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Public Health

IT is a simple but shocking truth that we know much more about health protection than we apply individually or collectively.

We could live longer and enjoy life more fully if only we were interested enough to care for our bodies in ways made available to us by science. For reasons that cannot be associated with complete sanity we brush off suggestions that we should let a doctor examine us, or take time off to relax, or even give a little thought to our habits of life: habits that may be rushing us toward premature graves.

Business executives are probably among the foremost in recognizing that a man is only in his best position to exercise judgment when he is feeling his best physically. That is probably why business people are among the sturdiest supporters of public health.

Some confusion exists between the terms "public health" and "medical service." Public health is the science and the art of preventing disease, prolonging life, and promoting physical and mental health and efficiency through organized community efforts. These include sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health. This is a widely accepted definition given by Professor C. E. A. Winslow in *Science*.

The provincial responsibility

All the provinces have well-organized health services staffed by highly qualified personnel.

Health services in the provinces commonly include central planning, the operation of special programmes affecting the whole province, such as research in cancer,

mental health and tuberculosis, and the provision of laboratory service. The provinces make consultative service available to local authorities; they administer regulations governing local services; they provide basic services in areas where there is no municipal organization; they work closely with provincial education departments with respect to school children's health and with departments of agriculture regarding the control of animal diseases that may be carried to man by meat or milk.

Visitors to the parliament buildings in Fredericton may see a cairn commemorating an important event: the appointment in New Brunswick of the first Minister of Health in the British Empire. That example was followed in England and in other parts of the world, raising public health to new importance and efficiency.

The first public health laboratory in North America was established in Ontario in 1890, and today all the provinces operate laboratory services and immunization centres. Ontario, which had a part-time secretary looking after the province's health on a budget of \$4,000 in 1882, now has more than 6,000 civil servants in the department of health (4,500 of whom are employed in mental hospitals) and the annual expenditure is about \$50 million.

Municipal activity

The purpose of a local health department may be summarized in this way: to apply the sciences of preventive medicine, prevent disease, develop a healthy population, and safeguard life at all ages so that the optimum of longevity may be attained. Duties within this broad assignment include collection of vital statistics; provision of good sanitation; and seeing to it that cases of certain infectious diseases are isolated and placarded.

In public health language "sanitation" means control of the conditions of the physical environment of man so that he can carry on his life at home, at work

and at play without hazard to his own or his neighbour's health. This includes the protection of the source, processing, and distribution of water and foods, especially milk and milk products, against contamination or pollution; the disposal of man's personal and industrial wastes; control of insects, vermin, and animals capable of causing or spreading disease in the human being; the cleanliness of the air; the conditions of employment where irritating or poisonous materials are a by-product of the work; elimination of noise that interferes with rest and comfort; abatement of public nuisances.

Forward-looking persons are now seeking to improve local health services in intensity as well as in breadth of coverage. It is becoming generally accepted that local health officers should be full-time workers for the public health of the area they serve, and should have special training in preventive medicine and hygiene.

This ideal is being realized in some provinces by the establishment of local health units, first started in the province of Quebec in 1926. A health unit is a union of urban and rural municipalities for the purpose of providing a more efficient sustained community health programme, carried out by full-time qualified personnel. Some units serve a county, others embrace a city and its suburbs.

Federal health services

The federal health services seek to keep disease out of Canada, to ensure that the country's food, drugs and medicines are safe, and to maintain an environment free from preventable health hazards. These services are administered by the Department of National Health and Welfare.

One section of the Department is charged with making sure that food sold in Canada is pure, clean and wholesome, and that drugs made available here may be used safely for the purposes for which they are recommended. It controls the manufacturing, labelling, advertising and merchandising of proprietary or patent medicines.

As an example, consider preparations said to contain certain vitamins and minerals. These are analysed to make sure that the amounts claimed on the labels are indeed present. No one is allowed to offer for sale to the public any food or drug as a treatment for certain ailments, such as cancer, diabetes, epilepsy, heart disease, tuberculosis and venereal disease. All the many listed diseases are so serious as to demand professional care.

This is a particularly beneficial field of work, pending the general and thorough education of people in health matters. We may laugh at the quaint beliefs of yesterday, but there are still many false ideas abroad. People who seem to be otherwise intelligent put their

faith in remedies that are no more than superstitions, although the whole sum of medical knowledge is readily obtainable from family doctors and public clinics. The United States Commissioner of Food and drugs said recently: "Lives are being lost needlessly because people are putting their trust in worthless remedies." A man on our Canadian prairies was found to be offering silk handkerchiefs for the healing of various ailments.

