LEGISLATIVE ASSEMBLY OF THE NORTHWEST TERRITORIES

8TH COUNCIL, 56TH SESSION

TABLED DOCUMENT NO. 1-56

TABLED ON June 9, 1975

Tabled Document No. 156
Tabled June 9th 1975

REPORT

on

HEALTH CONDITIONS

in the

NORTHWEST TERRITORIES

1974

Chief Medical and Health Officer
Government of the Northwest Territories

INDEX

REPORT ON HEALTH CONDITIONS IN THE NORTHWEST TERRITORIES - 1974

VITAL STATISTICS

POPULATION:

The three main population groups of the Northwest Territories are subdivided as follows:

	Indians	Eskimos	Others	Total
Number	7533	13932	16384	37849
Percentage	19.90%	36.81%	43.29%	100.00%

The figures in the above table have again been derived by subtracting deaths and adding births to the 1971 census figures. Because of non-availability of immigration and emigration figures, the totals under the heading "Others" which includes most of the white population may be somewhat inaccurate. However, the totals approximate the estimated figure by the Dominion Bureau of Statistics.

LIVE BIRTHS:

The live birth rates per 1,000 population:

Indians 23.6 Eskimos 28.4 Others 29.3 All groups 27.8

There is a notable fall-off in birth rate in all three population groups for the year 1974. It is interesting to note that the "Other" group has a higher birth rate than either Eskimo or Indian. As has been commented previously, this represents temporary residence in the Northwest Territories of young white population.

SEX RATIO OF BIRTHS:

The ratio of male births per 1,000 female births was:

	1974	1973	1972	1971
Indians	1282	1097	1175	959
Eskimos	1371	1223	1017	969
Others	931	1140	992	1197

The overall ratio for N.W.T. was 1135.

The four year average for male births per 1,000 female births was:

Indian	1128	National Rate
Eskimo	1145	1061
Other	1065	

The small population base on which these figures are derived is again reflected in the wide swinging male/female sex ratio from year to year. Although the four year moving average of this ratio appears to indicate an excess of male over female births which is considerably larger than the national rate, it seems possible that the differences are not statistically significant.

BIRTH WEIGHTS:

Average birth weights for live births were as follows:

	INDIANS		ESKIMOS		OTHERS	
	Males	Females	Males	Females	Males	Females
1971	7.06 lbs.	6.92 lbs.	7.11 lbs.	6.81 lbs.	7.56 lbs.	7.13 lbs.
1972	7.27 lbs.	6.99 lbs.	7.12 lbs.	6.88 lbs.	7.66 lbs.	7.22 lbs.
1973	7.11 lbs.	6.81 lbs.	7.00 lbs.	6.81 lbs.	7.45 lbs.	7.51 lbs.
1974	6.66 lbs.	6.41 lbs.	6.80 lbs.	6.42 lbs.	7.25 lbs.	7.03 lbs.

It is interesting to note that in all three population groups, the average birth weight of both male and female infants is between .2 and .5 lbs. lighter than previous years. The precise significance of this observation is not understood. It is not a matter of the figures being weighted by an undue preponderance of low birth weight infants since this figure is smaller than usual as is seen in the next table. The possibility of its being nutritionally related cannot be overlooked though we have currently no data to support such a contention.

LOW BIRTH WEIGHT INFANTS:

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

	INDIANS	ESKIMOS	OTHERS	ALL GROUPS	ALL CANADA
1972	9.5	12.01	7.66	9.80	Rate - 1971 6.8
1973	12.43	10.96	4.37	8.16	
1974	8.9	8.58	4.98	7.01	

As in previous years, the preponderance of low birth weight infants occurs in the Indian and Eskimo groups. The probability of this being an artificially low figure due to comparison with a unrealistic norm derived from non-native based figures has been mentioned previously. However, the average figure for 1974 is not grossly dissimilar from the All Canada rate.

MULTIPLE BIRTHS:

The incidence of twinning in the Northwest Territories was somewhat lower than last year in both Eskimo and Other groups and, as last year, was again 0 amongst the Indian group.

The distribution according to racial origin is as follows:

Indians - 0 Eskimos - 4 Others - 8

STILL BIRTHS:

The total number of still births rose by 2 to repeat the 1972 figures. Because of the reduced number of total births, this shows up as a quite notable increase in the still-birth rate. The 0 rate of still births amongst the Indian population is to be noted.

The figures are as follows:

Indians - 0 Eskimos - 8 Others - 6

... 3

HOSPITALIZED BIRTHS:

Percentages of births occurring in hospitals or nursing stations are as follows:

Indians - 97.7% Eskimos - 98.9% Others - 98.9%

The rates are not significantly different from previous years and are reassuringly high.

MATERNAL AGE:

The percentage distribution of live births by age of mother and ethnic group for the year 1974 appear in the following table:

	INDIANS	ESKIMOS	OTHERS	CANADA - 1973
Under 20	28.08	24.24	16.21	12.02
20-24	29.21	32.32	38.04	33.65
25-29	19.66	17.67	33.26	34.34
30-34	14.04	13.38	9.97	13.92
35-39	5.05	7.57	1.66	4.68
40-44	3.37	2.52	0.83	1.17
45-49	-	0.50	-	0.73
N.S.	0.56	1.76	-	0.12

There is a notable increase in the number of births occurring in the under 20 age group. This is a quite marked increase from 1973 and is even more notable when compared with the All Canada figures. It is attributable in part to an undoubted increase in promiscuity, existence of which is attested to both by the rising of venereal disease incidence and the figures for illegitimacy. However, with the small population base, quite a small number of rather early marriages might equally contribute substantially to such an incidence. It is notable that in both the Indian and the Eskimo groups, there is a slight shift towards the southern pattern of a greater proportion of children being born below the age of 30. Such a trend, if it were to continue, would be indicative of success of family planning efforts.

BIRTH ORDER:

The percentage distribution of live births by birth order and ethnic group for 1974 is as follows:

	INDIANS	ESKIMOS	OTHERS	CANADA - 1973
1st Child	30.89	26.01	43.86	43.36
2nd & 3rd Child	29.77	34.59	44.69	45.94
4th and Later	39.32	39.39	11.43	10.67

In these figures also, the Indian and Eskimo groups have moved marginally closer to the All Canada figures and is some slight indication of a tendency towards smaller families.

TABLE I

NORTHWEST TERRITORIES

Vital Statistics - 1974

	INDIANS 1974 Pop. - 7,533				ESKIMOS 1974 Pop. - 13,932				OTHERS 1974 Pop. - 16,384				ALL GROUPS 1974 Pop. - 37,849				ALL CANADA
	1974		1973	1972	1974		1973	1972	1974		1973	1972	1974		1973	1972	1973
	No.	Rate	Rate	Rate	No.	Rate	Rate	Rate	No.	Rate	Rate	Rate	No.	Rate	Rate	Rate	Rate
Livebirths (a)	178	23.6	26.07	29.09	396	28.4	32.80	35.12	481	29.3	34.23	31.90	1055	27.8	32.09	32.54	15.5
Illegitimate Live Births (b)	88	49.4	45.60	41.70	115	29.0	30.20	24.80	98	20.3	16.24	16.33	301	28.4	26.30	24.29	-
Livebirths born in Hosps. and N/S (c)	174	97.8	96.90	99.52	392	98.9	97.31	98.04	476	99.0	99.63	100.00	1042	98.0	98.31	99.14	99.8
Low Birth Weight Infants (d)	16	8.9	12.43	9.95	34	8.6	10.96	12.01	24	5.0	4.38	7.66	74	7.0	8.16	9.80	-
Stillbirths (e)	-	-	5.18	-	8	20.2	15.66	21.45	6	12.4	7.29	8.06	14	13.2	10.10	11.93	10.6
Perinatal Deaths (f)	3	16.8	25.90	9.47	20	49.5	26.84	41.15	12	24.6	12.77	20.00	35	33.2	20.20	26.95	17.6
Neonatal Deaths (0-28 days) (g)	3	16.8	20.72	18.95	16	40.4	13.42	23.60	6	12.4	5.47	14.11	25	23.7	10.94	18.75	10.8
Post Neonatal Deaths (29-365 days) (h)	5	28.1	10.36	28.43	12	30.3	31.32	49.35	3	6.2	7.29	12.09	20	18.9	16.83	29.83	4.8
Infant Deaths (under 1 year) (i)	8	44.9	31.08	47.39	28	70.7	44.74	72.96	9	18.7	12.77	26.20	45	42.6	27.77	48.59	15.5
Total Deaths (Crude Death Rate) (j)	47	6.2	5.94	6.75	94	6.7	6.16	8.89	75	4.5	5.82	5.21	216	5.7	5.97	6.88	7.4
Deaths in Hosps. and N/S (k)	31	65.9	71.42	65.30	46	48.9	57.14	56.77	44	58.6	47.31	61.72	121	56.0	55.70	60.08	-
Natural Increase (l)	131	17.4	20.12	22.34	302	21.6	26.63	26.23	406	24.7	28.47	26.73	839	22.3	26.12	25.66	8.1
Maternal Deaths (m)	-	-	-	47.30	1	25.5	-	21.40	-	-	-	-	1	9.5	-	17.00	1.1

(a) rate per 1,000 population
(b) rate per 100 live births
(c) rate per 100 live births
(d) rate 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
(m) rate per 10,000 live births

