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NORTHWEST TERRITORIES

SESSIONAL PAPER NO. IV, 1964 (First Session)

REPORT ON HEALTH CONDITIONS IN THE NORTHWEST TERRITORIES, 1963

SUMMARY

1. The estimated population for 1963 was 24,066 -- 5,714 Indians (23.7%); 8,565 Eskimos (35.6%); and 9,787 (40.7%) persons of White Status. It is increasing at the rate of 3 1/2% per year.

2. The crude birth rate of 45 per 1,000 population was 1.8 times the National rate, and 65% of the births took place in Hospitals or Nursing Stations. The crude fertility rates (births per 1,000 women 15-49 yrs) for the Indian and Eskimo populations were 191 and 262 respectively as compared to the National rate of 111. 27% of the births in the native population were born to mothers who had already had at least 6 children, while only 12% of White Status mothers fell into this category.

3. The crude death rate of 10 per 1,000 population was the lowest ever recorded. There was an increase in the neonatal death rate, which was mainly due to an increased number of deaths in White Status babies.

The infant death rate of 103 was the lowest recorded in the past 25 years.

The average age at death for the three ethnic groups was:-

	<u>Indians</u>	<u>Eskimos</u>	<u>Others</u>
All decedents	33 yrs	15 yrs	31 yrs
Decedents over 1 yr. of age.	47 yrs	36 yrs	53 yrs

4. The chief cause of death in the first 28 days of life was Prematurity. From the first month onwards, the chief causes of death were:-

1. Injuries and Violence,
2. Pneumonia,
3. Senility and Unknown Causes, and
4. Cardiovascular Diseases.

Alcohol was associated with 25% of the deaths due to violence.

5. Respiratory Diseases and Diseases of the Digestive System and Skin were the major causes of sickness both in Inpatients and Outpatients.

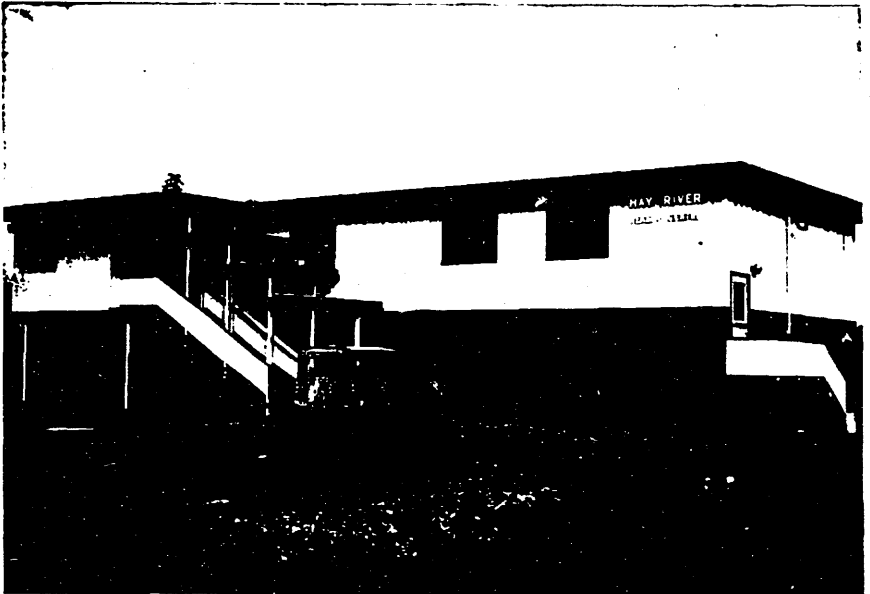
6. An epidemic of Influenza occurred in the Western Arctic area in April-May, and affected a total of 2,654 persons.

An epidemic of Tuberculosis occurred at Eskimo Point in the Central Arctic, and 82 persons had to be evacuated to Hospital. The disease was of a very virulent type, but gradually responded to treatment, and the patients are making satisfactory progress.

7. The Health Centres at Hay River and Yellowknife were completed during the year and are now in full operation.



YELLOWKNIFE HEALTH CENTRE



HAY RIVER HEALTH CENTRE

REPORT ON HEALTH CONDITIONS IN THE NORTHWEST TERRITORIES, 1963

Population:

The estimated population of the Northwest Territories in 1963 was:-

<u>Indians</u>	<u>Eskimos</u>	<u>Others</u>	<u>Total</u>
5,714	8,565	9,787	24,066

These figures were obtained by adding the natural increase (births minus deaths) for the years 1961 and 1962 to the 1961 Census figures of the Dominion Bureau of Statistics, and these are the figures which have been used in calculating all rates.

This is the first year in which we have tried to calculate age-specific death rates for the ethnic groups in the Northwest Territories, and to enable us to do so the Department of Northern Affairs and National Resources, and the Indian Affairs Branch of the Department of Citizenship and Immigration kindly agreed to provide us with population figures broken down into age and sex groupings. The total populations in the figures supplied were not the same as those calculated from the 1961 Census, as they were based on Band membership and on Eskimo Registration Numbers and did not show the true area of residence. However, the figures gave us the percentage distribution of the population in the various age groups and these were applied to the populations calculated from the 1961 Census.

TABLE 1  
NORTHWEST TERRITORIES  
Indians and Eskimos

Age Distribution of Population, 1963

	<u>Indians</u>			<u>Eskimos</u>			<u>All Canada</u>	
	<u>Population</u>	<u>%</u>	<u>%</u>	<u>Population</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Under 1	215	3.7		337	3.9			
1 - 4	852	14.9	18.6	1,395	16.3	20.2	12.4	12.4
5 - 9	761	13.3		1,274	14.9		11.4	
10 - 14	652	11.4	24.7	1,033	12.1	27.0	10.2	21.6
15 - 19	515	9.0		924	10.8		7.8	
20 - 24	462	8.0		718	8.4		6.4	
25 - 29	357	6.3		638	7.4		6.6	
30 - 34	344	6.0		509	5.9		6.9	
35 - 39	284	4.9	34.2	385	4.5	37.0	6.9	34.6
40 - 44	222	3.9		392	4.5		6.1	
45 - 49	184	3.2		289	3.4		5.5	
50 - 54	177	3.1		235	2.7		4.7	
55 - 59	178	3.1	13.3	150	1.7	12.3	3.9	20.2
60 - 64	154	2.7		114	1.3		3.2	
65 +	309	5.4	8.1	172	2.0	3.3	8.0	11.2
Not Stated	48							
<b>TOTAL</b>	<b>5,714</b>	<b>100</b>	<b>100</b>	<b>8,565</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 1 shows the percentage of native persons in each age group as compared to the All Canada figures. It will be noted that the Indian and Eskimo populations are young populations, 43% and 47% respectively being under 15 years of age whereas the Canadian figures show only 34% in this age group. The percentages in the young adult groups equate with those of the rest of Canada, but from 35 years of age onwards, the percentages of the native population in the older age groups falls

progressively below the National figures.

