

LEGISLATIVE ASSEMBLY OF THE
NORTHWEST TERRITORIES
7TH COUNCIL, 47TH SESSION

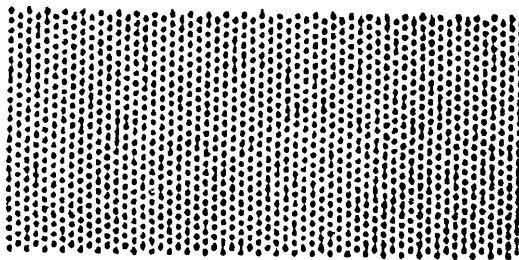
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1972



REPORT
on
HEALTH CONDITIONS
in the
NORTHWEST TERRITORIES
1971



Northern Health Service
Department of National Health and Welfare
1972

AMENDMENT

Report on Health Conditions in the Northwest Territories, 1971

1. Page 4, Table 1

Description to (m) omitted. Should read "Rate per 10,000 live births"

2. Page 23. Paragraph 2, Syphilis,

Should read "two in the Indian -----" instead of "one"

3. Page 23, Gonorrhoea Chart

Eskimos "M" should read "366" instead of "336"

REPORT ON HEALTH CONDITIONS IN THE NORTHWEST TERRITORIES - 1971

VITAL STATISTICS

POPULATION:

The population of the Northwest Territories is estimated as follows:

	<u>INDIANS</u>	<u>ESKIMOS</u>	<u>OTHERS</u>	<u>TOTAL</u>
Number	7009	13077	14914	35000
Percentage	20.02%	37.36%	42.62%	100.00%

Since the 1971 census figures are not yet available, these estimations were based on the 1961 census with additions for the recorded natural increases since then. Immigration and emigration, except for Department of National Defence personnel, has not been taken into account and therefore, our figures probably are on the low side for all groups.

LIVE BIRTHS:

The live birth rates per 1000 population were:

Indians - 34.09 Eskimos - 38.31 Others - 34.06 All Groups - 35.65

The rates for Indians and Eskimos have dropped 7 and 2 points respectively from 1970, while the rate for others has increased slightly. All groups have a rate of at least twice that for all Canada.

SEX RATIO OF BIRTHS:

The ratio of male births per 1000 female births was:

	<u>1971</u>	<u>1970</u>	<u>1969</u>
Indians	959.3	1163	1032
Eskimos	969.11	1207	1067
Others	1197.4	1233	1058

The national rate for 1968 was 1060.

It is interesting to note the decreased percentages of male births in all groups with subsequent excess of female over male births for Indians and Eskimos.

BIRTH WEIGHTS:

Average birth weights for live births were as follows:

	<u>INDIANS</u>		<u>ESKIMOS</u>		<u>OTHERS</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
1969	7.18 lbs.	7.02 lbs.	7.23 lbs.	6.68 lbs.	7.41 lbs.	7.51 lbs.
1970	7.13 lbs.	7.01 lbs.	7.17 lbs.	6.84 lbs.	7.69 lbs.	7.15 lbs.
1971	7.06 lbs.	6.92 lbs.	7.11 lbs.	6.81 lbs.	7.56 lbs.	7.13 lbs.

It will be noted that there is a slight decrease for both males and females in all ethnic groups.

LOW BIRTH WEIGHT INFANTS:

Low birth weight infants were defined as those whose birth weights were 5.5 lbs. or less. The gestational age was not taken into account because of the incompleteness of many birth certificates.

The rate of low birth weight infants per 100 live births was:

	<u>INDIANS</u>	<u>ESKIMOS</u>	<u>OTHERS</u>	<u>ALL GROUPS</u>	<u>ALL CANADA</u> <u>1968</u>
1970	11.1	12.9	8.5	10.9	
1971	10.87	11.77	6.10	9.29	8.3

The rates for All Groups show a slight decrease from last year; however, there are geographic variations within all ethnic groups, with particularly high rates in some areas, e.g. Eskimos in Inuvik Zone had a rate of 18.18 and Others in Keewatin, a rate of 20.0.

MULTIPLE BIRTHS:

The ethnic distribution of twin births was:

Indians - 2 Eskimos - 1 Others - 4

STILL BIRTHS:

The still birth ratio decreased slightly from the previous year. Of the 15 still births reported, 9 occurred in the Eskimo group.

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	<u>INDIANS</u>		<u>ESKIMOS</u>		<u>OTHERS</u>	
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HOSPITALIZED BIRTHS:

97.19% of live births and all still births occurred in a Hospital or Nursing Station. This is the highest percentage ever. The ethnic distribution was:

Indians - 98.7% Eskimos - 95.8% Others - 99.8%

Obviously, all groups have ready access to medical care and are utilizing the maternity services available.

MATERNAL AGE

The percentage distribution of live births by age of mother and ethnic groups, N.W.T., 1971:

	INDIANS	ESKIMOS	OTHERS	CANADA 1968
Under 20	28.87	22.55	12.99	8.7
20-24	28.45	33.33	35.82	34.8
25-29	17.15	19.96	34.05	29.5
30-34	17.99	12.37	13.18	15.8
35-39	13.38	10.97	3.93	8.3
40-44	4.18	5.98	.98	2.6
45-49	1.25	0.79	.19	0.2

The distribution of births for Others is similar to that for all Canada. Among the Indian and Eskimo groups, there is a high percentage of teenage mothers.

BIRTH ORDER:

The fertility patterns of older women in the Indian and Eskimo groups are reflected in the high proportion of 4th and later children, as illustrated in the distribution of births by birth order.

Percentage distribution of live births by birth order and ethnic group, N.W.T., 1971:

	INDIANS	ESKIMOS	OTHERS	CANADA 1968
1st child	23.43	21.35	39.56	34.2
2&3rd child	30.96	23.55	44.48	43.8
4th & later	45.60	55.08	15.94	21.9

TABLE I
NORTHWEST TERRITORIES
Vital Statistics - 1971

	INDIANS 1971 Pop. - 7,009				ESKIMOS 1971 Pop. - 13,077				OTHERS 1971 Pop. - 14,914				ALL GROUPS 1971 Pop. - 35,000				ALL CANADA
	1971		1970	1969	1971		1970	1969	1971		1970	1969	1971		1970	1969	1968
	No.	Rate	Rate	Rate	No.	Rate	Rate	Rate	No.	Rate	Rate	Rate	No.	Rate	Rate	Rate	Rate
Livebirths (a)	239	34.09	41.2	40.1	501	38.31	40.8	49.4	508	34.06	32.1	28.0	1248	35.65	40.1	38.0	17.6
Illegitimate Births (b)	91	38.07	35.2	33.9	86	17.16	16.9	14.5	93	18.30	13.2	12.0	270	21.63	19.3	17.7	9.0
Livebirths born in Hosps. and N/S (c)	236	98.7	99.7	98.0	480	95.80	92.4	85.9	507	99.80	99.6	100	1213	97.19	96.4	93.0	99.5
Low Birth Rate Infants (d)	26	10.87	11.1		59	11.77	12.9		31	6.10	8.5		116	9.29	10.9		8.3
Stillbirths (e)	2	8.36	11.4	4.0	9	17.96	17.4	12.6	4	7.82	10.2	15.3	15	12.01	13.8	11.7	10.8
Perinatal Deaths (f)	6	24.89	37.9	20.2	23	45.09	40.1	43.0	5	9.76	21.8	30.3	34	26.92	33.2	34.0	23.7
Neonatal Deaths (0-28 days) (g)	6	25.10	26.6	16.1	17	33.93	26.2	30.7	1	1.96	13.1	15.4	24	19.23	21.6	22.7	14.8
Post Neonatal Deaths (29-365 days) (h)	13	54.39	26.6		32	63.87	78.4		4	7.87	8.6		49	39.26	43.1		6.0
Infant Deaths (under 1 year) (i)	19	79.49	53.1	24.2	49	97.80	105.0	90.5	5	19.68	21.7	20.5	73	58.49	64.7	53.7	18.8(1970)
Total Deaths (Crude Death Rate) (j)	61	8.70	7.18	6.5	147	11.24	11.1	10.1	89	5.96	4.6	4.1	297	8.48	7.46	6.7	7.4
Deaths in Hosps. and N/S (k)	25	54.34	62.3	50.0	75	64.10	62.3	54.8	39	60.93	59.1	57.0	139	61.23	61.5	54.5	67.7
Natural Increase (l)	178	25.39	34.3	33.6	354	27.07	38.2	39.2	419	28.09	27.5	23.8	951	27.17	32.7	31.3	10.2
Maternal Deaths (m)	-	-	-	-	-	-	17.4	-	-	-	-	-	-	-	7.7	-	2.7

(a) rate per 1,000 population
 (b) rate per 100 live births
 (c) rate per 100 live births
 (d) births 5.5 lbs. & under per 100 live births
 (e) rate per 1,000 live births
 (f) stillbirths plus deaths 0-7 days, per 1,000 total births (live births & stillbirths)

(g) deaths 0-28 days per 1,000 live births
 (h) deaths 29-365 days per 1,000 live births
 (i) deaths under 1 year per 1,000 live births
 (j) crude death rate - deaths per 1,000 population
 (k) rate per 100 deaths
 (l) rate per 1,000 population

