

MATERNAL AND CHILD HEALTH
NORTHWEST TERRITORIES

March 8 1967

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The Northwest Territories has an area of 1.3 million square miles and a total population of 26,000 persons, i.e. a population density of 1 per 50 sq. miles. This population is scattered in over 100 towns and settlements in groups of 20 - 3000 persons. This fact alone explains the difficulty in obtaining detailed information on maternal and child health in this vast sparsely populated area and also the almost impossible task of providing adequate treatment and public health services to many of its population.

The Ethnic population distribution is as follows:-

Indians 23.4% Eskimos 36.1% Others 40.5%

The Eskimos inhabit the barren lands of the Central and Eastern Arctic while the Indians and Metis reside within the treed areas of the Mackenzie valley. The non-native population, many of whom are Government employees, and their families are scattered throughout the Territory but the main population concentration is in the West.

VITAL STATISTICS:

Population Structure -

The population structure of the Indian and Eskimo groups is as follows:

	<u>N.W.T. Indians</u>	<u>N.W.T. Eskimos</u>	<u>All Canada</u>
0 - 4 Years	18.6%	20.2%	12.4%
5 - 9 Years	13.3%	14.9%	11.4%
10 - 14 Years	11.4%	12.1%	10.2%
0 - 14 Years	43.3%	47.2%	34.0%
15 - 39 Years	34.2%	37.0%	34.6%
40 - 59 Years	13.3%	12.3%	20.2%
60 Years +	8.1%	3.3%	11.2%

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The very high percentage of the Indian and Eskimo populations under 14 years will be noted as also the low percentages in the over 40 year age groups.

BIRTH & DEATH RATES (1965)

	<u>INDIANS</u>	<u>ESKIMOS</u>	<u>OTHERS</u>	<u>ALL GROUPS</u>	<u>ALL CANADA (1963)</u>
Birth Rate	33.4	55.8	39.4	43.9	24.6
Stillbirth Rate	9.8	15.3	9.6	12.2	12.3
% Prematurity	4.4	7.4	11.0		
% of Births Occurring in Hospitals & N.S.	89.1	62.4	97.1	79.7	98.3
Perinatal Death Rate	34.1	24.4	11.9	21.6	15.8
Neonatal Death Rate	29.5	41.9	2.4	25.4	18.1
Infant Death Rate	64.0	95.4	12.0	59.5	26.3
Death Rate 1 -4 Yrs	.0	14.3	0		
Death Rate 5-14 Yrs	0.7	3.7	?		
Crude Death Rate	9.7	11.1	3.8	7.2	7.8
Average Age at Death	31.6	19.8	45.4	29.1	62.3
Average Age at Death (Over 1 year)	51.2	38.8	51.8	45.8	-
% of Deaths Occurring in Hospitals & N.S.	43.2	35.6	35.0	37.2	64.9
National Increase	26.2	44.7	35.5	41.7	16.8

These figures demonstrate the very high birth rate especially among the Eskimo population and the high perinatal and infant death rates among the two native groups. It will also be noted that the Eskimo preschool and school children death rates are approximately

13 and 7 times respectively the national rates, and yet even with these high rates the national increase is nearly $2\frac{1}{2}$ times the Canadian rate. There is no doubt that the rates are most unsatisfactory but we may gain some consolation from the fact that over the past ten years there has been a dramatic improvement as is noticed by the infant death rates among the Eskimo population.

Year	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Infant Death Rate in Eskimos	250	228	240	206	211	185	194	157	92.1	95.4

CAUSES OF DEATH

The main causes of death reported in the 68 infant deaths during 1965 were as follows:

Pneumonia	21	31% of total
Diseases of Infancy and malformations	16	23% "
Unknown	9	13% "
Injuries & Accidents	6	9% "
Infective & Parasitic Diseases	6	9% "
Gastro-intestinal Diseases	5	7% "

The main causes among the 21 deaths reported in the 1 - 14 year age groups were:

Injuries & Accidents	9	43% of total
Pneumonia	7	33% "
Gastro-intestinal Diseases	2	9% "

