

The Second International Symposium on Circumpolar Health

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Following the successful 1967 Symposium on Circumpolar Health-Related Problems held at the University of Alaska under the joint auspices of the Arctic Institute and the University (Albrecht 1968), plans were initiated for staging a second conference, and this was soon given strong support by the Scandinavian-North European group. Their initiative led to the organization of the Nordic Council for Arctic Medical Research, with representation from Denmark, Finland, Iceland, Norway, and Sweden. Subsequently, in November 1968, the first chairman of the Nordic Council organization, Dr. Ole Wasz-Höckert, conferred in Washington, D.C., with Arctic Institute representatives and with the two United States and Canadian medical leaders at the Alaska symposium, to solicit advice and cooperation from the Institute in his efforts to secure approval for a second symposium to be held in Oulu, Finland. A year later, in December 1969, Dr. Wasz-Höckert convened a formal planning meeting in Oulu and Rovaniemi to discuss concrete plans for a 1971 conference. The Arctic Institute was represented at the planning session by Dr. C. Earl Albrecht of Philadelphia who had been Chairman of the 1967 Symposium, Dr. Gordon C. Butler, Regional Director, Northern Regional Medical Services, Canadian Department of National Health and Welfare, and Andreas G. Ronhovde of the Institute's Washington staff.

Plans were made at the Oulu session for a comprehensive program of environmental and special health problems of the arctic and subarctic regions, and the process of selecting outstanding speakers was initiated. The Arctic Institute was asked to support the Nordic Council in the details of program planning and speaker selection and to be responsible in particular for the coordination and stimulation of Canadian and United States participation. That was agreed to and was subsequently acted upon.

The Nordic Council set up its own organization for program, travel, and local arrangements. Dr. Wasz-Höckert became President of the Symposium, Dr. Henrik Forsius became chairman of the scientific committee, with principal responsibility for the detailed arrangement of the speaker program, and Dr. Jorma Hirvonen was designated Secretary General. The Nordic Council also established liaison with the Leningrad Arctic and Antarctic Scientific Research Institute, which assisted in arrangements for participation from the U.S.S.R.

The Symposium was held from 21 to 24 June 1971 in the new, modern University of Oulu Medical School, the northernmost medical school on earth. The participants came from thirteen countries and included three representatives from the World Health Organization. The 276 registered active participants were accompanied by 79 non-participants, for a total of 355. The conference was thus

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nearly three times the size of the 1967 Alaska symposium of slightly above 100 participants. The most numerous national groups were from the U.S.A. (82), Finland (69), Sweden (67), Canada (44), and Denmark (38). Other countries represented were Australia, France, Iceland, Japan, Norway, U.S.S.R., the U.K., and West Germany.

THE PROGRAM

The four-day program at Oulu was followed by a post-conference session at Rovaniemi. The total program presented 95 main speakers, plus 88 "free" or contributed papers, for a grand total of 183 presentations. In order to make possible such a prodigious program in the allotted time the conference was divided into three sections after the first day's plenary sessions. Nearly a third (59) of the papers read were contributed by North Americans, whereas more than half (109) were presented by speakers from the Nordic countries.

In view of the central fact that the symposium concentrated on circumpolar health problems, with emphasis on the peculiar or special problems of the arctic and subarctic regions, it was understandable that considerable attention was given to environmental problems and influences on health and morbidity in the polar regions. The program topics and the individual papers were, to a lesser extent, concerned with strictly medical subjects. More attention was given to significant effects of cold, permafrost, and other special physical and social aspects of the northern environment in relation to native health, and also to the special problems of providing public health services in the circumpolar countries.

The first day of the symposium, conducted in plenary sessions, aimed at setting the scene for later discussions of narrower topics; thus the program dealt with the geographic environment and the significant factors of arctic community life that affect the health of local populations. For the remaining three days of the program at Oulu the participants were free to attend any one of the three sections running concurrently. It may be noted that the larger number of speeches and papers presented at the Oulu symposium, compared with the earlier Alaska conference, reflected an increased tempo of general interest of the circumpolar countries in all aspects of arctic development, including health factors affecting both native peoples and transients from the south.

One of the major intervening developments which had produced new research and thrown new light on arctic health problems, physical and psychological, was the work done under the five-year International Biological Program (IBP). An integral part of that program is the study of "the biological and behavioural processes responsible for the successful adaptation and slow population growth of approximately 70,000 Eskimos in an arctic environment" (Milan 1968).

The four members of the IBP Committee, established as a result of a planning meeting in Point Barrow, Alaska, in 1967 to implement the study of Eskimos, were all present and participated actively in the 1971 symposium at Oulu. Projects under the program had been started in the summer of 1968. Participants in the IBP Eskimo studies contributed to or were authors or co-authors of at least thirty papers read at the Oulu symposium. The international character of the IBP studies

was evidenced by the distribution of contributing authors. Canada, Denmark, Finland, France, Italy, Norway, and the U.S.A. were represented on the list of speakers on IBP researches and studies.