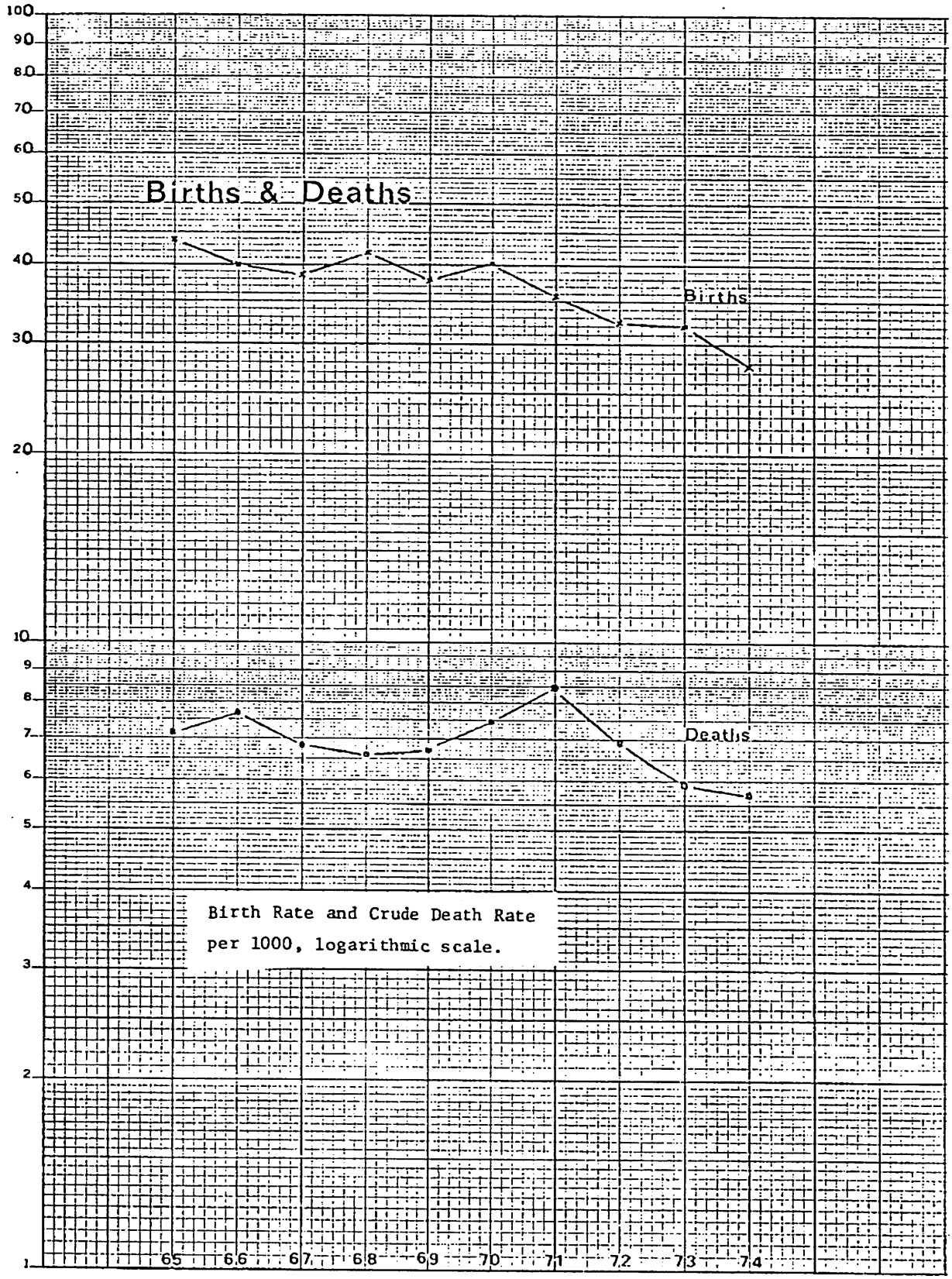
TABLE II

NORTHWEST TERRITORIES - 1974

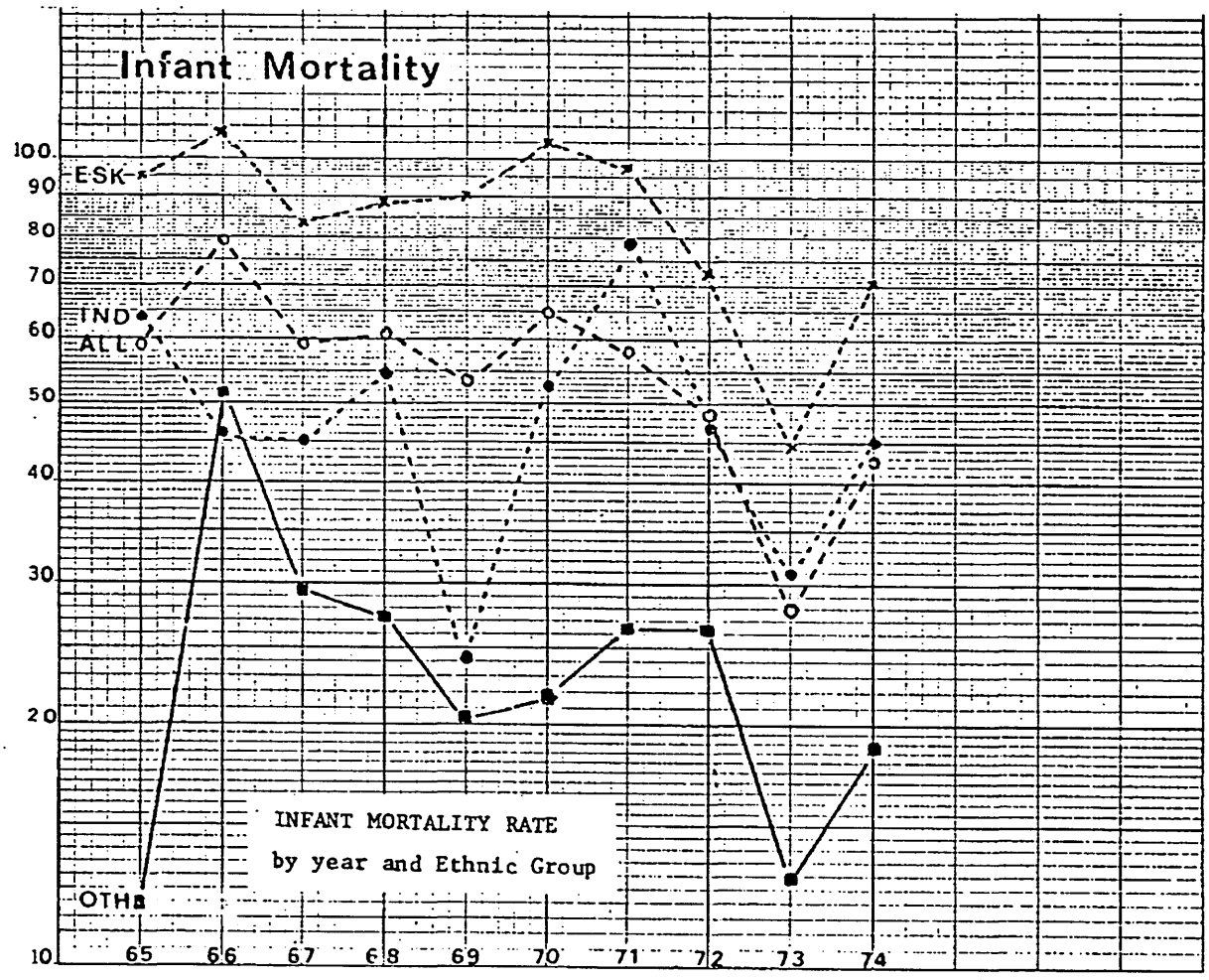
Vital Statistics in Zones

	Mackenzie Zone						Inuvik Zone						Keewatin Zone				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
	5229		2618		12939		2304		2108		1925		3576		414		5630		1106	
Livebirths (a)	133	25.4	78	29.7	361	27.9	45	19.5	41	19.4	88	45.7	109	30.4	6	14.4	168	29.8	26	23.5
Illegitimate Livebirths (b)	62	46.6	23	29.4	71	19.6	26	57.7	20	48.7	20	22.7	18	16.5	2	33.3	54	32.1	5	19.2
Births in Hosps. or N/S (c)	129	96.9	78	100.	356	98.6	45	100.	41	100.	88	100.	109	100.	6	100.	164	97.6	26	100.
Low Birth Weight Infants (d)	11	8.2	10	12.8	18	4.9	5	11.1	5	12.1	5	5.6	5	4.5	-	-	14	8.3	1	3.8
Maternal Deaths (e)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	59.5	-	-
Stillbirths (f)	-	-	1	12.8	5	13.8	-	-	1	24.3	-	-	1	9.2	-	-	5	29.7	1	38.4
Perinatal Deaths (g)	2	15.04	5	75.9	5	27.3	1	22.2	-	-	1	11.3	2	27.2	-	-	5	57.8	-	-
Neonatal Deaths (h)	2	15.04	6	76.9	5	13.8	1	22.2	-	-	1	11.3	5	45.8	-	-	5	29.7	-	-
Post Neonatal Deaths (i)	2	15.04	-	-	2	5.5	3	66.6	1	24.3	1	11.3	3	27.5	-	-	8	47.6	-	-
Infant Deaths (j)	4	30.07	6	76.9	7	10.3	4	88.8	1	24.3	2	22.7	8	73.3	-	-	13	77.3	-	-
Total Deaths (k)	28	5.35	20	7.6	61	4.7	19	8.2	9	4.2	10	5.2	27	7.5	1	2.4	38	6.7	3	2.7
Deaths in Hosps. or N/S (l)	22	78.5	10	50.0	36	59.0	9	47.3	3	33.3	6	60.0	12	44.4	-	-	21	55.2	2	66.6
Natural Increase (m)	105	20.07	58	22.1	300	23.1	26	11.2	32	15.1	78	40.5	82	22.9	5	12.1	130	23.0	23	20.8

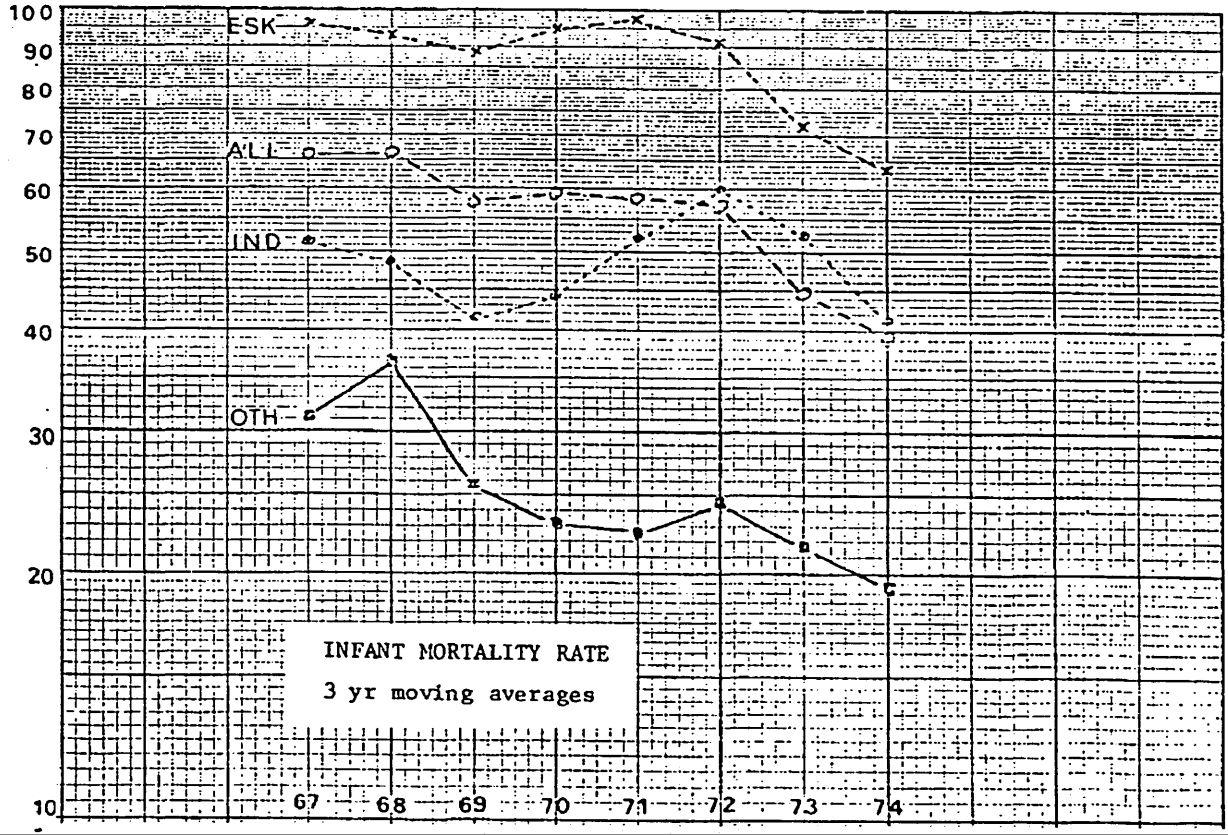
(a) rate per 1,000 population
(b) rate per 100 live births
(c) rate per 100 live births
(d) birth weight 2500 grams and below per 100 live births
(e) rate per 10,000 live births
(f) rate per 1,000 live births
(g) stillbirths plus deaths 0-7 days per 1,000 total births (live births and still births)
(h) deaths 0-28 days per 1,000 live births
(i) deaths 29-365 days per 1,000 live births
(j) deaths under 1 year per 1,000 live births
(k) crude death rate - deaths per 1,000 population
(l) rate per 100 deaths
(m) rate per 1,000 population



Birth Rate and Crude Death Rate per 1000, logarithmic scale.



(In the three year moving average each point on the graph represents the average of the previous three years. Its effect is to widen the population data base (three-fold) and to reduce wild swings which characterise rates derived from small numbers. It enables one to identify more clearly long term trends.)



BIRTHS OUTSIDE THE TERRITORIES:

The proportion of children born outside the N.W.T. fell back to slightly below the 1972 level and well below the level for 1973. The 1974 rate was 11.18% (11.33% in 1972, 14.4% in 1973).

- - - - - - - - -

DEATHS:

The accompanying tables on pages give the breakdown of death rate according to ethnic groups and age groups in the Territory as a whole and in the various Zones.

CRUDE DEATH RATE:

The crude death rate has fallen by a further .2% to 5.7. There is a temptation when looking at this figure to compare it with the All Canada rate and to think that because the death rate in the Northwest Territories is lower, therefore, health conditions are necessarily better. This is not a true indication. The reason for the relatively low death rate in the Northwest Territories is due to the presence of a young population with an absence of deaths due to the diseases of old age.

The following small table shows the deaths in the Northwest Territories distributed according to age at death and ethnic origin. Perhaps the most reassuring figure in this table is the marked reduction in deaths in the 1-4 year age group, a total of 14 in 1973 falling to 6 in 1974.

	Indians		Eskimos		Others		All Groups	
Age Group	No.	%	No.	%	No.	%	No.	%
0 - 7 days	3	6.38	12	12.76	6	8.0	21	9.72
8 - 28 days	-	-	4	4.25	-	-	4	1.85
29 - 365 days	5	10.63	12	12.76	3	4.0	20	9.25
1 - 4 years	-	-	5	5.31	1	1.33	6	2.77
5 - 9 years	1	2.12	2	2.12	3	4.0	6	2.77
10 - 14 years	1	2.12	2	2.12	2	2.66	5	2.31
15 - 19 years	4	8.51	3	3.19	2	2.66	9	4.16
20 - 29 years	3	6.38	7	7.44	12	16.0	22	10.18
30 - 39 years	3	6.38	7	7.44	5	6.66	15	6.94
40 - 49 years	3	6.38	7	7.44	11	14.66	21	9.72
50 - 59 years	6	12.76	14	14.89	8	10.66	28	12.96
60 +	18	38.29	19	20.21	22	29.33	59	27.31
TOTAL	47		94		75		216	

The figures shown here, although not a cause for complacency, are at the same time, not a cause for grave concern. Excess mortality is not a concern so much as excess morbidity and it is towards the reduction of illness and the improvement in quality of life that our main efforts must be directed.