INSURED HOSPITAL DAYS - 1964

Disease	Under 1 Yr	1-4 Years	5 - 9 Years	10-14 Years	Totals	%
1. Pneumonia	4028	3973	824	381	9206	36%
2. Diseases of Nervous system & sense organs	1358	1103	415	224	3100	12%
3. Diseases of Digestive System	1859	937	295	256	3347	13%
4. Other respiratory Diseases	936	674	626	271	2507	10%
5. Accidents & Injuries	60	557	341	183	1141	5%
6. Infective & Parasitic Diseases	619	483	328	59	1489	6%
TOTAL for above Diseases	8860	7727	2829	1374	20790	82%
TOTAL days for all Diseases	10525	9213	3710	1897	25345	-
% of days used by above diseases	84%	77%	76%	72%	82%	-

It will be noted that 65% of the total insured hospitalization was in respect of respiratory, digestive and infective diseases and that a further 12% was mainly due to Ear and Eye infections. These are diseases which are associated with the harsh climate, inadequate housing, poor sanitation and lack of adequate and safe water and sewage systems, and lack of knowledge about infant and child care on the part of the mothers.

The main causes of our high child morbidity and mortality are:

(a) Climatic Conditions:

The climate of the Central and Eastern Arctic is probably one of the worst in the world -- winter temperatures vary between 10 and 50 below zero (F) and the prevalent 20-30 mph winds create a wind chill factor of 2,100 to 2,400. When one remembers that human skin will freeze in one half a minute when exposed to a wind chill of 2,400, one can realize the intensity of the cold.

(b) Inadequate Housing:

The type of housing varies considerably, e.g., igloos, tents, shacks, log cabins, prefabricated houses - but they all have one thing in common - overcrowding. When one considers that the majority of houses have only one room and that from 5 - 11 people may be living, sleeping, eating and defecating in a confined space of 256 sq. ft. one can readily understand the ease of spread of disease. Few igloos or tents are seen nowadays in the settlements but they are still the only accommodation available in most hunting and fishing camps and the inside temperature is less than 20° above zero during the winter months. Consider the shock to the newborn infant being born into this environment. Visit an igloo or tent during the break-up season and see the icicles hanging from the roof and the caribou skins and other bed clothes stiff with ice, and one wonders how infants survive as well as they do.

(c) Poor Sanitation:

Sanitation standards in most northern communities are very poor with the result that water supplies become polluted, and gastro-enteritis ensues during the summer months.

(d) Nutrition:

In older days, life in the North was either a feast or a famine. Food mainly consisted of meat, fish and berries -- when hunting was good, there was an abundance of good food, while at other times many people died of starvation. Today, there is no starvation and in good hunting and fishing areas, there is still an abundance of meat and fish, but the increasing population, the concentration of the population into settlements, and the reduction in size of the caribou herds has resulted in many areas being short of fresh meat. Most of the food now used in the North is imported, and while there is a good variety, the native naturally tends to purchase the cheaper foods with a high carbohydrate and low protein, fat and vitamin content. In this way the diet of the native people has really deteriorated and today many subsist on a diet of "bannock" and tea. Sufficient calories are consumed and there is no evidence of hypoproteinaemia but mild Vitamin A and B deficiencies and hypochromic anaemias occur among the child population. This may explain the natives' apparent lack of resistance to infections.

(e) Ignorance:

As in many other underdeveloped areas, the peoples' lack of knowledge regarding the basic principles of personal and home hygiene and child care is a major problem in the Canadian North.

(f) Distance from Medical Facilities:

When one considers that less than 25,000 people inhabit the 1.3 million square miles of the Northwest Territories and that the great majority of those are scattered throughout the Territories in

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of 50-500 people, it is easy to providing adequate medical care. No except in the area of the Upper Mackenzie (ar area) and poor weather conditions, ak-up seasons, and the 20 hour winter igation extremely difficult in many and we have tried to solve them as ons: als in the Northwest Territories with 16 beds per 1,000 population -- which rovided in any Province. These hospitals entres of population. In the smaller people, Nursing Stations have been small cottage hospitals with 4 beds and stations are equipped with portable other necessary emergency equipment rugs. Short-term illnesses are treated an inpatient or outpatient basis and esses are evacuated to suitable hospitals. am is also operated from these centres. d 3 Mission Nursing Stations in the re are planned within the next few years d, practically every settlement with a ill have medical facilities as adequate e.

