

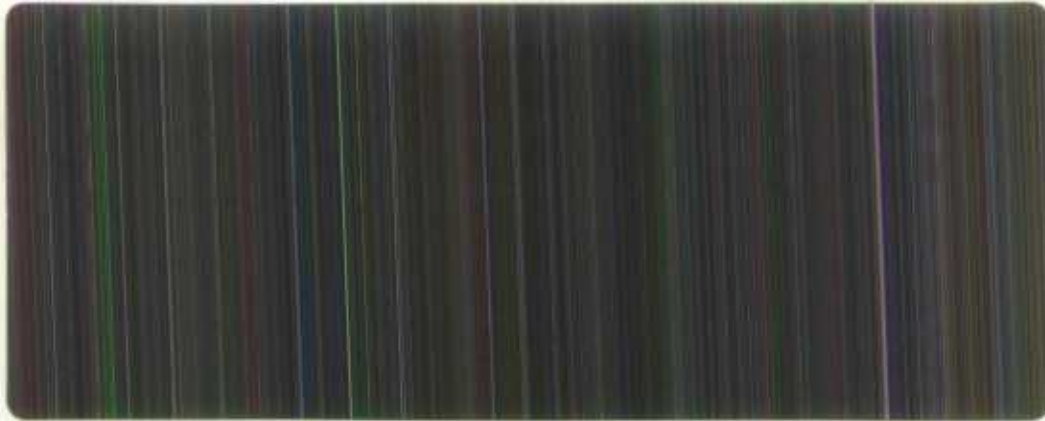
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Input-Output Division**

**EXECUTIVE SUMMARY**

**Hospital Data in the National Accounts**

**by**

**P.S.K. Murty**

**# 69**

**December 22, 1994**

The author P.S.K. Murty is the Chief of Public Sector, Input-Output Division, Statistics Canada. This paper was presented at a joint meeting of the Health Statistics Division and the Canadian Institute for Health Information (CIHI) held in the Conference room on the 23rd Floor, R.H. Coats Building, Statistics Canada, Ottawa, at 10:00hrs on December 7, 1994.



## **Executive Summary**

### Hospital Data in the National Accounts

by

P.S.K. Murty

This paper describes how the present hospital survey data find their way into the System of National Accounts (SNA). Mention is also made about the future data needs to satisfy the SNA requirements.

Hospitals constitute an important segment of the economy and the bulk of the information, over 98%, comes from the existing hospital survey called "Annual Return of Health Care Facilities - - Parts one and two" which is conducted every year by the Health Statistics Division of Statistics Canada. The survey covers the General and Allied, Lay and Religious hospitals (hereafter called General hospitals) which are presently included in the Government sector of the National Accounts. The importance of the hospitals in the Canadian economy can be gauged by the fact that the survey's General hospitals alone spend as much as the non-defence federal government subsector for their current operations. In 1991, for example, General hospitals spent \$24.2 billion for current operations,



while the non-defence federal government subsector spent \$24.1 billion. As is well known, National Accounts portray all economic transactors and transactions which take place in the exchange economy summarized into sectors, industries, and commodities. It is universally recognized that the **National Accounts are essential and powerful tools for economic analysis, and for fiscal and monetary policies. They are required by the policy makers in government departments as they are the indispensable tools to evaluate and monitor current performance of the economy. They measure changes in the growth of output, patterns in the income flows, composition of demand and supply, and show either strength or weakness not only at the over all macro-level but also at the micro-level of commodities, industries, and sectors. Without them, it would be impossible to determine what is happening in the economy of the country. Their goal is to provide, among other things, a statistical picture of the key economic processes of production, consumption, income generation, capital formation, international trade, and national savings, to name a few.** These important economic indicators are extensively used by several federal departments and agencies such as Finance Department and Bank of Canada which formulate fiscal and monetary policies for the country. Such is the importance of the National Accounts and their key data elements such as the hospital information that are identified and integrated in those sets of accounts.





The Canadian System of National Accounts presents the hospital information in two different sectors, namely, the Government Sector and the Business sector, and releases the information to users in the two main publications.

The first is the annual publication called National Income and Expenditure Accounts, catalogue No. 13-201 which contains, among other things, data relating to "General hospitals"<sup>1</sup> as a separate subsector of the government sector accounts. The revenue and expenditure data of government owned and operated Federal and Provincial hospitals other than the General hospitals are classified in the appropriate subsectors of governments. Thus, in this publication, the federal hospitals are left in the federal government while the defence hospitals are included in the defence subsector; the provincial hospitals are in the provincial subsector. The hospital data for the private hospitals are classified in the business sector accounts although these data are not specifically shown in the publication.

The second is the annual publication of Input-Output Accounts called The Input-Output Structure of the Canadian Economy, catalogue No. 15-201 which utilizes, among other things, government and private hospital data in its elaborate analytical structure showing industry, sector, and

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<sup>1</sup>General hospitals include General and Allied hospitals and Lay and Religious hospitals as defined and classified by the Health Statistics Division of Statistics Canada.



commodity details of the total economy. In this publication, the Input-Output Accounts distinguish 627 commodities and over 200 industries. The hospital revenues and gross expenditures are shown separately in terms of the commodities in two different sectors, namely, in the Government sector and in the Business sector. The hospital sector in the Input-Output Accounts is comprehensive and represents all hospitals whether they are owned by Provincial governments or Federal government (excluding Defence). Thus all government hospitals -- General, Provincial and Federal - (except defence hospitals) -- are reflected in the Input-Output government hospital subsector while only General hospitals are shown in the subsector of the National Income and Expenditure Accounts. Historically, defence hospitals are retained in the Defence subsector of the Input-Output Accounts in the same way as the National Income and Expenditure Accounts and there is no difference in this regard.

