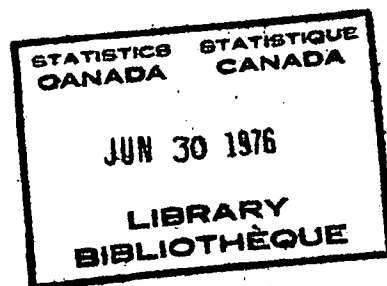


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CANADIAN VITAL STATISTICS TRENDS

1921 - 1954

Reference Paper No. 70

DOMINION BUREAU OF STATISTICS
Health and Welfare Division
Vital Statistics Section

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PREFACE

The growing strength and diversification of Canada's economic position in recent years has been accompanied and associated with equally dramatic changes in the growth and composition of the Canadian population. These changes have been portrayed in a general way in census figures published decennially by the Dominion Bureau of Statistics, but a panoramic analysis of long-term trends in the demographic components of overall population change has not hitherto been made the subject of a single Bureau report.

The purpose of the present document is accordingly to summarize leading characteristics of the underlying factors involved in Canadian population development in the period from 1921 to 1954; the reversal of long established trends in fertility; the comparative influences of natural increase and net immigration; the altered patterns of mortality with respect to age and cause of death; the manifesting of scientific and social advances in the sensitive barometers of longevity and infant mortality.

These statistics of birth, marriage, death and natural increase play a fundamental part in the appraisal of population progress and prospects. In turn, such assessments profoundly influence a wide range of important governmental and private decisions. The historical and international setting in which these data are placed in the report should serve to enhance their significance and usefulness to all who are interested in Canadian demography and health.

HERBERT MARSHALL,

Dominion Statistician.

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CANADIAN VITAL STATISTICS TRENDS

1921 - 1954

I. SUMMARY OF POPULATION CHARACTERISTICS BEFORE 1921

Early difficulties of colonization were so severe that in 1763, after a century and a half of occupation, the white population stood at only 60,000. Trade and settlement gradually expanded to the extent that a population of a million was reached by approximately 1830. Economic upheaval in Europe and incessant waves of immigration augmented the population to three million by 1860. The 1871 Census gave a population figure of 3,689,000. But despite the acquisition of further territory and the construction of the transcontinental Canadian Pacific Railway, the following three decades were disappointing in the matter of population growth. Some time between 1891 and 1896 the rate of increase must have almost reached the vanishing point. In 1901 the population was 5,371,000, an increase of only 1,682,000 since the 1871 Census, and while 1,582,000 immigrants had been admitted,

over 2,000,000 persons had departed from Canada, chiefly to the United States. From then until 1921 there was a resurgence of economic expansion with the 1921 Census recording a population of 8,788,000. The highest decennial rate of increase in Canada's history was recorded between 1901-11, a period of large-scale immigration promoted by the government and the railways with a view to settling the newly-opened agricultural area of the West and providing labour for the growing industry in the East. After 1911 there were successive reductions in the rate of population growth, associated with changes in the birth and death rates and with variation in the flow of immigration. In the fifty years from the first post-Confederation census to 1921, the average annual increase in population had been less than 102,000.

TABLE 1. A Reconstruction of Canada's Population Record, 1851-1921

(000's omitted)

Period	Population at beginning of period	Births ¹	Deaths ¹	Immigration ²	Emigration (Residual)
1851-1861	2,436	1,281	611	209	85
1861-1871	3,230	1,369	718	187	379
1871-1881	3,689	1,477	754	353	440
1881-1891	4,325	1,538	824	903	1,109
1891-1901	4,833	1,546	828	326	506
1901-1911	5,371	1,931	811	1,759	1,043
1911-1921	7,207	2,338	988 ³	1,612	1,381

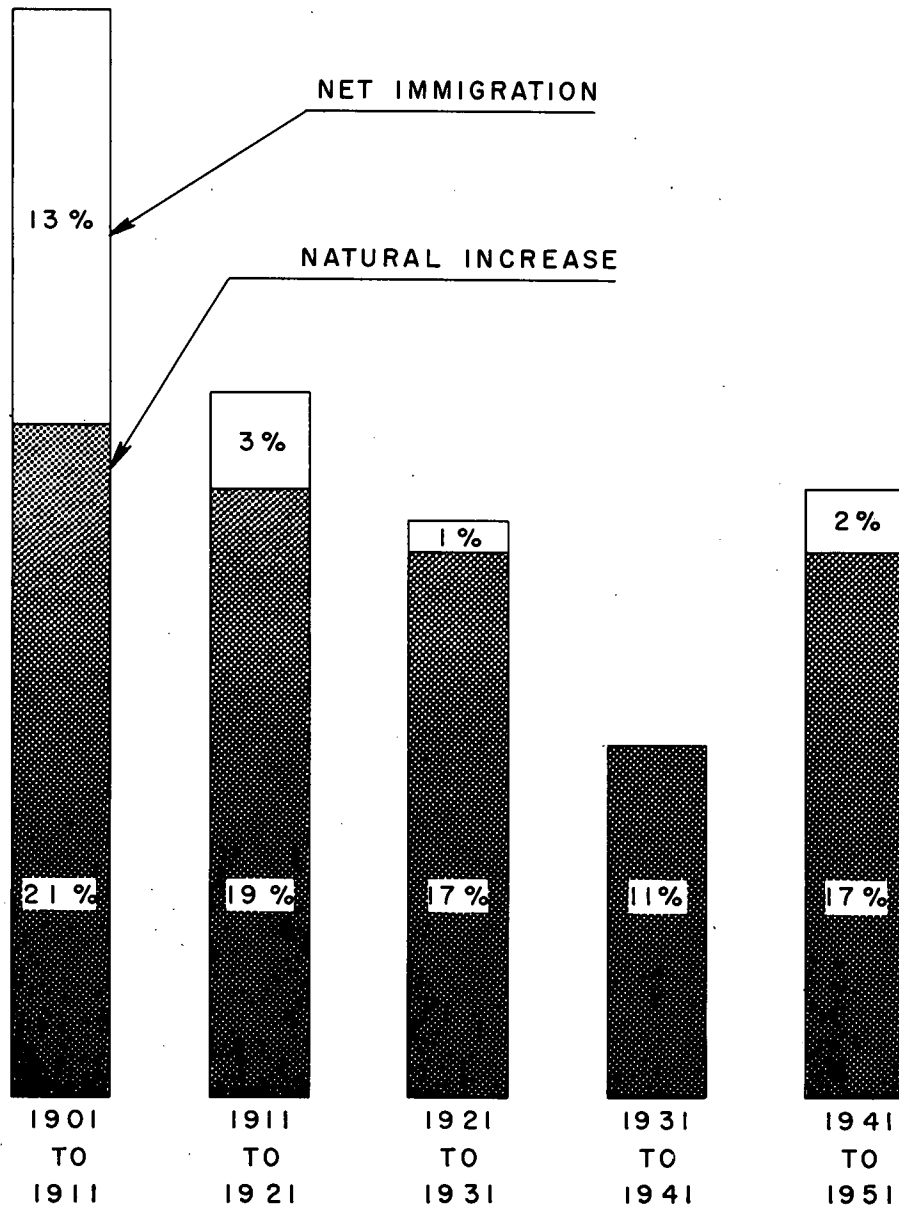
1. Births and deaths for periods from 1851 to 1921 inferred by applying mortality rates to decennial censuses.

2. Immigration during census years divided into January-May, June-December in proportion of 5/12 and 7/12 to correspond to usual census date of June 1.

3. Allows for 120,000 deaths due to World War I and the influenza epidemic.

CHART - I

PERCENTAGE POPULATION INCREASE EACH DECADE



II. CHARACTERISTICS OF CANADIAN POPULATION GROWTH 1921-1954

The Canadian population has increased from less than 9 million in 1921 to more than 15 million in 1954. While a small part of this increase may be attributed to net migration, by far the most significant share has been contributed by high natural increase, that is, by a high birth rate—which is one of the highest presently recorded for a major industrial nation—as well as by a gradually declining death rate. Despite a postwar annual rate of growth of well over 2 p.c. this rate not long ago appeared to be approaching zero. By 1941 there had been three successive declines in the intercensal rate of population increase; from 34 per cent in the first ten years of the century down to 22 per cent, 18 per cent and 11 per cent in successive decades. This trend was reversed between 1941 and 1951 with a 22 per cent increase in population.

The core of this expansion lay in a 50 per cent increase in the excess of births over deaths, a trend that was also shared with the rest of the Western world. Other developments helped to

accelerate this trend. For example, while emigrants exceeded immigrants by nearly 100 thousand between 1931 and 1941, there was a reversal of the flow of net migration in the following decade with a surplus of over 100,000 immigrants. And of course the addition of Newfoundland represented an increase of 344 thousand which is non-repetitive in character.

Canada's population has increased by nearly 3 million persons since the end of World War II. Since 1946 over 3 million children have been born and less than 1 million persons have died, a net gain through natural increase of 2 millions. The population has doubled within the past 40 years as it did in the preceding 40 years and also in the 30 years before that. The long-term significance of natural increase in this connection may be indicated by the fact that while 7.1 million migrants arrived in Canada between 1851-1950, 6.6 million left the country so that over 95 per cent of Canada's population increase during the century was due to natural increase.

TABLE 2. A Reconstruction of Canada's Population Record, 1921-1953

(000's omitted)

Period	Population at beginning of period	Births	Deaths	Immigration ¹	Emigration (Residual)
1921 -1931	8,788	2,415	1,055	1,203	974
1931 -1941	10,377	2,294	1,072	150	242
1941 -1951 ³	11,507	3,186	1,214 ²	548	379
1951 ³	13,648				
1951 ⁴ -1955 ⁴	14,009	1,660	503	667	232
1955 ⁴	15,601				

1. Immigration during census years divided into January-May, June-December in proportion of 5/12 and 7/12 to correspond to usual census date of June 1.

2. Allows for 36,000 deaths due to World War II.

3. Not including Newfoundland.

4. Including Newfoundland.

Although Canadian vital statistics are not available prior to 1921 it is safe to estimate that during the past hundred years the rate of natural increase has always tended to remain at a high level, probably in the vicinity of 15 per thousand

population. In recent times the most dynamic element in natural increase has been a high crude birth rate. From 32 per thousand in 1921, the birth rate declined steadily until it was below 21 in 1937. It rose to a plateau of 24 during the war years and

to new peaks of 28.9 in 1947 and 28.7 in 1954. At the same time during this same period the crude death rate has declined gradually from a little over 11 to 8.6 in 1953 and then dropped sharply to 8.2 in 1954. Life expectancy has increased from probably about 45 or 50 years in 1851 to over 66 years for males and over 70 years for females in 1951. The number of infants dying before reaching their first birthday has been reduced from well over 100 in 1851 (even probably closer to 200) out of every 1,000 infants born alive to 32 in 1954. The rate of mortality due to childbirth must have been exceedingly high in 1851; as late as 1921 over 500 mothers died as a result of childbirth for every 100,000 infants born alive; in 1954 the rate was down to 80.

Other tremendous reductions have taken place in the mortality pattern since the early 1920's, with the most important decreases in the childhood and early adult ages. In 1926, over 19 p.c. of all male deaths were of persons 5 to 45 years of age; in 1954 these accounted for less than 11 per cent of total deaths. The reduction in mortality among females in this age group is perhaps even more remarkable, the proportion dropping from 22 p.c. to approximately 9 p.c. Death rates for males up to age 45 have been roughly halved during the past 25 years; those for females in the same ages have been reduced as much as 3-4 times.

These reductions in the mortality rates in early and middle years of life have had the effect of increasing the number of people in the older age groups and of raising the average age of the population as a whole. Consequently a much larger proportion of deaths is now occurring in the older age groups. Further, the reductions in rates will eventually raise the average age at death. In 1921 average age at death of males was 39.0 years and of females 41.1 years; by 1954 this had been advanced to 57.3 and 60.0 respectively.

Despite reductions in infant mortality over the past thirty years, more deaths still occur in the first year of life than in any other single year. Of the 107,000 deaths occurring in 1926, 31,000 or almost 30 p.c. were of children under 5 years of age and three-quarters of those were of children under one year of age. Of approximately 124,500 deaths in 1954, 16,000 or only 13 p.c. were of children under 5 years of age and more than five-sixths of those were under one year. Most of the reduction has taken place among children over the age of one month but there has been a notable decrease in all childhood ages up to 5 years.

The increased life span has reflected the remarkable success that has attended the attack by health authorities on the infective and contagious diseases which in the past have constituted

such a great hazard in the early and young adult years of life. Diphtheria, for example, has been almost wiped out and mortality from tuberculosis has been greatly reduced. On the other hand the ageing of the population has increased the proportion of deaths from certain causes that affect older people. Thus cancer and the diseases of the cardio-vascular-renal systems now account for a substantially larger proportion of all deaths than formerly. At the present time about 80 per cent of all deaths may be found within the following groups of causes: diseases of the heart and arteries, cancer, accidents, diseases of early infancy, the respiratory diseases—tuberculosis, pneumonia and influenza—and nephritis.

At the root of the wide increases in births has been the larger number of married couples rather than increases in the average size of family. Between 1941 and 1951 the proportion of married women rose from 38 per cent to 51 per cent in the age group 20-24, from 66 per cent to 79 per cent in the age group 25-29, and from 76 per cent to 84 per cent in the age group 30-34. While some of this difference may be attributed to postponement during the depression there is evidence that a higher proportion of women are marrying and at a somewhat earlier age than formerly. The marriage rate has remained at a high level since 1940 and reached a postwar peak of 10.9 per thousand population in 1946 thereafter declining to 8.5 in 1954. The recent decline is due to the reduction in the number of unmarried females in the nubile ages.

Some of the factors which have contributed most to the high postwar level of fertility are short-run in character, for example, the temporary adjustment of the timing of marriages and of births within marriage, largely as a result of war and depression. The long-term influences would appear to exert both upward and downward pressures on the birth rate. The tendencies for higher proportions of women to marry, and for higher proportions of those who do marry to have at least one child have been offset by the tendency for couples to cease child-bearing at lower and lower parities. Finally the socio-economic context contains many factors which have always led to decreased fertility in other countries. Such developments include the mass movements of the population from agriculture to industry and from the country into the city. Manufacturing areas have gained rapidly at the expense of agricultural regions in regard to population. While urban areas have grown by 30 per cent the rural farm population has declined by 10 per cent and agricultural workers now make up less than one-sixth of the total labour force. Meanwhile women constitute an ever larger component of the working population and the number of married women in the labour force has increased four-fold during a decade. In fact Canada is now largely an urban industrial society and bears all the characteristic marks of such a society except that of low fertility.

CHART-2

CAUSES OF DEATH, 1954

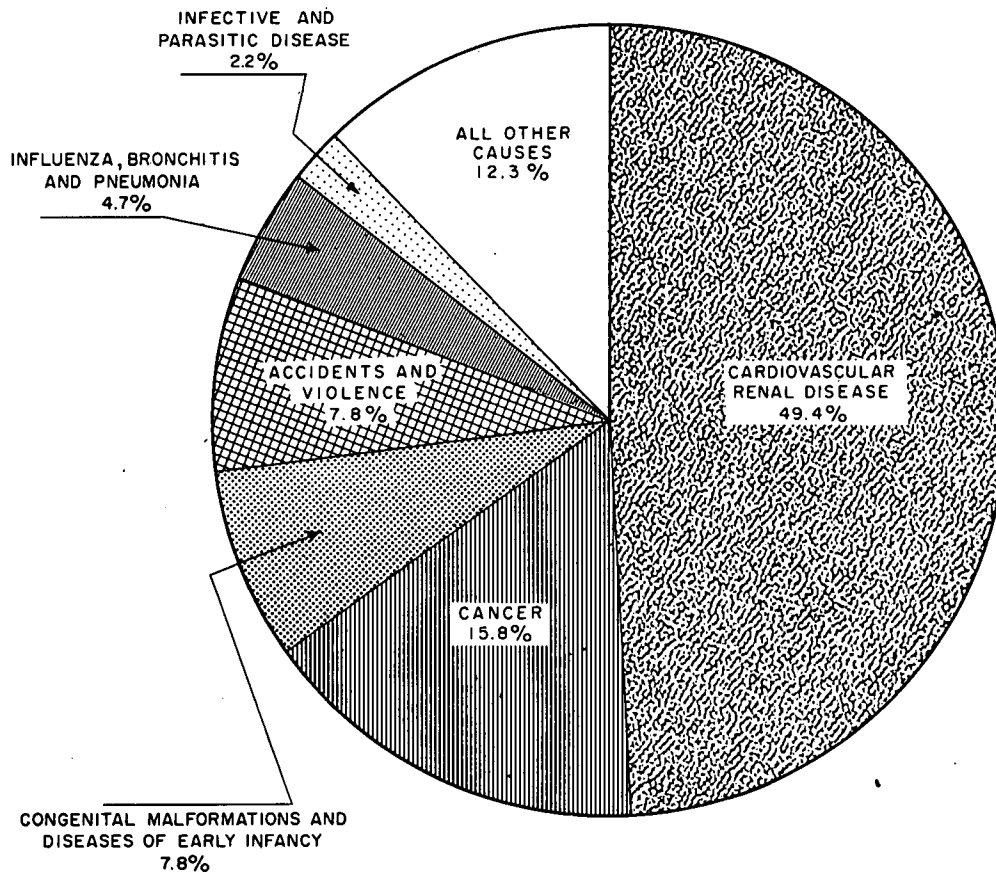


TABLE 3. The Canadian Population 1921-54

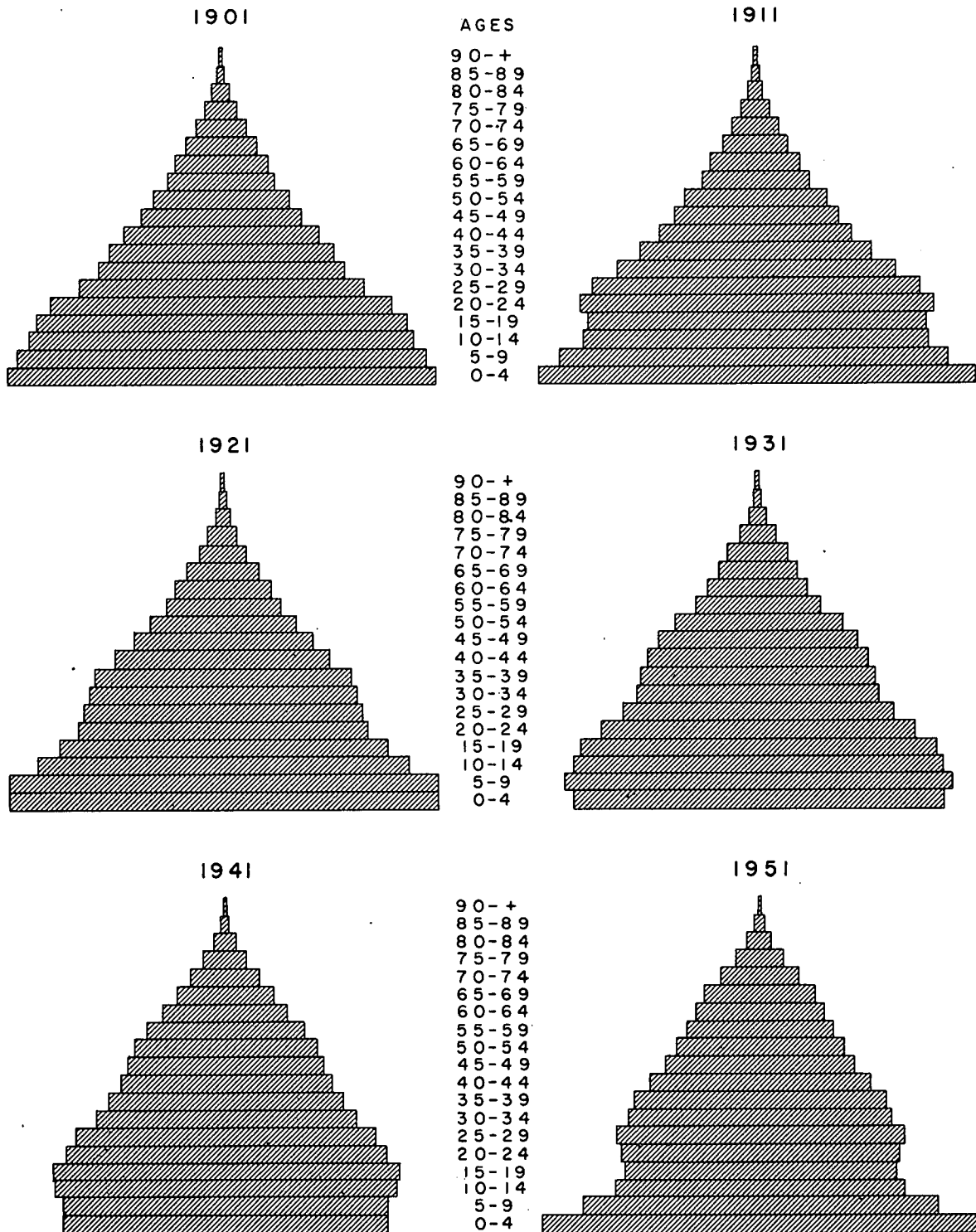
Item	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Estimated in thousands, June 1											
1921	9,039	263	89	524	388	2,361	2,934	610	757	588	525
1922	9,169	262	89	522	389	2,409	2,980	616	769	592	541
1923	9,255	257	87	518	389	2,446	3,013	619	778	593	555
1924	9,393	262	86	516	391	2,495	3,059	625	791	597	571
1925	9,547	265	86	515	393	2,549	3,111	632	806	602	588
1926	9,705	266	87	515	396	2,603	3,164	639	821	608	606
1927	9,891	267	87	515	398	2,657	3,219	651	841	633	623
1928	10,090	268	88	515	401	2,715	3,278	664	862	658	641
1929	10,287	271	88	515	404	2,772	3,334	677	883	684	659
1930	10,471	276	88	514	406	2,825	3,386	689	903	708	676
1931	10,645	282	88	513	408	2,874	3,432	700	922	732	694
1932	10,780	284	89	519	414	2,925	3,473	705	924	740	707
1933	10,905	286	90	525	419	2,972	3,512	708	926	750	717
1934	11,015	288	91	531	423	3,016	3,544	709	928	758	727
1935	11,119	290	92	536	428	3,057	3,575	710	930	765	736
1936	11,226	292	93	543	433	3,099	3,606	711	931	773	745
1937	11,323	294	93	549	437	3,141	3,637	715	922	776	759
1938	11,432	296	94	555	442	3,183	3,672	720	914	781	775
1939	11,548	298	94	561	447	3,230	3,708	726	906	786	792
1940	11,665	301	95	569	452	3,278	3,747	728	900	790	805
1941	11,793	303	95	578	457	3,332	3,788	730	896	796	818
1942	11,945	308	90	591	464	3,390	3,884	724	848	776	870
1943	12,091	313	91	606	463	3,457	3,915	723	838	785	900
1944	12,245	316	91	611	461	3,500	3,963	727	836	808	932
1945	12,377	322	92	619	467	3,560	4,000	727	833	808	949
1946	12,598	330	94	608	478	3,629	4,093	727	833	803	1,003
1947	12,864	337	94	615	488	3,710	4,176	739	836	825	1,044
1948	13,143	344	93	625	498	3,788	4,275	746	838	854	1,082
1949	13,423	345	94	629	508	3,882	4,378	757	832	885	1,113
1950	13,688	351	96	638	512	3,969	4,471	768	833	913	1,137
1951	13,984	361	98	643	516	4,056	4,598	776	832	939	1,165
1952	14,405	374	103	653	526	4,174	4,766	798	843	970	1,198
1953	14,756	383	106	663	536	4,269	4,897	809	861	1,002	1,230
1954	15,168	398	105	673	547	4,388	5,046	828	878	1,039	1,266

Chart 3 illustrates the percentage distribution of the population by age. The proportion of the Canadian population over 65 years of age has steadily increased from 4.1 p.c. in 1881 to 7.8 p.c. in 1951. Between 1931 and 1941 the total population of Canada increased 10.9 p.c. but the population 65 years of age and older increased by 33.3 p.c. The comparative figures for the period

between 1941-51 were 18.6 p.c. for the total population and 38.4 p.c. for the population 65 years of age and over. The most drastic increases between 1931 and 1951 of the population over 65 took place in the Western provinces. In Manitoba the proportion rose from 4.5 p.c. to 8.5 p.c., in Saskatchewan from 3.4 p.c. to 8 p.c. and in British Columbia from 5.5 p.c. to 10.8 p.c.