The ratio of males to females in both the Eskimo and Indian populations is the same, namely 1,040 males to 1,000 females.

The vital statistics in this report have been calculated separately for the three ethnic groups resident in the Northwest Territories, i.e. Registered Indians, Eskimos, and Others (White Status). In comparing rates one should remember that some of the numbers in certain categories are so small that it is misleading to compare rates, and that the "White Status" group includes enfranchised Indians and Metis.

#### Vital Statistics:

##### Births

The overall birth rate is 45 per 1,000 population which is 1.8 times the Canadian rate. The birth rate is down slightly from 1962 for all ethnic groups, and it is interesting to note that the Indian and White Status rates are similar, while the Eskimos have a rate which is more than twice the Canadian rate.

The ratio of male to female births varies considerably in the three groups:-

Indians	- 1,163 males to 1,000 females
Eskimos	- 1,016 males to 1,000 females
Others	- 1,069 males to 1,000 females
All Canada (1961)	- 1,057 males to 1,000 females

The preponderance of male Indian births is noteworthy, as a similar observation was noted in the Yukon Territory in 1962 where the ratio was 1,300 to 1,000. Twenty-seven percent of Indian births are recorded as illegitimate while the comparable figure for Eskimos and Others is 8%.

Premature births appear to be more common in the non-native population, as 8.7% of births among white status persons were premature, while the corresponding rates for Indians and Eskimos were 4.7% and 6.5% respectively. This may be due to more accurate recording of prematurity among the non-native group, but, as is mentioned later in this report, it is to be expected that the prematurity rate would be higher among persons of white status.

There has been a steady increase in the percentage of births taking place in hospitals and Nursing Stations over the past ten years:-

	<u>1953</u>	<u>1955</u>	<u>1957</u>	<u>1959</u>	<u>1961</u>	<u>1963</u>
Percentage of Births occurring in Hospitals and Nursing Stations	38.9	45.5	38.6	45.7	57.1	65

The percentages vary considerably for the three ethnic groups, those for 1963 being as follows:-

Indians	- 70%
Eskimos	- 39%
Others	- 94%

The Stillbirth rate for the Territories is 13.7 which is similar to the All Canada rate.

Table 2 lists live births by the age group of the mother, and as expected, we find that a greater percentage of Indian and Eskimo births occur in mothers in the early and late reproductive years than is the case in women of White Status.

TABLE 2  
NORTH-EST TERRITORIES  
Live Births by Age Group of Mother  
1963

Age of Mother	INDIAN			ESKIMO			OTHER			TOTAL		
	Number	%	%	Number	%	%	Number	%	%	Number	%	%
12-14 years	-			-			-			-		
15-16 years	5	2.3		13	2.6		4	1.0		22	2.0	
17-19 years	14	6.6	8.9	63	12.8	15.4	30	7.7	8.7	107	9.8	11.3
20-24 years	59	28		121	24.6		120	31		300	28	
25-29 years	45	21		116	23.6		116	30		277	25	
30-39 years	76	36	85	142	29	77	112	29	90	330	30	83
40-45 years	10	4.7		26	5.3		5	1.2		41	3.8	
46-49 years	3	1.4	6.1	9	1.8	7.1	1	0.2	1.4	13	1.2	5.0
50+ years	-			-			-			-		
TOTAL BIRTHS	212	100	100	490	100	100	388	100	100	1090	100	100

Table 3 lists the birth order of children born in the Territories, and shows that 27% of the births in the native population were born to mothers who already had 6 children, while only 12% of the white status mothers fell into this category. 3.3% of Indian mothers and 1.8% of Eskimo mothers had previously had 12 or more children, while the comparable figures for white status mothers was 0.5%.

TABLE 3  
NORTH-EST TERRITORIES  
Birth Order (Live Births)  
1963

	INDIAN			ESKIMO			OTHER		
	Number	%	%	Number	%	%	Number	%	%
1st Child	31	14.6		69	14.0		97	25	
2nd Child	30	14.1		87	17.7		79	20.3	
3rd Child	33	15.5	44	52	10.6	41	72	18.5	63
4th Child	24	11.3		51	10.4		57	14.6	
5th Child	17	8.0		69	14.0		25	6.4	
6th Child	21	9.9	29	38	7.7	32	17	4.3	25
7th Child	22	10.4		30	6.1		13	3.3	
8th Child	7	3.3		31	6.3		9	2.3	
9th Child	5	2.3	16	23	4.6	17	6	1.5	7.2
10th Child	5	2.3		15	3.0		5	1.3	
11th Child	5	2.3		10	2.0		4	1.0	
12th Child	5	2.3	7.0	6	1.2	6.3	2	0.5	2.8
13th Child or more	7	3.3	3.3	9	1.8	1.8	2	0.5	0.5
TOTALS	212	100	100	490	100	100	388	100	100

## Deaths

Tables 5 and 6 give the pertinent figures on mortality. The overall crude death rate was 10 per 1,000 population, which is the lowest ever recorded and compares fairly favourably with the National rate of 7.7. Table 4 shows the percentage of total deaths which occur in the major age groupings of the population, and the high percentage of deaths occurring in the Under 1 year and in the 1-39 year groupings as compared to the National percentages is immediately evident.

TABLE 4  
NORTHEAST TERRITORIES

Percentage Deaths Occurring in Major Age Groupings, 1963

	<u>Indians</u>	<u>Eskimos</u>	<u>Others</u>	<u>All Canada (1961)</u>
Under 1 year	31%	54%	41%	10%
1 - 39 years	24%	28%	14%	8%
40 - 59 years	16%	7%	16%	16%
60 years +	28%	11%	29%	64%

This high mortality in infants, children, and young adults becomes even more apparent when we compare infant and age-specific death rates.

### Perinatal Deaths - (0-6 days)

These are deaths occurring during the first week of life and we see that out of 52 neonatal deaths (0-28 days) 43 (83%) occurred in the first 6 days of life, and if we go into further detail we find that 27 of those occurred within 24 hours of birth. Our perinatal death rate is 4 times that of the National figure, and prematurity is given as the main cause of those deaths. It should be noted that the perinatal death rate among white status infants is slightly higher than among the native groups and there appears to be a correlation between reported prematurity and perinatal rates, e.g.