Other sections of the Department of National Health and Welfare have to do with occupational health; industrial hygiene; public health engineering; medical examination of immigrants; quarantine; the handling of food and drink aboard passenger trains, and many other things.

The national health plan

The national health grant programme stems from a suggestion favourably reported on by the Rowell-Sirois Commission in 1940. It proposed federal grants-in-aid to support broad public health programmes which should include sustained attacks upon tuberculosis, mental illness, venereal disease and cancer. The programme was introduced in 1948, providing for the payment of federal grants to the provinces for specified purposes.

Though shortage of qualified workers and other essential factors have limited utilization of the funds made available, there have been impressive advances made. Mental health services have been notably extended. In the first seven years, there were 4,456 doctors, dentists, and other professional people added to the ranks of public health service; more than 9,000 health workers were given training; space for 65,000 beds was made available under the hospital construction grant.

Voluntary organizations

Assisting, and often prodding, the official public health agencies are voluntary associations of two kinds: professional, like the Canadian Medical Association, and lay organizations like the Health League of Canada. The voluntary agency has been the pioneer agency.

Many of the earliest welfare undertakings were initiated by groups of public-spirited citizens. As the worth of these programmes was proved, and the financial burden became too heavy for private philanthropy, governments on various levels were drawn into the activities.

These voluntary associations cover every phase of health-building. Some are national, some provincial and some local. They interest themselves in child welfare, prevention of blindness, treatment of arthritis and

rheumatism, caring for people who are diabetic, serving as auxiliaries in hospitals, promoting health education in schools, visiting patients in mental hospitals, providing needed items of diet to indigent persons, and a hundred other kinds of service.

Most widely known is the Health League of Canada, which for thirty-five years has been devoted to a dynamic programme of health education, especially in the field of disease prevention, to the support of official departments of health, and to co-operation in both advisory and active ways with the other voluntary health organizations. Its story was told in detail in *Maclean's Magazine*, November 26, 1955.

Dr. Gordon Bates, director of the Health League since its beginning, believes that most of the 125,000 Canadians who die every year might have lived longer, and many of the ailing persons might have remained healthy, if they and the community health authorities had been thoroughly educated in matters of health protection. Failure to prevent illness that is preventable is costly in terms of human misery, decreased industrial production, unnecessary poverty, and death.

Some encouraging trends

Even today, one comes upon many provincial health reports that say, month after month, "no cases of typhoid, no cases of diphtheria." Since the introduction of drug therapy in the control of tuberculosis the death rate from that disease has been declining with accelerated rapidity. In the United States complete figures for 1955 are expected to show for the first time a drop below 10 deaths per 100,000, only half the death rate of 1951 and less than a fifth of that recorded twenty years ago. The death rate among children under 15 is less than one tenth the figure of twenty years ago.

Canada has been moving against tuberculosis with increasing energy during this century. Free diagnostic services are provided by public health authorities, and X-ray examinations are given free in industrial plants, offices and schools. Free or subsidized treatment is provided in provincial sanatoria. Some provinces are employing a vaccine (B.C.G.) as a preventive measure, administering it to new-born infants and making it available to other children through health units.

A discovery by Dr. Edith Mankiewicz and her staff at the Royal Edward Laurentian Hospital in Montreal, announced in December, is a great step forward in combatting the disease. It reduces by at least three weeks the length of time needed to confirm or disprove the presence of tuberculosis in a patient.

Another deadly disease of former years is on its way out: typhoid. Dr. Calixte Favreau, of Hôpital Sainte-Justine, Montreal, is quoted in *Health Facts* as saying:

"Pasteurization is the most practical, economical, simple and sure way of getting pure, non-contaminated milk for children."

But pasteurization is not yet universal in Canada, and Dr. Bates declares boldly: "millions of Canadians are still flirting with sickness and death by drinking unpasteurized milk."

Polio, so much in the public mind during the past ten years, is being attacked by use of the Salk vaccine, but it is still too early for statistical proof that the disease has been mastered. Ontario's health minister reported in December that, following use of the vaccine, the percentage of deaths during the 1955 polio season was one half that of 1954.

Diphtheria, which killed thousands of babies and young children in early days, has practically vanished with use of the toxoid discovered by Dr. Gustav Ramon, of France. Toronto had its first death-free year in 1940, and now case-free years are commonplace. In all of Canada in 1953 there were only 15 deaths from diphtheria.

This victory is the outcome of one of the great health efforts in history, waged by the Health League in co-operation with departments of health. Canada, with only nine million population, had ten thousand cases of diphtheria in one year, resulting in thirteen hundred deaths. After crusading for thirty years, bringing pressure to bear on health authorities and educating parents, it was possible to announce that the year 1953 passed with only 132 cases of diphtheria reported.