PLACE OF DEATH:

As in 1973, 56% of all deaths occurred in either a hospital or nursing station. The ethnic distribution being:

Indians - 75.6% Eskimos - 48.9% Others - 58.6%

MATERNAL DEATHS:

There was one maternal death in an Eskimo mother from Baffin Zone during 1974.

PERINATAL DEATHS (0-7 days plus still births)

As was suspected the perinatal death rate has not shown the continued rapid downward trend that might have been expected from 1973 figures. Rates have risen again considerably in 1974 but not to the level of 1972. It can certainly be said that the perinatal mortality figures are not to be attributed to lack of awareness on the part of the nursing staff. The 1974 increase has occurred at a time when the ongoing Perinatal Mortality Study has put the entire infant mortality picture into the forefront of the nurses' thinking. The conclusions reached by the Perinatal Mortality Study Committee are eagerly looked forward to and it is hoped that at least preliminary figures and trends will be available towards the end of 1975.

NEONATAL MORTALITY (0-28 days)

There was a notable increase in neonatal mortality especially in the Eskimo and the Other group. Indians showed a marginal decrease over 1973 figures.

POST-NEONATAL MORTALITY (29 - 365 days)

An increase in Indian deaths in this category from 2 to 5 associated with the no change status in both Eskimo and Other groups have combined to produce a total figure slightly in excess of 1973 figures but considerably down from 1972. Reference to the table of Causes of Death by Ethnic Group and Age Group on page (13) points to the leading cause of infant mortality being Pneumonia. Such a high incidence of respiratory disease is indicative of environmental causes, probably largely due to overcrowding.

INFANT DEATHS (under 1 year)

The increase in infant deaths to a figure closer to the 1972 rate must be compared with the observed increase in communicable diseases experienced during 1974. We can only repeat the absolute necessity for improvement in general living conditions, water supply and sanitary disposal if we are to achieve any real reduction in this rate. The three year moving average (page 7) serves to depict the general downward trend in this rate.

NATURAL INCREASE:

The rate of natural increase in all three population groups has fallen matching the decreased birth rate and the more or less stationary crude death rate.

CAUSE OF DEATH:

The major causes of death are listed below:

	No. of Deaths	Percentage of Total Deaths
Injuries, Accidents, Violence	70	32.40
Disease of Infancy, Prematurity and Malformation	25	11.57
Cardiovascular Disease	43	19.90
Pneumonia	24	11.11
Malignant Neoplasms	29	13.42
Senility, Unknown and Other Diseases	5	2.31
Diseases of Central Nervous System (Cerebral accidents, non-meningococcal meningitis)	6	2.77
Gastrointestinal Diseases (Gastroenteritis, Ulcer of stomach and Duodenum)	4	1.85

An increase in the actual number of deaths due to cardiovascular disease and to malignant neoplasms is perhaps noteworthy as well as the slight decrease in the total number of deaths attributed to accidents and violence. The halving in the number of suicides must also be brought to attention. Although the figures do not affect Territorial statistics in that those involved were not residents of the Northwest Territories, mention must be made of two major aircraft crashes during the year; the total loss of life of 40, indicative of the considerable hazard of air travel in the Northwest Territories.

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

	Indians		Eskimos		Others		
	Male	Female	Male	Female	Male	Female	Total
Lung	2	1	3	-	5	-	11
Gastro Intestinal	-	-	1	1	1	-	3
Prostate	-	-	-	-	-	-	-
Skin	-	-	-	-	-	-	-
Cervix (Uterine)	-	1	-	-	-	-	1
Parotid	-	-	-	-	-	-	-
Skeletal	-	-	-	1	1	-	2
Reticulo-Endothelial	-	-	-	1	1	1	3
Kidney	-	1	-	-	1	-	2
Generalized	-	-	-	-	-	-	-
Other	1	1	2	-	-	3	7
TOTAL	3	4	6	3	9	4	29

DEATHS FROM ACCIDENTS, INJURIES, VIOLENCE, N.W.T. 1974

	Indian	Eskimo	Other	TOTAL
Exposure	-	2	-	2
Drowning	1	4	1	6
Inhalation of Gastric Contents	1	1	1	3
Asphyxia	1	3	4	8
Suicide	1	2	2	5
Burns	1	3	3	7
Aircraft Crashes	-	1	4	5
Motor Vehicle Accidents	2	-	7	9
Poison (Excludes Alcohol)	-	2	-	2
Gunshot Wounds (Accidental)	1	2	1	4
Homicide	4	3	1	8
Alcohol Poisoning	-	1	-	1
Others (Falls, Crushing)	-	1	5	6
Crib Deaths	2	1	1	4
TOTAL	14	26	30	70

TABLE III

Causes of Death by Ethnic Group and Selected Age Groups 1974

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	34-65 yrs	65+ yrs		0-28 days	29-365	1-4 yrs	5-9 yrs	10-14 yrs	15-34 yrs	34-64 yrs	65+ yrs	
Injuries & Accidents (BE 47-50)	70	-	3	-	-	-	7	2	2	14	1	2	1	-	1	12	9	-	26	-	2	1	2	2	15	6	2	30
Diseases of Infancy & Malformations (B41-44)	25	3	1	-	-	-	-	-	-	4	11	3	-	-	-	-	-	-	14	6	1	-	-	-	-	-	-	7
Cardiovascular Diseases (B24-29)	43	-	-	-	-	-	1	-	9	10	-	2	-	1	-	-	7	8	18	-	-	-	-	-	1	5	9	15
Pneumonia (B31)	24	-	1	-	1	1	-	2	2	7	1	7	1	-	-	-	4	4	17	-	-	-	-	-	-	-	-	-
Malignant Neoplasms (B18)	29	-	-	-	-	-	-	5	2	7	-	-	-	-	-	-	7	2	9	-	-	-	1	-	-	6	6	13
Senility, Unknown & Other Diseases (B45-46)	5	-	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	1	2	-	3
Diseases of the Nervous System (B22-23)	6	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	2	-	-	-	-	-	-	3	1	4
Gastrointestinal Diseases (B33-36)	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1
Other Respiratory Diseases (B30 &32)	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Infective & Parasitic Diseases (B3-17)	5	-	-	-	-	-	-	2	-	2	-	1	-	-	1	-	1	-	3	-	-	-	-	-	-	-	-	-
Cirrhosis of Liver & Hyperplasis of Prostate (B37-39)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2
Benign Neoplasms	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others	4	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	2	-	3	-	-	-	-	-	-	-	-	-
	216									47									94									75

MATERNAL AND CHILD HEALTH

In recent years increased emphasis has been put on the maternal and child health program and considerable progress has been made in decreasing the mortality rates and increasing the quantity and quality of care rendered to these groups.

SPECIAL CARE REGISTER:

During the year criteria and guidelines for implementation of an infant and child Special Care Register were formulated and distributed to field units. After a six month trial period the program will be reviewed and revised and should be in full operation during the latter half of 1975.

The Special Care Register was devised to assist in the early identification of potential or actual health problems.

Special objectives of the Register are:

1. To benefit the child by detecting problems or potential problems early and instituting remedial action for prevention or treatment.
2. To benefit the family by increasing their appreciation of the needs of their child and assisting them in meeting these needs.
3. To assist the Community Health team in identifying specific needs of children and applying preventive measures and in setting priorities in child care programs.
4. To assist management teams in Zone and Regional Offices by providing an index of the needs of children in each community and a measure of the effectiveness of the health care delivery system.

N.W.T. Perinatal and Infant Mortality and Morbidity Study:

This comprehensive study was devised to identify causes and associated factors involved in the relatively high rate of stillbirths, neonatal and infant deaths, and infant morbidity rates in the Northwest Territories; to assess the adequacy of care and management in the home, nursing station and hospital; to recommend measures for reducing infant morbidity and preventing infant mortality and to identify leads to further investigation and research. It is an indepth study of the health and illness data of each child born within the study year (April 1, 1973 to March 31, 1974) from the prenatal period up to the end of the first year

of age; also included are nutritional and sociological familial data. In addition, a sub-committee is reviewing all infant deaths and makes recommendations regarding the care and management of infants.

From April 1, 1974 until March 31, 1975, data on each child will be collected as the first birthday is reached. A computer program will then assist in the compilation and analysis of the study data and the report will be made available as it is received.

Family Planning:

Family planning counselling is an integral part of prenatal, post-partum and well-baby care programs. Birth control materials are available free of charge to the indigent at all field units.

The decrease in the rate of livebirths noted on page 1 may be associated with the consistent efforts being made to make family planning, counselling and birth control materials readily available to the entire population.

Well Baby Clinics:

A concentrated and persistent effort is being made to make the well baby clinic visits an opportunity for physical examination, developmental assessment and health counselling as well as for immunization purposes. Most well baby clinics are fairly well attended but in addition considerable infant care and counselling is undertaken by the nurses during other activities.

NURSING COVERAGE

Nursing coverage has remained fairly stable with the usual exception of a nursing shortage during the summer.

The turnover of nurses is still high as shown in the following table:

Zone	Number of Positions	Vacancies Dec. 31/74	Terminated in 1974	Hired 1974	% of Turnover
Baffin - field	30	4	20(1)	22	66%
Frobisher Bay Hospital	16	0	17	18	106%
Inuvik - field	24	5	23(3)	24(2)	95%
Inuvik Hospital	29	8	25(3)	20(3)	86%
Keewatin	18	3	15	15(1)	83%
Mackenzie	51	6	42(1)	50(1)	82%
Totals	168	26	142(8)	149(7)	Average 86%

( ) Numbers in brackets indicate term employment.

New nursing positions were created at Edzo, N.W.T. to staff the new 12 bed cottage hospital.

Educational leave for studies at the university level was granted to 3 nurses plus three non-federal nurses sponsored by the N.W.T. Bursary Fund. Twelve nurses went on the Clinical Training for Nurses Courses at various universities and returned to positions in which they can utilize their advanced clinical skills and knowledge. This brings the total number of nurses sponsored for this specialized training to 46, of whom 30 remain in the Northwest Territories.

Of the 142 nurses employed at years end, 25 had a bachelor's degree in nursing, 20 had public health nursing certificates, 45 had midwifery training, and 3 had psychiatric nursing post-graduate training.

MEDICAL SERVICES:

The early part of 1974 was marked by staffing difficulties in various parts of the Region and at times our medical staff were stretched to the limit. The sudden requirement to staff Fort Smith on the departure of the two private practitioners who had been working in that town made considerable demands on our Inuvik staff until such time as permanent staff could be found which was not to occur until the middle of the summer. Similarly the closure of the Pusivik Clinic in Frobisher Bay at mid-year made heavy demands on the physician staffing branch of our personnel department. By the end of the year, however, all positions were filled and the medical manpower position seemed stable.

An analysis of the availability of physician services in the N.W.T. reveals that out of a total of 62 communities in the N.W.T., two Yellowknife (pop. 7,500) and Hay River (pop. 3,500) are served by resident physicians in private practice. These two communities represent 26.4% of the total population of N.W.T.

Three communities, Inuvik (pop. 4,150), Ft. Smith (pop. 2,702) and Frobisher Bay (pop. 2,360) are served by full time government employed physicians. These three represent an additional 22.2% of the total population.

Thus a total of 20,000+ residents (about 50%) enjoy full time resident physician services within their own community.

Four communities, Rae-Edzo, Fort Simpson, Cambridge Bay and Rankin Inlet, with a combined population of approximately 10% of the total population have a resident physician who spends some time away from his station, seeing other communities in the area.

The community of Pine Point receives medical visits two to three times weekly whilst Ft. Providence is visited once in two weeks, these two services being provided by private practitioners in Hay River.

There remain 51 communities, four only of which do not normally receive visits by physicians. The other 47, on an average are visisted by a physician nine times a year, though the distribution is influenced considerably by size, location and of course climate.

Such visits are provided by Medical Services staff and by southern physicians who serve the northern communities under a series of contracts with the Universities of Alberta, Manitoba, McGill and Toronto.

PUBLIC SERVICE HEALTH

The programme in public service health in the Northwest Territories has its main point of impact in the pre-employment medical screening of potential employees of all branches of the Federal Government working in the N.W.T. and certain departments, mainly that of Education in the Government of the N.W.T.