	<u>Indians</u>	<u>Eskimo</u>	<u>White Status</u>
% Prematurity	4.7	6.5	8.7
Perinatal Death Rate	41	54	56

### Neonatal Deaths - (0-28 days)

There has been a marked rise in this rate in respect to white status infants over the last three years (5--19--49). 90% of these deaths occurred during the perinatal period and as previously mentioned are nearly all associated with prematurity. One expects more premature births among women of the higher economic groups as, having better medical attention, they are likely to bring to near-term, pregnancies which, in the less fortunate groups, would have terminated earlier in abortions or miscarriages. However, it is difficult to explain the progressive increase in this rate over the past few years -- it may be that the improved medical services are converting what would have been abortions into premature deliveries, but this is doubtful as, if this were the case, the native rates should also show a comparable increase. It behoves us to carefully observe this rate over the next few years.

The Neonatal death rates for Indians compares very favourably with the National rate, while the Eskimo and White Status rates are three times the National figure.

### Infant Deaths - (0-365 days)

The overall infant death rate of 103 per 1,000 births is the lowest recorded in the past 25 years. The Indian and Eskimo figures are decreasing gradually, but here again the White Status figure of 62 shows an increase -- however as with the Neonatal rate, it is solely due to the increase in Perinatal deaths.

TABLE 5  
NORTHWEST TERRITORIES  
Vital Statistics, 1963(g)

	INDIANS (Pop. 5,714)				ESKIMOS (Pop. 8,565)				WHITE STATUS (Pop. 2,787)				NORTHWEST TERRITORIES ALL GROUPS (Pop. 24,066)				ALL CANADA RATE 1961
	1963		1962	1961	1963		1962	1961	1963		1962	1961	1963		1962	1961	
	Number	Rate	Rate	Rate	Number	Rate	Rate	Rate	Number	Rate	Rate	Rate	Number	Rate	Rate	Rate	
Livebirths(a)	212	37	41	42	490	57.2	61	64	388	39.7	39	42	1,090	45	47	50	26.1
Illegitimate Births(b)	58	27	26	34	39	7.9	8	7	31	8	10	8	128	11.7	12	13	4.5
Stillbirths(c)	5	23	4	23	5	10.2	18	14	5	13	16	13	15	13.7	15	16	13
Livebirths Born in Hospitals and Nursing Stations(e)	148	70			191	39			366	94			705	65		57	96.9
Maternal Deaths(d)					1	20	19.8		1	25			2	18	9.1		4.6
Perinatal Deaths(f) (0-6 days)	4	41			22	54			17	56			43	52			12.7
Neonatal Deaths(c) (0-28 days)	4	18.9	27	9	29	59	50	60	19	49	19	5	52	47	35	30	18
Infant Deaths(c) (Under 1 year)	13	61	103	81	76	155	194	185	24	62	27	21	113	103	120	108	27
TOTAL DEATHS (a)	42	7.4	10	9	142	16.6	23	22	58	5.9	6	4	242	10.0	13.	11	7.7
Deaths in Hospitals and Nursing Stations(e)	17	40.5			42	29.6			34	58.7			93	38.4		26	63
Natural Increase(a)	170	29	30	37	348	40.6	38	38	330	33.7	33	35	848	35	34	36	18

(a) Rate per 1,000 population. (b) Rate is percentage of total live births. (c) Rate per 1,000 livebirths. (d) Rate per 10,000 livebirths.  
(e) Rate column shows percentages of livebirths or deaths occurring in Hospitals or Nursing Stations.  
(f) Perinatal Death Rate is Stillbirths (28 weeks +) plus infant deaths under 1 week per 1,000 total births (live and stillbirths).  
(g) Based on certificates received up to 17 March 1964. (3 deaths in non-residents excluded)



TABLE 6

## NORTH-EAST TERRITORIES

Age Specific Death Rates -- Indians and Eskimos 1963

Age Group	INDIANS				ESKIMOS				ALL CANADA	
	Population <sup>(a)</sup>	Deaths	Rate <sup>(c)</sup>	Rate <sup>(d)</sup>	Population <sup>(b)</sup>	Deaths	Rate <sup>(c)</sup>	Rate <sup>(d)</sup>	Rates	
Under 1(d)	215	13	61		337	76	155		27.2	
1 - 4 yrs	852	4	4.7		1,395	21	15.0		1.1	
5 - 9 yrs	761	-	-		1,274	1	0.8		0.5	
10 - 14 yrs	652	1	1.5		1,033	2	1.9		0.4	
15 - 19 yrs	515	-	-	0.5	924	3	3.2	1.8	0.8	0.57
20 - 24 yrs	462	1	2.2		718	3	4.2		1.1	
25 - 29 yrs	357	2	5.6		638	3	4.7		1.1	
30 - 34 yrs	344	2	5.8		509	2	3.9		1.3	
35 - 39 yrs	284	-	-		385	5	13.0		1.8	
40 - 44 yrs	222	3	13.5		392	2	5.1		2.7	
45 - 49 yrs	184	3	16.3	5.9	289	2	6.9	5.8	4.5	1.4
50 - 54 yrs	177	-	-		235	1	4.2		7.5	
55 - 59 yrs	178	1	5.6		150	5	33.3		11.7	
60 - 64 yrs	154	3	19.5	7.8	114	5	43.8	22.0	18.4	11.8
65 +	309	9	29.4		172	11	64.0		59.8	
Unspecified	48	-	-							
TOTALS	5,714	42	7.4		8,565	142	16.6		7.7	

(a) Indian population based on figures provided by Indian Affairs Branch X 1.118 to bring up to estimated population.

(b) Eskimo population based on figures provided by Department of Northern Affairs and National Resources X 0.91 to reduce figures to estimated population.

(c) Rates per 1,000 population in specified age groups.

(d) Per 1,000 live births.

NOTE - The number of deaths in many age groups is so small that comparisons of rate could be misleading.

### Total Deaths -

The Crude Death Rate is 10 per 1,000 population (National Rate 7.7). The Eskimo rate is over twice that of the National figure, but both other groups compare favourably with the rest of Canada. The Age-Specific Death Rates listed in Table 6, show that the death rates of the native population in nearly all age groups between 5 and 50 years of age are 2 to 4 times higher than the National figures, and that in the 1-4 year age group the Indian and Eskimo death rates are respectively 4 and 13 times the National rate.

In past years we have stressed particularly the high Infant Mortality amongst our Indians and Eskimos, but these figures show that we must now pay equal or more attention to the health of the preschool child.

### Average Age at Death -

The Dominion Bureau of Statistics gives the average ages of all Decedents in the Northwest Territories as follows:-

	<u>1953</u>	<u>1955</u>	<u>1957</u>	<u>1959</u>	<u>1961</u>
Northwest Territories	24.35	26.8	21.9	23.8	23.7
All Canada	58.3	59.2	59.4	59.7	61.4

On calculating the figures for 1963, we find that the average age at death for all residents is 22 years, and when we break this figure down for the various ethnic groups, we find that

The average age of Indian decedents is	33.16 years
Eskimo "	15.05 years
Other "	31.11 years

However, if we exclude deaths in the first year of life and take the average age at death as from 1 year onwards we get the following figures:-

	<u>Indian</u>	<u>Eskimo</u>	<u>Other</u>
Average Age of Decedents over 1 year of age:	47.48 years	35.9 years	53 years

The graph attached to this report shows the average age of decedents over the last 30 years.