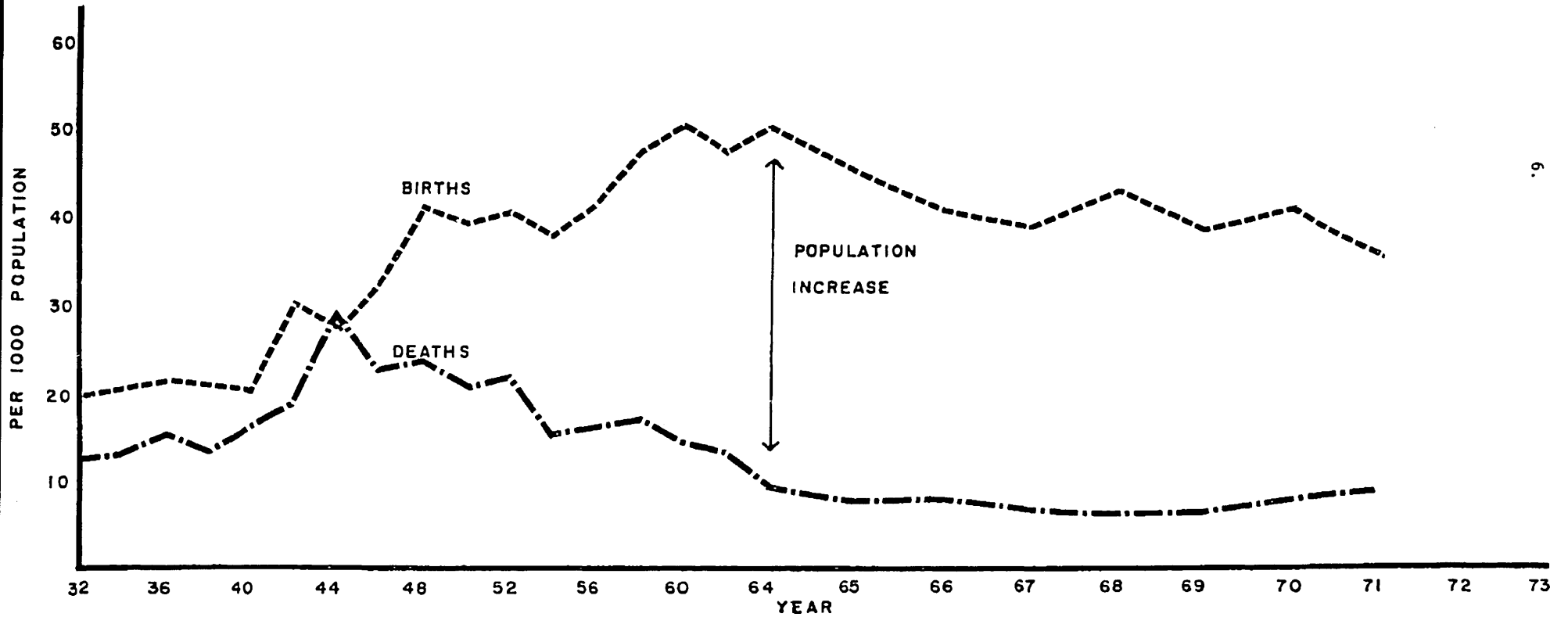
TABLE II
NORTHWEST TERRITORIES 1971

Vital Statistics in Zones

	Mackenzie Area						Inuvik Zone						Keewatin Area				Baffin Zone			
	Indians		Eskimos		Others		Indians		Eskimos		Others		Eskimos		Others		Eskimos		Others	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
	4884		2484		10919		2125		2003		2742		3066		345		5524		918	
Livebirths (a)	176	36.03	109	43.88	371	33.97	63	29.64	55	27.45	87	31.72	129	42.07	15	43.47	208	37.65	35	38.12
Illegitimate Births (b)	59	33.52	17	15.59	70	18.86	31	49.20	24	43.63	18	20.68	10	7.75	--	---	35	16.82	5	14.28
Births in N.S. or Hospitals (c)	173	98.29	101	92.66	370	99.73	63	100.0	55	100.0	87	100.0	124	96.12	15	100.0	200	96.15	35	100.00
Low Birth Weight Infants (d)	22	12.50	9	8.25	18	4.85	4	6.34	10	18.18	8	9.19	14	10.85	3	20.0	26	12.50	1	2.85
Maternal Deaths	-	---	-	---	-	---	-	---	-	---	-	---	-	---	-	---	-	---	-	---
Stillbirths (e)	1	5.68	3	27.52	3	8.08	1	15.87	-	---	1	11.49	1	7.75	-	---	5	24.03	-	---
Perinatal Deaths (f)	5	28.24	5	44.64	3	8.02	1	15.62	3	54.54	1	11.36	2	15.38	1	66.66	11	97.34	-	---
Neonatal Deaths (g)	6	34.09	-	---	-	---	-	---	3	54.54	-	---	1	7.75	1	66.66	7	33.65	-	---
Post Neonatal Deaths (h)	4	22.72	9	82.56	2	5.39	4	63.49	2	36.36	1	11.49	5	38.75	-	---	11	52.88	-	---
Infant Deaths (i)	10	56.81	11	100.91	2	5.39	4	63.49	5	90.90	1	11.49	6	46.51	1	66.66	18	86.53	-	---
Total Deaths (j)	34	6.96	28	11.27	51	4.67	12	5.64	15	7.48	11	4.01	30	9.78	1	2.89	44	7.96	1	1.08
Deaths in N.S. or Hospitals (k)	17	50.0	18	64.28	33	64.70	8	66.6	8	20.0	5	45.45	15	50.0	1	100.0	34	77.27	-	---
Natural Increase (l)	142	29.07	81	32.60	320	29.30	51	24.0	40	19.97	76	27.71	99	32.28	14	40.57	164	29.68	34	97.14

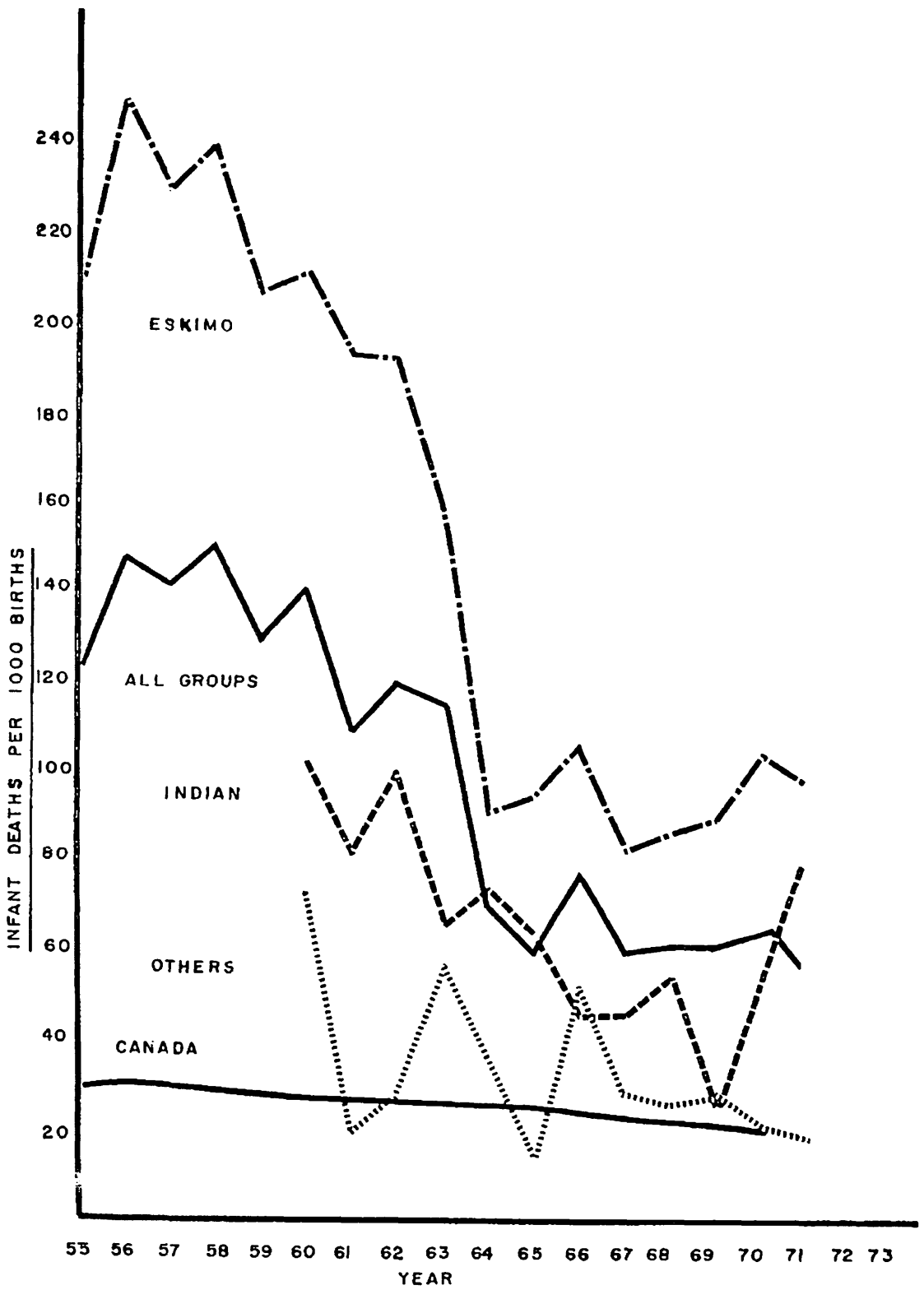
- (a) rate per 1,000 population
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- (f) stillbirths plus deaths 0-7 days per 1,000 total births (live births & still births)
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- (i) deaths under 1 year per 1,000 live births
- (j) crude death rate - deaths per 1,000 population
- (k) rate per 100 deaths
- (l) rate per 1,000 population

GRAPH I
VITAL STATISTICS N.W.T.