The fact that separate hospital data are published in these publications demonstrates that historically there was, and indeed presently there is, an extensive and pressing demand for that specific information. The main source for the detailed data requirements of the National Accounts for General hospitals is the Health Statistics Division which collects, compiles, and analyses hospital data based primarily on its survey called "Annual Return of Health Care Facilities" Parts one and two. The National Income and Expenditure Accounts (Catalogue 13-201) have been using the



hospital survey data from the Health Statistics Division for over 60 years from the time these accounts were started in the 1930s. The Input-Output Accounts (Catalogue 15-201) have also been using these data from 1961 onward ever since they were started, and have been incorporating them into benchmarks since that time, ie. for over 30 years.

It should be noted that the Input-Output Accounts require commodity and industry details, because the main principle used in the production of these accounts is to balance **the supply with the disposition of each commodity in the economy**. This commodity balancing technique shows up deficiencies, inconsistencies and irregularities in the basic data. As considerable research and analysis are done in the commodity balancing exercise in consultation with the basic data suppliers, this exercise tends to strengthen the data at the commodity, industry, and sectoral levels, as well as the resulting aggregate levels. This is why that after the commodity balancing exercise is completed, the statistical series developed in the Input-Output Accounts become benchmarks for the entire System of National Accounts. Incidentally, it may be mentioned that the commodity and industry details integrated in the Input- Output Accounts are not available elsewhere. These details provide information on the demand and supply of goods and services produced in the total economy by industry as well as the consumption levels in all the sectors. Such details are useful for market analysis and for government fiscal policies. Besides the information on the demand and supply of



commodities, the Input-Output Accounts show details for margins such as wholesale margin, retail margin, transport margin and tax margin. These margins make up the difference between the producer and purchaser price values. The Input-Output Accounts also provide a breakdown of tax margin by type of tax for each commodity, industry and sector which is not available elsewhere. For example, the crucial information needed for tax policies (such as the Goods and Services tax (GST) relating to the MUSH sector containing Municipalities, Universities, Schools, and Hospitals), can be generated only by these accounts. The Federal Finance Department uses these Input-Output tax margin data as one of their analytical tools for fiscal policy decisions concerning commodity taxation.

In addition, to facilitate international comparability, the international community expects a separate database for hospitals from Statistics Canada. These internal and international needs can be met by implementing the recommendations of this paper.

At the present time, the National Accounts show "hospitals" separately as a subsector in the Government sector and also as a separate industry in the Business sector. As we are now considering a historical revision of the National Accounts, the timing is good for a review of the existing subsectoring and the data sources in the context of the new 1993 United Nations System of National Accounts and other requirements. Two





points should be kept in mind in such a review. First, as the National Accounts have to portray the workings of the economy and its parts through a set of accounts, the network of the statistical information systems has to be geared in such a way that it delivers the required details for the National Accounting system. Second, the structure of the National Accounts should be adjusted, if necessary, to reflect not only the present institutional arrangements but also the anticipated institutional and other changes that are under consideration and likely to take place in the years to come. The provision for the anticipated changes prevents statistical problems that could arise later. In view of the new UN functional classification requirement for "Health affairs and services", it is appropriate to examine and discuss what structural changes, if any, are necessary to the existing government sub-sectoral classification. Now, the questions that are relevant at this stage are:

Should we create a separate health subsector in the National Accounts with hospitals as one of its distinct components?

or

Should we leave the present hospital subsector alone by including all other health categories in the appropriate levels of government, namely, federal, provincial, and local governments, without showing those health categories separately as is done now?



There are, of course, advantages in creating a new health subsector within the government sector with hospitals shown as one of its components. First, such a new subsector will correspond to the new UN functional classification system for international comparison. Second, it will portray more fully the classification changes that are taking place in the economy, namely, the shifts that the government authorities may make from "hospitals" category to "residential care facilities" category and so on either for survey reporting or for their own accounting systems.

Finally, the following suggestions are recommended for improvements in the redesigning process of the hospital survey.

- (i) At the present time, the survey covers both non-financial items such as beds and financial items such as expenditures and revenues. It is recommended that the survey approach be used exclusively for non-financial items. The non-financial items such as patients treated for various conditions required to calculate "real" gross output of hospitals should be obtained in this approach.
- (ii) For financial items, a new approach of obtaining administrative data in machine-readable format should be used. These administrative data should contain all the details of revenues and expenditures the way the hospitals keep the books for their own internal analysis of sources and disposition of funds. The data inflow could be patterned in the



same way as that of the federal government which will facilitate the compilation of information for each calendar year on a quarterly basis. The data which could be supplied in machine-readable format for every quarter would be more timely. Therefore, instead of Statistics Canada sending a structured questionnaire, the respondents can supply machine-readable data for expenditure (both current and capital) and revenue which can be concorded to the Input-Output commodities and used in the System of National Accounts.

- (iii) If a particular province is considering any changes to the existing statistical survey reporting, the expectations of Statistics Canada and the needs of the users as described in this paper should be taken into consideration. A follow-up session could be held to clarify any issues if necessary.

In conclusion, these recommended procedures would eliminate the need to report the financial information on structured questionnaires besides solving some operational problems. They will also facilitate in obtaining more timely information on a calendar year basis which is essential for the National Accounts of the Canadian economy.



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