Has Canada Enough Doctors?

By Joseph W. Willard

Providing adequate health services for all Canadians is a goal about which most people agree, but few realize the difficulties involved in finding a solution. One of the main problems is how to find trained health personnel. It will be discussed in two articles. The one below deals with the question of physicians while another to be published in the subsequent issue will treat the problem of dentists and nurses.

MUCH discussion has taken place, particularly during and since the war, concerning the introduction of a health insurance scheme in Canada. At times, too, little attention has been given to the fact that the implementation of such a medical care program needs to be complemented by sufficient health personnel and adequate hospital facilities.

Any priority list of the health services requirements for Canada to-day must rank hospital facilities and health personnel as two of the most urgent needs. While they are intimately related to each other, it has been necessary, because of space limitations, to consider only the latter question and to limit discussion on medical manpower to the three main professional groups, physicians, dentists and nurses.

I. PHYSICIANS

Supply of Physicians

Canada ranks as a most favoured nation with respect to the number of physicians relative to the size of its population. Only two out of 21 American Republics in the western hemisphere, on which such data are available, have a lower population-physician ratio than Canada. Countries in Asia and Africa, for the most part, do not even remotely approach Canadian standards. In Europe to-day, only Switzerland and the United Kingdom are in a more favourable position than Canada. Canadian needs for additional personnel are dwarfed when set beside those of China, India, many war-torn European countries and numerous Latin American States.

New Zealand has a slightly lower population-physician ratio than Canada and also a smaller geographical area in which to provide medical services. On the other hand, Australia, which is similar to Canada in that it is a geographically large country with a relatively small population, had 1,139 persons per physician[1] in 1945 compared with 960 persons per physician[2] in Canada in the same year. Our position, therefore, is more satisfactory than that of a host of other nations, but falls a little short of matching the United Kingdom and New Zealand and does not even approach that of the United States.[3]

Although it is a common misapprehension that the supply of physicians in Canada has declined in recent years, the number of physicians in relation to population has rarely been more favourable than at present. However, while this is true, it cannot be overlooked that the long-term rate of increase in medical manpower has been only *slightly* greater than that of the general population. For instance, in 1901 and 1911 there were 972 and 970 persons per physician, respectively, compared with 947 in 1947. By 1921 there was an unfavourable rise in this ratio which was extended further during the succeeding decade.

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1. Based on estimate of Commonwealth Statistician for June, 1945.
2. Based on estimate of physicians from "Statement of Supply and Distribution of Physicians in Canada, July, 1945" of Canadian Medical Procurement and Assignment Board, p. 3, and Dominion Bureau of Statistics Intercensal Estimate of population.
3. Population-physician ratio of 713 in 1946 in United States.

However, since 1931 the population-physician ratio has improved encouragingly, dropping from 1,034 persons per physician in 1931 to 968 persons in 1941 and again to 947 in 1947.

Further, the effectiveness of physicians has increased considerably. One illustration is the improvement in transportation facilities which has been important —particularly in rural areas—in enabling a physician to accomplish more in a given time. The increased number of nurses employed by physicians in their offices and the greater scope given specially qualified nurses in hospital treatment have led to a greater economy of the doctor's time. Advances in modes of treatment, such as the use of penicillin and sulpha drugs, have tended to reduce the number of days of medical care required in the case of many types of illness. Also the general raising of living standards, increased health education and improved nutrition have tended to lessen demands for medical care.

Cognizance should also be taken of the fact that the output of Canadian medical schools has greatly increased. It is estimated that about 4,000 graduates will leave the ten Canadian medical schools in the next six years. This represents an annual average of 667 physicians which is considerably above the annual average of 517 physicians graduating in the 20-year inter-war period 1920-1939. A large part of this increase is due to expanded facilities in Canadian medical schools and the opening of a new medical school at Ottawa University which will have its first graduating class in 1951. Also, there is the possibility in the future that the two-year premedical training at the University of Saskatchewan may be extended to a complete medical course and also that British Columbia may establish a medical school.

Deaths of physicians have been rising steadily. The average annual deaths for the five years 1926-30 were 170 but rose to 195 in 1933-37 and increased again in 1940-44 to 222.8. In 1945, the atest year for which information is available, there were 236 deaths. In the years ahead we may expect a gradual increase in the number of deaths of physicians partly because of increase in total numbers, and partly because of the aging of physician population concomitant with that of the population as a whole.

The National Health Survey estimated that in the pre-war years the loss due repatriation of foreign-born graduates amounted to between five and ten per cent of the total output of Canadian medical schools. Although the number of alien medical students in Canada has been reduced somewhat in the last few years, in order to permit the admission of larger numbers of Canadian veterans, to the courses, there will still be a substantial wastage of trained personnel because of this factor. However, while Canada loses in the training of these undergraduates she gains substantially in the post-graduate training afforded Canadians in other countries.