GRAPH 2
INFANT MORTALITY RATE

N.W.T.



It is well documented that infant mortality is associated with high birth orders and that the babies of young mothers with several small children are particularly vulnerable. It is also well known that the risk of maternal mortality and morbidity increases with age and parity. The need for family planning programs in the N.W.T. is obvious.

BIRTHS OUTSIDE THE TERRITORIES:

13.14% of all births occurred in hospitals outside of the N.W.T. 53% of these births were to non-native mothers. The majority of the native group were from Keewatin Zone, since Churchill Hospital is the referral centre for this region.

DEATHS:

Please refer to Tables I and II which give details of the various death rates according to ethnic groups and zones and include comparisons with the previous two years.

CRUDE DEATH RATE:

The overall crude death rate, ie. total deaths per 1000 population, has increased slightly from 1970. This increase was reflected in the rates for all ethnic groups and is due mainly to an increase in deaths of those 60 years and over.

The percentage age distribution of deaths was as follows:

Age Group	Indians		Eskimos		Others		All Groups	
	No.	%	No.	%	No.	%	No.	%
0-7 days	4	8.69	14	11.96	1	1.56	19	8.37
8 - 28 days	2	4.34	1	.85	-	-	3	1.32
9 - 365 days	8	17.39	27	23.07	3	4.68	38	16.74
1 - 4 years	1	2.17	8	6.83	3	4.68	12	5.28
5 - 9 years	-	-	-	-	1	1.56	1	.44
10 - 14 years	1	2.17	2	1.70	2	3.12	5	2.20
15 - 19 years	2	4.34	2	1.70	2	3.12	6	2.64
20 - 29 years	3	6.51	12	10.25	7	10.93	22	9.69
30 - 39 years	1	2.17	5	4.27	8	12.50	14	6.16
40 - 49 years	2	4.34	7	5.98	8	12.50	17	7.48
50 - 59 years	2	4.34	10	8.54	8	12.50	20	8.80
60+	20	43.47	29	24.78	21	32.81	70	30.83
TOTAL	46		117		64		227	

Contrary to 1970, the majority of deaths did not occur in the under 1 year group, but rather, in the 60 years and older category.

PLACE OF DEATH:

61.23% of all deaths occurred in either a hospital or nursing station. The ethnic distribution is as follows:

Indians - 54.34% Eskimos - 64.10% Others - 60.93%

MATERNAL DEATHS:

No maternal deaths were recorded for 1971.

PERINATAL DEATHS (0-7 days plus stillbirths)

This rate increased slightly for Eskimos, but decreased substantially in the Indian and Other groups. Most of the deaths occurred in the first week of life and were due mainly to prematurity.

NEONATAL MORTALITY (0-28 days)

The neonatal mortality rates increased for Eskimos, but dropped slightly in the Indian group and markedly in the Other group. Most of these deaths occurred in the first 7 days.

POST NEONATAL MORTALITY (20-365 days)

The post neonatal death rate in the Indian group doubled from the previous year; the Eskimo dropped 15 points, the Other rate decreased slightly. The N.W.T. rate of 39.26 compares unfavourably with 6.0 for all Canada. The numerically important causes of death in this period are pneumonia, crib deaths and accidental inhalation of gastric contents. Mortality in this period is dependent, to a large extent, upon socio-economic conditions. Mothers in substandard overcrowded houses with poor sanitation, must find it almost impossible to put any health teaching into practice.

The 8 crib deaths and 7 deaths for accidental inhalation give cause for concern. Investigators elsewhere are finding growing evidence which indicates a direct relationship between these deaths and standards of parental care.

INFANT DEATHS (under 1 year)

The N.W.T. infant mortality rate dropped by 6 points from the previous year, but is still 3 times the national rate. The decrease occurred in the Eskimo group. It was encouraging to see the Eskimo rate in Keewatin Zone reduced from 119.7 in 1970 to 46.51 in 1971. The Indian rate increased from 1970.

TABLE III
NORTHWEST TERRITORIES
Causes of Death by Ethnic Group and Selected Age Groups 1971
Number of Deaths

CAUSES OF DEATH	GRAND TOTAL	INDIANS									ESKIMOS									OTHERS														
		Infants			Pre Sch	School			Young Adult	Adult	Eld	TOTAL	Infants			Pre Sch	School			Young Adult	Adult	Eld	TOTAL	Infants			Pre Sch	School			Young Adult	Adult	Eld	TOTAL
		0-28 days	29-365	1-4 yrs	5-9 yrs	10-14 yrs	15-34 yrs	35-64 yrs	65+ yrs	0-28 days	29-365		1-4 yrs	5-9 yrs	10-14 yrs	15-34 yrs	35-64 yrs	65+ yrs	0-28 days	29-365	1-4 yrs	5-9 yrs		10-14 yrs	15-34 yrs	35-64 yrs	65+ yrs							
Injuries & Accidents (BE 47-50)	70	-	5	1	-	1	5	3	-	15	1	5	3	-	2	15	3	1	30	-	1	2	-	1	11	7	3	25						
Diseases of Infancy & Malformations (B41-44)	30	5	1	-	-	-	-	-	-	6	15	5	2	-	-	-	-	-	22	1	1	-	-	-	-	-	-	2						
Cardiovascular Diseases (B24-29)	30	-	-	-	-	-	-	1	5	6	-	-	-	-	1	7	2	10	-	-	-	1	-	1	6	6	14							
Pneumonia (B31)	23	-	1	-	-	-	1	-	4	6	-	9	1	-	-	-	1	4	15	-	-	-	-	-	-	2	2							
Malignant Neoplasms (B18)	21	-	-	-	-	-	-	2	2	4	-	-	-	-	-	5	4	9	-	-	-	-	1	1	5	1	8							
Senility, Unknown & Other Diseases (B45-46)	18	-	1	-	-	-	-	-	5	6	-	1	-	-	-	2	5	8	-	-	-	-	-	-	2	2	4							
Diseases of the Nervous System (B22-23)	10	-	-	-	-	-	-	-	2	2	-	-	-	-	1	1	2	4	-	-	-	-	-	-	2	2	4							
Gastrointestinal Diseases (B33-36)	9	1	-	-	-	-	-	-	-	1	-	4	1	-	-	-	1	6	-	1	-	-	-	-	-	1	2							
Other Respiratory Diseases (B30 & 32)	7	-	-	-	-	-	-	-	-	-	-	1	-	-	-	3	2	6	-	-	1	-	-	-	-	-	1							
Infective & Parasitic Diseases (B3-17)	5	-	-	-	-	-	-	-	-	-	-	2	1	-	-	2	-	5	-	-	-	-	-	-	-	-	-							
Cirrhosis of Liver & Hyperplasia of Prostate (B37-39)	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	2							
Benign Neoplasms	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-							
TOTALS	227	6	8	1	-	1	6	6	18	46	16	27	8	-	2	17	25	22	117	1	3	3	1	2	14	23	17	64						

NATURAL INCREASE:

The natural increase was reduced for Indian and Eskimo groups, but is still 2 1/2 times the national rate of 10.2.

CAUSE OF DEATH:

The major causes of death are listed below:

	<u>No. of Deaths</u>	<u>Percentage of Total Deaths</u>
Injuries, Accidents, Violence	70	30.83
Disease of Infancy, Prematurity, and Malformations	30	13.21
Cardiovascular diseases	30	13.21
Pneumonia	23	10.13
Malignant Neoplasms	21	9.25
Senility, unknown and other diseases	18	7.92
Diseases of the Central Nervous System (Cerebral accidents, Non-Meningococcal Meningitis)	10	4.40
Gastrointestinal diseases (gastro- enteritis, ulcer of stomach and duodenum)	9	3.96

MALIGNANT NEOPLASMS (CANCERS) BY SITE, ETHNIC GROUP AND SEX

	Indians		Eskimos		Others		Total
	Male	Female	Male	Female	Male	Female	
Lung	2	-	-	2	-	1	5
Gastro-Intestinal	1	1	1	1	1	1	6
Pancreas	-	-	1	1	-	-	2
Blood	-	-	-	-	1	-	1
Prostate	-	-	-	-	1	-	1
Testicle	-	-	1	-	-	-	1
Skin	-	-	-	-	-	1	1
Liver	-	-	1	-	-	-	1
Gall Bladder	-	-	-	-	-	1	1
Cervix Uterine	-	-	-	-	-	1	1
Parotid	-	-	-	1	-	-	1
TOTAL	3	1	4	5	3	5	21

The number of deaths from injuries, accidents or violence increased from the previous year and this category constitutes a greater proportion of the total deaths. Once again the association of alcohol consumption with deaths in this category has been estimated at between forty to fifty percent of the total episodes.

In 1971 the degenerative diseases such as cardiovascular, senility, etc. were more prominent as causes of death, whereas, infectious diseases were less prevalent in terms of causes of death.

