

External Affairs
Supplementary Paper

No. 53/26 First National Report on Gamma Globulin

An address by the Minister of National Health and Welfare, Mr. Paul Martin, made to the 41st annual meeting of the Canadian Public Health Association, at Toronto, October 1, 1953.

The United Nations -- World Clinic

For the past year it has been my responsibility -- along with my colleague, our distinguished Secretary of State for External Affairs, Mr. Pearson -- to represent Canada at the seventh session of the United Nations, which set itself the formidable task of achieving an honourable armistice in Korea. In our consultations with other member nations and in our deliberations around the conference table, it seemed to me that there was a direct parallel between our efforts to achieve peace and security throughout the world and what Canada's public health workers are doing every day to improve the health and well-being of this nation.

To me, the United Nations is a kind of "global clinic" which seeks out and deals with complex political, social and economic ills in an effort to restore health and security to a sick and troubled world.

The principles followed by the United Nations are much the same as those which guide the work of any good health clinic. First, and most important, its doors are always open to all who stand in need of its help. Secondly, it recognizes the necessity for getting all the facts before diagnosing the condition and prescribing treatment. Third, it stresses the value of prevention and seeks to eliminate the causes of conflict before trouble develops. Finally, it enlists the co-operation and support of members with varying and sometimes conflicting backgrounds, capacities and interests.

A recent example of co-operative action on an urgent health problem will illustrate how these same principles apply to public health work in Canada. I have in mind the prompt and effective marshalling of the nation's public health resources to help combat this summer's polio epidemic which assumed such serious proportions in some areas of Canada.

Gamma Globulin for Poliomyelitis

With the virtual elimination of diphtheria, whooping cough and smallpox as threats to the nation's health and with the very encouraging progress made in recent years in bringing tuberculosis under control, poliomyelitis has now assumed new prominence as a major public health problem in Canada. For personal reasons, this is a matter in which I have a particular interest.

Preliminary figures, with 5,784 cases and a tragic toll of 214 deaths to date, would seem to indicate that this year's outbreak of polio -- particularly in Manitoba and the earlier epidemic in the Yukon -- may prove to be one of the most serious on record. That it was possible to produce in Canada the only known preventive agent -- gamma globulin -- and to ensure its equitable distribution is an outstanding illustration of effective co-operation and a tribute to the nation's public health workers.

Gamma globulin is Canada's health story of the year. To meet an emergency situation, the Federal Government granted more than \$150,000 to assist in the production of gamma globulin and to extend research into its value. Detailed plans have also been worked out to assure considerably increased production in 1954.

I am sure the members of this Association appreciate fully that many questions concerning the use and the effectiveness of gamma globulin still remain to be answered. While a great deal of publicity has been given to its value in modifying the paralysis which may follow an attack of polio, the use of this blood fraction is still in the experimental stage and there is, as yet, little justification for undue optimism.

A Mammoth Production Job

Interest in Canada in the use of gamma globulin for preventing or lessening the severity of paralysis from polio was aroused by reports of trials made in the United States. Many members of this group were probably present in Cleveland last year when Dr. W. McD. Hammon of Pittsburgh reported the results of tests involving some 55,000 children. Dr. Hammon found among that half of the experimental group which received gamma globulin injections an encouraging decrease in paralytic polio cases as well as a significant modification in the severity of the paralysis in those who contracted the disease.

In view of this evidence, inconclusive as it may have been, a conference was called in Ottawa last January under the chairmanship of my Deputy Minister, Dr. G.D.W. Cameron, to consider all aspects of the problem. The public health and research experts attending this conference agreed that, while final judgment should be reserved until more facts were known, every effort should be made to increase the supply of gamma globulin.

Fortunately the Connaught Medical Research Laboratories in Toronto not only had scientific personnel familiar with the complex processes involved in the production of gamma globulin but had a supply of blood serum on hand which had been stored from the Second World War. With funds provided out of the National Health Programme, special production facilities were set up and the Connaught Laboratories worked night and day to produce the needed supplies of gamma globulin.