The possibility of a heavy loss of medical manpower through migration is real. Our principal adverse drain of trained personnel is to the United States and the latest figures from the Immigration and Naturalization Service of the United States are not very heartening. In the ten years, 1931 to 1940 an annual average of 112.8 physicians were admitted to the United States as immigrant aliens. Some of these took graduate training and returned to Canada but many did not come back. In the year ended June 30, 1947, 206 Canadian physicians entered United States as immigrant aliens. How many will return we cannot predict. It will depend on many factors not the least important of which will be attractive opportunities in the United States. This migration has been one of the main sources of wastage of our medical manpower resources in the past, and present indications are that it will continue to be a most serious loss. It is not possible at present to predict the extent of general immigration into Canada nor whether there will be any balancing immigration

of physicians to maintain the present relationship between the supply of physicians and population.

Demand for Medical Services

The nation's demand for medical care is affected by a number of variables, including the level of national income and employment, the attitude of the public toward medical care, the size and age distribution of the population, the birth and death rates, the prevalence of disease, etc. The postwar demand for physicians is much greater than in prewar years because of a number of factors, such as the increase in population, the extensive program of the Department of Veterans' Affairs for medical care for veterans, the larger armed forces, the broader appreciation generally of health services and the greater financial capacity to pay for such services. In order to overcome war-time depletion of medical personnel and to meet the greatly expanded post-war demand and need for better public health protection, federal, provincial, and local health departments have placed very heavy demands upon the limited medical manpower trained for this type of health service.

The post-war patient load has been particularly heavy in a number of specialties. For instance, Canada has never had sufficient psychiatrists to serve its patients in mental institutions and persons needing psychiatric treatment, a need which has been augmented by mental disturbances induced by modern warfare. There is also a demand for more physicians with training in obstetrics and pediatrics and a need for specialists in industrial medicine.

Geographically, post-war needs for general practitioners appear to be greatest in the provinces of New Brunswick, Saskatchewan and Prince Edward Island. The provinces with higher percentages of urban population and higher provincial incomes are the ones more adequately served with physicians. The relative position of the provinces, as shown by population-physician ratios, has not altered appreciably in several decades. Ontario, British Columbia and Manitoba occupy the most favoured positions, while Quebec, Alberta and Nova Scotia occupy intermediate positions. From a regional point of view the Maritime Provinces face the greatest shortage. The population-physician ratio of the three provinces of the Maritimes are among the four most unfavourable.

Maldistribution of Physicians

But while regional and provincial comparisons have a certain significance, rural-urban disparities are really the crux of the problem. A study of the population-physician ratios for counties and census divisions for Canada reveals that, for the most part, the proportion of active physicians to population is more unfavourable in the more rural areas than in the highly urbanized areas. Added to this is the fact that it takes more time for a rural physician to visit his patients. If rural people are to enjoy parity of services, the rural physician should serve fewer people than the urban physician. Also, the disproportionately large number of older doctors in rural practice affects rural areas adversely.

During the war the shortage of physicians in rural areas was critical. The Canadian Medical Procurement and Assignment Board in a number of instances temporarily alleviated the situation by seconding medical officers from the armed forces to serve in some of these rural communities. But this was a war-time stop-gap measure designed to assist in only the most urgent situations. Since the end of the war the shortage of doctors in rural areas has been relieved to some extent by the return of service doctors to civilian life but it has by no means disappeared.

The disparity in the supply of physicians between rural areas and urban centres has been with us for many years but the disturbing fact is that it has been increasing. Canadian experience corresponds very closely with that of the United States in this regard and for this reason it is important to note a few

of the conclusions of a study of the location and movement of physicians from 1923 to 1938 in that country. "The combined effect of physician migration, recruitment, and losses from the profession, over the period 1923-38, resulted in gains for both large and small cities and in losses for rural communities. Moreover, comparison of physician totals with population data indicates that the tendency for physicians to concentrate in large urban areas somewhat parallels, but exceeds in magnitude, the trend for the population as a whole. Failure of rural localities to attract and retain a proportionate share of new registrants has resulted in a distribution heavily weighted with old physicians. In 1923 the median age of rural physicians was four years above that for physicians in large cities; by 1938 the difference was ten years."[4]

A recent illustration of the need in rural areas and small communities in one province is given in the report of the Special Select Committee of the Manitoba Legislature on Health which stated that Manitoba needs another 130 general practitioners and an additional 75 specialists for practice outside Greater Winnipeg before medical services would be up to standard.[5]

In contrast, the urban centres, and the metropolitan areas in particular, are very well served with physicians. For instance, the seven largest cities in Canada contain roughly 28 per cent of the population but about 46 per cent of the physicians. The population-physician ratio for these seven centres is well below 600 persons per doctor.

