

- (3) A small child psychiatric in-patient service within the department of pediatrics.
- (4) Access to a residential treatment centre.
- (5) Development of day care centres.

IV. EXAMINATIONS

It is considered that if undergraduate and post-graduate training in child psychiatry is adequate across Canada, a question related to this field of medicine should be included in certification and fellowship examinations in pediatrics. The Medical Council of Canada examination in pediatrics might also include a question on intellectual and emotional problems in children.

V. SYMPOSIUM

The organization of a symposium on the teaching of child psychiatry at an annual meeting of the Canadian Paediatric Society is strongly recommended.

SUMMARY

The need for physicians to acquire a deeper understanding of, and experience in, emotional and intellectual development and disorders associated with these functions in the child is recognized. A training program for undergraduate medical students and graduates has been proposed.

Northern Venture

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ABSTRACT

During the past year the Department of Pediatrics at Queen's University has supplied a pediatric consulting service to the James Bay Zone of the Indian and Northern Health Services. Five pediatricians and three pediatric residents have visited the area for periods of two weeks. The organization of the program, the educational opportunities inherent in the scheme, the health problems encountered and the special character and challenge of the work are briefly described.

SOMMAIRE

L'année dernière, le service de pédiatrie à l'Université Queen a fourni un service de consultation pédiatrique aux habitants de la région de la Baie James, pour le compte des services médicaux aux Indiens et aux indigènes du Nord. Cinq pédiatres et trois résidents en pédiatrie ont visité la région pendant des périodes de deux semaines. L'article expose brièvement l'organisation du plan, les occasions d'apprendre qu'il comportait, les problèmes pathologiques rencontrés ainsi que le caractère spécial de ce travail et les difficultés à surmonter.

IN 1964 collaboration began between the Faculty of Medicine at Queen's University and the Directorate of Indian and Northern Health Services of the Department of National Health and Welfare. The first move was the provision of a school health service by the Department of Preventive Medicine to the Tyendingaga Indian Reserve at Deseronto. The second move was the establishment of consultant services by the Department of Pediatrics to the James Bay Zone. From the beginning it was intended that both these operations should include the three traditional functions of a university medical school, namely, service, education and research. This paper describes our activities in the James Bay Zone.

THE JAMES BAY ZONE

The James Bay Zone of the Indian and Northern Health Services extends from Winisk on the southwest coast of Hudson's Bay into James Bay and up the east coast of Hudson's Bay to Sugluk on Hudson's Strait (Fig. 1). Part of the Zone is in Ontario and part in Quebec. The total population is 8340. The largest town (population 1500) is Moosonee at the outlet of the Moose River on James Bay. Moose Factory (population 1350) is situated on an island in the estuary of the same river about a mile from Moosonee. The Moose Factory Indian Hospital is the Zone headquarters. The remainder of the population is distributed in settlements on the coast or a little way inland throughout the Zone.

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The tree-line runs north of Winisk on the west coast and through Great Whale River on the east coast. In general, communities south of the tree-line are Indian and those to the north are Eskimo. Great Whale River has a population of both Indians and Eskimos.

Each settlement contains from 70 to 1000 natives and a small "white" population. The term "white" is unsatisfactory and inaccurate but it is in current use in a purely utilitarian way to describe those people who are neither Indian nor Eskimo. The white population consists of government officials

seriously hamper or stop transport to and from the settlements for three to six weeks.

THE HEALTH SERVICE

The headquarters for the Health Service to the Zone is the Moose Factory Indian Hospital. The Zone superintendent is also the medical superintendent of the hospital. There is a potential staff of six doctors but seldom are all the posts filled. The hospital itself, built in 1950, has 170 beds. Half of these are devoted to tuberculosis for pa-