### Natural Increase -

This figure remains steady at a 3½% increase per year, for the Territories, which is double the National figure of 1.8 per cent. The Eskimo population shows an annual increase of 4%.

### Place of Death -

Table 5 shows that 35% of all deaths occurred in Hospitals or Nursing Stations. While this is much lower than the Canadian figure of 83%, it has been rising gradually over the past 8 years:-

<u>1955</u>	<u>1957</u>	<u>1959</u>	<u>1961</u>	<u>1963</u>
20%	22%	29%	26%	38%

This is indicative of the increased Hospital and Nursing Station facilities in the Territories.

TABLE 7  
NORTHWEST TERRITORIES  
Causes of Death by Ethnic Group and Selected Age Groups, 1963 (a)

Numbers of Cases

Causes of Death Group	GRAND TOTAL	INDIANS							ESKIMOS							WHITE STATUS									
		Infants		Pre sch	Sch	Young Adult	Adult	Eld	Total	Infants		Pre sch	Sch	Young Adult	Adult	Eld	Total	Infants		Pre sch	Sch	Young Adult	Adult	Eld	Total
		Neo. 1-28 days	29-364d	1-4 yrs	5-14 yrs	15-34 yrs	35-64 yrs	65+ yrs		Neo. 1-28 days	29-364d	1-4 yrs	5-14 yrs	15-34 yrs	35-64 yrs	65+ yrs		Neo. 1-28 days	29-364d	1-4 yrs	5-14 yrs	15-34 yrs	35-64 yrs	65+ yrs	
Diseases of Infancy (B41-44)	56	4	1	1				6	27	3	1					31	19							19	
Injuries (B447-50)	43		1	1	1	5	5	13		8	1	3	6	4		22		1	1		4	2		8	
Pneumonia (B31)	41		2	1				6		19	5			4	2	30		4	1					5	
Senility & Unknown Causes (B45)	29						1	3	4	2	10	1		2	1	6	22				1		2	3	
Cardiovascular Diseases (B24-29)	20						3	3		1			1	4	1	7						6	4	10	
Diseases of Nervous System (B22-23)	16		2				1	1	4		5					6						4	2	6	
Gastrointestinal Diseases (B33-36)	13		3	1				4		6	2			1		9								-	
Neoplasms (B18-19)	8						1	1						1	2	3						1	3	4	
Other Respiratory Diseases (B30 & B32)	6						1	1			1			2		3						2		2	
Tuberculosis, All Forms (B1-2)	5									1			2	2		5								-	
Infective & Parasitic Diseases (B3-17)	3									3						3								-	
Complications of Pregnancy (B40)	2													1		1					1			1	
ALL CAUSES including injuries	242	4	9	4	1	5	10	9	42	29	47	21	3	11	20	142	15	5	2		6	15	11	58(b)	

NOTES: (a) Preliminary figures, based on certificates received up to 17 March 1964.  
(b) Three deaths in non-residents excluded.

Causes of Death -

The major causes of death for the three ethnic groups are listed in Table 7. It shows, as expected, that in the first 28 days of life "Diseases of Infancy" cause nearly all the deaths. It should be noted that this category includes Pneumonia and Diarrhoea of the Newborn and Congenital Malformations. The major causes of death in other age groups are, in order of priority:-

1. Injuries and violence,
2. Pneumonia,
3. Senility and unknown causes,
4. Cardiovascular Diseases,
5. Diseases of the Nervous System,
6. Gastrointestinal Diseases.

Table 8 shows a breakdown of deaths due to injuries and violence, and we see that drownings, exposures, and burns account for 56% of these deaths. Eleven deaths are listed as Asphyxia, and in all these cases, overlying, smothering by bedclothes, and inspiration of vomit were listed as direct causes. These are probably incorrect diagnoses, and all these eleven deaths would have been more accurately listed as "Sudden Death in Infants (cause unknown)". There are about 2,500 such deaths in Canada every year, and in the United States it is estimated that 25% of infant deaths can be placed in this category. The usual history is that an apparently healthy well nourished baby is placed in a crib or pram, and within a few hours it dies, and autopsy findings are negative. In past years, it was suggested that many of these infants smothered against the pillow or bedclothes or that they had inspired food or vomit into their lungs. Few medical authorities accept these theories today as little evidence has been presented in support of them. Much research is taking place to try and discover the cause of this "Sudden death in the Infant" but to date we are ignorant of the true pathology in these cases.

Note should be taken of the fact that the Royal Canadian Mounted Police reported that the excessive use of alcohol was associated with 25% of the deaths due to Injuries. At first glance this may not seem important, but when one takes into account the fact that less than 50% of the population of the Territories have access to alcohol, one can easily see how this problem could continue to increase and become responsible for a greater percentage of deaths.

TABLE 8  
NORTH-WEST TERRITORIES  
Deaths Due to Violence, 1963<sup>(b)</sup>

	Indians	Eskimos	White Status	Total Northwest Territories
Motor vehicle accidents	-	-	3	3
Fractures other than in motor vehicle accidents	2	1	1	4
Homicides (Knife wounds)	-	1	-	1
Burns	3	-	3	6
Drownings	6	3	1	10
Exposure	-	8	-	8
Asphyxia (overlying, inspiration of vomit, etc) (a)	2	9	-	11
<b>TOTALS</b>	<b>13</b>	<b>22</b>	<b>8</b>	<b>43</b>
<b>% of Total Deaths</b>	<b>31%</b>	<b>15%</b>	<b>14%</b>	<b>18%</b>

(a) Mostly reported in infants -- probably not true cause of death.

(b) Figures based on certificates received up to 17 March, 1964.

NOTE - According to R.C.M.P. reports 10 of the deaths due to violence were associated with excessive consumption of alcohol.

The second greatest cause of death was Pneumonia (41 deaths) and 34 (83%) of these deaths occurred in children under 4 years of age, and 73% of them occurred among the Eskimo population.

It is interesting to note that Gastrointestinal and Infectious and Parasitic diseases accounted for 16 deaths and all occurred among the native population. These diseases are intimately associated with the living conditions of the populations concerned, and will remain prevalent until housing and sanitation standards in the Territories are improved.

Tuberculosis accounted for 5 deaths all of which occurred among the Eskimo population.