This rural-urban maldistribution is one of the most fundamental problems in the consideration of a more equitable allocation of the services of Canadian physicians. There are several cogent reasons why physicians generally, and graduates from medical schools in particular, tend to locate in cities. In these centres they have access to modern hospital facilities, professional contacts and the opportunity of more easily keeping abreast with advances in medical science. Also they can enjoy a better standard of living both economically and culturally.

Two useful approaches through which this faulty distribution might to some extent be adjusted suggest themselves. Firstly, the economic status of the physician in these areas might be improved by some method of supplementing his patient-income. In other words, financially it should be to his advantage rather than his detriment to serve in a rural community. Secondly, rural practice might be made more attractive through the construction and improvement of hospital facilities (wherever the population is sufficient to warrant such facilities). One might observe also that these suggestions would apply whether or not there is a health insurance scheme which provides general practitioner service.

As many medical students return to their home community after completing medical training, it might be helpful also to provide some encouragement by means of 'medical schoarships" to young persons with the necessary ability and aptitude who live in small towns and rural localities. This would have the further advantage of helping to offset the differential in the cost of medical education between students whose homes are in the same centres as medical schools and some of those students living outside such localities.

Medical Care Needs

The extent of unmet needs for medical care for the people of Canada is not known. In this regard a recent study of the rural needs of the population in Michigan is of interest both from the point of view of the survey method used and of the results. "The basic element of the method is a list of symptoms, which, if any one is present, indicate need for medical attention. The

4. Location and Movement of Physicians, 1923 and 1938, by Mounten, Pennell, and Brockett, *Public Health Reports*, United States Public Health Service, Vol. 60, Feb. 16, 1945, No. 7, p. 183.

5. *Public Health Economics*, Pub. by Bureau of Public Health Economics, School of Public Health, University of Michigan, Vol. 4, No. 8, Aug., 1947, p. 586.

findings of a survey using the list of symptoms and certain additional questions showed that 584 individuals, 47.9 per cent, of a sample of 1,219 persons had one or more symptoms which should receive medical attention and that among the 584 individuals there were 314, or 27.7 per cent of the 1,219, who had not seen a doctor. The need for medical care increased with the age of the population and with a decline in the gross income of the family."[6]

Why were these people with unmet medical needs not availing themselves of medical attention? "The reasons given most frequently for not seeing a doctor were: (1) 'ailment not serious enough,' (2) 'don't have the necessary funds,' (3) 'don't have time to see a doctor' and (4) 'doctors can't help you much anyway'."[7]

That the amount of unmet need for medical care is considerable and that two important reasons for this are lack of appreciation of and an inability to pay for medical services is corroborated by other studies. One of the most pressing problems concerning the health of our people is how to reach these unmet needs for medical care. In whatever manner this is achieved, it will involve some extension of the present health services which in turn will depend upon the supplementation of existing personnel and the effecting of a fair and equitable distribution of all such personnel.

The medical manpower situation might be summarized as follows: international comparisons show Canada to be one of the most favoured nations; the present population-physician ratio is perhaps the most satisfactory in Canadian experience; there has been a steady improvement in the effectiveness of medical services; and the output of medical schools has been greatly augmented. On the other hand, the number of deaths of physicians is rising slowly; some loss of trained personnel will continue because of the number of foreign-born students being educated in Canada; there will be a further wastage of medical manpower through emigration with a possibility that this may become a very heavy loss. Further, the demand for medical services has been greatly augmented and there still appears to be a sizeable amount of unmet needs for medical care.

The prospects of more favourable population-physician ratios for several years ahead are good provided the net loss of emigration over immigration of physicians does not become too serious. However, some areas continue to face an acute shortage of physicians. The crucial problem at the present time appears to be not so much an overall shortage, although this does pertain in some specialties, as a maldistribution of physicians. Any public medical care programs that propose to adequately serve rural areas in Canada must give prime consideration to this difficulty.

6. "Medical Needs of the Rural Population in Michigan," by Charles R. Hoffer. *Rural Sociology*, University of North Carolina, Vol. 12, June, 1947, No. 2 p. 162.

7. *Ibid.*, p. 164.

Scotland and the New National Health Service

By Muriel Ritson

IN countries where a State Medical Service has either not yet been introduced or is still in its infancy, the new British Health Service, inaugurated by the passing of the English and Scottish National Health Service Acts may well seem revolutionary.

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In Scotland, where a State sponsored Medical Service has been an accepted part of our Social Services for over 30 years, we regard it as evolutionary; and indeed all socially minded citizens have believed for a long time that a widening and co-ordination of our medical services were overdue—division of opinion merely appearing in discussion