1961/62	848	1957/58-1961/62	942	-43	
1966/67-1970/71	892	1962/63-1966/67	990	7		1962/63-1966/67	939	1962/63-1966/67	1,042	-37		1962/63-1966/67	986	1962/63-1966/67	1,094	-81	
1971/72-1975/76	1,143	1967/68-1971/72	1,268	-10		1967/68-1971/72	1,201	1967/68-1971/72	1,334	-60		1967/68-1971/72	1,260	1967/68-1971/72	1,398	-107	
1976/77-1980/81	1,312	1972/73-1976/77	1,457	24		1972/73-1976/77	1,382	1972/73-1976/77	1,534	-30		1972/73-1976/77	1,452	1972/73-1976/77	1,611	-85	
1981/82-1985/86	1,473	1977/78-1981/82	1,635	-15		1977/78-1981/82	1,554	1977/78-1981/82	1,725	-75		1977/78-1981/82	1,636	1977/78-1981/82	1,816	-136	
1986/87-1990/91	1,633	1982/83-1986/87	1,813	-96		1982/83-1986/87	1,729	1982/83-1986/87	1,920	-162		1982/83-1986/87	1,825	1982/83-1986/87	2,026	-227	
Improving Physician-Population Ratio - 1:857 <sup>1</sup>																	
1961/62-1965/66	994	1957/58-1961/62	1,103	-204		1957/58-1961/62	1,030	1957/58-1961/62	1,143	-244		1957/58-1961/62	1,066	1957/58-1961/62	1,183	-284	
1966/67-1970/71	1,202	1962/63-1966/67	1,334	-337		1962/63-1966/67	1,254	1962/63-1966/67	1,392	-387		1962/63-1966/67	1,309	1962/63-1966/67	1,453	-440	
1971/72-1975/76	1,549	1967/68-1971/72	1,719	-461		1967/68-1971/72	1,618	1967/68-1971/72	1,796	-522		1967/68-1971/72	1,686	1967/68-1971/72	1,871	-580	
1976/77-1980/81	1,863	1972/73-1976/77	2,068	-587		1972/73-1976/77	1,951	1972/73-1976/77	2,166	-662		1972/73-1976/77	2,039	1972/73-1976/77	2,264	-738	
1981/82-1985/86	2,176	1977/78-1981/82	2,416	-796		1977/78-1981/82	2,285	1977/78-1981/82	2,536	-886		1977/78-1981/82	2,394	1977/78-1981/82	2,657	-977	
1986/87-1990/91	2,510	1982/83-1986/87	2,786	1,069		1982/83-1986/87	2,644	1982/83-1986/87	2,934	-1,176		1982/83-1986/87	2,777	1982/83-1986/87	3,083	-1,284	

**TABLE 8-3 (Cont'd.)**  
Constant Physician-Population Ratio - 1:857  
Projected Population, Net Immigration:

0 Per Annum					25,000 Per Annum					50,000 Per Annum				
Can. Medical Grads.		First-Year Enrolment			Can. Medical Grads.		First-Year Enrolment			Can. Medical Grads.		First-Year Enrolment		
Projected Yrs.	Annual Aver. Needed Supply of Grads.	Projected Enrolment Yrs.	Annual Aver. Required Enrolment	Deficit or Surplus	Projected Yrs.	Annual Aver. Needed Supply of Grads.	Projected Enrolment Yrs.	Annual Aver. Required Enrolment	Deficit or Surplus	Projected Yrs.	Annual Aver. Needed Supply of Grads.	Projected Enrolment Yrs.	Annual Aver. Required Enrolment	Deficit or Surplus
Constant Volume of Medical Services Required per Capita - 5.3784 Physician-Visits														
1961/62- 1965/66	796	1957-58- 1961/62	883	16	1961/62- 1965/66	831	1957/58- 1961/62	922	-23	1961/62- 1965/66	866	1957/58- 1961/62	961	-62
1966/67- 1970/71	896	1962/63- 1966/67	995	2	1962/63- 1970/71	944	1962/63- 1966/67	1,047	-42	1962/63- 1970/71	990	1962/63- 1966/67	1,099	-86
1971/72- 1975/76	1,148	1967/68- 1971/72	1,274	-16	1971/72- 1975/76	1,206	1967/68- 1971/72	1,339	-65	1971/72- 1975/76	1,265	1967/68- 1971/72	1,404	-113
1976/77- 1980/81	1,318	1972/73- 1976/77	1,463	18	1972/73- 1980/81	1,387	1972/73- 1976/77	1,540	-36	1972/73- 1980/81	1,457	1972/73- 1976/77	1,617	-91
1981/82- 1985/86	1,479	1977/78- 1981/82	1,641	21	1981/82- 1985/86	1,561	1977/78- 1981/82	1,732	-82	1981/82- 1985/86	1,643	1977/78- 1981/82	1,824	-144
1986/87- 1990/91	1,640	1982/83- 1986/87	1,820	103	1982/83- 1990/91	1,736	1982/83- 1986/87	1,927	-169	1982/83- 1990/91	1,832	1982/83- 1986/87	2,034	-235
Constant Volume of Medical Services Required per Capita - 6.7230 Physician-Visits														
1961/62- 1965/66	2,062	1957/58- 1961/62	2,289	-1,390	1961/62- 1965/66	2,105	1957/58- 1961/62	2,337	-1,438	1961/62- 1965/66	2,149	1957/58- 1961/62	2,385	-1,486
1966/67- 1970/71	1,208	1962/63- 1966/67	1,341	-344	1962/63- 1970/71	1,260	1962/63- 1966/67	1,398	-393	1962/63- 1970/71	1,325	1962/63- 1966/67	1,471	-458
1971/72- 1975/76	1,497	1967/68- 1971/72	1,662	-404	1971/72- 1975/76	1,570	1967/68- 1971/72	1,743	-469	1971/72- 1975/76	1,650	1967/68- 1971/72	1,831	-540
1976/77- 1980/81	1,709	1972/73- 1976/77	1,897	-416	1972/73- 1980/81	1,797	1972/73- 1976/77	1,995	-491	1972/73- 1980/81	1,885	1972/73- 1976/77	2,092	-566
1981/82- 1985/86	1,911	1977/78- 1981/82	2,121	-501	1981/82- 1985/86	2,013	1977/78- 1981/82	2,235	-585	1981/82- 1985/86	2,116	1977/78- 1981/82	2,349	-669
1986/87- 1990/91	2,112	1982/83- 1986/87	2,345	-628	1982/83- 1990/91	2,233	1982/83- 1986/87	2,478	-720	1982/83- 1990/91	2,353	1982/83- 1986/87	2,612	-813

1 On the assumption that the physician-population ratio will maintain the 0.85 per cent average annual improvement registered between 1951 and 1961, during the projected periods. The physician-population ratio becomes: 1961, 1:857; 1966, 1:822; 1971, 1:787; 1976, 1:753; 1981, 1:723; 1986, 1:693; 1991, 1:665.

Having fixed our requirements for physicians and medical students enrolment, it is necessary to decide the best methods of eliminating the indicated deficits in our medical manpower in order to pave the way as far as possible towards the ultimate goal of providing enough medical services for our peoples' needs today and tomorrow.

## APPENDICES

APPENDIX 2-1  
PROVINCIAL PHYSICIAN-POPULATION RATIOS, 1911-61\* ACTIVE CIVILIAN PHYSICIANS

Province <sup>1</sup>	1911			1921			1931		
	Number of Physicians	Per Cent of Total	Physician-Population Ratio	Number of Physicians	Per Cent of Total	Physician-Population Ratio	Number of Physicians	Per Cent of Total	Physician-Population Ratio
Newfoundland.....	—	—	—	—	—	—	—	—	—
Prince Edward Island.....	72	1.0	1:1,306	68	0.8	1:1,309	63	0.6	1:1,397
Nova Scotia.....	408	5.5	1:1,206	457	5.2	1:1,147	445	4.4	1:1,153
New Brunswick.....	281	3.8	1:1,253	268	3.1	1:1,448	269	2.7	1:1,517
Quebec.....	2,000	27.0	1:1,003	2,216	25.5	1:1,065	2,747	27.4	1:1,046
Ontario.....	3,053	41.2	1: 828	3,459	39.7	1: 848	3,934	39.3	1: 872
Manitoba.....	433	5.8	1:1,065	557	6.4	1:1,095	666	6.6	1:1,051
Saskatchewan.....	379	5.1	1:1,298	524	6.0	1:1,445	584	5.8	1:1,579
Alberta.....	369	5.0	1:1,014	548	6.3	1:1,073	583	5.8	1:1,256
British Columbia.....	416	5.6	1: 945	609	7.0	1: 862	729	7.3	1: 952
Total.....	7,411	100.0	1: 970	8,706	100.0	1:1,008	10,020	100.0	1:1,034
Province <sup>1</sup>	1941			1951			1961		
	Number of Physicians	Per Cent of Total	Physician-Population Ratio	Number of Physicians	Per Cent of Total	Physician-Population Ratio	Number of Physicians	Per Cent of Total	Physician-Population Ratio
Newfoundland.....	—	—	—	143	1.0	1:2,524	230	1.1	1:1,991
Prince Edward Island.....	67	0.6	1:1,418	73	0.5	1:1,342	91	0.4	1:1,149
Nova Scotia.....	428	4.0	1:1,350	588	4.1	1:1,094	706	3.3	1:1,044
New Brunswick.....	270	2.5	1:1,693	357	2.5	1:1,445	455	2.1	1:1,314
Quebec.....	3,162	29.5	1:1,054	4,097	28.6	1: 990	6,167	29.0	1: 853
Ontario.....	4,197	39.1	1: 903	5,363	37.4	1: 857	8,040	37.8	1: 776
Manitoba.....	659	6.1	1:1,108	838	5.8	1: 926	1,120	5.3	1: 823
Saskatchewan.....	527	4.9	1:1,700	651	4.5	1:1,278	951	4.5	1: 973
Alberta.....	603	5.6	1:1,320	840	5.9	1:1,118	1,356	6.4	1: 982
British Columbia.....	810	7.6	1:1,010	1,375	9.6	1: 847	2,150	10.1	1: 758
Total.....	10,723	100.0	1:1,072	14,325	100.0	1: 976	21,266	100.0	1: 857

\* These data are not available for 1901.  
<sup>1</sup> Exclusive of Yukon and Northwest Territories.  
Source: 1911-1961, Census data.



APPENDIX 2-2 (Concl.)

Type of Practice <sup>1</sup>	Number and Per Cent Distribution and Country of Birth											
	Country Not Given					Total						
	Male		Female		Total	Male		Female		Total		
	No.	%	No.	%	No.	%	No.	%	No.	%		
No specification .....	—	—	—	—	—	13	0.2	2	0.6	15	0.3	
Full-time specialty .....	88	25.4	1	10.0	89	25.0	2,992	55.5	115	35.6	3,107	54.3
Part-time specialty practice .....	6	1.7	—	—	6	1.7	234	4.3	11	3.4	245	4.3
Intern.....	2	0.6	—	—	2	0.6	128	2.4	10	3.1	138	2.4
Resident or fellow.....	196	56.6	8	80.0	204	57.3	991	18.4	58	18.0	1,049	18.3
Other full-time staff in hospital service .....	14	4.0	—	—	14	3.9	478	8.9	41	12.7	519	10.0
Full-time medical school faculty .....	1	0.3	—	—	1	0.3	120	2.2	11	3.4	131	2.3
Administrative medicine.....	1	0.3	—	—	1	0.3	44	0.8	5	1.5	49	0.9
Preventive medicine .....	4	1.2	—	—	4	1.1	135	2.5	21	6.5	156	2.7
Research.....	1	0.3	—	—	1	0.3	61	1.1	4	1.2	65	1.1
Retired .....	31	9.0	1	10.0	32	9.0	166	3.1	13	4.0	179	3.1
Not in practice.....	2	0.6	—	—	2	0.6	33	0.6	32	9.9	65	1.1
Total.....	346	100.0	10	100.0	356	100.0	5,395	100.0	323	100.0	5,718	100.0

<sup>1</sup> The figures include 967 General Practitioners (Canada 457; U.S.A. 398; Other Countries 73; Country not given 39), who were not shown separately. Source: A.M.A., Circulation and Records Department, Chicago, April 24, 1962.



APPENDIX 2-3  
DISTRIBUTION OF U.S. PHYSICIANS TRAINED IN CANADA, BY SPECIALTY

Specialty	Number and Per Cent Distribution and Country of Birth									
	Canada		United States		Other Countries		Country Not Given		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Administrative Medicine.....	26	1.0	7	0.5	5	1.3	1	0.3	39	0.8
Anaesthesiology .....	148	5.5	66	4.8	19	5.0	5	1.6	238	5.0
Dermatology.....	27	1.0	26	1.9	6	1.6	5	1.6	64	1.3
General surgery .....	334	12.5	205	14.8	40	10.4	41	12.9	620	13.0
Internal Medicine: .....	352	13.2	236	17.1	56	14.6	36	11.4	680	14.3
General.....	293		202		43		28		566	
Sub-Specialty:										
(Allergy, cardiovascular disease, gastroenterology, pulmonary diseases).....	59		34		13		8		114	
Neurological surgery.....	37	1.4	15	1.1	5	1.3	3	0.9	60	1.2
Neurology .....	33	1.2	12	0.9	8	2.1	7	2.2	60	1.2
Obstetrics & Gynaecology .....	209	7.8	103	7.4	24	6.3	23	7.2	359	7.6
Ophthalmology.....	114	4.3	56	4.0	13	3.4	13	4.1	196	4.1
Orthopaedic surgery .....	89	3.3	74	5.4	11	2.9	6	1.9	180	3.8
Otolaryngology.....	104	3.9	37	2.7	19	2.3	24	7.6	174	3.7
Pathology.....	125	4.7	78	5.6	20	5.2	24	7.6	247	5.2
General paediatrics .....	126	4.8	76	5.5	20	5.2	15	4.7	237	5.0
Physical medicine & Rehabilitation .....	12	0.4	3	0.2	2	0.5	—	—	17	0.4
Plastic surgery .....	8	0.3	3	0.2	—	—	1	0.3	12	0.3
Preventive medicine: .....	93	3.5	35	2.5	11	2.9	2	0.6	—	—
General.....	4		1		—		—		5	
Sub-Specialty:										
Aviation medicine .....	1		1		—		1		3	
Occupational medicine .....	50		21		5		1		77	
Public health .....	38		12		6		—		56	
Proctology .....	6	0.2	7	0.5	—		—		13	0.3
Psychiatry .....	349	13.2	104	7.5	52	13.6	43	13.6	548	11.5
Radiology.....	108	4.0	47	3.4	9	2.3	10	3.2	174	3.7
Thoracic Surgery .....	17	0.6	9	0.7	1	0.3	1	0.3	28	0.6
Urology.....	47	1.8	23	1.7	6	1.6	10	3.2	86	1.8
Unspecified <sup>1</sup> .....	304	11.4	161	11.6	66	17.2	47	14.8	578	12.2
	2,668	100.0	1,383	100.0	383	100.0	317	100.0	4,751	100.0

<sup>1</sup> Retired, not in practice and no claim.

Source: A.M.A., Circulation & Records Dept., Chicago, April 24, 1962.



APPENDIX 2-4 (Cont'd)

Medical School	Years Since Graduation											
	25-29				30-34				35-39			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Dalhousie .....	15	23	1	1	9	7	3	-	23	9	9	-
Laval .....	2	6	-	-	2	9	4	-	3	5	-	-
Montreal .....	3	14	1	-	5	3	1	-	20	7	1	-
McGill .....	48	167	12	1	53	115	22	2	123	31	24	4
Ottawa .....	-	-	-	-	-	-	-	-	-	-	-	-
Queen's .....	29	13	3	-	59	1	3	1	41	1	3	20
Toronto .....	73	12	4	-	83	11	17	1	189	18	19	4
Western Ontario .....	19	16	1	-	24	3	4	-	20	5	-	1
Manitoba .....	29	4	2	-	26	6	1	-	27	5	11	-
Saskatchewan .....	-	-	-	-	-	-	-	-	-	-	-	-
Alberta .....	7	4	3	-	9	5	2	-	3	3	-	-
British Columbia .....	-	-	-	-	-	-	-	-	-	-	-	-
Total .....	225	259	27	2	270	160	57	5	449	84	67	29
Per Cent of Total .....	7.2	14.5	5.9	0.6	8.8	9.0	12.5	1.4	14.4	4.7	14.7	8.1

(a) Canada (b) U.S.A. (c) Other Countries and (d) Country not given  
Source: A.M.A. Circulation and Records Department, Chicago, April 24th, 1962.

APPENDIX 2-4 (Concl.)

Medical School	Total							
	Canada		United States		Other Countries		Country Not Given	
	No.	%	No.	%	No.	%	No.	%
Dalhousie .....	148	4.7	116	6.5	32	7.1	14	3.9
Laval .....	117	3.8	113	6.3	15	3.3	19	5.4
Montreal .....	112	3.6	58	3.3	20	4.4	21	5.9
McGill .....	580	18.6	1,121	62.9	159	34.9	45	12.6
Ottawa .....	140	4.5	74	4.2	14	3.1	7	2.0
Queen's .....	276	8.8	71	4.0	28	6.1	95	26.8
Toronto .....	907	29.0	85	4.8	104	22.8	65	18.4
Western Ontario .....	248	7.9	79	4.4	24	5.3	27	7.6
Manitoba .....	360	11.5	32	1.8	36	7.9	27	7.6
Saskatchewan .....	21	0.7	2	0.1	1	0.2	1	0.3
Alberta .....	168	5.4	21	1.2	10	2.2	20	5.6
British Columbia .....	48	1.5	9	0.5	13	2.7	14	3.9
Total .....	3,125	100.0	1,781	100.0	456	100.0	356	100.0

APPENDIX 2-5  
REGISTRATION POLICIES FOR CITIZENS OF CANADA BY LICENSING BOARDS IN THE UNITED STATES AND  
LOCATION OF U.S. PHYSICIANS WHO GRADUATED FROM CANADIAN MEDICAL SCHOOLS

States	Location of Physicians as of May 1959 (a)	Graduates of Approved Canadian Medical Schools Considered for Licensure by Exa- mination on Same Basis as Graduates of Approved Medical Schools in United States	Graduates of Approved Canadian Medical Schools Presenting Canadian Registration Acceptable for Licensure by Reciprocity or Endorsement	Graduates of Medical Schools Outside of United States and Canada Presenting Canadian Registration Accepted for Licensure by Reciprocity or Endorsement	United States Citizenship Requirement for Candidates from Canada		
					Full Citi- zen- ship	Declara- tion of Inten- tion	Not Re- quired
Alabama .....	14	-	-	-	-	-	X
Alaska .....	1	X	-	-	-	-	X
Arizona .....	32	X	-	-	-	X	-
Arkansas .....	7	X	X	-	X	-	-
California .....	662	X	-	-	-	-	X
Canal Zone .....		X	X	X	-	-	X
Colorado .....	21	X	-	-	X	-	-
Connecticut .....	171	X	X	-	-	X	-
Delaware .....	16	X	X	-	X	-	-
Dist. of Columbia ..	32	X	X	-	-	-	X
Florida .....	84	X	-	-	X	-	-
Georgia .....	15	X	-	-	X	-	-
Guam .....		X	X	X	-	-	X
Hawaii .....	19	X	-	-	-	X	-
Idaho .....	7	X	-	-	-	X	-
Illinois .....	166	-	-	-	-	X	-
Indiana .....	35	X	-	-	X	-	-
Iowa .....	28	X	-	-	-	X	-
Kansas .....	24	X	-	-	X	-	-
Kentucky .....	13	X	-	-	X	-	-
Louisiana .....	27	X	-	-	-	-	-
Maine .....	100	X	-	-	-	-	-
Maryland .....	86	X	-	-	-	-	X
Massachusetts .....	322	X	-	-	-	-	X
Michigan .....	530	X	-	-	-	-	-
Minnesota .....	144	X	-	-	-	X <sup>1</sup>	-
Mississippi .....	11	X	X	-	-	-	-
Missouri .....	41	X	X	-	-	-	-
Montana .....	10	X	-	-	X	X	-

APPENDIX 2-5 (Concl.)

States	Location of Physicians as of May 1959 (a)	Graduates of Approved Canadian Medical Schools Considered for Licensure by Examination on Same Basis as Graduates of Approved Medical Schools in United States	Graduates of Approved Canadian Medical Schools Presenting Canadian Registration Acceptable for Licensure by Reciprocity or Endorsement	Graduates of Medical Schools Outside of United States and Canada Presenting Canadian Registration Accepted for Licensure by Reciprocity or Endorsement	United States Citizenship Requirement for Candidates from Canada		
					Full Citizenship	Declaration of Intention	Not Re-quired
Nebraska .....	5	X	-	-	X	-	-
Nevada .....	16	X	-	-	-	X	-
New Hampshire .....	91	X	X	-	-	X	-
New Jersey .....	155	X	-	-	X	-	-
New Mexico .....	11	X	-	-	-	X	-
New York .....	1,062	X	X	-	-	X	-
North Carolina .....	45	X	-	-	X	-	-
North Dakota .....	61	X	-	-	-	X <sup>1</sup>	X
Ohio .....	252	X	-	-	X	-	-
Oklahoma .....	13	X	-	-	X	-	-
Oregon .....	33	X	-	-	-	-	X
Pennsylvania .....	241	X	-	-	-	X	-
Puerto Rico .....	10	X	-	-	-	-	-
Rhode Island .....	53	X	-	-	X	-	-
South Carolina .....	2	X	-	-	-	-	-
South Dakota .....	7	X	-	-	X	-	-
Tennessee .....	20	X	-	-	-	-	-
Texas .....	61	X	-	-	-	-	-
Utah .....	13	X	-	-	-	-	-
Vermont .....	34	X	X	-	-	-	X
Virgin Islands .....		X	-	-	-	-	-
Virginia .....	44	X	-	-	-	-	X
Washington .....	140	X	-	-	-	-	-
West Virginia .....	21	X	-	-	-	-	X
Wisconsin .....	36	X	-	-	X	-	-
Wyoming .....	2	X	X	-	X	-	-

X Implies Yes.

<sup>1</sup> Issued temporary licence renewable for 5 years or until full citizenship is obtained.

Source: (1) "Medical Licensure Statistics 1961", *The Journal of the A.M.A.*, vol. 180, June 9, 1962, p. 856.

(2) "Health Manpower Source Book", Section 11, "Medical School Alumni", William H. Stewart and Maryland Y. Pennell, U.S. Department of Health, Education and Welfare, Public Health Service, Division of Public Health Methods, 1961, Table 1, p. 2.

Note: (a) Foreign countries - 137; unknown location - 37; federal physicians - 198; Total - 5,421.

## APPENDIX 2-6

## DEATHS OF CANADIAN PHYSICIANS, BY AGE GROUP AT DEATH, 1926-61

Year of Death	Age Group								Total
	20-24	25-34	35-44	45-54	55-64	65-74	75 and over	Not Given	
1926	-	7	21	32	41	34	24	-	159
1927	-	14	12	18	45	39	23	-	151
1928	-	10	14	35	43	35	43	-	180
1929	-	2	12	32	40	66	35	-	187
1930	1	11	12	32	41	39	37	-	173
1931	-	8	15	41	44	44	29	-	181
1932	-	8	11	22	43	54	39	-	177
1933	-	7	14	21	42	56	44	-	184
1934	1	7	8	18	59	61	39	-	193
1935	-	12	10	28	61	57	45	-	213
1936	-	6	9	17	56	48	46	-	182
1937	-	8	13	32	50	46	54	-	203
1938	-	5	12	27	63	66	53	-	226
1939	-	8	12	22	66	64	43	-	215
1940	-	2	14	31	47	72	62	-	228
1941	-	4	16	25	46	72	67	-	230
1942	-	4	19	20	59	72	43	-	217
1943	-	6	11	32	50	65	50	2	216
1944	-	1	12	22	51	70	75	2	233
1945	-	4	12	30	39	88	68	2	243
1946	-	8	10	28	47	66	54	24	237
1947	-	6	8	29	39	71	66	20	239
1948	-	3	19	27	52	68	58	18	245
1949	1	5	14	36	61	73	74	24	288
1950	-	10	13	26	49	78	70	11	257
1951	-	3	13	31	40	67	47	25	226
1952	-	3	13	32	53	58	63	14	236
1953	-	4	14	22	52	68	67	27	254
1954	-	3	9	19	28	55	94	41	249
1955	-	6	5	14	53	79	91	29	277
1956	-	3	15	33	57	75	106	6	295
1957	-	2	6	34	45	64	102	11	264
1958	-	8	14	25	58	58	78	9	250
1959	-	2	16	18	40	63	75	7	221
1960	-	3	22	29	38	66	85	9	252
1961	-	5	17	38	66	85	95	3	309

Sources: 1926-45, DBS, *Vital Statistics* references; 1946-54, medical register, association, and "news note" sources utilized in the maintenance of the records of the Physicians Register, Department of National Health and Welfare; and 1955-61, Canadian Medical Directory's listings and bulletins. This statistical information was provided by the Research and Statistics Division, Department of National Health and Welfare.



## APPENDIX 2-7

PER CENT DISTRIBUTION OF DEATHS OF CANADIAN PHYSICIANS,  
BY AGE GROUP AT DEATH, 1926-61

Year of Death	Total Number of Physicians Whose Age of Death was Given	Age Group						
		20-24	25-34	35-44	45-54	55-64	65-74	75 and Over
1926	159	-	4.4	13.2	20.1	25.8	21.4	15.1
1927	151	-	9.3	8.0	11.9	29.8	25.8	15.2
1928	180	-	5.7	7.8	19.4	23.8	19.4	23.9
1929	187	-	1.1	6.4	17.1	21.4	35.3	18.7
1930	173	0.6	6.4	6.9	18.5	23.7	22.5	21.4
1931	181	-	4.4	8.3	22.7	24.3	24.3	16.0
1932	177	-	4.5	6.2	12.4	24.3	30.5	22.0
1933	184	-	3.8	7.6	11.4	22.8	30.5	23.9
1934	193	0.6	3.6	4.2	9.3	30.5	31.6	20.2
1935	213	-	5.6	4.7	13.2	28.6	26.8	21.1
1936	182	-	3.3	5.0	9.3	30.8	26.4	25.3
1937	203	-	3.9	6.4	15.8	24.6	22.7	26.6
1938	226	-	2.2	5.3	11.9	27.9	29.2	23.5
1939	215	-	3.7	5.6	10.2	30.7	29.8	20.0
1940	228	-	0.9	6.1	13.6	20.6	31.6	27.2
1941	230	-	1.7	7.0	10.9	20.0	31.3	29.1
1942	217	-	1.8	8.8	9.2	27.2	33.2	19.8
1943	214	-	2.8	5.1	15.0	23.4	30.3	23.4
1944	231	-	0.4	5.2	9.5	22.1	30.3	32.5
1945	241	-	1.7	5.0	12.4	16.2	36.5	28.2
1946	213	-	3.8	4.7	13.1	22.1	31.0	25.3
1947	219	-	2.7	3.7	13.2	17.8	32.4	30.2
1948	227	-	1.3	8.4	11.9	22.9	30.0	25.5
1949	264	0.4	1.9	5.3	13.6	23.1	27.7	28.0
1950	246	-	4.0	5.3	10.6	19.9	31.7	28.5
1951	201	-	1.5	6.5	15.4	19.9	33.3	23.4
1952	222	-	1.4	5.9	14.4	23.9	26.0	28.4
1953	227	-	1.8	6.2	9.7	22.9	30.0	29.4
1954	208	-	1.4	4.3	9.1	13.6	26.4	45.2
1955	248	-	2.4	2.0	5.6	21.4	31.9	36.7
1956	289	-	1.0	5.2	11.4	19.7	26.0	36.7
1957	253	-	0.8	2.4	13.4	17.8	25.3	40.3
1958	241	-	3.3	5.8	10.4	24.1	24.1	32.3
1959	214	-	0.9	7.5	8.4	18.7	29.4	35.1
1960	243	-	1.2	9.1	11.9	15.6	27.2	35.0
1961	306	-	1.6	5.6	12.4	21.6	27.8	21.0

**APPENDIX 3-1**  
**NUMBER AND PERCENTAGE DISTRIBUTION OF GRADUATES OF CANADIAN MEDICAL SCHOOLS, BY SCHOOL,**  
**1944-45 to 1961-62**

Medical School	Academic Year									
	1944-1945	1945-1946	1946-1947	1947-1948	1948-1949	1949-1950	1950-1951	1951-1952	1952-1953	
Dalhousie . . . . .	75 <sup>1</sup>	—	28	34	43	45	55	53	56	6.8
% . . . . .	9.8	—	4.9	5.4	6.3	5.7	6.4	6.8	108	13.1
Laval . . . . .	37	70	85	72	83	144	141	67	89	13.1
% . . . . .	4.8	13.6	15.0	11.4	12.2	18.2	16.4	8.6	89	13.1
Montreal . . . . .	47	56	79	100	83	84	92	83	10.8	10.8
% . . . . .	6.1	10.9	13.9	15.8	12.2	10.6	10.7	10.6	115	115
McGill . . . . .	92	101	92	119	128	113	116	115	13.9	13.9
% . . . . .	12.0	19.8	16.2	18.8	18.9	14.3	13.5	14.7	52	6.3
Ottawa . . . . .	—	—	—	—	—	—	43	44	57	57
% . . . . .	—	—	—	—	—	—	5.0	5.6	6.3	6.3
Queen's . . . . .	83 <sup>1</sup>	41	41	—	43	47	52	50	6.4	6.9
% . . . . .	10.8	8.0	7.2	—	6.3	5.9	6.1	6.4	162	162
Toronto . . . . .	245 <sup>1</sup>	131	124	129	154	161	174	175	19.6	19.6
% . . . . .	31.8	25.5	21.9	20.4	22.7	20.4	20.3	22.2	62	62
Western Ontario . . . . .	55 <sup>1</sup>	38	34	40	52	93	61	60	7.6	7.6
% . . . . .	8.5	7.4	6.0	6.4	7.7	11.8	7.2	7.7	72	72
Manitoba . . . . .	55	56	63	62	59	63	67	83	8.7	8.7
% . . . . .	7.2	10.9	11.2	9.8	8.7	7.9	7.8	10.6	—	—
Saskatchewan . . . . .	—	—	—	—	—	—	—	—	—	—
% . . . . .	—	—	—	—	—	—	—	—	52	52
Alberta . . . . .	70 <sup>1</sup>	20	21	76 <sup>1</sup>	34	41	57	53	6.3	6.3
% . . . . .	9.0	3.9	3.7	12.0	5.0	5.2	6.6	6.8	—	—
British Columbia . . . . .	—	—	—	—	—	—	—	—	—	—
% . . . . .	—	—	—	—	—	—	—	—	825	825
Canada . . . . .	769	513	567	632	679	791	858	783	100.0	100.0
% . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	42	42
Change <sup>2</sup> . . . . .	—	-256	54	65	47	112	67	-75	8.5	5.4
Percentage Change <sup>2</sup> . . . . .	—	-33.3	10.5	11.5	7.4	16.5	8.5	-8.7	—	—

APPENDIX 3-1 (Concl.)

Medical School	Academic Year										Total	Annual Average 1944-45 to 1961-62
	1953- 1954	1954- 1955	1955- 1956	1956- 1957	1957- 1958	1958- 1959	1959- 1960	1960- 1961	1961- 1962			
Dalhousie . . . . .	53	48	51	49	56	52	50	49	50	847	50	
Laval . . . . .	5.9	5.4	6.3	5.5	6.7	6.1	5.8	5.9	6.0	6.0	5.9	
Montreal . . . . .	134	134	78	113	120	124	141	108	110	1,869	104	
McGill . . . . .	15.0	15.0	9.6	12.7	14.5	14.4	16.3	12.9	13.2	13.2	12.1	
Ottawa . . . . .	99	91	96	100	113	97	101	109	97	1,616	90	
Queen's . . . . .	11.1	10.2	11.8	11.2	13.5	11.3	11.6	13.1	11.6	11.4	10.6	
Toronto . . . . .	110	112	108	97	108	98	95	103	102	1,924	107	
Western Ontario . . . . .	12.3	12.5	13.2	10.9	12.9	11.4	11.0	12.4	12.2	13.6	12.5	
Manitoba . . . . .	47	48	32	50	41	55	43	48	41	544	45	
Saskatchewan . . . . .	5.2	5.4	3.9	5.6	4.9	6.4	5.0	5.8	4.9	3.8	5.3	
Alberta . . . . .	53	55	59	56	45	56	52	48	53	891	52	
British Columbia . . . . .	5.9	6.2	7.2	6.3	5.4	6.5	6.0	5.8	6.3	6.3	6.1	
Canada . . . . .	166	155	151	139	119	147	138	143	150	2,763	154	
Change <sup>2</sup> . . . . .	18.5	17.3	18.5	15.6	14.2	17.1	16.0	17.0	17.8	19.5	18.0	
Percentage Change <sup>2</sup> . . . . .	61	60	58	54	57	51	54	57	62	1,019	57	
	6.8	6.7	7.1	6.0	6.8	5.9	6.3	6.8	7.4	7.2	6.7	
	58	76	64	116 <sup>1</sup>	45	55	54	53	39	1,140	63	
	6.5	8.4	7.8	12.9	5.4	6.4	6.3	6.4	4.7	8.2	7.4	
	—	—	—	29	38	30	29	26	29	181	30	
	—	—	—	3.2	4.5	3.5	3.4	3.1	3.5	1.3	3.5	
	61	57	59	42	47	50	50	51	53	894	50	
	6.8	6.4	7.2	4.7	5.6	5.8	5.8	6.1	6.3	6.3	5.9	
	54	58	60	48	47	44	56	39	52	458	51	
	6.0	6.5	7.4	5.4	5.6	5.2	6.5	4.7	6.2	3.2	6.0	
	896	894	816	893	836	859	863	834	838	14,146	853	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	785	100.0	
										(Annual Average)		
Change <sup>2</sup> . . . . .	71	-2	-78	77	-57	23	4	-29	4			
Percentage Change <sup>2</sup> . . . . .	8.6	-0.2	-8.7	9.4	-6.4	2.8	0.5	-3.4	0.5			

<sup>1</sup> Two classes.<sup>2</sup> Minus sign denotes decreases.Source: Education Issues of the *Journal of the American Medical Association*.

**APPENDIX 3-2**  
**NUMBER OF GRADUATES OF CANADIAN MEDICAL SCHOOLS BY MEDICAL SCHOOLS,**  
**1910-1961 AND BY SEX 1947-1948, 1960-1961**

Item & Years	Del- housie	Laval	Mon- treal	McGill	Ottawa	Queen's	To- ronto	Western Ontario	Man- itoba	Saskat- chewan	Al- berta	British Colum- bia	Total No.	Change <sup>1</sup>	Per- centage Change
<b>Average Annual Number of Graduates:</b>															
1910-14 .....	11	16	34	56	—	44	98	28	23	—	—	—	310	-29	-9.4
1915-19 .....	11	14	25	118	—	43	87	14	14	—	—	—	281	165	58.7
1920-24 .....	21	21	51	188	—	40	152	18	32	—	—	—	446	5	1.1
1925-29 .....	29	33	41	88	—	41	130	22	49	—	16	—	451	24	5.3
1930-34 .....	27	44	42	99	—	46	123	33	51	—	22	—	475	10	2.1
1935-39 .....	29	37	40	99	—	47	119	34	54	—	29	—	485	60	12.4
1940-44 .....	38	58	51	106	—	47	121	32	59	—	37	—	545	87	16.0
1945-49 .....	36	69	73	108	—	41	157	46	69	—	44	—	632	199	31.5
1950-54 .....	52	119	89	114	46 <sup>2</sup>	52	168	67	71	32 <sup>4</sup>	53	54 <sup>3</sup>	831	199	31.5
1955-59 .....	51	114	99	105	44	54 <sup>4</sup>	142	56	71	—	51	51	858	27	3.2
<b>Number of Graduates:</b>															
1947-48 ... M	34	68	94	109	—	—	114	36	59	—	69	—	583	—	—
... F	34	72	100	119	—	—	115	4	3	—	76 <sup>3</sup>	—	49	—	—
... T	34	72	100	119	—	—	129	40	62	—	12.0	—	632	—	—
... %	5.4	11.4	15.8	18.8	—	—	20.4	6.4	9.8	—	—	—	100.0	—	—
1948-49 ... M	42	83	79	121	—	41	123	49	52	—	31	—	621	—	—
... F	43	83	83	128	—	43	154	52	59	—	34	—	58	47	7.4
... T	6.3	12.2	12.2	18.9	—	6.3	22.7	7.7	8.7	—	5.0	—	679	—	—
... %	5.7	18.2	10.6	14.3	—	5.9	20.4	11.8	7.9	—	—	—	100.0	—	—
1949-50 ... M	42	142	81	104	—	43	152	92	53	—	37	—	746	—	—
... F	3	2	3	9	—	4	9	1	10	—	4	—	45	—	—
... T	45	144	84	113	—	47	161	93	63	—	41	—	791	112	16.5
... %	5.7	18.2	10.6	14.3	—	5.9	20.4	11.8	7.9	—	—	—	100.0	—	—
1950-51 ... M	53	137	86	109	40	51	149	54	63	—	53	—	795	—	—
... F	2	4	6	7	3	1	25	7	4	—	4	—	63	—	—
... T	55	141	92	116	43	52	174	61	67	—	57	—	858	67	8.5
... %	6.4	16.4	10.7	13.5	5.0	6.1	20.3	7.2	7.8	—	6.6	—	100.0	—	—
1951-52 ... M	51	66	78	109	44	47	165	57	79	—	51	—	747	—	—
... F	2	1	5	11	4	3	10	3	4	—	2	—	36	—	—
... T	53	67	83	116	44	50	175	60	83	—	53	—	783	-75	-8.7
... %	6.8	8.6	10.6	14.7	5.6	6.4	22.2	7.7	10.6	—	6.8	—	100.0	—	—
1952-53 ... M	54	106	84	106	51	51	154	58	68	—	47	—	779	—	—
... F	2	2	5	9	1	6	162	6	4	—	5	—	46	—	—
... T	56	108	89	115	52	57	162	62	72	—	52	—	825	42	5.4
... %	6.8	13.1	10.8	13.9	6.3	6.9	19.6	7.6	8.7	—	6.3	—	100.0	—	—

APPENDIX 3-2 (Concl.)