The range of subject matter discussed by the 96 main speakers and in the 88 contributed papers may be shown by a grouping under the following ten headings:

1. The arctic environment, including geographic, social, and economic problems which affect health, with emphasis on the effects of permafrost;

2. Community planning and development, with attention to housing, water supply, sewage disposal, pollution, and communications;

3. Human adaptability to arctic conditions, including reports on current research, particularly IBP studies, and genetic aspects of the native populations;

4. The effects of cold, including findings on cold physiology, physical capacity in cold, cold injuries, clothing, and other protective measures;

5. Infections in the Arctic, with special attention to bacterial diseases, viral diseases, and to parasites and zoonoses;

6. Odontology, including variations in dental morphologic traits, effects of diet, dental diseases, and other special dental problems among native arctic peoples;

7. Ophthalmology, discussed in several contributed papers from Scandinavia and Canada;

8. Nutrition, including reports on dietary surveys, on physiological and pathological effects of nutritional changes, as well as theoretical approaches to the evaluation of nutritional status through the use of multiple radioactive tracer techniques;

9. Public health in the Arctic, including reports of studies, experimentation, and research on relevant facets such as disease prevalence, psychological-psychiatric problems, the organization of health care, education of medical personnel, delivery of medical care under arctic conditions, and preventive health programs;

10. Lastly, consideration of medical problems in a changing arctic society, including such factors as changing settlement patterns, progress in immunization among remote populations, new aspects of mental health problems, and new strategies of medical treatment and health care.

Space considerations obviously preclude even a summary presentation of the contents of the 183 symposium speeches and papers. Because most of the papers were individual rather than institutional products, the relevance, depth, importance, and overall quality of the presentations varied greatly. In total the papers demonstrated that the range and degree of sophisticated concern with the fundamental factors in arctic individual and community existence, especially among native peoples, had increased greatly in the past few years. Realization was demonstrated in a great number of the papers read that the arctic environment has produced some previously unsuspected effects on native health, with the result that the subject of genetics, for example, had prominent attention at the symposium. One paper for instance reported a measurement study of aerobic and anaerobic power and pulmonary function in 250 Eskimo men, women, and children. Compared with non-Eskimos, including the research party, the Eskimos showed lower blood pressure, larger heart size, and more frequent functional heart murmurs. No difference was found in physical endurance.

The participants heard several papers on physical disease prevalence and on characteristic psychological-psychiatric problems among arctic residents. Some of the specific findings were of interest as were some comparisons between different arctic localities. A report on a comprehensive survey of disease prevalence in the Alaskan arctic and subarctic gave emphasis to the rapid changes that have been noted in recent years. Infant mortality, for example, diminished from a 75 per 1,000 rate in 1960 to a 31 per 1,000 rate in 1969. Although respiratory infections were reported as having continued at a high rate, pneumonia morbidity and mortality in all ages had diminished dramatically. Tuberculosis morbidity and mortality rates also showed a drastic reduction between 1950 and 1970. Cancer death rates were lower in Alaska than in the other 49 states. Deaths due to heart disease and strokes were also at a lower rate, but were increasing. Scandinavian studies showed that certain diseases, such as diabetes, duodenal ulcer, and arteriosclerotic heart disease had a lower incidence in Greenland than in Scandinavia. Some of the differences were explained as probably due to social and cultural differences, some to stress factors, and others were suspected of having a genetic foundation. Diabetes was mentioned among the latter. Psychological-psychiatric problems among arctic natives were reported as of the same types as found elsewhere, but the incidence of particular diagnosis showed a different rank order. Depression and schizophrenia ranked high in the rural arctic, according to one speaker, although another paper reported depression as more prevalent in larger villages.

PUBLICATION OF SYMPOSIUM PAPERS

The scientific papers presented at the 1967 symposium held in College, Alaska, were published in *Archives of Environmental Health* by arrangement with the American Medical Association. The problem of issuing published proceedings or a complete set of the Oulu symposium papers was discussed at the close of the Oulu conference by the group which had planned its convocation. An offer by the American Medical Association to the Arctic Institute to devote at least one issue of *Archives* to the publication of conference papers was accepted. It was reported that other journals, principally European, would probably also be interested. It was finally agreed that the Nordic Council, through its Chairman and Secretary General, would assume the detailed direction of having symposium papers published, to the extent feasible and desirable.

FUTURE CONFERENCES

In addition to many informal discussions, there was also held a more formal discussion at Oulu by the steering group regarding future circumpolar health conferences, and particularly the scheduling of the next one. There appeared to be a consensus that the pace of developments in the Arctic and the growing interest in problems of the native and transient populations would have the effect of shortening the desirable interval between circumpolar health conferences; one every three years was suggested as probably warranted. It was further agreed that the valuable experience the planners of the first two circumpolar health symposia

have gained would make it logical that the same institutions would be in the best position to organize and administer the third conference. The Nordic Council for Arctic Medical Research, the Arctic Institute of North America, and the Leningrad Arctic and Antarctic Scientific Research Institute would therefore consider the necessary planning steps, including, in the first instance, the question of a host country and a specific location for the third conference. The hope was expressed that the World Health Organization, which had representatives at the Oulu conference, would be ready to assume a more active role in the next conference. The problem of finding financial support for such conferences was discussed in terms of their undoubted value to the public and private organizations which have general or specific political, social, and economic interests in the arctic and sub-arctic regions. It was strongly emphasized that the promotion of valuable research on arctic environmental and health problems, and the free exchange of ideas and information about findings and progress in the arctic health field would both merit the periodic convening of circumpolar health conferences of the type that had been held in Alaska in 1967 and in Finland in 1971.

REFERENCES

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