DEATHS FROM ACCIDENTS, INJURIES, VIOLENCE, N.W.T. 1971

	<u>Indian</u>	<u>Eskimo</u>	<u>Other</u>	<u>Total</u>
Exposure	-	7	2	9
Drowning	1	4	3	8
Inhalation of gastric contents	3	4	1	8
Asphyxia	3	3	-	6
Suicide	-	4	2	6
Burns	-	-	5	5
Aircraft crashes (N.W.T. residents only)	-	-	5	5
Motor vehicle accidents	2	-	2	4
Poisons (exclude alcohol)	-	2	2	4
Gunshot wounds (accidental)	2	1	-	3
Homicide	-	2	-	2
Alcohol poisoning	1	1	-	2
Other (falls, crushing)	3	2	3	8
TOTAL	15	30	25	70

PUBLIC HEALTH SERVICES

Following several studies and recommendations by consultants, the Department of National Health and Welfare established in the N.W.T. in 1971, as a pilot project, a Health Data Bank and Information system. It is hoped that this system will help us to make a more accurate assessment of the Health Status of the population and provide a basis for more effective program planning evaluation.

The system includes data on morbidity and mortality patterns, health-relevant community factors, levels of activity in treatment and public health services, medical facilities and medical and paramedical coverage.

The system was initiated in October 1971 and we anticipate the first feed back by April 1972 and quarterly thereafter.

MATERNAL AND CHILD HEALTH:

Several measures were instituted in 1971 to attack the problem of infant mortality and morbidity.

1. "At Risk" registers were established in areas of high infant mortality. Vulnerable babies in the communities were identified and kept under close surveillance by the Public Health Nurses.
2. A Perinatal and Infant Mortality Committee was established to study factors relating to health and illness in babies in the N.W.T. All babies born within a twelve month period will be included in the study and will be followed for one year. It is hoped that this committee will be able to identify factors associated with our perinatal and infant mortality, so that we might initiate preventive and corrective action.
3. A special infant health project was started in May 1971, at Eskimo Point. The project augments traditional services, by providing for intensive supervision of infants under 1 year of age. Those babies identified as belonging to the "high risk" category are under the surveillance of a project nurse, while all other babies are visited at home by 2 Eskimo Home Health Aides, who were trained on the job. A great deal of time is spent in educating parents in child care. The first assessment of this program will be done in June 1972. There are already indications, that the frequent contact with mothers is making a difference to the quality of maternal care.
4. As one concrete measure to reduce prematurity and infant mortality rates, we are encouraging high risk mothers to space their children. Family Planning Clinics as such, have not been established, but family planning information has become part of health counselling in the pre- and post-natal periods and at well baby clinics.

Advice and supplies are available at all of our facilities in the N.W.T. There has been a noticeable rise in interest in family planning amongst women of all ethnic groups.

Inservice education in conception control has been offered to field staff in all zones over the past 18 months, but the high turnover of nurses makes it almost impossible to have all staff orientated to family planning.

Northern Health Services has co-operated with the Yellowknife Family Planning Clinic Board in all their endeavours and will continue to give support and practical assistance.

SCHOOL HEALTH:

All school beginners were given physical examinations by either physicians or nurses in 1971. However, we fell short of our objective to arrange examinations for all children in grades 6 and 10. The value of a routine school physical has been questioned in many quarters. It has been pointed out that the number of defects uncovered is very small for the amount of time and personnel involved in this one activity. This will have to be assessed over a period of time.

Our Health Educator worked with the Department of Education in Keewatin Zone to formulate a health curriculum for schools. This has now been completed and we hope that other school districts will follow suit.

PUBLIC SERVICE HEALTH:

An occupational health program for public servants, Territorial and Federal, is in the process of being organized. Up-to-date, arrangements have been made for pre-employment, periodic and special medical examinations where such examinations are prescribed by standards or regulations. Since we already offer a total health service including health counselling to all northern residents, no special nurse counselling program for public servants has been established at this time, although a pilot project for Territorial employees is planned for Frobisher Bay by mid 1972.

TREATMENT SERVICESOUTPATIENT SERVICES - NURSING STATIONS:

Table IV gives a summary of people seen on an outpatient basis at Nursing Stations and the various disease conditions treated. This report covers the period January to August 1971. From September 1st, this information was recorded on N.W.T. Medicare claim cards and put on computer as part of the Health Information Data System. Morbidity statistics are not yet available from the System.

MEDICAL SERVICES:

During 1971 the Department was fortunate in having a full complement of medical officers in the field. Vacancies did occur, but these were filled within a very short time. As a result, there were increased visits of physicians to the various satellite communities.

We continued to experience a high "turn-over" rate of Departmental physicians with an average length of stay of 1.8 years. There was a considerable increment in physicians' salaries during 1971 and this certainly eased the problem of recruitment. Another incentive, expected to be approved during 1972, is that of a scholarship program in which, after two years satisfactory service in the north, a physician will be given one year's education, at full pay, with no requirement to return to employment with the health service.

The number of private practitioners in the N.W.T. had increased to 12 as of December 1971. They are located in Yellowknife, Fort Smith and Hay River. It is expected that, with the advent of Medicare, increasing population and better amenities, private practitioners will be attracted to the more remote areas in the not too distant future.

The third component of medical coverage consisted of visits by consultants from several University centres in the provinces. These visits are being increased in frequency and duration to the extent that there are serious accommodation problems at the smaller settlements. For this reason a number of trailers for visiting personnel have been shipped to centres of need (see "Facilities" section).

TABLE IV

SUMMARY OF NURSES REPORTS FROM NURSING STATIONS & HEALTH CENTRESJANUARY 1st - AUGUST 31st, 1971

ITEM	BAFFIN ZONE	INUVIK ZONE	KEEWATIN ZONE	MACKENZIE ZONE	GRANDE TOTAL
Sick Persons Who Visited	5,564	9,993	10,413	13,879	39,849
Common cold and influenza	1,215	1,829	2,345	2,476	7,955
Bronchitis and other resp. diseases	1,722	702	1,704	1,082	5,210
Gastrointestinal conditions	1,065	659	852	902	3,478
Malnutrition, anaemia, underweight	110	183	84	153	530
Breast conditions	66	24	44	67	201
Gynaecological conditions	199	306	279	555	1,339
Prematurity	12	10	8	19	49
Other complications of pregnancy	33	58	51	16	158
Fractures, dislocations	72	77	45	91	285
Cuts, bruises, sprains	910	964	734	912	3,520
Other accidents (inc. burns)	228	184	168	423	1,003
Orthopedic conditions (excl. acc.)	69	75	53	116	313
Refractive errors	45	35	278	123	481
Other eye conditions	279	332	993	558	2,162
Ear, nose, throat conditions	2,343	1,309	2,077	1,813	7,542
Skin conditions	1,458	1,377	1,045	2,134	6,014
Infestations	132	84	132	304	652
Dental conditions	520	414	869	390	2,193
Conditions of nervous system	240	161	180	216	797
Arthritis and rheumatism	103	191	157	260	711
Cardiovascular conditions	238	159	144	139	680
Diabetes mellitus	2	21		68	91
All other	1,419	4,442	3,811	305	9,977

NURSING COVERAGE:

Once again we were fortunate, during 1971, to have provided adequate nursing coverage to all areas. However, maintenance of sufficient numbers of nurses is a continual exercise in crisis management.

Plans were made during the year with several university centres to arrange for four to six month courses for nurses who work in isolated communities. The course content will concentrate upon subjects related to diagnosis and treatment procedures. This should result in a higher calibre of health care, but it will also cause staffing problems since the nurses who come down to these courses must have their positions filled during their absence on course.

During 1971 nursing positions were created and filled at Grise Fiord, Holman Island, Snowdrift, Pelly Bay, Belcher Islands and Lake Harbour.

DENTAL SERVICES:

Dental treatment continues to be provided by Departmental dentists to those people living in Baffin, Keewatin and Inuvik Zones, whereas, dental treatment in the MacKenzie Zone is being offered by private dental practitioners resident in three centres of the MacKenzie Zone.

In the areas being served by Departmental dentists, all communities received at least one visit during 1971 with the exception of Arctic Bay, Grise Fiord, Pond Inlet and Port Burwell. Regrettable as these voids may be, they are understandable in view of the high turnover of Field Dental Officers within the Department. Although staffing has improved, the records indicate that of the 15 dentists employed by the Department during the year, only 6 remained at year's end. Considering also the time required for the new dentists to become acclimatized to a strange environment, to very different clinical working conditions and new cultural groups, the remaining field dental staff should be complimented on their achievements in 1971.

In the June 1971 session of the Territorial Council, the N.W.T. Dental Profession Ordinance was amended to relax the professional requirements for those persons qualifying outside Canada and wishing to register to practise dentistry in the north. Enabling Legislation was also enacted at the same session of council which permits Dental Nurse Therapists to provide treatment within a clearly defined range of dental services.

It would now appear that a school for training these Dental Nurse Therapists will be situated in the N.W.T., possibly by late 1972.

The signs of dental breakdown are accumulated throughout life. In order for us to promote a dentally-fit individual or population it is therefore necessary to start with dental care for the very young and to follow up these individuals progressively thereafter. In keeping with this precept, this Department emphasizes prevention of dental disease and comprehensive dental care for the young. For the sake of efficiency and enlightenment, it makes good sense to consider in future building programs, the location of dental clinics within the schools of the north.

