PREFACE

The circumpolar regions offer one of the last frontiers of medical science. Until a few years ago the arctic was a bleak, inaccessible region, penetrated only by a few hardy souls who could bring no more comfort to the ills of the indigenous peoples than could be crammed into the ubiquitous black bag. But the pace of change has been rapid. The indigenous people have largely abandoned their nomadic camps, coming together in larger settlements with schools, a nursing station if not a hospital, and (generally) regular air communication with major urban centres. There is now no obstacle (other than the cost of air freight) to taking almost all the facilities of modern medicine to northern communities.

Much remains to be discovered about the medical problems of arctic life. Morbidity and mortality remain far higher than in the south. Problems of a rugged physical environment are compounded by makeshift housing and sanitation, ignorance of the principles of hygiene, sometimes poor nutrition, and often the stress of rapid cultural change. Diseases such as tuberculosis and rheumatic fever, long controlled in the south, are still a problem in many parts of the north. Otitis media is widespread. Epidemics of hepatitis, brucellosis, botulism, and encephalitis and a high incidence of intestinal parasitic infections testify to the problems of hygiene. Nor is "civilization" an unmixed blessing for the indigenous peoples. The psychologist's indices of acculturative stress have their parallel in an alarming toll of alcoholism, suicides, and venereal diseases. Dental health is steadily deteriorating as store food replaces the traditional diet. Mercury and other pollutants of our industrial society force us to caution the native against eating his normal foods. The rifle and the snowmobile deplete game reserves and leave the hunter with a permanent defect of hearing.

This bewildering array of problems must be handled by a dedicated but pitifully small health care delivery team. Over the vast distances of the arctic, there are unusual opportunities to experiment with new approaches - public health nurses, nursing and dental assistants, with the

emphasis on recruitment of indigenous personnel - possibly within the framework of native cooperatives. There is also much scope for thought as to how physicians can be encouraged to work in remote areas, being spared both a sense of isolation and also a limitation of their freedom by appropriate relationships with visiting consultants.

The north also holds much interest for the pure scientist. The isolated indigenous populations provide fascinating material for the geneticist and those interested in inherited disease. The lack of daylight and other temporal cues during the winter months offers the possibility of distinguishing exogenous and endogenous circadian rhythms. The bitterly cold environment challenges man's range of adaptability, providing the physiologist with such questions as control mechanisms, thermogenesis, and cold diuresis, the engineer with problems of clothing design, and the physician with the occasional need to diagnose and treat frostbite and hypothermia.

The future probably belongs to the public health engineer and the educator. Through appropriate design of housing and public buildings, the harshness of the external environment can be tempered. Given adequate resources, there is no reason why current problems of water supply, sewage, and garbage disposal cannot be corrected. But much will depend ultimately upon the attitudes of the indigenous people - their willingness to accept the advice of the experts and to understand the reasons behind this advice.

These were some of the themes tackled by the Third International Symposium on Circumpolar Health, held in Yellow-knife, Northwest Territories, 8-11 July 1974. The meeting was much larger than its predecessors in Alaska and Northern Finland. Nearly 400 registrants came from all of the nations bordering the arctic. The scientific committee accepted more than 170 papers for presentation, and many were of such a high quality that it was thought worth while to assemble the proceedings as a resource volume for all concerned with circumpolar health.

Symposium proceedings fall into at least three broad categories. Type one is the tape transcript. This preserves for posterity such gems as the chairman's request for a glass of water, but summarizes a number of the main speeches in two words, "tape inaudible." Type two is based on unedited manuscripts, seized from lecturers as they leave the rostrum. The end-product is commonly preferable to the first type of volume, but nevertheless it still has many shortcomings. The material from English-speaking contributors is often little more than a set of poorly phrased lecture notes, with incomplete sentences, inadequate references, and carelessly

documented tables, while some foreign contributions degenerate into indecipherable gibberish. Type three is the fully edited volume. Authors are given a clear statement of the quality of manuscript required, and an editorial board then makes careful review of the material for inaccuracies, redundancies, and overlap with other presentations.

This is, we hope, a type three volume. Following the Yellowknife Conference, authors were invited to submit carefully prepared manuscripts, and more than 90 papers were received in a format judged suitable for publication. Where appropriate, this information has been further supplemented by brief "commentaries," based on edited abstracts of other contributions. Editing the volume has taught us much - not only about circumpolar health, but also about the personalities of the rugged individualists who work in the north. Some contributions were literary masterpieces, imbued with a fine sense of the beauty and the poetry of the arctic. Despite firm instructions, many contributors felt impelled to exceed the stipulated page limits. In a few instances, the material was of such interest that leeway was allowed, but often the editors were forced to make hard decisions and vigorous use of scissors and paste. A surprising number of participants painstakingly copied the area of Alaska and the Northwest Territories, along with other humdrum items of geography - all apparently from a common and unacknowledged source! Some saw fit to boast or complain of the hazards and discomforts we have all endured, waiting at lonely airstrips for the plane that fails to arrive. One or two were moved to long diatribes against bureaucracy, the stupidity of the natives, or the arrogance of the whites. A few saw the handling of a simple local problem as a mammoth space-age experiment, and the occasional enthusiast inflated his title of office and accompanying acknowledgments to two or more pages! The authors may quarrel with our decision, but these do not seem matters to commit to perpetuity - unless in a privately financed volume.

However, in addition to thanking the contributors, two specific acknowledgments must be made. One is to Dr Otto Schaefer, who carried the heavy burden of initiating and supervising the progress of the symposium through to its successful conclusion. The other is to the Medical Services, Northern Region, of Health and Welfare Canada, who provided generous financial support, both for the Yellowknife Symposium and also for the publication of this volume. Both Dr Schaefer and Northern Regional Medical Services are totally committed to the task of improving Circumpolar Health, and

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if this volume helps forward that objective, they will be well pleased with the efforts of all who have contributed to it.

R.J.S. S.I.