Item & Years	Dalhousie	Laval	Mon-treal	McGill	Ottawa	Queen's	To-ronto	Western Ontario	Man-itoba	Saskat-chewan	Al-berta	British Colum-bia	Total No.	Change <sup>1</sup>	Per-centage Change
1953-54 ... M	48	133	90	106	45	47	150	58	52	—	55	52	836		
F	5	1	9	4	2	6	16	3	6	—	6	2	60		
T	53	134	99	110	47	53	166	61	58	—	61	54	896	71	8.6
%	5.9	15.0	11.1	12.3	5.2	5.9	18.5	6.8	6.5	—	6.8	6.0	100.0		
1954-55 ... M	47	132	84	103	47	49	141	56	72	—	54	50	835		
F	1	2	7	9	1	6	14	4	4	—	3	8	59		
T	48	134	91	112	48	55	155	60	76	—	57	58	894	-2	-0.2
%	5.4	15.0	10.2	12.5	5.4	6.2	17.3	6.7	8.4	—	6.4	6.5	100.0		
1955-56 ... M	50	73	87	101	31	58	140	52	58	—	57	56	763		
F	1	5	9	7	1	1	11	6	6	—	2	4	53		
T	51	78	96	108	32	59	151	58	64	—	59	60	816	-78	-8.7
%	6.3	9.6	11.8	13.2	3.9	7.2	18.5	7.1	7.8	—	7.2	7.4	100.0		
1956-57 ... M	45	110	90	90	46	51	123	50	114	27	39	44	829		
F	4	3	10	7	4	5	16	4	2	2	3	4	64		
T	49	113	100	97	50	56	139	54	116 <sup>4</sup>	29	42	48	893	77	9.4
%	5.5	12.7	11.2	10.9	5.6	6.3	15.6	6.0	12.9	3.2	4.7	5.4	100.0		
1957-58 ... M	53	113	111	106	40	45	106	55	43	32	45	44	793		
F	3	7	2	2	1	—	13	2	2	6	2	3	43		
T	56	120	113	108	41	45	119	57	45	38	47	47	836	-57	-6.4
%	6.7	14.5	13.5	12.9	4.9	5.4	14.2	6.8	5.4	4.5	5.6	5.6	100.0		
1958-59 ... M	49	118	91	92	53	54	138	46	52	26	49	40	808		
F	3	6	6	6	2	2	9	5	3	4	1	4	51		
T	52	124	97	98	55	56	147	51	55	30	50	44	859	23	2.8
%	6.1	14.4	11.3	11.4	6.4	6.5	17.1	5.9	6.4	3.5	5.8	5.2	100.0		
1959-60 ... M	46	135	94	89	39	45	121	52	53	25	49	50	798		
F	4	6	7	6	4	7	17	2	1	4	1	6	65		
T	50	141	101	95	43	52	138	54	54	29	50	56	863	4	0.5
%	5.8	16.3	11.6	11.0	5.0	6.0	16.0	6.3	6.3	3.4	5.8	6.5	100.0		
1960-61 ... M	46	102	106	91	41	44	133	53	48	26	47	34	771		
F	3	6	3	12	7	4	10	4	5	—	4	5	63		
T	49	108	109	103	48	48	143	57	53	26	51	39	834	-29	-3.4
%	5.9	12.9	13.1	12.4	5.8	5.8	17.0	6.8	6.4	3.1	6.1	4.7	100.0		

1 Minus sign denotes decrease.

2 1951-1954.

3 1954.

4 1957-1959.

5 Two classes.

Source: Education Issues of the *Journal of the American Medical Association*.

APPENDIX 3-3  
NUMBER AND PER CENT DISTRIBUTION OF MEDICAL GRADUATES, CANADIAN AND FOREIGN,  
BY MEDICAL SCHOOL, 1947-48 To 1961-62

Medical School	1948						1949						1950						1951						1952					
	Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign		
	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%
	Total			Total			Total			Total			Total			Total			Total			Total			Total			Total		
Dalhousie...	33	97.1	1	2.9	34		42	97.7	1	2.3	43		45	100.0	—	—	—	—	55	98.1	1	1.9	53		52	98.1	1	1.9	53	
Laval .....	71	97.3	2	2.7	73		102	96.2	4	3.8	106		116	99.1	1	0.9	117		143	100.0	—	—	67		67	100.0	—	—	67	
Montreal....	99	97.1	3	2.9	102		82	97.6	2	2.4	84		84	100.0	—	—	84		92	100.0	—	—	86		86	100.0	—	—	86	
McGill .....	66	55.5	53	44.5	119		111	84.1	21	15.9	132		88	82.2	19	17.8	107		93	78.8	25	21.2	118		83	74.1	29	25.9	112	
Ottawa.....	—	—	—	—	—		—	—	—	—	—		—	—	—	—	—	—	45	100.0	—	—	45		46	97.9	1	2.1	47	
Queen's.....	—	—	—	—	—		43	100.0	—	—	43		46	97.9	1	2.1	47		52	100.0	—	—	50		50	100.0	—	—	50	
Toronto .....	127	96.3	4	3.1	131		156	98.7	2	1.3	158		157	98.1	3	1.9	160		172	98.3	3	1.7	175		175	99.4	1	0.6	176	
Western Ontario.....	40	100.0	—	—	40		52	100.0	—	—	52		93	100.0	—	—	93		61	100.0	—	—	61		59	98.3	1	1.7	60	
Manitoba .....	—	—	—	—	—		—	—	—	—	—		63	100.0	—	—	63		67	100.0	—	—	67		86	98.9	1	1.1	87	
Saskatchewan	—	—	—	—	—		—	—	—	—	—		—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	
Alberta.....	44	100.0	—	—	44		34	100.0	—	—	34		41	100.0	—	—	41		58	100.0	—	—	58		53	100.0	—	—	53	
British Columbia...	—	—	—	—	—		—	—	—	—	—		—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	
Canada.....	480	88.4	63	11.6	543		622	95.4	30	4.6	652		733	96.8	24	3.2	757		833	96.2	33	3.8	866		757	95.7	34	4.3	791	

APPENDIX 3-3 (Cont'd)

Medical School	1953						1954						1955						1956						1957											
	Canadian			Foreign			Total			Canadian			Foreign			Total			Canadian			Foreign			Total			Canadian			Foreign			Total		
	No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%		No.	%				
	55	98.2	1	1.8	56		53	98.1	1	1.9	54		48	100.0	—	—	48		51	100.0	—	—	51	46	93.9	3	6.1	49								
Dalhousie...	108	98.2	2	1.8	110		129	95.6	6	4.4	135		126	94.7	7	5.3	133	73	91.3	7	8.7	80	104	97.2	3	2.8	107									
Laval.....	89	95.7	4	4.3	93		93	96.9	3	3.1	96		94	94.9	5	5.1	99	94	98.9	1	1.1	95	93	93.9	6	6.1	99									
Montreal....	78	67.8	37	32.2	115		65	59.1	45	40.9	110		60	53.6	52	46.4	112	47	43.5	61	56.5	108	52	53.6	45	46.4	97									
McGill .....	45	93.8	3	6.2	48		45	100.0	—	—	45		40	88.9	5	11.1	45	25	78.1	7	21.9	32	37	74.0	13	26.0	50									
Ottawa .....	53	93.0	4	7.0	57		52	98.1	1	1.9	53		52	94.5	3	5.5	55	55	93.2	4	6.8	59	53	94.6	3	5.4	56									
Queen's .....	165	97.6	4	2.4	169		159	98.8	2	0.2	161		149	96.8	5	3.2	154	152	97.4	4	2.6	156	136	97.1	4	2.9	140									
Toronto ....																																				
Western Ontario....	57	96.6	2	3.4	59		60	100.0	—	—	60		58	96.7	2	3.3	60	57	98.3	1	1.7	58	53	98.1	1	1.9	54									
Manitoba ...	68	98.6	1	1.4	69		61	100.0	—	—	61		77	100.0	—	—	77	62	96.9	2	3.1	64	110	94.8	6	5.2	116									
Saskatchewan.....	—	—	—	—	—		—	—	—	—	—		—	—	—	—	—	—	—	—	—	—	29	100.0	—	—	29									
Alberta.....	53	100.0	—	100.0	53		63	100.0	—	—	63		55	100.0	—	—	55	58	100.0	—	—	58	46	100.0	—	—	46									
British Columbia..	—	—	—	—	—		56	98.2	1	1.8	57		58	98.3	1	1.7	59	60	100.0	—	—	60	47	94.0	3	6.0	50									
Canada....	771	93.0	58	7.0	829		836	93.4	59	6.6	895		817	91.1	80	8.9	897	734	89.4	87	10.6	821	806	90.3	87	9.7	893									



APPENDIX 3-3 (Concl.)

Medical School	1958					1959					1960					1961					1962				
	Canadian		Foreign		Total	Canadian		Foreign		Total	Canadian		Foreign		Total	Canadian		Foreign		Total	Canadian		Foreign		Total
	No.	%	No.	%		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%	
Dalhousie .	48	85.7	8	14.3	56	43	82.7	9	17.3	52	44	88.0	6	12.0	50	38	77.6	11	22.4	49	41	82.0	9	18.0	50
Laval .....	121	99.2	1	0.8	122	114	93.4	8	6.6	122	139	98.6	2	1.4	141	102	95.3	5	4.7	107	108	98.2	2	1.8	110
Montreal ...	111	99.1	1	0.9	112	101	98.1	2	1.9	103	100	99.0	1	1.0	101	111	100.0	—	—	111	97	100.0	—	—	97
McGill .....	44	40.4	65	59.6	109	45	42.1	62	57.9	107	49	51.0	47	49.0	96	42	40.0	63	60.0	105	54	52.9	48	47.1	102
Ottawa .....	33	84.6	6	15.4	39	41	74.5	14	25.5	55	35	68.6	16	31.4	51	42	80.8	10	19.2	52	35	85.4	6	14.6	41
Queen's ...	39	84.8	7	15.2	46	50	89.3	6	10.7	56	49	94.2	3	5.8	52	46	95.8	2	4.2	48	47	88.7	6	11.3	53
Toronto ...	115	93.5	8	6.5	123	142	95.9	6	4.1	148	129	92.8	10	7.2	139	143	96.6	5	3.4	148	145	96.7	5	3.3	150
Western Ontario.....	56	98.2	1	1.8	57	50	98.0	1	2.0	51	52	96.3	2	3.7	54	54	94.7	3	5.3	57	61	98.4	1	1.6	62
Manitoba ..	39	86.7	6	13.3	45	52	94.5	3	5.5	55	48	90.6	5	9.4	53	48	90.6	5	9.4	53	31	79.5	8	20.5	39
Saskatchewan.....	36	94.7	2	5.3	38	30	93.8	2	6.2	32	28	96.6	1	3.4	29	24	92.3	2	7.7	26	25	86.2	4	13.8	29
Alberta .....	43	97.7	1	2.3	44	50	100.0	—	—	50	51	98.1	1	1.9	52	49	98.0	1	2.0	50	52	98.1	1	1.9	53
British Columbia ..	45	95.7	2	4.3	47	47	100.0	—	—	47	53	94.6	3	5.4	56	37	90.2	4	9.8	41	47	90.4	5	9.6	52
Canada .....	730	87.1	108	12.9	838	765	87.1	113	12.9	878	777	88.9	97	11.1	874	736	86.9	111	13.1	847	743	88.7	95	11.3	838

APPENDIX 3-4  
PER CENT OF MEDICAL STUDENT ENROLMENT TO TOTAL UNIVERSITY STUDENT ENROLMENT  
BY SEX,<sup>1</sup>  
1947-48 to 1960-61

Year	Medical Student Enrolment				Total University Student Enrolment		
	Male		Female		Total	Male	Female
	No.	%	No.	%			
1947-48 .....	2,867	4.5	233	1.6	3,100	64,027	14,178
1948-49 .....	3,017	5.0	216	1.5	3,233	60,794	14,003
1949-50 .....	3,249	5.9	198	1.5	3,447	54,846	13,644
1950-51 .....	3,469	6.9	214	1.6	3,683	50,479	13,463
1951-52 .....	3,247	7.0	211	1.6	3,458	46,484	13,150
1952-53 .....	3,220	6.9	224	1.7	3,444	46,781	13,045
1953-54 .....	3,410	7.2	233	1.8	3,643	47,460	13,277
1954-55 .....	3,365	6.6	224	1.6	3,589	50,820	13,849
1955-56 .....	3,449	6.4	232	1.6	3,681	54,188	14,580
1956-57 .....	3,419	6.0	236	1.5	3,655	56,675	15,949
1957-58 .....	3,427	5.5	259	1.4	3,686	62,157	18,286
1958-59 .....	n.a.	-	n.a.	-	3,668	67,546	20,466
1959-60 .....	3,379	4.7	331	1.5	3,710	72,136	22,792
1960-61 .....	3,478	4.4	379	1.4	3,857	79,605	26,306

<sup>1</sup> Excluding pre-medical and additional year students the per cent of total medical student enrolment to total university student enrolment is as follows:  
1949-50 - 4.8; 1950-51 - 5.5; 1955-56 - 5.3; 1959-60 - 3.7; 1960-61 - 3.1.



APPENDIX 3-5 (Concl.)

Year	Total University Student Enrolment Minus Medical Student Enrolment					Population of University Age Group		
	Male		Female		Total	20-24 <sup>1</sup>		1,000 <sup>1</sup> Total
	No.	Per 100,000	No.	Per 100,000		Male	Female	
1947-48	61,160	11,244.7	13,945	2,531.3	75,105	543.9	550.9	1,094.8
1948-49	57,777	10,611.0	13,787	2,517.0	71,564	544.5	547.7	1,092.2
1949-50	51,597	9,280.0	13,446	2,400.6	65,033	556.0	560.1	1,116.1
1950-51	47,010	8,555.0	13,249	2,380.3	60,259	549.5	556.6	1,106.1
1951-52	43,237	8,044.2	12,939	2,347.8	56,176	537.5	551.1	1,088.6
1952-53	43,561	7,969.4	12,821	2,319.3	56,382	546.6	552.8	1,099.4
1953-54	44,050	7,969.9	13,044	2,352.8	57,094	552.7	554.4	1,107.1
1954-55	47,455	8,486.2	13,625	2,448.8	61,080	559.2	556.4	1,115.6
1955-56	50,739	9,012.2	14,348	2,567.2	65,087	563.0	558.9	1,121.9
1956-57	53,256	9,389.3	15,713	2,796.4	68,969	567.2	561.9	1,129.1
1957-58	58,730	10,113.7	18,027	3,140.6	76,757	580.7	574.0	1,154.7
1958-59	—	—	—	—	84,338	587.1	582.4	1,169.5
1959-60	68,757	11,707.3	22,461	3,839.5	91,218	587.3	585.0	1,172.3
1960-61	76,127	12,953.4	25,927	4,393.7	102,054	587.7	590.1	1,177.8

<sup>1</sup> 1947-1950 population of university age, 20-24, excludes Yukon and Northwest Territories.

<sup>2</sup> Excluding pre-medical and additional year students, the total medical students' enrolment per 100,000, population of university age group, 20-24, are as follows: 1949-50 - 297.3; 1950-51 - 315.4; 1955-56 - 325.4; 1959-60 - 302.7; and 1960-61 - 297.9.

Source: Data on medical student enrolment have been computed from the Educational Issues of the *A.M.A. Journal*; total university students enrolment has been obtained from the files of the D.B.S., Education Division, Higher Education Section.

APPENDIX 3-6  
NUMBER AND PER CENT DISTRIBUTION OF FIRST-YEAR MEDICAL STUDENTS, CANADIAN AND FOREIGN,  
BY MEDICAL SCHOOL, 1947-48 to 1961-62

Medical School	1947-48						1948-49						1949-50						1950-51						1951-52					
	Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign		
	No.		%		No.		No.		%		No.		No.		%		No.		No.		%		No.		No.		%		No.	
	Total		%		Total		Total		%		Total		Total		%		Total		Total		%		Total		Total		%		Total	
Dalhousie.....	57	98.3	1	1.7	58	57	98.3	1	1.7	58	57	98.3	1	1.7	58	57	98.3	1	1.7	58	59	100.0	—	59	59	100.0	—	—	59	59
Laval.....	91	100.0	—	—	91	123	98.4	2	1.6	125	153	96.2	6	3.8	159	153	94.4	9	5.6	162	74	90.2	8	9.8	82	74	90.2	8	9.8	82
Montreal.....	123	100.0	—	—	123	118	95.9	5	4.1	123	114	94.2	7	5.8	121	95	95.0	5	5.0	100	114	98.3	2	1.7	116	114	98.3	2	1.7	116
McGill.....	93	80.9	22	19.1	115	87	75.0	29	25.0	116	81	66.4	41	33.6	122	65	56.0	51	44.0	116	58	50.0	58	50.0	116	58	50.0	58	50.0	116
Ottawa.....	58	96.7	2	3.3	60	60	93.8	4	6.2	64	64	100.0	—	—	64	58	96.7	2	3.3	60	53	88.3	7	11.7	60	53	88.3	7	11.7	60
Queen's.....	52	100.0	—	—	52	53	100.0	—	—	53	58	95.1	3	4.9	61	60	98.4	1	1.6	61	59	96.7	2	3.3	61	59	96.7	2	3.3	61
Toronto.....	150	98.7	2	1.3	152	189	99.0	2	1.0	191	159	98.1	3	1.9	162	160	98.2	3	1.8	163	152	98.1	3	1.9	155	152	98.1	3	1.9	155
Western Ontario.....	59	98.3	1	1.7	60	60	100.0	—	—	60	58	96.7	2	3.3	60	59	100.0	—	—	59	59	98.3	1	1.7	60	59	98.3	1	1.7	60
Manitoba.....	—	—	—	—	—	—	—	—	—	—	71	100.0	—	—	71	70	97.2	2	2.8	72	63	95.5	3	4.5	66	63	95.5	3	4.5	66
Saskatchewan.....	32	100.0	—	—	32	32	100.0	—	—	32	32	100.0	—	—	32	32	100.0	—	—	32	31	100.0	—	—	31	31	100.0	—	—	31
Alberta.....	51	100.0	—	—	51	49	100.0	—	—	49	48	100.0	—	—	48	54	100.0	—	—	54	55	100.0	—	—	55	55	100.0	—	—	55
British Columbia.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada.....	766	96.5	28	3.5	794	828	95.1	43	4.9	871	895	93.4	63	6.6	958	924	92.6	74	7.4	998	836	90.8	85	9.2	921	836	90.8	85	9.2	921

APPENDIX 3-6(Cont'd)

Medical School	1952-53						1953-54						1954-55						1955-56						1956-57					
	Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign		
	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%
	Total			Total			Total			Total			Total			Total			Total			Total			Total			Total		
Dalhousie.....	57	96.1	2	3.4	59	52	89.7	6	10.3	58	48	84.2	9	15.8	57	51	91.1	5	8.9	56	47	77.0	14	23.0	61					
Laval .....	94	97.9	2	2.1	96	138	98.6	2	1.4	140	121	93.8	8	6.2	129	157	99.4	1	0.6	158	133	95.0	7	5.0	140					
Montreal .....	116	95.1	6	4.9	122	125	99.2	1	0.8	126	112	98.2	2	1.8	114	122	99.2	1	0.8	123	128	99.2	1	0.8	129					
McGill .....	47	43.5	61	56.5	108	57	50.4	56	49.6	113	50	42.7	67	57.3	117	49	42.6	66	57.4	115	58	50.0	58	50.0	116					
Ottawa .....	49	77.8	14	22.2	63	47	73.4	17	26.6	64	57	89.1	7	10.9	64	51	72.9	19	27.1	70	49	73.1	18	26.9	67					
Queen's .....	60	93.8	4	6.2	64	56	93.3	4	6.7	60	47	88.7	6	11.3	53	56	88.9	7	11.1	63	55	94.8	3	5.2	58					
Toronto .....	147	96.1	6	3.9	153	147	98.0	3	2.0	150	123	93.9	8	6.1	131	152	96.8	5	3.2	157	139	93.3	10	6.7	149					
Western Ontario .....	59	98.3	1	1.7	60	58	100.0	—	—	58	59	98.3	1	1.7	60	55	96.5	2	3.5	57	56	93.3	4	6.7	60					
Manitoba .....	71	97.3	2	2.7	73	54	88.5	7	11.5	61	56	86.2	9	13.8	65	66	90.4	7	9.6	73	61	91.0	6	9.0	67					
Saskatchewan ..	31	96.9	1	3.1	32	33	100.0	—	—	33	38	95.0	2	5.0	40	38	92.7	3	7.3	41	33	91.7	3	8.3	36					
Alberta .....	60	100.0	—	—	60	53	100.0	—	—	53	58	100.0	—	—	58	53	100.0	—	—	53	51	96.2	2	3.8	53					
British Columbia ...	59	98.3	1	1.7	60	54	90.0	6	10.0	60	53	88.3	7	11.7	60	57	96.6	2	3.4	59	55	91.7	5	8.3	60					
Canada .....	850	89.5	100	10.5	950	874	89.5	102	10.5	976	822	86.7	126	13.3	948	907	88.5	118	11.5	1,025	865	86.8	131	13.2	996					

APPENDIX 3-6 (Concl.)

Medical School	1957-58						1958-59						1959-60						1960-61						1961-62					
	Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign			Canadian			Foreign		
	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%	No.		%
	To- tal			To- tal			To- tal			To- tal			To- tal			To- tal			To- tal			To- tal			To- tal			To- tal		
Dalhousie.....	55	90.2	6	9.8	61	46	76.7	14	23.3	60	42	67.7	20	32.3	62	45	69.2	20	30.8	65	56	86.2	9	13.8	65					
Laval .....	136	98.6	2	1.4	138	122	98.4	2	1.6	124	115	99.1	1	0.9	116	125	99.2	1	0.8	126	127	99.2	1	0.8	128					
Montreal .....	119	98.3	2	1.7	121	138	97.2	4	2.8	142	114	98.3	2	1.7	116	128	99.2	1	0.8	129	129	100.0	—	—	129					
McGill .....	50	43.1	66	56.9	116	56	50.5	55	49.5	111	48	43.6	62	56.4	110	53	48.2	57	51.8	110	49	45.0	60	55.0	109					
Ottawa .....	62	86.1	10	13.9	72	57	86.4	9	13.6	66	49	81.7	11	18.3	60	61	87.1	9	12.9	70	52	74.3	18	25.7	70					
Queen's .....	57	93.4	4	6.6	61	57	90.5	6	9.5	63	59	98.3	1	1.7	60	49	96.1	2	3.9	51	57	95.0	3	5.0	60					
Toronto .....	150	96.2	6	3.8	156	157	96.3	6	3.7	163	142	94.0	9	6.0	151	137	93.2	10	6.8	147	130	89.0	16	11.0	146					
Western Ontario .....	59	95.2	3	4.8	62	57	95.0	3	5.0	60	59	96.7	2	3.3	61	58	98.3	1	1.7	59	59	98.3	1	1.7	60					
Manitoba .....	55	85.9	9	14.1	64	38	74.5	13	25.5	51	39	83.0	8	17.0	47	41	82.0	9	18.0	50	56	91.8	5	8.2	61					
Saskatchewan .....	32	94.1	2	5.9	34	26	76.5	8	23.5	34	34	85.0	6	15.0	40	36	92.3	3	7.7	39	35	87.5	5	12.5	40					
Alberta .....	55	100.0	—	—	55	49	96.1	2	3.9	51	51	89.5	6	10.5	57	64	97.0	2	3.0	66	71	98.6	1	1.4	72					
British Columbia .....	53	89.8	6	10.2	59	51	86.4	8	13.6	59	50	86.2	8	13.8	58	49	81.7	11	18.3	60	50	82.0	11	18.0	61					
Canada .....	883	88.4	116	11.6	999	854	86.8	130	13.2	984	802	85.5	136	14.5	938	846	87.0	126	13.0	972	871	87.0	130	13.0	1,001					



## APPENDIX 3-7

FIRST-YEAR MEDICAL STUDENTS PER 100,000 POPULATION,  
CANADA AND BY PROVINCE, 1952-53 to 1961-62

Province	Population ( ' 000) First-Year Medical Students Ratio Per 100,000	1952- 1953	1953- 1954	1954- 1955	1955- 1956	1956- 1957
Newfoundland .....	Population ...	374.0	383.0	395.0	406.0	415.0
	Students .....	8	14	7	15	5
	Ratio .....	2.1	3.7	1.8	3.7	1.2
Prince Edward Island	Population ...	100.0	101.0	101.0	100.0	99.3
	Students .....	13	4	9	6	8
	Ratio .....	13.0	4.0	8.9	6.0	8.1
Nova Scotia .....	Population ...	653.0	663.0	673.0	683.0	694.7
	Students .....	32	25	17	23	27
	Ratio .....	4.9	3.8	2.5	3.4	3.9
New Brunswick .....	Population ...	526.0	533.0	540.0	547.0	554.6
	Students .....	21	20	22	21	17
	Ratio .....	4.0	3.8	4.1	3.8	3.1
Quebec .....	Population ...	4,174.0	4,629.0	4,388.0	4,517.0	4,628.4
	Students .....	241	302	295	332	318
	Ratio .....	5.8	6.5	6.7	7.4	6.9
Ontario .....	Population ...	4,788.0	4,941.0	5,115.0	5,266.0	5,404.9
	Students .....	294	290	258	289	279
	Ratio .....	6.1	5.9	5.0	5.5	5.2
Manitoba .....	Population ...	798.0	809.0	823.0	839.0	850.0
	Students .....	57	43	43	59	59
	Ratio .....	7.1	5.3	5.2	7.0	6.9
Saskatchewan .....	Population ...	843.0	861.0	873.0	878.0	880.7
	Students .....	57	63	52	45	39
	Ratio .....	6.8	7.3	5.9	5.1	4.4
Alberta .....	Population ...	973.0	1,012.0	1,057.0	1,091.0	1,123.1
	Students .....	62	53	63	53	55
	Ratio .....	6.4	5.2	6.0	4.9	4.9
B.C., Yukon, N.W.T.	Population ...	1,230.0	1,273.0	1,322.0	1,371.0	1,430.0
	Students .....	65	60	56	64	58
	Ratio .....	5.3	4.7	4.2	4.7	4.1
Canada .....	Population ...	14,459.0	18,845.0	15,287.0	15,698.0	16,080.0
	Students .....	850	874	822	907	865
	Ratio .....	5.9	4.6	5.4	5.8	5.4

## APPENDIX 3-7 (Concl.)

FIRST-YEAR MEDICAL STUDENTS PER 100,000 POPULATION,  
CANADA AND BY PROVINCE, 1952-53 to 1961-62

Province	Population ( '000) First-Year Medical Students Ratio Per 100,000	1957- 1958	1958- 1959	1959- 1960	1960- 1961	1961- 1962	Average
Newfoundland	Population .	424.0	432.0	444.1	448.0	457.9	—
	Students ...	7	7	9	9	13	9.4
	Ratio .....	1.7	1.6	2.0	2.0	2.8	2.3
Prince Edward Island .....	Population .	99.0	100.0	101.0	103.0	104.6	—
	Students ...	7	5	5	7	8	7.2
	Ratio .....	7.1	5.0	5.0	6.8	7.6	7.2
Nova Scotia ..	Population .	701.0	709.0	719.0	727.0	737.0	—
	Students ..	29	30	16	22	23	24.4
	Ratio .....	4.1	4.2	2.2	3.0	3.1	3.5
New Brunswick	Population .	562.0	571.0	582.0	589.0	597.9	—
	Students ...	20	13	16	16	23	18.9
	Ratio .....	3.6	2.3	2.7	2.7	3.8	3.4
Quebec .....	Population .	4,769.0	4,904.0	5,024.0	5,142.0	5,259.2	—
	Students ...	325	322	299	319	313	306.6
	Ratio .....	6.8	6.6	6.0	6.2	6.0	6.5
Ontario .....	Population .	5,636.0	5,821.0	5,969.0	6,111.0	6,236.1	—
	Students ...	297	308	285	274	275	284.9
	Ratio .....	5.3	5.3	4.8	4.5	4.4	5.2
Manitoba .....	Population .	862.0	875.0	891.0	906.0	921.7	—
	Students ...	51	38	39	40	54	48.3
	Ratio .....	5.9	4.3	4.4	4.4	5.9	5.6
Saskatchewan.	Population .	880.0	891.0	907.0	915.0	925.2	—
	Students ...	34	34	36	41	40	44.1
	Ratio .....	3.9	3.8	4.0	4.5	4.3	5.0
Alberta .....	Population .	1,164.0	1,206.0	1,248.0	1,291.0	1,332.0	—
	Students ...	62	46	48	62	72	57.6
	Ratio .....	5.3	3.8	3.8	4.8	5.4	5.0
B.C., Yukon, N.W.T. ....	Population .	1,503.0	1,571.0	1,601.0	1,638.0	1,666.7	—
	Students ...	51	51	50	55	50	56.0
	Ratio .....	3.4	3.2	3.1	3.4	3.0	3.9
Canada .....	Population .	16,610.0	17,080.0	17,483.0	17,870.0	18,238.0	—
	Students ...	883	854	802	846	871	857.4
	Ratio .....	5.3	5.0	4.6	4.7	4.8	5.2

## APPENDIX 3-8

FIRST-YEAR MEDICAL STUDENTS PER 10,000 POPULATION  
OF UNIVERSITY AGE GROUP, 20-24,  
CANADA AND FOR PROVINCES, 1952-53 TO 1961-62

Province	Population ( '000) Students Per 10,000	1952- 1953	1953- 1954	1954- 1955	1955- 1956	1956- 1957
Newfoundland .....	Population ...	27.7	28.3	29.0	29.5	30.0
	Students .....	8	14	7	15	5
	Ratio .....	2.9	4.9	2.4	5.1	1.7
Prince Edward Island	Population ...	6.7	6.8	6.6	6.3	6.1
	Students .....	13	4	9	6	8
	Ratio .....	19.4	5.9	13.6	14.3	13.1
Nova Scotia .....	Population ...	46.5	47.0	47.4	48.2	49.1
	Students .....	32	25	17	223	27
	Ratio .....	6.9	5.3	3.6	4.8	5.5
New Brunswick .....	Population ...	36.9	36.8	36.7	36.6	36.4
	Students .....	21	20	22	21	17
	Ratio .....	5.7	5.4	6.0	5.7	4.7
Quebec .....	Population ...	343.1	343.9	346.4	349.7	353.2
	Students .....	241	302	295	332	318
	Ratio .....	7.0	8.8	8.5	9.5	9.0
Ontario .....	Population ...	357.2	360.9	364.1	364.4	365.1
	Students .....	294	290	258	289	279
	Ratio .....	8.2	8.0	7.1	7.9	7.6
Manitoba .....	Population ...	58.8	58.4	58.1	57.9	57.7
	Students .....	57	43	43	59	59
	Ratio .....	9.7	7.4	7.4	10.2	10.2
Saskatchewan .....	Population ...	62.5	62.8	62.2	60.9	59.0
	Students .....	57	63	52	45	39
	Ratio .....	9.1	10.0	8.4	7.4	6.6
Alberta .....	Population ...	74.7	78.6	80.3	81.7	82.9
	Students .....	62	53	63	53	55
	Ratio .....	8.3	6.7	7.8	6.5	6.6
B.C., Yukon & N.W.T.	Population ...	82.3	83.5	84.8	86.7	89.7
	Students .....	65	60	56	64	58
	Ratio .....	7.9	7.2	6.6	7.4	6.5
Canada .....	Population ...	1,099.4	1,107.1	1,115.6	1,121.9	1,129.1
	Students .....	850	874	822	907	865
	Ratio .....	7.7	7.9	7.4	8.1	7.7

## APPENDIX 3-8 (Concl.)

Province	Population ( '000) Students Per 10,000	1957- 1958	1958- 1959	1959- 1960	1960- 1961	1961- 1962	Average
Newfoundland	Population .	30.4	30.4	30.4	30.1	30.2	—
	Students ...	7	7	9	9	13	9.4
	Ratio .....	2.3	2.3	3.0	3.0	4.3	3.2
Prince Edward Island.....	Population .	6.0	6.3	6.4	6.4	6.3	—
	Students ...	7	5	5	7	8	7.2
	Ratio .....	11.7	7.9	7.8	10.9	12.7	11.7
Nova Scotia ..	Population .	49.1	49.3	49.5	49.4	49.3	—
	Students ...	29	30	16	22	23	24.4
	Ratio .....	5.9	6.1	3.2	4.5	4.7	5.0
New Brunswick	Population .	36.6	37.1	37.2	37.2	37.4	—
	Students ...	20	13	16	16	23	18.9
	Ratio .....	5.5	3.5	4.3	4.3	6.1	5.1
Quebec .....	Population .	356.9	358.6	360.9	364.3	369.6	—
	Students ...	325	322	299	319	313	306.6
	Ratio .....	9.1	9.0	8.3	8.8	8.5	8.6
Ontario .....	Population .	379.5	386.6	385.8	387.3	386.9	—
	Students ...	297	308	285	274	275	284.9
	Ratio .....	7.8	8.0	7.4	6.9	7.1	7.6
Manitoba .....	Population .	58.2	58.4	58.7	58.9	59.0	—
	Students ...	51	38	39	40	54	48.3
	Ratio .....	8.8	6.5	6.6	6.8	9.2	8.3
Saskatchewan.	Population .	56.4	56.8	57.4	57.2	57.0	—
	Students ...	34	34	36	41	40	44.1
	Ratio .....	6.0	6.0	6.3	7.2	7.0	7.4
Alberta .....	Population .	84.5	85.5	86.5	87.8	82.2	—
	Students ...	62	46	48	62	72	57.6
	Ratio .....	7.3	5.4	5.5	7.1	8.1	6.9
B.C., Yukon & N.W.T. ....	Population .	97.1	100.5	99.5	99.2	98.7	—
	Students ...	51	51	50	55	50	56.0
	Ratio .....	5.3	5.1	5.0	5.5	5.1	6.2
Canada .....	Population .	1,154.7	1,169.5	1,172.3	1,177.8	1,183.6	—
	Students ...	883	854	802	846	871	857.4
	Ratio .....	7.6	7.3	6.8	7.2	7.4	7.5

## APPENDIX 3-9

NUMBER OF APPLICANTS FOR MEDICAL STUDIES, BY MEDICAL SCHOOL,  
1949-50 TO 1961-62  
(At three-year intervals)

Medical School	University Years				
	1949-1950	1952-1953	1955-1956	1958-1959	1961-1962
Laval .....	-	-	-	159	206
Montreal .....	-	270	297	246	211
McGill .....	1,673	1,276	891	920	820
Ottawa .....	-	-	304	395	359
Queen's .....	199	126	113	152	153
Toronto .....	304	254	269	286	276
Western Ontario .....	99	100	110	136	130
Manitoba .....	206	141	181	158	211
Saskatchewan .....	89	60	63	65	121
Alberta .....	129	93	81	-	143
British Columbia .....	285	164	214	270	233

Source: *Medical Education in Canada*, J.A. MacFarlane, et al., a study prepared for the Royal Commission on Health Services.

## APPENDIX 4-1

## ROYAL COMMISSION ON HEALTH SERVICES

Daly Building  
P.O. Box 1173, Ottawa  
March, 1962.

Dear Doctor:

The studies undertaken by the Royal Commission on Health Services make it necessary to approach every member of the medical profession for information which will contribute to our understanding of the work of physicians and to solicit their views on certain aspects of health services. We have enlisted the aid of the Department of National Health and Welfare, The Canadian Medical Association, l'Association des Médecins de Langue Française du Canada, and the Royal College of Physicians and Surgeons of Canada in this undertaking, and the attached questionnaire is the product of their cooperation and the Commission's requirements. The present enquiry incorporates the current survey of the periodic series conducted by the Department of National Health and Welfare to obtain information about the supply and distribution of physicians in Canada.

I hope that busy practitioners will not find the task of completing these questions too burdensome and that the Commission may count on your help in establishing essential data on doctors.

You will observe that the questions are presented in two separate portions. The first relates to your qualifications, your work and your opinions. This main questionnaire should be completed and returned in the envelope addressed to the Department of National Health and Welfare. The second portion relates to the economics of medical work. It is designed to be completely anonymous and to that end should be returned to the Royal Commission on Health Services where it will be processed to obtain tables related to the financial aspects of practice and employment.

The physician is the central figure in the health services which constitute our field of study and his help is essential in our task of assessing needs and resources. The data which emerge from this inquiry will be available to the cooperating professional organizations and I hope that you will do your part by completing and returning the questionnaires at your earliest convenience.

Yours sincerely,



EMMETT M. HALL

SURVEY OF PHYSICIANS IN CANADA, 1962

Do not  
write here

1. Year of Birth\_\_\_\_\_2. Sex\_\_\_\_\_3. Birth place \_\_\_\_\_  
(province, if Canada, or country)

4. Undergraduate  
medical training: a) Name of school\_\_\_\_\_b) Year graduated \_\_\_\_\_

5. Postgraduate specialist degrees, diplomas, certificates:  

Specialties	Qualifying Body	Year Qualified
_____	_____	_____
_____	_____	_____
_____	_____	_____

6. Year first licensed to practise  
in Canada (excluding student registration)\_\_\_\_\_7. If immigrant,  
year entered Canada \_\_\_\_\_

8. Location (for major work in which now engaged) \_\_\_\_\_  
(place) (province)

9. Types of work in which now engaged: (give % of time for each)  

	% of time
Private practice:	
General .....	_____
Specialist .....	_____
Consultant (referred only) ....	_____
Junior intern .....	_____
Senior intern, resident, fellow...	_____
Hospital staff:	
Specialist services .....	_____
Other (specify) _____	_____
Research.....	_____
Teaching.....	_____
Public health .....	_____
Industrial medicine .....	_____
Other (specify or give title)	
Specialist .....	_____
Non-spec. ....	_____
Retired: Part time .....	_____
Full time <input type="checkbox"/>	_____

10. Employing agency:  
(for major source of income; check one)  

Self .....	<input type="checkbox"/>
Partnership .....	<input type="checkbox"/>
Group .....	<input type="checkbox"/>
Hospital (of auspices not shown below)	<input type="checkbox"/>
Dept. Nat'l Health and Welfare .....	<input type="checkbox"/>
Dept. Veterans Affairs .....	<input type="checkbox"/>
Canadian Pension Commission .....	<input type="checkbox"/>
Regular Armed Forces .....	<input type="checkbox"/>
Other Fed. Govt. Dept., Board or agency (specify) _____	
Prov. Dept. Health (except below) ....	<input type="checkbox"/>
Prov. Hosp. Insurance Admin. body ...	<input type="checkbox"/>
Other Prov. Dept., Board or agency (specify) _____	
County or municipality .....	<input type="checkbox"/>
University or college.....	<input type="checkbox"/>
Industry .....	<input type="checkbox"/>
Other (specify) _____	

11. Is your major work chiefly administrative? ☐ Yes ☐ No

12. If in partnership or group practice, how many are associated? \_\_\_\_\_  
(total physicians)

13. Per cent of total remuneration gained from:  

Professional fees _____%	Salaried medical work _____%	Other sources _____%
--------------------------	------------------------------	----------------------

14. If all or part of your total work \_\_\_\_\_  
time is devoted to a specialty \_\_\_\_\_  

Specialties	% of time
-------------	-----------



Do not  
write here

15. Length of time in present practice or employment (major work) \_\_\_\_\_ years

16. First practice or medical employment in Canada (excluding internship, postgraduate studies, or service in the Regular Armed Forces):
- a) Year begun \_\_\_\_\_
- b) Type of work \_\_\_\_\_
- c) Location \_\_\_\_\_ (place) \_\_\_\_\_ (province)

17. Place of residence prior to entering university training \_\_\_\_\_  
(place and province, if Canada, or country)

18. Father's occupation at time you entered university training (or earlier, if father then deceased) \_\_\_\_\_

**Prepayment and Insurance Plans**

The following questions are designed to elicit your opinions about current plans of medical insurance and possible future developments.