FACILITIES

New facilities were placed in the following centres during the year:

- | | |
|------------------|---|
| Lake Harbour | - New 2 bed Nursing Station - 3 trailer units. |
| Grise Fiord | - Expanded the existing Clinic to a 2 bed Nursing Station - 2 additional trailer units. |
| Clyde River | - Erected in 1971 - 7 module 5 bed Nursing Station c/w Public Health facilities and Nursing quarters. This project delayed to 1971 due to ice conditions in the Davis Strait making it impossible to off-load. |
| Broughton Island | - Erected in 1971 - 7 module 5 bed Nursing Station, c/w Public Health facilities and Nursing quarters. This project delayed to 1971 due to ice conditions in the Davis Strait making it impossible to off-load. |
| Resolute Bay | - New transient trailer. Accommodates 8. Purchased a 3 bedroom Doctor's residence from the N.W.T. Administration. |
| Belcher Islands | - New 2 bed Nursing Station - 3 trailer units. |
| Coral Harbour | - New transient trailer. Accommodates 8. |
| Eskimo Point | - New Health Office - trailer unit. |
| Baker Lake | - Expanded existing station to provide Public Health facilities and adequate nursing accommodation. |

- Fort Wrigley - New 3 bed Nursing Station - 3 trailer units.
Transferred the Clinic from Fort Resolution and added storage and residence.
- Holman Island - Expanded the existing Clinic to a 3 bed Nursing Station - 2 additional trailer units.
- Snowdrift - New 3 bed Nursing station - 3 trailer units.
- Hay River - New Health Office in the Native Village. Trailer unit.
- Hay River - Leased accommodation to provide facilities for Public Health and Dental Clinic previously situated at Vale Island.
- Tuktoyaktuk - Expanded existing station to provide Public Health facilities and adequate accommodation.
- Fort Good Hope - New transient trailer. Accommodates 8.
- Fort Norman - New transient trailer. Accommodates 8.
- Fort McPherson - Completion of the new 5 bed Nursing Station and Public Health facilities damaged by fire during construction.
- Fort Simpson - Feasibility study and preliminary planning for a new 12 bed hospital.
- Inuvik Hospital - Feasibility study and preliminary planning and pile driving.
- Inuvik - Constructed a new Health Office in downtown area. 2 trailer units presently set up adjacent to the hospital and utilized for a Health Centre. These units will be transferred to Sachs Harbour upon completion of renovation to the hospital in 1973.
- Frobisher Bay - Health Centre and Dental Clinic relocated in leased accommodation in the Ritchie Building in Ikaluit.

Due to the uncertainty of population figures at this point in time, it is difficult to ascertain if all communities of over 100 residents in the N.W.T. have a Nursing Station with resident nursing staff. However, the exceptions, if any, must be very few.

It is important that the health service should not "over-build" in the north particularly in terms of permanent buildings. It is becoming increasingly difficult to forecast population trends in various parts of the north and, for this reason, emphasis is being placed upon the construction of "moveable" trailer units.

NOTIFIABLE DISEASES

It will be noted that the incidence of German Measles and Red Measles decreased considerably from the previous year and this has been the result of more concentrated efforts at immunization throughout all zones.

It will be noted that the incidence of "influenza" markedly increased in 1971 over the previous year. It should be emphasized that these figures are approximations only since, except during an epidemic, it is often difficult to diagnose influenza on clinical grounds alone.

The degree to which prevention of influenza can be accomplished by vaccination is open to question. One of the biggest problems is that of "shifting antigenicity" which means that different types of influenza virus can cause the disease and it is almost impossible to predict the type of viruses which will prevail during any given year.

Influenza can be a dire threat to those at the two extremes of ages and to those who are handicapped with other debilitating diseases. Vaccination should be given with these priorities in mind.

Hepatitis was particularly prevalent in the Inuvik and Mackenzie Zones and this disease outbreak alone made great demands on the public health personnel and on the health budget. The pattern of the hepatitis outbreak, in terms of its association with poor hygiene, overcrowding and lack of acceptable water and sewer sanitation, proves quite conclusively that the incidence of the disease is directly related to these adverse living conditions. Bacillary dysentery, also increased during 1971 and, here too, the incidence of this disease is a reflection of the level of hygiene and sanitation.

The statistics will indicate that meningitis is still a definite problem in the north and we are hopeful that a vaccine may soon be available to decrease the incidence of this disease.

HEALTH CONDITIONS IN N.W.T.NOTIFIABLE DISEASES:

Major notifiable diseases were recorded as follows:

	<u>1970</u>	<u>1971</u>
Influenza	1109	3478
Rubella	449	36
Hepatitis	81	266
Red Measles	60	29
Whooping Cough	31	8
Bacillary Dysentery	25	109
Meningococcal Infections	5	3
Non-specific Meningitis	8	9
Typhoid Fever	-	1

The Zonal distribution of the following infections was:

<u>DISEASE</u>	<u>INUVIK</u>	<u>MACKENZIE</u>	<u>KEEWATIN</u>	<u>BAFFIN</u>
German Measles (Rubella)	12	7	1	16
Red Measles	1	10	7	11
Influenza	1547	1185	619	127
Hepatitis	132	136	-	10
Bacillary Dysentery	36	70	-	3

VENEREAL DISEASE:1. Gonorrhoea:

Table number V gives the incidence of this disease in the N.W.T. during 1971 and it will again be noted that each year the incidence increases markedly.

It should be pointed out that some of the increase of 1971 over previous years is due to the fact that there has been some change in the reporting system.

During 1971 the clinical cases reported to "Statistics Canada" included -

1. Males with clinical findings, but negative tests.
2. Named female contacts whose findings were negative.
3. Clinical cases in areas where laboratory tests were not done.

In previous years such cases were either not counted or counted only as "unconfirmed".

Both the 1970 statistics indicate that the highest incidence of gonorrhoea occurred in the males in the "others" category and this is perhaps partly attributable to the large number of transient youths and adults who migrate to the north for short periods of time particularly in the summer months. The second highest incidence rate is in Eskimo males, although the Eskimo females showed the greatest increase over 1970.

All of these figures must be viewed in the context of inadequate reporting, although the reporting system in the north is believed to be superior to that of the provinces.

As in the rest of Canada, the highest gonorrhoea is in the (20-24) age group; however, increases were noted in the (10-14) and (15-19) age groups.

There is some reason to hope that a vaccine against gonorrhoea may prove to be effective. The vaccine, already developed, has been tested for safety and its ability to produce antibodies. It has also been used on selected persons in Inuvik Zone and it is expected that the results of this trial will be known by mid 1972.

There is some evidence of an increasing resistance of the gonorrhoea bacterium to the usual doses of conventional antibiotics (eg. penicillin) and, if this resistance becomes more serious, recommendations will be made to increase the strength of the antibiotic and/or changing to other antibiotics to which the bacteria is more sensitive. In addition, consideration is being given to the use of Probenecid in the treatment of this disease in addition to antibiotics. Probenecid prolongs the duration of the antibiotic in the bloodstream, thereby making it more effective against the infection.

The interim treatment program at Inuvik, Hay River and Yellowknife has been closely studied and the results indicate that it is of doubtful value, mainly due to the high "drop-out" rate of those who are included in the program.

2. Syphilis:

There were 13 cases of confirmed syphilis in the N.W.T. in 1971. Ten of these were in the white population, one in the Indian and one in the Metis. The majority (9), were reported from the MacKenzie Zone. All cases except one were in the male population.

GONORRHOEA:

Ethnic Group	Total by Sex		Age Groups							Age Not Stated
			1-9	10-14	15-19	20-24	25-39	40-59	60+	
	M	F								
Indians	223	103	0	0.0	49.0	127.0	121.0	23.0	5.0	1.0
%			0	0.0	15.0	39.1	37.1	7.0	1.5	0.3
Eskimos	336	309	0	13.0	157.0	245.0	186.0	54.0	1.0	19.0
%			0	1.9	23.3	36.3	27.6	8.0	0.1	2.8
Others	401	89	0	1.0	72.0	207.0	175.0	32.0	0.0	3.0
%			0	0.2	14.7	42.2	35.7	6.6	0.0	0.6
TOTALS	990	501	0	14.0	278.0	579.0	482.0	109.0	6.0	23.0
%	66.4	33.6	0	1.0	18.7	38.8	32.3	7.3	0.4	1.5

N.W.T. - Confirmed and clinical cases by sex-age distribution in the three ethnic groups. Unconfirmed cases not included.