CHART-3

PERCENTAGE DISTRIBUTION OF THE POPULATION BY AGE



III. SUMMARY OF BIRTHS, MARRIAGES, DEATHS AND NATURAL INCREASE 1921-54

In 1954 Canada's birth rate per 1,000 population at 28.7 had almost returned to the 1921 level of 29.3. From 1921 to 1937 this rate fell to 20.1, rose to 28.9 in 1947 and exceeded 28 in 1953 and 1954. The 1954 birth rates in Ontario, Alberta and British Columbia were their highest on record since 1921; Saskatchewan recorded its highest rate since 1922; Manitoba's 1954 rate was exceeded only in 1947, 1922 and 1921; since 1928, Quebec has had a higher rate than 1954 only in 1946 and 1947. Although the 1954 rates in Newfoundland and Nova Scotia were not as high as in the five or six years immediately following World War II, they nevertheless have been rising over the last three or four years. New Brunswick was the only province with a lower rate in 1954 and a general decline since 1947. Newfoundland's rate (34.3) was the highest among the provinces with Alberta in second place (32.3) replacing New Brunswick and Quebec, which in 1954 had identical rates (30.4). Prince Edward Island had the lowest rates (25.9) followed by British Columbia (26.0); Manitoba (26.9); Ontario (27.0); Nova Scotia (28.1) and Saskatchewan (28.5).

In 1954 Canada's crude death rate at 8.2 was the lowest on record. This represented the eleventh consecutive annual decrease from the rate of 10.1 in 1943, a decline of almost 20 per cent in a little over a decade. The 1954 drop resulted from a decline in total deaths to 124,520 from the record high total of 127,381 in 1953. There were corresponding drops in rates from 1953 in all provinces except Newfoundland and Prince Edward Island. Provincial rates varied from 7.2 in Saskatchewan

and Alberta to 9.8 in British Columbia, which had the highest proportion of all provinces of aged persons in its population.

The excess of births over deaths amounted to nearly 311,000 persons in 1954 which involved a rate of 20.5 per thousand population. The rate of natural increase had declined from 17.7 in 1921 when 160,348 persons were added to the population by natural increase to 9.7 in 1937 with an increase of 109,784. The rate remained below 15 until after World War II but reached 19.5 in 1947 since which time it has never fallen below 18. In 1954 the rates varied provincially from a high of 27.0 in Newfoundland to a low of 16.7 in Prince Edward Island. Since 1921 over 5,825,000 persons have been added to the population by natural increase or an annual average between each Census of 140,133 from 1921-30; 125,502, 1931-40; 203,741, 1941-50 and 282,822 from 1951 to 1954 inclusive.

Marriages dropped in practically all provinces to a total of 128,385 in 1954 after five consecutive annual increases from 123,877 in 1949 to 130,837 in 1953. Newfoundland was the only province to record its fifth consecutive increase since 1949 in marriages registered while in New Brunswick the rates have been steady over the past five years. The general result has been a drop in the marriage rate in 1954 to 8.5 per 1,000 population from 8.9 in 1953, a steady decline from the previous post-war record of 10.9 in 1946. Provincial rates varied from 5.8 in Prince Edward Island to 9.6 in Alberta. Alberta, Ontario and British Columbia had the highest rates in that order.

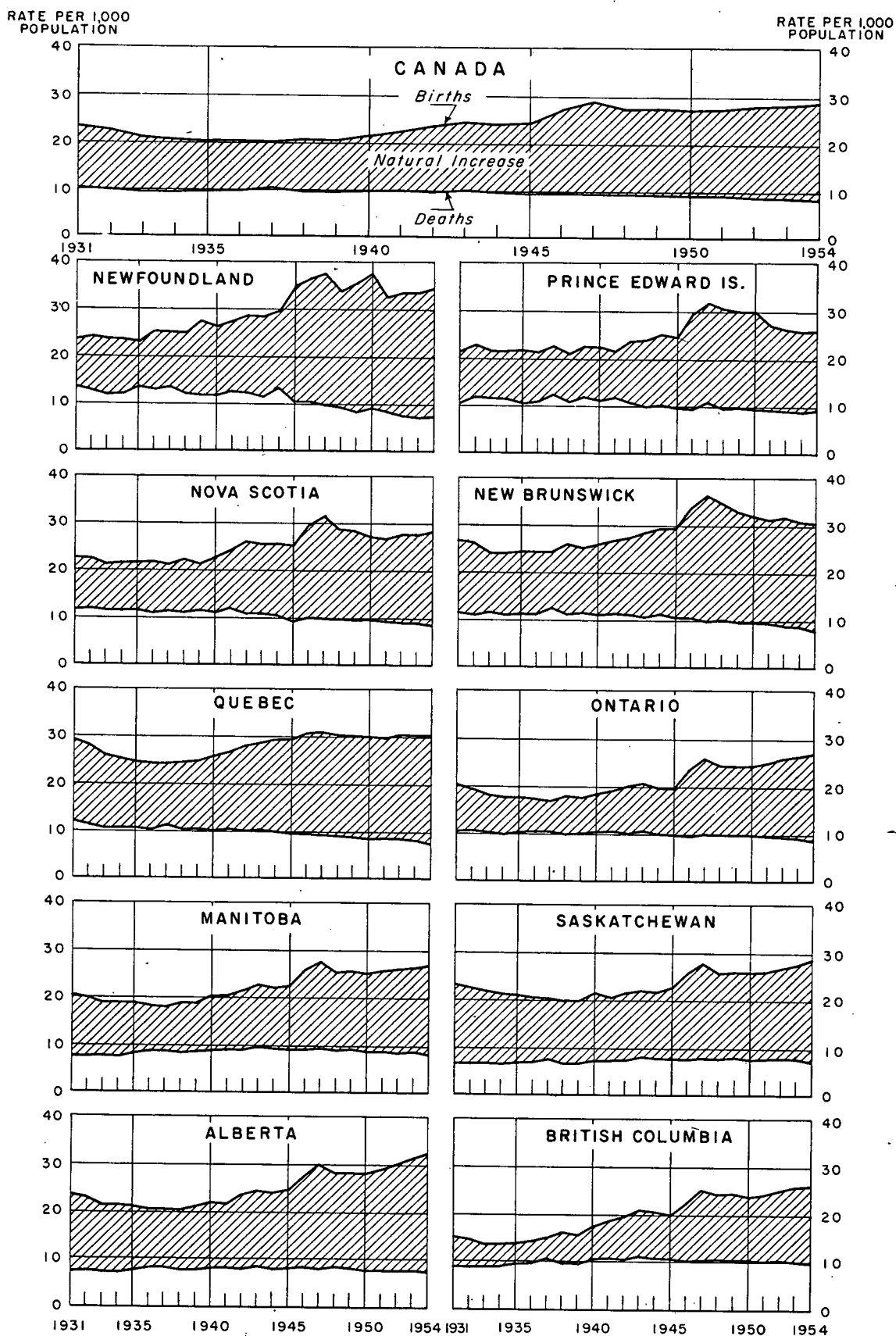
TABLE 4. Births, Marriages, Deaths and Natural Increase, 1921-54

Item	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Births (exclusive of stillbirths)											
Number											
1921	264,879	7,151	2,156	13,021	11,465	88,749	74,152	18,478	22,493	16,561	10,653
1931	247,024	6,551	1,879	11,615	10,801	83,606	69,209	14,376	21,331	17,252	10,404
1941	263,605	8,288	2,049	13,903	12,272	89,209	72,262	14,812	18,464	17,308	15,038
1951	380,101	11,738	2,651	17,125	16,075	120,930	114,827	19,942	21,733	27,003	28,077
1952	402,527	12,561	2,703	17,951	16,691	126,416	123,891	20,777	22,605	29,105	29,827
1953	416,825	12,797	2,737	18,276	16,458	128,719	129,771	21,242	23,703	31,376	31,746
1954	435,142	13,653	2,724	18,909	16,649	133,178	136,261	22,248	24,981	33,593	32,946
Rate per 1,000 population											
1921	29.3	27.2	24.3	24.9	30.2	37.6	25.3	30.3	29.7	28.1	20.3
1931	23.2	23.3	21.3	22.6	26.5	29.1	20.2	20.5	23.1	23.6	15.0
1941	22.4	27.3	21.6	24.1	26.8	26.8	19.1	20.3	20.6	21.7	18.4
1951	27.2	32.5	27.1	26.6	31.2	29.8	25.0	25.7	26.1	28.8	24.1
1952	27.9	33.6	26.2	27.5	31.7	30.3	26.0	26.0	26.8	30.0	24.9
1953	28.2	33.4	25.8	27.6	30.7	30.2	26.5	26.3	27.5	31.3	25.8
1954	28.7	34.3	25.9	28.1	30.4	30.4	27.0	26.9	28.5	32.3	26.0

TABLE 4. Births, Marriages, Deaths and Natural Increase, 1921-54 - Concluded

Item	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
General Mortality											
Number											
1921	104,531	3,376	1,209	6,420	5,410	33,433	34,551	5,388	5,596	4,940	4,208
1931	108,274	3,757	912	5,968	4,644	34,487	35,705	5,319	6,066	5,302	6,114
1941	118,423	3,784	1,134	6,914	5,184	34,338	39,226	6,495	6,458	6,385	8,505
1951	125,454	3,004	904	5,812	4,873	34,900	43,981	6,735	6,440	7,167	11,638
1952	125,950	2,773	916	5,756	4,647	34,854	44,402	6,552	6,625	7,345	12,080
1953	127,381	2,733	926	5,808	4,637	34,469	45,242	7,015	6,687	7,646	12,218
1954	124,520	2,916	966	5,692	4,286	33,169	44,515	6,719	6,323	7,520	12,414
Rate per 1,000 population											
1921	11.6	12.8	13.6	12.3	14.2	14.2	11.8	8.8	7.4	8.4	8.0
1931	10.2	13.4	10.4	11.6	11.4	12.0	10.4	7.6	6.6	7.2	8.8
1941	10.0	12.5	11.9	12.0	11.3	10.3	10.4	8.9	7.2	8.0	10.4
1951	9.0	8.3	9.2	9.0	9.4	8.6	9.6	8.7	7.7	7.6	10.0
1952	8.7	7.4	8.9	8.8	8.8	8.4	9.3	8.2	7.9	7.6	10.1
1953	8.6	7.1	8.7	8.8	8.7	8.1	9.2	8.7	7.8	7.6	9.9
1954	8.2	7.3	9.2	8.5	7.8	7.6	8.8	8.1	7.2	7.2	9.8
Natural Increase											
Number											
1921	160,348	3,775	947	6,601	6,055	55,316	39,601	13,090	16,897	11,621	6,445
1931	138,750	2,794	967	5,647	6,157	49,119	33,504	9,057	15,265	11,950	4,290
1941	145,182	4,504	915	6,989	7,088	54,871	33,036	8,317	12,006	10,923	6,533
1951	254,647	8,734	1,747	11,313	11,202	86,030	70,846	13,207	15,293	19,836	16,439
1952	276,577	9,788	1,787	12,195	12,044	91,562	79,489	14,225	15,980	21,760	17,747
1953	289,444	10,064	1,811	12,468	11,821	94,250	84,529	14,227	17,016	23,730	19,528
1954	310,622	10,737	1,758	13,217	12,363	100,009	91,746	15,529	18,658	26,073	20,532
Rate per 1,000 population											
1921	17.7	14.4	10.7	12.6	16.0	23.4	13.5	21.5	22.3	19.7	12.3
1931	13.0	9.9	10.9	11.0	15.1	17.1	9.8	12.9	16.5	16.4	6.2
1941	12.4	14.8	9.7	12.1	15.5	16.5	8.7	11.4	13.4	13.7	8.0
1951	18.2	24.2	17.9	17.6	21.8	21.2	15.4	17.0	18.4	21.2	14.1
1952	19.2	26.2	17.3	18.7	22.9	21.9	16.7	17.8	18.9	22.4	14.8
1953	19.6	26.3	17.1	18.8	22.0	22.1	17.3	17.6	19.7	23.7	15.9
1954	20.5	27.0	16.7	19.6	22.6	22.8	18.2	18.8	21.3	25.1	16.2
Marriages											
Number											
1921	71,254	1,522	518	3,550	3,173	18,659	24,871	5,310	5,101	4,661	3,889
1931	68,179	1,588	490	3,394	2,544	16,783	23,771	4,888	5,700	5,142	3,879
1941	124,526	2,684	673	6,596	4,941	32,782	43,270	8,305	7,036	8,470	9,769
1951	128,230	2,517	583	5,094	4,386	35,704	45,198	7,366	6,805	9,305	11,272
1952	128,301	2,730	613	5,390	4,276	35,374	45,251	7,128	6,944	9,514	11,081
1953	130,837	2,771	647	5,378	4,232	35,968	45,954	7,277	7,186	10,126	11,298
1954	128,385	2,952	605	5,265	4,278	35,516	45,028	6,837	6,953	9,960	10,991
Rate per 1,000 population											
1921	7.9	5.7	5.8	6.8	8.4	7.9	8.5	8.7	6.7	7.9	7.4
1931	6.4	5.6	5.6	6.6	6.2	5.8	6.9	7.0	6.2	7.0	5.6
1941	10.6	8.7	7.1	11.4	10.8	9.8	11.4	11.4	7.9	10.6	11.9
1951	9.2	7.0	5.9	7.9	8.5	8.8	9.8	9.5	8.2	9.9	9.7
1952	8.9	7.3	6.0	8.3	8.1	8.5	9.5	8.9	8.2	9.8	9.2
1953	8.9	7.2	6.1	8.1	7.9	8.4	9.4	9.0	8.3	10.1	9.2
1954	8.5	7.4	5.8	7.8	7.8	8.1	8.9	8.3	7.9	9.6	8.7

BIRTH, DEATH AND NATURAL INCREASE RATES



IV. INTERNATIONAL COMPARISON OF VITAL STATISTICS

Canada's comparative international position shows wide variation in vital statistics. This country has made tremendous strides in reducing the death rate in general and in particular the rate for infective diseases and maternal mortality. Table 5 below indicates that Canada's low death rate was second only to the Netherlands and her rate of maternal mortality second only to the United States. Canada's birth rate was comparatively high being surpassed by only five countries. Again only half a dozen countries had lower rates of neo-natal mortality.

A marked contrast, however, appears in regard to infant mortality in which Canada was found to be in twelfth place. While Canada has not kept pace with a number of other countries, at the same time her record has not been unimpressive. For example Sweden with the lowest rate of infant mortality saw a reduction in that rate from 61.4

between 1920-24 to the current level of 18 while Canada's rate during the same period dropped from 104.3 to 32.

Such international comparisons are meant to suggest useful approximations of current trends. It must be pointed out that crude rates should be used with caution because they are affected by differences in the age compositions of populations. In particular, the completeness of registration of live births and infant deaths varies from country to country and there is some evidence that the under-registration of deaths is proportionately greater for infants than for other ages. Despite these variations, however, it must be affirmed that the Canadian infant mortality rate is considerably higher than that of many other countries in widely-separated parts of the globe. In Charts 5 and 6 Canada's crude birth and death rates are compared with those of western Europe and America.

CHART-5

CRUDE BIRTH RATES

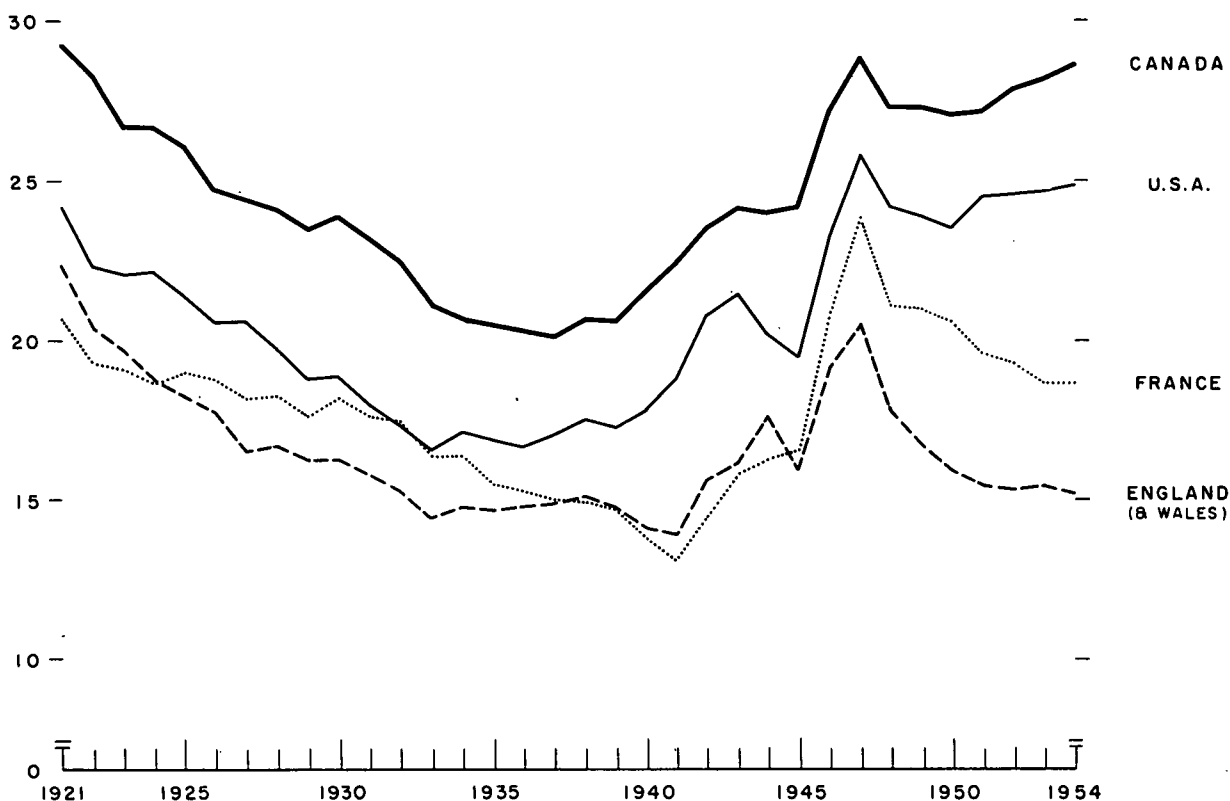


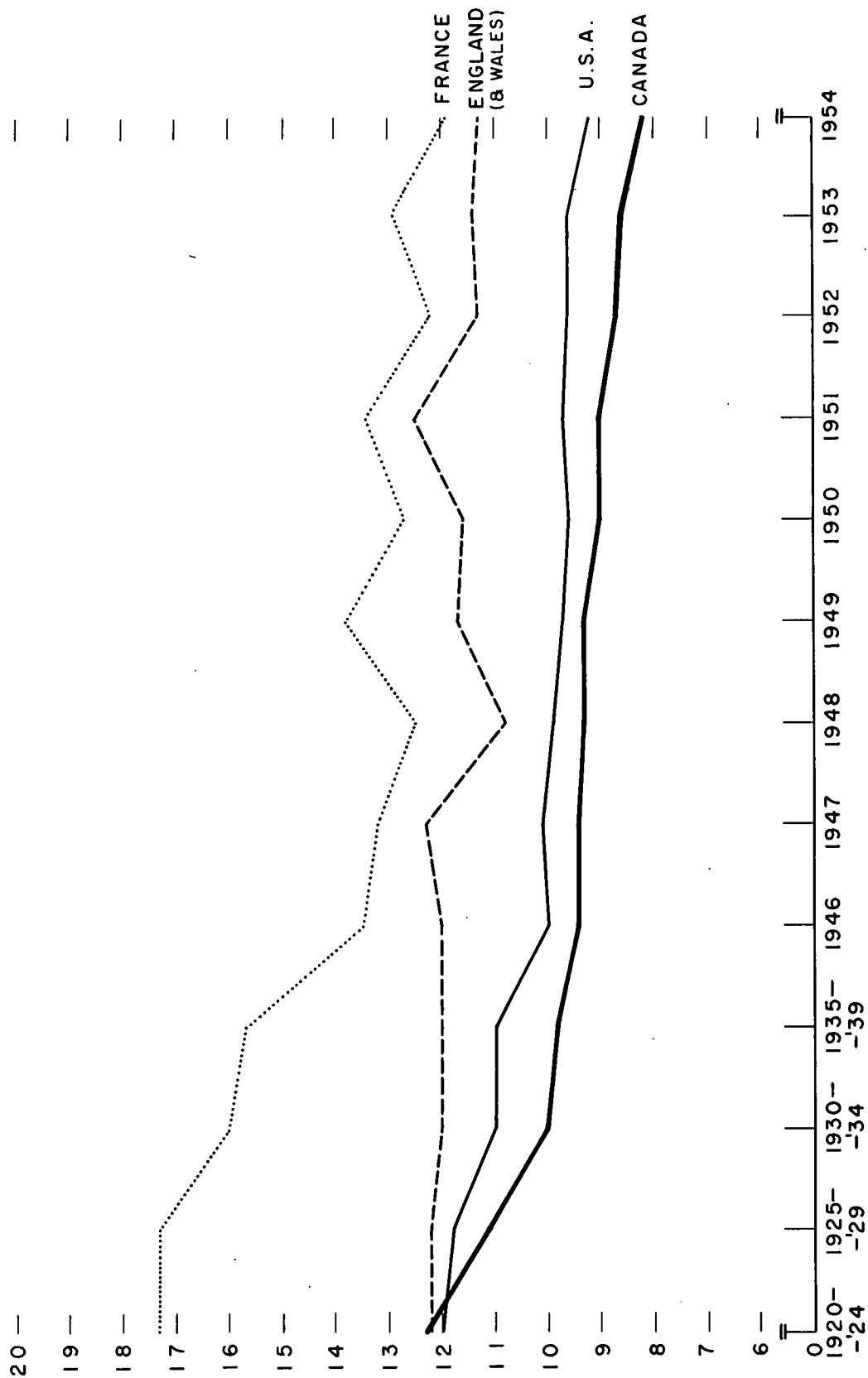
TABLE 5. Comparisons of International Vital Statistics Rates¹