The truly remarkable results achieved in producing approximately 25,000 average doses of gamma globulin is a tribute to Dr. Defries and his staff at the Connaught Laboratories. Particular mention should be made of the work

of Dr. Arthur Charles and Mrs. K.A.B. Degen whose skill and ingenuity contributed so much to the success of the whole operation. The final step in the development of other infectious diseases and will almost certainly be replaced when a more lasting immunizing agent for polio is developed.

Distributing Available Supplies

To ensure that the limited quantities of the serum would be used to the very best advantage, an advisory committee representing federal and provincial health departments and university medical research centres was set up to assist in the distribution of gamma globulin. It was agreed that supplies would be made available only through provincial health departments and that allocations would be made by the Committee to those areas where polio reached epidemic proportions. The serum was reserved for administration to those in the younger age group who had been directly exposed to paralytic poliomyelitis.

In view of the severity of the epidemic in Manitoba, additional supplies of gamma globulin were earmarked for that province permitting public health officials to provide injections to persons under 30 coming in contact with paralytic cases as well as to voluntary nurses working in polio wards.

That it has been possible to meet all requests for gamma globulin this summer and fall is a tribute to the work of Dr. Milton Brown and the members of the advisory committee and to Dr. B.D.B. Layton of the Department of National Health and Welfare who had responsibility for the day to day administration of the Committee's distribution policy. It is also a high tribute to the understanding and restraint exhibited by the provincial health departments in assessing local situations and presenting their requests to the Committee.

An important feature of the programme was the recommendation made by the Committee that follow-up studies should be conducted where gamma globulin had been administered. It was suggested that information should be gathered, wherever possible, by a team consisting of a health officer and public health nurses. From a research standpoint, the value of this procedure is inestimable and it is expected that the reports of these teams will provide valuable information on which further studies of the effectiveness of the serum can be made.

Plans are now under discussion with provincial health authorities to undertake an expanded programme next year under which the facilities of the Connaught Laboratories will be increased so that production can be more than doubled. With no reserve supply of blood serum on hand, the Canadian Red Cross Society will be called upon to provide blood through its long-established blood donor service. I hope the importance of the gamma globulin programme will give new incentive to the public to donate their blood and to lend their financial support to the vital work of the Canadian Red Cross Society.

Continuing Research on Polio

While gamma globulin, in the light of our present knowledge, is the most effective weapon we have in the fight against polio, it should be remembered that it only provides a degree of protection for a limited time - perhaps

five weeks at best. This "passive immunization" has not in the past proved entirely satisfactory for the control of other infectious diseases and will almost certainly be replaced when a more lasting immunizing agent for polio is developed. The final answer to the control of polio will be found in the protection of a vaccine that will confer a lasting immunity.

Important progress has already been made in this direction and federal aid is now being given to research studies at the Toronto Hospital for Sick Children and the School of Hygiene at the University of Montreal. The Toronto research, which is being directed by Dr. A.J. Rhodes, has been undertaken to investigate more thoroughly than has previously been possible the various strains of the polio virus in Canada and to find out which of the three common types cause polio epidemics in this country.

This project is being correlated with work on the development of a polio vaccine which Dr. Rhodes is carrying forward at the Connaught Laboratories. In this connection, it was recently announced that progress had been made in producing polio virus in quantity -- a necessary and important step in the production of any polio vaccine. Naturally, we all look forward to the day when an effective vaccine will be available to prevent the ravages of this crippling and killing disease.

Extending the Frontiers of Public Health

The story of gamma globulin is a dramatic illustration of the exciting developments that are now taking place in the entire field of public health. All across Canada, new services are being developed and new facilities are being established to assist public health workers in combatting disease and extending the frontiers of life.