N.W.T. - The disease incidence of confirmed and clinical cases among the various groups was:

- Indians - 4651 per 100,000 population
- Eskimos - 5162 per 100,000 population
- Others - 3283 per 100,000 population
- All Groups - 4259 per 100,000 population

TABLE V

TOTAL CASES OF GONORRHOEA REPORTED IN NORTHWEST TERRITORIES - 1971

ZONE	INDIAN		ESKIMO		OTHERS (incl.) METIS		TOTALS by SEX		TOTALS 1971	CUMULATIVE TOTALS	
	M	F	M	F	M	F	M	F		1970	1969
NO. NAME											
W31 Tuktoyaktuk	1		21	10 (7)	7		29	10 (7)	39 (7)	19 (9)	26 (18)
W32 Aklavik	8	2	2		2	1	12	3	15		
Inuvik	12	15 (8)	24	31 (15)	57	20 (7)	93	66 (30)	159 (30)	115 (53)	154 (38)
W 4 McPherson	27	27 (16)		(1)	5	1	32	28 (17)	60 (17)	18 (6)	30 (4)
W 5 Ft. Good Hope										9	
W 6 Ft. Norman	5	2			2		7	2	9	7	14
Ft. Franklin											(2)
TOTAL - INUVIK ZONE	53	46 (34)	47	41 (30)	73	22 (8)	173	109 (72)	282 (72)	168 (69)	224 (63)
W 1 Cambridge Bay			51	33 (41)	6	(1)	57	33 (42)	90 (42)	20 (4)	1
W 2 Coppermine			14	14 (4)	2		16	14 (4)	30 (4)	2	1
E 4 Spence Bay											
W 7 Port Radium											
W 8 Ft. Simpson - Liard	36	15 (27)			40	8 (8)	76	23 (35)	99 (35)	30 (6)	16 (14)
W10 Ft. Resolution	4	2 (2)			13	3 (5)	17	5 (7)	22 (7)	28 (6)	2 (1)
W11 Ft. Rae	22	6			1		23	6	29	2	2
W12 Snowdrift - Reliance											
W14 Ft. Smith	38	7 (16)	12	5 (4)	50	11 (15)	100	23 (35)	123 (35)	90 (49)	20 (12)
W92 Pine Point	1	1 (1)			14	3	15	4 (1)	19 (1)	123 (26)	47 (10)
Hay River	22	3 (8)	1		59	19 (10)	82	22 (18)	104 (18)		
W93 Ft. Providence	11	4 (7)			2		13	4 (7)	17 (7)	35 (13)	4 (1)
W132 Yellowknife	36	18 (8)	9	1 (2)	86	11 (16)	131	30 (26)	161 (26)	159 (35)	93 (29)
TOTAL-MCKENZIE ZONE	170	56 (69)	87	53 (51)	273	55 (55)	530	164 (175)	694 (175)	488 (139)	186 (70)
E 1 Eskimo Point			15	12 (3)			15	12 (3)	27 (3)	26 (5)	15 (1)
E 2 Baker Lake			4	2		1	4	3	7	9 (1)	
E31 Chesterfield Inl.			1	(1)	1		2	(1)	(1)		
Rankin Inlet			29	21 (9)	1	1	30	22 (9)	52 (9)	25	40
Belcher Island						1	1	1	1		
E32 Coral Harbour			1	1 (1)			1	1 (1)	2 (1)		1
TOTAL-KEEWATIN ZONE	-	-	50	36 (14)	2	3	52	39 (14)	91 (14)	60 (10)	56 (1)
E 5 Pond Inlet			2	3	1		3	3	6	12	1
Resolute Bay			2	1	2		4	1	5	(1)	
E 6 Broughton Isl.			9	4 (4)			9	4 (4)	13 (4)	17 (3)	1 (2)
Fangnirtung			9	3 (8)	1		10	3 (8)	13 (6)		
E71 Frobisher Bay	1	122	136 (25)	48	9	170	166 (25)	216 (25)	177 (30)	63 (25)	
E72 Lake Harbour			1	1			1	1	2		
E73 Cape Dorset			24	24 (8)			24	24 (8)	48 (8)	12 (4)	
E 5 Igloolik			13	7 (7)	1		14	7 (7)	21 (7)		
TOTAL - BAFFIN ZONE	-	1	182	179 (52)	53	9	235	189 (52)	424 (52)	218 (38)	65 (27)
TOTAL - N.W.T.	223	103 (103)	366	309 (147)	401	89 (63)	990	501 (313)	1491 (313)	934 (256)	531 (161)

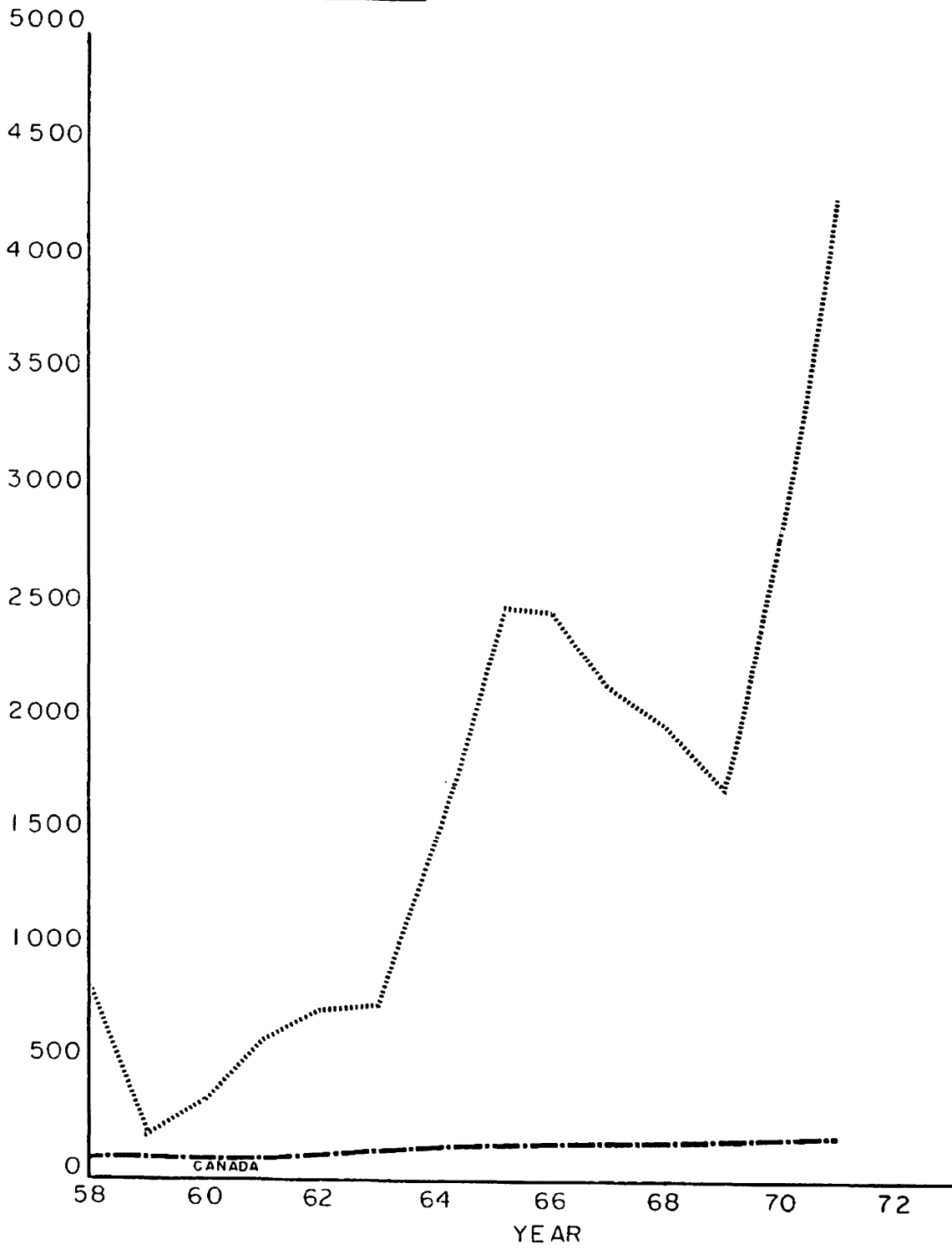
Figures in parenthesis - unconfirmed cases.

GONORRHOEA

N.W.T

GRAPH 3

RATE PER 100,000 POPULATION



TUBERCULOSIS - NORTHWEST TERRITORIES - 1971

There has been a further reduction in the new and reactivated cases of tuberculosis in 1971 - 93 cases as compared to 114 in 1970. The reduction in the number of cases applied to all three groups - Indians, Eskimos and Others.

Our BCG figures for the last two years, 1970 and 1971, represent BCG given to newborns mainly.

It will be noted that the number of bacteriological tests, 7,612, is greatly reduced from 1970; however, this figure represents individuals who have had sputum tests - many of them would have had several sputum samples. Consequently, the total number of sputa examined during the year is likely higher than in 1970.

TABLE VI
BACTERIOLOGICAL STATUS
OF NEW AND RE-ACTIVATED TUBERCULOSIS CASES
NORTHWEST TERRITORIES - 1971

	DIRECT SMEAR		CULTURE		BIOPSY		NON-BACILLARY	
	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT
Indians	4	1	9	3			4	
Eskimos	22	1	21	12	3		6	
Others	2		1	3			1	
TOTAL	28	2	31	18	3		11	

(30.1%) (2.1%) (33.3%) (19.5%) (3.2%) (11.8%)

In reviewing the incidence of tuberculosis in the various areas, Baffin Zone stands out as having by far the greatest number in proportion to the population with Frobisher Bay, Cape Dorset and Clyde River standing out as the most significant settlements. Keewatin and Inuvik Zones are hardly remarkable. Mackenzie Zone shows a considerable cluster of new and reactivated cases centering in Fort Resolution and Yellowknife.