Additionally medical examinations for transfer of superannuation benefits between different employing governments are screened, and increasingly of late, the Department of National Health and Welfare has been facilitating, and paying for, periodic medical examinations on certain categories of workers, specially those in hazardous occupations or occupations in which the lives of others may be dependent on the health of the employee, e.g. school bus drivers.

It is anticipated that responsibilities in this field will slowly increase, though at present it is a small part only of the total programme.

TREATMENT SERVICES:

The backbone of the treatment services operated by N.W.T. Region is the chain of Nursing Stations operated in all settlements with a population of over 200, and Health Stations manned by Community Health Auxiliaries supported by two way radio or telephone communication in the smaller settlements.

These facilities are open daily on week days for treatment purposes, and on a 24 hour call basis for the treatment of emergencies.

Increasingly problems are being experienced in a few settlements where nurses feel they have been called out frivolously in the middle of the night and even actual harassment appears to have occurred. Such developments make it increasingly difficult to obtain and to hold staff.

All nursing stations have a number of beds designed for short term stay of a maximum of 2 - 3 days, for the treatment of short term illness or as a holding place prior to evacuation to a larger treatment centre.

Admissions to the nursing stations during 1974 were as follows:

ADMISSIONS TO NURSING STATIONS

Baffin	402	Patient days	741
Inuvik	156	Patient days	250
Keewatin	312	Patient days	540
Mackenzie	392	Patient days	741
TOTAL	1,337		2,651

PUBLIC HEALTH SERVICES:

The general supervision of public health as it relates to sanitation, quarantine of communicable disease, water supplies, school sanitation etc. is handled in all zones by Environmental Health Officers, and 1974 marked the first time that we had a full time Environmental Health Officer working in the Keewatin Zone, and by Medical Officers who in addition to clinical duties are appointed as Medical Health Officers. Health Officers of both categories have powers of entry at all reasonable times to all premises where health hazards are thought to exist, powers of inspection relative to these hazards and powers of authority to require that health hazards be abated.

Additionally Medical Services has the legal power and responsibility to investigate epidemic disease within the territories, and the study of disease patterns defined by the notifiable disease officer is a prime function of the Chief Medical Officer of Health.

Northwest Territories Water Board:

It is the duty of the N.W.T. Water Board to study and advise upon all applications for water usage within the Northwest Territories.

The technical committee of the water board has representation by N.W.T. Region in the form of one of the Yellowknife based environmental health officers and by Mr. Jack Grainge, Head of the Arctic Technology Section of the Federal Department of the Environment, whose responsibility is to advise upon the health aspects of proposed water use applications.

FACILITIES

The Capital building program in the four zones is detailed hereunder.

Since our capital projects are of necessity geared to the April 1 - March 31 Fiscal Year this brief input is also so structured.

BAFFIN ZONE

Frobisher Bay General Hospital -- New combination general waste/pathological incinerator installed. Expansion plans developed to tender call for renovations and addition to modernize and to accommodate dental, public health administration.

Pangnirtung -- New nursing station completed and placed in service. Residence constructed at factory for shipment and installation at Pangnirtung in summer of 1975 for Dental Therapists program.

Pond Inlet and Cape Dorset -- Residence prefabricated for installation in 1975 for Dental Therapists.

INUVIK ZONE

Inuvik General Hospital -- Expansion completed and placed in service. Kitchen renovations underway, 90% complete.

Sachs Harbour -- Prefabricated nursing station delivered and installed and put in service with resident nurse.

KEEWATIN ZONE

Baker Lake -- Residence constructed for delivery and installation 1975 for Dental Therapist.

MACKENZIE ZONE

Edzo -- Cottage Hospital completed and placed in service.

Cambridge Bay -- Prefabricated nurses' residence delivered, installed and occupied. Nursing station renovated and expanded.

Holman Island, Fort Wrigley and Pelly Bay -- New diesel electric emergency power plant installed at nursing stations.

Snowdrift -- Sewage disposal unit structure constructed for installation in 1975.

SCHOOL HEALTH PROGRAMS

In 1974 all school medical preliminary screening was provided by the nursing staff, where problems were encountered referrals were made to our staff physicians. Regular classroom inspections and individual health inspections were carried out in all schools. The immunization program against communicable disease was carried out with customary attention to completeness. Immunization status of our northern settlements must be equal to or better than that of any other part of Canada. An immunization level of 100% is by no means unusual in the native population of many of the settlements. As noted elsewhere teaching on veneral disease was carried out in several of the larger schools in the Territories in 1974 and this teaching program is to be extended through out 1975.

DENTAL SERVICES

The relative stability of dental staffing that characterized 1973 was regrettably not to continue through 1974 and the year was notable for the number of resignations amongst government employed dentists, including the Regional Dental Officer who chose to retur- to the private field early in the year. To some extent the staffing changes resulted from the normal changes experienced but with an unusual synchrony in timing of resignation. Perhaps the change in philosophy required by the adoption of the dental nurse therapist as the preferred deliverer of primary dental care also played some part in sparking a few of the professional resignations.

Despite the success of the dental auxiliary worker in New Zealand and the acknowledged high standard of training given in the Fort Smith school of Dental Therapy there are many professional dentists on the North American continent who regard such developments with disfavor and find it impossible to work with such a philosophy.

The changeover therefore has been marked by unavoidable instability, which will probably not be totally dissipated until sufficient therapists are in the field to demonstrate unequivocally their adequacy for the task in hand.

Altogether during 1974 a total of 22 dentists, government employed and contract, working for periods of a few weeks up to a full year gave service in the settlements where they saw a total of 13,685 patients, performed 7,782 restorations and 7,996 extractions, with 4,425 other dental treatments such as prophylactic fluoride applications, gingival treatments, etc.

In addition 517 dentures were provided.

During the second half of the year following graduation, five dental therapists working as full time employees saw 1,714 patients for whom they provided 2,151 restorations, 1,222 extractions and 640 preventive dental services (fluoride applications, cleaning, etc.).

Additionally they provided 550 other services, comprising pulp treatments, placement of steel crowns, scaling, minor repairs of dentures and provision of assistance to visiting dentists.

It will be evident from even these small totals that there is a difference in pattern of treatment between dentist and dental therapist, the former seeing greater numbers of patients and performing a less number of treatments per patient whereas the therapist tries to complete all necessary work on every patient. This latter pattern of course is characteristic of a full rather than an emergency service and is the ultimate aim throughout the Territories as more and more therapists become trained and available.

NOTIFIABLE DISEASES

Experience of increase in disease incidence is always disappointing in a public health programme and the marked increase for the second year running of cases of Infectious hepatitis is a case in point.

Following the very sudden upsurge in this disease in Baffin Zone at the end of 1973, the disease was carried rapidly to most of the settlements in Baffin Zone so that by May of 1974, all settlements had experienced one or more cases and in some virtually the entire population had been affected.

In July 1974, the first cases were seen in the Keewatin Zone when a sudden rash of cases hit Coral Harbour. From here incidence spread first to Repulse Bay, then Rankin Inlet and in October a massive, and to be expected onslaught hit Eskimo Point.

Administration of gamma-globulin in the community of Eskimo Point gave disappointingly low protection. It is difficult to understand the failure of this normally effective protective procedure and one is led to wonder if, because of the extremely difficult situations of low water availability and poor disposal methods the infecting doses of organisms transmitted were so high as to override the protective level of gamma-globulin given.

Many cases occurred and the nurses were hard put to it to keep up with the demands on their time, to the detriment of public health nursing service.

By the end of the year, incidence of this disease had declined markedly in the Keewatin and Baffin Zones and there was no evidence of any serious out-break in either of the Western Zones.

Although prophesy is always dangerous, it would seem safe to say that Infectious hepatitis will not again be a major problem in Keewatin or Baffin in the 70's and probably not before the middle of the 80's, since post-infection immunity is strong and lifelong, and in the majority of the settlements, infection rate has been very high.

The other disease of concern during 1974 was the very high experience of Streptococcal throat infections in the Central Arctic.

Dependent on the particular strain of streptococcus involved, this organism may be responsible for Scarlet Fever at the time of acute infection or for Acute nephritis and/or Rheumatic Fever as a sequel to the primary throat infection. Experience of these unhappy side effects has been very low fortunately.

Attempts to eradicate the organism as a cause of disease in one of the more heavily infected settlements, Gjoa Haven, using Oral penicillin were completely ineffectual. Although the organism was penicillin sensitive, and acute infections responded rapidly to the use of penicillin, the organism remained in the community and reappeared in individuals following cessation of treatment.

The aid of the Epidemiology division in Ottawa has been sought in the elucidation of this ongoing problem.

A 75% decrease in measles incidence was experienced from 1973, though the figure in 1973 was a vast increase over the experience in immediately preceding years. The measles immunization programme was modified in 1973 in an attempt to lessen the incidence of this disease. Maybe we are seeing some results of that decision.

Enteric infections with Shigella (Bacillary Dysentery) and Salmonella (Food poisoning) were both increased over the 1973 levels, the former back to that experienced in 1971 and 1972. The reservoir for Shigella infection is man and outbreaks of Bacillary dysentery represent a breakdown in normal personal or sewer and water hygiene.

The reservoir of Salmonellosis on the other hand, except for the special case of Typhoid, is animal and the route of

Major Notifiable Diseases (Non V.D.) Reported 1974 N.W.T.

Disease	Year	Inuvik	Mackenzie	Keewatin	Baffin	Total N.W.T.
Infectious Hepatitis (A)	1974	10	43	142	370	565
	1973	97	50	0	288	435
	1972	33	87	1	1	122
Typhoid Fever	1974	1	0	0	0	1
	1973	0	0	0	1	1
	1972	6	0	0	0	6
Bacillary Dysentery	1974	54	39	0	4	97
	1973	7	41	0	1	49
	1972	44	48	0	1	93
Salmonellosis	1974	0	28	0	0	28
	1973	0	8	0	0	8
	1972	7	0	0	0	7
Meningococcal Meningitis	1974	0	5	3	0	8
	1973	0	7	0	1	8
	1972	0	1	1	1	3
Measles	1974	50	49	9	11	119
	1973	45	311	116	8	480
	1972	1	14	2	5	22
Rubella	1974	14	15	4	25	58
	1973	8	13	8	7	36
	1972	3	21	1	5	30
Diphtheria	1974	0	2	0	0	2
	1973	0	6	0	0	6
	1972	0	0	1	0	1
Trichinosis	1974	0	35	0	0	35
	1973	0	0	0	0	0
	1972	0	0	1	0	1
Botulism	1974	0	0	0	3	3
	1973	0	2	0	0	2
	1972	0	0	0	0	0

infection normally food products. Dairy products such as milk powder and dried eggs are often incriminated, and one will readily recall the problem caused in 1974 by a Quebec chocolate firm with a national market. Poultry and meat may also be implicated.

In the case of Salmonellosis in the Northwest Territories, a persistent search has so far failed to turn up the source, or sources of the cases seen.

There was again a single case of Typhoid which was directly traceable to one of the known carriers in the Inuvik Zone. Only steady surveillance and regular indoctrination can keep such a situation under control.

Two outbreaks of Trichinosis occurred. One attributable to polar bear meat in the Baffin Zone affected 4 individuals. A second, far more serious, was traced to the consumption of black bear meat and was responsible for illness in 31 individuals and death in two. This was in Mackenzie Zone.

Trichinosis is a disease due to a parasitic helminth (worm) which is 100% preventable by thorough cooking of meat before it is eaten. Deep freezing is also normally considered to be equally protective.

"Education" is the only real measure of value, yet the disease is still relatively common in Central Europe and Eastern Canada. The lessons have to be not only taught but also remembered.

VENEREAL DISEASE

The Northwest Territories picture in respect to Gonorrhoea shows improvement, and by contrast with most of the Provinces and Canada as a whole, we were actually in the position of recording a decline in confirmed cases of approximately 20%.

It is difficult to pinpoint the exact cause of this turn around from the steadily climbing incidence reported previously, but this department, through it's very able Infectious Disease Officer, Mr. J. Atkinson, has sponsored during 1973 and 1974 an extremely active educational campaign on Venereal Disease. N.W.T. Region would like to feel there is an association between his activities and the decline.

The incidence of Syphilis was again low. Four cases were found, the same number as last year. It is reiterated that it is the firm belief that any easing of the pressure kept on the prompt treatment of Gonorrhoea with large doses of Penicillin would probably be reflected in an increase in incidence of the much more serious disease, Syphilis.

