Community health aides for sparse populations

During the 1960s, community health aides began to provide primary care in the villages of the indigenous people in Alaska. Since 1968 the aides have received standard training designed and organized by the Alaska Area Native Health Board. The community health aides scheme enjoys substantial financial support but its success has also depended on the application of sound ideas and principles which could, perhaps, be adopted to advantage in other parts of the world with very sparse populations.

Alaska, the northernmost state of the USA, covers 1.5 million square kilometres, mainly between 60° and 70° N. The south-west half of Alaska is subarctic and the north-east is arctic with a taiga landscape merging into tundra. Hunting and fishing are still the principal means of livelihood of the indigenous people.

Of the total population, almost half a million (amounting to 84%) are immigrants living mainly in urban areas of the south and south-west. The other 16% comprise 35 000 Eskimos and Aleuts settled along the coast, and 40 000 Red Indians found mostly along the rivers.

The average population density is 0.3 per square kilometre, but if non-indigenous settlement areas are excluded, the figure drops to 0.04 per square kilometre. There are enormous distances between the native villages, of which 200 are scattered over a wilderness with a harsh climate. The villages vary in population from 30 to a few hundred inhabitants, and the development of all modern services in them has proved extremely difficult.

Native morbidity and mortality

During the last two decades a dramatic decline in morbidity and mortality rates among indigenous Alaskans, especially with regard to tuberculosis, otitis media and other infectious diseases, has been attributable partly to socioeconomic development and partly to efficient rural health programmes.

The native morbidity and mortality pattern has become similar to that elsewhere in the Western world, with an increasing frequency of cardiovascular diseases and malignant neoplasms, despite the high proportion of young people—the native birth rate being more than double the average for the USA.

The total native mortality figure is lower than the average for the country. Accidental
deaths are still at the top of the list, and deaths from influenza and pneumonia are several times more frequent than among the total population of the USA. Other major causes of mortality are suicide, homicide, cirrhosis of the liver associated with alcoholism, and diseases of early infancy.

By 1981 the infant mortality rate of the natives had decreased to 17 per 1000; the figure for the whole country was 12 per 1000 at this time. Neonatal mortality is almost the same as the national average; the somewhat elevated numbers of postneonatal deaths among the indigenous people are closely correlated with low birth weight (1).

The low neonatal and maternal mortality rates are largely explained by the fact that practically all deliveries take place in hospital. Expectant mothers are sent to hospital by air and the waiting period of several weeks before delivery is used for health education.

**Community health aides**

The earliest health services for the natives of Alaska came in the 1930s with the creation by the Federal Bureau of Indian Affairs of rural hospitals in several towns, mostly along the coast. In the 1950s, the responsibility for native health was taken over by the United States Public Health Service, and in the 1960s regular calls to native settlements began, focusing inter alia on maternal and child health and environmental sanitation.

A new group of health workers, the community health aides, emerged during the latter period with the task of providing primary care for villagers. Since 1968 these aides have received a standard training designed and organized by the Alaska Area Native Health Board, and provided in each of seven service units. The village council in each native village selects for training a local woman, or occasionally a man, who has usually completed 9 years of schooling.

The training focuses on primary care and the problems that absorb most of the resources of the rural health services. Prevention, immunization and health education are important ingredients of the curriculum. The basic course lasts about three months, after which the aides start work in their own villages. Each village clinic has a well-designed drug kit with essential remedies and vaccines.

The aides are supported in their work by a manual (2) and by daily radiotelephone communication with doctors at the regional hospitals. Difficult cases are flown to the hospitals for more qualified diagnosis and treatment. Alaska has 350 airports and all-weather airstrips, and well-trained pilots.

There is regular supervision of the aides and assistance for the village clinics from public health nurses and, occasionally, physicians at the regional hospitals. Frequent refresher courses are provided for the aides. These measures help to maintain high standards, to create a team spirit, and to boost the self-confidence of the aides.

The native health services are supported financially by the Federal Government, the
State of Alaska, and 12 native regional health corporations. The aides are paid according to contracts between these authorities. Remuneration varies from place to place but is attractive and about equivalent to that of primary school teachers.

The total cost of health services for a village is difficult to calculate because a number of activities and several authorities are involved. It has been estimated that almost half the total expenditure goes on air services for patients and health personnel.

In general, the Alaskan natives wish to continue with their rural existence, close to abundant natural resources. Consequently, a satisfactory primary health care network in the rural areas is vitally important. The community health aides programme is a front-line service for all villagers, giving full geographical coverage and accessibility. It is well accepted and fully utilized. The villagers have the feeling that it belongs to them.

Twenty years ago a basic medical training of less than half a year for auxiliaries would have been dismissed as unrealistic. Yet the concepts and methods of the community health aides scheme have been thoroughly tested and evaluated and are now well adapted to their purpose. Naturally, the aides do not have the scientific background of physicians but they are the vital peripheral branch of a team whose members work with a common purpose.

**Lessons learned**

Some population groups in the world are difficult to reach and serve, including refugees, urban slum dwellers, and 50–100 million nomads, indigenous peoples, and ethnic minorities, sometimes scattered over wide areas at low density. Apart from being geographically difficult to reach, tribespeople may be mistrustful for cultural, linguistic and other reasons. Such people are often neglected by health planners. Services for scattered populations have to be designed in unorthodox ways, and high per capita costs must be allowed for if acceptable and accessible health services are to be provided in sparsely populated regions.

Front-line services, based on locally recruited indigenous people with 5–6 years of primary schooling and ½–2 years of health training, have been created in several countries, with varying results. Regrettably, the Alaskan experience has not attracted sufficient attention from countries with comparable problems.

What explains the Alaskan success? Ample resources? Good ideas? Or a mixture of the two plus close cooperation between Alaskan natives and non-native Americans?

The trainees are chosen by their fellow-villagers, and after training live and work among their own people. Selecting trainees in this way seems to be of great psychological importance, as it tends to create a foundation of mutual confidence. This tends to create a foundation of mutual confidence. At the same time it discourages a brain drain from rural areas.

Furthermore, the training concentrates on a relatively small number of leading rural
health problems. Other essential elements are firm team work, frequent consolidation courses, an excellent working manual, and the daily use of well-functioning radiotelephones for communication with regional hospitals.

Some features of the community health aides scheme raise the standard of services without requiring high costs and could be adopted in situations where financial resources are scarcer than in Alaska. Even in the absence of air and modern road transport, improvements of existing front-line health services can often be achieved. However, the use of mules, camels, jeeps, and stretcher-bearers will undoubtedly have to continue in many parts of the Third World.

Those in authority are often reluctant to launch and run services in scattered communities. The per capita costs may be prohibitively high in developing countries. Other hampering factors include shortages of primary schools and the insufficient use of education facilities; high rates of illiteracy strongly restrict the selection of suitable candidates for training as auxiliary health workers. There may be a lack of radio or telephonic communication, inadequate transport, failure to organize extension and refresher courses for auxiliaries, and half-hearted cooperation from villagers. Friction between tribes may impede the development of efficient rural health services if, for instance, one tribe refuses to accept services provided or run by another.

The exchange of experiences in health services ought not to be restricted to certain latitudes, something that has, in the past, put a check on the sharing of ideas on a global scale. Climatic dissimilarities should not be barriers to learning. It is not inconceivable that some of the lessons learned in the Arctic will be relevant to problems encountered in areas of sparse population in the tropics and elsewhere.

References