Rank	Births		Deaths		Infant mortality		Neo-natal mortality	
	Country	Rate	Country	Rate	Country	Rate	Country	Rate
1	Venezuela.....	46.7	Netherlands.....	7.5	Sweden.....	18	Norway.....	14
2	Mexico	45.8	Canada.....	8.2	New Zealand.....	20	Sweden.....	14
3	Ceylon	36.2	Norway.....	8.4	Netherlands	21	Netherlands	15
4	Chili.....	35.5	Union of South Africa ²	8.6	Australia	22	New Zealand.....	15
5	Peru	30.0	Italy	9.0	Norway.....	24	Australia	17
6	Canada.....	28.7	New Zealand.....	9.0	England and Wales	26	England and Wales...	18
7	India.....	28.4	Australia	9.1	Denmark	27	Canada	19
8	Yugoslavia	28.4	Denmark.....	9.1	Switzerland	27	Denmark.....	19
9	Union of South Africa ²	25.5	Finland	9.1	United States	27	Finland	19
10	United States	24.9	Peru	9.1	Finland	31	Union of South Africa ²	19
11	New Zealand.....	24.7	Spain	9.1	Scotland.....	31	United States.....	19
12	Portugal.....	22.6	United States	9.2	Canada.....	32	Switzerland	20
Maternal mortality			Marriages			Natural increase		
Country		Rate	Country		Rate	Country		Rate
1	United States	0.5	Union of South Africa ²		10.1	Venezuela		36.6
2	Canada.....	0.7	Yugoslavia		9.9	Mexico		32.9
3	England and Wales.....	0.7	United States		9.2	Ceylon		25.8
4	France.....	0.7	Chili		8.6	Chili		22.0
5	New Zealand.....	0.7	German Federal Republic ...		8.6	Peru		20.9
6	Northern Ireland	0.7	New Zealand		8.6	Canada		20.5
7	Scotland.....	0.7	Canada		8.5	Yugoslavia		17.6
8	Denmark.....	0.8	Netherlands		8.3	Union of South Africa ²		16.9
9	Netherlands.....	0.8	Scotland		8.2	New Zealand.....		15.7
10	Norway.....	0.8	Denmark		8.1	United States		15.7
11	Australia	0.9	Spain.....		8.0	India.....		15.2
12	Belgium	0.9	Australia.....		7.9	Netherlands.....		14.1

1. 1954 or latest year available.
2. Whites.

CHART-6

CRUDE DEATH RATES



V. BIRTHS

At 28.7 per 1,000 population Canada's 1954 birth rate was the third highest on record since the compiling of national vital statistics in 1921. It has risen steadily for the fifth consecutive year from 27.1 in 1950 and was only slightly below the previous record rate of 28.9 in 1947 and 29.3 in 1921. On an average in 1954 one in every five married women in the population aged 15-45 bore a child. A record of 435,142 births were registered in Canada in 1954, 18,317 more or 4.4 per cent higher than the previous record 416,825 registered in 1953. This was the sixth consecutive annual

increase from the 358,941 registered in 1948, or an average annual increase of 12,700 or 3.5 per cent per year. The 1954 figures were also all-time records in all provinces except Prince Edward Island, Nova Scotia and New Brunswick, which had record high totals in 1947. For Nova Scotia and New Brunswick 1954 births were, however, slightly higher than in 1953. For the second consecutive year more births were registered in Ontario than in Quebec which has traditionally had the greatest number.

TABLE 6. Birth Rates (Per 1,000 Population) Canada and Provinces

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1921.....	29.3	27.2	24.3	24.9	30.2	37.6	25.3	30.3	29.7	28.1	20.3
1931.....	23.2	23.3	21.3	22.6	26.5	29.1	20.2	20.5	23.1	23.6	15.0
1937.....	20.1	25.0	22.5	21.1	24.2	24.1	16.9	18.0	20.2	20.5	14.9
1941.....	22.4	27.3	21.6	24.1	26.8	26.8	19.1	20.3	20.6	21.7	18.4
1951.....	27.2	32.5	27.1	26.6	31.2	29.8	25.0	25.7	26.1	28.8	24.1
1952.....	27.9	33.6	26.2	27.5	31.7	30.3	26.0	26.0	26.8	30.0	24.9
1953.....	28.2	33.4	25.8	27.6	30.7	30.2	26.5	26.3	27.5	31.3	25.8
1954.....	28.7	34.3	25.9	28.1	30.4	30.4	27.0	26.9	28.5	32.3	26.0

Masculinity

Regardless of where birth statistics have been collected they have shown an excess of male over female births. While no conclusive explanation of this excess has been given it is so much of an accepted statistical fact that a proper ratio of male to female births has become one of the criteria of complete registration. The number of males to every 1,000 females born in Canada between 1926-54 varied between 1,067 in 1944 and 1,048

in 1935. There were variations in provincial ratios from 1,090 in New Brunswick in 1933 to 999 in Prince Edward Island in 1950 and 1953. Larger differences in the provincial sex ratios are due to chance variation because of the relatively small number of births involved—the smaller the total number of births, the greater the chance of wide sex-ratio variations from year to year. In 1954 there were 1,057 males born for every 1,000 females with provincial ratios varying from 1,074 in Alberta to 1,036 in Manitoba.

TABLE 7. Sex Ratios of Live Births, 1926-1954

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1926.....	1,062	1,064	1,025	1,055	1,049	1,070	1,057	1,076	1,058	1,052	1,056
1931.....	1,059	1,081	1,132	1,043	1,056	1,062	1,060	1,019	1,053	1,075	1,059
1933.....	1,054	1,045	1,019	1,041	1,090	1,046	1,052	1,068	1,057	1,067	1,078
1935.....	1,048	1,068	1,016	1,061	1,025	1,044	1,054	1,031	1,059	1,055	1,034
1941.....	1,057	1,076	1,110	1,036	1,021	1,060	1,064	1,058	1,053	1,054	1,048
1944.....	1,067	1,108	1,027	1,069	1,066	1,062	1,075	1,083	1,059	1,062	1,049
1950.....	1,060	1,086	999	1,063	1,070	1,062	1,059	1,069	1,048	1,052	1,050
1951.....	1,058	1,040	1,074	1,067	1,039	1,058	1,065	1,084	1,045	1,039	1,056
1953.....	1,054	1,043	999	1,050	1,066	1,056	1,051	1,034	1,047	1,063	1,072
1954.....	1,057	1,060	1,065	1,056	1,069	1,060	1,050	1,036	1,070	1,074	1,056

Hospitalized Births

The percentage of all Canadian births occurring in hospitals has grown from less than 18 per cent in 1926 to 84.7 per cent in 1954. The change has been even more marked in certain provinces. For example in 1926 less than 3 per cent of births occurred in hospital in Prince Edward Island while in 1954 the percentage was 93.5. In 1954 the proportion of births occurring in hospital was over 90 per cent in seven provinces. However there

are still significant differences among the provinces due to such factors as the existence of prepaid or provincially sponsored hospital, maternity or medical-care plans in some provinces, the unavailability of hospital facilities in others, particularly in remote rural areas, and preference for home delivery in some local areas. In general the greatly increased number of hospitalized births is a reflection of the improvement in modern hospital services and facilities.

TABLE 8. Percentage of Births Occurring in Hospital

	Canada	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1926	17.8	2.7	7.3	8.5	4.8	24.9	31.3	22.5	33.5	48.3
1931	26.8	11.2	19.0	12.1	7.3	38.2	43.6	32.5	47.8	65.0
1941	48.9	32.7	50.4	30.8	17.6	67.5	73.6	63.2	77.1	87.3
1951	79.1	88.3	87.2	70.7	53.0	93.1	93.1	95.2	93.6	97.3
1952	81.5	87.1	88.8	74.0	56.7	94.6	93.7	96.4	96.4	97.5
1953	83.4	91.9	90.4	77.4	60.3	95.7	94.7	96.4	93.9	97.6
1954	84.7	93.5	91.9	79.9	62.4	96.1	95.8	97.4	94.6	97.9

Illegitimacy*

The total number of illegitimate births in Canada increased from 6,307 in 1926 to 16,830 in 1954 while the rate of illegitimate births increased from 2.6 per cent of total live births to 3.9 per cent during the same period. In 1945 the rate had been as high as 4.5 per cent. The highest provincial rate was found in British Columbia where it had increased from less than 2 per cent in 1926 to 6.2 per cent in 1954. The lowest provincial rate in 1954 was found in Ontario at 3.1 per cent of total live births. In interpreting these figures it must be kept in mind that a part of the increase was the result of more complete registration of illegitimate

births brought about by the co-operation of provincial registration officials and social welfare agencies.

Of the mothers of the 16,830 illegitimate children born in 1954, over 5,000 were under 20 years of age and almost 11,000 were under 25. In general the average age of mothers of illegitimate children tends to be some four or five years lower than the average age of mothers of legitimate children.

* Illegitimacy in this report does not refer to births conceived out of wedlock but those in which parents reported themselves as not having been married to each other at the time of birth or registration.

TABLE 9. Illegitimate Live Births and Percentages of Total Live Births, by Province, 1921-54
(Exclusive of the Territories)

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada ¹
Illegitimate live births											
Number											
Average, 1921-25 .....	..	46	457	245	..	1,658	407	291	321	152	..
" 1926-30	168	42	558	299	2,334	2,196	501	489	479	240	7,138
" 1931-35	205	74	652	373	2,431	2,707	501	651	613	330	8,333
" 1936-40	246	83	766	415	2,539	2,939	506	663	643	475	9,030
" 1941-45	406	107	1,074	591	3,003	3,751	597	673	852	889	11,536
" 1946-50	441	152	1,244	754	3,382	4,256	766	914	1,202	1,516	14,375
1951	417	138	1,147	643	3,650	3,807	771	971	1,272	1,633	14,449
1952	315	118	1,041	648	3,913	3,920	952	994	1,310	1,857	15,068
1953	411	145	1,034	661	4,163	4,080	988	1,043	1,559	1,896	15,980
1954	488	127	1,060	658	4,420	4,251	1,094	1,128	1,562	2,042	16,830
Percentages of total live births											
Average, 1921-25 .....	..	2.3	3.8	2.2	..	2.3	2.5	1.3	2.1	1.5	..
" 1926-30	2.5	2.4	5.1	2.9	2.8	3.2	3.5	2.3	3.0	2.3	3.0
" 1931-35	3.1	3.8	5.7	3.6	3.1	4.2	3.7	3.2	3.7	3.3	3.6
" 1936-40	3.2	4.0	6.4	3.7	3.2	4.6	3.7	3.6	3.9	3.9	3.9
" 1941-45	4.4	4.9	7.1	4.5	3.1	4.8	3.8	3.6	4.5	5.0	4.2
" 1946-50	3.6	5.3	6.9	4.5	2.9	4.0	4.0	4.2	4.9	5.9	4.1
1951	3.6	5.2	6.7	4.0	3.0	3.3	3.9	4.5	4.7	5.8	3.8
1952	2.5	4.4	5.8	3.9	3.1	3.2	4.6	4.4	4.5	6.2	3.7
1953	3.2	5.3	5.7	4.0	3.2	3.1	4.7	4.4	5.0	6.0	3.8
1954	3.6	4.7	5.6	4.0	3.3	3.1	4.9	4.5	4.6	6.2	3.9

1. Figures for Newfoundland are included for 1949-54 only.

Fertility Rates

Despite its utility for many purposes the crude birth rate is not a good measure of the rate at which the population is replacing itself because it is so much affected by changes in the age and sex composition of the total population. Since more than 99 per cent of children are born to women between the ages of 15 and 50, variations in the proportion of women of these ages to the population as a whole will cause variations in the birth rates even though the fertility of women at each age may be the same. Consequently a more reliable index of reproductive capacity will be found in the gross reproduction rate which is unaffected by differences in the age and sex composition of the population.

The gross reproduction rate for a given year is the average number of girl children that would be born to each woman who lived to reach the age of 50 years, if the fertility rates of the given year continued unchanged. When the gross reproduc-

tion rate falls below unity, 1,000 women in the reproductive period of life are not having enough children to replace themselves even if all their children lived to maturity.

The gross reproduction rate fell from 1.712 in 1921 to a low of 1.286 in 1937, rose to 1.753 in 1947 and reached a peak of 1.871 in 1954. As a consequence of economic development and resulting internal migration movements, provincial rates have not followed the national pattern very closely. At the same time there is a definite tendency toward equalization. In 1921-22 the highest provincial gross reproduction rate was nearly double the lowest rate; in 1954 the highest rate exceeded the lowest provincial figure by less than 20 per cent.

Canada's gross reproduction rate is one of the highest in the world. In 1951, for example, Canada's rate at 1.669 compared with 1.045 for England and Wales and 1.067 for Sweden.

TABLE 10. Age Specific and Gross Reproduction Rates¹, 1926-54
(Excluding Newfoundland)

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total fertility	Gross reproduction rate
1926	29.0	139.9	177.4	153.8	114.6	50.7	6.0	3,357	1.628
1931	29.9	137.1	175.1	145.3	103.1	44.0	5.5	3,200	1.555
1937	25.6	113.6	142.2	123.4	85.3	34.7	4.2	2,646	1.286
1941	30.7	138.4	159.8	122.3	80.0	31.6	3.7	2,832	1.377
1947	42.6	189.1	206.4	150.5	93.1	34.1	3.3	3,595	1.753
1951	47.9	188.5	198.7	144.4	86.4	30.8	3.0	3,499	1.699
1952	50.7	201.4	204.0	151.5	87.3	30.7	2.8	3,642	1.765
1953	52.6	210.0	207.6	154.9	88.1	31.1	2.9	3,736	1.819
1954	55.0	219.6	211.3	159.7	88.7	32.4	3.2	3,849	1.871
Prince Edward Island	54.4	189.7	197.8	167.3	123.9	59.3	4.3	3,983	1.929
Nova Scotia	73.9	240.8	203.0	158.1	94.4	35.5	3.6	4,047	1.968
New Brunswick	64.8	230.5	218.6	180.7	116.2	52.0	6.0	4,344	2.100
Quebec	32.4	197.1	220.7	176.3	113.2	44.2	4.7	3,944	1.915
Ontario	67.1	222.1	200.8	147.0	71.0	23.3	2.0	3,667	1.789
Manitoba	56.7	211.4	198.3	150.3	80.0	28.9	2.0	3,638	1.787
Saskatchewan	56.8	228.9	217.4	161.8	91.7	35.3	4.0	3,979	1.922
Alberta	74.2	274.1	234.2	168.4	89.3	32.7	3.1	4,380	2.112
British Columbia	65.8	239.7	207.1	144.2	67.9	20.8	1.7	3,736	1.817

1. Per 1,000 women.

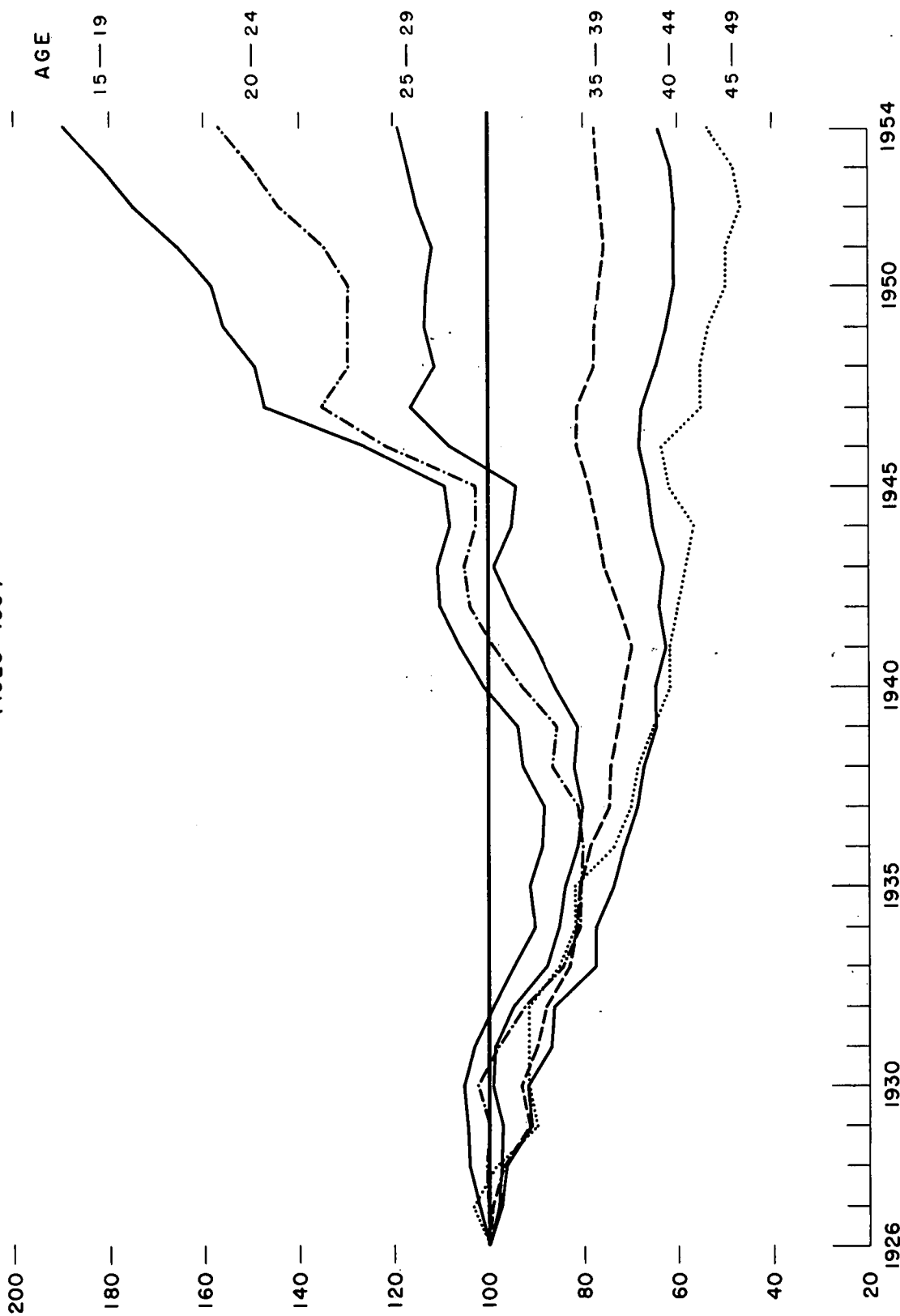
Chart 7 portrays an index of age-specific fertility rates and clearly illustrates the fact that increased fertility is associated with younger mothers under 30 years of age. Trends for this

group since 1940 have been particularly significant. On the other hand the fertility of older women has been declining steadily over the past twenty-eight years.

CHART-7

INDEX OF AGE-SPECIFIC FERTILITY RATES

(1926=100)



Ages of Parents and Birth Order

In addition to the fertility rates at each age there are three other factors influencing the average age of parents having children. The first is the average age of potential parents at any point in time, that is, of the population between the ages of 15 and 50. The second is the average age of couples at marriage and the third the proportion of first and second births to total births. Other things being equal, a high proportion of first and second births will result in a lower average age

of parents. In 1930-32, first and second births were 43 per cent of the total births. By the period 1945-48 first and second births together were 57 per cent of the total. In 1954 the proportion was over 50 per cent.