is operating in the Territories, two ls. Depending on the size of the ffed by one to three nurses, who m in the area served.

ted in the smaller settlements of

nd nurses visiting the settlements, nd treatment clinics, and

patients while awaiting evacuation or nursing station.

e settlement increases to such an required, a nursing station or ealth station building becomes a

l in all settlements which do not

These are lay people such as ay Managers, School Teachers, etc., ment and treat minor disease with ealth Service. Many of these ienced in diagnosing and treating the occurrence of serious illness, to the nearest doctor who then ranges transferral of the patient lay dispensers has recently become

and their main duties are to explain the basic principles of hygiene to their own community, to encourage the formation of local Health Committees and to help the people to help themselves. Eight such workers are now employed in various settlements and it is proposed to train another ten at Churchill in June 1967.

(g) Sanitarians, Health Educator:

Posts have been provided for three sanitarians and for one health educator in an attempt to improve environmental conditions and to educate the population in the principles of personal and community hygiene and healthful living. Unfortunately at the present time only one sanitarian has been recruited and our health educator has transferred to the Company of Young Canadians. Continuing attempts are being made to recruit these personnel.

(h) Communications:

There has been a marked improvement in telecommunications over the past two years - this has been accomplished by the combined efforts of the Department of Transport, the Bell Telephone Company and the Canadian National Telegraph Company. Most settlements of over 100 people have now a 24 hour emergency telecommunications service so that they may request and receive medical advice and assistance. This has proven a great boon to the nurses and lay dispensers in isolated areas.

(i) Housing:

The Department of Indian Affairs & Northern Development have for many years been attempting to improve housing standards in the Territories but lack of adequate funds has hindered their work with the result that it was only possible to build small one-roomed

Meanwhile the Northern Health Service attempt to ensure that susceptible groups do not suffer from iron, vitamin or mineral deficiencies and preparations are supplied as follows:

- (i) All pregnant and lactating women are supplied with antenatal capsules.
- (ii) All infants are supplied with liquid preparations of vitamins and iron.
- (iii) All preschool children may be supplied with chewable vitamin and iron preparations.
- (iv) All school children are supplied with special vitamin biscuits.
- (v) Other groups such as school children, ex-TB patients, etc. may, when necessary, be supplied with Vitamin and Iron Capsules.

(k) Public Health Program:

Our main incidence of death and disease is among the young and our Public Health Program naturally stresses the need for service to this group. Included in the Public Health Program are:

- (a) Antenatal Clinics - These are held by the doctor or the nurse and all pregnant women are encouraged to attend regularly. Many women are confined in the Nursing Station or in their homes with a nurse or lay person in attendance, but all primipara, grand multipara (para 6 +) and those with a history of difficulty or showing any abnormality are evacuated to the nearest hospital 3 - 4 weeks before confinement.
- (b) Well Baby Clinics - These are normally held twice

monthly usually on a group basis so that health films may be shown or talks given, on some aspect of child care. Immunizations are an important part of this program and protection is provided against the following diseases to all children - Pertussis, Poliomyelitis, Diphtheria, Tetanus, Measles, and Smallpox. Tests for Phenylketonuria are carried out on the first visit to the clinic.

- (c) School Health Service - School children are screened by the nurse and examined by the doctor on at least three occasions during the school life of the child. Rapid inspections are also carried out by the nurse three to four times yearly. Immunizations are kept up-to-date and educational films and talks are arranged. Dental services are also provided but the program is inadequate and needs extension and improvement. Teacher-nurse conferences are encouraged.
- (d) Home Visiting - This is a most important part of our Public Health Program. Homes are visited at least once monthly, often in company with the Community Health Worker and advice given on all aspects of infant care, nutrition, home hygiene, etc. During these visits, persons in need of treatment are referred to the Nursing Station or Hospital, parents are reminded of the necessity to bring their children for immunization or x-ray clinics and any problems which arise are directed to the responsible authority.

N.W.T.