19. About what proportion of your current patients have some kind of medical prepayment or insurance coverage?

☐ 100%   ☐ 75-99%   ☐ 50-74%   ☐ 25-49%   ☐ Less than 25%   ☐ None

20. a) Would you be in favour of a plan which provides, as a basic benefit, in-hospital medical, surgical and obstetrical services? ..... ☐ Yes   ☐ No

b) If yes, check below the additional benefits which you would include:

Home and office calls .....	<input type="checkbox"/>	Appliances .....	<input type="checkbox"/>
Prescribed drugs .....	<input type="checkbox"/>	Dental care .....	<input type="checkbox"/>
Home nursing service .....	<input type="checkbox"/>	Ambulance service .....	<input type="checkbox"/>
Visual and hearing aids .....	<input type="checkbox"/>		

21. What expenses should the plan pay?

	Total	Part		Total	Part
a) Doctor's services .....	<input type="checkbox"/>	<input type="checkbox"/>	Appliances .....	<input type="checkbox"/>	<input type="checkbox"/>
Prescribed drugs .....	<input type="checkbox"/>	<input type="checkbox"/>	Dental care .....	<input type="checkbox"/>	<input type="checkbox"/>
Home nursing service .....	<input type="checkbox"/>	<input type="checkbox"/>	Ambulance service .....	<input type="checkbox"/>	<input type="checkbox"/>
Visual and hearing aids .....	<input type="checkbox"/>	<input type="checkbox"/>			

b) Catastrophic expenses only ..... ☐

N.B. Does your answer a) only to benefits you indicate in Q. 20? ☐ Yes   ☐ No  
to this question relate: b) to any range of benefits? ..... ☐ Yes   ☐ No

22. Which sponsorship would you prefer? (check one)

☐ Medical profession   ☐ Government   ☐ Insurance company   ☐ Other

23. Which type of patient, in your experience, is more likely to:

a) "Shop around"? .....	<input type="checkbox"/> Insured	<input type="checkbox"/> Non-insured
b) Seek early diagnosis and treatment? .....	<input type="checkbox"/> Insured	<input type="checkbox"/> Non-insured
c) Follow and complete treatment? .....	<input type="checkbox"/> Insured	<input type="checkbox"/> Non-insured
d) Demand over-servicing? .....	<input type="checkbox"/> Insured	<input type="checkbox"/> Non-insured

24. In your experience, are you likely to receive more remuneration for the same amount of service from a patient who is:

Do not  
write here

Group Practice

25. Do you think that group practice tends to:
- a) Improve the quality of medical services? ..... ☐ Yes ☐ No
  - b) Improve the availability of medical services? ..... ☐ Yes ☐ No
  - c) Improve the working conditions of doctors? ..... ☐ Yes ☐ No

Patterns of Service in Private Practice  
(including group practice and partnership)

26. For the *working* day (midnight to midnight) immediately prior to your filling in this questionnaire, please specify:

Day of the week _____	Patients Seen (No.)	Hours Spent
Type of Activity		
a) Office calls .....	_____	_____
b) Hospital calls (in- and out-patients) .....	_____	_____
c) Home visits (including travelling time):		
i) Day .....	_____	_____
ii) Night .....	_____	_____
d) Teaching and/or research .....	_____	_____
e) Other activities (specify major below): .....	_____	_____
_____ .....	_____	_____
_____ .....	_____	_____

27. Examinations and specific services performed on the *working* day (midnight to midnight) immediately prior to filling in this questionnaire (i.e., same day as for Question 26):

	Number
a) Physical examination of apparently well people:	
i) For specific purposes (e.g., insurance, employment, etc.)	_____
ii) Preventive routine (e.g., well baby, annual check up, etc.)	_____
b) Other specific services:	
i) Surgical and obstetrical procedures .....	_____
ii) Referred consultations .....	_____
iii) Special diagnostic and treatment procedures .....	_____
iv) Immunizations .....	_____
v) Other services (specify major below):	
_____ .....	_____
_____ .....	_____
_____ .....	_____

28. If in solo general practice:

a) What is the size of your practice? _____	b) How many of these potential patients are now under active or continuing treatment? _____
(persons)	(persons)

Thank you for your cooperation in filling in this questionnaire. Please mail this portion of it to the Research and Statistics Division of the Department of National Health and Welfare in the enclosed return envelope so addressed. Mail the separate anonymous supplement on medical economics directly to the Royal Commission on Health Services (special return envelope enclosed).

## APPENDIX 4-2

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS,  
BY AGE GROUP, FOR REGIONS AND CANADA, 1962

Region	Age Groups								Total
	Under 25	25— 34	35— 44	45— 54	55— 64	65— 69	70 and Over	Not Given	
<i>Atlantic Provinces</i>									
Number.....	1	173	312	205	139	21	25	—	876
Per cent.....	0.1	19.7	35.6	23.4	15.9	2.4	2.9	—	—
<i>Quebec</i>									
Number.....	10	871	935	503	377	85	57	2	2,840
Per cent.....	0.4	30.7	32.9	17.7	13.3	3.0	2.0	—	—
<i>Ontario</i>									
Number.....	13	1,035	1,527	897	596	150	156	1	4,375
Per cent.....	0.3	23.7	34.9	20.5	13.6	3.4	3.6	—	—
<i>Prairie Provinces</i>									
Number.....	11	453	838	471	224	47	43	5	2,092
Per cent.....	0.5	21.7	40.1	22.5	10.7	2.2	2.1	0.2	—
<i>British Columbia</i>									
Number.....	4	289	537	336	179	25	15	—	1,385
Per cent.....	0.3	20.9	38.7	24.3	12.9	1.8	1.1	—	—
<i>Canada<sup>1</sup></i>									
Number.....	39	2,821	4,149	2,412	1,515	328	296	8	11,568
Per cent.....	0.3	24.4	35.9	20.9	13.1	2.8	2.6	—	—

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 4-3

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN IMMIGRANT  
PHYSICIANS, BY AGE GROUP, FOR REGIONS AND CANADA, 1962

Region	Age Groups							Total
	Under 25	25- 34	35- 44	45- 54	55- 64	65- 69	70 and Over	
<i>Atlantic Provinces</i>								
Number.....	1	64	111	48	20	3	2	249
Per cent.....	0.4	25.7	44.6	19.3	8.0	1.2	0.8	—
<i>Quebec</i>								
Number.....	1	109	155	62	56	14	8	405
Per cent.....	0.2	26.9	38.3	15.3	13.8	3.5	2.0	—
<i>Ontario</i>								
Number.....	1	230	528	207	114	24	13	1,117
Per cent.....	0.1	20.6	47.3	18.5	10.2	2.1	1.2	—
<i>Prairie Provinces</i>								
Number.....	—	152	354	172	86	18	6	788
Per cent.....	—	19.3	44.9	21.8	10.9	2.3	0.8	—
<i>British Columbia</i>								
Number.....	—	87	181	83	58	7	2	418
Per cent.....	—	20.8	43.3	19.9	13.9	1.7	0.4	—
<i>Canada</i> <sup>1</sup>								
Number.....	3	642	1,329	572	334	66	31	2,977
Per cent.....	0.1	21.6	44.6	19.2	11.2	2.2	1.1	—

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 4-4

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN SPECIALIST  
PHYSICIANS, BY AGE GROUP, FOR REGIONS AND CANADA, 1962

Region	Age Groups						Total
	25- 34	35- 44	45- 54	55- 64	65- 69	70 and Over	
<i>Atlantic Provinces</i>							
Number .....	29	133	75	63	7	4	311
Per cent .....	9.3	42.8	24.1	20.2	2.3	1.3	—
<i>Quebec</i>							
Number .....	145	504	285	174	33	23	1,164
Per cent .....	12.5	43.3	24.5	14.9	2.8	2.0	—
<i>Ontario</i>							
Number .....	148	605	336	227	43	40	1,399
Per cent .....	10.6	43.2	24.0	16.2	3.1	2.9	—
<i>Prairie Provinces</i>							
Number .....	83	342	198	92	11	11	737
Per cent .....	11.2	46.4	26.4	12.5	1.5	1.5	—
<i>British Columbia</i>							
Number .....	29	180	141	77	10	4	441
Per cent .....	6.6	40.8	32.0	17.5	2.3	1.0	—
<i>Canada<sup>1</sup></i>							
Number .....	434	1,764	1,035	633	104	82	4,052
Per cent .....	10.7	43.4	25.5	15.6	2.6	2.0	—

<sup>1</sup>Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 4-5A  
NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN ACTIVE CIVILIAN PHYSICIANS, BY YEARS  
SINCE FIRST LICENSED TO PRACTISE IN CANADA, FOR REGIONS AND CANADA, 1962

Years Since First Licensed to Practise in Canada	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada <sup>1</sup>	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Less than 5.....	65	10.5	412	19.0	391	12.4	199	15.9	128	13.6	1,195	14.7
5 - 9 .....	102	16.5	471	21.8	558	17.6	238	19.0	189	20.1	1,558	19.1
10 - 14.....	103	16.7	405	18.7	529	16.7	212	16.9	158	16.8	1,407	17.3
15 - 19.....	93	15.0	225	10.4	403	12.7	206	16.4	152	16.2	1,079	13.3
20 - 24.....	68	11.0	182	8.4	380	12.0	137	10.9	102	10.9	869	10.7
25 - 29 .....	60	9.7	160	7.4	305	9.6	105	8.4	103	11.0	733	9.0
30 - 34.....	60	9.7	123	5.7	211	6.7	70	5.6	50	5.3	514	6.3
35 - 39 .....	32	5.2	99	4.6	180	5.7	41	3.3	43	4.6	395	4.8
40 and Over .....	35	5.7	86	4.0	208	6.6	45	3.6	14	1.5	388	4.8
Total Reporting.....	618	100.0	2,163	100.0	3,165	100.0	1,253	100.0	939	100.0	8,138	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

**APPENDIX 4-5B**  
**NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN IMMIGRANT PHYSICIANS,**  
**BY YEARS SINCE FIRST LICENSED TO PRACTISE IN CANADA,**  
**FOR REGIONS AND CANADA, 1962**

Years Since First Licensed to Practise in Canada	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada <sup>1</sup>	
	Number Report- ing	Per cent	Number Report- ing	Per cent	Number Report- ing	Per cent	Number Report- ing	Per cent	Number Report- ing	Per cent	Number Report- ing	Per cent
Less than 5 years .....	95	42.8	104	32.9	284	27.3	237	32.0	106	26.5	826	30.2
5 - 9 .....	69	31.1	109	32.4	374	36.0	259	35.0	126	31.5	937	34.2
10 - 14 .....	27	12.2	39	11.6	210	20.2	125	16.9	78	19.5	479	17.5
15 - 19 .....	13	5.9	18	5.4	57	5.5	23	3.1	27	6.8	138	5.0
20 - 24 .....	6	2.7	14	4.1	29	2.8	23	3.1	16	4.0	88	3.2
25 - 29 .....	6	2.7	10	3.0	28	2.7	26	3.5	22	5.5	92	3.4
30 - 34 .....	4	1.8	18	5.4	21	2.0	24	3.2	14	3.5	81	3.0
35 - 39 .....	1	0.4	8	2.4	21	2.0	14	1.9	9	2.2	53	1.9
40 and Over .....	1	0.4	16	4.8	15	1.5	10	1.3	2	0.5	44	1.6
Total .....	222		336		1,039		741		400		2,738	

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 4-6  
NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN AND IMMIGRANT ACTIVE  
CIVILIAN PHYSICIANS BY FATHER'S OCCUPATION, FOR REGIONS AND CANADA, 1962

Father's Occupational Groups <sup>1</sup>	Canadian-born Physicians										Canada <sup>2</sup>	
	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Number Report- ing	Per cent of Total
	Number Report- ing	Per cent of Total	Number Report- ing	Per cent of Total	Number Report- ing	Per cent of Total	Number Report- ing	Per cent of Total	Number Report- ing	Per cent of Total		
Proprietors and managers.....	177	28.5	638	26.5	828	25.7	330	25.4	230	24.2	2,203	25.8
Physicians and surgeons.....	68	10.9	285	11.9	454	14.0	146	11.3	99	10.4	1,052	12.4
Other professional.....	106	17.1	367	15.3	641	19.8	210	16.1	205	21.5	1,529	18.0
Clerical.....	23	3.7	135	5.6	140	4.3	58	4.5	37	3.9	393	4.6
Transportation and communication.....	36	5.8	89	3.7	83	2.5	43	3.3	42	4.4	293	3.4
Commercial and financial.....	33	5.3	130	5.4	178	5.5	72	5.6	43	4.5	456	5.4
Service .....	12	1.9	40	1.7	53	1.6	26	2.0	20	2.1	151	1.8
Agriculture .....	72	11.6	299	12.4	354	10.9	262	20.2	116	12.2	1,103	13.0
Fishing, trapping, logging and mining ....	15	2.4	14	0.6	34	1.1	13	1.0	18	1.9	94	1.1
Manufacturing, mechanical and construction.....	50	8.1	263	10.9	335	10.4	88	6.8	93	9.8	829	9.7
Unskilled workers .....	13	2.1	72	3.0	61	1.9	18	1.4	16	1.7	180	2.1
Retired .....	8	1.3	31	1.3	56	1.7	18	1.4	20	2.1	133	1.6
Not stated <sup>3</sup> .....	8	1.3	40	1.7	18	0.6	13	1.0	13	1.3	92	1.1
Total.....	621	100.0	2,403	100.0	3,235	100.0	1,297	100.0	952	100.0	8,508	100.0



## APPENDIX 4-6 (Concl.)

Father's Occupational Groups <sup>1</sup>	Immigrant Physicians									
	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia	
	Number Reporting	Per cent of Total	Number Reporting	Per cent of Total	Number Reporting	Per cent of Total	Number Reporting	Per cent of Total	Number Reporting	Per cent of Total
Proprietors and managers.....	73	29.9	137	34.7	282	25.5	214	27.4	101	24.6
Physicians and surgeons.....	37	15.2	49	12.4	172	15.6	88	11.3	71	17.4
Other professional.....	52	21.2	91	23.0	323	29.1	215	27.6	95	23.2
Clerical.....	17	6.9	20	5.1	66	6.0	58	7.4	26	6.3
Transportation and communication.....	5	2.0	5	1.3	16	1.4	12	1.5	8	2.0
Commercial and financial.....	8	3.2	12	3.0	36	3.3	23	3.0	15	3.7
Service.....	14	5.8	8	2.0	22	2.0	32	4.1	12	2.9
Agriculture.....	15	6.1	23	5.8	57	5.2	68	8.8	25	6.1
Fishing, trapping, logging and mining.....	1	0.4	—	—	5	0.5	2	0.2	3	0.7
Manufacturing, mechanical and construction.....	18	7.3	26	6.6	70	6.3	40	5.1	32	7.8
Unskilled workers.....	1	0.4	3	0.8	22	2.0	4	0.5	1	0.2
Retired.....	1	0.4	9	2.3	14	1.3	10	1.3	12	2.9
Not stated <sup>3</sup> .....	3	1.2	12	3.0	20	1.8	14	1.8	9	2.2
Total.....	245	100.0	395	100.0	1,105	100.0	780	100.0	410	100.0
									2,935	100.0

<sup>1</sup> Father's occupation at time of entering university training or earlier, if father then deceased.<sup>2</sup> Excludes Yukon and Northwest Territories.<sup>3</sup> Includes some who were unemployed.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 4-7  
CHOICE OF REGION OF FIRST PRACTICE BY CANADIAN-BORN PHYSICIANS,  
FOR REGIONS AND CANADA, 1962

Region of Present Practice	Region of Residence before Entry to Medical School	Region of First Practice					Outside of Canada	Total Reporting Physicians	
		Atlantic Provinces	Quebec	Ontario	Prairie Provinces	British Columbia		Number	Per cent
Atlantic Provinces.....	Atlantic Provinces.....	472	87.9%	7	3	3	6	506	94.2
	Quebec.....	4	2	2	—	—	—	8	1.5
	Ontario.....	8	—	7	—	1	—	16	3.0
	Prairie Provinces.....	3	1	—	1	—	—	5	0.9
	British Columbia.....	—	—	—	—	1	1	2	0.4
Quebec.....	Total and Per cent.....	487	90.7	16	4	5	7	537	7.6
	Atlantic Provinces.....	14	3.4	—	—	—	—	19	1.0
	Quebec.....	49	1,588	74	19	10	11	1,751	95.3
	Prairie Provinces.....	2	86.4%	31	4	—	—	46	2.5
	British Columbia.....	1	2	1	11	—	1	16	0.9
Ontario.....	Total and Per cent.....	66	3.6	3	—	1	—	5	0.3
	Atlantic Provinces.....	25	1,605	109	34	11	12	1,837	26.1
	Quebec.....	3	18	10	1	1	—	37	1.4
	Prairie Provinces.....	44	62	25	6	3	—	55	2.0
	British Columbia.....	2	3	2,231	125	21	22	2,505	91.9
Prairie Provinces.....	Total and Per cent.....	74	2.7	19	5	10	—	36	1.3
	Atlantic Provinces.....	9	85	2,322	184	38	23	2,726	38.7
	Quebec.....	1	2	1	—	—	—	10	0.9
	Ontario.....	1	—	4	3	—	—	10	0.9
	British Columbia.....	15	14	32	22	1	1	57	5.2
British Columbia.....	Total and Per cent.....	26	2.4	6	18	4	—	28	2.6
	Atlantic Provinces.....	3	16	116	888	27	19	1,092	15.5
	Quebec.....	2	6	1	—	—	—	4	0.5
	Ontario.....	2	1	5	2	2	—	15	1.8
	British Columbia.....	24	12	8	9	10	1	51	6.0
Canada <sup>1</sup> .....	Total and Per cent.....	30	3.5	87	186	329	7	645	15.7
	Atlantic Provinces.....	523	20	19	310	349	8	848	12.1
	Quebec.....	57	1,616	110	4	4	6	576	8.2
	Ontario.....	57	72	2,329	30	15	11	1,839	26.1
	British Columbia.....	22	23	1,017	160	33	24	2,675	38.0
Total and Per cent.....		683	9.7	115	209	345	8	716	10.2
Total and Per cent.....		683	24.8	38.2	20.2	430	6.1	7,040	1.0

<sup>1</sup> Excludes Yukon and Northwest Territories.  
Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 4-8

NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN  
ACTIVE CIVILIAN PHYSICIANS, BY SIZE OF COMMUNITY OF  
RESIDENCE AT TIME OF ENTRY TO MEDICAL SCHOOL AND SIZE  
OF COMMUNITY OF FIRST PRACTICE, FOR REGIONS AND CANADA

Region of Present Practice and Size of Community of First Practice	Size of Community of Residence at Time of Entry to Medical School							
	Under 10,000 Population		10,000 and Under 100,000 Population		100,000 and Over Population		Total	
	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent
<i>Atlantic Provinces</i>								
Number reporting .....	291	50.0	114	19.6	177	30.4	582	—
Under 10,000 population .....	176	60.5	32	28.1	58	32.8	266	45.7
10,000 and under 100,000 pop..	63	21.6	60	52.6	32	18.1	155	26.6
100,000 and over population ...	52	17.9	22	19.3	87	49.1	161	27.7
<i>Quebec</i>								
Number reporting .....	631	28.1	338	15.1	1,275	56.8	2,244	—
Under 10,000 population .....	299	47.4	46	13.5	149	11.7	494	22.0
10,000 and under 100,000 pop..	170	26.9	199	59.0	340	26.7	709	31.6
100,000 and over population ...	162	25.7	93	27.5	786	61.6	1,041	46.4
<i>Ontario</i>								
Number reporting .....	781	25.1	561	18.0	1,768	56.9	3,110	—
Under 10,000 population .....	306	39.2	96	17.1	258	14.6	660	21.2
10,000 and under 100,000 pop..	224	28.7	291	51.9	479	27.1	994	32.0
100,000 and over population ...	251	32.1	174	31.0	1,031	58.3	1,456	46.8
<i>Prairie Provinces</i>								
Number reporting .....	442	36.8	153	12.7	607	50.5	1,202	—
Under 10,000 population .....	227	51.4	47	30.7	174	28.7	448	37.3
10,000 and under 100,000 pop..	90	20.4	59	38.6	127	20.9	276	23.0
100,000 and over population ...	125	28.2	47	30.7	306	50.4	478	39.7
<i>British Columbia</i>								
Number reporting .....	249	27.3	129	14.1	535	58.6	913	—
Under 10,000 population .....	111	44.6	35	27.1	166	31.0	312	34.2
10,000 and under 100,000 pop..	41	16.5	39	30.2	87	16.3	167	18.3
100,000 and over population ...	97	38.9	55	42.7	282	52.7	434	47.5
<i>Canada<sup>1</sup></i>								
Number reporting .....	2,394	29.7	1,295	16.1	4,362	54.2	8,051	—
Under 10,000 population .....	1,119	46.7	256	19.8	805	18.5	2,180	27.1
10,000 and under 100,000 pop..	588	24.6	648	50.0	1,065	24.4	2,301	28.6
100,000 and over population ...	687	28.7	391	30.2	2,492	57.1	3,570	44.3

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 4-9  
DISTRIBUTION OF CANADIAN-BORN ACTIVE CIVILIAN PHYSICIANS,  
BY SCHOOL OF UNDERGRADUATE MEDICAL TRAINING IN CANADA AND YEARS SINCE GRADUATION,  
FOR REGIONS AND CANADA, 1962<sup>1</sup>

School of Undergraduate Medical Training	Years since Graduation	Region of Present Practice										Total	
		Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Number	Per cent of all Universities
<i>Dalhousie</i> ...	Less than 10 .....	120		5		28		6		5		164	
	10 - 19 .....	129		7		16		9		13		174	
	20 - 29 .....	85		4		12		4		6		111	
	30 - 39 .....	58		3		5		2		1		69	
	40 and over .....	21		—		—		—		—		21	
	Not stated .....	—		—		—		—		—		—	
	Total and per cent .....	413	76.6	19	3.5	61	11.3	21	3.9	25	4.7	539	6.4
<i>Laval</i> .....	Less than 10 .....	10		354		8		8		—		380	
	10 - 19 .....	12		254		17		4		2		289	
	20 - 29 .....	5		144		5		4		1		159	
	30 - 39 .....	6		96		2		—		—		104	
	40 and over .....	3		32		—		1		—		36	
	Not stated .....	—		1		—		—		—		1	
	Total and .....	36	3.7	881	90.9	32	3.3	17	1.8	3	0.3	969	11.5
<i>Montreal</i> .....	Less than 10 .....	2		345		6		—		—		353	
	10 - 19 .....	5		261		9		—		—		275	
	20 - 29 .....	1		130		5		1		—		137	
	30 - 39 .....	—		89		5		2		—		96	
	40 and over .....	—		33		3		2		—		38	
	Not stated .....	—		2		1		—		—		3	
	Total and .....	8	0.9	860	95.3	29	3.2	5	0.6	—	—	902	10.6
<i>McGill</i> .....	Less than 10 .....	8		108		27		16		20		179	
	10 - 19 .....	27		144		59		27		70		327	
	20 - 29 .....	25		109		38		12		39		223	
	30 - 39 .....	22		62		33		13		28		158	
	40 and over .....	10		31		18		7		11		77	
	Not stated .....	—		2		—		—		1		3	
	Total and .....	92	9.5	456	47.2	175	18.1	75	7.8	169	17.4	967	11.4
<i>Ottawa</i> .....	Less than 10 .....	1		19		60		6		8		94	
	10 - 19 .....	6		5		21		2		2		36	
	20 - 29 .....	—		—		—		—		—		—	
	30 - 39 .....	—		—		—		—		—		—	
	40 and over .....	—		—		—		—		—		—	
	Not stated .....	—		1		1		—		—		2	
	Total and .....	7	5.3	25	18.9	82	62.1	8	6.1	10	7.6	132	1.6
<i>Queen's</i> .....	Less than 10 .....	—		25		122		11		14		172	
	10 - 19 .....	6		11		117		22		34		190	
	20 - 29 .....	3		—		112		17		14		146	
	30 - 39 .....	2		5		69		4		6		86	
	40 and over .....	1		1		36		5		3		46	
	Not stated .....	—		—		1		—		—		1	
	Total and .....	12	1.9	42	6.6	457	71.3	59	9.2	71	11.0	641	7.6

## APPENDIX 4-9 (Concl.)

School of Under-graduate Medical Training	Years since Graduation	Region of Present Practice										Total	
		Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Number	Per cent of all Universities
Toronto .....	Less than 10 .....	3		26		454		14		27		524	
	10 - 19 .....	4		10		519		44		45		622	
	20 - 29 .....	7		10		381		35		50		483	
	30 - 39 .....	3		6		278		13		35		335	
	40 and over .....	1		—		146		9		4		160	
	Not stated .....	—		—		4		—		—		4	
	Total and per cent .....	18	0.8	52	2.4	1,782	83.8	115	5.4	161	7.6	2,128	25.2
Western Ontario .....	Less than 10 .....	—		17		168		7		4		196	
	10 - 19 .....	—		8		154		18		18		198	
	20 - 29 .....	—		6		89		5		8		108	
	30 - 39 .....	—		2		56		2		1		61	
	40 and over .....	—		—		19		2		—		21	
	Not stated .....	—		—		1		—		—		1	
	Total and per cent .....	—	—	33	5.6	487	83.3	34	5.8	31	5.3	585	6.9
Manitoba .....	Less than 10 .....	—		7		15		143		35		200	
	10 - 19 .....	1		4		33		167		53		258	
	20 - 29 .....	—		5		26		120		63		214	
	30 - 39 .....	2		2		13		72		29		118	
	40 and over .....	—		1		—		23		1		25	
	Not stated .....	—		—		—		2		—		2	
	Total and per cent .....	3	0.4	19	2.3	87	10.6	527	64.5	181	22.2	817	9.7
Saskatchewan .....	Less than 10 .....	—		2		3		47		6		58	
	10 - 19 .....	—		—		—		—		—		—	
	20 - 29 .....	—		—		—		—		—		—	
	30 - 39 .....	—		—		—		—		—		—	
	40 and over .....	—		—		—		—		—		—	
	Not stated .....	—		—		4		4		5		13	
	Total and per cent .....	—	—	2	2.8	7	9.9	51	71.8	11	15.5	71	0.8
Alberta .....	Less than 10 .....	—		6		13		130		31		180	
	10 - 19 .....	2		1		4		133		59		199	
	20 - 29 .....	—		—		7		78		43		128	
	30 - 39 .....	—		1		3		14		14		32	
	40 and over .....	—		—		—		—		—		—	
	Not stated .....	—		—		—		—		—		—	
	Total and per cent .....	2	0.4	8	1.5	27	5.0	355	65.9	147	27.2	539	6.4
British Columbia .....	Less than 10 .....	1		8		10		3		129		151	
	10 - 19 .....	—		—		—		—		—		—	
	20 - 29 .....	—		—		—		—		—		—	
	30 - 39 .....	—		—		—		—		—		—	
	40 and over .....	—		—		—		—		—		—	
	Not stated .....	—		—		—		—		7		7	
	Total and per cent .....	1	0.6	8	5.1	10	6.3	3	1.9	136	86.1	158	1.9
All Universities .....	Less than 10 .....	145	24.5	922	38.3	914	28.2	391	30.8	279	29.5	2,651	31.4
	10 - 19 .....	192	32.4	705	29.3	949	29.3	426	33.5	296	31.3	2,568	30.4
	20 - 29 .....	126	21.3	408	17.0	675	20.9	276	21.7	224	23.7	1,709	20.2
	30 - 39 .....	93	15.7	266	11.1	464	14.3	122	9.6	114	12.1	1,059	12.6
	40 and over .....	36	6.1	98	4.1	222	6.9	49	3.9	19	2.0	424	5.0
	Not stated .....	—	—	6	0.2	12	0.4	6	0.5	13	1.4	37	0.4
	Total and per cent .....	592	7.0	2,405	28.5	3,236	38.3	1,270	15.0	945	11.2	8,448	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 4-10

ACTIVE CIVILIAN PHYSICIANS IN RELATION TO POPULATION AND AREA, BY  
COUNTY OR CENSUS DIVISION, FOR PROVINCES, 1961

Province and County or Census Division	Population June, 1961	Per cent of Urban Population	Physi- cians June, 1961	Physician- Population Ratio	Square Miles per Physician
<i>Newfoundland</i>					
Div. 1 (St. John's) .....	188,904	62.4	139	1:1,359	26.0
Div. 2 (Grand Bank) .....	24,779	36.3	6	1:4,130	288.3
Div. 3 (Port aux Basques) ..	23,299	35.3	9	1:2,589	890.2
Div. 4 (Stephenville) .....	24,185	43.5	8	1:3,023	339.3
Div. 5 (Cornerbrook) .....	39,086	74.7	20	1:1,954	119.6
Div. 6 (Grand Falls) .....	38,045	77.1	17	1:2,238	564.2
Div. 7 (Bonavista) .....	39,652	27.2	8	1:4,957	319.5
Div. 8 (Lewisporte) .....	44,659	18.3	11	1:4,060	282.6
Div. 9 (St. Anthony) .....	21,710	13.8	5	1:4,342	1,367.2
Div. 10 (Goose Bay) .....	13,534	43.6	7	1:1,933	15,347.9
<i>Total Nfld.</i> .....	457,853	50.7	230	1:1,991	621.9
<i>Prince Edward Island</i>					
Div. 1 (Kings) .....	17,893	14.9	7	1:2,556	91.6
Div. 2 (Prince) .....	40,894	23.5	28	1:1,461	27.9
Div. 3 (Queens) .....	45,842	47.2	56	1: 819	13.7
<i>Total P.E.I.</i> .....	104,629	32.4	91	1:1,150	24.0
<i>Nova Scotia</i>					
Div. 1 (Annapolis) .....	22,649	13.1	12	1:1,887	107.1
Div. 2 (Antigonish) .....	14,360	30.3	12	1:1,197	45.1
Div. 3 (Cape Breton) .....	131,507	82.5	89	1:1,478	10.9
Div. 4 (Colchester) .....	34,307	49.3	22	1:1,559	66.0
Div. 5 (Cumberland) .....	37,767	52.8	25	1:1,511	67.3
Div. 6 (Digby) .....	20,216	11.4	16	1:1,264	60.6
Div. 7 (Guysborough) .....	13,274	17.3	6	1:2,212	268.5
Div. 8 (Halifax) .....	225,723	75.9	353	1: 639	5.8
Div. 9 (Hants) .....	26,444	19.7	15	1:1,763	81.9
Div. 10 (Inverness) .....	18,718	18.5	9	1:2,080	156.6
Div. 11 (Kings) .....	41,747	28.0	45	1: 928	18.7
Div. 12 (Lunenburg) .....	34,998	24.7	24	1:1,458	48.7
Div. 13 (Pictou) .....	43,908	61.4	30	1:1,464	37.5
Div. 14 (Queens) .....	13,155	28.2	8	1:1,644	122.9
Div. 15 (Richmond) .....	11,374	—	6	1:1,896	81.5
Div. 16 (Shelburne) .....	15,208	23.9	9	1:1,690	108.8
Div. 17 (Victoria) .....	8,266	—	3	1:2,755	368.3
Div. 18 (Yarmouth) .....	23,386	36.9	22	1:1,063	38.1
<i>Total N.S.</i> .....	737,007	54.3	706	1:1,044	29.4
<i>New Brunswick</i>					
Div. 1 (Albert) .....	12,485	31.4	8	1:1,561	85.1
Div. 2 (Carleton) .....	23,507	22.7	16	1:1,469	81.3
Div. 3 (Charlotte) .....	23,285	34.1	13	1:1,791	95.6
Div. 4 (Gloucester) .....	66,343	19.9	29	1:2,288	63.9
Div. 5 (Kent) .....	26,667	10.9	8	1:3,333	216.8
Div. 6 (Kings) .....	25,908	19.2	27	1: 960	50.9
Div. 7 (Madawaska) .....	38,983	44.4	23	1:1,695	54.9
Div. 8 (Northumberland) ....	50,035	30.1	14	1:3,574	333.6
Div. 9 (Queens) .....	11,640	11.7	4	1:2,910	343.3
Div. 10 (Restigouche) .....	40,973	51.4	36	1:1,138	90.1
Div. 11 (Saint John) .....	89,251	88.1	118	1: 756	5.2
Div. 12 (Sunbury) .....	22,796	59.2	2	1:1,398	539.5
Div. 13 (Victoria) .....	19,712	26.6	11	1:1,792	188.5
Div. 14 (Westmorland) .....	93,679	60.9	99	1: 946	14.4
Div. 15 (York) .....	52,672	58.0	47	1:1,121	75.4
<i>Total N.B.</i> .....	597,936	46.5	455	1: 1,314	60.4

## APPENDIX 4-10 (Cont.)

Province and County or Census Division	Population June, 1961	Per cent of Urban Population	Physicians June, 1961	Physician- Population Ratio	Square Miles per Physician
<i>Quebec</i>					
Div. 1 (Abitibi) .....	108,313	45.3	42	1:2,579	1,826.8
Div. 2 (Argenteuil) .....	31,830	52.3	19	1:1,675	41.2
Div. 3 (Arthabaska) .....	45,301	60.4	26	1:1,742	25.6
Div. 4 (Bagot) .....	21,390	31.1	8	1:2,674	43.3
Div. 5 (Beauce) .....	62,264	42.1	42	1:1,482	26.9
Div. 6 (Beauharnois) .....	49,667	85.8	28	1:1,774	5.3
Div. 7 (Bellechasse) .....	26,054	4.4	11	1:2,369	59.4
Div. 8 (Berthier) .....	27,325	44.0	12	1:2,277	151.3
Div. 9 (Bonaventure) .....	42,962	3.1	15	1:2,864	230.9
Div. 10 (Brome) .....	13,691	23.0	5	1:2,738	97.6
Div. 11 (Chambly) .....	146,745	97.3	126	1:1,165	1.1
Div. 12 (Champlain) .....	111,953	69.6	73	1:1,534	117.6
Div. 13 & 14 (Charlevoix) ...	31,012	41.6			123.1
Div. 13 (Charlevoix E) .....	16,450	50.0	11	1:1,495	
Div. 14 (Charlevoix O) .....	14,562	32.1	7	1:2,080	
Div. 15 (Chateauguay) .....	34,042	63.4	19	1:1,792	13.9
Div. 16 (Chicoutimi) .....	157,196	78.5	165	1: 956	107.9
Div. 17 (Compton) .....	24,410	35.0	10	1:2,441	93.3
Div. 18 (Deux Montagnes) ...	32,837	43.0	21	1:1,564	13.3
Div. 19 (Dorchester) .....	34,711	17.6	21	1:1,653	40.1
Div. 20 (Drummond) .....	58,220	71.2	34	1:1,712	15.6
Div. 21 (Frontenac) .....	30,600	28.6	14	1:2,186	97.9
Div. 22, 23, 24 (Gaspé) .....	74,341	24.2			126.6
Div. 22 (Gaspé - Est) .....	41,333	21.5	21	1:1,968	
Div. 23 (Gaspé - Ouest) ....	20,529	44.4	12	1:1,711	
Div. 24 (Îles de la Madeleine) .....	12,479	—	4	1:3,120	
Div. 25, 26 (Hull) .....	129,111	78.1			28.9
Div. 25 (Hull) .....	84,803	96.7	59	1:1,437	
Div. 26 (Gatineau) .....	44,308	42.5	30	1:1,477	
Div. 27 (Huntingdon) .....	14,752	21.2	5	1:2,950	72.2
Div. 28 (Iberville) .....	18,080	42.0	10	1:1,808	19.8
Div. 29 (Joliette) .....	44,969	55.4	36	1:1,249	69.6
Div. 30 (Kamouraska) .....	27,138	27.6	12	1:2,262	86.5
Div. 31 (Labelle) .....	29,084	34.7	10	1:2,908	239.2
Div. 32 & 33 (Lac St. Jean) .	105,230	53.9			354.2
Div. 32 (Lac St. Jean Est) ..	43,920	69.0	29	1:1,514	
Div. 33 (Lac St. Jean Ouest).	61,310	43.1	38	1:1,613	
Div. 34 (La Prairie) .....	31,157	73.1	15	1:2,077	11.3
Div. 35 (L'Assomption) .....	39,440	63.8	22	1:1,793	11.2
Div. 36 (Levis) .....	51,842	73.7	50	1:1,037	5.4
Div. 37 (L'Islet) .....	24,798	18.7	13	1:1,908	59.5
Div. 38 (Lotbinière) .....	30,234	12.4	14	1:2,160	51.9
Div. 39 (Maskinonge) .....	21,274	28.8	12	1:1,773	198.2
Div. 40 & 41 (Matane) .....	70,664	37.5			147.0
Div. 40 (Matane) .....	35,078	40.9	13	1:2,698	
Div. 41 (Matapédia) .....	35,586	47.3	10	1:3,559	
Div. 42 (Mégantic) .....	57,400	65.2	34	1:1,688	22.9
Div. 43 (Missisquoi) .....	59,526	55.1	18	1:1,640	20.8
Div. 44 (Montcalm) .....	18,766	31.1	6	1:3,128	649.0
Div. 45 (Montmagny) .....	26,450	35.6	13	1:2,035	48.5
Div. 46 - 47 (Montmorency) ..	25,708	36.6			157.0
Div. 46 (Montmorency #1) ...	20,734	45.4	9	1:2,304	
Div. 47 ( " #2, Ile-D'Orléans) .....	4,974	—	5	1: 995	
Div. 48 & 49 (Montreal & Jesus Islands) ..	1,872,437	99.7			0.1
Div. 48 (Ile de Montréal) ....	1,747,696	99.7	3,442	1: 508	
Div. 49 (Ile Jésus) .....	124,741	98.8	101	1:1,235	