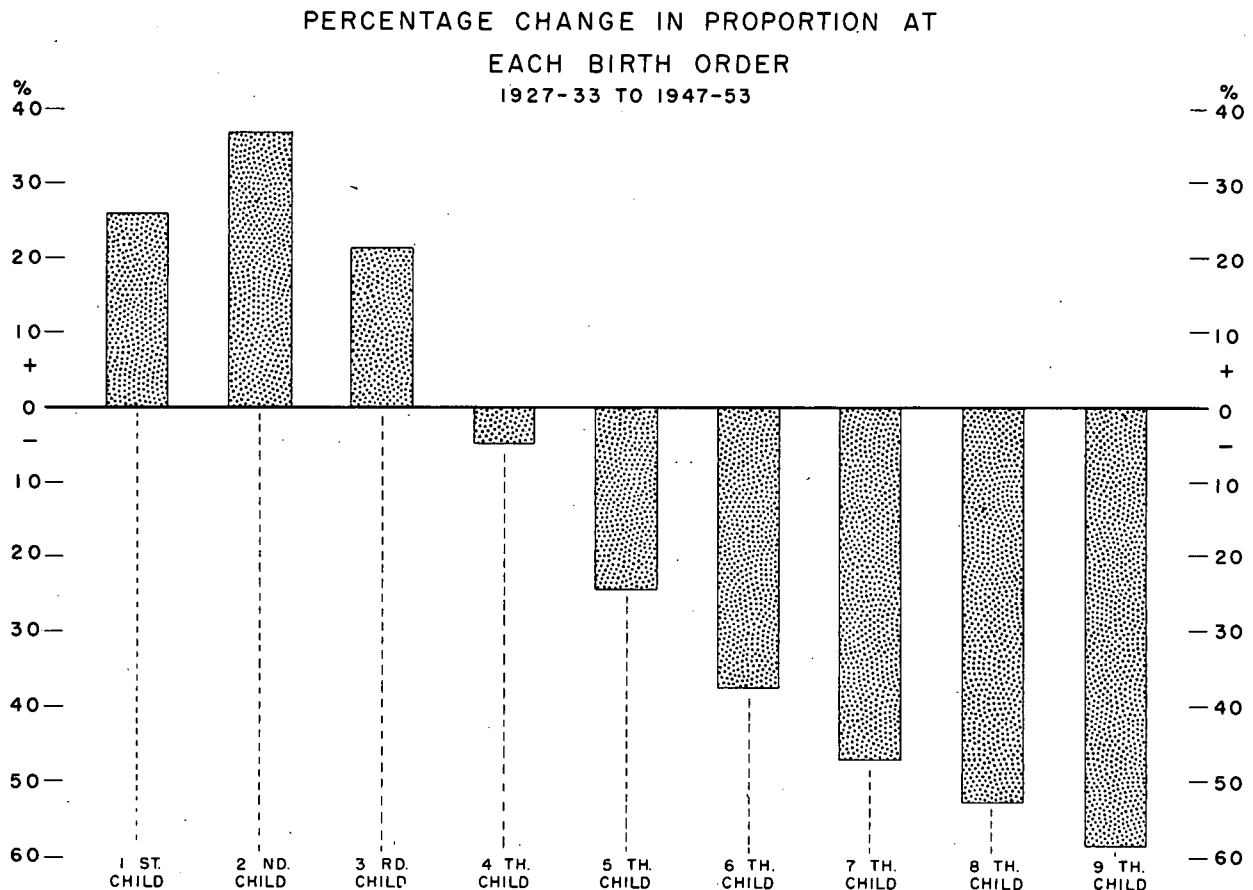
Chart 8 illustrates the increased importance of first, second and third births in relation to total births in the period 1947-53 compared with 1927-33. The decline in the proportion of total births of births beyond the fourth child is clearly revealed.

TABLE 11. Percentage Distribution of Births¹ by Age of Parents

	Mother				Father			
	1931	1941	1951	1954	1931	1941	1951	1954
Under 20	5.4	5.8	5.6	5.9	0.4	0.5	0.8	0.8
20-24	25.1	27.4	27.1	27.6	11.2	12.2	14.6	15.8
25-29	27.8	30.4	31.0	29.8	24.8	28.2	29.0	28.8
30-34	21.0	20.2	20.8	21.6	24.1	25.9	24.7	25.1
35-39	14.4	11.6	11.6	11.3	18.9	17.4	16.9	15.8
40-44	5.6	4.1	3.5	3.6	12.3	9.3	8.9	8.9
45-49	0.6	0.4	0.3	0.3	5.7	4.3	3.5	3.4
50+	--	--	--	--	2.6	2.3	1.6	1.5
Average age	29.2	28.5	28.4	28.4	33.6	32.7	32.1	31.9

1. Legitimate live births.

CHART-8.



Stillbirths*

The rate of stillbirths dropped from 34.8 per 1,000 live births in 1921 to 31.5 in 1931 and has since that time shown a slow steady decline to the record low of 16.6 in 1954. The rates varied provincially in 1954 from a low of 11.3 in British Columbia to a high of 21.7 in Prince Edward Island. The rate of stillbirths to unmarried mothers has

always been considerably higher than that for married mothers and consequently higher than the over-all rate but in recent years this difference has been disappearing.

* The birth of a foetus, after at least twenty-eight weeks pregnancy, which after complete separation from the mother does not show any sign of life.

TABLE 12. Stillbirths and Rates per 1,000 Live Births, by Province, 1921-54
(Exclusive of the Territories)

Year	Born to all mothers											Born to unmarried mothers ²	
	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada ¹	No.	P.C. of Total
Stillbirths													
Average, 1921-25 .....	..	57	457	288	2,659	3,083	546	601	418	295	8,403	..	..
" 1926-30	128	43	365	283	2,212	2,761	479	551	467	297	7,458	356	4.77
" 1931-35	141	67	401	302	2,337	2,284	383	488	421	247	6,930	381	5.50
" 1936-40	162	61	334	282	2,386	2,008	340	393	359	248	6,410	337	5.26
" 1941-45	191	50	388	295	2,786	1,988	345	348	327	309	6,838	355	5.20
" 1946-50	215	54	358	320	2,898	2,020	349	350	385	352	7,177	343	4.85
1951	189	56	319	293	2,768	1,975	340	303	402	365	7,010	327	4.79
1954	242	59	326	313	2,805	2,027	323	327	418	373	7,213	296	4.25
Rates per 1,000 live births												Per 1,000 illegitimate live births ²	
Average, 1921-25 .....	..	29.1	37.7	26.0	30.5	43.1	32.9	27.9	27.0	28.7	33.9	..	..
" 1926-30	19.0	24.8	33.1	27.4	26.7	40.2	33.3	25.9	29.3	28.7	31.5	49.9	49.9
" 1931-35	21.1	34.2	34.9	28.9	29.6	35.1	28.0	24.0	25.4	24.7	30.3	45.7	45.7
" 1936-40	21.2	29.7	27.7	25.4	30.4	31.2	25.2	21.0	22.0	20.5	28.0	37.3	37.3
" 1941-45	20.5	22.8	25.6	22.6	28.5	25.6	21.8	18.9	17.4	17.5	24.7	30.8	30.8
" 1946-50	17.4	18.9	19.9	19.0	25.1	19.2	18.1	16.0	15.9	13.6	20.2	24.2	24.2
1951	16.1	21.1	18.6	18.2	22.9	17.2	17.0	13.9	14.9	13.0	18.4	23.3	23.3
1954	17.7	21.7	17.2	18.8	21.1	14.9	14.5	13.1	12.4	11.3	16.6	18.1	18.1

1. Figures for Newfoundland are included for 1949-54 only.
2. Exclusive of Newfoundland.

Multiple Births

Approximately one confinement in 85 in Canada results in the birth of more than one child. In the period 1926-54 there have been 96,555 such confinements, of which 95,667 were twins and 875 were triplets. There have been 12 sets of quad-

ruplets and one set of quintuplets, the Dionne quintuplets who were born in 1934.

The proportion of stillbirths is higher among multiple than among single births. It is about twice as high for twins and between three and five times as high in the case of triplets.

TABLE 13. Single and Multiple Births, Live and Stillborn, 1952-54
(Exclusive of the Territories)

Confinements and births	Numbers			Percentages		
	1952	1953	1954	1952	1953	1954
Confinements:						
Single	400,496	414,529	432,525	98.9	98.9	98.9
Twin	4,587	4,553	4,847	1.1	1.1	1.1
Triplet	39	51	44	--	--	--
Quadruplet	—	2	1	—	--	--
Totals, confinements	405,122	419,135	437,417	100.0	100.0	100.0
Births:						
Single:						
Live	393,597	407,898	425,615	98.3	98.4	98.4
Stillborn	6,899	6,631	6,910	1.7	1.6	1.6
Twin:						
Live	8,822	8,777	9,398	96.2	96.4	96.9
Stillborn	352	329	296	3.8	3.6	3.1
Triplet:						
Live	108	142	125	92.3	92.8	94.7
Stillborn	9	11	7	7.7	7.2	5.3
Quadruplet:						
Live	—	8	4	—	100.0	100.0
Stillborn	—	—	—	—	—	—
Totals, births	409,787	423,796	442,355	100.0	100.0	100.0
Live	402,527	416,825	435,142	98.2	98.4	98.4
Stillborn	7,260	6,971	7,213	1.8	1.6	1.6

VI. DEATHS

The general pattern of mortality which is described in Sections I and III is given a more detailed focus in Table 14 illustrating the trends of crude death rates and in the age-specific death rates portrayed in Tables 15 and 16 and Chart 9. In particular, attention is drawn to the age and sex differentials of mortality rates.

In 1954 a little over 11 per cent of all deaths were of infants under one year of age, an additional 9 per cent were of persons between 1 and 40 years of age, 16 per cent between 40 and 60, 44 per cent between 60 and 80 and 20 per cent over 80 years of age. Of deaths among men, 38 per cent were

under 60 years of age as compared with 34 per cent among women; only 17 per cent of all male deaths were persons over 80, while among women of this age group the proportion was 24 per cent. The female death rates at all ages have consistently been lower than those for males; for example, up to age 25 the female rate is only one-half to three-quarters of the male rate and up to age 70 only 60-75 per cent of the male rate. The total female rate in 1954 was 7 per 1,000 females in the population, 26 per cent lower than that for males at 9.4. Life expectancy for males has accordingly always been lower and stood at 66 1/3 in 1951 for males and nearly 71 for females.

TABLE 14. Crude Death Rates (Per 1,000 Population) Canada and Provinces

Year	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1921	11.6	12.8	13.6	12.3	14.2	14.2	11.8	8.8	7.4	8.4	8.0
1931	10.2	13.4	10.4	11.6	11.4	12.0	10.4	7.6	6.6	7.2	8.8
1937	10.4	13.5	12.3	11.1	12.4	11.3	10.6	8.5	7.5	8.1	10.5
1941	10.0	12.5	11.9	12.0	11.3	10.3	10.4	8.9	7.2	8.0	10.4
1951	9.0	8.3	9.2	9.0	9.4	8.6	9.6	8.7	7.7	7.6	10.0
1952	8.7	7.4	8.9	8.8	8.8	8.4	9.3	8.2	7.9	7.6	10.1
1953	8.6	7.1	8.7	8.8	8.7	8.1	9.2	8.7	7.8	7.6	9.9
1954	8.2	7.3	9.2	8.5	7.8	7.6	8.8	8.1	7.2	7.2	9.8

TABLE 15. Trends in Age-specific Death Rates (Per 1,000 population)

Age	Average 1926-30	Average 1936-40	Average 1946-50	Year 1954	% decline since 1926-30
0- 1	93.3	64.5	46.0	33.7	63.9
1- 4	7.8	4.9	2.4	1.5	80.8
5- 9	2.4	1.7	1.0	0.7	70.8
10-14	1.9	1.3	0.8	0.5	73.7
15-19	2.8	1.9	1.3	0.9	67.9
20-29	3.8	2.6	1.7	1.2	68.4
30-39	4.5	3.5	2.3	1.7	62.2
40-49	6.8	5.7	4.8	3.9	42.6
50-59	12.2	11.7	10.8	9.9	18.9
60-69	28.6	27.3	25.8	24.0	16.1
70+	91.8	89.6	83.0	76.4	16.8

TABLE 16. Death Rates (per 1,000 Population) by Sex and Age, Canada 1921-54 and Provinces, 1954

No.		Total	Ages						
			Under 5 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years
			Males						
	Canada:								
1	1921 ¹	10.9	28.9	3.1	2.1	3.1	3.7	4.0	3.8
2	1922 ¹	11.0	27.5	2.8	2.1	2.8	3.7	3.8	3.9
3	1923 ¹	11.0	26.7	2.5	2.0	3.0	3.4	3.8	3.9
4	1924 ¹	10.3	24.0	2.3	2.0	2.7	3.4	3.2	3.5
5	1925 ¹	10.3	23.6	2.3	2.0	2.6	3.4	3.3	3.4
6	1926.....	11.9	31.8	2.5	2.1	2.9	3.5	3.5	3.7
7	1927.....	11.4	29.7	2.7	2.2	2.8	3.6	3.9	3.8
8	1928.....	11.6	28.3	2.6	2.1	3.0	3.7	3.9	3.9
9	1929.....	11.8	29.8	2.7	2.0	3.1	3.7	3.9	3.9
10	1930.....	11.2	28.7	2.6	1.7	2.8	3.7	3.7	3.7
11	1931.....	10.5	26.8	2.2	1.5	2.5	3.2	3.4	3.5
12	1932.....	10.3	22.9	1.9	1.5	2.3	3.0	3.1	3.4
13	1933.....	10.0	21.8	1.6	1.3	2.2	2.8	2.8	3.1
14	1934.....	10.0	22.1	1.7	1.4	1.8	2.4	2.8	3.3
15	1935.....	10.2	21.9	1.8	1.5	2.1	2.5	2.9	3.3
16	1936.....	10.2	20.3	1.9	1.4	2.1	2.6	2.9	3.2
17	1937.....	10.9	24.5	2.2	1.5	2.1	2.7	2.8	3.4
18	1938.....	10.3	20.5	1.8	1.5	2.0	2.5	2.7	3.0
19	1939.....	10.4	19.4	1.7	1.3	2.0	2.4	2.6	2.8
20	1940.....	10.5	18.7	1.6	1.2	2.0	2.3	2.4	2.8
21	1941.....	10.8	20.0	1.7	1.4	2.0	2.6	2.7	2.8
22	1942.....	10.6	18.5	1.5	1.2	1.9	2.8	2.5	2.7
23	1943.....	10.9	18.0	1.7	1.3	2.2	2.8	2.4	2.5
24	1944.....	10.5	17.8	1.6	1.1	2.0	2.2	2.0	2.3
25	1945.....	10.3	15.8	1.3	1.1	1.8	2.1	2.1	2.2
26	1946.....	10.3	15.9	1.3	1.1	1.7	2.1	2.0	2.2
27	1947.....	10.4	15.7	1.2	1.0	1.6	2.0	2.1	2.2
28	1948.....	10.4	13.7	1.2	0.9	1.5	2.1	1.9	2.1
29	1949.....	10.3	13.2	1.1	0.9	1.5	1.9	1.9	2.1
30	1950.....	10.1	12.2	1.0	0.8	1.3	1.7	1.7	1.9
31	1951.....	10.1	11.1	1.0	0.8	1.3	1.9	1.8	2.1
32	1952.....	10.0	11.3	1.0	0.8	1.4	1.9	1.8	2.1
33	1953.....	9.8	10.5	1.0	0.8	1.4	1.9	1.7	2.0
34	1954.....	9.4	9.5	0.8	0.7	1.2	1.7	1.6	1.9
35	Newfoundland.....	8.3	11.8	1.0	0.6	1.5	1.6	1.7	1.2
36	Prince Edward Island.....	10.0	9.0	0.7	0.6	1.0	2.0	2.8	1.5
37	Nova Scotia.....	9.4	9.2	0.9	0.7	1.4	2.2	1.9	1.8
38	New Brunswick.....	9.0	10.7	1.1	0.9	1.2	1.8	1.6	1.7
39	Quebec.....	8.5	11.9	0.9	0.7	1.2	1.6	1.5	1.8
40	Ontario.....	9.8	7.7	0.8	0.6	1.0	1.4	1.5	1.9
41	Manitoba.....	9.6	9.0	0.7	0.7	1.1	2.0	1.4	1.8
42	Saskatchewan.....	8.7	8.9	0.4	0.5	1.1	1.7	1.6	1.8
43	Alberta.....	8.8	8.5	0.7	0.8	1.0	2.3	1.7	2.0
44	British Columbia.....	11.9	8.0	0.6	0.5	1.6	2.7	2.1	2.1

1. Excluding the province of Quebec. Data for Newfoundland not available prior to 1949.

TABLE 16. Death Rates (per 1,000 Population) by Sex and Age, Canada 1921-54 and Provinces, 1954

Ages											No.
35 to 39 years	40 to 44 years	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 to 69 years	70 to 74 years	75 to 79 years	80 to 84 years	85 years and over	
Males											
4.7	5.6	7.3	9.8	15.2	21.9	33.4	56.9	89.4	133.8	228.2	1
4.6	5.6	7.2	9.8	15.9	22.2	37.0	60.0	91.4	144.4	245.8	2
4.7	5.8	7.0	9.8	16.2	23.7	38.3	59.9	92.9	154.4	259.9	3
4.3	5.4	7.0	9.4	14.2	22.5	36.6	57.1	90.0	150.8	238.1	4
4.1	5.3	6.8	9.4	14.6	22.1	36.8	56.8	92.2	145.9	244.4	5
4.8	5.9	7.4	10.1	15.7	23.7	38.1	62.6	101.6	152.5	252.6	6
4.6	5.6	7.4	10.3	16.2	23.6	37.6	59.0	94.8	137.7	246.2	7
4.8	6.1	8.0	10.7	16.5	24.7	39.7	60.6	101.4	147.4	259.3	8
4.8	6.1	8.1	11.2	15.9	24.7	40.4	60.0	97.8	153.4	268.6	9
4.6	5.8	7.7	10.8	15.7	23.2	37.4	58.0	93.2	141.3	242.0	10
4.2	5.4	7.2	10.7	15.4	22.9	35.2	55.0	87.4	134.1	228.1	11
4.4	5.2	6.8	10.3	15.4	23.2	36.4	58.6	93.4	151.3	247.9	12
3.8	5.0	7.0	10.1	14.6	23.3	36.0	56.6	89.9	150.5	234.0	13
3.8	4.8	7.0	10.1	15.2	24.5	35.5	56.4	87.8	142.8	220.4	14
4.0	5.1	7.0	10.2	15.0	24.6	35.3	57.8	88.6	146.7	227.5	15
4.0	5.0	7.1	10.2	15.4	24.9	36.0	58.2	90.6	149.2	227.1	16
4.2	5.2	7.5	10.5	15.8	26.1	37.0	57.2	92.8	152.0	226.5	17
3.7	5.0	7.1	10.4	15.1	24.0	35.8	57.7	89.5	140.0	221.5	18
3.7	4.8	6.7	10.4	15.5	24.0	37.3	58.3	93.6	141.6	242.5	19
3.6	4.9	6.9	10.6	16.3	24.7	38.2	59.3	91.5	147.5	247.3	20
3.8	5.0	7.3	10.6	16.0	24.2	37.3	58.5	95.7	147.6	241.9	21
3.4	4.8	6.9	10.8	15.7	24.1	36.9	56.9	92.7	140.6	232.0	22
3.4	4.9	7.0	10.3	16.1	24.6	38.1	58.8	94.4	150.7	263.6	23
3.1	4.3	6.8	10.0	15.7	23.8	37.5	57.5	89.6	139.7	235.1	24
3.2	4.3	6.8	10.0	15.3	23.8	36.9	55.3	89.6	136.4	236.1	25
2.9	4.4	6.5	9.9	15.3	23.8	37.1	54.0	86.7	130.4	225.6	26
3.1	4.3	7.0	10.1	15.6	24.3	37.1	54.7	84.1	129.5	214.2	27
3.1	4.4	6.8	10.3	15.7	24.7	36.0	55.7	84.8	130.7	215.7	28
2.8	4.1	6.8	10.1	15.3	25.2	36.5	56.2	82.4	133.4	220.8	29
2.6	4.0	6.6	10.0	15.6	25.1	36.4	54.8	84.8	132.4	222.5	30
2.5	3.9	6.3	10.3	16.2	24.4	35.1	54.5	87.7	135.6	234.8	31
2.6	3.9	6.3	10.6	16.3	24.5	35.6	52.3	83.3	132.6	223.9	32
2.6	3.9	6.2	10.4	15.7	24.2	35.3	53.7	82.4	129.3	231.9	33
2.3	3.6	5.7	10.0	15.1	24.1	35.3	52.0	79.8	125.0	227.7	34
2.6	3.8	4.9	8.4	12.5	19.4	31.5	47.0	74.0	126.9	207.1	35
3.8	6.3	4.2	7.5	15.2	17.8	28.8	44.7	71.0	98.3	220.0	36
2.4	3.8	5.3	9.5	13.6	24.5	31.3	46.3	67.5	125.0	195.3	37
2.3	3.2	6.9	8.4	14.1	17.2	30.0	46.1	74.3	121.0	195.0	38
2.8	3.9	6.5	11.0	16.4	25.7	37.9	51.3	85.7	133.1	228.0	39
2.0	3.8	5.5	10.3	16.2	25.7	36.6	56.1	83.6	130.4	248.6	40
1.7	2.7	5.2	8.5	13.5	22.3	35.1	52.1	75.8	109.4	217.3	41
1.6	2.3	4.0	6.8	11.7	17.4	29.7	45.4	70.3	107.2	226.9	42
2.4	3.8	5.4	9.6	13.3	22.8	32.4	50.6	78.8	113.9	222.3	43
2.3	3.6	5.7	10.7	13.4	25.3	35.8	51.9	76.8	123.7	212.2	44