For many years this country has enjoyed a high standard of public health. Credit for the notable advances of the past half century must be shared by our health professions, our voluntary health agencies and the health departments of our provincial and local governments. Five years ago, to help fill certain evident gaps in existing public health services, the Federal Government launched a vast new programme of grants-in-aid to the provinces. Since that time, the National Health Programme has given a decided stimulus to health action in Canada, not by usurping or duplicating provincial and local services but by giving them needed financial support.

Since 1948, under the stimulus of the National Health Programme, more has been done by Canada's senior governments to advance the cause of public health than in any comparable period in our history. While expanded government support has been of unquestioned value, we must never lose sight of the fact that the true effectiveness of all our public health programmes must ultimately depend on the devotion and effort of the physicians, nurses, and other professional staff who make up Canada's dedicated army of public health workers.

This spring, new possibilities for progress were opened up with the announcement of three new grants for Child and Maternal Health, Medical Rehabilitation, and Laboratory and Radiological Services under which \$42,000,000

will be available to the provinces over the next five years to help develop improved services and facilities in these fields. As in the development of the gamma globulin programme, the successful operation of these new health grants will require the continued support and co-operation of provincial health authorities and of public health workers.

There can be no question that the National Health Programme has had a strong impact on public health practice in Canada. It is difficult to review progress under specific headings since so many health services are inter-related and since progress in one sector is so quickly reflected in another. It might be of interest, however, for me to highlight very briefly a few of the more outstanding developments that are of particular concern to the public health worker:

(1) Strengthening Provincial Health Administrations:

All provinces have made use of the grant funds to develop their central health administrations by adding new divisions and strengthening existing services.

(2) Expanding Community Health Services:

The notable expansion of local public health services is best indicated by the fact that 8,600,000 Canadians live in areas of Canada now served by 107 health units given continuing assistance under this Programme.

(3) Training Health Workers:

Since the beginning of the National Health Programme, some 5,000 health workers have been given special training and more than 4,700 have been added to provincial and local health staffs.

(4) Improving School Health Services:

In every province, the National Health Programme has made possible significant improvements and extensions in school and pre-school health and medical services.

(5) Extending Public Health Services in Hospitals:

Hospitals are being encouraged to take a more active part in community health activities because of the support given for out-patient departments and other public health services.

(6) Augmenting Preventive Health Services:

Finally, there has been a very decided increase in preventive and diagnostic facilities and services. New clinics have been set up to fight cancer, arthritis and rheumatism, mental illness and crippling conditions in children, while free X-ray examinations and B.C.G. immunization are helping to bring tuberculosis under control.

Good Health in a Healthy Society

These, then, are some of the highlights of Canada's National Health Programme. By any standard, public health achievements in this country merit respect. But the steady and responsible progress of our health plans takes on added significance when considered against the sombre background of a world in turmoil.

And that brings me back to what I said at the outset of these remarks about the relation between what we are doing for the health of our people and our efforts to build a healthier, more peaceful world. There can be no question that concern for the health of the individual is one of the surest marks of a humane and enlightened society. Just as surely, the subjugation of individual welfare is one of the first signs of tyranny. Perhaps I might be permitted to recall the words I used a year ago in speaking to the annual meeting of this Association in Winnipeg:

"In societies that themselves are sick, the health of the individual is of little account. In any conflict of interest that develops between the state and its members, the state comes always first. That is one reason why Communism can sometimes conquer but can never convince those nourished in the warm humanity of the civilization of the Western World."

Today, we stand impatient on the threshold of many promising opportunities to enlarge the enjoyment of life, to restrict disease and to reinforce health -- not only here in Canada but in less fortunate lands that, because of hunger, poverty and disease, lag generations and centuries behind the common forward march of humanity.

But all our progress is threatened by the ever present possibility of world conflict. We are forced to invest time, talent, and productive energy in building up our defences to safeguard national security. Through patient international negotiation at the United Nations, we are working in good faith to provide a better world in which men and nations can walk together in friendliness and self-respect. But I say to you today that nothing serves more to strengthen our way of life and to give heart to our own people and faith to those in other lands than humanitarian efforts to further the cause of human health and well-being, not for ourselves alone but for all mankind.

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