### Morbidity

#### Inpatients -

Table 9 shows the incidence of Hospitalization of Territorial residents for the year 1962 broken down into age and ethnic groupings. Interesting facts which emerge from this table are:-

- (a) the very high rate of hospitalization in children under 10 years, and
- (b) the high "average stay" period in the native groups, particularly in the Eskimos.

Hospitalization per unit population during 1962 was as follows:-

Eskimos	- 3.7 days
Indians	- 2.9 days
Others	- 2.1 days

A glance at the pie-charts attached to this report shows that while the number of hospital separations among the three ethnic groups equate closely to the percentage distribution of the ethnic groups in the population, the Eskimos, comprising 36% of the population were responsible for 44% of the hospital days.

	<u>Indian</u>	<u>Eskimo</u>	<u>Other</u>
% Distribution in Population	24%	36%	40%
Separations	23%	36%	41%
Hospital Days	24%	44%	32%

Table 10 and the pie-charts on disease distribution in Inpatients shows that the following conditions were responsible for the major proportion of hospital days:-

<u>Disease</u>	<u>1961</u>	<u>1962</u>
Respiratory Diseases	25%	27%
Pregnancy and Childbirth	20%	17%
Diseases of Digestive System	12%	9%
Diseases of Nervous System and Sense Organs	6%	6%
Infective and Parasitic Diseases	5%	10%
Other Diseases	26%	25%

#### Outpatients -

Table 11 lists the various diseases treated at Nursing Stations and Health Centres during the year 1962. Here we note that diseases of the Respiratory and Digestive Systems account for 57% of all diseases treated, while accidents and skin

TABLE 9

## NORTHWEST TERRITORIES

Hospitalization by Sex, Age and Ethnic Origin, 1962 (T.H.I.S.)

Age Group	MALES									FEMALES								
	Separations			Patient Days			Average Stay			Separations			Patient Days			Average Stay		
	Indians	Eskimos	Others	Indians	Eskimos	Others	Indians	Eskimos	Others	Indians	Eskimos	Others	Indians	Eskimos	Others	Indians	Eskimos	Others
Newborn	95	103	219	532	604	1,386	5.7	5.8	6.3	86	139	176	522	962	1,112	8.6	7.0	6.3
Under 1	161	219	151	1,157	2,314	1,141	9.1	10.8	7.5	138	168	121	1,543	2,227	927	11.1	13.4	7.7
1-4 yrs	129	236	232	1,505	2,899	1,617	11.7	12.8	7.0	144	184	136	1,321	1,954	913	9.2	10.9	6.7
5-9 yrs	79	93	69	1,237	1,340	537	16.7	15.5	8.0	45	80	95	396	925	653	8.8	12.0	6.8
10-14 yrs	45	66	64	316	1,022	363	7.1	16.4	5.7	51	76	56	622	1,175	285	12.4	16.3	5.0
15-19 yrs	36	43	41	467	455	311	12.9	11.7	7.5	48	128	109	405	1,514	674	8.5	12.1	6.3
20-24 yrs	21	58	54	225	466	517	10.7	8.5	9.7	75	146	225	1,284	1,234	1,234	6.1	8.8	5.4
25-29 yrs	20	33	42	136	427	540	6.8	13.8	12.9	80	157	224	548	1,328	1,338	6.8	8.6	6.0
30-34 yrs	33	42	51	378	591	292	11.6	14.2	5.8	52	110	180	302	1,086	1,120	5.8	10.1	6.2
35-39 yrs	20	25	55	202	368	581	10.9	15.2	10.4	61	95	111	392	1,358	737	6.4	14.7	6.7
40-44 yrs	24	32	42	167	425	354	6.9	14.0	8.5	22	76	71	129	700	548	5.8	9.7	7.8
45-49 yrs	12	17	47	232	186	427	19.3	11.1	8.7	21	42	41	152	1,179	301	7.2	31.4	7.4
50-54 yrs	6	35	63	40	738	821	6.6	24.0	14.9	18	17	24	153	243	354	8.5	14.2	14.3
55-59 yrs	10	23	42	62	438	484	6.2	19.3	11.5	23	11	25	314	69	238	13.6	6.2	9.5
60-64 yrs	20	16	33	265	332	468	13.2	21.0	12.3	15	23	9	84	646	148	5.6	28.0	16.4
65-69 yrs	19	11	20	218	188	361	12.4	18.5	18.1	7	15	9	95	83	122	14.7	5.8	13.8
70-74 yrs	9	7	22	118	108	381	13.1	15.4	19.2	13	3	6	249	88	45	20.0	29.3	7.5
75-79 yrs	15	1	13	613	7	203	42.2	7.0	15.6	12	3	8	144	29	100	13.6	9.6	12.5
80-84 yrs	4	4	15	90	24	131	26.7	6.0	8.7	10	4	3	102	33	29	10.2	8.2	9.8
85 +	4	2	5	44	24	65	11.0	12.0	13.0	5	2	3	120	52	68	24.0	26.0	23.7
Age Unspecified											3	1		65	5		21.8	5.0
TOTALS	762	1,066	1,285	8,304	12,956	10,980				926	1,482	1,633	8,048	17,000	10,951			
Days Declined by T.H.I.S.				201	645	208							88	568	81			

Average Stay includes days declined by T.H.I.S.

NORTHWEST TERRITORIES

TABLE 10

Summary of T.H.I.S. Inpatient Statistics 1961 and 1962  
(Research and Statistics Division)

Separations, Patient Days, Average Stay and Rates (excluding Newborns)  
(including out of Territories Hospitalization)

Class No.	Principal Diagnosis	Separations		Patient Days		Average Stay		Separations		Patient Days	
		1961	1962	1961	1962	1961	1962	1961 (Pop.22,998)	1962 (Pop.24,000)	1961	1962
1	Infective and Parasitic Diseases	254	614	3176	6749	12.5	11	1104	2613	13809	28658
2	Neoplasms	76	102	1045	1749	14.1	19.2	330	448	4544	7429
3	Allergic, Endocrine System, Metabolic and Nutritional Diseases	72	101	946	1399	13.2	14.1	313	420	4113	5919
4	Diseases of the Blood and Blood Forming Organs	15	20	179	250	11.7	12.1	65	86	778	1095
5	Mental, Psychoneurotic and Personality Disorders	110	91	1021	978	9.2	11	482	388	4461	4044
6	Diseases of the Nervous System and Sense Organs	342	360	4684	4324	15.6	12.1	1487	1492	20367	18026
7	Diseases of the Circulatory System	159	203	3210	4919	20.2	23.8	691	847	13958	20170
8	Diseases of the Respiratory System	1294	1733	12318	16609	9.5	9.6	5648	7277	53792	70223
9	Diseases of the Digestive System	615	574	5797	5094	9.3	8.8	2678	2429	25233	21352
10	Diseases of the Genito-urinary System	251	292	2279	3565	12.0	11.6	1091	1280	9910	15258
11	Deliveries and complications of Pregnancy, Childbirth and the Puerperium	1059	1109	6149	6287	5.8	5.7	4626	5222	26850	29602
12	Diseases of the Skin and Cellular Tissue	216	248	1999	2587	9.2	10.6	939	1027	8652	10836
13	Diseases of the bones and organs of movement	83	105	1396	1414	17.6	13.4	360	426	6070	5739
14	Congenital Malformations	40	55	942	828	22.7	15.1	174	231	4096	3585
15	Certain Diseases of Early Infancy	48	94	580	1243	12.3	13.6	209	392	2522	5346
16	Senility and Ill-defined conditions	198	232	1379	1160	6.9	4.9	865	963	6213	4783
17	Accidents, Poisonings and Violence	346	387	3994	3609	11.3	9.1	1508	1584	18597	14655
18	Supplementary Classifications for Special Admissions	80	32	478	287	5.4	9.2	348	138	2078	1270
TOTAL - All Diagnoses		5259	6352	51577	63051	10.0	10.0	22928	27269	226106	272995