**TABLE 16. Death Rates (per 1,000 Population) by Sex and Age, Canada 1921-54 and Provinces.
1954 - Concluded**

No.		Total	Ages						
			Under 5 years	5 to 9 years	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years
			Females						
	Canada:								
1	1921 ¹	10.2	22.7	2.7	1.9	2.7	3.7	4.1	4.5
2	1922 ¹	10.3	21.7	2.4	1.9	2.6	3.8	4.2	4.6
3	1923 ¹	10.4	21.3	2.4	1.7	2.6	3.5	3.9	4.4
4	1924 ¹	9.6	19.5	2.2	1.8	2.5	3.5	3.7	4.2
5	1925 ¹	9.5	19.0	1.7	1.6	2.4	3.5	3.6	3.8
6	1926	10.9	25.4	2.1	1.8	2.9	4.0	4.1	4.6
7	1927	10.4	23.6	2.4	2.0	3.0	4.0	4.1	4.3
8	1928	10.6	22.6	2.3	1.9	2.7	4.0	4.2	4.6
9	1929	10.8	23.8	2.5	1.9	2.8	4.0	4.3	4.6
10	1930	10.2	23.1	2.0	1.6	2.8	3.6	4.1	4.1
11	1931	9.6	21.2	1.7	1.5	2.2	3.2	3.8	4.2
12	1932	9.5	18.0	1.5	1.4	2.1	3.0	3.6	4.0
13	1933	9.2	17.0	1.3	1.2	1.9	2.8	3.4	3.9
14	1934	8.9	17.2	1.3	1.1	1.9	2.7	3.1	3.7
15	1935	9.2	17.2	1.5	1.3	1.8	2.7	3.3	3.6
16	1936	9.3	16.3	1.7	1.2	1.9	2.8	3.1	3.8
17	1937	9.7	19.4	1.8	1.3	1.9	2.7	3.1	3.7
18	1938	8.9	16.2	1.6	1.2	1.7	2.4	2.7	3.2
19	1939	9.0	15.0	1.4	1.1	1.6	2.1	2.6	3.1
20	1940	9.0	14.8	1.2	1.0	1.5	2.1	2.6	2.8
21	1941	9.1	15.5	1.3	1.0	1.5	2.0	2.5	2.8
22	1942	8.8	14.6	1.2	0.9	1.5	1.9	2.4	2.6
23	1943	9.2	14.3	1.2	1.0	1.4	2.0	2.3	2.5
24	1944	8.9	14.1	1.2	1.0	1.3	1.9	2.2	2.4
25	1945	8.5	12.6	1.0	0.8	1.2	1.6	1.9	2.4
26	1946	8.4	12.6	1.1	0.8	1.3	1.8	1.9	2.1
27	1947	8.3	12.2	0.8	0.7	1.3	1.6	1.7	2.0
28	1948	8.3	11.0	0.7	0.6	1.0	1.4	1.5	1.8
29	1949	8.1	10.5	0.8	0.6	1.0	1.3	1.4	1.7
30	1950	7.9	9.6	0.7	0.6	0.8	1.0	1.2	1.4
31	1951	7.8	8.8	0.7	0.5	0.9	1.0	1.1	1.5
32	1952	7.5	8.8	0.7	0.5	0.6	0.9	1.0	1.4
33	1953	7.4	8.2	0.5	0.5	0.6	0.8	1.0	1.2
34	1954	7.0	7.4	0.5	0.4	0.6	0.7	0.9	1.2
35	Newfoundland	6.3	8.3	0.5	0.4	0.9	1.0	0.9	1.6
36	Prince Edward Island	8.4	6.8	0.3	0.4	0.7	1.1	0.6	1.2
37	Nova Scotia	7.5	6.4	0.5	0.3	0.7	0.7	1.0	1.5
38	New Brunswick	6.7	9.0	0.6	0.4	0.6	0.8	1.0	1.0
39	Quebec	6.6	9.6	0.6	0.4	0.5	0.7	1.0	1.3
40	Ontario	7.8	6.0	0.5	0.3	0.5	0.6	0.9	1.1
41	Manitoba	6.5	6.2	0.5	0.3	0.5	0.7	0.6	1.3
42	Saskatchewan	5.6	6.2	0.3	0.3	0.7	0.5	0.8	0.8
43	Alberta	5.5	6.3	0.6	0.3	0.5	0.7	0.7	0.8
44	British Columbia	7.6	6.2	0.4	0.5	0.6	0.7	0.9	1.3

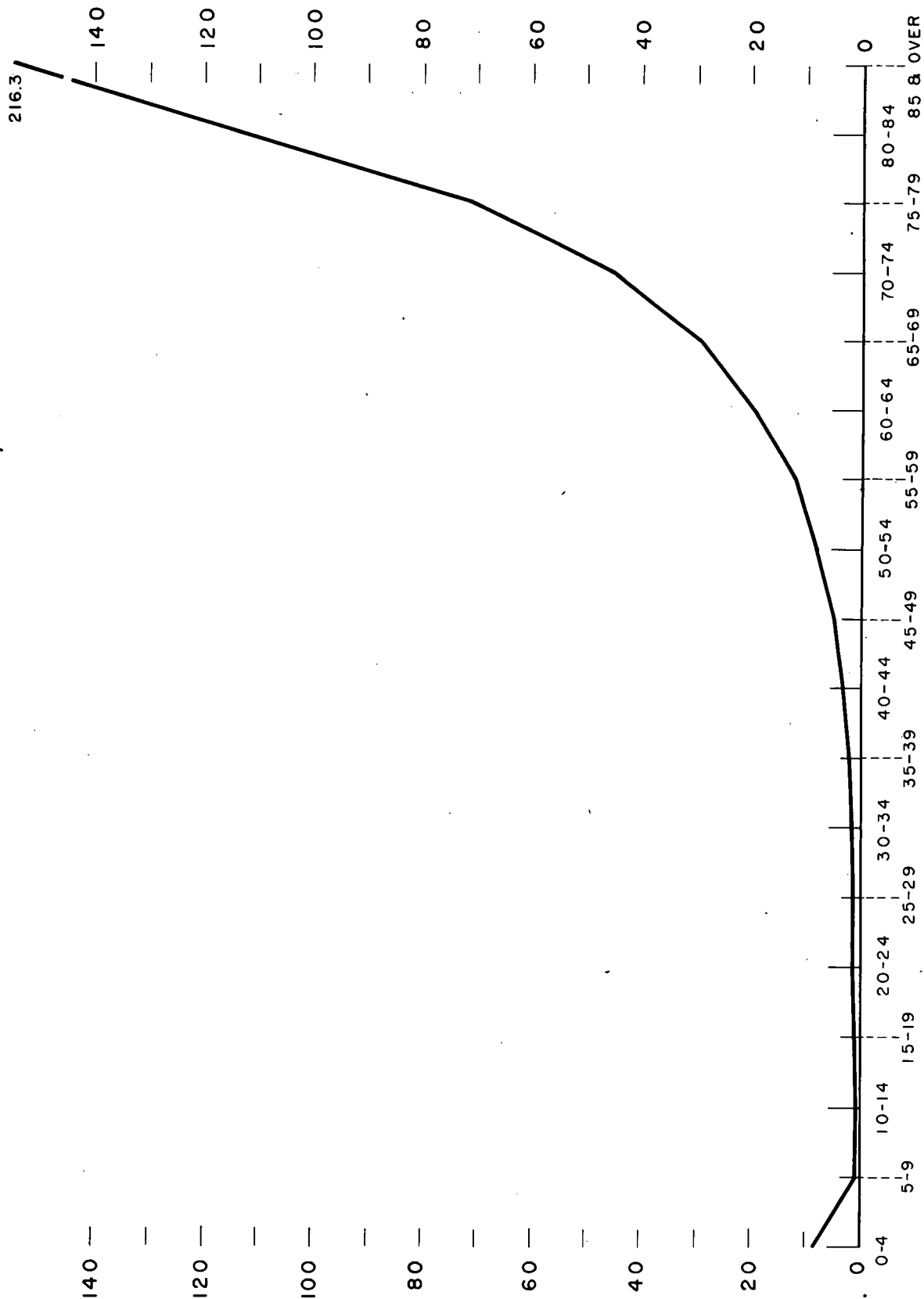
1. Excluding the province of Quebec. Data for Newfoundland not available prior to 1949.

TABLE 16. Death Rates (per 1,000 Population) by Sex and Age, Canada 1921-54 and Provinces, 1954 - Concluded

Ages											No.
35 to 39 years	40 to 44 years	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 to 69 years	70 to 74 years	75 to 79 years	80 to 84 years	85 years and over	
Females											
5.5	5.9	7.1	10.2	13.5	19.7	33.2	52.8	80.9	122.4	224.9	1
5.5	6.0	7.6	9.7	13.9	20.2	32.8	53.3	88.3	135.2	237.2	2
5.5	5.7	7.4	9.7	14.5	21.4	34.6	55.4	93.4	144.2	256.9	3
5.0	5.5	6.8	9.6	12.7	20.1	32.1	51.1	80.2	129.9	247.8	4
4.6	5.4	6.5	8.8	12.7	20.1	32.6	51.0	82.6	136.5	251.5	5
5.6	6.1	7.5	9.5	13.5	21.0	35.0	54.0	92.8	144.5	274.3	6
5.4	5.8	7.3	9.3	13.3	20.6	33.3	49.3	85.7	133.1	252.8	7
5.4	6.1	7.4	9.8	14.2	21.2	33.0	54.3	88.8	143.3	267.3	8
5.4	6.2	7.3	9.8	13.8	21.8	35.1	55.5	91.2	143.2	256.0	9
4.9	6.0	7.1	9.3	13.7	20.1	32.8	50.7	82.6	132.8	233.5	10
4.8	5.0	6.6	9.0	13.4	20.7	30.3	49.1	82.9	127.1	212.6	11
4.7	5.4	6.8	9.3	13.6	20.2	32.0	51.9	86.6	141.2	237.8	12
4.4	5.1	6.8	9.2	13.3	20.5	32.3	50.5	83.5	135.6	227.9	13
4.2	4.7	6.5	8.8	12.9	20.2	30.3	48.8	78.4	131.9	209.7	14
4.5	4.9	6.5	8.7	12.9	20.3	31.1	49.9	80.1	137.3	215.0	15
4.5	4.9	6.3	9.2	12.9	20.7	31.1	50.8	81.4	133.1	218.1	16
4.3	5.1	6.5	9.2	12.7	20.4	29.8	51.4	80.8	136.5	222.7	17
3.9	4.6	5.8	8.2	12.3	19.0	29.4	48.6	78.1	123.4	209.8	18
3.8	4.3	5.8	8.5	12.2	19.5	30.4	49.0	80.4	131.0	230.9	19
3.7	4.2	5.7	8.5	12.2	18.4	30.1	49.1	82.7	127.6	231.8	20
3.4	4.5	6.0	8.1	12.3	18.5	30.4	47.0	79.7	131.2	229.3	21
3.3	4.1	5.7	8.0	12.4	18.2	29.3	45.2	77.3	122.8	221.6	22
3.4	4.1	5.7	8.1	12.1	18.6	29.9	47.8	81.8	134.6	237.7	23
3.0	4.0	5.4	8.1	11.6	18.1	29.2	46.6	76.6	126.2	223.5	24
3.0	3.6	5.3	7.7	11.2	17.6	27.2	45.4	74.5	119.2	218.6	25
2.7	3.6	5.3	7.4	11.3	16.7	27.4	44.3	71.9	119.3	213.8	26
2.5	3.3	4.9	7.2	10.6	17.2	27.0	44.0	71.1	117.8	202.0	27
2.5	3.4	4.8	7.3	10.9	16.9	26.3	43.7	72.2	116.7	212.2	28
2.3	3.2	4.7	7.0	10.2	16.9	26.2	44.4	71.5	113.4	206.5	29
2.2	3.2	4.6	6.6	10.1	16.1	26.4	42.8	69.9	115.3	208.9	30
2.0	3.0	4.5	6.4	10.2	16.1	24.9	41.6	73.3	120.6	211.9	31
1.9	2.8	4.4	6.4	9.6	15.4	23.9	40.4	66.4	109.6	204.2	32
1.8	2.8	4.1	6.4	9.5	15.4	24.3	39.9	67.6	111.0	208.9	33
1.7	2.7	3.9	6.0	8.8	14.5	23.1	37.8	63.4	103.3	207.7	34
2.6	3.5	3.7	6.2	7.2	12.0	20.2	27.8	64.2	98.6	206.3	35
1.6	3.7	2.6	7.1	6.2	16.8	16.7	30.0	68.2	75.0	242.5	36
1.8	3.1	3.5	6.1	8.4	14.3	22.3	33.5	61.6	93.6	195.0	37
1.6	2.1	3.4	4.3	8.5	13.2	22.1	34.5	54.6	100.0	181.4	38
2.0	3.1	4.4	7.1	9.8	16.3	27.5	40.0	68.9	111.8	212.2	39
1.5	2.6	3.9	5.7	8.9	15.0	22.7	39.3	64.4	106.2	216.3	40
1.1	2.5	3.7	5.2	8.1	13.3	22.9	35.5	58.4	97.1	204.7	41
1.2	1.8	2.6	5.5	8.0	12.3	19.0	36.4	54.4	77.1	169.3	42
1.6	2.0	3.3	5.4	7.6	12.1	21.2	35.4	68.8	98.9	191.4	43
1.9	2.8	4.1	5.5	7.6	12.3	20.6	36.6	56.6	102.4	205.2	44

CHART-9

AGE SPECIFIC DEATH RATES, 1954



Causes of Death

The main causes of death from 1931 to 1954 are plotted on Chart 10 while in Table 17 will be found changes in the main causes of death over five-year periods. Chart 11 provides an index of death rates for the main causes of death over the five-year periods. Since 1926-30 there has been an increase of 45.8 p.c. in the rate for cardiovascular renal disease while cancer shows an increase of 44 p.c. On the other hand there was a striking decline of 94.5 p.c. in the communicable disease group including diphtheria, whooping cough, measles and scarlet fever. There were declines of over 70 p.c. for tuberculosis and for influenza, bronchitis and pneumonia. Small declines were reported in rates for diabetes and accidents. The decline in the accident rate is particularly noteworthy because of the more frequent occasions for accidents in the modern mechanical and industrial world. If the overall death rate for 1921 had prevailed in 1954 over 50,000 additional persons would have died than was actually the case.

In comparing mortality rates over the past quarter century it must be remembered that there have been changes in classification, improvements in certification and new efforts to determine the underlying cause of death. Furthermore there is in the more recent figures greater provision for classification of more specific conditions, for example, allergies.

In 1954 diseases of the heart (i.e. causes with involvement of the heart) accounted for a total of 41,297 deaths, approximately the same as in 1953 and one-third of all deaths. Cancer accounted for 16 p.c., vascular lesions an additional 11 p.c. and accidents nearly 7 p.c. These major causes were responsible for over two-thirds of all deaths in 1954.

In general an improvement was observed in comparison with 1953. There was an increase in arteriosclerotic and degenerative heart disease from 33,274 in 1953 to 33,810 in 1954 but this disease is generally associated with advanced age. Cancer too was up from 19,120 to 19,694 for the same period. However, vascular lesions affecting the central nervous system (such as cerebral haemorrhages, embolism, thrombosis and 'strokes' declined from 14,107 in 1953 to 13,732 in 1954. Accidents of all kinds declined from 8,642 to 8,380; diseases associated with early infancy 7,485 to 7,120; influenza, bronchitis and pneumonia (except of newborn) 6,322 to 5,460.

Consequently, except for relatively small increases in mortality for arteriosclerotic and degenerative heart disease, cancer, suicides, and, among infants from birth injuries, asphyxia and atelectasis, the number of deaths from practically all other causes dropped noticeably from the 1953 levels, and rapidly from rates of only a few years ago. For example, tuberculosis deaths dropped to 1,562 from 1,810 in 1953—less than half the annual deaths three years earlier. Deaths from all parasitic and infective diseases, including tuberculosis, amounted to less than 2,700 in 1954; only about one-quarter the number of a decade ago. Influenza deaths dropped from 1,176 in 1953 to 518 in 1954, those from motor vehicle highway accidents from 3,053 to 2,781, while deaths from acute poliomyelitis dropped to 157 from the 481 reported in the epidemic year of 1953. The reduction in the overall death rate from 8,632 per million population in 1953 to 8,209 in 1954 meant that in relation to the whole population, if the 1953 rate had remained stable almost 6,500 more persons would have died in 1954 than the actual 124,500.

TABLE 17. Death Rates from Various Causes, 1926-1954

	Average 1926-30	Average 1931-35	Average 1936-40	Average 1941-45	Average 1946-50	Year 1954	% change 1926-30 to 1954
Cardiovascular renal disease ¹	278.1	281.6	314.4	391.5	406.3	405.5	+45.8
Cancer	85.7	98.0	110.2	118.5	123.6	123.4	+44.0
Diabetes	11.4	12.5	14.4	19.7	18.2	10.6	- 7.0
Accidents	58.7	52.3	55.8	60.5	58.8	55.2	- 6.0
Tuberculosis	80.3	65.5	56.3	50.0	37.0	10.3	- 87.2
Influenza, bronchitis, pneumonia	134.0	100.6	97.4	69.0	55.2	38.9	- 71.0
4 communicable diseases ²	29.1	14.7	13.4	8.7	4.5	1.6	- 94.5

1. Includes: diseases of heart (incl. rheumatic fever) and arteries, intracranial lesions, chronic nephritis.

2. Includes: diphtheria, whooping cough, measles, scarlet fever.

CHART-10

MAIN CAUSES OF DEATH, 1931 TO 1954

(RATES PER 100,000)

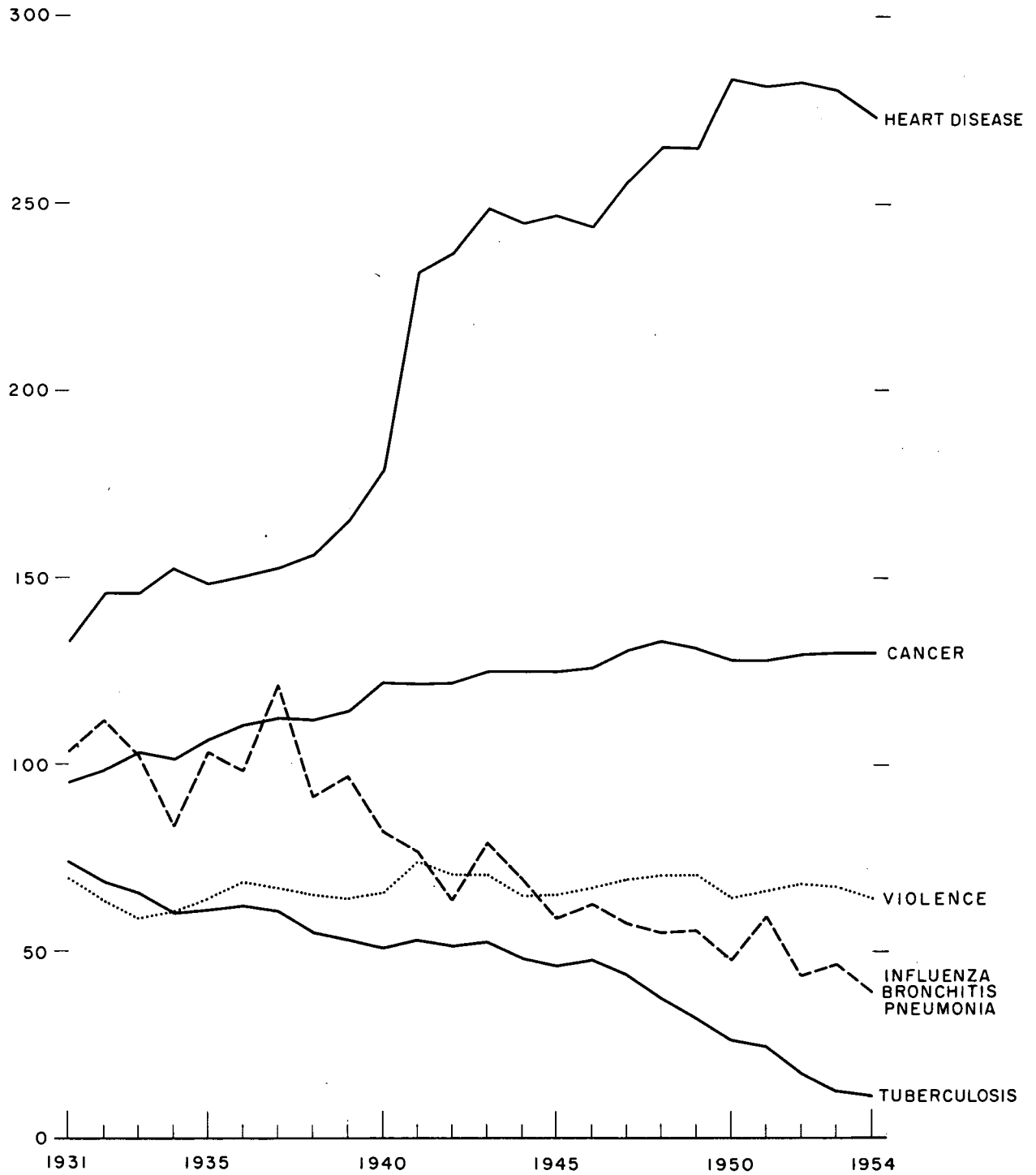


CHART-II

INDEX OF DEATH RATES (1926 - 30 = 100)

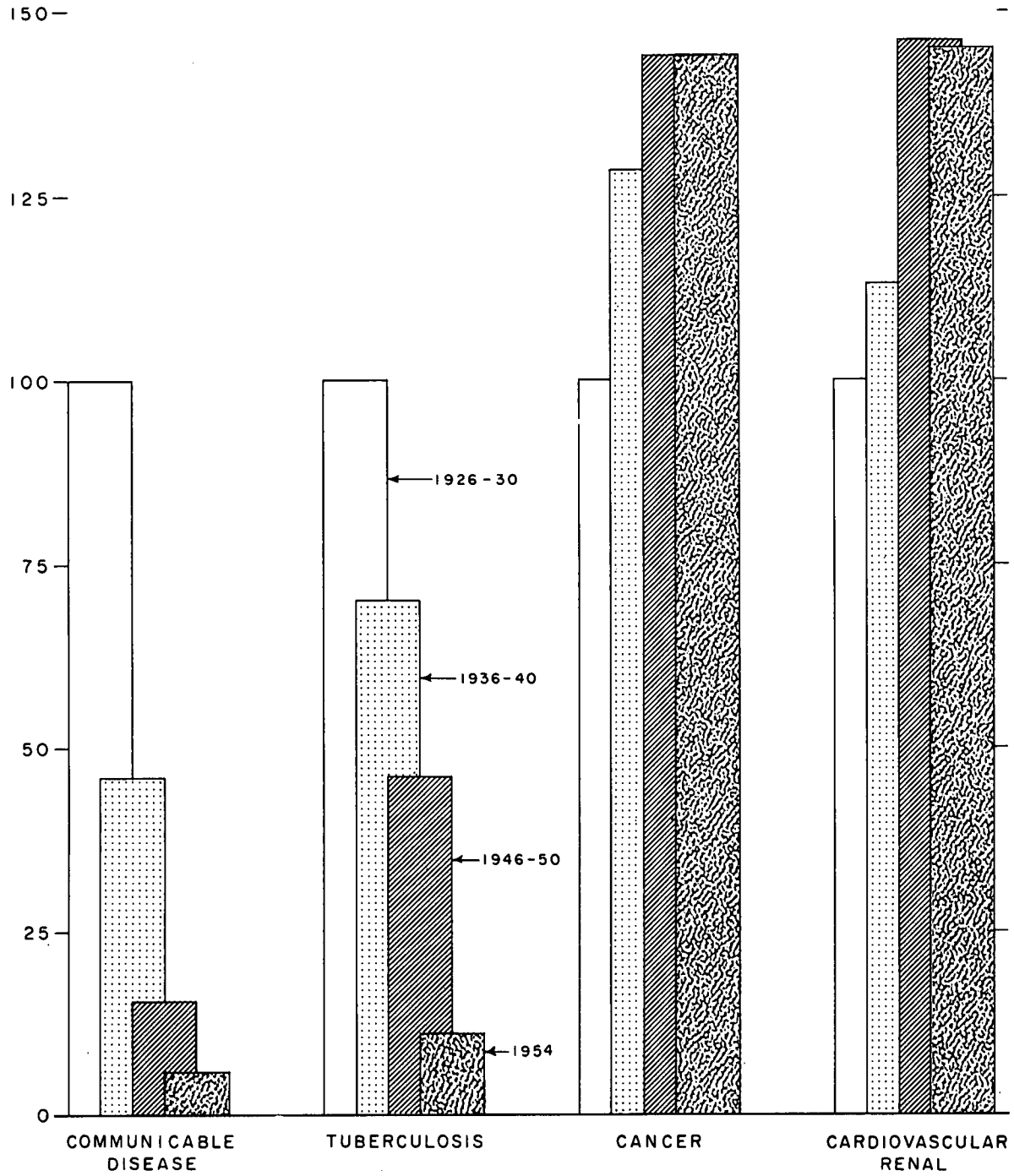


TABLE 18. Deaths From Infectious Diseases
(5-year averages)

	1926-30	1936-40	1946-50	1954
Tuberculosis	7,884	6,265	4,678	1,457
Influenza	4,594	3,496	1,118	495
Whooping cough	944	604	216	95
Diphtheria	912	322	116	18
Measles	597	366	200	107
Typhoid	592	239	55	7
Scarlet fever	391	201	36	15
Poliomyelitis	167	97	111	157

(Excluding Newfoundland)

TABLE 19. Accidental Deaths and Rates per 100,000 Population in Canada, 1926-30, 1936-40, 1946-50, 1954

	Number of deaths				Rate per 100,000 population			
	Average 1926-30	Average 1936-40	Average 1946-50	1954	1926-30	1936-40	1946-50	1954
Railway	392	221	226	148	4.0	2.0	1.8	1.0
Motor Vehicle	1,029	1,560	2,049	2,867	10.5	14.0	16.0	19.4
Other transport	458	266	461	695	4.7	2.4	3.6	4.7
Poisoning	150	166	254	338	1.5	1.5	2.0	2.3
Falls	841	1,816	1,696	1,496	8.6	16.3	13.3	10.1
Other accidents	2,902	2,195	2,930	2,836	29.6	19.7	22.9	19.2
Total	5,772	6,224	7,616	8,380	58.9	55.9	59.6	56.8

Note: Categories have been adjusted to overcome changes in classification throughout the period; while not strictly comparable the numbers and rates indicate general trends.