## APPENDIX 4-10 (Cont'd)

Province and County or Census Division	Population June, 1961	Per cent of Urban Population	Physicians June, 1961	Physician- Population Ratio	Square Miles per Physician
Div. 50 (Napierville) .....	11,216	36.4	7	1:1,602	21.3
Div. 51 (Nicolet) .....	30,827	14.4	16	1:1,927	39.1
Div. 52 (Papineau) .....	32,697	50.5	14	1:2,336	112.9
Div. 53 (Pontiac) .....	19,947	22.0	10	1:1,995	956.0
Div. 54 (Portneuf) .....	50,711	41.9	27	1:1,878	53.3
Div. 55 (Quebec) .....	331,307	92.2	646	1: 513	4.2
Div. 56 (Richelieu) .....	38,565	75.0	24	1:1,607	9.2
Div. 57 (Richmond) .....	42,232	64.0	21	1:2,011	25.9
Div. 58 (Rimouski) .....	65,295	50.1	48	1:1,360	43.5
Div. 59 (Rouville) .....	25,979	50.3	11	1:2,362	22.1
Div. 60 (Saguenay) .....	81,900	55.8	38	1:2,155	8,294.1
Div. 61 (Shefford) .....	54,963	65.5	34	1:1,617	16.7
Div. 62 (Sherbrooke) .....	80,490	87.3	108	1: 745	2.2
Div. 63 (Soulanges) .....	10,075	10.2	3	1:3,358	45.3
Div. 64 (Stanstead) .....	36,095	69.9	23	1:1,569	18.8
Div. 65 (St. Hyacinthe) .....	44,993	69.9	45	1:1,000	6.2
Div. 66 (St. Jean) .....	38,470	73.2	27	1:1,425	7.6
Div. 67 (St. Maurice) .....	109,873	84.0	118	1: 931	15.4
Div. 68 (Temiscamingue) .....	60,288	57.1	31	1:1,945	289.6
Div. 69 & 70 (Temiscouata) .....	69,318	40.5			56.8
Div. 69 (Rivière du Loup) .....	40,239	44.4	21	1:1,916	
Div. 70 (Temiscouata) .....	29,079	35.0	12	1:2,423	
Div. 71 (Terrebonne) .....	102,275	72.2	78	1:1,311	10.0
Div. 72 (Vaudreuil) .....	28,681	60.4	18	1:1,593	11.2
Div. 73 (Vercheres) .....	25,697	55.9	21	1:1,224	9.5
Div. 74 (Wolfe) .....	18,335	24.6	7	1:2,619	97.1
Div. 75 (Yamaska) .....	16,058	9.7	7	1:2,071	52.1
<i>Total Quebec</i> .....	5,259,211	74.3	6,167	1: 853	84.9
<i>Ontario</i>					
Div. 1 (Algoma) .....	111,408	73.1	72	1:1,547	268.3
Div. 2 (Brant) .....	83,839	75.9	92	1: 911	4.6
Div. 3 (Bruce) .....	43,036	34.9	29	1:1,484	56.9
Div. 4 (Carleton) .....	352,932	92.1	627	1: 563	1.5
Div. 5 (Cochrane) .....	95,666	66.2	67	1:1,428	779.7
Div. 6 (Dufferin) .....	16,095	36.2	12	1:1,341	46.4
Div. 7 (Dundas) .....	17,162	32.8	12	1:1,430	32.0
Div. 8 (Durham) .....	39,916	46.6	25	1:1,597	25.2
Div. 9 (Elgin) .....	62,862	48.9	72	1: 873	10.0
Div. 10 (Essex) .....	258,218	81.4	328	1: 787	2.2
Div. 11 (Frontenac) .....	87,534	72.5	232	1: 377	6.9
Div. 12 (Glengarry) .....	19,217	13.5	11	1:1,747	43.5
Div. 13 (Grenville) .....	22,864	40.5	16	1:1,429	28.9
Div. 14 (Grey) .....	62,005	48.4	52	1:1,192	32.8
Div. 15 (Haldimand) .....	28,197	33.5	17	1:1,659	28.7
Div. 16 (Haliburton) .....	8,928	—	4	1:2,232	371.5
Div. 17 (Halton) .....	106,967	88.8	125	1: 856	2.9
Div. 18 (Hastings) .....	93,377	59.7	73	1:1,279	31.8
Div. 19 (Huron) .....	53,805	33.7	37	1:1,454	35.0
Div. 20 (Kenora) .....	51,474	48.1	35	1:1,471	4,377.7
Div. 21 (Kent) .....	89,427	56.8	83	1:1,077	11.1
Div. 22 (Lambton) .....	102,131	67.1	106	1: 964	10.6
Div. 23 (Lanark) .....	40,313	57.1	40	1:1,008	28.5
Div. 24 (Leeds) .....	46,889	50.9	52	1: 902	17.3
Div. 25 (Lennox and Addington) .....	23,717	19.0	13	1:1,824	90.0
Div. 26 (Lincoln) .....	126,674	74.9	167	1: 759	2.0
Div. 27 (Manitoulin) .....	11,176	13.7	5	1:2,235	317.6
Div. 28 (Middlesex) .....	221,422	82.0	462	1: 479	2.7



## APPENDIX 4-10 (Cont'd)

Province and County or Census Division	Population June, 1961	Per cent of Urban Population	Physicians June, 1961	Physician- Population Ratio	Square Miles per Physician
<i>Ontario (Cont.)</i>					
Div. 29 (Muskoka) .....	26,705	34.4	22	1:1,214	72.0
Div. 30 (Nipissing) .....	70,568	61.1	60	1:1,176	126.0
Div. 31 (Norfolk) .....	50,475	34.6	25	1:2,019	25.4
Div. 32 (Northumberland) ....	41,892	42.6	30	1:1,396	24.5
Div. 33 (Ontario) .....	135,895	79.3	128	1:1,062	6.7
Div. 34 (Oxford) .....	70,499	51.4	69	1:1,022	11.1
Div. 35 (Parry Sound) .....	29,632	31.5	20	1:1,482	216.8
Div. 36 (Peel) .....	111,575	78.0	131	1: 852	3.6
Div. 37 (Perth) .....	57,452	57.4	51	1:1,127	16.5
Div. 38 (Peterborough) .....	76,375	72.6	87	1: 878	16.3
Div. 39 (Prescott) .....	27,226	46.9	19	1:1,433	26.0
Div. 40 (Prince Edward) ....	21,108	28.1	18	1:1,173	21.7
Div. 41 (Rainy River) .....	26,531	65.3	16	1:1,658	454.8
Div. 42 (Renfrew) .....	89,635	52.7	47	1:1,907	64.0
Div. 43 (Russell) .....	20,892	26.0	8	1:2,612	50.9
Div. 44 (Simcoe) .....	141,271	51.0	124	1:1,139	13.4
Div. 45 (Stormont) .....	57,867	75.4	48	1:1,206	8.6
Div. 46 (Sudbury) .....	165,862	71.4	146	1:1,136	123.7
Div. 47 (Thunder Bay) .....	138,518	80.1	125	1:1,108	419.8
Div. 48 (Temiskaming) .....	50,971	65.2	40	1:1,274	147.4
Div. 49 (Victoria) .....	29,750	47.0	28	1:1,063	48.1
Div. 50 (Waterloo) .....	176,754	83.7	198	1: 893	2.6
Div. 51 (Welland) .....	164,741	81.1	148	1:1,113	2.6
Div. 52 (Wellington) .....	84,702	65.0	92	1: 921	11.1
Div. 53 (Wentworth) .....	358,837	90.4	465	1: 772	1.0
Div. 54 (York) .....	1,733,108	97.4	3,029	1: 572	0.3
<i>Total Ontario</i> .....	6,236,092	77.3	8,040	1: 776	41.5
<i>Manitoba</i>					
Div. 1 .....	28,734	13.0	12	1:2,395	138.8
Div. 2 .....	36,105	29.5	16	1:2,257	123.9
Div. 3 .....	21,980	7.9	14	1:1,570	182.2
Div. 4 .....	14,217	16.5	9	1:1,580	274.0
Div. 5 .....	31,402	32.9	15	1:2,093	87.8
Div. 6 .....	30,929	40.1	15	1:2,062	119.5
Div. 7 .....	49,536	59.1	41	1:1,208	61.8
Div. 8 .....	21,617	28.3	13	1:1,663	166.2
Div. 9 .....	11,832	12.0	6	1:1,972	190.3
Div. 10 .....	19,296	28.0	14	1:1,378	134.4
Div. 11 .....	13,447	—	5	1:2,689	546.0
Div. 12 .....	28,686	6.4	10	1:2,869	789.3
Div. 13 .....	12,880	9.8	9	1:1,431	194.2
Div. 14 .....	6,702	20.4	2	1:3,351	465.0
Div. 15 .....	14,906	21.2	7	1:2,129	482.7
Div. 16 .....	46,781	47.8	28	1:1,671	5,782.1
Div. 17 .....	21,323	39.5	10	1:2,132	166.4
Div. 18 .....	15,403	—	1	1:15,403	3,652.0
Div. 19 .....	19,921	6.2	6	1:3,320	1,354.2
Div. 20 .....	475,989	97.8	887	1: 537	0.3
<i>Total Man.</i> .....	921,686	63.9	1,120	1: 823	189.1
<i>Saskatchewan</i>					
Div. 1 .....	38,875	23.4	22	1:1,767	270.2
Div. 2 .....	33,760	30.1	29	1:1,164	230.6
Div. 3 .....	28,245	14.1	17	1:1,661	449.8
Div. 4 .....	17,925	24.8	14	1:1,280	541.4
Div. 5 .....	45,396	25.1	21	1:2,162	274.3
Div. 6 .....	154,400	74.8	257	1: 601	26.4

## APPENDIX 4-10 (Concl.)

Province and County or Census Division	Population June, 1961	Per Cent of Urban Population	Physicians June, 1961	Physician- Population Ratio	Square Miles per Physician
<i>Saskatchewan (Cont'd)</i>					
Div. 7 .....	61,340	55.8	50	1:1,227	149.4
Div. 8 .....	41,328	39.0	30	1:1,378	308.8
Div. 9 .....	50,021	30.1	31	1:1,614	161.6
Div. 10 .....	33,977	8.8	15	1:2,265	324.0
Div. 11 .....	125,846	78.1	293	1: 430	20.4
Div. 12 .....	28,283	24.0	12	1:2,357	498.5
Div. 13 .....	32,994	23.4	18	1:1,833	380.4
Div. 14 .....	54,564	21.8	31	1:1,760	432.9
Div. 15 .....	83,669	34.3	54	1:1,549	151.7
Div. 16 .....	45,020	27.3	39	1:1,154	208.4
Div. 17 .....	28,830	19.2	12	1:2,403	576.1
Div. 18 .....	20,708	19.1	6	1:3,451	19,251.5
<i>Total Sask. ....</i>	<i>925,181</i>	<i>43.0</i>	<i>951</i>	<i>1: 973</i>	<i>231.5</i>
<i>Alberta</i>					
Div. 1 .....	39,140	71.1	31	1:1,263	260.6
Div. 2 .....	83,306	56.6	89	1: 936	78.0
Div. 3 .....	30,967	41.3	22	1:1,408	217.9
Div. 4 .....	15,020	17.6	8	1:1,878	1,059.3
Div. 5 .....	38,115	15.0	21	1:1,815	310.5
Div. 6 .....	317,989	89.4	359	1: 886	13.8
Div. 7 .....	40,837	22.1	29	1:1,408	261.4
Div. 8 .....	76,533	44.2	57	1:1,343	99.2
Div. 9 .....	20,274	61.9	10	1:2,027	1,777.5
Div. 10 .....	70,177	23.2	48	1:1,462	170.1
Div. 11 .....	410,679	85.1	609	1: 674	9.2
Div. 12 .....	47,310	20.8	20	1:2,366	2,512.1
Div. 13 .....	45,431	14.8	16	1:2,839	586.1
Div. 14 .....	19,282	40.4	9	1:2,142	1,331.1
Div. 15 .....	76,884	22.6	28	1:2,746	3,310.2
<i>Total Alberta ....</i>	<i>1,331,944</i>	<i>63.3</i>	<i>1,356</i>	<i>1: 982</i>	<i>183.5</i>
<i>British Columbia</i>					
Div. 1 .....	34,244	52.8	25	1:1,370	639.4
Div. 2 .....	70,707	54.9	59	1:1,198	226.2
Div. 3 .....	94,646	50.7	82	1:1,154	130.8
Div. 4 .....	907,531	85.2	1,476	1: 615	6.6
Div. 5 .....	290,835	68.1	350	1: 830	37.7
Div. 6 .....	66,290	37.0	53	1:1,251	592.8
Div. 7 .....	21,325	64.7	16	1:1,333	1,386.7
Div. 8 .....	74,240	38.0	47	1:1,580	1,531.6
Div. 9 .....	38,203	65.1	26	1:1,469	3,389.5
Div. 10 .....	31,061	46.9	16	1:1,941	5,158.3
<i>Total B.C. ....</i>	<i>1,629,082</i>	<i>72.6</i>	<i>2,150</i>	<i>1: 758</i>	<i>167.1</i>
<i>Yukon</i>					
<i>Total Yukon ....</i>	<i>14,628</i>	<i>34.4</i>	<i>9</i>	<i>1:1,625</i>	<i>22,816.2</i>
<i>Northwest Territories</i>					
<i>Total N.W.T. ....</i>	<i>22,998</i>	<i>36.5</i>	<i>15</i>	<i>1:1,533</i>	<i>83,562.5</i>
<i>Canada ....</i>	<i>18,238,247</i>	<i>69.6</i>	<i>21,290</i>	<i>1: 857</i>	<i>166.7</i>

Source: Census of Canada, 1961, Advance Report No. AP-4, June 28, 1962, DBS Census (Demography) Division and Occupation and Employment Section.

**APPENDIX 4-11A**  
**NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN ACTIVE CIVILIAN PHYSICIANS**  
**BY TYPE OF WORK, FOR REGIONS AND CANADA, 1962**

Region	Private Practice			Internship			Hospital Staff			Re- search	Teach- ing	Public Health	Indus. Medi- cine	Other	Total
	Gen. Pract.	Spec. ialist	Con- sultant	Total	Junior	Senior	Total	Spec- ialist	Other	Total					
<i>Atlantic Provinces</i>															
Number reporting ..	260	194	21	475	1	25	26	35	22	57	2	8	29	4	625
Per cent of total ..	41.6	31.0	3.4	76.0	0.2	4.0	4.2	5.6	3.5	9.1	0.3	1.3	4.6	0.6	3.9
<i>Quebec</i>															
Number reporting ..	755	816	61	1,632	31	308	339	177	43	220	59	31	95	36	2,434
Per cent of total ..	31.0	33.5	2.5	67.0	1.3	12.6	13.9	7.3	1.8	9.1	2.4	1.3	3.9	1.5	0.9
<i>Ontario</i>															
Number reporting ..	1,170	820	257	2,247	92	245	337	232	39	271	72	46	113	50	3,254
Per cent of total ..	36.0	25.2	7.9	69.1	2.8	7.5	10.3	7.1	1.2	8.3	2.2	1.4	3.5	1.5	3.7
<i>Prairie Provinces</i>															
Number reporting ..	484	419	40	943	40	91	131	70	25	95	12	39	31	4	1,301
Per cent of total ..	37.2	32.2	3.1	72.5	3.1	7.0	10.1	5.4	1.9	7.3	0.9	3.0	2.4	0.3	3.5
<i>British Columbia</i>															
Number reporting ..	381	270	71	722	11	56	67	54	12	66	12	20	30	3	967
Per cent of total ..	39.5	27.9	7.3	74.7	1.1	5.8	6.9	5.6	1.2	6.8	1.2	2.1	3.1	0.3	4.9
<i>Canada<sup>1</sup></i>															
Number reporting ..	3,050	2,519	450	6,019	175	725	900	568	141	709	157	144	298	97	8,581
Per cent of total ..	35.5	29.4	5.2	70.1	2.0	8.5	10.5	6.7	1.6	8.3	1.8	1.7	3.6	1.1	3.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 4-11B  
NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN IMMIGRANT PHYSICIANS  
BY TYPE OF WORK, FOR REGIONS AND CANADA, 1962

Region	Private Practice			Internship			Hospital Staff			Re- search	Teach- ing	Public Health	Indus. Medi- cine	Other	Total
	Gen. Pract.	Spec- ialist	Consul- tant	Total	Junior	Senior	Total	Spec- ialist	Other						
<i>Atlantic Provinces</i>															
Number reporting ..	61	36	6	103	3	24	27	47	10	57	3	6	20	1	249
Per cent of total ..	24.5	14.5	2.4	41.4	1.2	9.6	10.8	18.9	4.0	22.9	1.2	2.4	8.0	0.4	12.9
<i>Quebec</i>															
Number reporting ..	61	124	6	191	15	82	97	49	10	59	30	11	5	7	407
Per cent of total ..	14.9	30.5	1.5	46.9	3.7	20.1	23.8	12.0	2.6	14.6	7.4	2.7	1.2	1.7	1.7
<i>Ontario</i>															
Number reporting ..	381	232	83	696	27	108	135	118	16	134	50	29	34	10	1,119
Per cent of total ..	34.0	20.8	7.4	62.2	2.4	9.7	12.1	10.5	1.4	11.9	4.5	2.6	3.0	0.9	2.8
<i>Prairie Provinces</i>															
Number reporting ..	285	171	23	479	9	46	55	79	24	103	14	20	60	4	786
Per cent of total ..	36.3	21.8	2.9	61.0	1.2	5.8	7.0	10.1	3.0	13.1	1.8	2.5	7.6	0.5	6.5
<i>British Columbia</i>															
Number reporting ..	178	83	32	293	6	27	33	34	8	42	12	1	26	2	418
Per cent of total ..	42.5	19.9	7.7	70.1	1.4	6.5	7.9	8.1	1.9	10.0	2.9	0.2	6.2	0.5	2.2
<i>Canada<sup>1</sup></i>															
Number reporting ..	966	646	150	1,762	60	287	347	327	68	395	109	67	145	24	2,979
Per cent of total ..	32.4	21.7	5.0	59.1	2.0	9.6	11.6	11.0	2.3	13.3	3.7	2.2	4.9	0.8	4.4

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

**APPENDIX 4-12A**  
**NUMBER AND PER CENT DISTRIBUTION OF CANADIAN-BORN ACTIVE PHYSICIANS,**  
**BY AUSPICES OF EMPLOYMENT, FOR REGIONS AND CANADA, 1962**

	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada <sup>1</sup>	
	Number reporting	Per cent	Number reporting	Per cent	Number reporting	Per cent	Number reporting	Per cent	Number reporting	Per cent	Number reporting	Per cent
<i>Private practice</i>												
Self-employed .....	352	61.8	1,337	57.7	1,652	54.7	389	31.7	353	38.4	4,083	50.8
Partnership .....	63	11.1	166	7.2	360	11.9	295	24.0	248	27.0	1,132	14.0
Group practice .....	59	10.4	136	5.9	234	7.8	259	21.1	123	13.3	811	10.0
Total .....	474	83.4	1,639	70.8	2,246	74.4	943	76.8	724	78.7	6,026	74.8
<i>Federal Government</i> .....	15	2.6	32	1.4	62	2.0	35	2.8	28	3.1	172	2.1
<i>Provincial Government</i> .....	36	6.3	57	2.5	114	3.8	38	3.1	28	3.1	273	3.4
<i>County or Municipality</i> .....	1	0.2	23	1.0	38	1.3	15	1.2	10	1.1	87	1.1
<i>University or College</i> .....	10	1.8	56	2.4	93	3.1	53	4.3	31	3.3	243	3.0
<i>Industry</i> .....	2	0.4	30	1.3	36	1.2	1	0.1	1	0.1	70	0.9
<i>Hospital</i> <sup>2</sup> .....	25	4.4	459	19.8	377	12.5	138	11.2	81	8.8	1,080	13.5
<i>Other</i> .....	6	1.0	18	0.8	52	1.7	6	0.5	15	1.6	97	1.2
Total .....	569	100.0	2,314	100.0	3,018	100.0	1,229	100.0	918	100.0	8,048	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Includes personnel in hospitals of auspices not shown above.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 4-12B  
NUMBER AND PER CENT DISTRIBUTION OF IMMIGRANT ACTIVE PHYSICIANS,  
BY AUSPICES OF EMPLOYMENT, FOR REGIONS AND CANADA, 1962

Auspices of Work	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada <sup>1</sup>	
	Number report- ing	Per cent	Number report- ing	Per cent	Number report- ing	Per cent	Number report- ing	Per cent	Number report- ing	Per cent	Number report- ing	Per cent
<i>Private practice</i>												
Self-employed .....	69	27.7	158	38.8	514	45.9	203	25.8	182	43.5	1,126	37.8
Partnership .....	14	5.6	18	4.4	101	9.0	148	18.8	65	15.6	346	11.6
Group practice .....	18	7.2	15	3.7	82	7.3	128	16.2	46	11.0	289	9.7
Total .....	101	40.6	191	46.9	697	62.3	479	60.8	293	70.1	1,761	59.1
<i>Federal Government</i> .....	13	5.2	22	5.4	35	3.1	30	3.8	23	5.5	123	4.1
<i>Provincial Government</i> ...	93	37.4	5	1.2	84	7.5	103	13.1	32	7.7	317	10.6
<i>County or Municipality</i> ...	3	1.2	2	0.5	31	2.8	44	5.6	12	2.9	92	3.1
<i>University or College</i> ....	10	4.0	39	9.6	55	4.9	45	5.7	11	2.6	160	5.4
<i>Industry</i> .....	3	1.2	6	1.5	10	0.9	3	0.4	3	0.7	25	0.8
<i>Hospital</i> <sup>2</sup> .....	23	9.2	134	32.9	177	15.8	75	9.5	41	9.8	450	15.1
<i>Other</i> .....	3	1.2	8	2.0	30	2.7	9	1.1	3	0.7	53	1.8
Total .....	249	100.0	407	100.0	1,119	100.0	788	100.0	418	100.0	2,981	100.0

<sup>1</sup> Excludes Yukon and Northwest Territories.  
<sup>2</sup> Includes personnel in hospitals of auspices not shown above.  
Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



APPENDIX 4-13A (Concl.)

Type of Present Major Work																			Total Number reporting			
Region of Present Practice and Type of Major Work of First Practice																						
Gen.	Private Practice					Consultant					Hospital Staff				Research		Teaching		Public Health		Indust. Medicine	
	Pract.	Specialist		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		Per cent of pres. work		
Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	
<i>Prairie Provinces</i>																						
Private Practice:																						
General	479	98.8	133	31.5	14	34.1	10	14.2	4	15.4	2	15.4	2	5.1	9	25.7	—	653	57.5			
Specialist	4	0.8	279	66.1	3	7.3	2	2.9	—	—	—	—	1	2.6	—	—	—	290	25.5			
Consultant	—	—	—	—	23	56.1	56	80.0	21	80.8	—	—	1	2.6	—	—	—	24	2.1			
Hospital Staff	—	—	—	—	1	2.4	2	2.9	1	3.8	11	84.6	31	79.4	26	74.3	3	82	7.2			
Other	2	0.4	10	2.4	—	—	2	2.9	1	3.8	—	—	—	—	—	—	—	86	7.7			
Total	485	100.0	422	100.0	41	100.0	70	100.0	26	100.0	13	100.0	39	100.0	35	100.0	4	1,135	100.0			
Per cent of total rep.	42.7		37.2		3.6		6.2		2.3		1.1		3.4		3.1		0.4	100.0				
<i>British Columbia</i>																						
Private Practice:																						
General	376	98.1	99	36.7	11	15.3	11	20.4	1	8.3	1	8.3	2	10.0	2	6.7	2	505	59.0			
Specialist	6	1.6	156	57.8	23	31.9	2	3.7	—	—	—	—	4	20.0	—	—	—	191	22.3			
Consultant	—	—	2	0.7	37	51.4	—	—	—	—	1	8.3	—	—	—	—	—	40	4.7			
Hospital Staff	—	—	2	0.7	1	1.4	39	72.2	8	66.7	1	8.3	—	—	6	20.0	1	58	6.8			
Other	1	0.3	11	4.1	—	—	2	3.7	3	25.0	9	75.0	14	70.0	22	73.3	—	62	7.2			
Total	383	100.0	270	100.0	72	100.0	54	100.0	12	100.0	12	100.0	20	100.0	30	100.0	3	856	100.0			
Per cent of total rep.	44.8		31.5		8.4		6.3		1.4		1.4		2.3		3.5		0.4	100.0				
<i>Canada<sup>1</sup></i>																						
Private Practice:																						
General	2,921	95.5	653	25.9	63	13.9	128	22.0	47	33.1	17	10.2	10	6.9	122	40.3	55	4,016	53.8			
Specialist	23	0.8	1,718	68.0	184	40.7	46	7.9	9	6.3	2	1.2	28	19.3	11	3.6	4	2,025	27.1			
Consultant	—	—	3	0.1	181	40.0	1	0.2	—	—	3	1.8	2	1.4	—	—	—	190	2.5			
Hospital Staff	5	0.2	17	0.7	6	1.3	382	65.7	70	49.3	1	0.6	7	4.8	17	5.6	1	506	6.8			
Other	108	3.5	132	5.3	18	4.1	24	4.2	16	11.3	143	86.2	98	67.6	153	50.5	37	729	9.8			
Total	3,057	100.0	2,523	100.0	452	100.0	581	100.0	142	100.0	166	100.0	145	100.0	303	100.0	97	7,466	100.0			
Per cent of total rep.	40.9		33.8		6.1		7.8		1.9		2.2		1.9		4.1		1.3	100.0				

<sup>1</sup> Excludes Yukon and Northwest Territories.  
Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.



## APPENDIX 4-13B

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE IMMIGRANT PHYSICIANS, BY TYPE OF MAJOR WORK OF FIRST PRACTICE  
AND TYPE OF MAJOR WORK IN WHICH ENGAGED IN 1962, FOR REGIONS AND CANADA

Region of Present Practice and Type of Major Work of First Practice	Type of Present Major Work														Total number reporting			
	Private Practice				Hospital Staff				Research		Teaching		Public Health				Industr. Medicine	
	Gen.	Pract.	Specialist		Consultant		Specialist		Other		Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work
			Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work								
<i>Atlantic Provinces</i>																		
Private practice:																		
General .....	48	78.7	6	16.7	3	50.0	3	6.4	2	20.0	—	—	3	15.0	1	100.0	66	34.7
Specialist .....	1	1.6	25	69.4	14	16.7	—	29.7	—	—	—	—	1	5.0	—	—	42	22.1
Consultant .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hospital staff .....	2	3.3	1	2.8	24	51.1	6	51.1	6	60.0	1	16.7	1	5.0	—	—	35	18.4
Other .....	10	16.4	4	11.1	2	33.3	2	12.8	2	20.0	3	83.3	15	75.0	—	—	47	24.7
Total .....	61	100.0	36	100.0	6	100.0	47	100.0	10	100.0	3	100.0	20	100.0	1	1,000	190	100.0
Per cent of total reporting .....	32.1		18.9		3.2		24.7		5.3		1.6		10.5		0.5		100.0	
<i>Quebec</i>																		
Private practice:																		
General .....	47	77.0	18	14.5	—	—	1	2.0	3	30.0	5	16.7	1	9.1	1	20.0	77	25.4
Specialist .....	4	6.6	92	74.2	5	83.3	22	44.9	—	—	2	6.7	2	40.0	2	28.6	129	42.6
Consultant .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hospital staff .....	1	1.6	2	1.6	—	—	20	40.8	6	60.0	3	10.0	—	—	1	14.3	33	10.9
Other .....	9	14.8	12	9.7	1	16.7	6	12.3	1	10.0	20	66.6	10	90.9	2	42.8	64	21.1
Total .....	61	100.0	124	100.0	6	100.0	49	100.0	10	100.0	30	100.0	11	100.0	5	100.0	303	100.0
Per cent of total reporting .....	20.1		40.9		2.0		16.2		3.3		9.9		3.6		1.7		100.0	
<i>Ontario</i>																		
Private practice:																		
General .....	331	86.9	57	24.6	14	16.9	8	6.8	3	18.8	6	12.0	2	6.9	11	32.4	436	45.8
Specialist .....	3	0.8	148	63.8	52	62.6	35	29.7	—	—	8	16.0	4	13.8	—	—	250	26.2
Consultant .....	—	—	1	0.4	12	14.5	—	—	—	—	1	2.0	—	—	—	—	14	1.5
Hospital staff .....	5	1.3	6	2.6	3	3.6	63	53.4	12	75.0	1	2.0	3	10.3	7	20.6	100	10.5
Other .....	42	11.0	20	8.6	2	2.4	12	10.1	1	6.2	34	68.0	20	69.0	16	47.0	153	16.0
Total .....	381	100.0	232	100.0	83	100.0	118	100.0	16	100.0	50	100.0	29	100.0	34	100.0	953	100.0
Per cent of total reporting .....	40.0		24.3		8.7		12.4		1.7		5.2		3.0		3.6		100.0	

APPENDIX 4-13B (Concl.)

Region of Present Practice and Type of Major Work of First Practice	Type of Present Major Work																	Total Number reporting			
	Private Practice						Hospital Staff				Research		Teaching		Public Health					Industr. Medicine	
	Gen. Pract.		Specialist		Consultant		Specialist		Other		Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.	Per cent of pres. work	Num-ber of rep.		Per cent of pres. work
	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work	Num-ber rep.	Per cent of pres. work											
Prairie Provinces	General	244	85.6	42	24.6	1	4.3	9	11.4	8	33.3	2	14.3	2	10.0	8	13.3	2	50.0	318	46.8
	Specialist	4	1.4	105	61.4	17	73.9	16	20.3	1	4.2	1	7.1	6	30.0	3	5.0	—	—	153	22.5
	Consultant	—	—	2	1.2	3	13.0	—	—	—	—	—	—	—	—	—	—	—	—	5	0.7
	Hospital staff	9	3.2	14	8.1	—	—	45	57.0	13	54.2	—	—	—	—	4	6.7	—	—	85	12.5
	Other	28	9.8	8	4.7	2	8.8	9	11.3	2	8.3	11	78.6	12	60.0	45	75.0	2	50.0	119	17.5
Total	285	100.0	171	100.0	23	100.0	79	100.0	24	100.0	14	100.0	20	100.0	60	100.0	4	100.0	680	100.0	
Per cent of total reporting	41.9		25.2		3.4		11.6		3.5		2.1		2.9		8.8		0.6		100.0		
British Columbia	General	155	87.1	25	30.2	7	21.9	4	11.8	2	25.0	1	8.3	—	—	9	34.6	—	—	203	54.0
	Specialist	1	0.6	50	60.2	14	43.9	13	38.2	1	12.5	1	8.3	—	—	1	3.8	—	—	81	21.5
	Consultant	—	—	—	—	5	15.6	—	—	—	—	—	—	—	—	—	—	—	—	5	1.3
	Hospital staff	4	2.2	4	4.8	2	6.3	16	47.1	3	37.5	—	—	—	—	1	3.8	—	—	30	8.0
	Other	18	10.1	4	4.8	4	12.5	1	2.9	2	25.0	10	83.4	1	100.0	15	57.9	2	100.0	57	15.2
Total	178	100.0	83	100.0	32	100.0	34	100.0	8	100.0	12	100.0	1	100.0	26	100.0	2	100.0	376	100.0	
Per cent of total reporting	47.3		22.1		8.5		9.1		2.1		3.2		0.3		6.9		0.5		100.0		
Canada <sup>1</sup>	General	825	85.4	148	22.9	25	16.7	25	7.6	18	26.5	14	12.8	5	7.5	32	22.1	8	33.3	1,100	44.0
	Specialist	13	1.3	420	65.0	89	59.4	100	30.6	2	2.9	12	11.0	10	14.9	7	4.8	2	8.3	655	26.1
	Consultant	—	—	3	0.5	20	13.3	—	—	—	—	1	0.9	—	—	—	—	—	—	24	1.0
	Hospital staff	21	2.2	27	4.2	5	3.3	168	51.4	40	58.8	4	3.7	4	6.0	13	9.0	1	4.2	283	11.3
	Other	107	11.1	48	7.4	11	7.3	34	10.4	8	11.8	78	71.6	48	71.6	93	64.1	13	54.2	440	17.6
Total	966	100.0	646	100.0	150	100.0	327	100.0	68	100.0	109	100.0	67	100.0	145	100.0	24	100.0	2,502	100.0	
Per cent of total reporting	38.6		25.7		6.0		13.1		2.7		4.4		2.7		5.8		1.0		100.0		

<sup>1</sup> Excludes Yukon and Northwest Territories.  
Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 4-14

CERTIFIED AND NON-CERTIFIED CIVILIAN SPECIALISTS,  
BY PROVINCES AND CANADA, 1951-1961

Province	Specialists						Percentage Increase in Total 1951-1961
	1951			1961			
	Certi- fied	Non- Certi- fied	Total	Certi- fied	Non- Certi- fied	Total	
Newfoundland .....	1	18	19	64	68	132	794.7
Prince Edward Island.....	18	3	21	29	21	50	138.1
Nova Scotia .....	135	38	173	236	106	342	97.7
New Brunswick.....	114	21	135	199	71	270	100.0
Quebec .....	906	373	1,279	2,443	691	3,134	145.0
Ontario .....	1,620	266	1,886	2,912	1,154	4,066	115.6
Manitoba .....	181	78	259	357	233	590	127.8
Saskatchewan .....	149	35	184	293	159	452	145.7
Alberta .....	219	56	275	529	198	727	164.4
British Columbia .....	452	96	548	863	240	1,103	101.3
Canada <sup>1</sup> .....	3,795	984	4,779	7,925	2,941	10,866	127.4

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Department of National Health and Welfare, Research Division, *Survey of Physicians in Canada June 1951*, Tables 12 and 13, pp. 18-19; data for 1961 certified specialists taken from the *Brief from the Royal College of Physicians and Surgeons of Canada*, submitted to the Royal Commission on Health Services, February, 1962, Appendix I, Table 2; and data for 1961 non-certified specialists taken from *Canadian Mailings Limited 1961*.

APPENDIX 4-15  
DISTRIBUTION OF CIVILIAN CERTIFIED SPECIALISTS BY PROVINCES AND PER CENT OF SPECIALISTS TO TOTAL SPECIALISTS IN SPECIALTY, SEPTEMBER 1, 1961

Province	Medical Specialties						Surgical Specialties							
	Population June 1961	Total Physicians June 1961	Internal Medicine	Anaesthesia	Dermatology	Paediatrics	Physical Medicine and Rehabilitation	Public Health	General Surgery	Neuro- surgery	Orthopaedic Surgery	Plastic Surgery	Thoracic Surgery	Urology
Newfoundland .....	457,853 2.5	230 1.1	9 0.7	7 1.0	-	5 0.9	-	2 1.3	15 0.9	1 1.6	4 1.6	-	2 10.5	1 0.5
Prince Edward Island	104,629 0.6	91 0.4	4 0.3	2 0.3	-	2 0.4	-	-	8	-	-	-	-	-
Nova Scotia .....	737,007 4.0	706 3.3	33 2.4	17 2.5	2 1.6	13 2.4	2 5.7	5 3.3	70 4.2	(1) 1 1.6	4 1.6	-	(1) 1 5.3	(1) 4 2.2
New Brunswick .....	597,936 3.3	455 2.1	24 1.7	16 2.4	2 1.6	9 1.6	1 2.9	2 1.3	67 4.0	1 1.6	4 1.6	-	-	5 2.7
Quebec .....	5,259,211 28.9	6,167 29.0	513 37.2	191 28.4	40 31.7	165 30.0	11 31.4	59 39.4	461 27.6	20 32.7	(2) 83 37.7	(1) 14 40.0	(1) 6 31.6	52 28.1
Ontario .....	6,236,092 34.3	8,040 37.8	472 34.2	247 36.7	53 42.0	219 39.6	(2) 11 31.4	38 25.4	631 37.8	(1) 15 24.6	(1) 54 24.4	(1) 13 37.1	(1) 3 15.8	(1) 61 33.0
Manitoba .....	921,686 5.1	1,120 5.3	63 4.6	34 5.1	5 4.0	36 6.5	1 2.9	5 3.3	63 3.8	(1) 3 4.9	(1) 15 6.8	(1) 1 2.9	(1) 2 10.5	(1) 9 4.9
Saskatchewan .....	925,181 5.1	951 4.5	45 3.3	18 2.7	4 3.2	17 3.1	(2) 1 2.9	9 6.0	59 3.5	5 8.2	8 3.6	(1) 1 2.9	(1) 1 4	(1) 13 7.0
Alberta .....	1,331,944 7.3	1,356 6.4	87 6.3	54 8.0	4 3.2	33 6.0	3 8.6	7 4.7	113 6.8	6 10.0	20 9.0	4 11.4	(2) 4 21.0	(1) 11 5.9
British Columbia .....	1,629,082 8.9	2,150 10.1	129 9.3	87 12.9	(1) 16 2.7	53 9.5	5 14.3	23 15.3	181 10.9	9 14.8	(1) 29 13.1	(1) 2 35	(1) 1 5.3	(1) 29 15.7
Canada¹ .....	18,200,621	21,266	1,379	673	126	552	35	150	1,668	61	221	35	19	185
			17.4	8.5	1.6	7.0	0.4	1.9	21.0	0.8	2.8	0.4	0.2	2.3

APPENDIX 4-15 (Concl.)

Province	Medical Specialties — Complexes										Surgical Specialties — Complexes							Total Certified Special- ists	Per Cent of Special- ists to Total Physicians in Province
	Neurology and Psychiatry				Pathology and Bacteriology		Radiology				Obstetrics and Gynaecology			Ophthalmology and Otolaryngology					
	Neuro- logy	Psy- chiatry	Neurol. & Psych.	Bac- terio- logy	Pathol. & Bacter.	Diagn.	Thera- peutic	Dia- gnostic & Therap.	Gynaeco- logy	Obste- trics	Obstet. & Gynaec.	Ophthal- mology	Oto- laryngo- logy	Ophthalm. & Otolaryng.					
Newfoundland.....	1	6	—	—	1	—	—	2	—	—	1	3	1	3	64	27.8			
Prince Edward Island	1.9	1.2	—	—	0.6	—	—	0.9	—	—	—	1.0	0.4	2.1	0.8				
	—	3	—	—	—	—	1	1	—	—	5	1	1	1	29	31.9			
	—	0.6	—	—	—	—	2.1	0.5	—	—	0.8	0.3	0.4	0.7	0.4				
Nova Scotia .....	1	16	3	1	8	—	15	2	4	—	13	6	2	13	236	33.4			
	1.9	3.2	6.5	1.8	4.5	—	5.7	4.2	1.9	—	2.1	2.1	0.8	9.0	3.0				
New Brunswick .....	1	10	1	—	5	2	7	2	8	—	12	5	6	9	199	43.7			
	1.9	2.0	2.2	—	2.8	3.0	2.7	4.2	3.8	—	1.9	1.7	2.4	6.3	2.5				
Quebec .....	25	138	15	28	46	16	41	5	98	26	59	131	72	93	35	2,443	39.6		
	46.2	27.2	32.6	50.0	25.8	24.6	15.6	10.4	46.7	92.9	81.9	21.3	24.9	37.7	24.4	30.8			
Ontario .....	(1) 16	212	18	17	66	33	116	19	59	2	12	278	106	93	48	2,912	36.2		
	29.5	42.0	39.1	30.4	37.1	50.8	44.1	39.6	28.1	7.1	16.7	45.1	36.7	37.7	33.3	36.7			
Manitoba .....	1	22	1	2	12	1	13	4	5	—	—	26	18	11	4	357	31.9		
	1.9	4.4	2.2	3.6	6.7	1.5	4.9	8.3	2.4	—	—	4.2	6.2	4.5	2.7	4.5			
Saskatchewan.....	2	23	1	—	14	2	11	5	5	—	1	24	10	6	9	293	30.8		
	3.7	4.6	2.2	—	7.9	3.0	4.2	10.4	2.4	—	1.4	3.9	3.5	2.4	6.3	3.7			
Alberta .....	2	29	1	3	12	4	23	5	8	—	—	56	20	10	10	529	39.0		
	3.7	5.7	2.2	5.4	6.7	6.3	8.7	10.4	2.4	—	—	—	9.1	7.0	6.9	6.7			
British Columbia ....	(1) 5	46	6	5	14	7	37	5	20	—	—	70	48	24	12	863	40.1		
	9.3	9.1	13.0	8.8	7.9	10.8	14.1	10.4	9.5	—	—	11.4	16.6	9.7	8.3	10.9			
Canada <sup>1</sup> .....	54	505	46	56	178	65	263	48	210	28	72	616	289	247	144	7,925 <sup>2</sup>	37.3		
	0.7	6.4	0.6	0.7	2.2	0.8	3.3	0.6	2.7	0.4	0.9	7.8	3.7	3.1	1.8	100.0			

<sup>1</sup> Excludes Yukon and Northwest Territories.<sup>2</sup> This figure includes 747 specialists certified by the College of Physicians and Surgeons of Quebec and 21 certified by provincial authority in the Province of Alberta, as listed by the Canadian Medical Directory.