In the latter half of 1973, the large doses of intramuscular penicillin universally recommended for the treatment of Gonorrhoea (and the prevention of Syphilis) became unavailable in the open Canadian market and Region was forced into the position of contracting for a special production of suitable dosage by a commercial manufacturer. The cost for such a special product was of course high but is considered reasonable expenditure in the face of our decidedly major problem.

VENEREAL DISEASE INCIDENCE 1974

GONORRHOEA

Gonorrhoea cases have generally been divided statistically into two groups:

1) Confirmed - include micro-positive and clinically accepted cases (with some exceptions for clinical cases in the towns of Inuvik and Frobisher Bay).
2) Unconfirmed - includes all suspect Gonorrhoea cases not included in (1).

Micro-positive and Clinical diagnosis cases were reported weekly to Statistics Canada. Unconfirmed cases were not reported to Statistics Canada although it is believed that a fair portion of these suspect but otherwise unconfirmed cases were positive for Gonorrhoea.

Change in Incidence of Gonorrhoea

1972	1973	1974	1974 Increase or Decrease over 1973
1726 Confirmed	2384 Confirmed	1999 Confirmed =	Decrease 16%
421 Unconfirmed	885 Unconfirmed	1352 Unconfirmed=	Increase 52%
2147	3269	3351 Total =	Increase 2%

Changes in Incidence of Gonorrhoea by Zone (Confirmed)

	1972	1973	1974	1974 change from 1973
Inuvik	431	728	640	Decrease 12%
Mackenzie	744	969	855	Decrease 11%
Keewatin	85	160	86	Decrease 46%
Baffin	466	527	418	Decrease 20%

Changes in Incidence of Gonorrhoea by Zone (Unconfirmed)

	1972	1973	1974	1974 Increase or Decrease over 1973
Inuvik	98	185	309	Increase 57%
Mackenzie	177	411	675	Increase 64%
Keewatin	12	78	51	Decrease 34%
Baffin	134	211	317	Increase 50%

GONORRHOEA N.W.T. 1974

Ethnic Group	Total by Sex		Age Groups							
			0 - 9	10 - 14	15 - 19	20 - 24	25 - 39	40-59	60 +	Age not stated
	M	F								
Indians	317	231		4	149	162	190	40	3	
% of Indians				.7	27.2	29.6	34.7	7.3	.5	
Eskimos	428	347	5	13	189	273	227	65	3	
% of Eskimos			.6	1.5	24.4	35.2	29.3	8.4	.4	
Others	531	145		3	133	213	269	52	3	3
% of Others				.4	19.7	31.5	39.8	7.7	.4	.4
Total Cases 1999	1276	723	5	20	471	648	686	157	9	3
% of Total	63.83	36.17	.25	1	23.56	32.42	34.32	7.85	.45	.15

N.W.T. Region Gonorrhoea Incidence by Sex and Age Groups (All Categories) Total

- 1 Yr.		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 59		60 +		Age ?	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
		1	2	2	1	9	40	323	486	622	444	404	248	307	175	169	94	16	3	4	1

Totals — Females - 1857
Males - 1494
3351

Gonorrhoea Epidemiology - (See also Appendix #1)

	No. of contacts Located & Treated	No. of contacts Reported	Percentage Located & Treated
Inuvik	865	1169	74%
Mackenzie	1465	2021	72%
Keewatin	156	213	73%
Baffin	743	989	75%
N.W.T. TOTAL	3229	4392	73%
(Outside Contacts)	(30)	(82)	(36%)

Gonorrhoea Rate per 100,000 (Micro-positive and Clinical Diagnosis)

N.W.T. Estimate population	Cases		Rate
37849	1999	5281	per 100,000

Gonorrhoea Rate per 100,000 (Unconfirmed)

N.W.T. Estimate population	Cases		Rate
37849	1352	3572	per 100,000

Gonorrhoea Rate per 100,000 (All Categories)

N.W.T. Estimated population	Cases		Rate
37849	3351	8853	per 100,000

Changes in Incidence of Gonorrhoea by Zone (Confirmed and Unconfirmed)

	1972	1973	1974	1974 Increase or Decrease over 1973
Inuvik	529	913	949	Increase 3%
Mackenzie	921	1380	1530	Increase 10%
Keewatin	97	238	137	Decrease 42%
Baffin	600	738	735	Decrease less than 1%

Gonorrhoea by Sex and Ethnic Group (Confirmed and Unconfirmed)

Indian		Eskimo		Other		Total		Total
M	F	M	F	M	F	M	F	
447	445	604	740	806	309	1857	1494	3351

Gonorrhoea Incidence (Proportional) by Ethnic Group (Confirmed and Unconfirmed)

Indian	Eskimo	Other	Total
26.62%	40.11%	33.27%	3351
(27.806% 1973)	(44.203% 1973)	(27.99% 1973)	

Gonorrhoea Incidence by Sex and Age Groups (Micro-positive and Clinical Diagnosis)

	-1 Yr		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 59		60+		Age?	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Inuvik								7	64	54	110	74	106	40	94	32	40	17	2			
Mackenzie			1	2	1		3	5	108	119	163	100	121	41	74	28	58	21	7		2	1
Keewatin						1		1	10	7	16	15	16	8	6	4	1	1				
Baffin							2	2	51	58	121	46	44	15	42	17	12	7	1			
Total N.W.T. Region			1	2	1	1	5	15	233	238	410	235	287	104	216	81	111	46	10		2	1

Totals

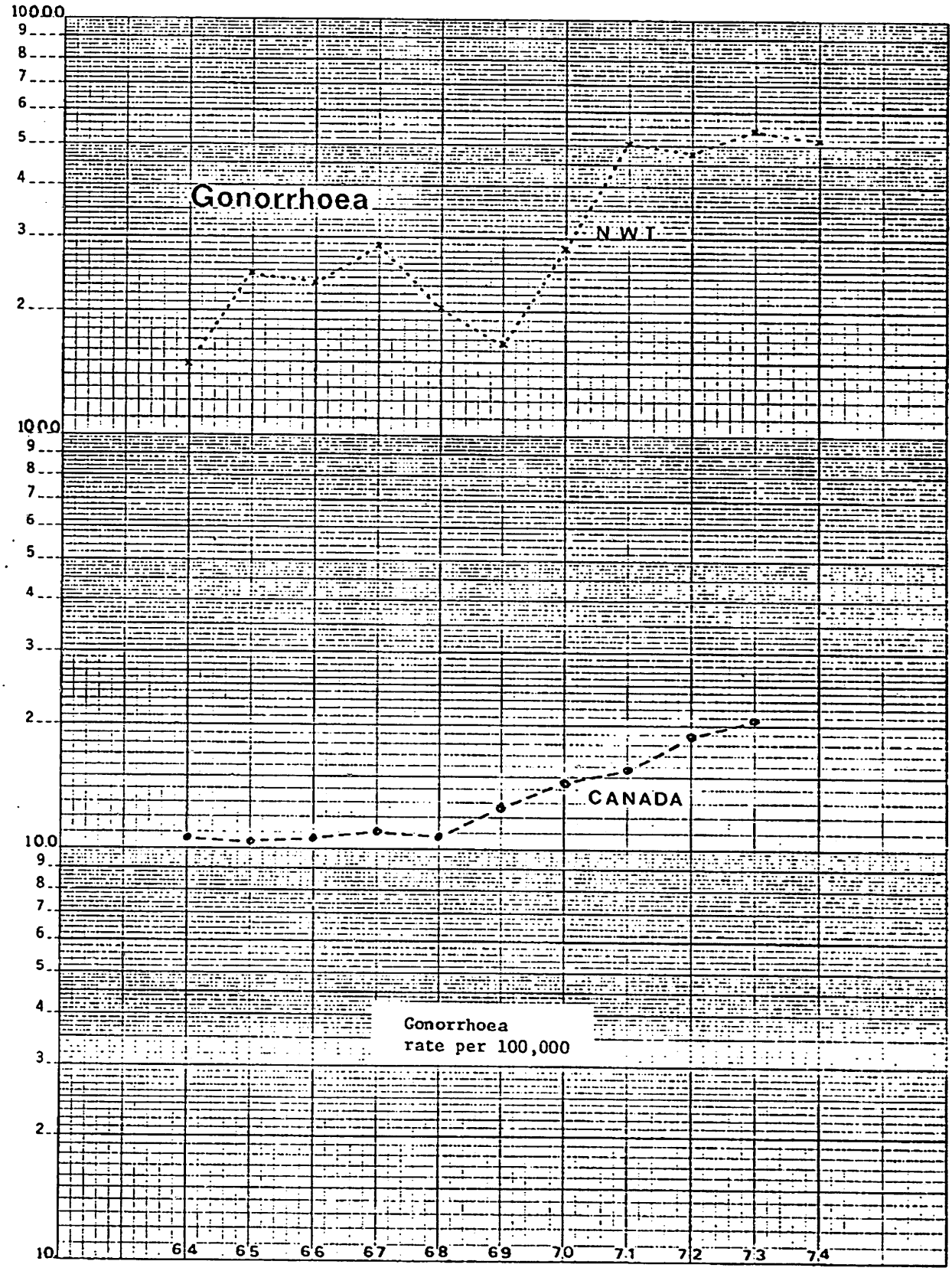
Inuvik	640
Mackenzie	855
Keewatin	86
Baffin	418
	1999

Gonorrhoea Incidence by Sex and Age Group (Unconfirmed)

	- 1 Yr		1 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 39		40 - 59		60+		Age?	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Inuvik							1	3	22	50	30	58	26	45	14	30	12	17		1		
Mackenzie					1		3	14	48	112	112	102	57	60	55	42	38	23	4	2	2	
Keewatin										7	8	7	3	11	4	5	3	2	1			
Baffin								8	20	79	62	42	31	28	18	17	5	6	1			
Total N.W.T. Region					1		4	25	90	248	212	209	117	144	91	94	58	48	6	3	2	

Totals

Inuvik 309 Mackenzie 675 Keewatin 51 Baffin 317 = 1352 Total


Gonorrhoea
N W T
CANADA
Gonorrhoea
rate per 100,000
100.0
10.0
1.0
64
65
66
67
68
69
70
71
72
73
74

TUBERCULOSIS - NORTHWEST TERRITORIES

Sixty-six patients with active tuberculosis were detected in the Northwest Territories in 1974. This compares with 49 in 1973 and 68 in 1972. The present increase in numbers of 25.8% as compared with the previous year probably represents a variance around an annual mean which with present TB surveillance methods can be expected to represent the pattern for many future years. However, this represents 1974 annual rate of 174 per 100,000 population which is about 8 times the national rate of approximately 20 per 100,000 for Canada.

Further analysis of the case finding reveals there were 22,472 referred chest films as compared with 11,200 in 1973. Similarly, the sputum examinations in 1974 totalled 12,429 against 6,348 in 1973. In other words, more extensive search led to discovering more cases. The case finding sources provided 54,803 tuberculosis diagnostic procedures to the residents of the Northwest Territories during 1974. These tests included mass chest x-ray survey (9,444), stationary clinical examinations in departmental and non-departmental hospitals, nursing stations and health centres (22,472). Tuberculin tests (10,458) and bacteriological 12,429.

The reservoir of residents with previously documented evidence of pulmonary tuberculosis or individuals with only radiological evidence of self-healed (but not treated) pulmonary tuberculosis becomes each year more up-dated in the computer tuberculosis registry despite considerable regional -- or zonal existing variations. The purpose of such registration is:

a) to offer preventive treatment to any such individual without previous adequate treatment. To prevent future and unpredictable breakdown of the self-healed lung lesion according to criteria and risk categories outlined as recommended by the Thoracic Society of Canada and the United States.

b) to follow or re-call individuals on treatment for active disease or on preventive treatment, suspects, and other high risk cases and categories.

c) to provide data for statistical analysis and to ensure continuity of records supporting field administrative and/or nurses services.

Effective preventive treatment avoids future disease in such "high risk" individuals thereby also preventing infections of the family or community members which if ignored in an increasingly tuberculin negative population could have an epidemic impact. Approximately 1,100 individuals are presently on preventive daily drug treatment but it appears that defaulting is probably high as preventive treatment is generally not well understood. It is prolonged (at least one year) requiring considerable motivation or understanding on the part of the participant who in general feels well.

Total numbers of diseased patients have reduced considerably (morbidity) and mortality (death due to tuberculosis) has practically disappeared in contrast to the early sixties with death rates of three to five hundred people per hundred thousand. However, constant vigilance despite present reassuring "numbers" is much indicated as illustrated below:

	N.W.T. POP.	ACTIVE TB CASES	N.W.T. RATE PER 100,000	CANADA RATE PER 100,000
Indians	7,533	24	318	
Eskimos	13,932	36	258	20
Others (Metis, White)	16,384	6		
TOTAL	37,849	66	174	

In other words, the occurrence of active tuberculosis in Treaty Indians in the Northwest Territories, is about 16 times the national occurrence and in Eskimos almost 13 times the national occurrence.