TABLE VII
TUBERCULOSIS - NORTHWEST TERRITORIES - 1971

ETHNIC GROUP	INDIANS			ESKIMOS			OTHERS			ALL GROUPS		
	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970	1969
POPULATION	7,009	6,399	6,180	13,077	11,619	11,175	18,000	14,322	13,928	36,562	32,340	31,283
NEW ACTIVE CASES	17	22	17	52	52	103	4	13	14	73	87	134
INCIDENCE	0.24	0.34	0.27	0.39	0.44	0.92	0.02	0.09	0.1	.02	0.26	0.42
RE-ACTIVATED CASES	4	3	8	13	20	29	3	4	2	20	27	39
CASES ON HOME-CHEMOTHERAPY										1,664	849	571
TUBERCULIN TESTS										7,325	11,213	11,078
B.C.G.										1,150	1,218	2,429
NO. OF X-RAY SURVEY FILMS										37,445	22,765	28,747
NO. OF REFERRED FILMS										12,320	11,552	10,244
BACTERIOLOGY TESTS										7,612*	13,485	12,327

* 7,612 - This figure is the number of people as compared to the number of sputa collected in 1970 and 1969 reports.

TABLE VIII

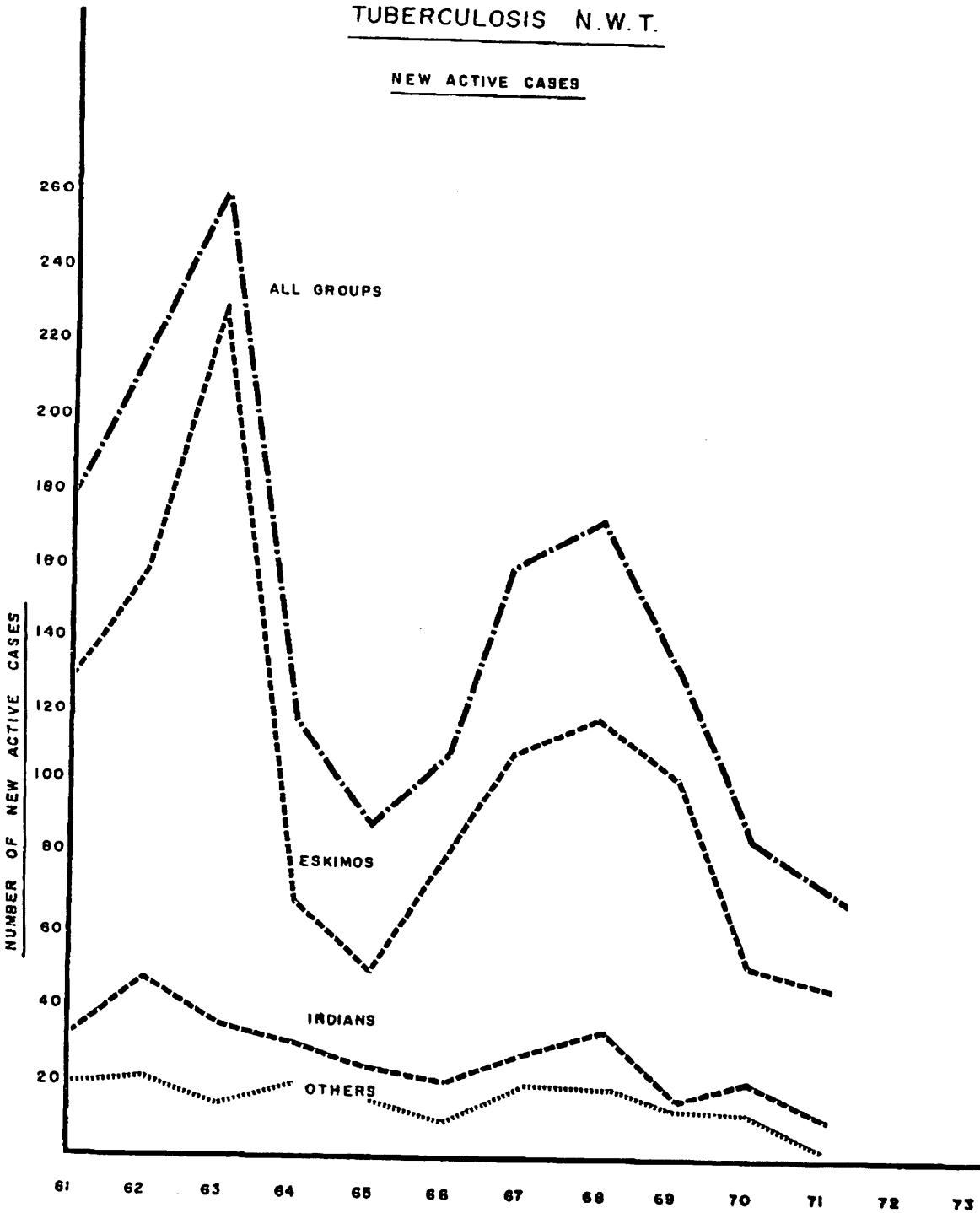
DISTRIBUTION OF NEW AND REACTIVATED TUBERCULOSIS CASES - 1971

HEALTH DISTRICT	INDIANS		ESKIMOS		OTHERS		TOTAL		TOTAL TO DATE 1971		RECENT CONVER- TERS
	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	
Tuktoyaktuk											
Inuvik											
Aklavik			1				1		1		
Fort McPherson	1					1	1	1	1	1	
Fort Good Hope											
Fort Norman											
Fort Franklin	2						2		2		
Arctic Red River	1						1		1		
TOTAL INUVIK ZONE	4		1			1	5	1	5	1	
Cambridge Bay			1				1		1		
Coppermine			3	1			3	1	3	1	
Holman Island											
Spence Bay											
Gjoa Haven											
Fort Simpson	1						1		1		
Fort Liard	2						2		2		
Fort Wrigley	1						1		1		
Fort Resolution	4	1			1	1	5	2	5	2	3
Fort Smith					1		1		1		
Hay River		1	1				1	1	1	1	
Fort Providence											
Fort Rae	1	1					1	1	1	1	
Snowdrift		1						1		1	
Yellowknife	3	1			3		6	1	6	1	2
Pelly Bay			1				1		1		
TOTAL MACKENZIE ZONE	12	5	6	1	5	1	23	7	23	7	5
Eskimo Point											
Whale Cove											
Baker Lake			3	1			3	1	3	1	
Rankin Inlet				1				1		1	
Chesterfield Inlet											
Coral Harbour											
Repulse Bay			3				3		3		
Fort Churchill											
Belcher Islands				1				1		1	
TOTAL KEEWATIN ZONE			6	3			6	3	6	3	
Arctic Bay			5				5		5		
Clyde River			4	3			4	3	4	3	1
Grise Fiord											
Igloolik			4	2			4	2	4	2	
Pond Inlet											
Pangnirtung			2				2		2		
Broughton Island				1				1		1	
Cape Dorset			8				8		8		3
Frobisher Bay			12	2			12	2	12	2	4
Lake Harbour			1				1		1		
Hall Beach			2				2		2		2
Port Burwell			1				1		1		
Resolute Bay			1				1		1		
TOTAL BAFFIN ZONE			40	8			40	8	40	8	10
GRAND TOTAL, N.W.T.	16	5	53	12	5	2	74	19	74	19	15

GRAPH 4

TUBERCULOSIS N.W.T.

NEW ACTIVE CASES



GRAPH 5

TUBERCULOSIS N.W.T.