Note: Figures shown in round brackets ( ) indicate individuals who hold Royal College certification in the specialty but who also hold a certificate in Internal Medicine or General Surgery, because it is not known to which specialty they are devoting the major portion of their time they have been counted under Internal Medicine or General Surgery rather than under the sub-specialty.

Source: A brief from the Royal College of Physicians and Surgeons of Canada, submitted to the Royal Commission on Health Services, February 1962, Appendix 1, Table 2, Population and total number of physicians, 1961 Census.

APPENDIX 4-16  
RATIOS OF SPECIALISTS PER 100,000 POPULATION, FOR REGIONS AND CANADA, 1961

Specialty	W H O. Recom- mended Ratio per 100,000 Population	Atlantic Provinces		Quebec		Ontario		Prairie Provinces		British Columbia		Canada <sup>1</sup>	
		Certified Specialist Ratio	Certified and Non- Certified Specialist Ratio	Certified Specialist Ratio	Certified and Non- Certified Specialist Ratio	Certified Specialist Ratio	Certified and Non- Certified Specialist Ratio	Certified Specialist Ratio	Certified and Non- Certified Specialist Ratio	Certified Specialist Ratio	Certified and Non- Certified Specialist Ratio	Certified Specialist Ratio	Certified and Non- Certified Specialist Ratio
General Surgery ..	10.00	8.43	10.17	8.77	10.04	10.12	12.28	7.39	10.26	11.10	12.83	9.16	11.10
Ophthalmology & Otolaryngology .	6.60	2.69	3.48	3.80	3.94	3.96	4.30	3.08	3.84	5.16	5.46	3.74	4.13
Obstetrics & Gynaecology ...	5.00	1.63	2.90	4.11	5.65	4.68	6.29	3.37	5.44	4.30	6.20	3.93	5.62
Internal Medicine <sup>2</sup> .....	3.30	3.69	5.64	9.75	13.10	7.57	11.80	5.13	8.46	7.92	10.43	7.58	10.56
Paediatrics .....	3.30	1.53	2.00	3.14	3.67	3.51	4.23	2.71	3.34	3.25	3.93	3.03	3.65
Radiology .....	1.70	2.21	2.58	2.74	2.89	3.11	3.45	2.49	2.86	3.81	4.11	2.86	3.15
Urology .....	1.60	0.53	0.63	0.99	1.01	0.98	1.04	1.04	1.10	1.14	1.96	1.02	1.08
Pathology <sup>3</sup> .....	1.00	0.84	1.69	1.18	1.54	1.59	2.26	1.42	2.11	1.29	2.09	1.34	1.95
Orthopaedic Surgery .....	1.00	0.63	0.79	1.58	1.69	0.87	1.06	1.35	1.73	1.78	1.84	1.21	1.40
Dermatology ....	1.00	0.21	0.26	0.76	0.89	0.85	1.06	0.41	0.75	0.98	1.23	0.69	0.89
Psychiatry <sup>4</sup> .....	1.00	2.06	3.21	2.91	3.50	3.69	4.91	2.42	4.03	3.19	4.05	3.03	4.09

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Includes non-certified physical medicine.

<sup>3</sup> Includes non-certified bacteriologists.

<sup>4</sup> Includes non-certified neurologists and psychiatrists.

Source: Data for certified specialists taken from the submission to the Royal Commission on Health Services by the Royal College of Physicians and Surgeons of Canada, February, 1962, Appendix 1, Table 2. Data for non-certified specialists taken from *Canadian Mailings Limited, 1961*.

APPENDIX 4-17  
CERTIFIED AND NON-CERTIFIED SPECIALIST - POPULATION RATIOS,  
BY SPECIALTY, FOR REGIONS AND CANADA, 1961

Specialty Practised	Atlantic Provinces		Quebec		Ontario	
	Cert. Specialist-Population Ratio	Cert. & Non-cert. Specialist-Population Ratio	Cert. Specialist-Population Ratio	Cert. & Non-cert. Specialist-Population Ratio	Cert. Specialist-Population Ratio	Cert. & Non-cert. Specialist-Population Ratio
			('000's)			
<i>Medical Specialties</i>						
Internal Medicine <sup>2</sup> .....	27.1	17.7	10.3	7.6	13.2	9.1
Anaesthesia .....	45.2	32.2	27.5	21.3	25.2	18.4
Dermatology & Syphilology .....	474.4	379.5	131.5	111.9	117.7	94.5
Paediatrics .....	65.4	49.9	31.9	27.2	28.5	23.6
Physical Medicine & Rehab. ....	632.5	632.5	478.1	478.1	566.9	566.9
Public Health .....	210.8	37.5	89.1	34.2	164.1	25.7
<i>Surgical Specialties</i>						
General Surgery .....	11.9	9.8	11.4	10.0	9.9	8.1
Neurosurgery .....	632.5	632.5	262.9	262.9	415.7	415.7
Orthopaedic Surgery .....	158.1	126.5	63.4	59.1	115.5	94.5
Plastic Surgery .....	—	—	375.7	375.6	479.7	479.7
Thoracic Surgery .....	632.5	632.5	876.5	876.5	2,078.7	2,078.7
Urology .....	189.7	158.1	101.1	99.2	102.2	95.4
<i>Medical Specialties - Complexes</i>						
<i>Neurology &amp; Psychiatry</i>						
Neurology .....	632.5	632.5	210.3	210.3	389.8	389.8
Psychiatry .....	54.2	54.2	38.1	38.1	29.4	29.4
Neurology & Psychiatry .....	474.4	73.0	350.6	114.3	346.4	66.3
<i>Pathology &amp; Bacteriology</i>						
Bacteriology .....	1,987.4	1,987.4	187.8	187.8	366.8	366.8
Pathology .....	135.5	135.5	114.3	114.3	94.5	94.5
Pathology & Bacteriology .....	948.7	105.4	328.7	150.3	189.0	83.1
<i>Radiology</i>						
Diagnostic .....	86.2	86.2	128.3	128.3	53.8	53.8
Therapeutic .....	379.5	379.5	1,051.8	1,051.8	328.2	328.2
Diagnostic & Therapeutic .....	126.5	86.2	53.7	49.6	105.7	78.0
<i>Surgical Specialties - Complexes</i>						
<i>Obstetrics &amp; Gynaecology</i>						
Gynaecology .....	—	—	202.3	202.3	3,118.0	3,118.0
Obstetrics .....	—	—	89.1	89.1	519.7	519.7
Obstetrics & Gynaecology .....	61.2	31.6	40.1	24.8	22.4	16.5
<i>Ophthalmology &amp; Otolaryngology</i>						
Ophthalmology .....	126.5	126.5	73.0	73.0	58.8	58.8
Otolaryngology .....	189.7	189.7	56.6	56.6	67.1	67.1
Ophthalmology & Otolaryngology .....	73.0	46.3	150.3	125.2	129.9	90.4
Industrial Medicine <sup>3</sup> .....	—	—	48.2	48.2	35.8	35.8

APPENDIX 4-17 (Concl.)

Specialty Practised	Prairie Provinces		British Columbia		Canada <sup>1</sup>	
	Cert. Specialist-Population Ratio	Cert. & Non-cert. Specialist-Population Ratio	Cert. Specialist-Population Ratio	Cert. & Non-cert. Specialist-Population Ratio	Cert. Specialist-Population Ratio	Cert. & Non-cert. Specialist-Population Ratio
			('000's)			
<i>Medical Specialties</i>						
Internal Medicine <sup>2</sup> .....	16.3	11.8	12.6	9.6	13.2	9.5
Anaesthesia .....	30.0	20.5	18.7	16.1	27.0	20.2
Dermatology & Syphilology .....	244.5	132.5	101.8	81.5	144.4	112.3
Paediatrics .....	37.0	30.0	30.7	25.5	33.0	27.4
Physical Medicine & Rehab. ....	635.8	635.8	325.8	325.8	520.0	520.0
Public Health .....	151.4	21.9	70.8	22.3	121.3	26.6
<i>Surgical Specialties</i>						
General Surgery .....	13.5	9.8	9.0	7.8	10.9	9.0
Neurosurgery .....	227.1	227.1	181.0	181.0	298.4	298.4
Orthopaedic Surgery .....	73.9	57.8	56.2	54.3	82.4	71.4
Plastic Surgery .....	529.8	529.8	814.5	814.5	520.0	520.0
Thoracic Surgery .....	529.8	529.8	1,629.0	1,629.0	957.9	957.9
Urology .....	96.3	90.8	56.2	50.9	98.4	92.4
<i>Medical specialties — Complexes</i>						
<i>Neurology &amp; Psychiatry</i>						
Neurology .....	635.8	635.8	325.8	325.8	337.0	337.0
Psychiatry .....	43.0	43.0	35.4	35.4	36.0	36.0
Neurology & Psychiatry .....	1,059.6	58.9	271.5	81.5	395.7	75.8
<i>Pathology &amp; Bacteriology</i>						
Bacteriology .....	635.8	635.8	325.8	325.8	325.0	325.0
Pathology .....	83.7	83.7	116.4	116.4	102.3	102.3
Pathology & Bacteriology .....	454.1	109.6	232.7	81.5	280.0	102.8
<i>Radiology</i>						
Diagnostic .....	67.6	67.6	44.0	44.0	69.2	69.2
Therapeutic .....	227.0	227.0	325.8	325.8	379.2	379.2
Diagnostic & Therapeutic .....	176.6	105.9	81.5	65.2	86.7	69.2
<i>Surgical Specialties — Complexes</i>						
<i>Obstetrics &amp; Gynaecology</i>						
Gynaecology .....	—	—	—	—	650.0	650.0
Obstetrics .....	3,178.8	3,178.8	—	—	252.8	252.8
Obstetrics & Gynaecology .....	30.0	18.5	23.3	16.1	29.5	19.7
<i>Ophthalmology &amp; Otolaryngology</i>						
Ophthalmology .....	66.2	66.2	33.9	33.9	63.0	63.0
Otolaryngology .....	117.7	117.7	67.9	67.9	73.7	73.7
Ophthalmology & Otolaryngology .....	138.2	67.6	135.8	95.8	126.4	84.3
Industrial Medicine <sup>3</sup> .....	99.3	99.3	81.5	81.5	52.0	52.0

<sup>1</sup> Excludes Yukon and Northwest Territories.

<sup>2</sup> Non-certified internal medicine also includes physical medicine.

<sup>3</sup> Not included in certified specialties.

Source: Data for certified specialists taken from the submission to the Royal Commission on Health Services, February, 1962, Appendix 1, Table 2. Data for non-certified specialists taken from *Canadian Mailing Limited*, 1961, and the population figures obtained from the 1961 Census.



**APPENDIX 4-18**  
**NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS IN SPECIALIST WORK,**  
**BY TYPE OF WORK, CERTIFICATION AND SPECIALTY PRACTISED, CANADA, 1962**

Specialty Practised	Type of Work						Total			
	Private Practice			Hospital Staff			Certi- fied	Non-Certi- fied	Total	Per Cent
	Certi- fied	Non-Certi- fied	Total	Per Cent	Certi- fied	Non-Certi- fied				
Anaesthesia .....	326	85	411	13.0	15	4	19	341	89	430
Dermatology & Syphilology .....	54	10	64	2.0	1	1	2	55	11	66
General Surgery .....	484	108	592	18.8	10	10	20	494	118	612
Internal Medicine & T.B. .	361	80	441	13.9	47	79	126	408	159	567
Neurology & Psychiatry ..	105	35	140	4.4	133	78	211	238	113	351
Neurosurgery .....	15	1	16	0.5	—	1	1	15	2	17
Obstetrics & Gynaecology .....	349	72	421	13.3	1	1	2	350	73	423
Orthopaedic Surgery .....	105	8	113	3.6	—	1	1	105	9	114
Ophthalmology & Otolaryngology .....	300	69	369	11.7	1	—	1	301	69	370
Paediatrics .....	243	32	275	8.7	12	3	15	255	35	290
Pathology and Bacteriology .....	7	6	13	0.4	141	64	205	148	70	218
Diagnostic and Therapeutic Radiology .....	89	3	92	2.9	215	16	231	304	19	323
Urology .....	76	9	85	2.7	—	—	—	76	9	85
Other and not stated <sup>1</sup> . . .	51	79	130	4.1	24	33	57	75	112	187
Total .....	2,565	597	3,162	100.0	600	291	891	3,165	888	4,053
										100.0

<sup>1</sup> Includes such specialties as Physical Medicine and Rehabilitation, Plastic Surgery, Public Health, Thoracic Surgery and Industrial Medicine.  
 Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 4-19

NUMBER AND PER CENT DISTRIBUTION OF ACTIVE CIVILIAN IMMIGRANT SPECIALISTS BY TYPE OF WORK AND SPECIALTY PRACTISED, CANADA, 1962

Specialty Practised	Type of Work				Total	
	Private Practice		Hospital Staff		Number reporting	Per cent
	Number reporting	Per cent	Number reporting	Per cent		
Anaesthesia .....	121	18.6	5	1.5	126	13.0
Dermatology & Syphilology .....	14	2.2	1	0.3	15	1.5
General Surgery .....	94	14.6	8	2.5	102	10.5
Internal Medicine & T.B.	89	13.8	48	14.7	137	14.1
Neurology and Psychiatry .....	46	7.1	83	25.5	129	13.3
Neurosurgery .....	5	0.8	—	—	5	0.5
Obstetrics and Gynaecology .....	76	11.8	1	0.3	77	7.9
Orthopaedic Surgery ...	20	3.1	1	0.3	21	2.2
Ophthalmology & Otolaryngology .....	70	10.8	—	—	70	7.2
Paediatrics .....	57	8.8	3	0.9	60	6.2
Pathology and Bacteriology .....	5	0.8	86	26.4	91	9.4
Diagnostic and Therapeutic Radiology .....	14	2.2	68	20.9	82	8.4
Urology .....	11	1.7	—	—	11	1.1
Other and not stated <sup>1</sup> ..	24	3.7	22	6.7	46	4.7
Total .....	646	100.0	326	100.0	972	100.0

<sup>1</sup> Includes Hospital Administration, Allergy, Cardiology, Cardiovascular Diseases, Gastroenterology, Haematology, Proctology, Biochemistry, Physical Medicine and Rehabilitation, Plastic Surgery, Public Health, Thoracic Surgery and Industrial Medicine.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 5-1  
AVERAGE WEEKLY SERVICES OF SPECIALISTS IN PRIVATE PRACTICE, BY SPECIALTY PRACTICED,  
TYPE OF ACTIVITY AND METHOD OF PRACTICE, CANADA, 1962

Type of Activity	Anaesthesia		Dermatology		General Surgery		Internal Medicine & T.B.		Neurology & Psychiatry		Neurosurgery	
	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice
No. of Drs. reporting.....	117	225	50	7	364	201	278	137	119	15	11	4
<i>Office calls</i>												
% of total patients.....	14.3	12.5	75.9	42.1	40.9	48.1	38.1	46.2	53.8	36.8	18.2	19.0
% of total hours .....	6.9	2.8	71.7	49.0	35.3	39.6	44.8	48.3	60.5	50.8	33.3	13.5
<i>Hospital calls</i>												
% of total patients.....	85.7	87.5	24.1	57.9	54.6	51.9	42.9	50.0	38.5	63.2	81.8	81.0
% of total hours .....	80.2	85.9	16.2	29.0	48.0	47.8	25.4	28.8	15.8	38.6	56.4	68.3
<i>Home visits Day</i>												
% of total patients.....	0.0	0.0	0.0	0.0	4.5	0.0	9.5	3.8	0.0	0.0	0.0	0.0
% of total hours .....	2.0	0.9	2.0	1.0	3.9	2.7	8.8	6.8	1.8	1.5	0.0	0.0
<i>Home visits Night</i>												
% of total patients.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% of total hours .....	1.0	0.0	0.0	2.0	2.0	1.8	2.6	3.4	0.9	0.0	0.0	0.0
<i>Teaching and/or research</i>												
% of total hours .....	2.0	5.6	6.1	12.0	4.9	3.6	7.0	5.1	9.6	5.3	4.3	10.1
<i>Other activities<sup>b</sup></i>												
% of total patients.....	0.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	7.7	0.0	0.0	0.0
% of total hours .....	7.9	4.8	4.0	7.0	5.9	4.5	11.4	7.6	11.4	3.8	6.0	8.1
Weekly number of patient-visits per doctor .....	36	38	152	180	115	128	110	124	63	90	115	100
Weekly hours per doctor, .....	43:59	42:21	43:06	39:35	44:25	43:56	49:38	46:42	49:38	52:15	50:56	58:35

APPENDIX 5-1 (Concl.)

Type of Activity	Obstetrics and Gynaecology		Orthopaedic Surgery		Ophthalmology and Otolaryngology		Paediatrics		Urology		Other & Not Stated <sup>1</sup>	
	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice
No. of Drs. reporting.....	274	123	60	46	284	62	180	80	51	24	95	24
<i>Office calls</i>												
% of total patients.....	59.1	60.0	35.7	38.2	76.2	72.0	48.4	41.9	33.3	30.8	42.8	42.8
% of total hours.....	45.1	48.7	38.3	39.6	68.8	63.7	38.2	38.2	36.5	33.0	36.1	42.7
<i>Hospital calls</i>												
% of total patients.....	40.9	36.7	60.7	61.8	23.8	28.0	31.0	35.5	66.7	69.2	52.4	52.4
% of total hours.....	38.7	37.8	45.1	46.5	21.5	27.3	21.2	24.4	50.1	55.3	38.7	40.0
<i>Home visits Day</i>												
% of total patients.....	0.0	3.3	0.0	0.0	0.0	0.0	10.3	9.7	0.0	0.0	0.0	4.8
% of total hours.....	2.7	2.0	0.9	2.0	1.1	0.0	18.6	17.1	1.9	2.1	2.5	4.3
<i>Night</i>												
% of total patients.....	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.2	0.0	0.0	0.0	0.0
% of total hours.....	1.8	1.8	0.9	1.0	1.1	0.0	7.6	6.5	1.9	0.0	2.5	1.7
<i>Teaching and/or research</i>												
% of total hours.....	7.2	4.5	7.8	6.9	3.2	5.0	6.8	5.7	5.8	6.4	11.8	3.5
<i>Other activities<sup>2</sup></i>												
% of total patients.....	0.0	0.0	3.6	0.0	0.0	0.0	6.9	9.7	0.0	0.0	4.8	0.0
% of total hours.....	4.5	4.5	7.0	4.0	4.3	4.0	7.6	8.1	3.8	3.2	8.4	7.8
Weekly number of patient-visits per doctor. ....	115	142	146	162	110	119	152	147	110	124	110	100
Weekly hours per doctor. ....	48:20	43:56	50:04	39:59	40:30	39:11	51:23	48:41	45:17	37:12	51:49	45:31

<sup>1</sup> Includes such specialties as Physical Medicine & Rehabilitation, Plastic Surgery, Public Health, Thoracic Surgery, Hospital Administration, Industrial Medicine, Allergy, Cardiology, Cardiovascular Diseases, Gastroenterology, Haematology, and other.

<sup>2</sup> Includes such activities as work at clinics, preparation of medical papers, attendance of medical meetings, telephone consultations, work connected with medical insurance, etc.

Note: 0.0 per cent less than one patient.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 5-2

AVERAGE WEEKLY SERVICES OF GENERAL PRACTITIONERS IN PRIVATE PRACTICE,  
BY TYPE OF MEDICAL ORGANIZATION AND TYPE OF ACTIVITY, CANADA, 1962

Type of Activity	Solo Practice	Partnership	Group Practice
No. of reporting Drs .....	2,542	819	492
<i>Office calls</i>			
% of total patients .....	59.8	58.0	57.4
% of total hours .....	50.3	49.4	49.9
Time per patient .....	0:17	0:15	0:16
<i>Hospital calls</i>			
% of total patients .....	21.6	27.9	28.9
% of total hours .....	19.9	24.6	25.8
Time per patient .....	0:19	0:15	0:16
<i>Home visits Day</i>			
% of total patients .....	12.6	8.7	9.0
% of total hours .....	18.7	14.4	13.1
Time per patient .....	0:30	0:29	0:26
<i>Home visits Night</i>			
% of total patients .....	3.0	2.9	3.4
% of total hours .....	5.9	6.4	6.7
Time per patient .....	0:40	0:38	0:35
<i>Teaching and/or research</i>			
% of total hours .....	0.6	0.6	0.5
<i>Other activities<sup>1</sup></i>			
% of total patients .....	3.0	2.5	1.3
% of total hours .....	4.6	4.6	4.0
Time per patient .....	0:31	0:32	0:57
Weekly no. of patient-visits per Dr .....	148	179	173
Weekly hours per Dr .....	50:34	52:26	52:08

<sup>1</sup>Includes such activities as work at clinics, preparation of medical papers, attendance at medical meetings, telephone consultations, work connected with medical insurance, etc.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 5-3  
AVERAGE WEEKLY LOAD OF PATIENTS OF SPECIALISTS IN PRIVATE PRACTICE,  
BY SPECIALTY PRACTISED, METHOD OF PRACTICE AND NATURE OF SERVICE, CANADA, 1962

Nature of Service	Anaesthesia		Dermatology		General Surgery		Internal Medicine & T.B.		Neurology & Psychiatry		Neurosurgery	
	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice
No. of Drs. reporting.....	87	171	43	7	335	193	257	131	86	10	10	4
A. Physical examination of apparently well people:												
(1) For specific purposes ...	16.7	0.0	0.0	0.0	12.5	11.1	12.5	9.1	0.0	0.0	0.0	0.0
(2) Preventive routine .....	0.0	12.5	0.0	0.0	12.5	11.1	12.5	9.1	0.0	0.0	14.3	12.5
B. Other specific services:												
(1) Surgical and obstetrical procedures .....	16.7	12.5	7.1	5.3	25.0	33.4	0.0	0.0	0.0	0.0	14.3	25.0
(2) Referred consultations...	0.0	12.5	35.7	63.2	25.0	22.2	25.0	27.3	33.3	22.2	57.1	37.5
(3) Specific diagnostic & treatment procedures ....	0.0	0.0	50.1	21.0	25.0	22.2	37.5	36.3	44.5	44.5	14.3	25.0
(4) Immunizations .....	0.0	0.0	0.0	10.5	0.0	0.0	0.0	9.1	0.0	11.1	0.0	0.0
(5) Other services.....	66.6	62.5	7.1	0.0	0.0	0.0	12.5	9.1	22.2	22.2	0.0	0.0
Weekly load of patients .....	28	38	66	90	38	43	38	52	43	43	33	38

## APPENDIX 5-3 (Concl.)

Nature of Service	Obstetrics and Gynaecology		Orthopaedic Surgery		Ophthalmology and Otolaryngology		Paediatrics		Urology		Other and Not Stated <sup>1</sup>	
	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice	Solo	Partnership or Group Practice
No. of Drs. reporting.....	257	118	58	43	232	57	165	79	45	22	89	21
A. Physical examination of apparently well people:												
(1) For specific purposes ...	8.3	7.1	0.0	0.0	7.1	7.1	0.0	6.7	0.0	0.0	10.0	0.0
(2) Preventive routine .....	25.0	28.6	0.0	0.0	7.1	0.0	38.9	39.9	0.0	9.1	0.0	9.1
B. Other specific services:												
(1) Surgical and obstetrical procedures .....	33.3	35.7	25.0	25.0	7.1	14.3	0.0	0.0	33.3	18.2	10.0	18.2
(2) Referred consultations...	16.7	14.3	62.5	50.0	28.7	28.6	11.1	6.7	33.3	27.2	30.0	27.2
(3) Specific diagnostic & treatment procedures.....	16.7	14.3	12.5	25.0	42.9	42.9	22.2	20.0	33.4	9.1	30.0	9.1
(4) Immunizations .....	0.0	0.0	0.0	0.0	0.0	0.0	22.2	20.0	0.0	18.2	10.0	18.2
(5) Other services.....	0.0	0.0	0.0	0.0	7.1	7.1	5.6	6.7	0.0	18.2	10.0	18.2
Weekly load of patients .....	57	66	38	38	66	66	86	71	43	38	48	52

<sup>1</sup> Includes such specialties as Physical Medicine and Rehabilitation, Plastic Surgery, Public Health, Thoracic Surgery, Hospital Administration, Industrial Medicine, Allergy, Cardiovascular Diseases, Cardiology, Gastroenterology, Haematology and others.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

**APPENDIX 5-4**  
**NUMBER AND PERCENTAGE DISTRIBUTION OF ACTIVE, SELF-EMPLOYED GENERAL PRACTITIONERS**  
**BY SIZE OF PRACTICE AND SIZE OF LOCALITY, FOR REGIONS AND CANADA**

Region and Size of Locality	Size of Practice (Number of Persons)											
	Less Than 500			500-999			1,000-1,499			1,500-1,999		
	Resp. Count	% Local- ity	% Size of Pract.	Resp. Count	% Local- ity	% Size of Pract.	Resp. Count	% Local- ity	% Size of Pract.	Resp. Count	% Local- ity	% Size of Pract.
<i>Atlantic Region</i>												
Less than 10,000 ...	7	6.1	21.2	10	8.7	12.3	21	18.3	13.9	13	11.3	10.7
10,000 - 49,999 ....	4	18.2	21.1	1	4.5	3.1	4	18.2	9.1	5	22.7	11.6
50,000 and over ....	1	4.8	1.0	-	-	-	8	38.1	4.3	2	9.5	1.6
<i>Quebec</i>												
Less than 10,000 ...	10	4.2	30.3	11	4.6	13.6	27	11.3	17.9	38	16.0	31.1
10,000 - 49,999 ....	8	13.8	42.1	12	20.7	37.5	9	15.5	20.5	11	19.0	25.6
50,000 and over ....	27	12.6	26.7	36	16.8	26.7	31	14.5	16.7	31	14.5	25.4
<i>Ontario</i>												
Less than 10,000 ...	10	4.5	30.3	38	17.0	46.9	62	27.8	41.1	45	20.2	36.9
10,000 - 49,999 ....	5	4.8	26.3	17	16.2	53.1	27	25.7	61.4	21	20.0	48.8
50,000 and over ....	42	10.6	41.6	67	16.8	49.6	98	24.6	52.7	53	13.3	43.4
<i>Prairie Region</i>												
Less than 10,000 ...	3	2.2	9.1	16	11.9	19.8	27	20.0	17.9	17	12.6	13.9
10,000 - 49,999 ....	1	16.7	5.3	1	16.7	3.1	1	16.7	2.3	2	33.3	4.7
50,000 and over ....	16	13.4	15.8	8	6.7	5.9	24	20.2	12.9	17	14.3	13.9
<i>British Columbia</i>												
Less than 10,000 ...	3	5.8	9.1	6	11.5	7.4	14	26.9	9.3	9	17.3	7.4
10,000 - 49,999 ....	1	10.0	5.3	1	10.0	3.1	3	30.0	6.8	4	40.0	9.3
50,000 and over ....	15	12.2	14.9	24	19.5	17.8	25	20.3	13.4	19	15.4	15.6
<i>Canada<sup>1</sup></i>												
Less than 10,000 ...	33	4.3	100.0	81	10.6	100.0	151	19.8	100.0	122	16.0	100.0
10,000 - 49,999 ....	19	9.5	100.0	32	15.9	100.0	44	21.9	100.0	43	21.4	100.0
50,000 and over ....	101	11.5	100.0	135	15.4	100.0	186	21.2	100.0	122	13.9	100.0
Total .....	153	8.3		248	13.5		381	20.7		287	15.6	
							286	15.5		133	7.2	



## APPENDIX 5-4 (Concl.)

Region and Size of Locality	Size of Practice (Number of Persons)														Total		
	3,000 - 3,499		3,500 - 3,999		4,000 - 4,499		4,500 - 4,999		5,000 and Over		% Size of Pract.						
	Resp. Count	% Local- ity	Resp. Count	% Local- ity	Resp. Count	% Local- ity	Resp. Count	% Local- ity	Resp. Count	% Local- ity		Resp. Count	% Local- ity				
Atlantic Region Less than 10,000 ... 10,000 - 49,999 .... 50,000 and over ....	12	10.4	12.2	2	1.7	11.8	7	6.1	31.8	2	1.7	50.0	8	7.0	30.8	115	15.1
	-	-	-	1	4.5	50.0	1	4.5	20.0	-	-	-	1	4.5	14.3	22	10.9
	2	9.5	3.5	2	9.5	7.1	1	4.8	3.7	1	4.8	14.3	1	4.8	2.4	21	2.4
	50	21.0	51.0	8	3.4	47.1	7	2.9	31.8	2	0.8	50.0	11	4.6	42.3	238	31.2
Quebec Less than 10,000 ... 10,000 - 49,999 .... 50,000 and over ....	4	6.9	57.1	-	-	-	1	1.7	20.0	2	3.4	100.0	3	5.2	42.9	58	28.9
	15	7.0	26.3	5	2.3	17.9	10	4.7	37.0	2	0.9	28.6	15	7.0	35.7	214	24.4
Ontario Less than 10,000 ... 10,000 - 49,999 .... 50,000 and over ....	11	4.9	11.2	2	0.9	11.8	4	1.8	18.2	-	-	-	2	0.9	7.7	223	29.2
	3	2.9	42.9	1	1.0	50.0	3	2.9	60.0	-	-	-	3	2.9	42.9	105	52.2
	17	4.3	29.8	13	3.3	46.4	7	1.8	25.9	3	0.8	42.9	16	4.0	38.1	398	45.5
	20	14.8	20.4	4	3.0	23.5	3	2.2	13.6	-	-	-	5	3.7	19.2	135	17.7
Prairie Region Less than 10,000 ... 10,000 - 49,999 .... 50,000 and over ....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3.0
	16	13.4	28.1	5	4.2	17.9	7	5.9	25.9	-	-	-	4	3.4	9.5	119	13.6
	5	9.6	5.1	1	1.9	5.9	1	1.9	4.5	-	-	-	-	-	-	52	6.8
British Columbia Less than 10,000 ... 10,000 - 49,999 .... 50,000 and over ....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	5.0
	7	5.7	12.3	3	2.4	10.7	2	1.6	7.4	1	0.8	14.3	6	4.9	14.3	123	14.0
	98	12.8	100.0	17	2.2	100.0	22	2.9	100.0	4	0.5	100.0	26	3.4	100.0	763	100.0
Canada <sup>1</sup> Less than 10,000 ... 10,000 - 49,999 .... 50,000 and over ....	7	3.5	100.0	2	1.0	100.0	5	2.5	100.0	2	1.0	100.0	7	3.5	100.0	201	100.0
	57	6.5	100.0	28	3.2	100.0	27	3.1	100.0	7	0.8	100.0	42	4.8	100.0	875	100.0
Total .....	162	8.8	47	2.6	54	2.9	13	0.7	75	4.1						1,839	

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 5-5  
NUMBER AND PERCENTAGE DISTRIBUTION OF ACTIVE, SELF-EMPLOYED GENERAL PRACTITIONERS, BY  
NUMBER OF PATIENTS UNDER TREATMENT AND SIZE OF LOCALITY, FOR REGIONS AND CANADA

Region and Size of Locality	Number of Patients Under Treatment											
	Less than 50 Patients			50 — 99 Patients			100 — 199 Patients			200 — 299 Patients		
	Resp. Count	Per Cent Locality	% No. of Patients	Resp. Count	Per Cent Locality	% No. of Patients	Resp. Count	Per Cent Locality	% No. of Patients	Resp. Count	Per Cent Locality	% No. of Patients
<i>Atlantic Region</i>												
Less than 10,000.....	24	22.2	10.2	19	17.6	17.0	26	24.1	16.9	11	10.2	13.9
10,000 — 49,999.....	6	27.3	12.5	3	13.6	9.4	7	31.8	13.0	3	13.6	15.0
50,000 and over .....	2	10.5	0.8	4	21.1	2.8	5	26.3	2.7	3	15.8	2.7
<i>Quebec</i>												
Less than 10,000.....	123	52.1	52.3	32	13.6	28.6	39	16.5	25.5	15	6.4	19.0
10,000 — 49,999.....	24	40.7	50.0	6	10.2	18.8	18	30.5	33.3	5	8.5	25.0
50,000 and over .....	100	42.2	41.2	37	15.6	25.7	38	16.0	20.8	24	10.1	21.8
<i>Ontario</i>												
Less than 10,000.....	45	21.2	19.1	33	15.6	29.5	60	28.3	39.2	35	16.5	44.3
10,000 — 49,999.....	12	11.9	25.0	15	14.9	46.9	28	27.7	51.9	9	8.9	45.0
50,000 and over .....	88	22.0	36.2	69	17.3	47.9	85	21.3	46.4	51	12.8	46.4
<i>Prairie Region</i>												
Less than 10,000.....	32	28.1	13.6	20	17.5	17.9	21	18.4	13.7	14	12.3	17.7
10,000 — 49,999.....	4	50.0	8.3	3	37.5	9.4	—	—	—	1	12.5	5.0
50,000 and over .....	30	25.2	12.3	13	10.9	9.0	26	21.8	14.2	12	10.1	10.9
<i>British Columbia</i>												
Less than 10,000.....	11	26.2	4.6	8	19.0	7.1	7	16.7	4.6	4	9.5	5.1
10,000 — 49,999.....	2	16.7	4.2	5	41.7	15.6	1	8.3	1.9	2	16.7	10.0
50,000 and over .....	23	19.3	9.5	21	17.6	14.6	29	24.4	15.8	20	16.8	18.2
<i>Canada<sup>1</sup></i>												
Less than 10,000.....	235	33.0	100.0	112	15.7	100.0	153	21.5	100.0	79	11.1	100.0
10,000 — 49,999.....	48	23.8	100.0	32	15.8	100.0	54	26.7	100.0	20	9.9	100.0
	243	27.2	100.0	144	16.1	100.0	183	20.5	100.0	110	12.3	100.0
Total .....	526	29.1		288	15.9		390	21.6		209	11.6	

## APPENDIX 5-5 (Concl.)

Region and Size of Locality	Number of Patients Under Treatment										Total	
	300 — 399 Patients			400 — 499 Patients			500 Patients and Over					
	Resp. Count	Per Cent Locality	% No. of Patients	Resp. Count	Per Cent Locality	% No. of Patients	Resp. Count	Per Cent Locality	% No. of Patients	Resp. Count		Per Cent Locality
<i>Atlantic Region</i>												
Less than 10,000...	6	5.6	15.0	3	2.8	12.0	19	17.6	27.9	108	15.2	
10,000 — 49,999...	1	4.5	5.6	2	9.1	25.0	—	—	—	22	10.9	
50,000 and over ....	1	5.3	1.8	1	5.3	3.2	3	15.8	2.4	19	2.1	
<i>Quebec</i>												
Less than 10,000...	7	3.0	17.5	5	2.1	20.0	15	6.4	22.1	236	33.1	
10,000 — 49,999...	1	1.7	5.6	3	5.1	37.5	2	3.4	9.1	59	29.2	
50,000 and over ....	11	4.6	19.6	5	2.1	16.1	22	9.3	17.3	237	26.5	
<i>Ontario</i>												
Less than 10,000...	15	7.1	37.5	9	4.2	36.0	15	7.1	22.1	212	29.8	
10,000 — 49,999...	16	15.8	88.9	3	3.0	37.5	18	17.8	81.8	101	50.0	
50,000 and over ....	28	7.0	50.0	14	3.5	45.2	65	16.3	51.2	400	44.7	
<i>Prairie Region</i>												
Less than 10,000...	9	7.9	22.5	7	6.1	28.0	11	9.6	16.2	114	16.0	
10,000 — 49,999...	—	—	—	—	—	—	—	—	—	8	4.0	
50,000 and over ....	10	8.4	17.9	5	4.2	16.1	23	19.3	18.1	119	13.3	
<i>British Columbia</i>												
Less than 10,000...	3	7.1	7.5	1	2.4	4.0	8	19.0	11.8	42	5.9	
10,000 — 49,999...	—	—	—	—	—	—	2	16.7	9.1	12	5.9	
50,000 and over ....	6	5.0	10.7	6	5.0	19.4	14	11.8	11.0	119	13.3	
<i>Canada<sup>1</sup></i>												
Less than 10,000...	40	5.6	100.0	25	3.5	100.0	68	9.5	100.0	712	100.0	
10,000 — 49,999...	18	8.9	100.0	8	4.0	100.0	22	10.9	100.0	202	100.0	
50,000 and over ....	56	6.3	100.0	31	3.5	100.0	127	14.2	100.0	894	100.0	
Total .....	114	6.3		64	3.5		217	12.0		1,808		

<sup>1</sup> Excludes Yukon and Northwest Territories.