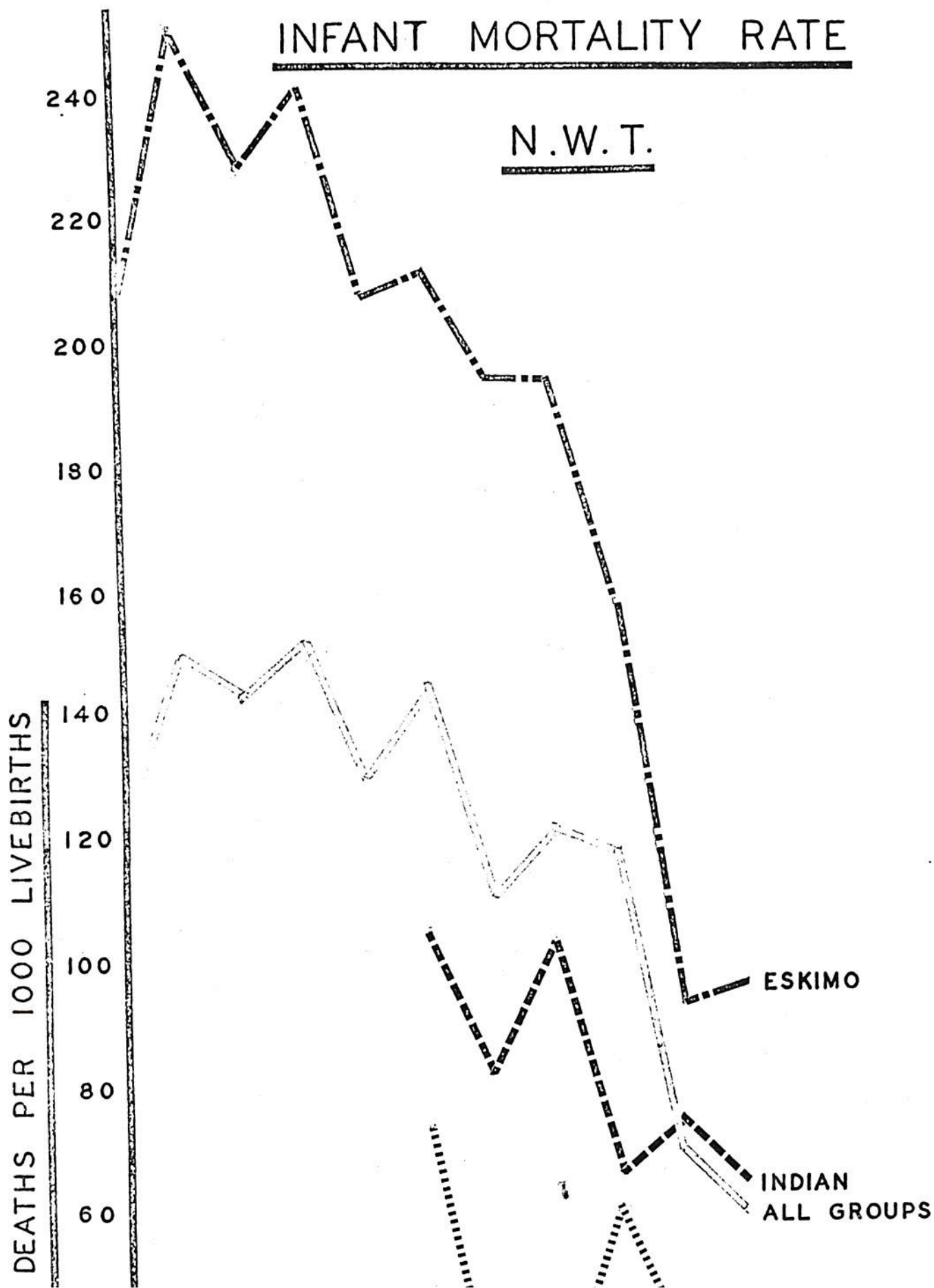
BIRTH RATE

N.W.T.

ALL CANADA

YEAR

5 56 57 58 59 60 61 62 63 64 65 66



AVERAGE AGE AT DEATH. N.W.T.

AGE AT DEATH IN YEARS

60
50
40
30
20
10

ALL CANADA

OTHERS

INDIANS

ALL GROUPS. N.W.T.

ESKIMOS

63

64

65