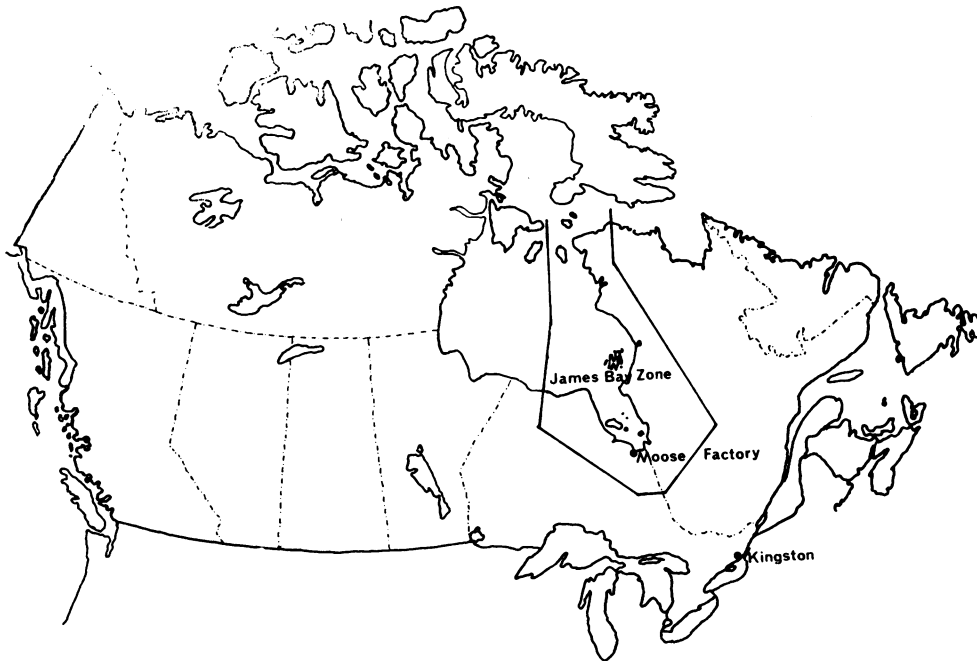


Fig. 1.—Sketch map of Canada to show the location of the James Bay Zone, Moose Factory and Kingston.

from the Departments of Transport and Northern Affairs, school teachers, the Anglican and Roman Catholic missionaries, the public health nurses and the managers and staffs of the Hudson's Bay Company stores. In some communities there are mission hospitals run by a religious order; in others there are Air Force bases and weather stations. In the summer there is a transient white population of tourists, surveyors, anthropologists, sociologists and other students. The organization of one community within the James Bay Zone has been well described by Willmott.¹ Studies of other similar communities have been made.²⁻⁴

Access to the James Bay Zone from Southern Ontario is by train or air to Moosonee. Transport over short distances within the Zone is by boat, canoe, dog team or snowmobile according to the season. In some communities there are motor vehicles (cars, jeeps, motor scooters), but none of the settlements are connected by roads. Transport over longer distances is by air. Break-up (May/June) and freeze-up (November/December)

tients from the Zone and farther north. The other 80 beds form an active treatment hospital with a 30-bed children's ward. An operating theatre is available and the general facilities are modern. Limited pathological and radiological investigations are carried out.

Most of the settlements have nursing stations (Fig. 2). These provide quarters for the nurse or nurses, an office, a dispensing unit and usually one or two beds for maternity cases or ill patients awaiting transport. The settlements are visited by the doctors from Moose Factory Hospital from time to time and communications with the hospital are maintained by radio and telephone.

HEALTH PROBLEMS

The health problems of arctic and subarctic regions have been described by Hildes⁵ and others.⁶⁻⁹ The pattern of disease encountered is influenced by the cold climate, the low socio-economic status of a scattered population and the confluence of modern civilization with a more

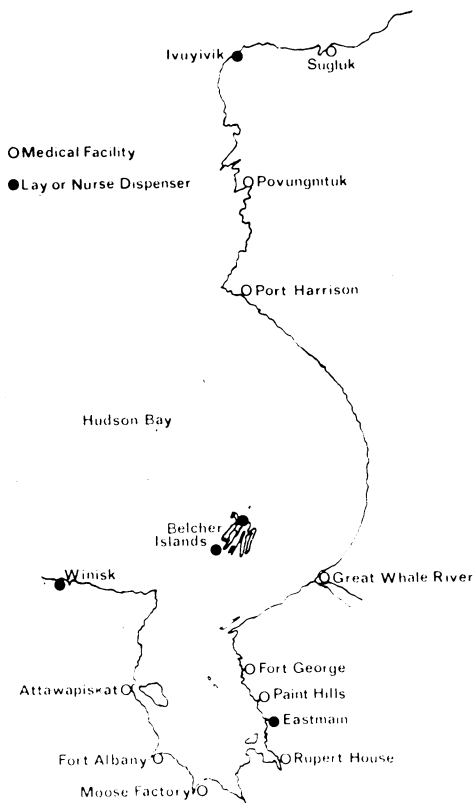


Fig. 2.—Sketch map of the James Bay Zone to show the nursing stations.

primitive society. The infant mortality rate is high. There is a high incidence of infectious disease particularly of the respiratory tract, but gastroenteritis, tuberculosis and parasitic infestation are also common. Malnutrition, particularly in infants, occurs. There are problems in the management of obstetrical emergencies. The health education of the population is hindered by language barriers.

QUEEN'S UNIVERSITY'S COLLABORATION

Service

Five pediatricians each spent two weeks in the James Bay Zone in 1965. Most of the time was spent at Moose Factory Indian Hospital, but each consultant made a field trip of several days to one or more of the settlements on the Coast. On three occasions the consultants were accompanied by pediatric residents. To a greater or lesser extent all took part in the health service. The resident worked on the pediatric ward and in the outpatient department, and took his turn "on call". Participation by the specialist was tailored to the immediate need and varied from consultation on young and old to the simple suturing of a wound. All manner of diseases were seen including suppurative otitis media, pneumonia, empyema, measles, chickenpox, glandular fever, tuberculosis, osteomyelitis, gastroenteritis, infections of the skin, congenital heart disease, heart failure, rheumatic fever, cerebrovascular disease, anemia, acute nephritis, appendicitis, failure to thrive, cerebral palsy, epilepsy, gun-

shot wounds, fractures, burns, blindness, malnutrition, prematurity, congenital dislocation of the hip, retained placentas, dental caries, dental abscesses, conjunctivitis, dyspepsia and numerous kinds of musculoskeletal aches and pains. Some patients were referred to Kingston General Hospital for further investigation and treatment.