Source: Questionnaire on Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 5-6

FULL AND PART-TIME MEDICAL STAFF AND INTERNS AND RESIDENTS EMPLOYED IN HOSPITALS,  
FOR REGIONS AND CANADA, 1950-1961

Region & Types of Hospital	1950			1951			1952			1953		
	Physicians		Interns and Residents	Physicians		Interns and Residents	Physicians		Interns and Residents	Physicians		Interns and Residents
	F-T	P-T		F-T	P-T		F-T	P-T		F-T	P-T	
<i>Atlantic Provinces</i>												
General <sup>1</sup> .....	21	33	97	18	39	94	21	26	91	48	51	111
Mental .....	12	20	2	16	16	2	21	17	2	24	37	—
T.B. ....	35	15	2	36	18	3	40	19	3	42	27	1
Federal .....	—	38	—	—	40	—	—	—	—	—	50	—
Private .....	—	6	—	—	16	—	—	1	—	—	—	—
Total .....	180	—	101	199	—	99	145	—	96	279	—	112
<i>Quebec</i>												
General <sup>1</sup> .....	175	127	645	207	319	637	113	124	475	126	151	543
Mental .....	50	16	30	40	29	14	62	23	19	41	70	45
T.B. ....	55	99	23	79	111	18	78	126	21	105	123	27
Federal .....	—	47	—	—	53	—	—	—	—	—	50	—
Private .....	—	29	—	—	29	—	—	12	—	—	4	6
Total .....	598	—	698	867	—	669	538	—	515	676	—	615
<i>Ontario</i>												
General <sup>1</sup> .....	101	118	526	101	120	635	149	173	643	158	170	628
Mental .....	93	27	10	89	26	18	95	30	49	76	92	31
T.B. ....	80	16	10	78	6	8	76	11	10	80	10	8
Federal .....	—	90	—	—	103	—	—	—	—	—	86	—
Private .....	—	18	—	—	22	—	—	6	—	—	20	3
Total .....	543	—	546	545	—	661	540	—	702	695	—	668
<i>Prairie Provinces</i>												
General <sup>1</sup> .....	63	77	226	64	72	267	76	72	223	79	79	235
Mental .....	50	21	3	62	12	3	64	15	1	60	24	15
T.B. ....	41	10	4	36	9	6	43	17	20	44	9	4
Federal .....	—	62	—	—	88	—	—	—	—	—	50	—
Private .....	—	4	—	—	5	—	—	9	—	—	—	—
Total .....	328	—	233	348	—	276	296	—	244	345	—	254
<i>British Columbia</i>												
General <sup>1</sup> .....	36	28	124	41	28	140	35	28	150	31	34	149
Mental .....	24	—	—	31	—	—	34	—	—	32	3	—
T.B. ....	17	15	—	20	15	—	24	10	1	24	13	1
Federal .....	—	34	—	—	47	—	—	—	—	—	41	—
Private .....	—	7	—	—	5	—	—	15	—	—	1	4
Total .....	161	—	124	187	—	140	146	—	151	183	—	150
<i>Canada<sup>3</sup></i>												
General <sup>1</sup> .....	396	383	1,618	431	578	1,773	394	423	1,582	442	485	1,666
Mental .....	229	84	45	238	83	37	276	85	71	233	226	91
T.B. ....	228	155	39	249	159	35	261	183	55	295	182	41
Federal .....	—	271	—	—	331	—	—	192 <sup>2</sup>	—	—	277	—
Private .....	—	64	—	—	77	—	—	43	—	—	38	1
Total .....	1,810	—	1,702	2,146	—	1,845	1,857	—	1,708	2,178	—	1,799
Minus medical graduates of Dalhousie, Laval & Montreal Universities, who receive degrees after internship			273			288			203			253
Total Interns & Residents			1,429			1,557			1,505			1,546
<i>Operating &amp; Reporting Hospitals, Canada, 1950-1961</i>												
	1950			1951			1952			1953		
	Oper.	Report.	%	Oper.	Report.	%	Oper.	Report.	%	Oper.	Report.	%
General <sup>1</sup> .....	823	763	92.7	830	778	93.7	834	777	93.2	855	810	94.7
Mental .....	68	65	45.6	70	67	95.7	75	72	96.0	77	74	96.1
T.B. ....	64	64	100.0	70	70	100.0	70	70	100.0	70	70	100.0
Federal .....	—	67	—	—	78	—	—	42	—	—	47	—
Private .....	—	225	—	—	220	—	—	187	—	236	133	56.4

## APPENDIX 5-6 (Cont'd)

Region & Types of Hospital	1954			1955			1956			1957		
	Physicians		Interns and Residents	Physicians		Interns and Residents	Physicians		Interns and Residents	Physicians		Interns and Residents
	F-T	P-T		F-T	P-T		F-T	P-T		F-T	P-T	
<i>Atlantic Provinces</i>												
General <sup>1</sup> .....	72	43	111	77	67	100	90	58	110	89	61	134
Mental .....	29	56	1	33	57	5	31	80	2	31	69	13
T.B. ....	48	25	2	46	27	2	42	39	1	39	28	2
Federal .....	49		—	52		—	51		—	49		—
Private .....	—	—	—	—	—	—	—	—	—	—	—	—
Total .....	322		114	359		107	391		113	366		149
<i>Quebec</i>												
General <sup>1</sup> .....	189	187	541	208	231	749	213	236	779	241	296	937
Mental .....	49	139	38	39	129	21	53	152	28	66	136	27
T.B. ....	99	97	20	91	108	20	89	104	20	92	117	21
Federal .....	53		—	53		—	54		—	58		—
Private .....	9	8	4	1	13	4	14	19	4	4	33	4
Total .....	830		603	873		794	934		831	1,043		989
<i>Ontario</i>												
General <sup>1</sup> .....	143	148	628	161	155	699	206	220	727	233	282	793
Mental .....	110	108	19	111	98	15	135	109	27	165	126	18
T.B. ....	76	10	10	73	14	10	77	21	5	73	17	5
Federal .....	86		—	86		—	76		—	79		—
Private .....	12	11	3	15	10	—	37	8	9	34	6	12
Total .....	704		660	723		724	889		768	1,015		828
<i>Prairie Provinces</i>												
General <sup>1</sup> .....	71	63	266	64	71	304	72	85	315	70	95	362
Mental .....	50	17	13	56	29	8	57	12	12	61	12	11
T.B. ....	45	6	3	45	5	1	42	5	2	45	5	4
Federal .....	50		—	54		—	64		—	61		—
Private .....	7		—	7		—	6		—	6		—
Total .....	309		282	331		313	343		329	355		377
<i>British Columbia</i>												
General <sup>1</sup> .....	35	34	176	38	40	183	43	44	156	43	44	177
Mental .....	27	7	1	37	6	1	40	9	—	41	9	—
T.B. ....	22	9	1	13	3	2	12	6	2	23	2	—
Federal .....	44		—	45		—	47		—	41		—
Private .....	2	4	—	1	2	—	—	—	—	1	2	—
Total .....	184		178	185		186	201		158	206		177
<i>Canada<sup>2</sup></i>												
General <sup>1</sup> .....	510	475	1,722	548	564	2,035	624	643	2,087	676	778	2,403
Mental .....	265	327	72	276	319	50	316	362	69	364	352	69
T.B. ....	290	147	36	268	157	35	262	175	30	272	169	32
Federal .....	282		—	290		—	292		—	288		—
Private .....	53		7	49		4	84		13	86		16
Total .....	2,349		1,837	2,471		2,124	2,758		2,199	2,985		2,520
Minus medical graduates of Dalhousie Laval & Montreal Universities who receive degrees after internship .....			286			273			225			262
Total Interns & Residents ..			1,551			1,851			1,974			2,258
<i>Operating &amp; Reporting Hospitals, Canada, 1950-1961</i>												
	1954			1955			1956			1957		
	Oper.	Report.	%	Oper.	Report.	%	Oper.	Report.	%	Oper.	Report.	%
General <sup>1</sup> .....	870	817	93.9	896	858	95.8	908	872	96.0	920	894	97.2
Mental .....	77	77	100.0	74	74	100.0	77	75	97.4	79	77	97.5
T.B. ....	66	66	100.0	65	65	100.0	64	64	100.0	62	62	100.0
Federal .....	—	44	—	—	46	—	—	44	—	—	40	—
Private .....	263	169	64.3	279	175	62.7	266	204	76.7	294	232	78.9

APPENDIX 5-6 (Concl.)

Region & Types of Hospital	1958			1959			1960			1961		
	Physicians F-T	P-T	Interns and Residents	Physicians F-T	P-T	Interns and Residents	Physicians F-T	P-T	Interns and Residents	Physicians F-T	P-T	Interns and Residents
<i>Atlantic Provinces</i>												
General <sup>1</sup> .....	97	60	126	98	136	117	109	169	141	116	169	165
Mental .....	28	82	19	31	103	19	35	96	11	43	110	13
T.B. ....	38	21	1	33	19	2	35	19	2	34	29	2
Federal .....	57	—	—	30	17	17	39	85	33	39	35	47
Private .....	—	—	—	—	—	—	—	—	—	—	—	—
Total .....	383		146	192	275	155	218	369	187	232	343	227
<i>Quebec</i>												
General <sup>1</sup> .....	282	278	1,068	391	428	1,072	335	585	1,279	322	637	1,456
Mental .....	74	147	35	74	147	35	88	166	43	115	173	49
T.B. ....	77	105	14	76	74	10	79	82	10	71	62	18
Federal .....	60	—	—	28	4	74	30	42	105	42	—	97
Private .....	7	21	4	2	13	8	—	13	2	10	52	9
Total .....	1,051		1,121	571	666	1,199	532	888	1,439	560	924	1,629
<i>Ontario</i>												
General <sup>1</sup> .....	247	289	821	281	333	824	320	388	918	295	389	880
Mental .....	153	133	41	164	171	24	194	185	31	205	189	30
T.B. ....	68	15	5	66	17	4	53	18	4	51	19	5
Federal .....	84	—	—	56	130	76	78	196	87	52	199	92
Private .....	14	10	8	7	20	23	5	25	2	9	18	—
Total .....	1,013		875	574	671	951	650	812	1,042	612	814	1,007
<i>Prairie Provinces</i>												
General <sup>1</sup> .....	83	104	416	107	157	391	117	177	491	119	185	438
Mental .....	70	27	11	50	35	20	62	30	19	66	23	10
T.B. ....	43	4	3	42	8	3	49	8	3	46	9	1
Federal .....	61	—	—	54	8	27	38	87	28	35	118	27
Private .....	11	—	—	—	5	—	2	5	—	1	7	—
Total .....	403		430	253	210	441	268	307	541	267	342	476
<i>British Columbia</i>												
General <sup>1</sup> .....	46	40	170	52	77	169	55	92	164	56	102	162
Mental .....	19	15	18	20	8	18	18	9	18	20	19	18
T.B. ....	22	14	2	22	17	—	20	8	—	21	13	—
Federal .....	42	—	—	22	98	57	22	100	62	23	103	58
Private .....	—	1	—	1	—	—	—	—	—	—	—	—
Total .....	199		190	117	200	244	115	209	244	120	237	238
<i>Canada<sup>3</sup></i>												
General <sup>1</sup> .....	755	771	2,601	929	1,131	2,573	936	1,411	2,993	908	1,482	3,101
Mental .....	344	404	124	339	464	116	397	486	122	449	514	120
T.B. ....	248	159	25	239	132	19	236	135	19	223	132	26
Federal .....	304	—	—	190	257	251	207	510	315	191	455	321
Private .....	64	12	10	38	31	31	7	43	4	20	77	9
Total .....	3,049		2,762	1,707	2,022	2,990	1,783	2,585	3,453	1,791	2,660	3,577
Minus medical graduates of Dalhousie, Laval & Montreal Universities, who receive degrees after internship .....			289			273			292			261
Total Interns & Residents			2,473			2,717			3,161			3,316
<i>Operating &amp; Reporting Hospitals, Canada 1950-1961</i>												
	Oper.	Report.	%	Oper.	Report.	%	Oper.	Report.	%	Oper.	Report.	%
General <sup>1</sup> .....	957	922	96.3	963	940	97.6	936	925	98.8	946	946	100.0
Mental .....	80	76	95.0	81	74	91.4	87	73	83.9	89	79	88.8
T.B. ....	58	58	100.0	57	57	100.0	58	58	100.0	55	55	100.0
Federal .....	—	42	—	66	47	71.2	86	71	82.6	80	69	86.3
Private .....	263	205	77.9	331	232	70.1	192	152	79.2	204	152	74.5

<sup>1</sup> General hospital includes public, general and allied special hospitals (chronic, convalescent, maternity and other).

<sup>2</sup> Data for physicians in federal hospitals are not available for 1952.

<sup>3</sup> Excludes Yukon and Northwest Territories.

Source: Health and Welfare Division, Institutions Section, Dominion Bureau of Statistics.

APPENDIX 5-7  
 AVAILABILITY OF INDUSTRIAL MEDICAL SERVICES AND MEDICAL PERSONNEL IN CANADIAN INDUSTRY, 1962

Industry & Number of Employees	Industrial Medical Services						Medical Personnel												
	Provide Medical or First Aid Services		Do Not Provide Medical or First Aid Services		No Information		Physician(s) in Attendance Full-Time		Physician(s) in Attendance Part-Time		Physician(s) on Call								
	Non-Office Employees	Office Employees	Non-Office Employees	Office Employees	Non-Office Employees	Office Employees	Non-Office Employees	Office Employees	Non-Office Employees	Office Employees	Non-Office Employees	Office Employees							
	Operat- ing	Others	Operat- ing	Others	Operat- ing	Others	Operat- ing	Others	Operat- ing	Others	Operat- ing	Others							
<i>Manufacturing — Plant Employees</i>																			
Total number of reporting units—8,618 .....	64	32	4	2	5	1	6	34	12	22	12	21							
Total number of plant employees—822,623 .....	84	14	2	3	2	9	26	6	6	34	12	21							
— Office Employees																			
Total number of reporting units—8,338 .....	63	32	5	2	5	1	6	34	12	22	12	21							
Total number of office employees—252,546 .....	87	11	2	3	2	9	26	6	6	34	12	21							
<i>Mining — Non-Office Employees</i>																			
Metal mining—49,018 .....	94	2	4	2	4	16	8	51	33	50	33	50							
Gold mining—13,258 .....	98	2	—	—	—	8	5	—	51	—	33	50							
Uranium mining—3,715 .....	100	—	—	—	—	19	—	—	50	—	—	—							
Other metal mining—32,045 .....	92	2	6	2	6	20	10	24	24	10	24	10							
Coal mining—9,460 .....	91	8	1	—	1	57	—	—	—	—	—	—							
Natural gas—1,254 .....	99	1	—	—	—	26	—	—	—	—	—	—							
Crude oil—4,717 .....	85	12	3	—	3	6	4	4	4	6	4	4							
Non-metal mining—7,669 .....	96	4	—	—	—	22	26	17	17	26	17	11							
Quarrying—2,488 .....	58	37	5	—	5	—	11	11	11	—	11	11							
Prospecting—1,303 .....	62	32	6	—	6	—	10	19	10	—	19	19							
<i>Transportation</i>																			
Air transport .....	3,018	7,378	80	88	90	17	9	9	3	1	60	77	78	48	65	71	10	4	8
Railway transport .....	25,410	76,424	99	98	91	1	2	9	—	—	57	60	88	57	53	46	98	97	90
Urban & suburban passenger transp. ....	10,629	5,058	90	96	95	10	4	5	—	—	—	—	48	53	68	35	6	6	2
Interurban bus transport .....	2,230	559	64	30	46	28	67	53	8	3	1	—	—	28	—	24	4	3	3
Trucking .....	15,775	5,578	45	39	41	50	57	54	5	4	5	—	—	4	4	6	7	7	8
Services incidental to water transport .....	12,492	2,050	72	33	33	15	23	23	13	44	—	—	—	6	4	4	23	23	20

APPENDIX 5-7 (Concl.)

Industry & No. of Employees	Industrial Medical Services						Medical Personnel					
	Provide Medical on First Aid Services			Do Not Provide Medical on First Aid Services			Physician(s) in Attendance Full-Time		Physician(s) in Attendance Part-Time		Physician(s) on Call	
	Non-Office Employees	Office Employees		Non-Office Employees	Office Employees		Non-Office Employees	Office Employees	Non-Office Employees	Office Employees	Non-Office Employees	Office Employees
<i>Storage</i>												
Grain Elevators .....	3,599	1,035	62	36	49	2	—	—	—	—	11	3
Storage & Warehousing .....	1,448	593	49	45	45	6	—	—	—	—	16	12
<i>Public Utilities &amp; Communications</i>												
Electric, Gas & Water .....	26,368	20,094	84	15	8	1	—	—	—	—	—	—
Telephone .....	32,165	23,942	81	19	13	—	—	—	—	—	—	—
Radio & T.V. ....	6,323	6,929	63	35	29	2	—	—	—	—	—	—
<i>Municipal Public Works Departments</i> .....	33,074	15,243	50	39	30	11	8	13	20	3	6	6
<i>Service</i>												
Hotels .....	21,966	50	50	44	6	6	5	5	6	6	18	18
Restaurants .....	21,397	21	21	69	10	10	—	—	1	1	7	7
Laundries & Dry Cleaning .....	13,929	53	53	40	7	7	—	—	4	4	7	7
<i>Trade</i>												
Wholesale .....	48,234	57,758	46	48	42	6	6	1	2	3	8	12
<i>Retail</i> .....	97,119	69,252	42	63	30	12	7	3	4	11	12	20
<i>Finance and Insurance</i>												
Banks .....	68,308	56	56	44	44	—	—	—	—	—	—	—
Life Insurance .....	19,671	78	78	17	17	5	5	27	27	32	35	35
Non-Life Insurance .....	17,090	36	36	49	49	15	15	—	—	11	7	7
Investment & Loan .....	23,328	22	22	61	61	17	17	—	—	3	3	3

All percentages in this table are proportions of the number of employees, except in manufacturing where percentages of reporting units are also given.  
Source: "Working Conditions in Canadian Industry, 1962", Report No. 6, Economics and Research Branch, Department of Labour. This survey covers a universe of establishments having 15 or more employees.



## APPENDIX 5-8

## EMPLOYMENT OF SPECIALISTS IN THE ARMED FORCES, MARCH 31, 1962

Specialty	No. in Establishment		No. of Positions Filled		Employed Staff Duties	
	Certi- fied	Non- Certi- fied	Certi- fied	Non- Certi- fied	Certi- fied	Non- Certi- fied
Anaesthesia .....	12	10	8	3	1	
Dermatology & Syphilology .....	3	2	2	2	1	
General Surgery .....	16	21	14	10		
Internal Medicine .....	17	17	10	3	1	
Psychiatry .....	13	2	6	3		
Obstetrics & Gynaecology .....	4	6	1			
Orthopaedic Surgery .....			1			
Ophthalmology .....	11		3	1	1	
Otolaryngology .....	8		5	1		
Ophthalmology & Otolaryngology ..			1			
Paediatrics .....					1	
Pathology .....	1		1	1		
Physical Medicine .....	2		1	2		
Plastic Surgery .....				1		
Diagnostic Radiology .....	11	3	7	3		
Industrial Medicine .....				3		
Aviation Medicine .....		26		9		2
Basic Sciences .....				1		
Biometrics .....				1		
Hospital Administration .....		6		5		3
Public Health .....	1			15		
Total .....	99	93	60	64	5	5

Source: Department of National Defence, July 20, 1962, File ref. H.Q. 2-6030-2 D.S.G. (PTS)  
Table III.

## APPENDIX 5-9

SCALE OF SALARIES IN EXISTENCE FOR PHYSICIANS  
IN THE ARMED SERVICES BY CATEGORIES, 1962

Categories of Physicians	Scale of Salaries	
	Unmarried	Married
1. <i>Captain</i>		
On enrolment.....	\$ 7,056	\$ 7,896
— after 3 years .....	8,016	8,856
— after 6 years .....	8,976	9,816
— after 9 years .....	9,936	10,776
2. <i>Major</i>		
On promotion.....	10,476	11,220
— after 3 years .....	10,836	11,580
— after 6 years .....	11,196	11,940
— after 9 years .....	11,556	12,300
3. <i>Lieutenant-Colonel</i>		
On promotion.....	11,820	12,588
— after 3 years .....	12,240	13,008
— after 6 years .....	12,660	13,428
— after 9 years .....	13,080	13,848
4. <i>Colonel</i>		
On promotion.....	13,236	14,028
— after 3 years .....	13,656	14,448
— after 6 years .....	14,076	14,868
5. <i>Brigadier</i>		
On promotion.....	14,204	16,008
(no progressive pay)		
6. <i>Major General</i>		
On promotion.....	17,160	18,000
(no progressive pay)		

Note: Enrolled in rank of Lieutenant (Navy), Captain (Army), Flight Lieutenant (RCAF). Rank tables are shown in Army equivalents. Marriage, subsistence and responsibility allowances are included in gross salaries.

## APPENDIX 6-1

## ECONOMICS OF MEDICAL PRACTICE - 1960

RETURN THIS PART OF THE QUESTIONNAIRE IN THE ENVELOPE ADDRESSED  
TO THE ROYAL COMMISSION ON HEALTH SERVICES

Do not  
write here

The following questions, referring to the year 1960, have been put on a separate sheet so that this portion of the completed questionnaire can be returned separately thus ensuring anonymity.

Please note that over and above the confidential and purely statistical nature of this whole study, the separation of this sheet removes any possibility of identifying the respondent. This procedure, on the other hand, makes it necessary to repeat certain questions regarding the type of your practice in order to ascertain the distribution by such characteristics of the data supplied.

1. Location: Province \_\_\_\_\_  
State whether: rural ☐ or urban: under 10,000 population ☐  
10,000 to 100,000 ☐  
over 100,000 ☐
2. Year of graduation \_\_\_\_\_ years in private practice \_\_\_\_\_
3. Practice: solo ☐; partnership or group ☐; not in private practice ☐.
4. Type of major work in which engaged during 1960 (check one):
- |  |   |
|--|---|
| Private practice: General <input type="checkbox"/>           | Research <input type="checkbox"/>                       |
| Specialist <input type="checkbox"/>                          | Teaching <input type="checkbox"/>                       |
| (state specialty) _____                                      | Public Health <input type="checkbox"/>                  |
|  | Industrial medicine <input type="checkbox"/>            |
|  | Other (specify or give title): <input type="checkbox"/> |
| _____ Consultant <input type="checkbox"/>                    | Specialist _____ <input type="checkbox"/>               |
| (referred only)  | Non-specialist _____ <input type="checkbox"/>           |
| Junior intern <input type="checkbox"/>                       | Retired <input type="checkbox"/>                        |
| Senior intern, resident, fellow <input type="checkbox"/>     |   |
| Hospital staff: Specialist services <input type="checkbox"/> |   |
| Other (specify) <input type="checkbox"/>                     |   |

N.B.: For any group practice or partnership where individual expenditures cannot be determined, it is requested that a composite return for questions 5, 6, and 7 below be completed by one member, indicating by checkmark ☐ that this is such a composite return, and giving the number of members of the group. \_\_\_\_\_  
(number)

## 5. Annual operating expenditures incurred in the practice during 1960:

If you find it more convenient from your bookkeeping methods to arrange the following operating expenditure items differently, (e.g. in line with your tax return, etc.) complete this section in accordance with your records.

- |   |  |
|---|--|
| 1) Medical, surgical supplies and services \$ _____ | 7) Automobile operating expenses \$ _____  |
| 2) Salaries or wages paid to assistants:            |  |
| a) Nursing staff No. _____                          | 8) Interest paid on borrowed capital _____   |
| b) Technical staff No. _____                        | 9) All other expenses of practice (incl. convention expenses, association fees, misc. office expenses, etc.) _____ |
| c) Clerical & other staff No. _____                 |  |
| 3) Telephone & answering service _____              |  |
| 4) Assistant's fees _____                           |  |
| 5) Office rental _____                              |  |
| 6) Depreciation:                                    |  |
| a) Medical equipment costing over \$50 _____        |  |
| b) Medical equipment (less than \$50) _____         |  |
| c) Office furniture and equipment _____             |  |
| d) Automobile _____                                 |  |
| e) Buildings _____                                  |  |
|   | Total current operating expenses _____   |

Do not  
write here

6. Depreciated value of capital assets at end of 1960 ..... \$ \_\_\_\_\_
7. Capital cost of buildings and/or equipment purchased in 1960..... \$ \_\_\_\_\_
8. Net income for 1960 from medical practice and salaried work:
- (a) Net income from practice..... \$ \_\_\_\_\_
- (b) Income from salaried appointment ..... \$ \_\_\_\_\_
- (c) Other professional income (fellowships, etc.)..... \$ \_\_\_\_\_

**COMPLETE THE FOLLOWING QUESTIONS ONLY IF  
PRACTICE WAS ESTABLISHED SINCE 1956**

9. Cost of establishing practice:

(1) How did you establish your practice:

- (a) by taking over an existing practice ☐
- (b) by establishing an entirely new solo practice ☐
- (c) starting practice under contract with:
- (i) community organization (e.g. municipality, industry, etc.)? ☐
- (ii) partnership or group? ☐

(2) In what year did you establish your practice?

Underline: 1957, 1958, 1959, 1960, 1961, 1962

(3) Indicate under the following headings the NET COST of items purchased as follows:

	Initial cost in 1st year of practice	additional cost in each subsequent year of practice			
		2nd year	3rd year	4th year	5th year
	\$	\$	\$	\$	\$
(a) Office space purchased (if rented check here <input type="checkbox"/> )	_____	_____	_____	_____	_____
(b) Examining and consulting room equipment	_____	_____	_____	_____	_____
(c) Office and waiting room furniture and equipment (e.g., filing cabinets, typewriter, etc.)	_____	_____	_____	_____	_____
(d) Automobile used in practice	_____	_____	_____	_____	_____
(e) Other capital goods	_____	_____	_____	_____	_____
(f) Purchase of practice	_____	_____	_____	_____	_____

(4) Source and amount of funds used to establish practice initially:

Source:	Amount: \$
(a) Personal resources.....	_____
(b) Gift.....	_____
(c) Credit or loan:	
(i) Family or relatives.....	_____
(ii) Bank.....	_____
(iii) Other (specify) .....	_____

(5) From the time you set up practice, how long did it take for your gross income to exceed the annual cost of operating your practice plus current living expenses? .....

PLEASE RETURN THIS SHEET TO THE ROYAL  
COMMISSION ON HEALTH SERVICES

## APPENDIX 6-2

GEOGRAPHIC DISTRIBUTION OF GROUP MEDICAL PRACTICE,  
BY SIZE OF GROUP AND SIZE OF COMMUNITY,  
FOR REGIONS AND CANADA, 1960<sup>1</sup>

Regions and Size of Community	Group Size (Number of Doctors)									
	3	4	5	6	7	8	9	10	10+	Total
Atlantic Region .....	12	3	1	5	1	—	1	1	—	24
Rural .....	2	—	—	—	—	—	—	—	—	2
Urban — Under 10,000 .....	2	—	1	4	—	—	—	—	—	7
— 10,000 — 100,000 .....	5	3	—	1	—	—	1	1	—	11
— Over 100,000 .....	3	—	—	—	1	—	—	—	—	4
Quebec .....	14	3	2	2	1	1	—	—	—	23
Rural .....	3	—	1	—	—	—	—	—	—	4
Urban — Under 10,000 .....	1	1	—	—	—	—	—	—	—	2
— 10,000 — 100,000 .....	4	1	1	1	—	—	—	—	—	7
— Over 100,000 .....	6	1	—	1	1	1	—	—	—	10
Ontario .....	34	10	9	3	3	1	3	1	6	70
Rural .....	8	1	—	—	—	—	—	—	—	9
Urban — Under 10,000 .....	8	2	3	—	—	—	—	—	—	13
— 10,000 — 100,000 .....	7	2	4	3	3	1	—	1	2	23
— Over 100,000 .....	11	5	2	—	—	—	3	—	4	25
Prairie Region .....	32	13	9	2	5	—	3	2	9	75
Rural .....	10	4	2	1	—	—	—	—	—	17
Urban — Under 10,000 .....	5	2	3	—	3	—	1	—	—	14
— 10,000 — 100,000 .....	3	4	1	1	1	—	—	2	3	15
— Over 100,000 .....	14	3	3	—	1	—	2	—	6	29
British Columbia .....	20	11	5	4	4	1	1	—	3	49
Rural .....	4	2	1	—	—	—	—	—	—	7
Urban — Under 10,000 .....	2	2	2	1	—	—	—	—	1	8
— 10,000 — 100,000 .....	6	1	1	1	—	1	—	—	2	12
— Over 100,000 .....	8	6	1	2	4	—	1	—	—	22
Not Stated .....	1	—	—	—	—	—	—	—	—	1
Rural .....	—	—	—	—	—	—	—	—	—	—
Urban — Under 10,000 .....	—	—	—	—	—	—	—	—	—	—
— 10,000 — 100,000 .....	—	—	—	—	—	—	—	—	—	—
— Over 100,000 .....	1	—	—	—	—	—	—	—	—	1
Canada .....	113	40	26	16	14	3	8	4	18	242
Rural .....	27	7	4	1	—	—	—	—	—	39
Urban — Under 10,000 .....	18	7	9	2	3	—	1	1	1	42
— 10,000 — 100,000 .....	25	11	7	10	4	2	1	3	7	69
— Over 100,000 .....	43	15	6	3	7	1	6	—	10	91

<sup>1</sup> Includes only those practices that responded.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 6-3

AVERAGE ANNUAL TOTAL NET INCOME FROM MEDICAL PRACTICE AND SALARIED APPOINTMENT OF ACTIVE CIVILIAN PHYSICIANS, BY TYPE OF MAJOR WORK IN WHICH ENGAGED DURING 1960, FOR PROVINCES AND CANADA

Type of Major Work and Source of Income <sup>1</sup>	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Not Stated	Canada
<i>Private Practice:</i>												
<i>General</i>												
Practice .....	11,580	9,890	13,400	12,990	10,050	14,300	13,720	12,250	12,820	15,680	13,130	13,060
Salaried Appointment .....	2,280	1,220	290	410	810	590	650	1,560	510	320	790	700
Other Professional .....	20	250	130	90	130	40	20	—	10	20	110	60
Total Average Income .....	13,880	11,360	13,820	13,490	10,990	14,930	14,390	13,810	13,340	16,220	14,030	13,820
Response Count .....	24	13	73	53	449	742	84	87	114	196	105	1,940
<i>Specialist</i>												
Practice .....	14,650	6,440	13,440	16,130	12,610	17,220	10,970	11,550	15,490	14,380	16,780	14,960
Salaried Appointment .....	2,850	8,460	4,710	3,450	3,510	3,270	5,110	5,620	3,670	3,500	3,500	3,600
Other Professional .....	170	30	240	60	220	170	70	310	160	50	70	170
Total Average Income .....	17,670	14,930	18,390	19,640	16,340	20,660	16,550	17,480	19,320	18,030	20,350	18,730
Response Count .....	23	7	87	65	654	915	74	69	127	241	96	2,358
<i>Internship:</i>												
<i>Junior</i>												
Practice .....	—	—	—	—	90	160	160	—	70	810	300	190
Salaried Appointment .....	400	—	1,780	—	1,260	1,780	1,020	780	1,460	1,250	1,540	1,490
Other Professional .....	—	—	—	—	80	70	90	260	—	—	—	60
Total Average Income .....	400	—	1,780	—	1,430	2,010	1,110	1,040	1,530	2,060	1,840	1,740
Response Count .....	1	—	4	—	33	63	9	4	13	15	8	150
<i>Senior</i>												
Practice .....	100	—	210	440	650	120	190	300	60	280	—	300
Salaried Appointment .....	4,380	—	3,080	960	2,050	2,880	3,210	2,500	2,090	2,990	1,870	2,590
Other Professional .....	440	—	550	1,820	400	470	510	660	420	400	450	470
Total Average Income .....	4,920	—	3,840	3,220	3,100	3,470	3,910	3,460	2,570	3,670	2,320	3,360
Response Count .....	6	—	19	7	177	259	34	19	28	51	18	618
<i>Hospital Staff:</i>												
<i>Specialist</i>												
Practice .....	—	—	2,660	—	3,060	2,410	1,210	—	590	550	130	1,930
Salaried Appointment .....	15,000	—	11,730	10,580	9,730	12,800	10,910	10,050	10,780	10,770	11,070	11,450
Other Professional .....	4,000	—	190	—	110	280	180	—	360	—	—	210
Total Average Income .....	19,000	—	14,580	10,580	12,900	15,490	12,300	10,050	11,730	11,320	11,200	13,590
Response Count .....	2	—	7	8	40	79	14	10	5	20	3	188
<i>Other</i>												
Practice .....	—	—	—	—	1,400	2,500	940	—	250	30	2,250	1,270
Salaried Appointment .....	9,860	—	8,850	15,000	10,210	10,510	8,810	9,080	8,820	11,770	7,270	10,060
Other Professional .....	—	—	—	—	750	290	290	—	200	—	30	230
Total Average Income .....	9,860	—	8,850	15,000	12,360	13,300	9,750	9,080	9,270	11,800	9,550	11,560
Response Count .....	5	—	2	1	11	26	4	6	7	9	4	75

## APPENDIX 6-3 (Concl.)

Type of Major Work and Source of Income <sup>1</sup>	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Not Stated	Canada
<i>Hospital Staff: (Concl'd)</i>												
<i>Research</i>												
Practice .....	—	—	500	—	320	580	760	7,000	2,140	560	—	590
Salaries .....	—	—	8,330	—	7,520	6,380	8,920	13,000	5,930	10,320	7,660	7,330
Other Professional .....	—	—	330	—	1,180	1,190	740	—	2,230	—	330	1,020
Total Average Income .....	—	—	9,160	—	9,020	8,150	10,420	20,000	10,300	10,880	7,990	8,940
Response Count .....	—	—	6	—	42	69	9	1	7	13	9	156
<i>Teaching</i>												
Practice .....	—	—	7,930	—	970	2,530	5,420	—	3,370	3,620	1,000	2,760
Salaries .....	—	—	7,960	—	9,020	11,940	9,070	10,330	10,280	11,270	13,660	10,490
Other Professional .....	—	—	440	—	460	720	—	3,170	1,080	—	200	620
Total Average Income .....	—	—	16,330	—	10,450	15,190	14,490	13,500	14,730	14,890	14,860	13,870
Response Count .....	—	—	8	—	26	35	7	3	10	6	5	100
<i>Public Health</i>												
Practice .....	—	—	—	2,250	1,790	470	1,040	700	760	—	670	790
Salaries .....	10,430	10,350	11,170	8,360	8,560	9,790	11,820	11,280	8,570	10,960	10,370	9,850
Other Professional .....	—	—	1,420	—	50	90	—	20	30	240	160	110
Total Average Income .....	10,430	10,350	12,590	10,610	10,400	10,350	12,860	12,000	9,360	11,200	11,200	10,750
Response Count .....	8	2	5	4	57	88	14	18	16	29	15	256
<i>Industrial Medicine</i>												
Practice .....	2,000	—	6,000	—	3,710	1,240	—	4,000	—	3,800	360	2,110
Salaries .....	13,000	—	250	11,250	8,990	12,860	12,500	3,500	11,410	10,110	11,140	11,000
Other Professional .....	—	—	—	—	20	100	—	—	—	50	100	60
Total Average Income .....	15,000	—	6,250	11,250	12,720	14,200	12,500	7,500	11,410	13,960	11,600	13,170
Response Count .....	1	—	2	2	21	40	1	1	4	11	7	90
<i>Other</i>												
Practice .....	570	—	3,530	5,750	5,090	5,900	3,000	610	8,860	4,020	400	4,960
Salaries .....	7,040	—	8,540	6,840	7,550	8,500	11,090	10,730	7,090	7,770	12,070	8,300
Other Professional .....	—	—	120	—	430	250	—	190	10	70	300	210
Total Average Income .....	7,610	—	12,190	12,590	13,070	14,650	14,090	11,530	15,960	11,860	12,770	13,470
Response Count .....	7	—	18	6	42	83	8	7	15	23	5	214
<i>Not Stated</i>												
Practice .....	1,500	—	5,930	—	11,980	12,800	2,000	—	14,250	9,760	10,440	11,300
Salaries .....	7,000	—	7,620	—	5,150	2,360	3,000	—	4,500	1,500	—	3,500
Other Professional .....	—	—	2,920	—	140	220	—	—	—	—	—	310
Total Average Income .....	8,500	—	16,470	—	17,270	15,380	5,000	—	18,750	11,260	10,440	15,110
Response Count .....	1	—	2	—	9	15	1	—	2	2	2	34

<sup>1</sup> Excludes partnership or group medical practice.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 6-4

AVERAGE TOTAL NET INCOME OF PHYSICIANS IN GROUP PRACTICE AND NUMBER OF PRACTICES/DOCTORS,  
BY SIZE OF GROUP, FOR PROVINCES AND CANADA, 1960<sup>1</sup>

Province	Size of Medical Group										Total	Average Net Income for All Group Sizes
	3	4	5	6	7	8	9	10	10+			
<i>Newfoundland</i>												
Number of Practices/Doctors ...	1/3	2/8									3/11	\$ 9,110
Average Net Income .....	\$ 15,730	\$ 6,610										
<i>Prince Edward Island</i>												
Number of Practices/Doctors ...	—	—		2/12							3/21	\$ 14,910
Average Net Income .....	\$ —	\$ —		\$ 14,840					1/9	\$ 15,000		
<i>Nova Scotia</i>												
Number of Practices/Doctors ...	9/27	—	1/5	2/12							12/44	\$ 20,450
Average Net Income .....	\$ 18,320	\$ —	\$ 25,200	\$ 23,250								
<i>New Brunswick</i>												
Number of Practices/Doctors ...	1/3	—	—	—							1/3	\$ 19,380
Average Net Income .....	\$ 19,380	\$ —	\$ —	\$ —								
<i>Quebec</i>												
Number of Practices/Doctors ...	7/21	3/12	1/5	1/6		1/8					13/52	\$ 17,230
Average Net Income .....	\$ 17,820	\$ 17,900	\$ 14,320	\$ 20,170		\$ 14,260						
<i>Ontario</i>												
Number of Practices/Doctors ...	27/81	7/28	7/35	3/18	3/21	1/8	1/9	1/10	5/78	55/288		\$ 18,890
Average Net Income .....	\$ 20,310	\$ 18,900	\$ 14,710	\$ 21,000	\$ 14,470	\$ 23,130	\$ 19,640	\$ 16,680	\$ 19,560			
<i>Manitoba</i>												
Number of Practices/Doctors ...	7/21	2/8	1/5	—	—	—	—	1/10	2/80	13/124		\$ 26,710
Average Net Income .....	\$ 14,020	\$ 16,620	\$ 10,500	\$ —	\$ —	\$ —	\$ —	\$ 40,340	\$ 30,360			
<i>Saskatchewan</i>												
Number of Practices/Doctors ...	9/27	4/16	3/15	—	1/7	—	1/9	—	—	18/74		\$ 17,420
Average Net Income .....	\$ 16,790	\$ 15,330	\$ 19,470	\$ —	\$ 17,090	\$ —	\$ 19,890	\$ —	\$ —			
<i>Alberta</i>												
Number of Practices/Doctors ...	12/36	7/28	3/15	1/6	2/14	—	1/9	—	6/97	32/205		\$ 17,780
Average Net Income .....	\$ 16,890	\$ 18,150	\$ 19,470	\$ 18,660	\$ 16,430	\$ —	\$ 16,910	\$ —	\$ 17,970			
<i>British Columbia</i>												
Number of Practices/Doctors ...	17/51	8/32	5/25	4/24	4/28	1/8	—	—	3/46	42/214		\$ 19,460
Average Net Income .....	\$ 19,940	\$ 20,440	\$ 23,460	\$ 18,760	\$ 15,360	\$ 18,130	\$ —	\$ —	\$ 19,160			
<i>Canada</i>												
Number of Practices/Doctors ...	90/270	33/132	21/105	13/78	10/70	3/24	4/36	2/20	16/301	192/1,036		\$ 19,420
Average Net Income .....	\$ 18,490	\$ 17,710	\$ 18,430	\$ 19,460	\$ 15,480	\$ 18,500	\$ 17,860	\$ 28,510	\$ 21,910			

<sup>1</sup> Includes only those practices that responded.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.