Recent tuberculin conversions, as indicated by change in the tuberculin skin test from previously negative to presently positive indicates transmission of the disease to a previously tuberculosis free person. Thirty-two recent convertors were detected in 1974 indicating, therefore, transmission of the TB bacillus. Such a person falls in a high risk group and is high priority for preventive drug treatment.

Finally, honing or refining tuberculosis surveillance

also involves more intensive contact investigations (to break the chain of transmission), particularly in sputum smear positive cases, more selective use of tuberculin skin testing and bacteriological examinations and improvement of management efficiency.

TUBERCULOSIS

NORTHWEST TERRITORIES - 1974

	FAR ADVANCED	MODERATELY ADVANCED	MINIMAL	PRIMARY	PLEURISY	EXTRA-PULMONARY	TOTAL
NEW CASES	3	12	16	10		10	51
% OF TOTAL	6%	23%	31%	20%		20%	100%
REACTIVATED CASES	2	10	1			2	15
% OF TOTAL	13%	67%	7%			13%	100%

TUBERCULOSIS ACTIVITY REPORT

NORTHWEST TERRITORIES - 1974

ETHNIC GROUP	INDIANS			ESKIMOS			OTHERS			ALL GROUPS		
YEAR	1974	1973	1972	1974	1973	1972	1974	1973	1972	1974	1973	1972
POPULATION	7,533	7,402	7,089	13,932	13,630	12,919	16,384	15,978	14,799	37,849	37,010	34,807
NEW ACTIVE CASES	19	11	15	26	17	27	6	10	6	51	38	48
INCIDENCE	0.25	0.15	0.21	0.19	0.12	0.21	0.03	0.16	0.04	0.13	0.10	0.13
REACTIVATED CASES	5	2	4	10	7	16	0	2	0	15	11	20
CASES ON HOME CHEMOTHERAPY										1,140	1,224	1,477
TUBERCULIN TESTS										10,458	9,533	5,955
B.C.G.										990	567	2,529
NO. OF X-RAY SURVEY FILMS										9,448	9,984	13,313
NO. OF REFERRED FILMS										22,472	11,200	12,755
BACTERIOLOGY TESTS										12,429	6,348	7,529

NEW AND REACTIVATED CASES OF TUBERCULOSIS

NORTHWEST TERRITORIES

1974	1973	1972	1971	1970	1969	1968
66	49	68	93	115	169	210

CASE FINDING SOURCE

NORTHWEST TERRITORIES - 1974

	NUMBER OF X-RAYS	ACTIVE CASES FOUND	NUMBER OF EXAMINATIONS PER CASE
X-RAY SURVEYS	9,448	2	4,724
REFERRED FILMS	22,472	41	5,480
SPUTUM SURVEYS	12,429	23	5,403

NEW AND REACTIVATED TB CASES

NORTHWEST TERRITORIES - 1974

ZONE	NEW CASES	REACTIVATED CASES	TOTAL
MACKENZIE	28	5	33
INUVIK	5	2	7
KEEWATIN	9	4	13
BAFFIN	9	4	13
TOTAL	51	15	66

NEW & REACTIVATED TUBERCULOSIS CASES BY DISTRICT & YEAR

NORTHWEST TERRITORIES

ZONE	1974	1973	1972	1971	1970	1969
MACKENZIE	33	22	25	30	41	51
INUVIK	7	8	5	6	11	12
KEEWATIN	13	6	11	9	16	22
BAFFIN	13	13	27	48	46	88
TOTAL	66	49	68	93	114	173

SUMMARY OF ACTIVITIES - CHRONIC DISEASE CONTROL

NORTHWEST TERRITORIES - 1974

ZONE	COMMUNITY SURVEYS	REFERRED FILMS	TUBERCULIN	BACTERIOLOGI-CAL TESTS	TOTAL
MACKENZIE	4,561	9,192	4,630	3,564	21,947
INUVIK	63	4,821	2,240	2,365	9,489
KEEWATIN	3,875	1,330	1,684	1,450	8,339
BAFFIN	949	7,129	1,904	5,050	15,032
TOTAL	9,448	22,472	10,458	12,429	54,807

BACTERIOLOGICAL STATUS

OF NEW AND RE-ACTIVATED TUBERCULOSIS CASES

NORTHWEST TERRITORIES - 1974

	DIRECT SMEAR		CULTURE		BIOPSY		NON-BACILLARY	
	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT
Indians	3	2	8	2	2		6	1
Eskimos	10	2	8	6	3		5	2
Others	1		5					
TOTAL	14	4	21	8	5		11	3

BACTERIOLOGICAL STATUS

OF NEW AND REACTIVATED TUBERCULOSIS CASES

NORTHWEST TERRITORIES - 1974

	DIRECT SMEAR		CULTURE		BIOPSY		NON-BACILLARY	
	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT
MACKENZIE ZONE								
Eskimos	1	1	5	1	1			
Indians	2	2	6	1	2		5	
Others	1		5					
TOTAL	4	3	16	2	3		5	
INUVIK ZONE								
Eskimos	1							
Indians	1		2	1			1	1
Others								
TOTAL	2		2	1			1	1
KEEWATIN ZONE								
Eskimos	3			4	2		4	
TOTAL	3			4	2		4	
BAFFIN ZONE								
Eskimos	5	1	3	1			1	2
TOTAL	5	1	3	1			1	2

TUBERCULOSIS CONTROL REPORT

NORTHWEST TERRITORIES REGION

1 9 7 4

	INDIANS		ESKIMOS		OTHERS		TOTAL		RECENT CONVERTERS
	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	
Tuktoyaktuk									1
Inuvik			1				1		1
Aklavik		1						1	
Fort McPherson	1						1		3
Fort Good Hope	2	1					2	1	1
Fort Norman									
Fort Franklin									
Arctic Red River	1						1		
Norman Wells									
TOTAL - INUVIK ZONE	4	2	1				5	2	6
Cambridge Bay									1
Coppermine			2	1			2	1	
Holman Island				1				1	
Spence Bay			2				2		
Gjoa Haven			1				1		
Fort Simpson	2						2		1
Fort Liard	1						1		
Fort Wrigley									
Fort Resolution		1			2		2	1	2
Fort Smith	1		1		1		3		1
Hay River	1						1		1
Fort Providence		1						1	
Fort Rae	9	1					9	1	
Snowdrift	1						1		
Yellowknife					3		3		1
Pelly Bay			1				1		1
TOTAL - MACKENZIE ZONE	15	3	7	2	6		28	5	8

TUBERCULOSIS CONTROL REPORT

NORTHWEST TERRITORIES REGION

1 9 7 4

	INDIANS		ESKIMOS		OTHERS		TOTAL		RECENT CONVERTERS
	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	NEW	RE-ACT	
Eskimo Point			2				2		2
Whale Cove									
Baker Lake			2	2			2	2	2
Rankin Inlet									
Chesterfield Inlet			1	1			1	1	1
Coral Harbour			3	1			3	1	5
Repulse Bay									1
Fort Churchill									
Belcher Islands			1				1		
TOTAL - KEEWATIN ZONE			9	4			9	4	11
Arctic Bay									
Clyde River			2				2		
Grise Fiord									
Igloolik									
Pond Inlet			1				1		
Pangnirtung			2	1			2	1	6
Broughton Island				1				1	
Cape Dorset			2				2		
Frobisher Bay			1	2			1	2	1
Lake Harbour									
Hall Beach									
Port Burwell									
Resolute Bay			1				1		
TOTAL - BAFFIN ZONE			9	4			9	4	7

OUT-PATIENTS ON ANTITUBERCULOSIS DRUG THERAPY

DECEMBER 31, 1974

	ACTIVE CLINICAL	SUB-CLINICAL
MACKENZIE ZONE		
Cambridge Bay	3	36
Coppermine	3	37
Fort Liard	1	6
Fort Providence	1	19
Fort Rae	4	53
Fort Resolution	3	19
Fort Simpson	-	16
Fort Smith	9	27
Fort Wrigley	5	22
Gjoa Haven	2	17
Hay River	5	22
Holman Island	-	1
Pelly Bay	1	10
Spence Bay	1	12
Snowdrift	-	13
Yellowknife	11	64
	49	374

OUT-PATIENTS ON ANTITUBERCULOSIS DRUG THERAPY

DECEMBER 31, 1974

	ACTIVE CLINICAL	SUB-CLINICAL
INUVIK ZONE		
Aklavik	1	24
Arctic Red River	-	2
Fort Franklin	-	11
Fort Good Hope	3	56
Fort McPherson	1	18
Fort Norman	1	8
Inuvik	5	36
Norman Wells	-	4
Sachs Harbour	-	6
Tuktoyaktuk	-	28
	11	193
KEEWATIN		
Baker Lake	7	34
Belcher Islands	1	3
Chesterfield Inlet	4	26
Coral Harbour	1	26
Eskimo Point	5	20
Rankin Inlet	-	20
Repulse Bay	1	20
Whale Cove	1	2
	20	151

OUT-PATIENTS ON ANTITUBERCULOSIS DRUG THERAPY

DECEMBER 31, 1974

	ACTIVE CLINICAL	SUB-CLINICAL
BAFFIN ZONE		
Arctic Bay	3	39
Broughton Island	1	26
Cape Dorset	4	32
Clyde River	6	37
Frobisher Bay	11	31
Frobisher Bay - Protocol	-	2
Grise Fiord	-	5
Hall Beach	2	16
Igloolik	-	14
Lake Harbour	2	9
Pangnirtung	2	42
Pond Inlet	2	41
Port Burwell	-	2
Resolute Bay	3	10
	36	306
TOTAL - N.W.T. -	116	1,024

CASE FINDING METHODS

NORTHWEST TERRITORIES - 1974

ZONE	COMMUNITY SURVEYS	REFERRED FILMS	LABORATORY	TOTAL
MACKENZIE	2 (7%)	21 (63%)	10 (30%)	33
INUVIK		5 (71%)	2 (29%)	7
KEEWATIN		9 (70%)	4 (30%)	13
BAFFIN		6 (46%)	7 (54%)	13
TOTAL	2 (3%)	41 (62%)	23 (35%)	66

NEW AND RE-ACTIVATED CASES OF TUBERCULOSIS

BY AGE, SEX AND RACIAL ORIGIN

NORTHWEST TERRITORIES - 1974

AGE GROUP	TOTAL			INDIANS			ESKIMOS			OTHERS		
	T	M	F	T	M	F	T	M	F	T	M	F
0 - 4	5	4	1	4	4		1		1			
5 - 9	5		5	3		3	2		2			
10 - 14	3	2	1				3	2	1			
15 - 19	2		2				1		1	1		1
20 - 24	3	1	2	1		1	1	1		1		1
25 - 29	6	4	2				4	2	2	2	2	
30 - 49	25	9	16	5	2	3	18	6	12	2	1	1
50 - 69	12	8	4	8	7	1	4	1	3			
70 - Over	5	2	3	3	1	2	2	1	1			
TOTAL	66	30	36	24	14	10	36	13	23	6	3	3