Infant Mortality (deaths under 1 year of age)

Table 20 illustrates the dramatic reduction from 102 in 1921 to 32 in 1954 of infant mortality rates per 1,000 live births, a drop of more than two-thirds in the rate. In two provinces, Ontario and Nova Scotia, the reduction exceeded 70 p.c. while in every province it was more than 50 p.c. Chart 12 pictures the progress made in reducing infant death rates at each age. In 1952-54 the reduction amounted to 72 per cent for the twelfth month when compared with 1932-34 but only 43 p.c. for the first month.

While there were more than 18,000 additional live births in 1954 than in 1953, 923 fewer infants died in their first year of life in 1954 than in the previous year—13,841 compared with 14,764, thus establishing a record low rate of 32. The Canadian rate has been gradually reduced from over 100 in 1923 but the most notable gains have been made during the last 10 to 15 years during which the rate has been cut in half. Of the 1,254,000 children

born in 1952-54, approximately 44,000 died and over 72,000 lived to their first birthday who would have died at the rate prevailing in the period 1926-30.

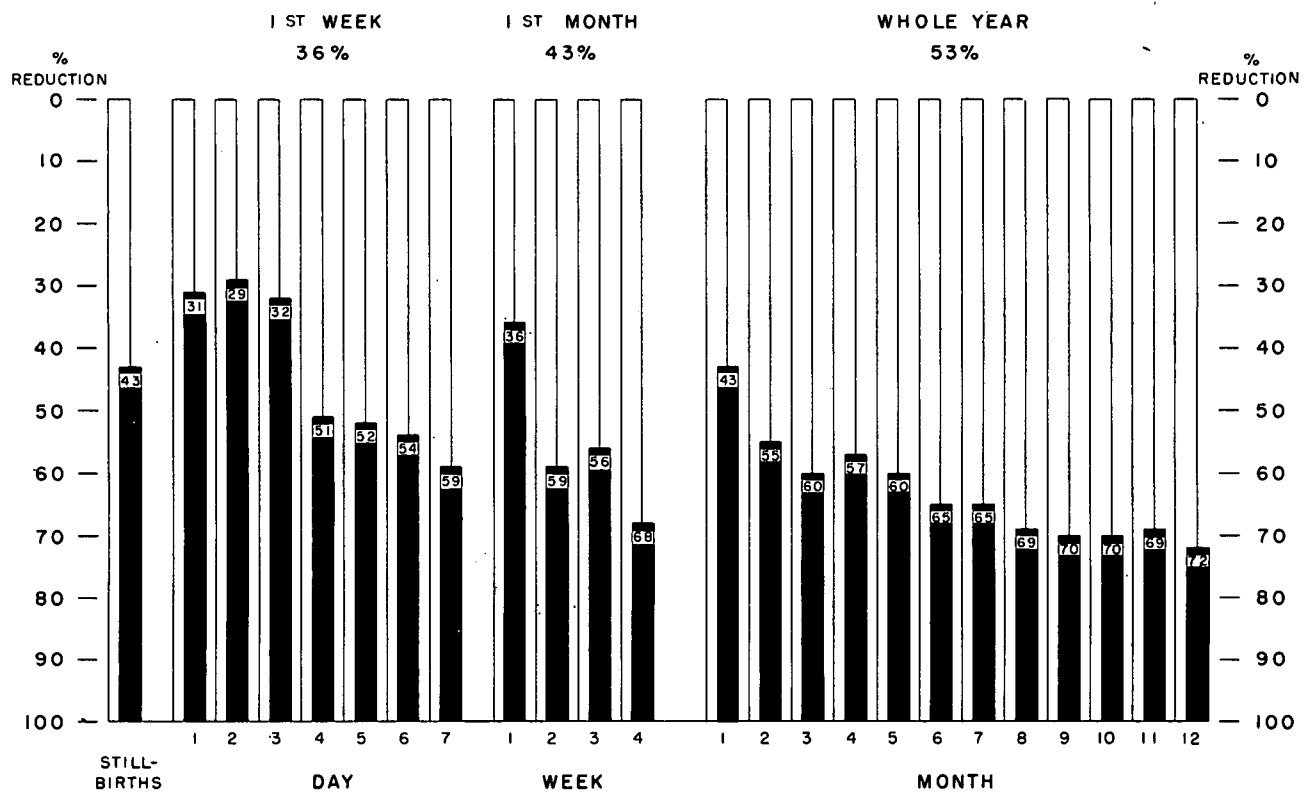
With the exception of Prince Edward Island, all provinces had lower rates per 1,000 births in 1954 than in the previous year. Provincial rates, however, varied from lows of 26 in Ontario, Alberta and British Columbia to highs of 40 in New Brunswick and Quebec. Some provinces have had very considerable reductions in their rates in the last few years, for example Newfoundland, Nova Scotia and New Brunswick have dropped from 58, 40 and 57, to 41, 30, and 40 within four years; Quebec from 50 to 40 in two years; Ontario from 35 to 26 in four years and the Western provinces reported similar declines. The fact that several other countries have lower infant mortality rates than Canada, that three provinces have rates as low as 26, and that the rates in all provinces are continuing to drop indicates that this is a field in which additional lives can be saved.

TABLE 20. Infant Mortality Rates per 1,000 Live Births, Canada and Provinces

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1921.....	102	108	83	101	113	128	91	83	81	84	57
1931.....	86	133	68	79	87	113	70	64	69	69	49
1941.....	61	98	80	65	76	76	46	53	51	51	37
1951.....	38	54	34	35	52	48	31	33	31	33	30
1952.....	38	46	31	34	44	50	31	31	35	30	29
1953.....	35	47	28	32	45	45	28	35	34	30	27
1954.....	32	41	35	30	40	40	26	29	28	26	26
Percentage reduction 1921 to 1954.....	68.6	62.0	57.8	70.3	64.6	68.8	71.4	65.1	65.4	69.0	54.4

CHART - 12

**PERCENTAGE REDUCTION OF INFANT DEATH RATES AT EACH AGE
1932-34 TO 1952-54 (AVERAGES)**



Infant mortality of males is 25 to 30 p.c. higher than that of females for Canada as a whole, with wider variations for the individual provinces. There were between 1,051 and 1,067 males born to every 1,000 females in the 1941-54 period. But because male infant mortality is higher, the excess of males is reduced drastically by the end of the first year.

For example, in 1952-54, 644,983 male children were born compared with 609,511 female children, an excess of 35,472 or 5.8 p.c.; 25,251 male children died during their first year compared with 18,657 female children, that is 6,594 more. The excess of males at one year of age was thus reduced to 28,878 or 4.9 p.c.

In 1954 over 62 p.c. of total infant deaths were caused by congenital malformations, immaturity, pneumonia among infants over four weeks of age, post-natal asphyxia and atelectasis, and injury at birth. Congenital malformations, which accounted for 2,137 or over 15 p.c. of the 13,841 infant deaths in 1954 exceeded immaturity for the second time as the greatest single cause of death. Immaturity was the underlying cause of 2,062 deaths (while in an additional 2,654 immaturity was present as a complication with some other underlying cause).

Influenza, bronchitis and pneumonia (as a group) accounted for 2,310 deaths (of which 2,015 were due to pneumonia); postnatal asphyxia and atelectasis, 1,507; injury at birth, 1,386; abdominal and intestinal diseases and infections (such as enteritis, gastritis, colitis and diarrhoea), 777. Only 340 or 2.5 p.c. of infant deaths were due to infective or parasitic diseases.

In Chart 13 and Table 21 will be found a brief presentation of infant mortality rates by major causes.

TABLE 21. Infant and neonatal death rates by major cause, by province (Average 1952-54)
(per 100,000 live births)

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Infant - Total	3,500	4,429	3,124	3,205	4,271	4,492	2,821	3,146	3,215	2,861	2,730
Lower respiratory (480-1, 490-3 500-2,763)	582	838	845	664	898	808	332	588	648	431	444
Immaturity (774-6)	516	707	551	539	581	367	572	556	593	590	552
Congenital malformations (750-759)	520	438	478	501	536	629	502	462	379	411	444
Birth injury (760-1)	346	346	221	229	374	437	322	359	261	274	257
Asphyxia and atelectasis (762) ..	330	146	221	359	325	298	375	271	311	386	343
Gastro-intestinal (543, 571-2, 764)	222	361	147	147	271	346	148	201	223	137	79
Ill-defined (773, 795)	281	608	74	120	470	610	74	145	118	89	73
Other	704	992	625	653	717	997	497	570	678	539	536
Neonatal - Total	2,105	2,253	1,580	1,839	2,368	2,570	1,911	1,849	1,843	1,770	1,711
Lower respiratory (480-1, 490-3 500-2,763)	123	146	110	103	163	199	67	103	130	77	79
Immaturity (774-6)	491	669	515	522	657	324	557	527	572	584	543
Congenital malformations (750-759)	317	254	257	283	325	393	305	275	236	236	276
Birth injury (760-1)	337	331	221	223	355	426	317	350	252	265	254
Asphyxia and atelectasis (762) ..	320	138	221	348	313	287	368	257	303	367	336
Gastro-intestinal (543, 571-2, 764)	45	62	-	44	54	82	28	28	29	16	13
Ill-defined (773, 795)	212	315	37	65	235	500	55	93	84	57	51
Other	259	331	184	256	259	357	214	215	236	166	162

Neo-Natal Mortality (Deaths under 4 weeks of age)

In 1954 the neo-natal mortality rate dropped to a new low of 19 per 1,000 live births, half of what it had been in 1932. All provinces, except one, had lower rates than in 1953, with provincial rates now varying between lows of 16 in Nova Scotia, Manitoba, and British Columbia to a high of 23 in Quebec.

Of the 13,841 infants who died within the first year of life, 8,384 or almost 61 p.c. died within four weeks of their birth. Although there has been a drastic reduction in infant mortality over the past 25 years most of the reduction has, however, been among infants who survived the first 4 weeks of life. For example, in 1930 neo-natal deaths accounted for 47 p.c. of all infant deaths; this proportion has now increased to 61 p.c.

In 1954 almost one-quarter or 1,961 of the deaths in the first 4 weeks of life were directly due to immaturity, while immaturity was present as a complication in 2,583 additional deaths. Post-natal asphyxia and atelectasis accounted for 1,454 deaths; injury at birth, 1,347; and congenital

malformations, 1,283. These four causes were responsible for 6,045 or almost three-quarters of all neo-natal deaths.

TABLE 22. Neo-Natal Mortality¹, Canada 1926-1954

	Number	Rate per 1,000 live births
Averages 1926-30	10,530	45
" 1931-35	8,507	37
" 1936-40	7,296	32
" 1941-45	8,076	29
" 1946-50	9,052	26
1946	8,991	27
1947	9,507	26
1948	8,897	26
1949	8,828	24
1950	9,036	24
1951	8,579	23
1952	9,131	23
1953	8,895	21
1954	8,384	19

1. Under 1 calendar month for the years 1926-50; less than 4 weeks of age since 1950.

CHART-13

INFANT DEATH RATES FOR MAJOR CAUSES 1931 TO 1954

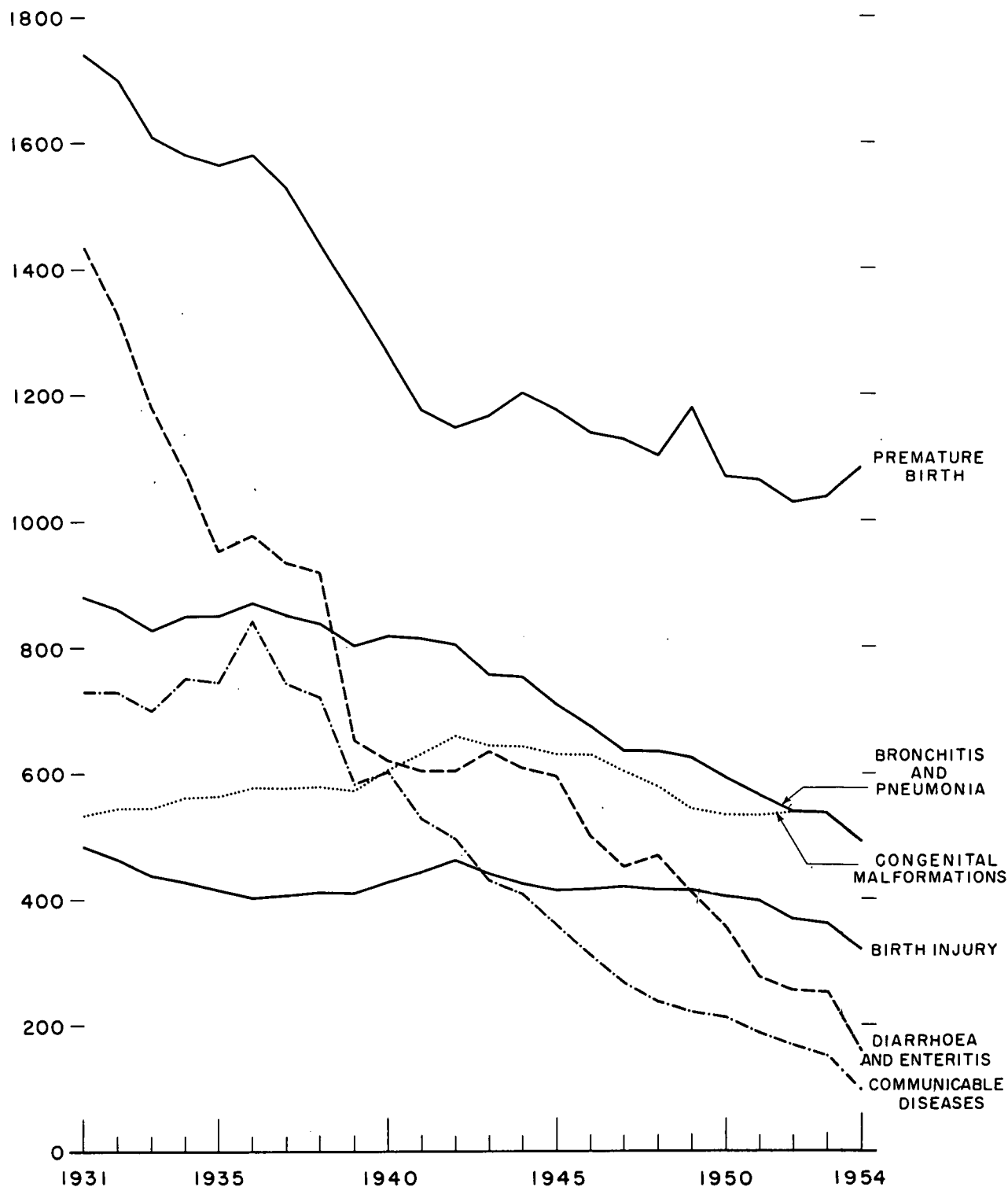


TABLE 23. Distribution of 1954 Infant Deaths by Age

	Number	%	Cumulative	
			Number	%
Total	13,841	100.0		
1st day	3,750	27.1	3,750	27.1
2nd "	1,104	8.0	4,854	35.1
3rd "	890	6.4	5,744	41.5
4th "	481	3.5	6,225	45.0
5th "	301	2.2	6,526	47.1
6th "	225	1.6	6,751	48.8
7th "	166	1.2	6,917	50.0
1st week	6,917	50.0	6,917	50.0
2nd "	633	4.6	7,550	54.5
3rd "	478	3.5	8,028	58.0
4th "	356	2.6	8,384	60.6
1st month	8,384	60.6	8,384	60.6
2nd "	1,283	9.3	9,667	69.8
3rd "	938	6.8	10,605	76.6
4th "	765	5.5	11,370	82.1
5th "	560	4.0	11,930	86.2
6th "	428	3.1	12,358	89.3
7th "	394	2.8	12,752	92.1
8th "	294	2.1	13,046	94.3
9th "	234	1.7	13,280	95.9
10th "	211	1.5	13,491	97.5
11th "	206	1.5	13,697	99.0
12th "	144	1.0	13,841	100.0

Maternal Mortality

The number of mothers who die in pregnancy and childbirth has been greatly reduced during the past two decades. Although the number of births has been much greater in recent years, the number of maternal deaths has declined steadily since about 1930 when there were 1,215 deaths and a rate of almost five deaths for every 1,000 live births to 312 in 1954. Since 1945, the rate of maternal mortality has dropped below two per 1,000 live births reaching a new low record in 1954 of 0.7 per 1,000 live births.

In 1954 provincial rates varied from a high of 1.6 in Newfoundland to 0.3 in Alberta. The current

rate is now only 1/8th of the 1936 rate. Had the 1936 rate been in effect in 1954, almost 2,450 mothers would have died.

Until a decade ago, puerperal sepsis and toxæmias of pregnancy were by far the most important causes of maternal deaths. Since 1936, the rate for puerperal sepsis has been reduced by approximately 95 p.c. owing in large measure to the use of sulpha and other antibiotics. Although there has been a reduction of over 70 p.c. since 1936 in the maternal death rate from toxæmias of pregnancy, this group still remains a major cause of maternal deaths, second only to complications of delivery.