## APPENDIX 6-5

RESPONSE COUNT AND AVERAGE NET INCOME OF ACTIVE CIVILIAN PHYSICIANS  
WITH INDEPENDENT PRACTICE ONLY, BY TYPE OF MAJOR WORK IN WHICH  
ENGAGED DURING 1960, FOR PROVINCES AND CANADA<sup>1</sup>

Province	Type of Major Work			
	General		Specialist	
	Response Count	Average Net Income	Response Count	Average Net Income
		\$		\$
Newfoundland .....	11	14,180	12	14,850
Prince Edward Island .....	10	10,400	1	15,510
Nova Scotia .....	58	14,090	41	19,150
New Brunswick .....	47	13,580	40	20,870
Quebec .....	361	10,310	309	16,540
Ontario .....	621	14,940	528	21,470
Manitoba .....	72	14,410	33	18,090
Saskatchewan .....	64	13,290	25	21,590
Alberta .....	96	13,110	51	19,670
British Columbia .....	168	16,370	129	18,680
Not Stated .....	92	14,030	52	19,220
Canada .....	1,600	13,690	1,221	19,500

<sup>1</sup> Excludes partnership or group medical practice.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.



## APPENDIX 6-6 (Concl.)

Level of Income	Province											
	Manitoba			Saskatchewan			Alberta			British Columbia		
	A	B	C	A	B	C	A	B	C	A	B	C
\$ 0-1,000 .....	12	5	7	5	2	3	11	3	6	9	1	5
\$ 1,001-2,000 .....	10	4	4	7	3	3	17	5	7	15	5	6
\$ 2,001-3,000 .....	7	3	2	10	4	3	23	7	6	33	3	9
\$ 3,001-4,000 .....	12	5	5	8	4	3	12	3	5	16	3	6
\$ 4,001-5,000 .....	12	5	6	7	3	3	7	2	3	14	2	7
\$ 5,001-6,000 .....	11	4	6	5	2	3	9	3	5	18	3	10
\$ 6,001-7,000 .....	11	4	6	5	2	3	12	3	6	24	4	12
\$ 7,001-8,000 .....	5	2	2	12	5	5	10	3	4	19	3	7
\$ 8,001-9,000 .....	16	6	6	15	7	6	16	5	6	19	3	7
\$ 9,001-10,000 .....	9	3	3	15	7	5	13	4	4	43	7	13
\$10,001-11,000 .....	15	6	5	14	6	5	16	5	6	33	5	11
\$11,001-12,000 .....	11	4	3	16	7	5	27	8	8	44	7	13
\$12,001-13,000 .....	13	5	5	13	6	5	17	5	7	16	3	6
\$13,001-14,000 .....	15	6	6	13	6	5	13	4	5	27	4	11
\$14,001-15,000 .....	13	5	4	6	3	2	16	5	5	30	5	10
\$15,001-16,000 .....	12	5	5	8	4	3	11	3	5	27	4	11
\$16,001-17,000 .....	12	5	7	6	3	4	8	2	5	21	3	12
\$17,001-18,000 .....	9	3	4	7	3	3	15	4	7	28	5	14
\$18,001-19,000 .....	10	4	6	8	4	5	11	3	7	26	4	16
\$19,001-20,000 .....	8	3	4	9	4	5	15	4	8	20	3	10
\$20,001-21,000 .....	-	-	-	3	1	2	7	2	6	10	2	8
\$21,001-22,000 .....	6	2	4	4	2	3	6	2	4	16	3	11
\$22,001-23,000 .....	4	2	4	3	1	3	6	2	5	13	2	11
\$23,001-24,000 .....	2	1	2	2	1	2	6	2	7	11	2	12
\$24,001-25,000 .....	4	2	4	7	3	6	7	2	6	15	2	14
\$25,000 and Over ....	20	8	3	17	8	2	37	11	5	69	11	10
<b>Totals</b>												
Questionnaire .....	259	4.2%		225	3.6%		348	5.6%		616	10.0%	
Directory .....	1,126	5.2%		847	4.0%		1,455	6.8%		2,245	10.5%	
Median .....	\$ 12,000			\$ 12,000			\$ 13,000			\$ 14,000		
										277	4.5%	
										12,000	-	
										6,179	100.0%	
										21,434		

1 Includes net income from practice, income from salaried appointment, and other professional income.

2 Excludes partnership or group practice.

3 Directory of Canadian Mailings Limited, listing as per October 1, 1962.

A. Number reporting.

B. Per cent of total reporting in province.

C. Per cent of Canada.

Source: Royal Commission on Health Services, Questionnaire on The Economics of Medical Practice 1962, Questions 1 and 8.

APPENDIX 6-7

AVERAGE TOTAL NET INCOME FROM MEDICAL PRACTICE AND SALARIED APPOINTMENT OF ACTIVE CIVILIAN PHYSICIANS, BY TYPE OF MAJOR WORK IN WHICH ENGAGED IN 1960 AND BY SIZE OF COMMUNITY IN WHICH LOCATED, FOR REGIONS AND CANADA<sup>1</sup>

(A) Region (C) Urban areas, under 10,000 population (E) Urban areas, over 100,000 population  
(B) Rural areas (D) Urban areas, 10,000-100,000 population (F) Size of locality not stated

Region, Size of Community Average Net Income and Response Count	Type of Major Work											
	Private practice		Internship		Hospital Staff		Re- search	Teach- ing	Public Health	Indus- trial Medi- cine	Other	Not Stated
	Gen- eral	Spe- cialist	Junior	Senior	Spe- cialist	Other						
<i>Atlantic Provinces</i>												
(A) Average net income .....	13,420	18,450	1,500	3,100	12,670	10,250	8,830	15,890	10,650	10,000	11,160	11,870
Number of respondents .....	163	182	5	32	17	8	6	8	19	5	31	3
(B) Average net income .....	10,090	11,830	400	—	9,300	3,600	—	—	9,750	15,000	7,280	—
Number of respondents .....	51	7	1	—	2	1	—	—	2	1	4	—
(C) Average net income .....	14,630	15,740	—	—	9,600	—	—	—	10,820	—	15,660	8,960
Number of respondents .....	54	22	—	—	1	—	—	—	4	—	4	2
(D) Average net income .....	15,640	18,630	1,200	3,390	14,340	12,830	—	15,820	10,440	11,250	11,160	—
Number of respondents .....	47	121	1	17	11	4	—	4	10	2	18	—
(E) Average net income .....	14,160	21,850	2,550	2,960	9,800	10,200	8,830	15,960	11,500	12,000	9,700	17,680
Number of respondents .....	6	29	2	12	3	1	6	4	1	1	2	1
(F) Average Net income .....	12,480	13,620	800	2,000	—	8,450	—	—	11,850	500	11,330	—
Number of respondents .....	5	3	1	3	—	2	—	—	2	1	3	—
<i>Quebec</i>												
(A) Average net income .....	10,870	16,120	1,350	2,710	12,790	11,610	7,840	9,980	10,340	12,700	12,640	17,130
Number of respondents .....	449	654	33	177	40	11	42	26	57	21	42	9
(B) Average net income .....	10,690	14,700	—	1,850	7,000	—	—	—	8,300	14,460	9,000	—
Number of respondents .....	115	25	—	3	1	—	—	—	5	1	1	—
(C) Average net income .....	9,660	13,350	990	7,000	10,950	—	14,000	—	10,000	12,960	6,000	7,280
Number of respondents .....	82	20	1	3	3	—	1	—	3	3	2	2
(D) Average net income .....	11,240	16,340	800	8,990	17,840	11,910	—	—	7,880	15,000	7,630	5,000
Number of respondents .....	94	135	1	3	5	2	—	—	19	1	3	1
(E) Average net income .....	11,270	16,400	1,420	2,590	12,710	11,550	7,720	10,290	12,200	12,390	13,230	22,440
Number of respondents .....	152	459	28	159	30	9	39	25	28	16	35	6
(F) Average net income .....	14,860	11,890	940	1,540	1,080	—	7,000	2,200	13,450	—	24,000	—
Number of respondents .....	6	15	3	9	1	—	2	1	2	—	1	—

## APPENDIX 6-7 (Cont'd)

Region, Size of Community Average Net Income and Response Count	Type of Major Work												Indus- trial Medi- cine	Other	Not Stated
	Private Practice		Internship		Hospital Staff		Re- search	Teach- ing	Public Health						
	Gen- eral	Spe- cialist	Junior	Senior	Spe- cialist	Other									
Ontario															
(A) Average net income .....	14,900	20,500	1,940	3,000	15,210	13,010	6,960	14,470	10,270	14,110	14,400	15,160			
Number of respondents .....	742	915	63	259	79	26	69	35	88	40	83	15			
(B) Average net income .....	13,530	12,480	—	3,200	9,500	—	16,000	8,280	11,430	—	11,000	1,160			
Number of respondents .....	122	9	—	2	2	—	1	1	6	—	2	1			
(C) Average net income .....	15,740	13,430	1,580	9,730	8,830	8,300	—	—	4,800	7,500	8,100	—			
Number of respondents .....	111	12	2	3	2	1	—	—	8	2	1	—			
(D) Average net income .....	17,440	20,000	1,950	3,100	16,630	12,620	4,490	13,840	9,270	14,920	14,040	31,380			
Number of respondents .....	185	253	4	31	31	4	9	5	19	13	17	3			
(E) Average net income .....	13,660	20,950	2,010	2,920	15,080	13,130	7,410	14,890	11,370	14,210	15,200	13,050			
Number of respondents .....	314	628	53	213	42	19	57	28	51	25	59	9			
(F) Average net income .....	13,980	20,530	1,280	2,490	8,250	15,000	600	12,000	10,140	—	7,450	7,350			
Number of respondents .....	10	13	4	10	2	2	2	1	4	—	4	2			
Prairie Provinces															
(A) Average net income .....	13,790	17,910	1,240	2,830	11,280	9,240	9,630	13,450	11,350	10,940	14,380	14,170			
Number of respondents .....	285	270	26	81	29	17	17	20	48	6	30	3			
(B) Average net income .....	12,210	10,570	600	1,800	10,380	5,000	12,500	—	10,660	9,750	10,280	—			
Number of respondents .....	95	3	1	1	3	1	1	—	6	2	4	—			
(C) Average net income .....	14,830	13,010	1,300	5,960	6,150	5,290	—	—	10,350	—	—	—			
Number of respondents .....	58	10	2	6	4	2	—	—	2	—	—	—			
(D) Average net income .....	14,440	16,880	—	2,090	9,320	8,820	20,000	10,330	11,350	—	13,130	—			
Number of respondents .....	26	57	—	16	9	6	1	3	14	—	4	—			
(E) Average net income .....	14,450	18,800	1,490	2,820	13,650	11,070	8,740	14,000	11,630	11,530	16,030	11,500			
Number of respondents .....	102	196	19	55	12	8	15	17	22	4	20	2			
(F) Average net income .....	14,630	7,280	930	1,550	23,600	—	—	—	11,420	—	8,600	19,500			
Number of respondents .....	4	4	4	2	1	—	—	—	4	—	2	1			

APPENDIX 6-7 (Cont'd)

Region, Size of Community Average Net Income and Response Count	Type of Major Work											
	Private Practice		Internship		Hospital Staff		Re- search	Teach- ing	Public Health	Indus- trial Medi- cine	Other	Not Stated
	Gen- eral	Spe- cialist	Junior	Senior	Spe- cialist	Other						
<i>British Columbia</i>												
(A) Average net income..... \$	16,190	17,990	2,050	3,270	11,320	11,810	10,890	14,890	10,960	13,900	11,790	11,260
Number of respondents .....	196	241	15	51	20	9	13	6	29	11	23	2
(B) Average net income..... \$	17,920	13,290	5,060	2,800	—	—	—	—	10,000	—	14,510	—
Number of respondents .....	33	4	2	2	—	—	—	—	1	—	1	—
(C) Average net income..... \$	18,000	14,210	4,250	4,820	8,810	—	16,000	—	10,640	—	15,000	—
Number of respondents .....	27	6	1	2	3	—	1	—	2	—	1	—
(D) Average net income..... \$	16,020	20,470	—	5,220	15,000	9,250	6,400	1,500	11,220	30,760	10,530	—
Number of respondents .....	59	49	—	3	1	2	1	1	13	1	3	—
(E) Average net income..... \$	14,860	17,620	1,430	3,030	11,580	13,070	10,580	17,570	10,830	11,850	11,250	11,260
Number of respondents .....	74	178	11	40	15	6	9	5	13	9	16	2
(F) Average net income..... \$	17,050	14,460	770	3,710	11,320	9,330	11,950	—	—	15,500	15,000	—
Number of respondents .....	3	4	1	4	1	1	2	—	—	1	2	—
<i>Not Stated</i>												
(A) Average net income..... \$	13,910	20,270	1,840	1,870	11,200	9,520	7,660	14,660	11,040	11,490	12,470	10,440
Number of respondents .....	105	96	8	18	3	4	9	5	15	7	5	2
(B) Average net income..... \$	11,870	10,000	—	—	13,000	—	—	—	—	—	—	—
Number of respondents .....	17	1	—	—	1	—	—	—	—	—	—	—
(C) Average net income..... \$	13,120	12,470	1,850	—	11,200	9,830	—	—	9,000	12,980	—	—
Number of respondents .....	25	5	1	—	1	2	—	—	1	2	—	—
(D) Average net income..... \$	17,830	19,600	—	3,120	—	—	—	22,000	11,000	10,000	12,000	—
Number of respondents .....	21	24	—	1	—	—	—	1	5	2	1	—
(E) Average net income..... \$	11,860	21,460	1,800	1,780	9,400	9,200	9,050	12,830	11,290	12,500	12,580	10,440
Number of respondents .....	38	63	2	8	1	2	5	4	6	1	4	2
(F) Average net income..... \$	26,520	17,160	1,850	1,810	—	—	5,920	—	11,270	11,000	—	—
Number of respondents .....	4	3	1	12	—	—	4	—	3	2	—	—



APPENDIX 6-8  
NUMBER AND PER CENT DISTRIBUTION OF GENERAL PRACTITIONERS AND SPECIALISTS IN  
SOLO PRIVATE PRACTICE IN RURAL AND URBAN AREAS,  
BY TOTAL NET INCOME RANGE, FOR REGIONS AND CANADA, 1960

Region, Type of Major Work and Place of Practice	\$5,000 and Less		\$5,001-10,000		\$10,001-15,000		\$15,001-20,000		\$20,001-25,000		\$25,001 and Over		Total Number Report- ing
	Number Report- ing	Per cent of Total Report- ing	Number Report- ing	Per cent of Total Report- ing	Number Report- ing	Per cent of Total Report- ing	Number Report- ing	Per cent of Total Report- ing	Number Report- ing	Per cent of Total Report- ing	Number Report- ing	Per cent of Total Report- ing	
<i>Atlantic Provinces</i>													
General - Rural .....	5	10	21	43	15	31	7	14	1	2	—	—	49
Urban .....	7	7	21	20	27	26	25	24	13	13	10	10	103
Specialist - Rural .....	—	—	2	33	2	33	2	33	—	—	—	—	6
Urban .....	4	3	14	10	27	20	33	24	27	20	32	23	137
<i>Quebec</i>													
General - Rural .....	15	13	49	43	32	28	10	9	6	5	3	3	115
Urban .....	62	19	102	32	95	29	37	11	15	5	12	4	323
Specialist - Rural .....	2	10	4	20	7	35	3	15	1	5	3	15	20
Urban .....	40	8	80	17	104	22	98	21	64	14	87	18	473
<i>Ontario</i>													
General - Rural .....	16	13	27	22	34	28	22	18	10	8	13	11	122
Urban .....	52	9	141	23	160	26	104	17	79	13	68	11	604
Specialist - Rural .....	1	13	3	38	1	13	1	13	1	13	1	13	8
Urban .....	42	6	62	8	123	17	144	20	129	18	234	32	734
<i>Prairie Provinces</i>													
General - Rural .....	15	17	18	20	30	33	19	21	4	4	4	4	90
Urban .....	14	8	45	24	46	25	44	24	18	10	17	9	184
Specialist - Rural .....	—	—	—	—	1	100	—	—	—	—	—	—	1
Urban .....	13	7	23	12	29	16	38	20	34	18	50	27	187
<i>British Columbia</i>													
General - Rural .....	1	3	6	20	7	23	5	17	2	7	9	30	30
Urban .....	15	9	33	21	33	21	37	23	21	13	20	13	159
Specialist - Rural .....	—	—	1	33	—	—	2	67	—	—	—	—	3
Urban .....	5	3	30	15	34	17	54	27	37	19	37	19	197
<i>Canada<sup>1</sup></i>													
General - Rural .....	55	13	125	30	121	29	68	16	24	6	30	7	423
Urban .....	161	11	370	25	378	26	257	18	153	11	138	9	1,457
Specialist - Rural .....	3	8	11	28	11	28	8	21	2	5	4	10	39
Urban .....	110	6	218	12	329	18	378	21	301	17	466	26	1,802

<sup>1</sup> Totals for Canada include those doctors who did not state a province in which their practice was located.  
Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.



## APPENDIX 6-9

AVERAGE TOTAL NET INCOME OF ACTIVE CIVILIAN PHYSICIANS IN PRIVATE PRACTICE,  
BY TYPE OF MAJOR WORK IN WHICH ENGAGED DURING 1960 AND LENGTH  
OF EXPERIENCE IN PRIVATE PRACTICE, FOR REGIONS AND CANADA<sup>1</sup>

Type of Major Work, Years in Private Practice	Atlantic Provinces			Quebec			Ontario			Prairie Provinces			British Columbia			Not Stated			Canada		
	No. Reporting	Average Total Net Income		No. Reporting	Average Total Net Income		No. Reporting	Average Total Net Income		No. Reporting	Average Total Net Income		No. Reporting	Average Total Net Income		No. Reporting	Average Total Net Income		No. Reporting	Average Total Net Income	
<i>General</i>		\$			\$			\$			\$			\$			\$			\$	
Less than 5 .....	24	10,073		63	8,480		104	11,090		40	13,728		36	11,220		11	12,020		278	10,840	
5-9 .....	31	14,470		89	11,860		157	16,950		63	14,121		59	18,390		25	16,470		424	15,450	
10-14 .....	26	15,286		73	13,830		106	16,590		44	15,405		30	19,480		11	15,790		290	15,870	
15-19 .....	18	15,870		46	12,080		105	16,820		29	14,726		23	20,610		12	14,900		233	15,830	
20-24 .....	13	13,405		41	12,050		51	17,810		22	15,944		13	19,780		1	20,300		141	15,640	
25-29 .....	14	16,382		48	12,040		52	18,250		18	20,478		9	13,450		12	15,760		153	15,910	
30-34 .....	12	15,305		31	8,900		55	13,420		26	9,005		14	10,470		8	10,710		146	11,400	
35-39 .....	6	8,235		19	8,620		42	10,740		10	16,915		4	12,740		8	13,290		89	11,130	
40 and over .....	14	8,411		30	6,180		61	9,590		21	6,540		3	3,070		12	7,520		141	7,980	
Not Stated .....	1	35,000		5	10,120		5	12,430		6	11,678		1	17,000		4	20,130		22	14,330	
Total .....	159	13,603		445	11,020		738	14,950		279	13,883		192	16,400		104	14,120		1,917	13,870	
<i>Specialist</i>																					
Less than 5 .....	14	13,625		93	12,775		107	13,517		32	12,533		22	11,762		7	9,165		275	12,905	
5-9 .....	31	18,880		69	12,297		183	22,763		40	18,923		44	18,840		14	21,489		409	20,568	
10-14 .....	34	23,322		67	23,173		169	26,770		49	24,186		55	24,666		10	32,544		386	24,564	
15-19 .....	20	24,296		59	17,597		80	28,492		22	26,365		29	24,666		11	28,032		221	24,466	
20-24 .....	9	21,496		38	20,027		43	23,754		12	18,530		17	19,943		3	24,123		122	21,391	
25-29 .....	14	18,142		45	21,899		60	21,972		14	18,439		10	22,024		12	19,450		155	21,094	
30-34 .....	10	21,068		32	17,236		38	22,676		8	23,440		16	18,368		5	25,624		109	20,490	
35-39 .....	7	10,220		28	14,990		28	21,568		4	27,665		5	12,470		5	17,370		77	17,598	
40 and over .....	6	15,745		20	12,804		35	11,658		5	15,002		2	5,270		9	16,853		77	12,933	
Not Stated .....	-	-		21	15,143		9	16,390		2	18,790		3	22,333		-	-		35	16,288	
Total .....	145	19,855		502	17,713		752	22,309		188	20,289		203	18,973		76	21,990		1,866	20,302	

<sup>1</sup> Excludes partnership or group practice.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 6-10  
AVERAGE TOTAL NET INCOME OF SPECIALISTS IN PRIVATE PRACTICE,  
BY SPECIALTY PRACTISED AND YEARS OF EXPERIENCE IN PRIVATE PRACTICE, CANADA, 1960

Specialty Practised	Years of Experience									
	0-4		5-9		10-14		15-19		20-24	
	No. re- porting	Average Net Income	No. re- porting	Average Net Income	No. re- porting	Average Net Income	No. re- porting	Average Net Income	No. re- porting	Average Net Income
Anaesthesia . . . . .	24	\$ 13,880	18	\$ 18,730	20	\$ 20,260	29	\$ 17,150	11	\$ 15,130
Dermatology & Syphilology . . . . .	5	9,460	8	15,660	10	20,950	3	17,270	1	40,270
General Surgery . . . . .	61	12,090	85	19,710	82	25,460	41	26,260	31	23,570
Internal Medicine & T.B. . . . .	33	10,210	49	18,750	68	20,880	39	22,300	15	20,110
Neurology and Psychiatry . . . . .	35	15,430	37	18,870	24	17,710	12	28,600	7	19,470
Neurosurgery . . . . .	4	21,860	8	25,800	6	24,420	2	36,990	—	—
Obstetrics & Gynaecology . . . . .	35	12,150	55	21,720	42	24,060	22	24,940	16	23,190
Orthopaedic Surgery . . . . .	9	10,070	12	25,180	13	30,130	7	25,640	3	19,610
Ophthalmology & Otolaryngology . . . . .	15	14,080	35	23,890	33	30,300	22	31,290	14	24,570
Paediatrics . . . . .	20	9,540	40	19,120	37	26,020	13	16,940	8	12,570
Pathology & Bacteriology . . . . .	3	19,780	4	25,330	3	16,500	1	18,000	—	—
Diagnostic & Therapeutic Radiology . . . . .	5	17,440	12	23,950	4	27,570	6	25,130	2	27,640
Urology . . . . .	4	22,770	13	22,120	12	38,360	7	31,600	3	28,100
Other and Not Stated¹ . . . . .	22	18,080	33	20,500	32	25,090	17	27,520	11	20,050
Total . . . . .	275	12,910	409	20,570	386	24,560	221	24,470	122	21,390

## APPENDIX 6-10 (Concl.)

Specialty Practised	Years of Experience								Total No. Reporting		
	25-29		30-34		35-39		40 and Over				
	No. Re- port- ing	Average Net Income	No. Re- port- ing	Average Net Income	No. Re- port- ing	Average Net Income	No. Re- port- ing	Average Net Income			
		\$		\$		\$		\$		\$	
Anaesthesia .....	13	15,780	5	12,370	3	18,850	10	14,490	6	16,350	139
Dermatology and Syphilology .....	4	21,780	3	8,840	2	12,020	2	8,360	—	—	38
General Surgery .....	32	21,410	37	19,300	24	15,370	12	12,140	5	14,150	410
Internal Medicine and T.B. ....	21	17,070	19	24,050	10	12,620	8	9,540	4	17,740	266
Neurology and Psychiatry .....	3	21,410	2	11,350	2	35,300	2	11,090	1	39,000	125
Neurosurgery .....	—	—	1	11,900	—	—	—	—	—	—	21
Obstetrics and Gynaecology .....	22	21,730	9	22,380	10	27,390	11	14,900	5	10,550	227
Orthopaedic Surgery .....	3	12,440	1	80,000	2	19,740	2	12,520	—	—	52
Ophthalmology and Otolaryngology .....	20	24,090	8	18,380	8	16,110	6	16,510	2	5,500	163
Paediatrics .....	16	15,580	10	17,800	6	7,730	6	12,860	2	14,240	158
Pathology and Bacteriology .....	—	—	—	—	—	—	2	16,280	1	9,000	14
Diagnostic & Therapeutic Radiology ...	5	28,890	—	—	2	36,100	2	14,820	4	20,660	42
Urology .....	5	44,720	2	35,490	1	12,000	3	14,700	—	—	50
Other and Not Stated <sup>1</sup> .....	11	23,170	12	21,850	7	19,420	11	10,780	5	21,482	161
Total .....	155	21,090	109	20,490	77	17,600	77	12,930	35	16,290	1,866

<sup>1</sup> Includes such specialties as: allergy, cardiology, cardiovascular diseases, gastroenterology, haematology, proctology, biochemistry, physical medicine and rehabilitation, plastic surgery, public health, thoracic surgery, industrial medicine, other and not stated.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 6-11  
AVERAGE TOTAL NET INCOME OF SPECIALISTS NOT IN PRIVATE PRACTICE,  
BY SPECIALTY PRACTISED AND YEARS OF EXPERIENCE, CANADA, 1960

Specialty Practised	Years of Experience									
	0 - 4		5 - 9		10 - 14		15 - 19		20 - 24	
	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income
Anaesthesia .....	7	\$ 3,310	4	\$ 8,110	3	\$ 14,850	-	\$ -	3	\$ 11,730
General Surgery .....	10	2,902	-	-	2	15,610	1	10,000	1	13,880
Internal Medicine & T.B. ....	5	7,808	6	6,945	5	11,504	5	12,550	8	10,503
Neurology & Psychiatry .....	10	10,050	21	9,462	21	10,150	10	10,610	6	12,080
Neurosurgery .....	1	5,000	-	-	-	-	-	-	-	-
Obstetrics & Gynaecology .....	-	-	2	2,750	2	12,500	-	-	-	-
Orthopaedic Surgery .....	1	4,000	-	-	-	-	-	-	-	-
Ophthalmology & Otolaryngology .....	4	1,732	-	-	-	-	1	22,970	-	-
Paediatrics .....	6	3,100	2	6,850	-	-	2	13,850	1	19,090
Pathology & Bacteriology .....	4	6,950	18	13,722	19	15,070	20	16,404	7	17,700
Diagnostic & Therapeutic Radiology .....	2	1,300	18	13,654	11	18,689	11	17,450	7	19,643
Urology .....	1	3,000	1	33,000	-	-	1	14,000	-	-
Other and not stated <sup>1</sup> .....	8	6,188	15	10,217	17	14,248	22	14,530	19	15,344
Total .....	59	5,410	87	11,160	80	13,820	73	14,840	52	14,950

APPENDIX 6-11 (Concl.)

Specialty Practised	Years of Experience								Total No. re- porting
	25-29		30-34		35-39		40 Years and Over		
	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income	No. Re- porting	Average Net Income	
Anaesthesia .....	3	\$ 18,866	1	\$ 10,000	—	\$ —	—	—	21
General Surgery .....	—	—	1	16,500	2	10,600	1	4,000	18
Internal Medicine and T.B. ....	8	20,190	7	12,071	2	7,350	—	—	46
Neurology and Psychiatry .....	8	13,978	7	12,980	5	9,690	3	15,850	91
Neurosurgery .....	—	—	—	—	—	—	—	—	1
Obstetrics and Gynaecology .....	—	—	—	—	—	—	—	—	4
Orthopaedic Surgery .....	—	—	—	—	—	—	—	—	1
Ophthalmology and Otolaryngology .....	1	15,000	1	13,500	1	7,020	—	—	8
Paediatrics .....	2	21,280	—	—	—	—	—	—	13
Pathology and Bacteriology .....	8	16,416	4	11,112	3	13,167	5	9,298	88
Diagnostic and Therapeutic Radiology ...	3	20,167	2	21,710	5	21,128	—	—	59
Urology .....	—	—	—	—	1	11,500	—	—	4
Other and not stated <sup>1</sup> .....	17	14,043	15	14,465	11	14,951	2	13,500	126
Total .....	50	16,360	38	13,690	30	13,750	11	10,140	480

Note: Data for Dermatology and Syphilology not available.

<sup>1</sup> Includes Industrial Medicine, Allergy, Cardiology, Cardiovascular Diseases, Gastroenterology, Haematology, Proctology, Biochemistry, Physical Medicine and Rehabilitation, Plastic Surgery, Public Health.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 6-12

AVERAGE TOTAL NET INCOME OF CIVILIAN ACTIVE PHYSICIANS IN SPECIALIST WORK, BY SPECIALTY PRACTISED AND TYPE OF WORK, FOR REGIONS AND CANADA, 1960<sup>1</sup>

Specialty Practised	Atlantic Provinces				Quebec			
	Private Practice		Not in Private Practice		Private Practice		Not in Private Practice	
	Number Reporting	Average Net Income	Number Reporting	Average Net Income	Number Reporting	Average Net Income	Number Reporting	Average Net Income
Anaesthesia . . . . .	12	\$ 16,020	1	\$ 10,000	32	\$ 13,000	12	\$ 9,600
Dermatology & Syphilology . . . . .	2	11,600	—	—	11	16,800	—	—
General Surgery . . . . .	45	19,840	—	—	120	19,500	11	4,820
Internal Medicine & T.B. . . . .	16	17,980	1	11,300	11	16,120	18	12,530
Neurology & Psychiatry . . . . .	9	18,480	6	10,030	45	17,930	11	7,390
Neurosurgery . . . . .	3	28,530	—	—	3	23,800	1	5,000
Obstetrics & Gynaecology . . . . .	16	21,200	—	—	59	17,080	1	1,000
Orthopaedic Surgery . . . . .	1	17,100	—	—	15	19,700	—	—
Ophthalmology & Otolaryngology . . . . .	11	22,330	—	—	35	19,150	5	8,500
Paediatrics . . . . .	7	20,570	1	9,700	48	13,800	6	3,270
Pathology & Bacteriology . . . . .	—	—	10	14,270	3	17,000	27	15,300
Plastic Surgery . . . . .	1	20,000	—	—	3	18,400	3	18,830
Diagn. & Therapeutic Radiology . . . . .	2	26,750	10	16,550	12	20,130	24	18,110
Other & Not Stated <sup>2</sup> . . . . .	20	20,340	7	12,370	46	20,570	31	12,050
Total & Average . . . . .	145	19,820	35	13,500	502	17,700	150	11,810



## APPENDIX 6-13

AVERAGE ANNUAL OPERATING EXPENDITURES INCURRED BY GENERAL PRACTITIONERS IN SOLO PRIVATE PRACTICE, BY ITEMS OF EXPENDITURES FOR REGIONS AND CANADA, 1960<sup>1</sup>

Items of Operating Expenditures	Atlantic Provinces Response Count—158			Quebec Response Count—446			Ontario Response Count—753			Prairie Provinces Response Count—280		
	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture
Med., surg. supplies & services .....	145	1,870	25.5	355	1,970	23.9	690	1,830	20.8	256	900	11.6
Salaries or wages, staff:												
Nursing .....	24	2,710	6.1	37	1,590	2.0	218	2,530	9.1	84	2,340	9.9
Technical .....	5	630	0.3	8	2,300	0.6	36	2,050	1.2	19	2,180	2.1
Clerical and other .....	47	1,040	4.6	83	1,040	2.9	319	1,670	8.8	111	1,630	9.2
Assistant's fees .....	36	1,250	4.3	30	1,270	1.4	238	720	2.4	109	960	5.3
Office rental .....	102	780	7.5	339	880	10.2	467	1,300	9.9	211	1,230	13.1
Depreciation allowance:												
Medical equipment .....	89	230	1.9	255	340	3.0	437	320	2.2	176	370	3.3
Office furniture .....	67	250	1.6	243	210	1.7	382	240	1.5	127	270	1.7
Automobile .....	142	730	9.9	359	860	10.5	624	690	7.1	222	690	7.8
Building .....	50	480	2.2	146	820	4.1	298	530	2.6	61	470	1.4
Automobile operating exp. ....	160	890	13.4	421	1,210	17.5	740	800	9.8	274	880	12.3
Int. on borrowed capital .....	67	320	2.1	184	490	3.0	286	400	1.9	101	310	1.6
All other expenses <sup>2</sup> .....	161	1,340	20.6	442	1,270	19.2	744	1,820	22.2	276	1,490	20.7
Total average expenditure <sup>3</sup> .....			\$6,700			\$6,560			\$8,060			\$7,080
Items of Operating Expenditures	British Columbia Response Count—201			Not Stated Response Count—102			Canada Response Count—1940			Excludes physicians in partnership or group practice.		
	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture	Num- ber Re- porting	Average Operat. Expend.	% of Total Average Expend- iture			
Med., surg. supplies & services .....	180	700	7.3	78	1,880	21.3	1,704	1,610	18.9			
Salaries or wages, staff:												
Nursing .....	103	2,710	16.3	22	2,420	7.7	488	2,470	8.3			
Technical .....	13	1,100	0.8	4	1,440	0.9	85	1,850	1.1			
Clerical and other .....	85	2,040	10.1	21	1,530	4.6	666	1,580	7.3			
Assistant's fees .....	51	1,950	5.9	29	820	3.4	493	980	3.4			
Office rental .....	182	1,540	16.3	56	1,190	9.6	1,357	1,170	11.0			
Depreciation allowance:												
Medical equipment .....	121	440	3.2	47	700	4.7	1,125	350	2.7			
Office furniture .....	96	290	1.6	39	300	1.8	954	240	1.6			
Automobile .....	166	620	6.0	66	820	7.9	1,579	730	8.1			
Building .....	34	840	1.6	26	710	2.7	615	620	2.7			
Automobile operating exp. ....	196	750	8.6	88	980	12.6	1,879	920	11.9			
Int. on borrowed capital .....	74	270	1.2	27	500	1.9	739	390	2.0			
All other expenses .....	200	1,800	21.1	90	1,600	20.9	1,913	1,590	21.0			
Total average expenditure <sup>3</sup> .....			\$8,510			\$6,750			\$7,450			

<sup>1</sup>Excludes physicians in partnership or group practice.<sup>2</sup>Residual expenditure, convention expenses, association fees, misc. office expenses etc.<sup>3</sup>Total average expenditure was obtained by dividing total operating expenditures by total response count.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.



**APPENDIX 6-14**  
**AVERAGE ANNUAL OPERATING EXPENDITURES INCURRED BY SPECIALISTS**  
**IN PRIVATE PRACTICE, BY ITEMS OF OPERATING EXPENDITURES AND SPECIALTY PRACTISED, CANADA, 1960<sup>1</sup>**

Specialty Practised	Medical, Surgical Supplies & Services				Salaries or Wages to Staff						Assistant's Fees		Office Rental	
	Average Operating Expenditure		Nursing		Technical		Clerical & Other		Average Operating Expenditure	Number Reporting	Average Operating Expenditure	Number Reporting	Average Operating Expenditure	Number Reporting
			Number Reporting	Average Operating Expenditure	Number Reporting	Average Operating Expenditure	Number Reporting	Average Operating Expenditure						
Anaesthesia .....	79	\$ 610	8	\$ 1,990	3	\$ 2,090	39	\$ 1,060	\$	18	\$ 1,510	83	\$	760
Dermatology & syphilology .....	27	1,540	5	2,680	2	3,380	19	2,400		2	220	32		1,810
General surgery .....	335	780	99	2,730	15	1,290	178	1,980		134	1,100	342		1,410
Internal medicine & tuberculosis .....	232	860	71	2,560	18	2,460	118	1,820		43	1,190	240		1,490
Neurology & psychiatry .....	69	720	10	1,920	8	1,010	72	1,500		7	500	99		1,490
Neurosurgery .....	11	400	-	-	1	130	15	2,740		3	560	20		1,630
Obstetrics & gynaecology .....	186	1,010	109	2,650	9	2,200	76	1,660		87	900	195		1,650
Orthopaedic surgery .....	44	850	11	2,110	5	3,540	29	3,060		8	1,870	47		1,640
Ophthalmology & otolaryngology .....	139	1,640	41	2,930	13	2,550	88	2,680		29	630	146		1,810
Paediatrics .....	128	790	59	2,740	8	1,390	71	1,720		27	1,550	140		1,560
Pathology & bacteriology .....	6	770	-	-	5	1,520	5	710		6	390	5		2,360
Diagnostic & therapeutic radiology .....	17	7,290	1	6,300	7	6,440	7	2,570		12	3,730	15		2,680
Urology .....	44	1,240	8	2,580	-	-	24	2,380		13	2,310	45		1,630
Other and not stated <sup>2</sup> .....	141	1,030	49	2,160	15	1,450	72	1,990		39	560	148		1,390
Total .....	1,458	1,020	471	2,610	109	2,260	813	1,970		428	1,150	1,557		1,520

APPENDIX 6-14 (Concl.)

