A bond for health

The USSR and the USA are collaborating closely to tackle some of the health problems shared by their neighbouring northern territories of Siberia and Alaska.

Alaska has much in common with Siberia, being somewhat isolated and, in many ways, resembling a Third World country. The Arctic is a frozen desert, with long summer days and long winter nights. Alaska’s population, like Siberia’s, consists of indigenous peoples with a traditional life-style, short- and long-term settlers, and temporary workers.

Alaska has over 200 villages and a total population of half a million people, of whom 90 000 are indigenous. Most people live in the towns of Anchorage, Fairbanks or Juneau, the capital. Many of the villages are inaccessible by road and few have sewerage systems, running water or reliable communication with urban centres. There are hospitals and clinics in the more densely populated rural areas, and village clinics are often staffed by health aides comparable to the fieldshers of the USSR.

How can statistically significant medical studies be performed on such a small and isolated population as that of Alaska? How can health services be better delivered, especially in today’s conditions of financial difficulty? How can rural health needs and priorities be discovered and what ways are there of communicating with other people in similar conditions? For years we in Alaska have worked virtually on our own, often finding that health models used successfully elsewhere in the USA did not work because of poor roads and communications, inadequate follow-up, and too few qualified health workers. Because of the isolation, unique cultural and climatic conditions, and lack of a strong support system, health workers are frequently not prepared to stay in the rural areas for more than two years. And it should be borne in mind that the costs associated with the delivery of health care in Alaska are extremely high.

East meets West

Medical workers from several countries with arctic and subarctic territories meet to discuss common problems at the International Congress on Circumpolar Health every three years. Unfortunately, this interval is too long, given the rapidity of advance in medical research and technology. Although Siberia has the largest population and land mass of the north and is a leader in northern medical research, its representation at these meetings has been scant. Until recently, Siberians and Alaskans had not done any large-scale joint health planning, only having made scattered efforts, as in the field of cancer studies.

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It seemed regrettable that the USSR and the USA had virtually no communication with each other through Alaska and Siberia. Working through the Soviet Medical Workers Union, therefore, I contacted many Soviet medical people and took delegations from the University of Alaska to Siberia with a view to cooperating with the Siberian Branch of the Academy of Medical Sciences of the USSR, which was as interested as we were in building a Siberian-Alaskan “bridge” in the health field. A plan was devised which covered the sharing of medical information and data, the exchange of individuals to evaluate each other’s health systems and research, the holding of joint conferences and seminars, and participation in joint research projects. Support came from both the Soviet Minister of Health and the Academy of Medical Sciences in Moscow, on condition that the Joint USSR-USA Commission on Health met and approved the plans. This was achieved in April 1987.

**Research planning**

We had to consider carefully the needs of the indigenous people and the newcomers, and to draw on the strengths of both. Each group clearly had to be approached in distinct ways, as the problems of one were not necessarily the same as those of another. There was a need to try and make health care culturally appropriate for the diverse target groups, and it was desirable that they should participate in both the examination of the tasks and the design of solutions.

Our plan for joint research is outlined below.

- **Physiological problems of adaptation to the north.** How does an individual change physiologically on coming to the north? How long does it take to adapt? How can people be better prepared for the north?

- **Effects of chronic stress in indigenous people and newcomers.** There is much stress attached to moving to a new area, especially one that does not easily lend itself to a support system. What effects are there on the health of indigenous people who go rapidly from a subsistence to a cash economy?

- **The immune system in indigenous people and newcomers, and the prevalence and incidence of auto-immune diseases.** Why do some individuals thrive while others become ill? What defence mechanisms are involved? How can we strengthen them? How prevalent are arthritis and rheumatism, and are these diseases exacerbated in the north?

- **Nutrition and health.** Should new dietary recommendations be made, given that most of those in existence have been formulated for larger groups living in the south? Could certain foodstuffs, such as fish oils, have a protective and preventive role? What are the effects of relatively recently introduced foods on indigenous people who have lived previously on a traditional diet? Why are diabetes and some other diseases, not previously seen in the north, now being encountered?

- **The role of genetics in the metabolism of alcohol in indigenous people and newcomers.** Alcoholism is a scourge in the north. An attempt will be made to examine genetic factors in the metabolism of alcohol by alcohol dehydrogenase. This enzyme is found in relatively small quantities in peoples of Mongolian origin, and it may be reasonable to expect that the indigenous
people of Alaska will exhibit this trait. The research programme should help to demonstrate whether such is the case and to advance the treatment of alcohol-related problems.

- Training and preparation of indigenous people and medical specialists. Few indigenous people have chosen to go into the health professions, and even fewer have successfully completed courses of study. The medical education of indigenous Siberians and Alaskans will be examined, with particular reference to Siberian models that are currently quite successful in Kharbarovsk. It is also intended to develop guidelines for the preparation of medical specialists for the north.

Good prospects

There has been immense enthusiasm for this programme at all levels. Students have formed the International Student Circumpolar Organization with the aim of exchanging letters and visits, and achieving improved understanding of each other’s health care delivery systems. Some thirty students travelled to Siberia with me in the summer of 1988.

One of the most important forms of cooperation will be in the area of information exchange. Alaska will develop a depository of Siberian medical literature and information, and Siberia will reciprocate. We are also discussing computer information exchange and international computer networks. Most circumpolar researchers are linked through the BITNET computer network, and some also have telex facilities.

Slightly more than a decade ago, Alaska had direct flights to the Siberian city of Kharbarovsk. We are studying the possibility of restoring them so that exchange visits can be made easier. At present one can travel to Siberia only via Moscow or Japan.

Health systems research should bring in people at all levels so that there is a widespread feeling of involvement. This is what we are attempting to achieve. During a two-month visit to Siberia, for example, I presented over 100 proposals for health systems research submitted by people ranging from individuals with no formal health training to seasoned professionals. We grouped the proposals by topic and interest and placed them before as many institutes of the Siberian Branch of the Academy of Medical Sciences as possible. These institutes, with their thousands of medical researchers, are responding positively.

Official, federal-level agreements on health have been expanded to include the private sector, a radical change from previous policy, which stipulated that everything had to go through at the federal, government-to-government level. Even though the University of Alaska is a state government agency, for purposes of agreements it is considered as part of the private sector because it is not a federal body.

There will be no military funding or involvement. The contacts made will be between scientists in the public health field. We shall attempt to put politics aside and
work together on common tasks and problems, something which, I hope, will spread to the other circumpolar nations. The Siberians use WHO standards in all their work. This will give Alaska an opportunity to work more actively through the World Health Organization.

In November 1987 a delegation of three from the Siberian Branch of the Academy of Medical Sciences of the USSR arrived in Alaska to explore further research possibilities and sign an agreement with the University of Alaska. The agreement calls for work to begin on nutrition and human health, the multifunctional roles of human lactoferrin, and the molecular characteristics of animal adaptation to cold, for the collection and exchange of data, and for joint health-related seminars to be held at least once a year.

The new pediatrician

The major goal of child health care today is no longer aimed at only saving lives but also directed towards helping the surviving children reach their full potential. This can best be done by motivating children through their parents and family to practise health promoting and health facilitating life-styles, controlling vulnerabilities and supporting resources of the child, the family and the community. The new competencies the pediatrician of tomorrow must develop are also along the direction of biosocial and developmental aspects of pediatrics.