INDIANS, ESKIMOS & OTHERS - NORTHWEST TERRITORIES

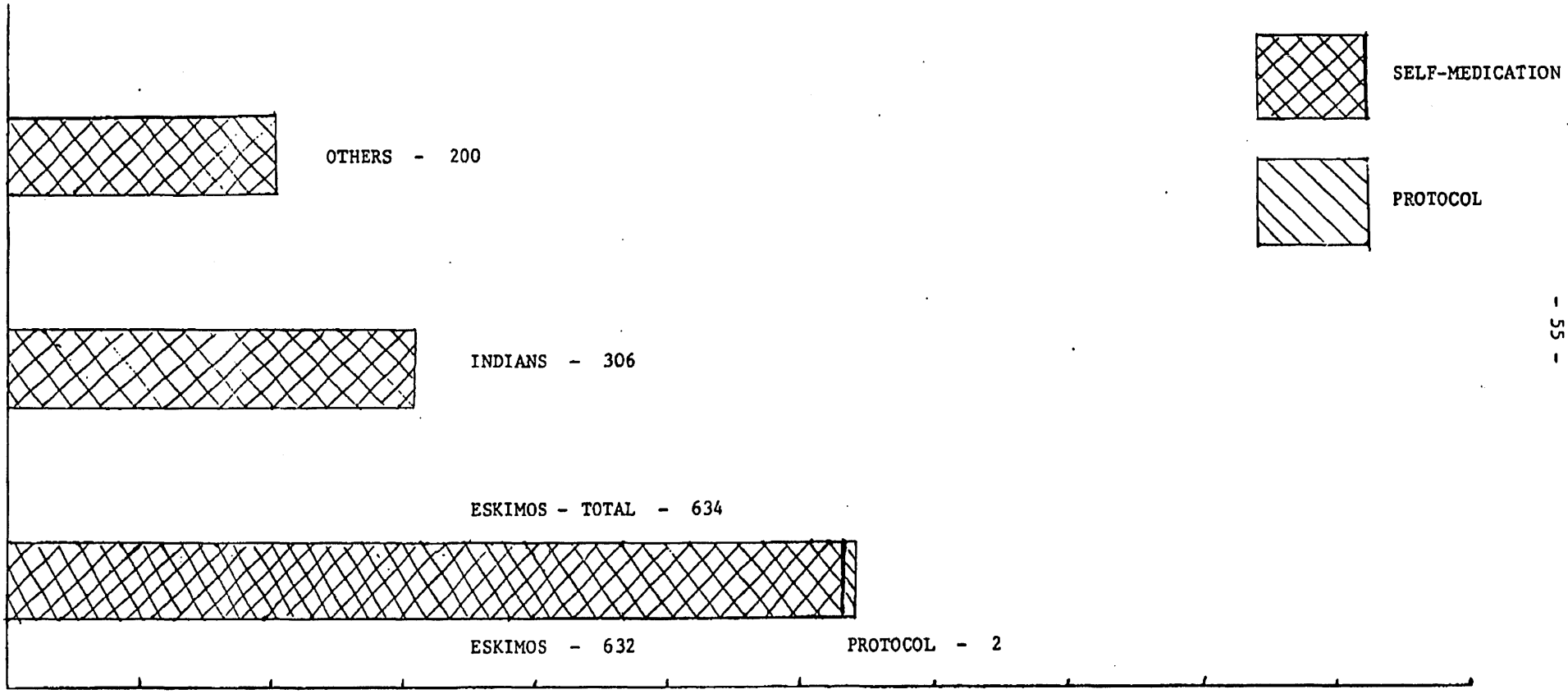
NEW AND REACTIVATED CASES OF TUBERCULOSIS BY EXTENT AND TYPE

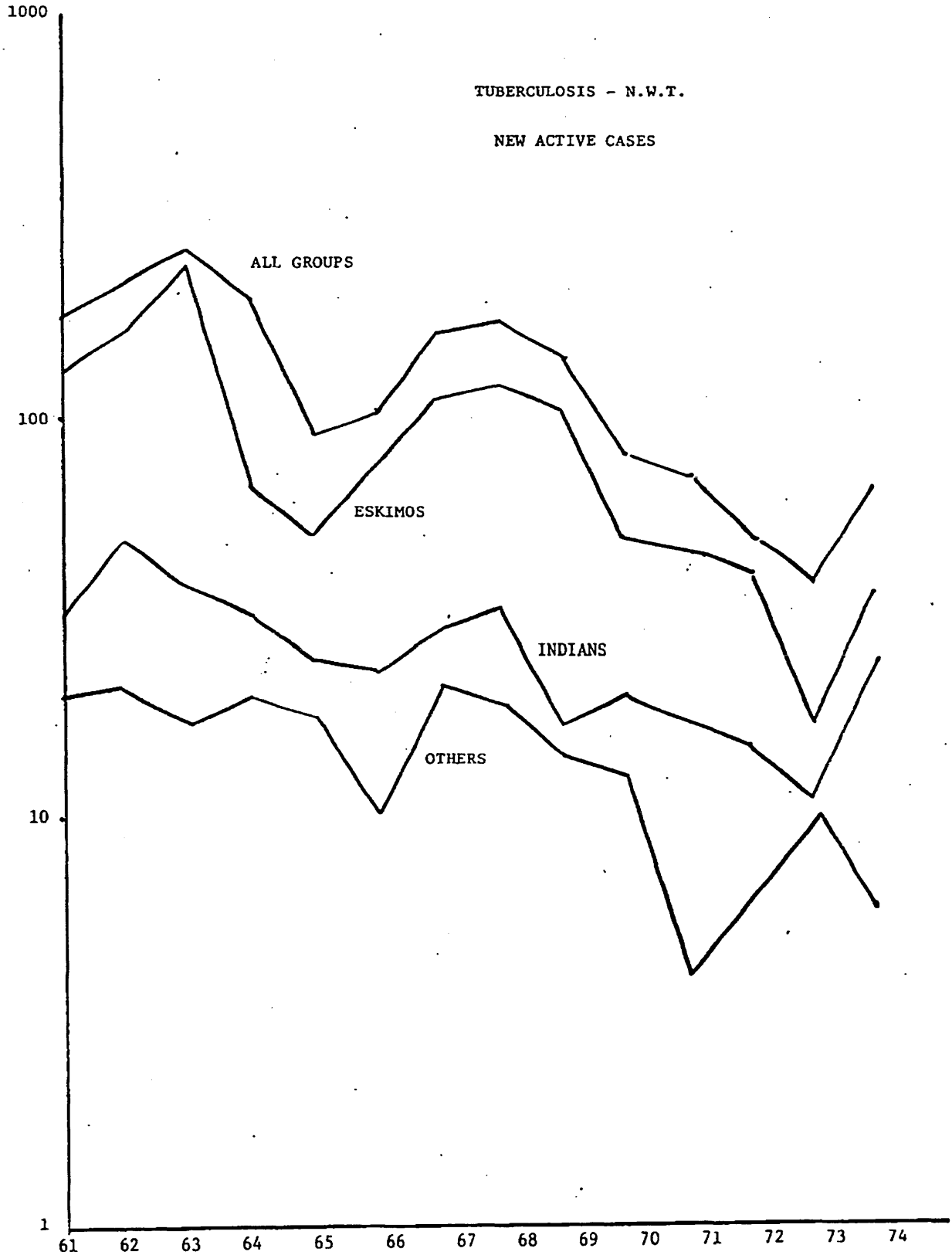
	1974	1973	1972	1971	1970	1969	TOTAL
Far Advanced	5 (7.6%)	-	-	3 (3.2%)	2 (1.7%)	1 (0.5%)	11
Moderately Advanced	22 (33.3%)	13 (26.5%)	27 (39.7%)	40 (43.1%)	38 (33.0%)	63 (37.3%)	203
Minimal	17 (25.7%)	28 (57.2%)	27 (39.7%)	31 (33.3%)	51 (44.3%)	58 (34.4%)	212
Primary	10 (15.2%)	3 (6.1%)	7 (10.3%)	7 (7.5%)	17 (14.9%)	34 (20.1%)	78
Extra-Pulmonary	12 (18.2%)	5 (10.2%)	7 (10.3%)	12 (12.9%)	7 (6.1%)	13 (7.7%)	56
TOTALS	66 (100.0%)	49 (100.0%)	68 (100.0%)	93 (100.0%)	115 (100.0%)	169 (100.0%)	560

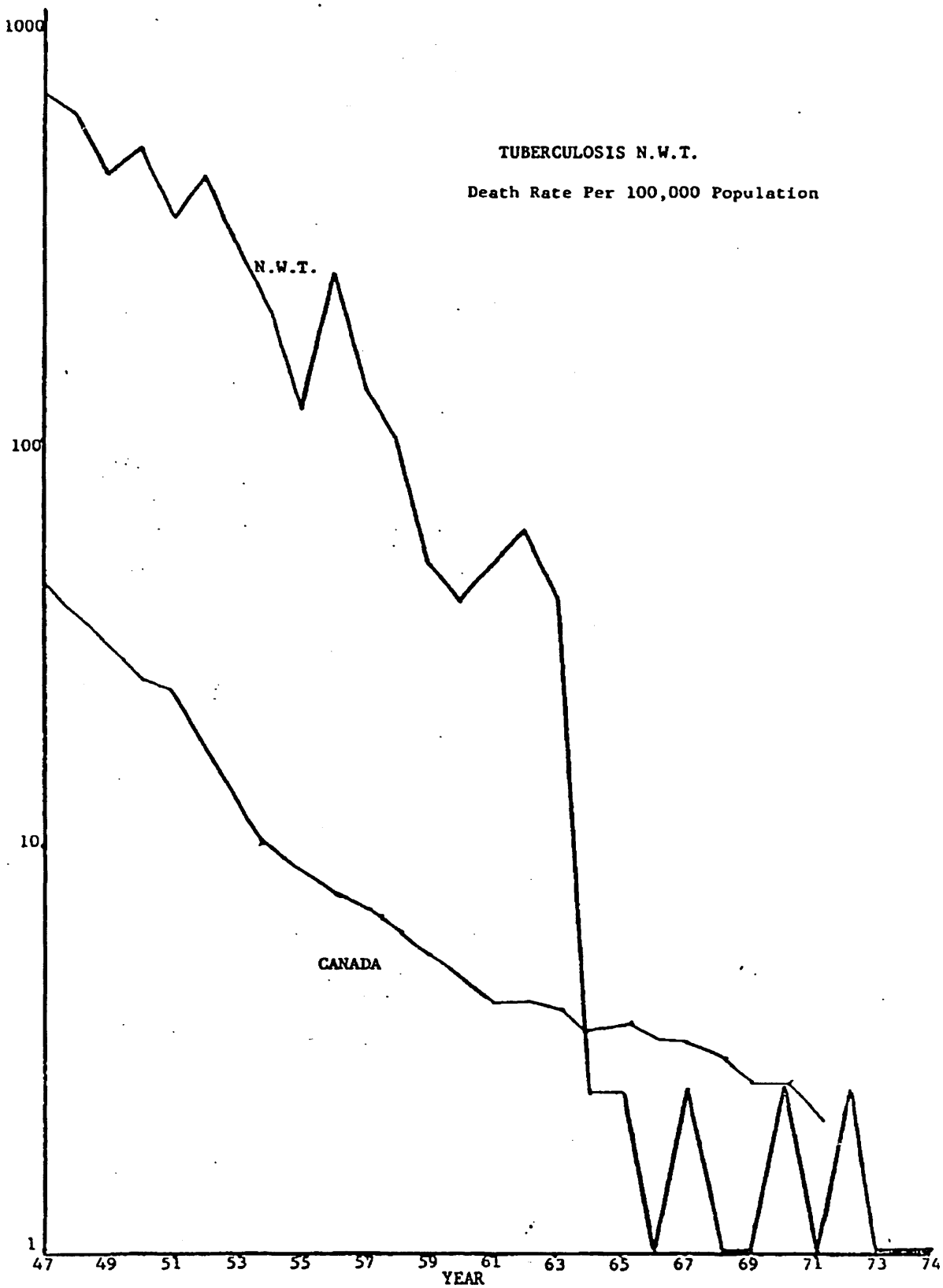
TREATMENT AT HOME

PREVENTION AND TREATMENT OF TUBERCULOSIS (CHEMOTHERAPY AND CHEMOPROPHYLAXIS)

NORTHWEST TERRITORIES - DECEMBER 31, 1974




TUBERCULOSIS - N.W.T.
NEW ACTIVE CASES
1000
100
10
1
ALL GROUPS
ESKIMOS
INDIANS
OTHERS
61
62
63
64
65
66
67
68
69
70
71
72
73
74



A graph shown on a logarithmic scale indicates the proportionate rise or fall of incidence, eg. 1:2 and 500:1000 will appear on a logarithmic scale in similar proportions.

MENTAL HEALTH

PSYCHIATRIC SERVICES TO THE NORTHWEST TERRITORIES

As in previous years, the provision of psychiatric consulting services depended very heavily on the involvement of psychiatrists based in southern university settings. However 1974 saw a move in the direction of providing more on-the-spot psychiatric services. A resident Zone Psychologist in Yellowknife provided psychological consultation in the Mackenzie Zone and a start was made with developing a program utilizing mental health nurses resident in the Northwest Territories. During 1974, the position of a mental health nurse for Inuvik was finalized, and it is planned that in the forthcoming year, mental health nurses will be located in all Zones. From this small nucleus, it is hoped that a more comprehensive mental health program utilizing on-the-spot personnel can be instituted.

Notwithstanding the introduction of the mental health nurse concept, psychiatric expertise from outside institutions will be required for the foreseeable future. Baffin Zone has been serviced by psychiatrists from the Clarke Institute of Psychiatry in Toronto, and the team approach utilizing a speech and learning specialist funded by the Department of Education of the Government of the Northwest Territories, has continued. Keewatin Zone continues to receive psychiatric visits from the University of Manitoba. Inuvik Zone continues to be serviced by the Regional Psychiatrist, who also shares the consultation load with a psychiatrist from the University of Alberta to the Mackenzie Zone. We are fortunate in having several psychiatrists from southern institutions who have made a personal commitment to provide this visiting consultation service on a long-term basis as continuity is perhaps more vital in psychiatry than in any other medical specialty.