TABLE 11  
NORTHWEST TERRITORIES

Returns of Diseases Treated in Nursing Stations and Health Centres, 1962  
(figures obtained from Nurse's Monthly Reports)

Disease	Natives		Non-Natives		Total Population	
	Number	Percent	Number	Percent	Number	Percent
Diseases of the Respiratory System	8,617	45	2,147	37.4	10,764	43.7
Diseases of the Digestive System	2,435	12.9	645	11.2	3,080	12.5
Accidents, Poisonings and Violence	2,151	11.4	1,129	19.7	3,280	13.3
Diseases of the Skin and Cellular Tissue	1,753	9.3	542	9.4	2,295	9.3
Diseases of the Sense Organs	726	3.8	152	2.6	878	3.5
Diseases of Bones and Organs of Movement	517	2.7	130	2.2	647	2.6
Allergic, Endocrine, Metabolic and Nutritional Diseases	242	1.3	66	1.1	308	1.3
Diseases of the Genito-urinary System	221	1.2	157	2.7	378	1.5
Complications of Pregnancy	184	0.9	54	0.9	238	1.0
Diseases of the Nervous System	151	0.8	73	1.2	224	0.9
Diseases of the Cardio-vascular System	140	0.7	70	1.2	210	0.8
Diseases of Early Infancy	35	0.2	4	0.06	39	0.2
Unspecified	1,698	9.0	564	9.5	2,262	9.2
TOTALS	18,870	100	5,733	100	24,603	100



diseases accounted for another 22%.

### Notifiable Diseases

Notifications of the common notifiable diseases during the year were as follows:-

Chicken Pox	-	69	Influenza	-	2,654
Dysentery	-	1	Measles	-	204
Encephalitis	-	4	Meningitis	-	4
Hepatitis	-	40	Mumps	-	2
			Rubella	-	70

Influenza assumed epidemic proportions during the months of April and May in the Western Arctic, and an outbreak of 32 cases of Infectious Hepatitis occurred at Fort Simpson during the month of March. Apart from these and the outbreak of Tuberculosis at Eskimo Point, which is discussed separately, no other outbreaks of a serious nature were reported.

### Tuberculosis

223 new active cases of Tuberculosis were discovered during the year, which gives an overall incidence of 0.94%. There was an increase in the incidence of this disease among Eskimos (2.1%) while there was a reduction in incidence among Indians (0.6%) and non-natives (0.4%). There would also have been a decrease among the Eskimo population were it not for the explosive outbreak which occurred at Eskimo Point, which accounted for 82 or 37% of the new cases. This outbreak was completely unexpected as this tiny hamlet had been surveyed annually for many years and few cases found. There is no doubt that the strain of the bacillus which caused this epidemic was of a most virulent type as Dr. Stuart Carey, Chief of Medical Services at Clearwater Hospital, reported that 25% of the patients continued to deteriorate during the first 3-6 months of full treatment, while in many others there was a delayed response to treatment.

This outbreak, which was the worst in Canada in recent years, is a prime example of what may happen when you get a combination of inadequate housing, overcrowding, lack of resistance, and the tubercle bacillus. We must face the fact that similar outbreaks can occur unless we increase our efforts to control Tuberculosis by:-

1. More frequent X-ray surveys in areas of high incidence.
2. Stepping up our B.C.G. immunization program.
3. Improving housing and sanitation standards and reducing overcrowding.

and 4. Improving the nutrition of the native populace.

There are other danger spots in the Territories, e.g., Coppermine, Spence Bay, Cambridge Bay, and Clyde River, -- these are all areas of high incidence and close surveillance is necessary to ensure that there is no repetition of the Eskimo Point disaster.

70% of the total population of the Territories was X-rayed during 1963, and as usual the response in the native population was much greater than among white status persons.

The B.C.G. Immunization Program was continued and 2,266 persons were vaccinated.

TABLE 12

## NORTHWEST TERRITORIES

Tuberculosis Control 1961 - 1963

	ESKIMOS			INDIANS			NON-NATIVES			TOTAL POPULATION		
	1961	1962	1963	1961	1962	1963	1961	1962	1963	1961	1962	1963
Population	7949	8282	8565	5284	5461	5714	9138	9487	9787	22371	23230	24066
% of Total Population	35.5	35.6	35.6	23.6	23.5	23.7	40.8	40.8	40.7	100	100	100
NEW ACTIVE CASES:	129	155	178	32	49	35	19	21	14	180	225	227
Incidence of New Active Cases in Population (%)	1.6	1.9	2.1	0.6	0.9	0.6	0.2	0.2	0.14	0.8	1.0	0.94
REACTIVATED CASES:	(a)	(a)	76	(a)	(a)	16	(a)	(a)	2	(a)	(a)	94
No. X-Rayed on Surveys	7037	7319	8244	3520	3531	4001	5404	4488	4577	15961	15333	16819
% Population X-Rayed on Survey	88	88	96	67	64	70	59	47	47	71	66	70
Number of B.C.G. Vaccinations	(a)	(a)	1159	(a)	(a)	520	(a)	(a)	587	(a)	(a)	2266

(a) Figures not readily available.

Venereal Disease

No cases of Syphilis were reported during the year. 186 cases of Gonorrhoea were reported -- this represents a rate of 773 per 100,000 population which is eight times the National rate. The age distribution of cases was as follows:-

<u>Under 1 yr</u>	<u>1-4 yrs</u>	<u>5-9 yrs</u>	<u>10-14 yrs</u>	<u>15-19 yrs</u>	<u>20-39 yrs</u>	<u>Age Not Stated</u>	<u>Total</u>
1	1	-	-	20	157	7	186

It should be noted that it is estimated that only 10-20% of Venereal Disease occurring in Southern Canada is officially reported, whereas, in the North the figure is probably near 90% -- this explains in part the apparent great difference in incidence of this disease. However, the fact remains that the incidence is high and that it is increasing every year.