Specialty Practised	Depreciation Allowance										Auto. Operating Expenses		Int. on Borrowed Capital		All Other Expenses		Total Average Expenditure <sup>3</sup>
	Med. Equipment		Office Furniture		Automobile		Building										
	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	Num-ber Re-port-ing	Average Operat-ing Expend-iture	
Anaesthesia .....	52	\$ 160	48	\$ 120	106	\$ 690	29	\$ 500	132	\$ 800	43	\$ 420	135	\$ 1,340		\$ 4,400	
Dermatology & syphilology ...	22	450	17	240	26	950	1	1,500	33	840	10	330	32	2,130		8,240	
General surgery ..	219	290	196	310	315	730	77	710	388	930	134	400	394	2,000		7,680	
Internal medicine & tuberculosis .	174	410	141	300	227	630	36	610	265	890	89	340	268	1,980		7,690	
Neurology & psychiatry ....	41	220	76	250	94	570	16	660	116	810	25	570	127	1,630		5,950	
Neurosurgery ....	9	250	13	290	20	620	1	30	23	780	6	570	21	2,470		7,460	
Obstetrics & gynaecology ...	129	360	114	290	181	790	37	600	220	900	86	420	222	2,190		8,560	
Orthopaedic surgery .....	27	360	31	450	43	750	4	320	49	930	16	470	50	2,290		8,960	
Ophthalmology & otolaryngology .	112	530	93	460	132	740	22	1,150	157	860	53	320	166	2,480		9,930	
Paediatrics .....	74	280	76	270	131	760	25	770	156	960	48	340	157	2,130		8,130	
Pathology & bacteriology ...	5	470	1	280	20	370	-	-	22	270	8	20	23	1,200		6,140	
Diagnostic & therapeutic radiology .....	13	1,210	12	620	26	660	4	370	37	850	7	360	35	1,500		11,610	
Urology .....	31	460	23	500	40	960	5	850	48	1,090	17	440	49	2,510		9,750	
Other and not stated <sup>2</sup> ....	107	330	83	250	143	660	21	730	184	790	55	410	183	1,920		8,200	
Total .....	1,015	360	924	310	1,504	710	278	690	1,830	880	597	390	1,862	2,010		7,890	

<sup>1</sup> Excludes partnership or group practice.<sup>2</sup> Includes such specialties as Allergy, Cardiology, Cardiovascular Diseases, Gastroenterology, Proctology and Biochemistry, Physical Medicine and Rehabilitation, Plastic Surgery, Public Health, Thoracic Surgery and Industrial Medicine.<sup>3</sup> Total average expenditure was obtained by dividing total operating expenditures by total response count.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 6-15

NUMBER AND PERCENTAGE DISTRIBUTION OF ACTIVE CIVILIAN PHYSICIANS  
IN SOLO PRIVATE PRACTICE BY LEVEL OF EXPENDITURES, AND RURAL  
AND URBAN AREAS, CANADA, 1960

Regions and Level of Operating Expenditures	General Practitioner				Specialist			
	Rural Areas		Urban Areas		Rural Areas		Urban Areas	
	Response Count	%	Response Count	%	Response Count	%	Response Count	%
<i>Atlantic Provinces</i>								
Less than \$2,000.....	4	8	—	—	—	—	4	3
\$ 2,001 — 5,000 .....	18	37	40	39	1	20	39	28
\$ 5,001 — 10,000 .....	20	41	46	45	3	60	71	51
\$10,001 — 15,000 .....	5	10	11	11	1	20	19	14
\$15,001 — 20,000 .....	2	4	3	3	—	—	3	2
\$20,001 and over .....	—	—	3	3	—	—	2	1
Total .....	49	100	103	100	5	100	138	100
<i>Quebec</i>								
Less than \$2,000 .....	6	5	9	3	2	13	23	5
\$ 2,001 — 5,000 .....	44	38	126	39	5	31	129	28
\$ 5,001 — 10,000 .....	46	40	132	41	8	50	201	43
\$10,001 — 15,000 .....	12	10	35	11	1	6	83	18
\$15,001 — 20,000 .....	4	3	13	4	—	—	17	4
\$20,001 and over .....	3	3	8	2	—	—	15	3
Total .....	115	100	323	100	16	100	468	100
<i>Ontario</i>								
Less than \$2,000 .....	8	6	21	3	—	—	28	4
\$ 2,001 — 5,000 .....	24	19	136	22	2	25	148	20
\$ 5,001 — 10,000 .....	50	40	291	47	4	50	334	44
\$10,001 — 15,000 .....	34	27	118	19	1	12	164	22
\$15,001 — 20,000 .....	6	4	26	4	1	13	48	6
\$20,001 and over .....	4	3	23	4	—	—	34	4
Total .....	126	100	615	100	8	100	756	100
<i>Prairie Provinces</i>								
Less than \$2,000 .....	6	7	6	3	—	—	8	4
\$ 2,001 — 5,000 .....	33	36	40	22	—	—	32	17
\$ 5,001 — 10,000 .....	40	44	91	49	—	—	93	49
\$10,001 — 15,000 .....	7	8	32	17	1	100	32	17
\$15,001 — 20,000 .....	5	5	10	5	—	—	12	6
\$20,001 and over .....	—	—	5	3	—	—	11	6
Total .....	91	100	184	100	1	100	188	100
<i>British Columbia</i>								
Less than \$2,000 .....	1	3	3	2	1	33	6	3
\$ 2,001 — 5,000 .....	3	10	22	13	—	—	25	12
\$ 5,001 — 10,000 .....	14	47	86	51	1	33	113	56
\$10,001 — 15,000 .....	9	30	44	26	1	33	40	20
\$15,001 — 20,000 .....	3	10	9	5	—	—	13	6
\$20,001 and over .....	—	—	3	2	—	—	5	2
Total .....	30	100	167	100	3	100	202	100
<i>Canada</i>								
Less than \$2,000 .....	26	6	43	3	3	9	71	4
\$ 2,001 — 5,000 .....	127	30	387	26	8	24	387	21
\$ 5,001 — 10,000 .....	178	41	684	46	17	50	852	46
\$10,001 — 15,000 .....	70	16	250	17	5	15	355	19
\$15,001 — 20,000 .....	22	5	63	4	1	3	96	5
\$20,001 and over .....	7	2	44	3	—	—	73	4
Total .....	430	100	1,471	100	34	100	1,834	100

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

APPENDIX 6-16

EMPLOYMENT OF NURSING, TECHNICAL, CLERICAL AND OTHER STAFF BY  
GENERAL PRACTITIONERS IN SOLO PRIVATE PRACTICE, BY SIZE OF  
COMMUNITY, CANADA, 1960

Size of Community	Re- sponse Count	Staff			
		Nurs- ing	Tech- nical	Clerical and other	Total
<i>Rural</i> .....	430				
Number reporting .....		79	19	124	
Number of staff .....		93	20	148	261
Mean number employed per doctor <sup>1</sup> .....		0.2	0.05	0.3	0.6
<i>Urban less than 10,000 population</i> .....	352				
Number reporting .....		72	16	118	
Number of staff .....		96	19	146	261
Mean number employed per doctor <sup>1</sup> .....		0.3	0.05	0.4	0.7
<i>Urban 10,000 - 100,000 population</i> .....	440				
Number reporting .....		123	18	171	
Number of staff .....		135	17	230	382
Mean number employed per doctor <sup>1</sup> .....		0.3	0.04	0.5	0.9
<i>Urban over 100,000 population</i> .....	684				
Number reporting .....		207	31	241	
Number of staff .....		240	34	265	539
Mean number employed per doctor <sup>1</sup> .....		0.4	0.05	0.4	0.8
<i>Not Stated</i> .....	34				
Number reporting .....		7	1	12	
Number of staff .....		7	1	17	25
Mean number employed per doctor <sup>1</sup> .....		0.2	0.03	0.5	0.7

<sup>1</sup> Number of staff divided by response count.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 6-17

EMPLOYMENT OF PARAMEDICAL AND CLERICAL STAFF  
BY SPECIALISTS IN SOLO PRIVATE PRACTICE,  
BY SPECIALTY PRACTISED, CANADA, 1960

Specialty Practised	Response Count	Total Staff	Mean Number Employed per Doctor <sup>1</sup>
Anaesthesia .....	153	54	0.4
Dermatology and syphilology .....	40	34	0.9
General surgery .....	441	336	0.8
Internal medicine and tuberculosis .....	285	227	0.8
Neurology and psychiatry .....	141	102	0.7
Neurosurgery .....	23	17	0.7
Obstetrics and gynaecology .....	248	227	0.9
Orthopaedic surgery .....	62	59	1.0
Ophthalmology and otolaryngology .....	179	177	1.0
Paediatrics .....	169	168	1.0
Pathology and bacteriology .....	16	8	0.5
Diagnostic and therapeutic radiology .....	41	38	0.9
Urology .....	55	36	0.7
Other and not stated <sup>2</sup> .....	185	139	0.8

<sup>1</sup> Number of staff divided by response count.

<sup>2</sup> Includes allergy, cardiology, cardiovascular disease, gastroenterology, haematology, proctology, biochemistry, physical medicine and rehabilitation, plastic surgery, public health, thoracic surgery and industrial medicine.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 6-18

AVERAGE DEPRECIATED VALUE OF CAPITAL ASSETS OF SPECIALISTS, IN SOLO PRIVATE PRACTICE BY SPECIALTY PRACTISED, AT END OF 1960, CANADA

Specialty Practised	Number Reporting	Average Depreciated Value of Capital Assets
		\$
Anaesthesia .....	65	9,680
Dermatology and syphilology .....	24	4,370
General surgery .....	227	7,390
Internal medicine and tuberculosis .....	147	4,370
Neurology and psychiatry .....	67	5,520
Neurosurgery .....	10	5,470
Obstetrics and gynaecology .....	121	8,320
Orthopaedic surgery .....	27	3,330
Ophthalmology and otolaryngology .....	92	5,390
Paediatrics .....	78	4,510
Pathology and bacteriology .....	7	950
Diagnostic and therapeutic radiology .....	21	12,470
Urology .....	25	7,240
Other and not specified <sup>1</sup> .....	92	3,350

<sup>1</sup> Includes allergy, cardiology, cardiovascular diseases, gastroenterology, haematology, proctology, biochemistry, physical medicine and rehabilitation, plastic surgery, public health, thoracic surgery and industrial medicine.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.



APPENDIX 6-19 (Cont'd)

Size of Locality and Year of Practice	Item of Expenditure												Total Response Count and Average Total Expenditure <sup>1</sup>			
	Office Space Purchased		Office Space Rented		Examining and Consulting Room Equipment		Office & Waiting Room Furniture and Equipment		Automobile Used in Practice		Other Capital Goods				Purchase of Practice	
	General Practitioners	Spec.	General Practitioners	Spec.	General Practitioners	Spec.	General Practitioners	Spec.	General Practitioners	Spec.	General Practitioners	Spec.	General Practitioners	Spec.	General Practitioners	Spec.
Urban Areas Under 100,000 Population																
First year —																
-No. reporting .....	63	46	16	8	114	79	111	76	124	81	29	16	23	3	139	105
-Average <sup>2</sup> .....	1,112	1,071	4,966	5,445	1,034	1,657	876	931	2,376	2,476	1,322	952	4,313	4,250	5,739	5,025
-Per cent <sup>3</sup> .....	8.9	10.2	10.0	8.3	14.8	24.8	12.2	13.4	36.9	38.0	4.8	2.9	12.4	2.4		
Second year —																
-No. reporting .....	43	26	4	4	61	41	55	30	33	27	14	2				
-Average <sup>2</sup> .....	1,567	1,390	1,080	2,453	394	978	402	1,075	1,434	1,712	1,099	6,498			1,299	1,690
-Per cent <sup>3</sup> .....	37.3	20.4	2.4	5.5	13.3	22.6	12.2	18.2	26.2	26.0	8.5	7.3				
Third year —																
-No. reporting .....	29	17	3	3	45	25	38	23	37	15	12	4				
-Average <sup>2</sup> .....	1,380	2,043	1,607	2,967	420	338	379	321	2,091	1,688	1,120	2,467			1,216	902
-Per cent <sup>3</sup> .....	23.7	36.6	2.9	9.4	11.2	9.0	8.5	7.8	45.8	26.7	8.0	10.4				
Fourth year —																
-No. reporting .....	19	9	1	2	25	10	6	9	22	7	5	2				
-Average <sup>2</sup> .....	1,351	1,015	1,320	3,450	170	532	1,195	492	2,060	2,148	2,250	1,550			684	419
-Per cent <sup>3</sup> .....	27.0	20.8	1.3	15.8	4.5	12.2	7.6	10.0	47.6	34.1	11.8	7.2				
Fifth year —																
-No. reporting .....	12	4	1	2	9	10	6	12	6	6	1	—			245	533
-Average <sup>2</sup> .....	1,462	1,174	1,320	3,450	152	1,884	99	994	1,903	2,252	2,000	—				
-Per cent <sup>3</sup> .....	51.4	8.4	3.7	12.4	4.1	33.5	1.6	21.3	33.5	24.2	5.7	0				



## APPENDIX 6-19 (Concl.)

Size of Locality and Year of Practice	Item of Expenditure												Total Response Count and Average Total Expenditure <sup>1</sup>									
	Office Space Purchased			Office Space Rented			Examining and Consulting Room Equipment			Office & Waiting Room Furniture and Equipment					Automobile Used in Practice			Other Capital Goods			Purchase of Practice	
	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	Gen-eral Practi-tioners	Spec. Practi-tioners	
<i>Urban Areas 100,000 and Over Population</i>																						
First year —																						
No. reporting .....	54	88		10	9		94	118		90	120		94	148		26	15		13	3		112
Average <sup>2</sup> .....	1,467	1,290		9,210	2,312		1,092	1,185		824	866		2,222	2,132		856	828		3,115	6,504		5,535
Per cent <sup>3</sup> .....	12.8	15.6		14.9	2.9		16.6	19.3		12.0	14.3		33.6	43.4		3.6	1.7		6.5	2.7		2.7
Second year —																						
No. reporting .....	37	61		3	5		50	70		49	76		38	47		9	9					180
Average <sup>2</sup> .....	1,488	1,347		6,007	1,146		549	352		460	386		1,692	1,458		572	324					1,720
Per cent <sup>3</sup> .....	28.6	38.5		9.4	2.7		14.2	11.6		11.7	13.7		33.4	32.1		2.7	1.3					1,186
Third year —																						
No. reporting .....	31	50		1	5		38	53		33	58		30	48		6	8					2,146
Average <sup>2</sup> .....	1,708	1,532		3,000	3,700		1,524	370		1,877	401		2,013	1,846		692	701					1,290
Per cent <sup>3</sup> .....	22.0	33.0		1.3	8.0		24.1	8.4		25.8	10.0		25.1	38.0		1.7	2.4					794
Fourth year —																						
No. reporting .....	24	29		1	3		26	31		21	32		16	28		2	5					1,580
Average <sup>2</sup> .....	1,475	1,686		3,000	2,020		1,472	463		1,797	559		3,896	1,918		75	387					405
Per cent <sup>3</sup> .....	20.0	34.2		1.7	4.3		21.7	10.1		21.3	12.5		35.3	37.5		0	1.4					
Fifth year —																						
No. reporting .....	9	19		1	2		12	18		14	19		10	10		1	5					377
Average <sup>2</sup> .....	1,264	1,930		3,000	1,650		150	299		133	654		2,405	1,390		50	270					405
Per cent <sup>3</sup> .....	27.0	50.3		7.2	4.4		4.2	7.4		4.5	17.0		57.0	19.0		0	1.7					

<sup>1</sup> Average total expenditure was obtained by dividing total expenditures by total response count.<sup>2</sup> This average was obtained by dividing total item expenditure by number reporting.<sup>3</sup> Per cent of item average (total item expenditure divided by total response count) to average total expenditure.

Source: Questionnaire on The Economics of Medical Practice, 1962, Royal Commission on Health Services.

## APPENDIX 7-1

AVERAGE ANNUAL PROFESSIONAL INCOME EARNED BY SELF-EMPLOYED  
PHYSICIANS, LAWYERS, DENTISTS, CONSULTING ENGINEERS AND ARCHITECTS  
AND ACCOUNTANTS, CANADA, 1946-1960 <sup>1</sup>

Index 1951 = 100.0

Year	Physicians		Lawyers		Dentists		Consulting Engineers and Architects		Accountants	
	\$	Index	\$	Index	\$	Index	\$	Index	\$	Index
1946	6,544	74.4	5,637	67.4	4,870	84.7	4,993	70.7	n.a.	—
1947	6,775	77.0	6,418	76.8	5,343	92.9	6,353	89.9	n.a.	—
1948	7,516	85.4	6,994	83.7	5,017	87.2	6,534	92.5	n.a.	—
1949	8,529	96.9	8,671	103.7	5,425	94.3	9,898	140.1	n.a.	—
1950	8,671	98.5	8,231	98.5	5,549	96.5	9,415	133.2	n.a.	—
1951	8,800	100.0	8,360	100.0	5,752	100.0	7,066	100.0	6,958	100.0
1952	9,404	106.9	7,704	92.2	6,377	110.9	10,371	146.8	7,062	101.5
1953	9,979	113.4	7,933	95.6	6,596	114.7	7,372	104.3	6,260	90.0
1954	10,651	121.0	9,668	115.6	6,941	120.7	9,999	141.5	7,536	108.3
1955	10,845	123.2	10,167	121.6	7,610	132.3	11,381	161.1	7,892	113.4
1956	11,781	133.8	10,580	126.6	8,530	148.3	11,398	161.3	8,637	124.1
1957	12,657	143.8	11,164	133.5	9,256	160.9	12,268	173.6	9,762	140.3
1958	14,040	159.5	11,187	133.8	9,876	171.7	12,575	177.9	9,573	137.6
1959	14,554	165.4	12,030	143.9	10,796	187.7	12,621	178.6	9,906	142.4
1960	15,131	171.9	12,519	150.0	11,509	200.0	13,430	190.0	10,150	145.8

<sup>1</sup> For purposes of these statistics, the Department of National Revenue has defined professional income as income or fees received from the independent practice of a profession for profit. Thus, professionally qualified persons employed on an annual salary basis by a company, government or institution are excluded. Income figures were derived by dividing the total professional income by the number of taxable returns.

Source: *Taxation Statistics, annual reports, 1948 to 1962*, Department of National Revenue.

APPENDIX 7-2  
GROWTH OF SELECTED PROFESSIONAL AND TECHNICAL OCCUPATIONS,  
CANADA, 1931-1961<sup>1</sup>

Occupation	1931			1941			1951			1961		
	Number	Per Cent of Labour Force	Per Cent of Professional Man-power	Number	Per Cent Change	Per Cent of Labour Force	Number	Per Cent Change	Per Cent of Labour Force	Number	Per Cent Change	Per Cent of Professional Man-power
Physicians and Surgeons.....	10,020	0.26	4.2	11,873	18.5	0.28	14,325	20.6	0.27	21,290	48.6	3.4
Dentists .....	4,039	0.10	1.7	3,740	-7.4	0.09	4,608	23.2	0.09	5,469	18.7	0.9
Nurses .....	31,898	0.81	13.4	38,509	20.7	0.92	50,761	31.8	0.96	84,692	66.8	13.5
Engineers <sup>2</sup> .....	15,818	0.41	6.6	18,547	17.2	0.44	31,440	69.5	0.59	51,508	63.8	8.2
Law Professionals...	8,602	0.22	3.6	8,398	-2.4	0.20	9,635	14.7	0.18	12,922	34.1	2.0
Teachers .....	86,183	2.19	36.1	90,888	5.1	2.16	110,540	22.0	2.09	189,172	17.1	30.1
Architects .....	1,298	0.03	0.5	1,202	-7.4	0.03	1,740	44.8	0.03	2,940	69.0	0.5
Artists, Writers and Musicians .....	14,748	0.38	6.2	15,344	4.0	0.36	20,146	31.3	0.38	31,752	57.6	5.0
Draftsmen and Designers .....	4,701	0.12	2.0	5,753	22.4	0.14	13,012	126.2	0.25	20,623	58.5	3.3
Others .....	61,258	1.56	25.7	50,907	-16.9	1.21	120,473	136.6	2.36	208,543	73.1	33.2
Total Labour Force ..	3,927m			4,196m			5,286m			6,472m		
Total Professional and Technical .....	238,565			244,861			376,680			628,911		
Total Professional and Technical as Percentage of Labour Force	6.1%			5.8%			7.1%			9.7%		

<sup>1</sup> Excluding Newfoundland prior to 1951 and Yukon and Northwest Territories prior to 1961.

<sup>2</sup> Including surveyors.

Source: Census data.

## APPENDIX 7-3

INDEX NUMBERS OF PHYSICIANS' PROFESSIONAL INCOME, WORKERS'  
AVERAGE WEEKLY WAGES AND SALARIES AND LABOUR INCOME PER PAID  
WORKER, CANADA, 1946 - 1960  
1949 = 100.0

Year	Physicians' Professional Income	Average Weekly Wages and Salaries in Manufacturing <sup>1</sup>	Average Weekly Wages and Salaries - Industrial Composite <sup>1</sup>	Average Labour Income Per Employee <sup>2</sup>
1946 .....	76.7	73.4	75.6	75.4
1947 .....	79.4	82.6	84.2	84.3
1948 .....	88.1	92.5	93.2	94.9
1949 .....	100.0	100.0	100.0	100.0
1950 .....	101.7	105.7	104.9	105.2
1951 .....	103.2	117.5	116.5	116.6
1952 .....	110.3	128.2	126.7	124.5
1953 .....	117.0	134.8	133.9	131.5
1954 .....	124.9	139.1	137.4	134.7
1955 .....	127.2	144.4	142.1	137.0
1956 .....	138.1	151.7	150.0	145.2
1957 .....	148.4	159.1	158.1	150.9
1958 .....	164.6	165.3	163.9	154.9
1959 .....	170.6	172.5	171.0	157.9
1960 .....	177.4	177.8	176.5	161.1

<sup>1</sup> *Employment and Payrolls*, March 1963, DBS, Labour Division,  
Employment Section, Table 8, p. 29.

<sup>2</sup> DBS, Labour Division, Labour Income and Research. Labour income excludes  
supplementary labour income.

Note: Income, wages and salaries in current dollars.

## APPENDIX 7-4

INDEX NUMBERS OF COST OF LIVING, DOCTORS' FEES AND OTHER COMPONENTS  
OF MEDICAL CARE, FOR URBAN AREAS, CANADA, 1945 - 1962  
1949 = 100.0

Year	Consumer Price Index	Doctors' Fees Index (Weighted Average)	Office Call Index	Home Call Index	Con- finement Index	Appen- dectomy Index
1945 .....	75.0	82.9	86.2	86.8	76.1	—
1946 .....	77.5	84.5	88.0	88.0	77.8	—
1947 .....	84.8	87.9	90.4	91.2	82.1	—
1948 .....	90.7	95.1	96.8	96.2	92.4	—
1949 .....	100.0	100.0	100.0	100.0	100.0	100.0
1950 .....	102.9	100.9	100.6	101.9	101.6	100.1
1951 .....	113.7	107.0	108.0	107.1	107.7	104.8
1952 .....	116.5	114.9	117.2	113.5	117.8	110.3
1953 .....	115.5	118.0	121.7	117.6	121.1	111.0
1954 .....	116.2	120.6	124.2	121.1	124.1	112.3
1955 .....	116.4	122.4	126.6	123.2	126.6	113.0
1956 .....	118.1	125.7	130.3	129.6	130.3	113.2
1957 .....	121.9	130.7	136.5	137.3	135.6	114.2
1958 .....	125.1	137.8	145.8	146.1	142.4	116.8
1959 .....	126.5	141.7	149.7	150.1	150.5	118.1
1960 .....	128.0	143.6	150.8	153.2	155.4	118.9
1961 .....	129.2	146.0	153.6	156.0	161.0	119.1
1962 .....	130.7	150.4	158.2	165.5	167.4	119.9

Source: DBS, Prices Division, Retail Prices Section.

APPENDIX 7-5  
EXPENDITURES ON PERSONAL MEDICAL SERVICES,  
CANADA, 1945 - 1961  
Current Dollars

Year	Personal Medical Services	Per Capita	Per cent of Gross National Expenditure	Per cent of Personal Expenditure <sup>2</sup>
	\$m <sup>1</sup>	\$		
1945.....	76.2	6.31	0.64	1.09
1946.....	86.7	7.05	0.73	1.07
1947.....	91.0	7.25	0.69	0.99
1948.....	101.4	7.91	0.67	1.00
1949.....	117.0	8.70	0.72	1.06
1950.....	135.0	9.85	0.75	1.11
1951.....	153.0	10.92	0.72	1.13
1952.....	168.0	11.62	0.70	1.13
1953.....	176.6	11.90	0.71	1.13
1954.....	188.6	12.34	0.76	1.16
1955.....	206.5	13.15	0.76	1.18
1956.....	240.1	14.93	0.79	1.27
1957.....	269.2	16.21	0.84	1.33
1958.....	295.5	17.30	0.90	1.39
1959.....	326.8	18.69	0.94	1.44
1960.....	354.5	19.84	0.98	1.50
1961.....	393.2	21.01	1.02	1.56

<sup>1</sup> Computed by Dr. J. Madden.

<sup>2</sup> Personal expenditures include expenditures on personal health care as reported in the National Accounts, cost of providing hospital care in government mental, tuberculosis, federal hospitals, and the administrative costs of public insurance programmes.

## APPENDIX 8-1

## PROJECTED DOCTOR REQUIREMENTS, CANADA, 1961-1991

Constant physician-population ratio - 1:857  
and improving ratio - 1:857 to 1:665

Year	Projected Population, Net Immigration - 10,000 Per Annum	Total Requirements for Physicians	
		Constant Ratio - 1:857	Improving Ratio - 1:857 to 1:665
1966	20,076.6	23,426	24,424
1971	22,105.0	25,793	28,087
1976	24,449.6	28,529	32,383
1981	27,136.1	31,664	37,532
1986	30,081.0	35,100	43,406
1991	33,250.1	38,798	50,000

  

Year	Projected Population, Net Immigration - 100,00 Per Annum	Total Requirements for Physicians	
		Constant Ratio - 1:857	Improving Ratio 1:857 to 1:665
1966	20,571.3	24,003	25,025
1971	23,195.3	27,065	29,473
1976	26,213.2	30,587	34,719
1981	29,635.0	34,579	40,988
1986	33,377.0	38,946	48,163
1991	37,427.5	43,672	56,281

NOTES: Physician-population ratio of 1:857 has been computed from the 1961 Census data. Physician-population ratio improved from 1:976 in 1951 to 1:897 in 1961 (excluding the improvement due to immigrant new registrants who were additions to Canadian medical manpower during the years 1950-60. These immigrants accounted for one-third of new medical registrants during that period.) Thus the rate of improvement equals 8.8 per cent over the 10-year period or 4.32 per cent of every five years, or at a compound rate of 0.85 per cent per annum. The physician-population ratio becomes: 1961 - 1:857; 1966 - 1:822; 1971 - 1:787; 1976 - 1:755; 1981 - 1:723; 1986 - 1:693; and 1991 - 1:665.

## APPENDIX 8-2

## PROJECTED DOCTOR REQUIREMENTS, CANADA, 1966-1991

Constant volume of medical services required per capita 5.3784 and  
6.7230 physician visits

Year	Projected Population, Net Immigration – 10,000 Per Annum	Total Requirements for Physicians			
		Volume of Service Per Capita – 5.3784		Volume of Service Per Capita – 6.7230	
		Physicians in Private Practice	Total Physicians	Physicians in Private Practice	Total Physicians
1966 .....	20,076.6	17,042	23,506	21,303	29,383
1971 .....	22,105.0	18,764	25,881	23,455	32,351
1976 .....	24,449.6	20,754	28,626	25,943	35,783
1981 .....	27,136.1	23,035	31,772	28,793	39,714
1986 .....	30,081.0	25,534	35,219	31,918	44,024
1991 .....	33,250.1	28,225	38,931	35,281	48,663
Year	Projected Population, Net Immigration – 100,000 Per Annum	Total Requirements for Physicians			
		Volume of Service Per Capita – 5.3784		Volume of Service Per Capita – 6.7230	
		Physicians in Private Practice	Total Physicians	Physicians in Private Practice	Total Physicians
1966 .....	20,571.3	17,462	24,085	21,828	30,107
1971 .....	23,195.3	19,690	27,158	24,612	33,947
1976 .....	26,213.2	22,251	30,691	27,814	38,364
1981 .....	29,635.0	25,156	34,698	31,445	43,372
1986 .....	33,377.0	28,332	39,078	35,415	48,848
1991 .....	37,427.5	31,768	43,818	39,713	54,776

Notes: Estimated 15,450 physicians in private practice in 1961 constituted 72.5 per cent of the total 21,290 physicians (including interns and residents) in Canada as of June, 1961. This proportion was used in calculating the total requirements for physicians.



## APPENDIX 8-3

## EXPECTED SUPPLY OF PHYSICIANS, CANADA, 1961-1991

Year	Number of Physicians	Attrition	Graduation	Immigration
June 1, 1961.....	21,290	681	800	350
1962.....	21,759	696	800	350
1963.....	22,213	711	800	350
1964.....	22,652	725	800	350
1965.....	23,077	738	800	350
June 1, 1966.....	23,489	752	900	350
1967.....	23,987	768	900	350
1968.....	24,469	783	900	350
1969.....	24,936	798	900	350
1970.....	25,388	812	900	350
June 1, 1971.....	25,826	826	950	250
1972.....	26,200	838	950	250
1973.....	26,562	850	950	250
1974.....	26,912	861	950	250
1975.....	27,251	872	950	250
June 1, 1976.....	27,579	882	950	250
1977.....	27,897	893	950	250
1978.....	28,204	902	950	250
1979.....	28,502	912	950	250
1980.....	28,790	921	950	250
June 1, 1981.....	29,069	930	950	250
1982.....	29,339	939	950	250
1983.....	29,600	947	950	250
1984.....	29,853	955	950	250
1985.....	30,098	963	950	250
June 1, 1986.....	30,335	971	950	250
1987.....	30,564	978	950	250
1988.....	30,780	985	950	250
1989.....	31,001	992	950	250
1990.....	31,209	999	950	250
June 1, 1991.....	31,410			

## APPENDIX 8-4A

# REQUIRED SUPPLY OF MEDICAL GRADUATES AND FIRST-YEAR ENROLMENT OF CANADIANS IN MEDICAL SCHOOL

Constant physician-population ratio 1:857

Projection Period	Needed Supply of Medical Grads.	Yearly Aver- age Enrol- ment	Re- quired 1st-Yr. Enrol- ment	Average Number of Population in University Age-Group 20-24												
				Popula- tion Net Immi- gration 0 Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Surplus or Deficit Per Annum	Popula- tion Net Immi- gration 25,000 Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Surplus or Deficit Per Annum	Popula- tion Net Immi- gration 50,000 Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Surplus or Deficit Per Annum				
1961/62 — 1965/66	(1) 3,894	779	4,322	864	(1) ('000)	1,198.4	899	+35	(2) ('000)	1,198.4	899	-4	(3) ('000)	1,198.4	899	-43
	(2) 4,067	813	4,514	903												
	(3) 4,241	848	4,708	942												
1966/67 — 1970/71	(1) 4,461	892	4,952	990		1,329.5	997	+7		1,340.0	1,005	-37		1,350.5	1,013	-81
	(2) 4,695	939	5,211	1,042												
	(3) 4,928	986	5,470	1,094												
1971/72 — 1975/76	(1) 5,714	1,143	6,342	1,268		1,677.6	1,258	-10		1,699.5	1,274	-60		1,721.2	1,291	-107
	(2) 6,007	1,201	6,668	1,334												
	(3) 6,299	1,260	6,992	1,398												
1976/77 — 1980/81	(1) 6,561	1,312	7,283	1,457		1,975.3	1,481	+24		2,005.0	1,504	-30		2,034.7	1,526	-85
	(2) 6,910	1,382	7,670	1,534												
	(3) 7,258	1,452	8,056	1,611												
1981/82 — 1985/86	(1) 7,364	1,473	8,174	1,635		2,159.9	1,620	-15		2,199.8	1,650	-75		2,239.6	1,680	-136
	(2) 7,772	1,554	8,627	1,725												
	(3) 8,181	1,636	9,081	1,816												
1986/87 — 1990/91	(1) 8,167	1,633	9,065	1,813		2,288.8	1,717	-96		2,344.0	1,758	-162		2,399.1	1,799	-227
	(2) 8,647	1,729	9,598	1,920												
	(3) 9,127	1,825	10,131	2,026												

**APPENDIX 8-4B**  
**REQUIRED SUPPLY OF MEDICAL GRADUATES AND FIRST-YEAR ENROLMENT OF CANADIANS IN MEDICAL SCHOOL**  
Improving physician-population ratio — 1:857<sup>1</sup>

Projection Period	Needed Supply of Medical Grads.	Yearly Average	Required 1st-Yr. Enrollment	Average Number of Population in University Age-Group 20-24								
				Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum	Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum	Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum
1961/62 — 1965/66	(1)	4,969	994	(1) 1,198.4	899	-204	(2) 1,198.4	899	-244	(3) 1,198.4	899	-284
	(2)	5,149	1,030	5,715	1,143	-337	1,329.5	997	-461	1,677.6	1,258	-440
	(3)	5,329	1,066	5,915	1,183	-461	1,677.6	1,258	-522	1,699.5	1,274	-580
1966/67 — 1970/71	(1)	6,009	1,202	6,670	1,334	-587	1,975.3	1,481	-587	2,005.0	1,504	-738
	(2)	6,271	1,254	6,961	1,392	-796	2,159.9	1,620	-796	2,199.8	1,650	-977
	(3)	6,545	1,309	7,265	1,453	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
1971/72 — 1975/76	(1)	7,744	1,549	8,596	1,719	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(2)	8,091	1,618	8,981	1,796	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(3)	8,428	1,686	9,355	1,871	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
1976/77 — 1980/81	(1)	9,317	1,863	10,342	2,068	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(2)	9,756	1,951	10,829	2,166	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(3)	10,196	2,039	11,318	2,264	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
1981/82 — 1985/86	(1)	10,882	2,176	12,079	2,416	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(2)	11,425	2,285	12,682	2,536	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(3)	11,969	2,394	13,286	2,657	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
1986/87 — 1990/91	(1)	12,548	2,510	13,928	2,786	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(2)	13,218	2,644	14,672	2,934	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284
	(3)	13,887	2,777	15,414	3,083	-1,069	2,288.8	1,717	-1,069	2,344.0	1,758	-1,284

<sup>1</sup> On the assumption that the physician-population ratio will maintain the 0.85 per cent average annual improvement registered between 1951 and 1961 during the projected periods. The physician-population ratio becomes: 1961, 1:857; 1966, 1:822; 1971, 1:787; 1976, 1:755; 1981, 1:723; 1986, 1:693; 1991, 1:665.

### APPENDIX 8-4C

#### REQUIRED SUPPLY OF MEDICAL GRADUATES AND FIRST-YEAR ENROLMENT OF CANADIANS IN MEDICAL SCHOOLS

Constant Volume of Medical Services Required Per Capita 5,3784 Physician-Visits

Projection Period	Needed Supply of Medical Grads.	Yearly Average Enrolment	Re-quired 1st-Yr.	Average Number of Population in University — Age Group 20—24											
				Population Net Immigration Per Annum	No. of Expected Students (7.5 per 10,000) Per Annum	Surplus or Deficit Per Annum	Population Net Immigration 25,000 Per Annum	No. of Expected Students (7.5 per 10,000) Per Annum	Surplus or Deficit Per Annum	Population Net Immigration 50,000 Per Annum	No. of Expected Students (7.5 per 10,000) Per Annum	Surplus or Deficit Per Annum			
1961/62 — 1965/66	(1) 3,979	796	4,417	883	(1) ('000)	1,198.4	899	+16	(2) ('000)	1,198.4	899	-23	1,198.4	899	-62
	(2) 4,153	831	4,610	922											
	(3) 4,328	866	4,804	961											
1966/67 — 1970/71	(1) 4,482	896	4,975	995		1,329.5	997	+2		1,340.0	1,005	-42	1,350.5	1,013	-86
	(2) 4,718	944	5,237	1,047											
	(3) 4,951	990	5,496	1,099											
1971/72 — 1975/76	(1) 5,739	1,148	6,370	1,274		1,677.6	1,258	-16		1,699.5	1,274	-65	1,721.2	1,291	-113
	(2) 6,032	1,206	6,696	1,339											
	(3) 6,326	1,265	7,022	1,404											
1976/77 — 1980/81	(1) 6,588	1,318	7,313	1,463		1,975.3	1,481	+18		2,005.0	1,504	-36	2,034.7	1,526	-91
	(2) 6,936	1,387	7,699	1,540											
	(3) 7,285	1,457	8,086	1,617											
1981/82 — 1985/86	(1) 7,393	1,479	8,206	1,641		2,159.9	1,620	-21		2,199.8	1,650	-82	2,239.6	1,680	-144
	(2) 7,804	1,561	8,662	1,732											
	(3) 8,214	1,643	9,118	1,824											
1986/87 — 1990/91	(1) 8,200	1,640	9,102	1,820		2,288.8	1,717	-103		2,344.0	1,758	-169	2,399.1	1,799	-235
	(2) 8,682	1,736	9,637	1,927											
	(3) 9,162	1,832	10,170	2,034											

**APPENDIX 8-4D**  
**REQUIRED SUPPLY OF MEDICAL GRADUATES AND FIRST-YEAR ENROLMENT OF CANADIANS IN MEDICAL SCHOOLS**  
 Constant volume of medical services required per capita — 6,7230 physician visits<sup>1</sup>

Projection Period	Needed Supply of Medical Grads.	Yearly Average Enrolment	Re-quired 1st-Yr. Enrolment	Average Number of Population in University Age-Group 20-24						Deficit Per Annum	Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum	Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum
				Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum	Population Net Immigration Per Annum	No. of Expected 1st-Yr. Students (7.5 per 10,000) Per Annum	Deficit Per Annum							
1961/62 — 1965/66	(1)	10,309	2,062				(1) (‘000)	899	-1,390		(3) (‘000)					
	(2)	10,526	2,105	11,443	2,289		1,198.4	899	-1,390				-1,438	1,198.4	899	-1,486
	(3)	10,745	2,149	11,684	2,337											
1966/67 — 1970/71	(1)	6,040	1,208	6,704	1,341		1,329.5	997	-344		1,340.0	1,005	-393	1,350.5	1,013	-458
	(2)	6,299	1,260	6,992	1,398											
	(3)	6,626	1,325	7,355	1,471											
1971/72 — 1975/76	(1)	7,486	1,497	8,309	1,662		1,677.6	1,258	-404		1,699.5	1,274	-469	1,721.2	1,291	-540
	(2)	7,850	1,570	8,714	1,743											
	(3)	8,248	1,650	9,155	1,831											
1976/77 — 1980/81	(1)	8,547	1,709	9,487	1,897		1,975.3	1,481	-416		2,005.0	1,504	-491	2,034.7	1,526	-566
	(2)	8,985	1,797	9,973	1,995											
	(3)	9,423	1,885	10,460	2,092											
1981/82 — 1985/86	(1)	9,554	1,911	10,605	2,121		2,159.9	1,620	-501		2,199.8	1,650	-585	2,239.6	1,680	-669
	(2)	10,067	2,013	11,174	2,235											
	(3)	10,579	2,116	11,743	2,349											
1986/87 — 1990/91	(1)	10,562	2,112	11,724	2,345		2,288.8	1,717	-628		2,344.0	1,758	-720	2,399.1	1,799	-813
	(2)	11,163	2,233	12,391	2,478											
	(3)	11,766	2,353	13,060	2,612											

<sup>1</sup> The high deficits recorded over the period 1961/62 — 1965/66 under the assumption of 6,7230 physician-visits per capita are due to the fact that the present rate is 5,3784 physician-visits per capita. These large deficits reflect the backlog that must be satisfied if the existing physician visits per capita is to be improved to the suggested level of 6,7230.

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