TABLE 24. Maternal Mortality Per 1,000 Live Births, Canada and Provinces

Year	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1921	4.7	7.4	3.2	4.3	4.1	3.8	5.2	4.4	5.7	6.7	4.8
1922	5.1	7.2	3.7	5.5	5.1	4.1	5.2	5.6	5.7	6.9	6.2
1923	5.0	6.6	2.5	7.2	4.6	4.1	5.3	4.6	5.6	5.6	6.3
1924	5.3	10.4	4.8	6.6	4.6	3.7	5.8	5.6	6.7	6.2	6.8
1925	4.9	4.0	8.4	5.4	4.7	3.8	5.5	6.4	5.7	5.8	5.8
1926	5.6	4.7	4.6	4.6	6.4	5.2	5.6	5.9	7.1	5.9	6.5
1927	5.5	5.1	2.4	6.8	6.2	4.9	6.0	5.1	5.4	6.4	6.7
1928	5.6	3.6	6.1	5.2	5.8	5.3	5.8	5.1	5.8	6.8	5.9
1929	5.7	5.6	7.8	4.2	7.3	5.3	5.4	6.8	6.2	7.3	5.6
1930	5.8	5.3	2.9	6.7	5.4	5.5	6.2	5.2	5.1	6.5	5.8
1931	5.1	6.4	6.9	4.7	5.6	4.8	5.4	4.8	4.4	5.0	6.3
1932	5.0	5.1	6.4	4.6	5.8	5.1	5.1	4.8	4.9	3.8	5.3
1933	5.0	4.5	4.1	4.7	6.0	5.0	5.4	4.1	4.6	4.5	4.7
1934	5.3	5.9	5.1	6.2	5.1	5.5	5.6	3.8	4.4	5.0	5.1
1935	4.9	3.1	4.0	5.3	4.6	5.4	5.0	4.2	4.1	4.3	5.2
1936	5.6	6.3	5.6	4.3	6.6	6.0	5.7	5.4	4.5	5.8	4.7
1937	4.9	4.6	5.7	3.0	3.7	5.2	5.2	4.3	4.6	4.8	4.5
1938	4.3	6.1	2.5	4.2	4.5	5.2	3.8	2.9	2.5	4.3	3.8
1939	4.3	5.3	7.5	4.1	4.8	4.6	4.3	3.5	3.3	3.6	3.1
1940	4.0	4.2	2.9	4.2	4.8	4.5	3.7	3.9	3.2	4.0	3.1
1941	3.6	6.9	2.9	3.5	3.5	4.3	3.0	3.1	3.1	3.1	2.7
1942	3.0	4.4	4.7	2.7	4.5	3.3	2.6	2.6	3.4	2.3	2.7
1943	2.8	3.7	4.1	3.7	3.1	3.2	2.3	2.4	2.6	2.7	2.5
1944	2.8	4.1	5.2	2.1	3.2	3.1	2.5	3.1	2.3	1.6	2.6
1945	2.3	2.4	2.7	1.5	1.8	2.5	2.2	1.9	2.6	2.4	2.6
1946	1.8	2.2	2.1	1.6	2.1	2.1	1.6	1.7	1.7	1.4	1.7
1947	1.6	2.3	2.0	1.0	1.4	2.2	1.2	1.1	1.6	0.9	1.2
1948	1.5	1.9	1.1	1.1	1.3	2.0	1.2	1.5	1.0	1.2	1.1
1949	1.5	2.0	0.4	1.1	1.1	2.0	1.3	1.3	1.2	1.0	1.0
1950	1.1	1.6	1.0	1.2	0.9	1.5	0.9	0.7	1.0	0.7	1.0
1951	1.1	2.1	0.4	0.7	0.7	1.5	0.8	1.1	1.0	0.6	0.7
1952	0.9	2.0	1.5	0.8	1.1	1.2	0.8	0.5	0.6	0.5	0.6
1953	0.8	1.5	0.7	0.8	1.0	1.1	0.5	0.8	0.5	0.7	0.6
1954	0.7	1.6	0.7	0.5	0.7	1.1	0.5	0.5	0.9	0.3	0.4

TABLE 25. Maternal Deaths by Age of Mother, Canada¹, 1941-54

Rates per 100,000 live births (at each age)

Year	Total ²	15-19	20-24	25-29	30-34	35-39	40-44	45-49
1941	352.9	277.4	224.9	284.0	403.2	634.7	793.9	654.8
1942	300.4	263.2	176.4	239.1	337.8	508.5	867.7	947.0
1943	281.4	218.6	183.3	215.9	296.0	475.8	822.0	1252.4
1944	273.0	177.8	186.2	225.4	332.7	415.9	621.1	298.2
1945	228.6	159.6	139.8	194.0	220.7	378.1	696.3	712.4
1946	179.9	139.4	96.7	145.2	189.2	315.9	589.3	1096.1
1947	154.3	102.3	92.1	99.5	200.0	305.0	442.0	763.4
1948	146.8	101.7	83.7	101.5	155.4	296.2	540.3	836.4
1949	144.7	106.7	77.8	106.8	174.4	251.9	524.1	752.6
1950	111.5	76.3	42.8	86.2	118.7	242.0	414.9	601.8
1951	103.2	69.8	67.2	72.1	104.3	198.5	329.5	678.3
1952	89.5	46.4	40.7	63.9	104.0	174.7	348.2	996.0
1953	75.5	22.2	30.3	60.7	71.0	182.6	309.8	590.0
1954	68.8	38.2	31.4	55.1	74.1	148.9	220.7	508.0

1. Exclusive of Yukon, Northwest Territories and Newfoundland.

2. Includes deaths of mothers under 15 years and 50 years and over.

CHART-14

COMPARATIVE DECLINE IN MATERNAL DEATH RATE AT EACH AGE

1941 = 100

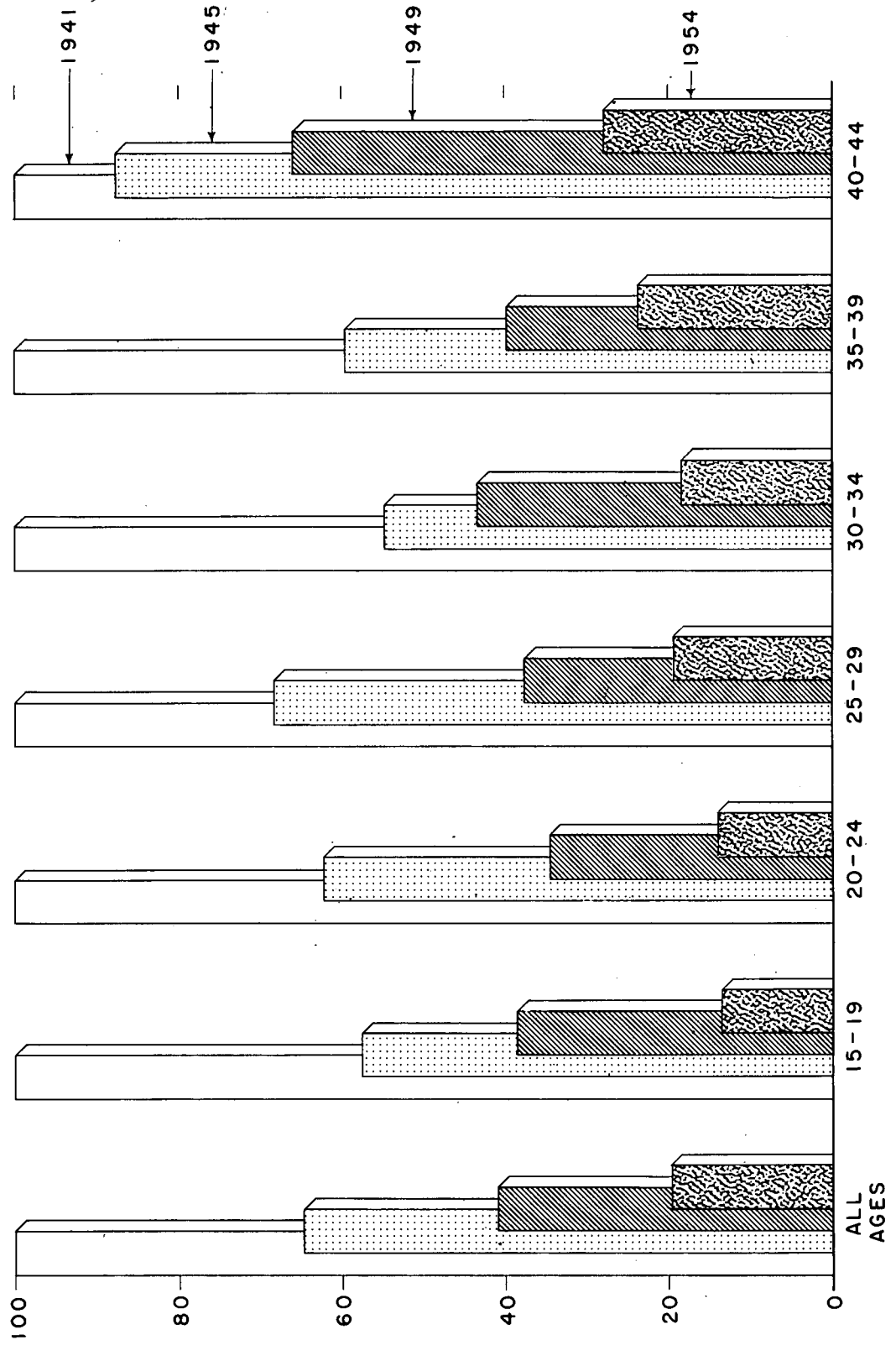


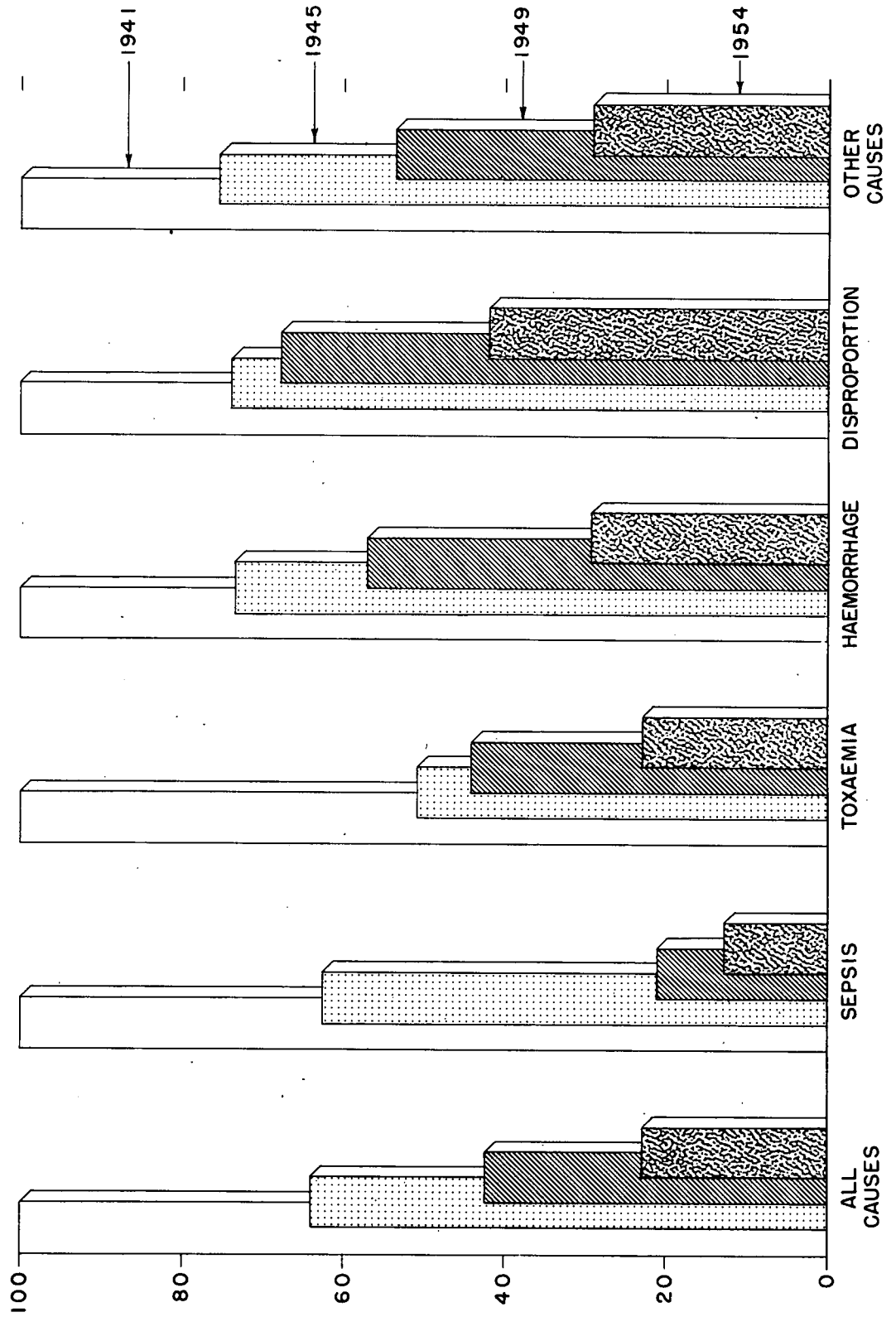
TABLE 26. Maternal Deaths by Cause, 1941-54

Year	Sepsis	Toxaemia	Haemorrhage	Disproportion, etc.	Other causes
	Number				
1941	251	224	167	49	109
1942	237	178	155	46	104
1943	206	174	177	50	111
1944	212	157	169	50	111
1945	177	129	139	41	93
1946	126	138	128	47	98
1947	111	126	134	47	94
1948	97	138	122	39	69
1949	73	137	132	46	81
1950	65	118	137	35	65
1951	69	126	107	42	61
1952	71	115	87	40	61
1953	67	95	90	27	45
1954	54	86	83	35	54
	Rate per 100,000 live births				
1941	98.3	87.7	65.4	19.2	42.7
1942	87.0	65.4	56.9	16.9	38.2
1943	72.6	61.4	62.4	17.6	39.1
1944	74.6	55.2	59.5	17.6	39.1
1945	61.3	44.7	48.1	14.2	32.2
1946	38.1	41.7	38.7	14.2	29.6
1947	30.9	35.1	37.3	13.1	26.2
1948	27.9	39.7	35.1	11.2	19.9
1949	20.6	38.7	37.3	13.0	22.9
1950	17.5	31.8	36.9	9.4	17.5
1951	18.2	33.1	28.2	11.0	16.0
1952	17.6	28.6	21.6	9.9	15.2
1953	16.1	22.8	21.6	6.5	10.8
1954	12.4	19.8	19.1	8.0	12.4

1941-49 exclude Newfoundland.
1950-54 include Newfoundland.

CHART-15

COMPARATIVE DECLINE IN MATERNAL DEATH RATES BY CAUSE
1941=100



VII. MARRIAGES AND DIVORCES

General trends and fluctuations in the marriage rate are summarized in Table 27 and Chart 16. The rate was relatively steady from 1921 to the depression period but then sank to a low of 6.4 in 1931 after which there was a gradual rise. The early war years brought a concentration of marriages which "borrowed" both from the past and the future, in that they included marriages postponed during the depressed thirties and subsequently made possible by war-time prosperity and other cases where the date was advanced because of impending departure overseas. There was a sharp drop during the later years of the war and this in turn was reversed in 1946-7. There has been a gradual decline since that year but the 1954 rate of 8.5 is still above that of the twenties and thirties and is high when consideration is taken of the fact that the low birth rate of the thirties is now reflected in a similarly low proportion of Canadian-born people reaching marriageable age.

The drop in the marriage rate to 8.5 per 1,000 population in 1954 from 8.9 in 1953 continued the decline from the post-war record of 10.9 in 1946. Provincial rates varied from 5.8 in Prince Edward Island to 9.6 in Alberta. After Alberta the highest rates were recorded by Ontario and British Columbia.

In 1954, for the country as a whole, 83 p.c. of the grooms were born in Canada—nearly 68 p.c. in the province in which they were married. Over

87 p.c. of the brides were born in Canada—nearly 75 p.c. in the province in which they were married. However, there were wide variations from this pattern among the provinces. In the older Atlantic Provinces and Quebec there is a greater tendency to marry native, or native and province-born partners than in the other provinces.

Over 91 p.c. of the marriages in 1954 were between persons who had not previously been married; 5 p.c. of the brides and nearly 5 p.c. of the grooms had been widowed, and more than 3 p.c. of the marriages were of divorced persons. The average age at marriage of bachelors was lower than 27 years and that of spinsters lower than 24. The average age of widowers and widows at the time of re-marriage was double that of bachelors and spinsters. Over 90 p.c. of spinsters married in 1954 were under 30 years of age—75 p.c. under 25 years—and over 80 p.c. of bachelors were under 30 with more than half of these less than 25 years of age.

Religion has such a strong influence on marriage that in 1954 approximately 71 p.c. of all marriages were between persons of the same religious denomination. Among those of Jewish faith, the proportion was 90 p.c., among Roman Catholics nearly 89 p.c., United Church nearly 62 p.c. and Eastern Orthodox over 50 p.c.

TABLE 27. Marriage Rates Per 1,000 Population, Canada and Provinces

Year	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1921	7.9	5.7	5.8	6.8	8.4	7.9	8.5	8.7	6.7	7.9	7.4
1931	6.4	5.6	5.6	6.6	6.2	5.8	6.9	7.0	6.2	7.0	5.6
1941	10.6	8.7	7.1	11.4	10.8	9.8	11.4	11.4	7.9	10.6	11.9
1946	10.9	9.3	8.9	10.8	12.3	10.1	11.3	11.8	9.9	11.8	11.7
1951	9.2	7.0	5.9	7.9	8.5	8.8	9.8	9.5	8.2	9.9	9.7
1952	8.9	7.3	6.0	8.3	8.1	8.5	9.5	8.9	8.2	9.8	9.2
1953	8.9	7.2	6.1	8.1	7.9	8.4	9.4	9.0	8.3	10.1	9.2
1954	8.5	7.4	5.8	7.8	7.8	8.1	8.9	8.3	7.9	9.6	8.7

TABLE 28. Average Age¹ of Bachelors and Spinsters, Canada, 1940-1954

	Bachelors	Spinsters
1940	28.0	24.7
1941	28.0	24.7
1942	28.0	24.7
1943	27.4	24.2
1944	27.6	24.4
1945	27.3	24.3
1946	27.1	24.1
1947	26.9	24.0
1948	26.8	23.9
1949	26.9	23.9
1950	26.7	23.8
1951	26.6	23.8
1952	26.5	23.7
1953	26.3	23.7
1954	26.3	23.6

1. At marriage.

Divorce was a rare event previous to the first world war with a rate of less than one per 1,000 of the yearly number of marriages. There were fewer than 20 divorces in any year before 1900, 21 in 1903, 51 in 1909 and 60 in 1913. However at the end of World War I and again following World War II there were sharp increases in the numbers

of divorces granted. The figure rose from 114 in 1918 to 373 in 1919 and 468 in 1920 after which it never fell below 500. In 1939 the divorce total reached 2,068 but by 1947 the figure had risen to 8,199 which was the post-war peak, the number of divorces thereafter declining to levels below 6,000 with a 1954 level of 5,800.

TABLE 29. Dissolutions of Marriage (Divorces), by Province, 1921-1954

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
1921	558	Not avail- able	—	41	13	10	96	122	59	89	128
1931	700		—	19	27	41	204	114	64	151	255
1941	2,461		—	60	52	62	916	206	125	274	674
1946	7,683		4	260	382	290	2,639	636	505	962	2,005
1951	5,263	4	10	187	156	289	2,102	361	226	589	1,339
1952	5,634	3	9	188	200	309	2,202	338	223	630	1,532
1953	6,110	9	15	185	181	273	2,774	374	218	603	1,478
1954	5,922	8	8	249	117	370	2,468	371	250	610	1,471

VIII. VITAL STATISTICS OF THE YUKON AND NORTHWEST TERRITORIES

Until relatively recently modern improvements in communication did not make it feasible to compile the statistics for the northern territories in time for inclusion with those of the provinces. At the present time, although vital statistics of the Yukon Territory and the Northwest Territories have been collected since 1924, they are presented separately because the figures for some of the

early years are not considered complete in that the personal particulars frequently are not available, the small and varying population of each year is not accurately known and, as some areas are accessible only during the summer months, complete returns have not been available sufficiently early in the calendar year for inclusion in the national totals for routine publication.

CHART-16

MARRIAGE RATES

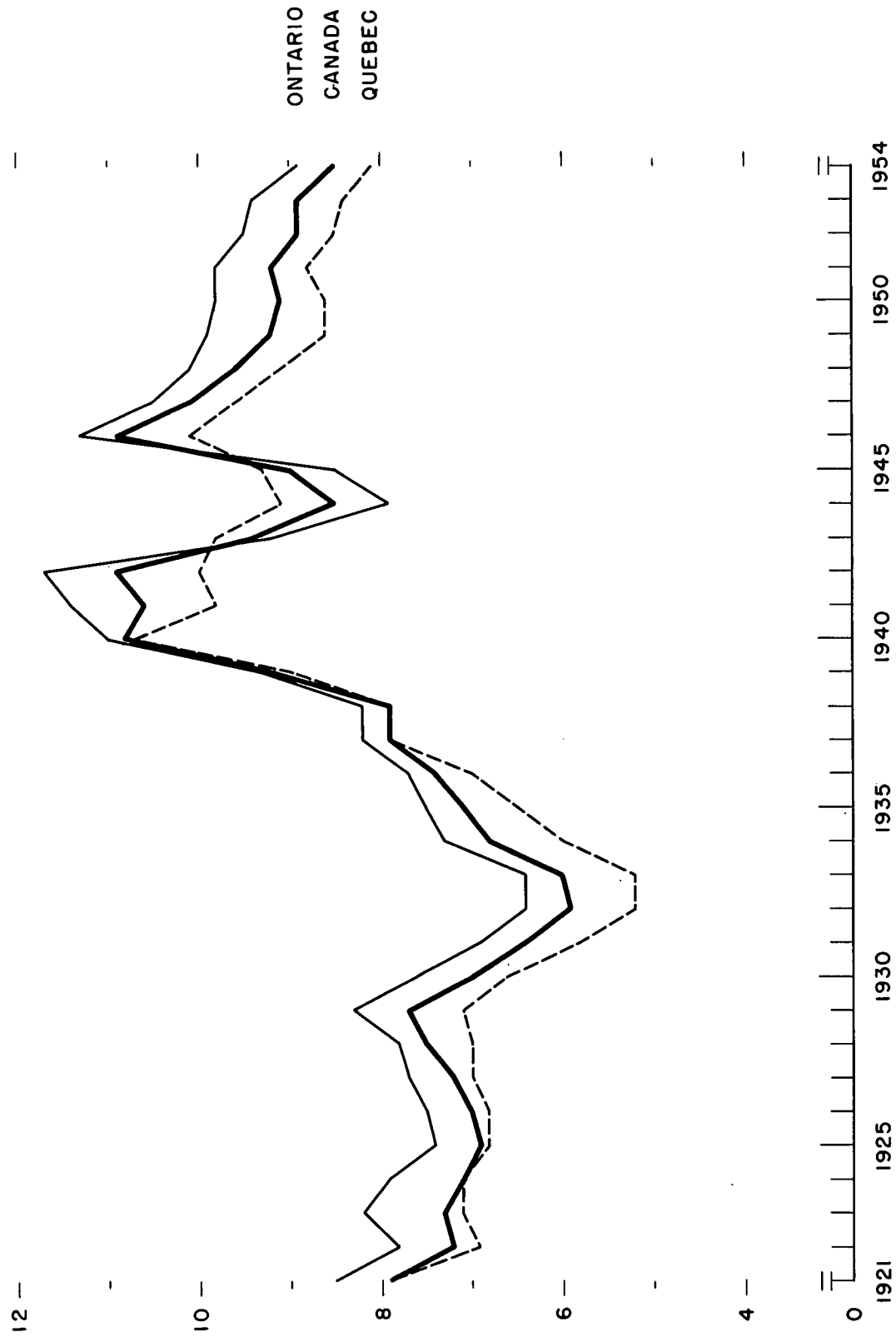


TABLE 30. Vital Statistics of the Yukon and Northwest Territories, 1926-54
 Note.— Figures for 1944-54 are by place of residence; for previous years by place of occurrence.