Much of our venereal disease is associated with the excessive use of alcohol, and it will be difficult to reduce the incidence unless we achieve some control over the alcohol problem. The rather lax morals of many of our residents also contribute greatly to the high incidence of this disease.

Food Processing and Catering Establishments

There are 57 food processing and catering establishments in the Territories, two of which are milk processing plants. Of the remaining 55 catering establishments, 40 could be classified as commercial concerns while the remainder are operated by Government Departments for the benefit of employees and pupils.

These establishments have been regularly inspected during the year by the Public Health Engineering Division of the Department of National Health and Welfare, and its officers have reported that 42 are being operated in a satisfactory manner, 9 are fairly satisfactory, and 4 have been classed as unsatisfactory. All operators have been advised on what action is necessary to bring their establishments up to standard.

A major difficulty in the control of food and drink establishments in the Northwest Territories is the deficiencies in existing legislation. Recommendations have been made to the Commissioner of the Territories on this subject.

The Public Health Engineering Division has requested that its officers be relieved of the duties of routine inspections as this is not their responsibility. This work should be carried out by Public Health Inspectors, and we have two such posts in our estimates, but to date we have not been able to recruit suitable applicants.

#### Radiation Fallout Studies

The Radiation Protection Division of the Department of National Health and Welfare has, in cooperation with the Northern Health Service, initiated a special study on the deposition of radioactive fallout in the Northwest Territories. Preliminary reports indicate that the cumulative deposit of radioactive fallout in the soil is somewhat less in the North than in Southern Canada. However, levels of Caesium-137 in caribou and reindeer meats are substantially higher than in southern beef.

Samples of human bone and urine are also being collected for analysis of radioactive content.

#### New Facilities

The construction of the new hospital at Frobisher Bay continued satisfactorily and it should be ready for occupation in June, 1964.

The new Health Centres at Hay River and Yellowknife were completed and are now in full operation. The movement of population from Vale Island to the new townsite at Hay River may necessitate a relocation of the Health Centre within the next few years, and a suitable site, adjacent to the new hospital site, has been reserved.

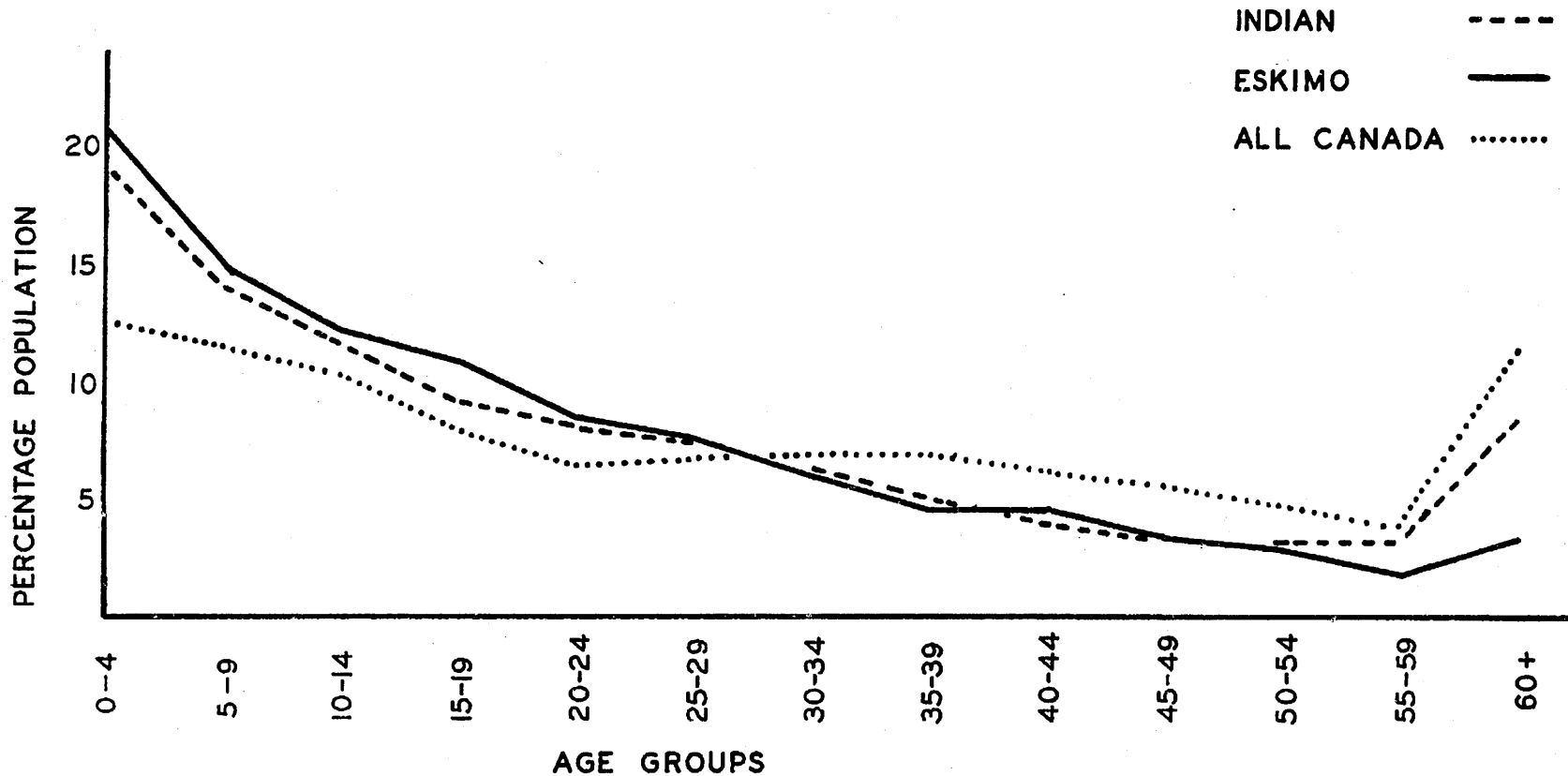
Spence Bay and Coral Harbour Nursing Stations have been in operation respectively since June and September 1963 and are providing very necessary health and treatment services for the inhabitants of these isolated settlements.

Facilities planned for 1964 include a new Nursing Station at Fort Franklin, replacement of the Nursing Station at Aklavik, renovation of the Health Centre at Fort Smith, and the erection of Health Stations at Whale Cove, Broughton Island and Port Burwell.