Education

Education was both formal and informal. One of us attended the Zone conference of nurses and gave formal lectures on specific subjects. All consultants attended ward rounds and were asked to discuss particular problems and patients. One physician gave a short series of lectures on the interpretation of the electrocardiogram. In addition, continuous discussion with doctors and nurses was carried out over coffee and at meals on all aspects of medicine and the local problems. The educational process works both ways; the consultants who ventured north from Queen's learned as much as they taught, or more.

The residents who accompanied the consultants added a new dimension to their clinical training. All were enthusiastic and felt the experience had been well worth while. After completion of her training, one resident returned to Moose Factory for a tour of duty and another has applied for a post there.

It is hoped that more medical students will spend their summers at this hospital. We are satisfied that this would be worth while, especially now that contact with a university has been established on a continuing and expanding basis.

Research

The demands of service and education have, as yet, left little time for research. Numerous specific organic, emotional and social problems require investigation. In addition, there is a need for basic data on the growth and development of the native population. Records of height and weight of school children were collected and will be presented elsewhere.

Future Plans

Although the need for pediatric collaboration in service, research and teaching is most obvious, it is proposed to expand the program into other specialties. An ophthalmologist, an internist and a diagnostic radiologist have already visited Moose Factory Hospital for a week each in order to explore the feasibility of more regular contact comparable to that established by the Department of Pediatrics.

COMMENT

Our present venture continues an association begun some years ago between the Faculty of Medi-

cine at Queen's University and the North. In the late forties and early fifties, Dr. Malcolm Brown¹⁰⁻¹⁷ led a research team which investigated the health, metabolism and cardiovascular responses of the Eskimo on Southampton Island. We look forward to an even closer association in the future. In the words of one of our authors, a "mutually beneficial symbiosis" is being established.

After a year's experience, we believe the Medical School can, in fact, make worth-while contributions to the Indian and Northern Health Services by direct service, teaching and research. At the very least, we feel our visits may relieve the sense of isolation and alienation which may afflict both doctors and nurses in the North and lead to a gross underestimate of the quality of health service they provide. We also believe that this program offers good opportunities for medical education. Too often the modern doctor receives all his training in a highly sophisticated medical centre and has no real idea of how medicine is practised in the world at large. Supervised "front-line" exposure to the people, health problems and conditions in the North can only improve the doctor's education. We think that, once experienced, the character and challenge of the work will attract more first-class Canadian graduates into the Health Service.

No one can doubt the need for improved health services in the North. At a World Health Organization conference it was stated that "the isolated and widely scattered groups of people of low economic status who live in the high latitude areas have to contend with extreme cold, low humidity, inadequate housing conditions—conditions that

hamper sanitation—lack of education, and malnutrition, as well as disease. These factors, together with a lack of adequate health services, result in high death rates. In Canada for example, the death rate for Eskimos is nearly three times the death rate for the "white status" population, and for Indians it is almost twice. Infant mortality is high and accounts for 57% of all Eskimo deaths and 37% of all Indian deaths."⁶ We hope that our northern venture will play some part in redressing this situation.

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UNIVERSITY-MEDICAL SCHOOL
SYMBIOSIS

The universities have given medical schools a degree of academic freedom in a concerned community which they might not possess otherwise. Deans and members of a medical faculty, secure in the support of their university administrations, are able to resist the pressures of the vested economic interests of medicine, whether they stem from the politics of medicine or the politics of government. The trustees and the administrative officers of a great university are not limited by the constraints of the various medical organizations and can refuse adherence to proposed regulations or procedures and controls that represent narrow vocationalism. The board of trustees as a separate, dis-associated body and buffer can protect its medical school from influences that would be academically or intellectually inappropriate and can grant to the man with unaccustomed and new ideas or with purely speculative concepts an asylum for the consideration of his thoughts and a chance to develop them removed from the pressures that might result were he part of a professional, political, or technological organization.

Perhaps most important of all, however, is the breadth of ideas which is presented to members of a medical faculty who are part of a university. The stimulating association of medical teachers and research workers with people in those sciences on which medicine is now greatly dependent is most important. They are not restricted to a narrow concentration in medicine *per se*; they are exposed, through daily contact, through the libraries, faculty clubs, or committee work, to a group of people with different and often widely divergent interests. More and more, medicine, as it conquers disease and becomes increasingly aware of the functioning and structure of the human body, will continue the already discernible trend of turning to other disciplines which are beginning to have a profound impact on its practice and understanding. The marked influence of biology, mathematics, physics, and chemistry has already been seen, and there are indications of many more interdisciplinary approaches in the future; it would seem to me that a particularly fertile area to be explored is that of the behavioral and environmental sciences.—D. R. Goddard, *J. A. M. A.*, **194**: 723, 1965.