A position still exists for a Zone Psychiatrist for Mackenzie Zone and recruitment attempts have continued; unfortunately so far, with no success.

MENTAL HEALTH STATISTICS

SUICIDES

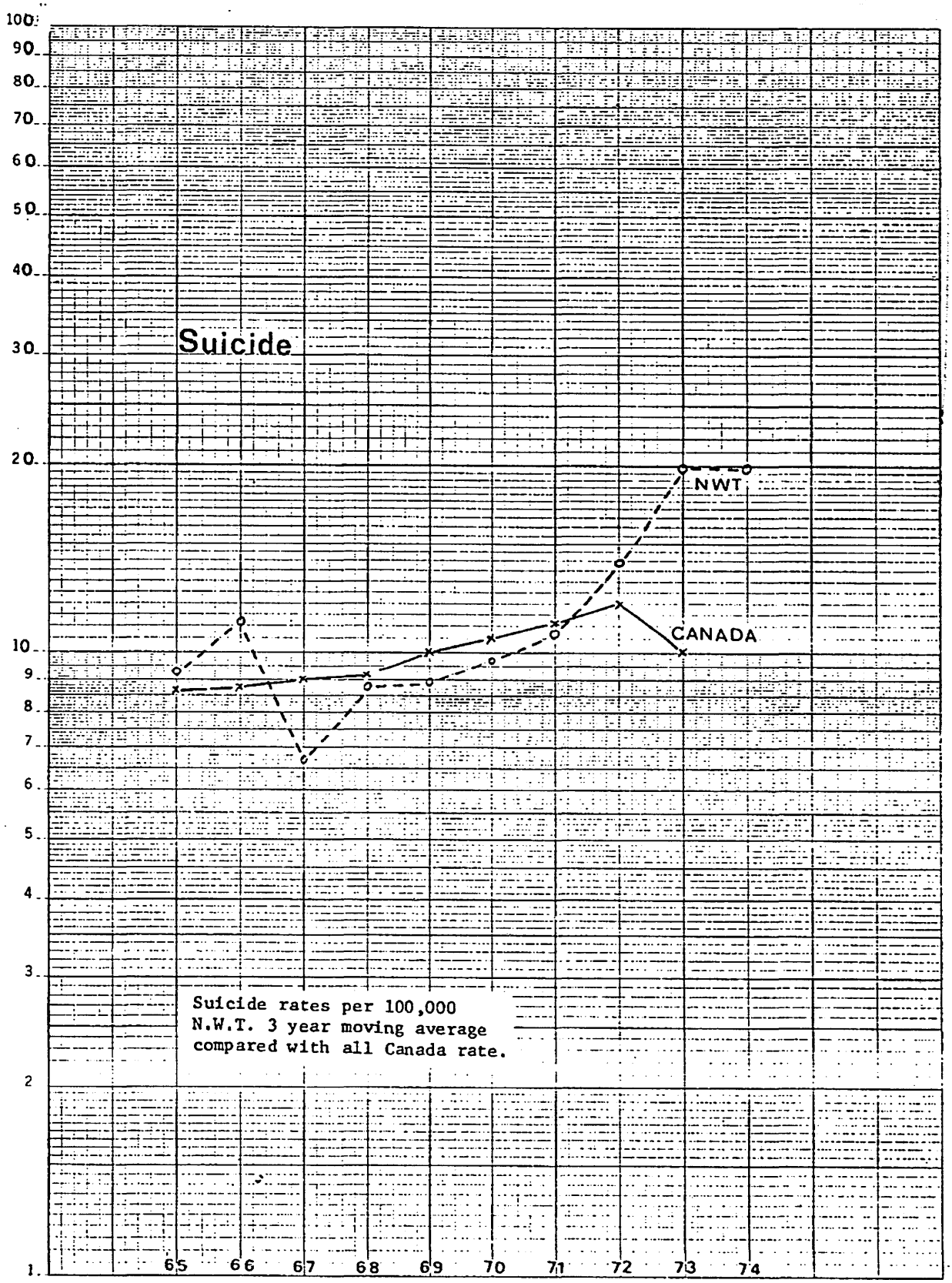
The accompanying graph demonstrates that the suicide rate in 1974 showed a downward plunge with the rate being approximately that of the

national average. Five suicides occurred in the Northwest Territories in 1974; four by firearms and one by hanging. Although it is heartening to be able to report a marked reduction in the number of suicides in 1974, a continuing disturbing feature is that the suicides occur in the younger segment of the population. In fact in 1974, all of the suicides were under the age of 25.

ADMISSIONS TO MENTAL HOSPITALS

1974 saw a reduction in the total admissions to mental hospitals. There were 33 admissions. The reason for this reduction is probably two-fold: (1) that the number of people being referred to a mental hospital on remand for a medical legal assessment was lower than in previous years and (2) an increasing number of psychiatric patients were being treated within the Northwest Territories. As on previous occasions, approximately half of the number of patients being admitted to mental hospitals in the south were admitted on a purely voluntary basis.

It is worth noting that the figure of 33 admissions to mental hospitals is artifically high as one patient was admitted twice in 1974 and another five were recent arrivals in the Northwest Territories, and could be more properly classified as transients, rather than residents of the Northwest Territories.


Suicide
NWT
CANADA
100
90
80
70
60
50
40
30
20
10
9
8
7
6
5
4
3
2
1
65
66
67
68
69
70
71
72
73
74
Suicide rates per 100,000
N.W.T. 3 year moving average
compared with all Canada rate.

HEALTH EDUCATION

Health Education and the Community Health Auxiliary Program

The Health Education Program is aimed at assisting the total population in understanding prevention, identifying and solving their health problems.

Public Health Education and community organization for health is carried out by all professional staff and by the Community Health Representatives. The Health Education staff provides professional advice and guidance to NWT Region staff and to many other agencies on request, notably the Northwest Territories Department of Education. In 1974 at Region the Health Education staff consisted of the Regional Health Educator, with interim staff assistance.

The program includes providing materials appropriate to the different levels of community development and sophistication and language within the four zones of the Northwest Territories Region. This year the health education staff started, largely through the Community Health Auxiliary Program, to provide materials produced in the North for the specific needs of Northern residents. The initial production was a series of prenatal posters making up a booklet. It was produced by the Inuit Community Health Auxiliary candidates and was printed by the Alberta Tuberculosis and Respiratory Diseases Association. The response from Community Health Representatives and nurses has been overwhelmingly appreciative. It is a beginning.

Co-ordination with the Government of the Northwest Territories has taken many forms. For example, in Baffin Zone Medical Services health films are part of the Resource Centre; three Home Management trainees took part in the first 5 weeks of the Community Health Auxiliary course. The Fort Smith Cooking School gained experience and reduced our costs by providing an excellent cuisine in Fort Simpson. (Wherever possible native foods were

utilized as part of the meals and of the nutrition teaching). The entire training program was carried out in co-operation with the Continuing and Special Education Division of the Department of Education, with particular assistance from the Baffin Zone Adult Education section for the course held in Pangnirtung.

The goal of the Community Health Auxiliary Program is to encourage the native people of the Northwest Territories to identify and solve their health problems, enter the health professions and upgrade their education and their ability to handle ever increasing community problems. In its 1974 educational programme for Community Health Representative, Northern Health embarked on a bold new venture. Based on Medical Service's innovative report of 1973 on Community Health Auxiliaries, it initiated an educational approach geared to the unique needs of the North and of its people.

Indian communities sent seventeen representatives to a course in Fort Simpson and the Northwest Territories Department of Education sent three Home Management trainees. Inuit communities sent nine representatives and an interpreter to the course in Pangnirtung. For five weeks, these local participants worked together in learn-by-doing situations to prepare themselves to be members of a community health team.

The Western course from January 8 to February 8, 1974, was preceded by a planning session in Banff in early December of 1973. The Eastern course, in a different culture and climate, was held on Baffin Island from February 28 to March 26. The planning session in Ottawa, which preceded the Pangnirtung course, benefited by the presence of National Medical Services staff.

Much planning and evaluation had already gone into the venture, which was approached as an experimental year. Having to hold two planning sessions and two courses within the final four months of the 1973-74 fiscal year created great pressure on everyone.

The time, energy, and money expended have been great indeed; but so was the vision which resulted in the Community Health Auxiliary Report and which built on it to bring together creative minds from all levels of Medical Services and the Northwest Territories Department of Education. Twenty-nine participants successfully completed the five-week courses. They came from Burwash Landing to Crise Fiord, in a land including the Yukon Territory and Baffin Island.

Each of these courses was part of a one-year apprenticeship. During 1974 Yukon Zone became a Region, and its five candidates moved from NWT Region responsibility. In Northwest Territories Region four of the candidates accepted other jobs and one left the area to be married by December, 1974. Those remaining are the beginning phase of a long-range programme in which the Community Health Representatives will be as integral and essential a part of a Community as the nursing staff.

Much was learnt in this new venture, both through the mistakes and the successes. One benefit from the over-tight schedule was that the evaluation of one planning session and course could be and was immediately utilized in another. This evaluation is continuing to help assess the programme. In December the representatives in MacKenzie Zone had their final two weeks at zone level. It is hoped they will meet in future years with other health staff. Inuvik, Keewatin and Baffin Representatives will complete their course in 1975. Detailed reports are being prepared of this attempt to meet the unique northern health needs.

The role of the Health Education program is to facilitate the primary aim of northern health, which is to maintain health by public health and prophylactic activities.

NUTRITION PROGRAM:

Nutrition services suffered during 1974 due to the resignation at the end of the previous year of our full-time nutritionist. An attempt was made to replace the previous services by a series of contracts with the University departments to the various Zones. This attempt was less than successful. Problems of establishment of personal service contracts which have been decided as undesirable in Federal Departments made the institution of these contracts next to impossible.

One contract only was established in Mackenzie Zone and this particular one was very satisfactory indeed. In summary during three periods of field service totalling eight weeks the following services were given.

Consultative and food service inspections at Akaitcho Hall, Sir John Franklin High School, Stanton Yellowknife Hospital, Fort Rae Hospital, Chief Jimmy Brown School, St. Ann's Hospital, the Receiving Home, the Boy's Group Home, the Juvenile Training Centre, Breynant Hall Hostel, and A.V.T.C. in Fort Smith, the Hospital and Bompas Hall in Fort Simpson.

Visits were made to Medical Service Zone Headquarters in Yellowknife, the Department of Education and the Department of Social Development each on several occasions and Regional Office of Medical Services on three occasions.

Finally visits were made for the purpose of educational efforts at the Nursing stations, inspection of food stores and available food stuffs and discussion of nutritional precepts with store operators in Cambridge Bay, Pelly Bay, Spence Bay, Coppermine, Holman Island and Detah Village.

A full time Regional Nutritionist will be employed in 1975.

MEDICAL RESEARCH

The full time staff of the Medical Research Unit was reduced to two throughout 1974, the parasitologist having been seconded to the position of Programmes Medical Officer. The programme was therefore carried entirely by Dr. Schaefer and one secretary, with the temporary assistance of one executive assistant responsible entirely for the Yellowknife meeting of the Third Symposium on Circumpolar Health which took place July 8 - 11 and was followed in Jasper by post-Symposium discussions July 14 - 18.

The proceedings of this highly successful meeting are expected to be published in a volume expected to run about 600 - 700 pages containing 125 - 130 papers, sponsored by the Federal Minister of Health and Welfare, the Hon. Marc Lalonde. Professor Shinji Itoh of Hokkaido, Japan is the principal editor.

In addition to an active programme of attending conferences and meetings in and related to the N.W.T. Dr. Schaefer has also represented Northern Region in conferences in other Regions.

Dr. Schaefer also, during the latter part of the year visited a number of the nursing stations where he was able at one time to advise our nurses and bring himself up to date on current problems.

Nutritional needs in general and breast feeding in particular are being given particular attention at the present, since much morbidity and in infancy some mortality is directly attributable to lack of knowledge or failure to apply what is known of human nutritional needs in the North.

The Medical Research Unit is charged with the screening of all research proposals of a medical nature which are proposed for implementation in the N.W.T. This programme is directly aimed at reducing the number of repetitive surveys, at improving quality in others, and perhaps just as often at encouraging and facilitating work of particular significance and value.

In all decisions the desire to reduce demands on the native population is kept clearly in view.