DEATH RATE PER 100,000

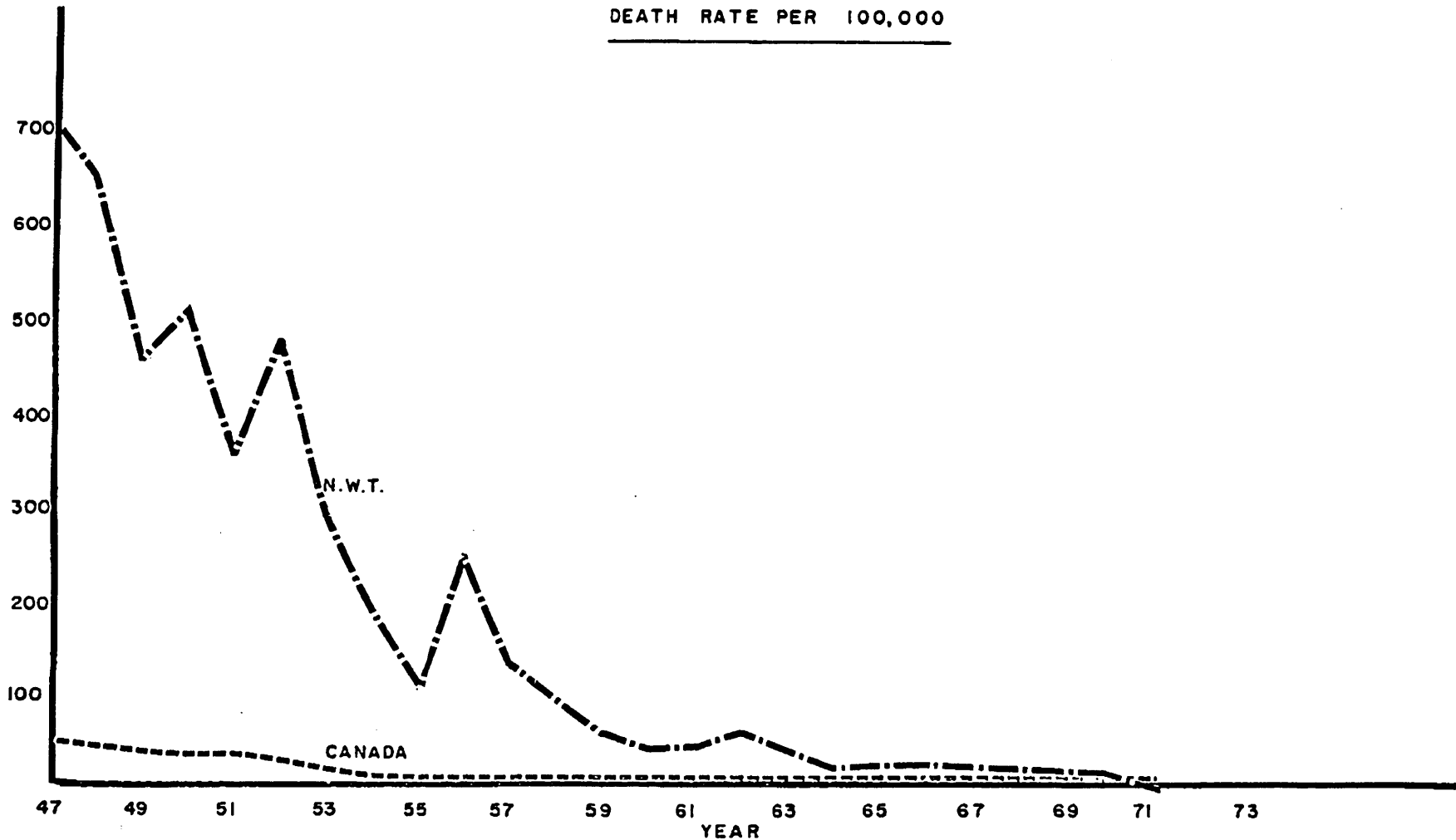


TABLE IX
NEW AND RE-ACTIVATED CASES OF TUBERCULOSIS
BY AGE, SEX AND RACIAL ORIGIN
NORTHWEST TERRITORIES - 1971

AGE GROUP	INDIANS			ESKIMOS			OTHERS			TOTALS			% DISTRIBUTION OF ALL CASES
	M	F	T	M	F	T	M	F	T	M	F	T	
0 - 4	2	-	2	1	1	2	-	-	-	3	1	4	4.3
5 - 9	1	2	3	2	-	2	-	-	-	3	2	5	5.4
10 - 14	-	1	1	1	2	3	-	-	-	1	3	4	4.3
15 - 19	-	-	-	6	2	8	-	-	-	6	2	8	8.6
20 - 24	-	-	-	3	5	8	-	1	1	3	6	9	9.7
25 - 29	2	-	2	3	3	6	-	-	-	5	3	8	8.6
30 - 49	2	2	4	9	14	23	3	1	4	14	17	31	33.3
50 - 69	3	4	7	8	4	12	1	1	2	12	9	21	22.6
70 - OVER	2	-	2	-	1	1	-	-	-	2	1	3	3.2
TOTAL	12	9	21	33	32	65	4	3	7	49	44	93	100.0

TABLE X

	<u>FAR ADVANCED</u>	<u>MODERATELY ADVANCED</u>	<u>MINIMAL</u>	<u>PRIMARY</u>	<u>PLEURISY</u>	<u>EXTRA - PULMONARY</u>	<u>TOTAL</u>
NEW CASES	2	27	26	7	1	10	73
% OF TOTAL	2.7	37.0	35.6	9.6	1.4	13.7	-
RE-ACTIVATED CASES	1	12	6	-	-	1	20
% OF TOTAL	5.0	60.0	30.0	-	-	5.0	-

It is interesting to note that there were only 9 cases of active tuberculosis under the age of ten. The four Eskimos in this younger age group all came from Baffin Zone while four of the five Indians are from Fort Resolution where a small epidemic occurred early in 1971. With the exception of the areas mentioned above there were no cases of primary tuberculosis in children in the balance of the settlements. This is clear indication that the sputum and x-ray surveillance is very effective in finding new infectious cases early enough to avoid the spread of tuberculosis to children.

There is a further shift to the older age group so far as "adult" tuberculosis is concerned with almost 60% of the cases occurring in persons 30 years of age and over. We expect this, provided the spread of infection to young people is prevented. In other words, we are finding active tuberculosis among persons who were infected as children twenty to forty years ago.

We are continuing with a very comprehensive preventative treatment program.

TABLE XI

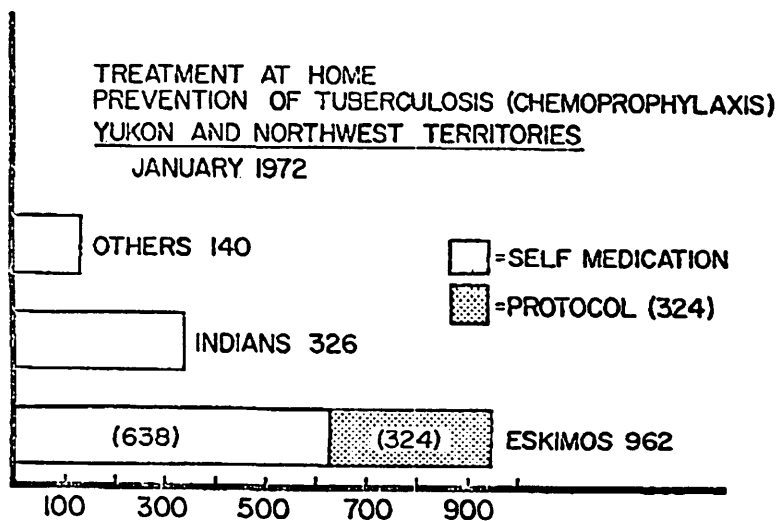


Table XI shows that as of January, 1972 there are 1,428 persons taking anti-tuberculosis drugs for the "prevention" of tuberculosis. Late in 1971, following a considerable educational program at Frobisher Bay, a protocol to give anti-tuberculosis drugs to all Eskimos at a high risk of breaking down with tuberculosis was initiated. Under this program a total of 392 people were selected to be included in the protocol. Of this number 324

are now on Isoniazid and Ethambutol - Monday, Wednesday, Friday - the drugs being given to each of these persons by trained Eskimo workers.

There are 68 controls who are being observed without medication. This protocol has been carefully reviewed with University groups in Canada and the Canadian T.B. and R.D. Association as well as the International Union Against Tuberculosis. In addition to those shown as receiving drugs now, some 800 persons have completed a course of preventative anti-tuberculosis drugs.

It now appears that we have a continuing trend which was observed in 1970 and has continued throughout 1971 of a reduction in the incidence of new and reactivated cases of tuberculosis - it seems that this is related to an aggressive surveillance by sputum surveys and x-ray surveys as well as a detailed contact follow-up of each new infectious case as it is found. With the continuation of the present surveillance it would appear that the most effective way of reducing the present "plateau" of new cases in the older age group is to expand in a selective way the preventative treatment program.

INVOLVEMENT OF NORTHERN RESIDENTS IN THE HEALTH CARE SYSTEM:

There is an increasing involvement of Northern residents in the operation of the Health Care System.

A Health Committee was formed in Coral Harbour under the auspices of Medical Services. The role of the Health Committee is to create an awareness within the people, of the need for better health and living conditions.

A complete screening of the Eskimo population at Frobisher Bay was undertaken in September 1971, which resulted in the selection of 324 persons to be given anti-tuberculosis drugs 3 times a week for a period of 18 months. The medication is being administered by a group of 12 Eskimo ladies who have been trained locally to give the drugs and to keep the necessary records. This T.B. protocol, because of the tremendous results, will possibly be extended to other settlements of the Eastern Arctic.

Clinical experience for the Fort Smith Nursing Aides program is provided in Frobisher Bay and Inuvik.

Para-med training was undertaken in Montreal by a resident of Frobisher Bay for the repair of spectacles.

On-the-job training was provided for two Health Aides in Eskimo Point for a special infant health project that was started in May 1971.

It is hoped that the Dental Nurse Therapist training program will attract residents of each ethnic group on an annual basis, commencing in 1972.

MEDICAL RESEARCH

Research projects pursued, in 1971, by the Northern Medical Research Unit included:

- (a) Continued involvement in the International Biology Program relating to the study of human adaptation of circumpolar populations. Two major field programs were carried out in this study at Igloodik and at Hall Beach.
- (b) Carbohydrate Metabolism in Eskimos: Work was carried out relating to glucose tolerance in Eskimos and, in particular, the changes occurring in the glucose tolerance curves when the glucose load is preceded by a protein meal. The finding of a "normalization" of blood glucose curves when sugar is ingested after such a protein meal rather than on an empty stomach has practical implications for health education and dietary guidance for hospitals, hostels and other institutions boarding native students.
- (c) INH Metabolism in Eskimos and Indians: This work was carried out in the Charles Camsell Hospital in co-operation with the National Reference Laboratory for Tuberculosis in Ottawa. It has been conclusively shown that the Eskimo people are rapid inactivators of this drug and this will have practical applications to our tuberculosis treatment and prevention program.
- (d) Malignant Disease: An epidemiological study of neoplastic diseases in Eskimos was started in co-operation with the University of Manitoba and McGill.

- (e) The physician in charge of the Research Unit presented three papers at the Circumpolar Health Symposium in Oulu, Finland during 1971. These papers were concerned with nutritional changes, cardiovascular and pulmonary pathology in the Eskimo people. Another paper was presented on parasitic diseases in the Canadian Arctic.
- (f) A publication on the epidemiology of chronic ear disease and its relation to infant nutrition was published in the Canadian Journal of Public Health and a general account of the impact of urbanization to northern native peoples was written for the magazine "NUTRITION TODAY".