Year	Yukon Territory			Northwest Territories		
	Births	Marriages	Deaths	Births	Marriages	Deaths
Number						
Average, 1926-30	33	14	54	158	24	185
“ 1931-35	49	24	61	190	41	137
“ 1936-40	67	36	72	228	72	177
“ 1941-45	105	60	96	383	95	332
“ 1946-50	254	73	91	626	139	372
1941	72	36	67	314	82	306
1942	96	36	108	369	109	222
1943	99	67	120	403	94	304
1944	136	94	100	316	66	349
1945	123	69	87	511	122	478
1946	146	66	80	593	177	347
1947	224	61	77	625	111	376
1948	274	77	112	645	117	370
1949	309	76	86	644	134	434
1950	316	84	99	622	154	332
1951	342	68	85	649	110	284
1952	390	73	94	642	100	341
1953	383	94	116	676	103	294
1954	425	110	85	631	134	250

IX. LIFE EXPECTANCY

The expectation of life provides a dramatic summary of health trends over the past thirty years. A glance at the Table below reveals that between 1931-51 life expectancy at birth increased from 60 to over 66 years for men and from 62 to 70.8 years for women. There is a gain for males of 3.4 years since 1941 compared with a gain of almost 3 years in the previous decade; females on the other hand gained 4.5 years since 1941 compared with 4.2 years in the preceding decade. Thus, since 1931, 6.3 years have been added to male life expectancy, while female longevity has been lengthened by 8.7 years.

The increases in life expectancy have been predominantly at the younger ages, particularly in infancy, and diminishing with advanced age. For example, since 1931, 2.6 years have been added to the life expectancy of a 5-year-old male, 1.7 years to a 20-year-old, almost half a year to a 40-year-old and a bare quarter year to a 60-year-old as compared with 6.3 years for a newborn male. During this period, life expectancy for a 5-year-old female gained 5.6 years; for a 20-year-old 4.7 years, 2.7 years for a 40-year-old and 1.5 years for a 60-year-old as compared with 8.7 years for a newborn female.

Longevity has improved for both sexes but more so and at all ages for females, whereas there has been only slight improvement for males beyond middle life. Briefly the rapid decline in the death rate for infants of both sexes in continuing, with slower declines with advancing age, so that relatively stationary death rates have been established from about 50 onwards for males and from about 80 for females.

The improvement in life expectancy, particularly among children and adolescents is owing mainly to the substantial reduction, in recent years, of mortality from infectious diseases; on the other hand, diseases associated with middle and old age are much less amenable to control. It is therefore unlikely that improvement in life expectancy in the future will be comparable to that of the last two decades. As roughly 12 p.c. of all annual deaths occur among infants, and an additional 70 p.c. among persons over 50, any further improvement must come as the result of further declines in mortality from conditions associated with child-birth and early infancy, further control of infectious diseases, prevention of accidents, and advances in combatting diseases associated with middle and old age, such as cardio-vascular-renal conditions and cancer.

CHART-17

AVERAGE LIFE EXPECTANCY
(MALES ONLY)

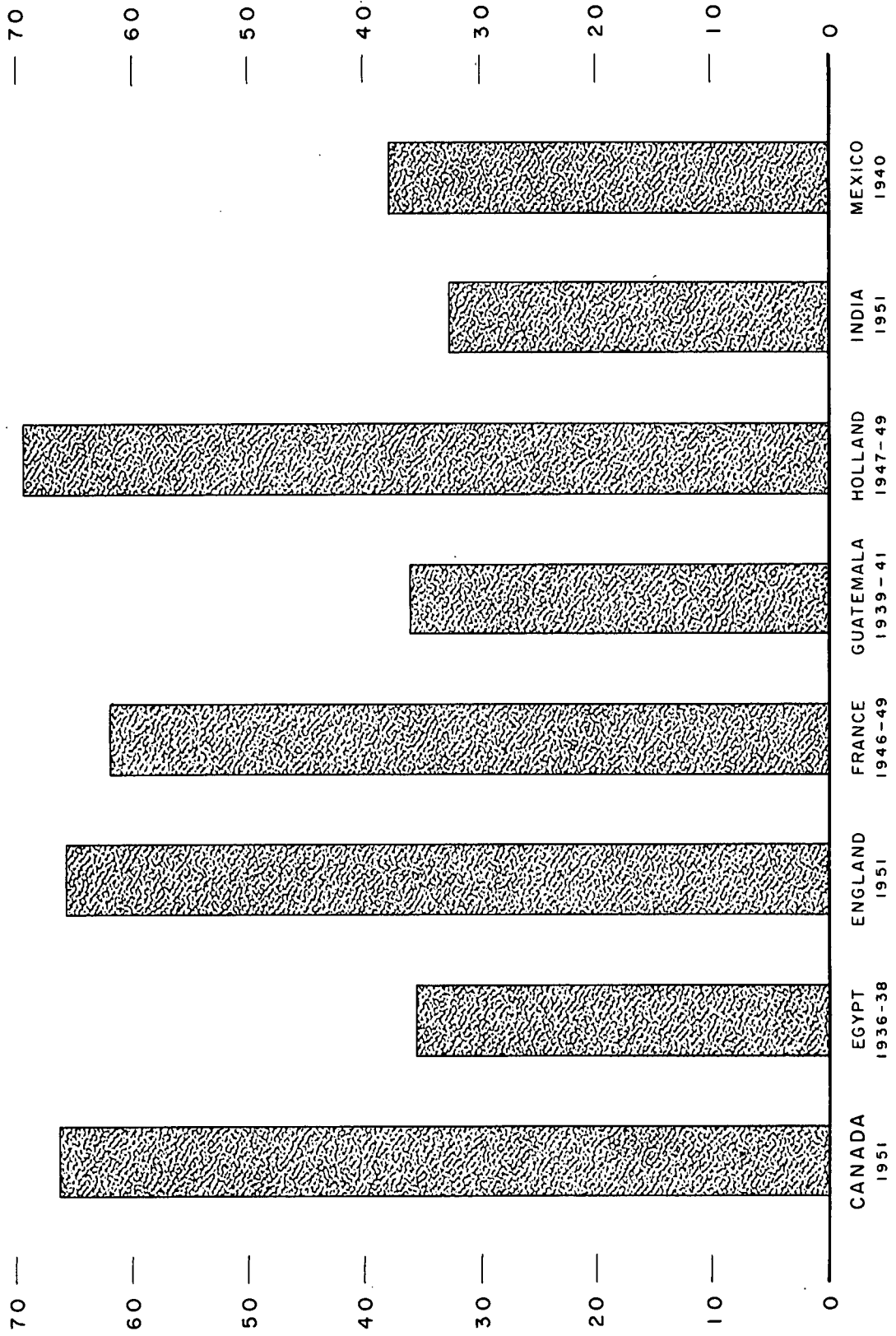


TABLE 31. Expectation of Life, 1931, 1941 and 1951

Age	1931		1941		1951	
	Male	Female	Male	Female	Male	Female
At birth.....	60.00	62.10	62.96	66.30	66.33	70.83
1 year	64.69	65.71	66.14	68.73	68.33	72.33
2 years	64.46	65.42	65.62	68.16	67.56	71.55
3 "	63.84	64.75	64.88	67.38	66.68	70.66
4 "	63.11	63.99	64.07	66.56	65.79	69.74
5 "	62.30	63.17	63.22	65.69	64.86	68.80
10 "	57.96	58.72	58.70	61.08	60.15	64.02
15 "	53.41	54.15	54.06	56.36	55.39	59.19
20 "	49.05	49.76	49.57	51.76	50.76	54.41
25 "	44.83	45.54	45.18	47.26	46.20	49.67
30 "	40.55	41.38	40.73	42.81	41.60	44.94
35 "	36.23	37.19	36.26	38.37	37.00	40.24
40 "	31.98	33.02	31.87	33.99	32.45	35.63
45 "	27.79	28.87	27.60	29.67	28.05	31.14
50 "	23.72	24.79	23.49	25.46	23.88	26.80
55 "	19.88	20.84	19.64	21.42	20.02	22.61
60 "	16.29	17.15	16.06	17.62	16.49	18.64
65 "	12.98	13.72	12.81	14.08	13.31	14.97
70 "	10.06	10.63	9.94	10.93	10.41	11.62
75 "	7.57	7.98	7.48	8.19	7.89	8.73
80 "	5.61	5.92	5.54	6.03	5.84	6.38
85 "	4.10	4.38	4.05	4.35	4.27	4.57
90 "	2.97	3.24	2.93	3.13	3.10	3.24
95 "	2.14	2.40	2.09	2.26	2.24	2.27
100 "	1.53	1.77	1.46	1.64	1.60	1.59

TABLE 32. Life Expectancy, Males, 1871 - 1951

Age	1871 ^{1,4}	1881 ^{1,4}	1921 ^{2,4}	1931 ³	1941 ³	1951 ³
0				60.00	62.96	66.33
1				64.69	66.14	68.33
2				64.46	65.62	67.56
3				63.84	64.88	66.68
4				63.11	64.07	65.79
5				62.30	63.22	64.86
6				61.47	62.34	63.93
7	58.10	57.60	60.23	60.61	61.45	62.99
8				59.74	60.54	62.05
9				58.86	59.63	61.10
10				57.96	58.70	60.15
11				57.05	57.77	59.20
12	54.28	54.42	55.92	56.14	56.84	58.24
13				55.22	55.91	57.29
14				54.31	54.99	56.34
15				53.41	54.06	55.39
16				52.52	53.15	54.46

TABLE 32. Life Expectancy, Males, 1871-1951 - Continued

Age	1871 ^{1,4}	1881 ^{1,4}	1921 ^{2,4}	1931 ³	1941 ³	1951 ³
17	50.25	50.54	51.55	51.64	52.25	53.52
18				50.77	51.35	52.60
19				49.91	50.46	51.67
20				49.05	49.57	50.76
21				48.20	48.69	49.84
22	46.38	46.52	47.45	47.36	47.81	48.93
23				46.51	46.94	48.02
24				45.67	46.06	47.11
25				44.83	45.18	46.20
26				43.98	44.29	45.28
27	42.92	42.90	43.34	43.12	43.40	44.36
28				42.27	42.51	43.44
29				41.41	41.62	42.52
30				40.55	40.73	41.60
31				39.69	39.83	40.68
32	39.43	39.33	39.13	38.82	38.94	39.75
33				37.96	38.04	38.83
34				37.10	37.15	37.92
35				36.23	36.26	37.00
36				35.38	35.37	36.08
37	35.66	35.52	34.88	34.52	34.49	35.17
38				33.67	33.66	34.25
39				32.83	32.74	33.35
40				31.98	31.87	32.45
41				31.14	31.00	31.55
42	31.84	31.64	30.69	30.29	30.14	30.66
43				29.46	29.29	29.78
44				28.62	28.44	28.91
45				27.79	27.60	28.05
46				26.96	26.76	27.19
47	28.03	27.81	26.57	26.14	25.93	26.35
48				25.33	25.11	25.51
49				24.52	24.30	24.69
50				23.72	23.49	23.88
51				22.93	22.70	23.08
52	24.23	23.96	22.57	22.15	21.92	22.30
53				21.39	21.15	21.52
54				20.63	20.39	20.76
55				19.88	19.64	20.02
56				19.14	18.90	19.28
57	20.47	20.19	18.78	18.41	18.17	18.56
58				17.69	17.46	17.86
59				16.99	16.75	17.17
60				16.29	16.06	16.49
61				15.60	15.39	15.83

TABLE 32. Life Expectancy, Males, 1871-1951 - Concluded

Age	1871 ^{1,4}	1881 ^{1,4}	1921 ^{2,4}	1931 ³	1941 ³	1951 ³
62.....	16.84	16.68	15.26	14.92	14.72	15.18
63.....				14.26	14.07	14.55
64.....				13.61	13.44	13.92
65.....				12.98	12.81	13.31
66.....				12.36	12.21	12.71
67.....	13.65	13.61	12.00	11.76	11.62	12.11
68.....				11.18	11.04	11.53
69.....				10.61	10.48	10.97
70.....				10.06	9.94	10.41
71.....				9.52	9.41	9.87
72.....	10.95	10.88	9.21	9.00	8.90	9.35
73.....				8.51	8.40	8.84
74.....				8.03	7.93	8.35
75.....				7.57	7.48	7.89
76.....				7.14	7.05	7.44
77.....	8.32	8.37	6.99	6.72	6.64	7.01
78.....				6.33	6.25	6.60
79.....				5.96	5.88	6.21
80.....				5.61	5.54	5.84
81.....				5.27	5.21	5.49
82.....	5.99	6.04	5.21	4.95	4.89	5.16
83.....				4.65	4.60	4.84
84.....				4.37	4.32	4.55
85.....				4.10	4.05	4.27
86.....				3.85	3.80	4.01
87.....	4.06	3.72	3.96	3.61	3.57	3.76
88.....				3.39	3.34	3.53
89.....				3.17	3.13	3.31
90.....				2.97	2.93	3.10
91.....				2.79	2.74	2.91
92.....	2.59	2.20	3.18	2.61	2.56	2.72
93.....				2.44	2.39	2.55
94.....				2.29	2.23	2.39
95.....				2.14	2.09	2.24
96.....				2.00	1.94	2.10
97.....	1.53	0.94	2.63	1.87	1.81	1.96
98.....				1.75	1.69	1.83
99.....				1.64	1.57	1.71
100.....				1.53	1.46	1.60
101.....				1.43	1.35	1.48
102.....			1.99	1.33	1.24	1.38
103.....				1.24	1.12	1.23
104.....				1.16	0.96	1.17
105.....				1.09	0.68	0.67
106.....						
107.....			1.79			

1. Ontario, Quebec, Nova Scotia and New Brunswick.

2. All provinces except Quebec and excluding Yukon and Northwest Territories.

3. All provinces (excluding Northwest Territories and Yukon).

4. The figures for 1871, 1881 and 1921 are to be interpreted with caution because of difficulties in the reporting of deaths in these early years and other factors.

TABLE 33. Life Expectancy, Females, 1871-1951

Age	1871 ^{1,4}	1881 ^{1,4}	1921 ^{2,4}	1931 ³	1941 ³	1951 ³
0				62.10	66.30	70.83
1				65.71	68.73	72.33
2				65.42	68.16	71.55
3				64.75	67.38	70.66
4				63.99	66.56	69.74
5				63.17	65.69	68.80
6				62.32	64.79	67.86
7	57.67	56.25	60.64	61.44	63.88	66.90
8				60.54	62.96	65.95
9				59.64	62.02	64.99
10				58.72	61.08	64.02
11				57.80	60.14	63.06
12	53.87	52.66	56.26	56.89	59.19	62.09
13				55.97	58.24	61.12
14				55.06	57.30	60.16
15				54.15	56.36	59.19
16				53.26	55.43	58.23
17	49.89	49.39	51.84	52.37	54.51	57.27
18				51.49	53.59	56.32
19				50.62	52.67	55.36
20				49.76	51.76	54.41
21				48.91	50.85	53.46
22	46.01	46.36	47.62	48.06	49.95	52.51
23				47.22	49.05	51.56
24				46.38	48.15	50.62
25				45.54	47.26	49.67
26				44.71	46.36	48.72
27	42.55	42.82	43.51	43.88	45.47	47.77
28				43.04	44.58	46.83
29				42.21	43.70	45.88
30				41.38	42.81	44.94
31				40.54	41.92	43.99
32	39.15	39.47	39.39	39.70	41.03	43.05
33				38.86	40.14	42.11
34				38.02	39.25	41.18
35				37.19	38.37	40.24
36				36.35	37.49	39.31
37	35.67	35.95	35.31	35.52	36.61	38.39
38				34.69	35.73	37.47
39				33.85	34.86	36.55
40				33.02	33.99	35.63
41				32.19	33.12	34.72
42	32.05	32.27	31.25	31.36	32.25	33.82
43				30.53	31.39	32.92
44				29.70	30.53	32.03
45				28.87	29.67	31.14
46				28.04	28.82	30.26
47	28.26	28.48	27.16	27.22	27.97	29.38
48				26.41	27.13	28.52
49				25.59	26.29	27.65
50				24.79	25.46	26.80
51				23.98	24.64	25.94
52	24.37	24.73	23.20	23.19	23.82	25.10
53				22.40	23.01	24.26
54				21.62	22.21	23.43
55				20.84	21.42	22.61
56				20.08	20.64	21.79

TABLE 33. Life Expectancy, Females, 1871-1951 - Concluded

Age	1871 ^{1,4}	1881 ^{1,4}	1921 ^{2,4}	1931 ³	1941 ³	1951 ³
57.....	20.45	21.05	19.41	19.33	19.87	20.99
58.....				18.59	19.12	20.19
59.....				17.86	18.37	19.41
60.....				17.15	17.62	18.64
61.....				16.44	16.89	17.88
62.....	16.83	17.47	15.77	15.74	16.16	17.13
63.....				15.05	15.45	16.40
64.....				14.38	14.76	15.68
65.....				13.72	14.08	14.97
66.....				13.07	13.41	14.27
67.....	13.68	14.32	12.48	12.44	12.77	13.58
68.....				11.82	12.14	12.91
69.....				11.22	11.53	12.26
70.....				10.63	10.93	11.62
71.....				10.06	10.34	11.00
72.....	10.79	11.55	9.71	9.51	9.77	10.40
73.....				8.97	9.22	9.82
74.....				8.46	8.69	9.26
75.....				7.98	8.19	8.73
76.....				7.52	7.71	8.21
77.....	8.05	8.86	7.40	7.08	7.26	7.72
78.....				6.67	6.83	7.25
79.....				6.29	6.42	6.80
80.....				5.92	6.03	6.38
81.....				5.57	5.66	5.97
82.....	5.50	6.47	5.46	5.25	5.30	5.59
83.....				4.94	4.96	5.23
84.....				4.65	4.65	4.89
85.....				4.38	4.35	4.57
86.....				4.12	4.07	4.27
87.....	3.03	4.27	3.96	3.88	3.81	3.99
88.....				3.65	3.57	3.72
89.....				3.44	3.34	3.47
90.....				3.24	3.13	3.24
91.....				3.05	2.93	3.02
92.....	2.72	2.68	2.87	2.87	2.74	2.81
93.....				2.70	2.57	2.62
94.....				2.54	2.41	2.44
95.....				2.40	2.26	2.27
96.....				2.26	2.12	2.12
97.....	1.55	1.54	1.95	2.12	1.99	1.97
98.....				2.00	1.87	1.83
99.....				1.88	1.75	1.71
100.....				1.77	1.64	1.59
101.....				1.67	1.54	1.48
102.....			1.74	1.57	1.45	1.39
103.....				1.48	1.35	1.29
104.....				1.39	1.25	1.27
105.....				1.30	1.14	1.20
106.....				1.21	0.98	
107.....				1.10	0.69	

1. Ontario, Quebec, Nova Scotia and New Brunswick.
2. All provinces except Quebec and excluding Yukon and Northwest Territories.
3. All provinces (excluding Yukon and Northwest Territories).
4. The figures for 1871, 1881 and 1921 are to be interpreted with caution because of difficulties in the reporting of deaths in these early years and other factors.

An abbreviated life table for 1951 appears below. It was based on the Census of 1951 and deaths during 1950-52. The table illustrates, in a convenient, standardized form, the general conditions of survival. A hypothetical number (100,000) births of each sex is assumed as a starting point. The life table shows how, on the basis of the mortality rates at each age in the given years, these 100,000 of each sex are reduced in number by death. For example, during the year 1951, of 100,000 males born, 4,325 died in their first year,

so that 95,675 survived to one year of age; 326 died in their second year, so that 95,349 survived to two years of age; and so on. At 100 years of age, only 90 of the original 100,000 would have survived. The probability of death at each age is the ratio between the number of deaths and the population at each age. Finally, the expectation of life is the average number of years which a person might expect to live if the mortality rates in the given years remained constant.

TABLE 34. Canadian Life Table, 1951

Age	Males				Females			
	Number living at each age	Number dying between each age and the next	Probability of dying before reaching next birthday	Expectation of life	Number living at each age	Number dying between each age and the next	Probability of dying before reaching next birthday	Expectation of life
At birth	100,000	4,325	.04325	66.33	100,000	3,423	.03423	70.83
1 year	95,675	326	.00341	68.33	96,577	288	.00299	72.33
2 years	95,349	172	.00180	67.56	96,289	148	.00154	71.55
3 "	95,177	151	.00159	66.68	96,141	110	.00114	70.66
4 "	95,026	112	.00118	65.79	96,031	88	.00092	69.74
5 "	94,914	434	.00101	64.86	95,943	318	.00079	68.80
10 "	94,480	397	.00077	60.15	95,625	262	.00052	64.02
15 "	94,083	646	.00112	55.39	95,363	371	.00067	59.19
20 "	93,437	851	.00172	50.76	94,992	465	.00091	54.41
25 "	92,586	834	.00182	46.20	94,527	534	.00106	49.67
30 "	91,752	928	.00189	41.60	93,993	682	.00129	44.94
35 "	90,824	1,175	.00227	37.00	93,311	957	.00177	40.24
40 "	89,649	1,772	.00328	32.45	92,354	1,395	.00257	35.63
45 "	87,877	2,793	.00524	28.05	90,959	2,048	.00387	31.14
50 "	85,084	4,322	.00853	23.88	88,911	2,884	.00560	26.80
55 "	80,762	6,318	.01348	20.02	86,027	4,238	.00834	22.61
60 "	74,444	8,629	.02071	16.49	81,789	6,264	.01308	18.64
65 "	65,815	10,795	.03004	13.31	75,525	8,949	.02040	14.97
70 "	55,020	13,185	.04435	10.41	66,576	12,626	.03308	11.62
75 "	41,835	14,842	.06938	7.89	53,950	16,238	.05567	8.73
80 "	26,993	13,483	.10846	5.84	37,712	16,944	.09222	6.38
85 "	13,510	8,843	.16353	4.27	20,768	12,831	.14637	4.57
90 "	4,667	3,718	.23667	3.10	7,937	6,181	.22183	3.24
95 "	949	859	.32997	2.24	1,756	1,585	.32229	2.27
100 "	90		.44550	1.60	171		.45146	1.59

Mortality rates at all ages for males have been almost consistently higher than for females. Males have the highest risk of mortality as compared with females during the first year of life, from their late 'teens to early 30's and from age 50 to 65. For both boys and girls the risk of mortality drops rapidly during childhood and is lowest at about age 10, increases gradually to about age 40 for

males and about 50 for females and then rises steeply with advancing age. At the mortality rates in the 1951 life table, about 15,000 males would have died before reaching the age of 50 compared with only about 11,000 females, while only 55,000 of the original group of 100,000 males would have survived to age 70 as compared with about 66,500 women.



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