Hope for mental health

Mental illness, a problem of staggering proportions, is being tackled by public health authorities all across the nation with new spirit. It is estimated by the Canadian Mental Health Association that there are in Canada at any one time 112,000 people disabled and another 915,000 partly disabled by this affliction. Statistics compiled by the Dominion Bureau of Statistics, the World Health Organization and the Alcoholism Research Foundation give some particulars: 66,000 people in mental hospitals and training schools; 150,000 suffering from alcoholism; 1,800 suicides a year; 3,000 drug addicts.

New services and the improvement of existing services with assistance of the National Health Grant are slowly but surely moving in to cope with mental illness.

Like prevention in other health areas, education is believed to be the most efficient weapon against mental illness. The Canadian Mental Health Association, established in 1918, has launched a vigorous new pro-

gramme that includes the establishment of provincial divisions and local branches. Among the principal purposes is the education of the public not only about the nature and treatment of mental illness but, more important, about the principles of mental hygiene and prevention of breakdown.

One of the greatest needs in dealing with mental illness is to wean people away from the feeling of shame formerly associated with the disease. Education of this sort is not wholly in the realm of adulthood, but should start in school, where children should learn the elements of right thinking about mental health.

Some unsolved problems

Thousands of hours a year are being spent by research workers on problems associated with diseases of the heart. Many new drugs are being used, and tests are being made through surgery, nutrition, rest of body and mind, and controlled living, but the answer to a mounting mortality has not yet been found. More than in many other diseases, the spirited co-operation of the patient is needed. Education in this area is being carried on by the Canadian Heart Association.

Another disease, cancer, still defies science, but much could be done with existing knowledge to lessen the death toll if only people would seek medical advice while the disease is localized. Fundamental research and wide education are sponsored by the National Cancer Institute of Canada and the Canadian Cancer Society. The provinces have set up or sponsored diagnostic clinics to enable persons who suspect that they have the disease to obtain early diagnosis and treatment.

The secret of cancer control, in our present state of knowledge, includes early detection, careful diagnosis, treatment and education. The great enemy of detection is flight: flight from the fear that diagnosis will reveal the truth. The resulting delay — even if only of short duration — may be fatal.

An estimated two million Canadians receive dental care during the course of a year, and this figure points up the case for preventive measures. General health will benefit through improved dental health. Public dental health consists in preventing dental disease and prolonging dental efficiency through organized community effort.

A more intelligent use of all known means of preventing dental disease and abnormalities is called for. These methods include sound nutrition, good dietary habits, and properly timed and effective tooth brushing. In addition, says the Health League of Canada, communal water supplies should be fluoridated.

Dental disease is almost entirely preventable: it remains only for people as individuals and as members of communities to see to it that the preventive measures are used.

Recreation

Public health is concerned with recreation of all body-building and mind-relaxing sorts. Says Dr. J. B. Kirkpatrick, Director of the School of Physical Education, McGill University: "A programme which focuses attention only upon the cure, or even upon the cure and prevention, of diseases, will waste dollars, hours and energy in 'picking up the pieces' after health accidents that need not have occurred . . . An over-all programme should be as much concerned with providing effective opportunities for people to exercise and to play as with hospitalization and immunization. We have too often overlooked the role of the physical education teacher and the recreation leader in the promotion of national health."

What is still needed

Even in prosperous and enlightened Canada there are important types of health service that are not available to all our people; the type and quality of public health service is not everywhere adequate; there has been insufficient emphasis in some areas on policies of prevention.

Much of the needed educational work falls upon the shoulders of the family doctor. He is the one who can gain the ear of the people. He must never, if we are to continue to progress in health, become disinterested in the preventive aspects of medicine. His personal influence can be more effective than all the publicity campaigns conceived by public health officials.

Personal effort

But not all the work of the finest physicians, surgeons, public health officers, and educationists can take care of the person who refuses to do his part toward regaining and maintaining his health.

How careless we are of our own precious possession, good health! Well-baby, pre-natal, well-woman, and cancer-detection clinics, providing free of charge the latest and best in advice, are ignored by thousands who would benefit by using them. Preventive treatments for whooping cough, diphtheria, smallpox, tuberculosis, and other diseases are brushed aside, with fatal results. Self-medication is ignorantly practised.

Co-operation is an empty word unless there is an investment in the job by all the co-operating parties. Governments on all levels may co-operate with physicians, scientists and educationists, but their united work goes for nothing with every man and woman who refuses to do his or her part.