Northern Health Service  
1 June 1964

# POPULATION DISTRIBUTION. N.W.T.

## INDIANS AND ESKIMOS



1963

## ESKIMO POPULATION

By Health Districts and 5 Year Age Groups

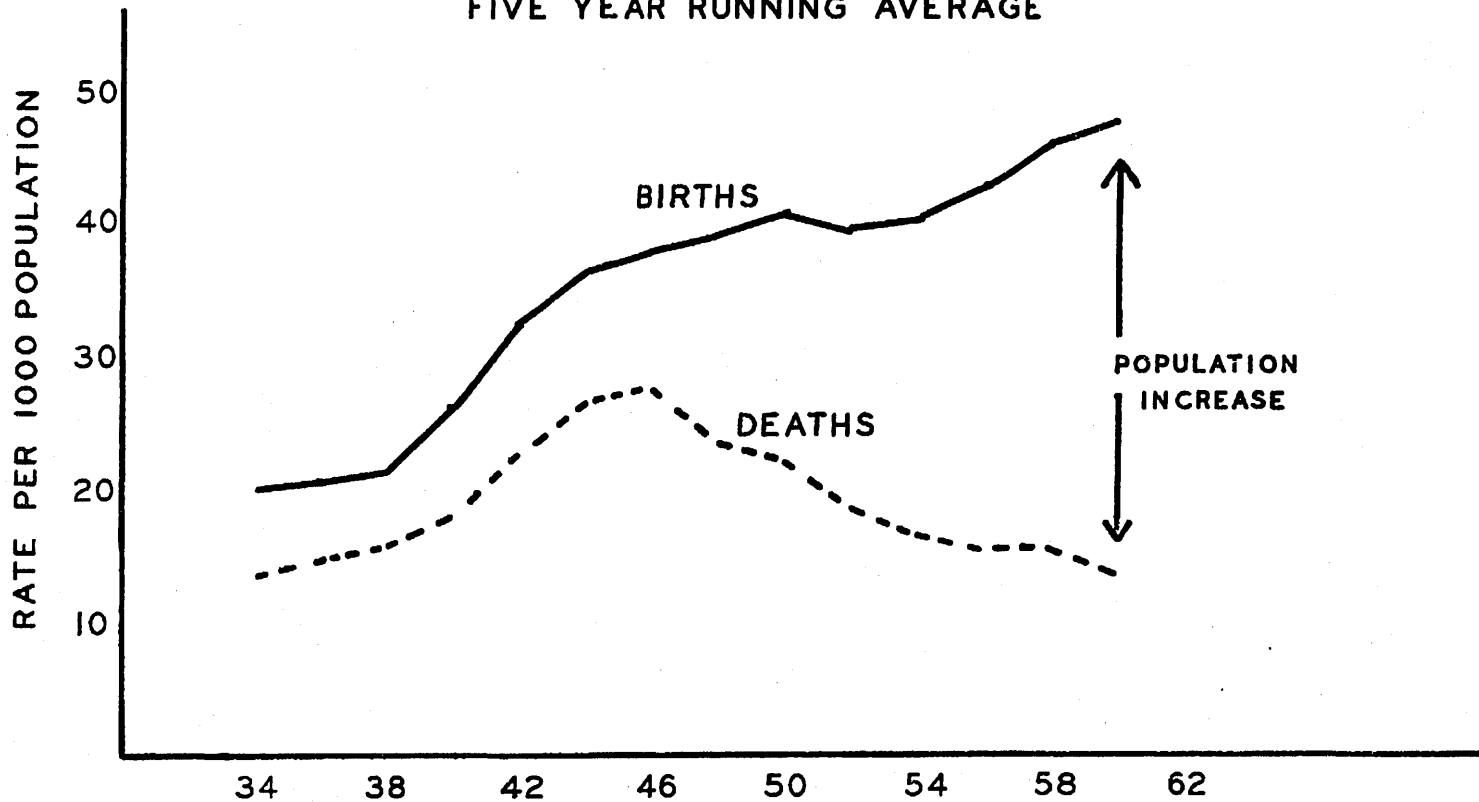
## NORTHWEST TERRITORIES

Health District	Under 1		1-4		5-9		10-14		15-19		20-24		25-29		30-34		35-39		40-44		45-49		50-54		55-59		60-64		65-69		70+		TOTALS		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Male	Female	M+F		
<b>MACKENZIE ZONE</b>																																			
W 1 Cambridge Bay	8	8	63	59	56	41	16	22	15	9	11	13	8	16	9	7	10	6	12	7	9	5	7	4	3	3	7	2	3	1	-	1	237	204	441
W 2 Coppermine	14	12	44	52	44	56	42	49	36	47	32	36	38	26	24	26	23	17	33	21	28	19	18	14	12	14	8	8	4	7	9	4	409	408	817
W 3 Tuktoyaktuk Aklavik Inuvik	38	39	137	118	123	142	112	91	113	95	74	85	58	63	47	51	36	26	40	44	30	26	25	17	5	9	10	7	5	6	14	9	867	828	1695
E 4 Spence Bay	11	15	43	41	37	41	43	42	33	31	23	28	24	25	25	15	9	10	14	12	10	9	9	10	6	8	5	6	4	1	4	2	300	296	596
Sub-totals	71	74	287	270	266	280	213	204	197	182	140	162	128	130	105	99	78	59	99	84	77	59	59	45	26	34	30	23	16	15	27	16	1813	1736	3549
<b>CENTRAL ZONE</b>																																			
E 1 Eskimo Point	10	10	50	42	35	43	29	29	32	27	22	25	18	30	20	11	26	18	10	11	16	10	9	5	9	9	5	7	4	7	2	3	297	287	584
E 2 Baker Lake	9	9	46	46	38	29	21	25	30	23	18	23	15	22	16	15	21	15	9	8	5	9	9	10	6	3	4	6	6	2	1	7	254	252	506
E 3 Chesterfield-Coral Harbour	28	21	96	84	75	60	62	64	64	78	45	44	38	47	33	26	26	28	23	21	21	17	16	9	14	9	5	4	1	5	4	9	551	526	1077
Sub-totals	47	40	192	172	148	132	112	118	126	128	85	92	71	99	69	52	73	61	42	40	52	36	34	24	29	21	14	17	11	14	7	19	1102	1065	2167
<b>EASTERN ZONE</b>																																			
E 5 Pond In.-Resolute	10	18	128	120	108	128	120	96	84	82	76	59	60	55	38	42	25	18	30	24	21	27	19	16	9	7	7	7	4	2	7	5	746	706	1452
E 6 Pangnirtung	17	15	64	69	73	62	64	66	42	32	35	33	31	28	31	29	19	23	18	24	13	5	15	9	2	8	4	10	4	6	5	7	437	426	863



# VITAL STATISTICS. N.W.T.

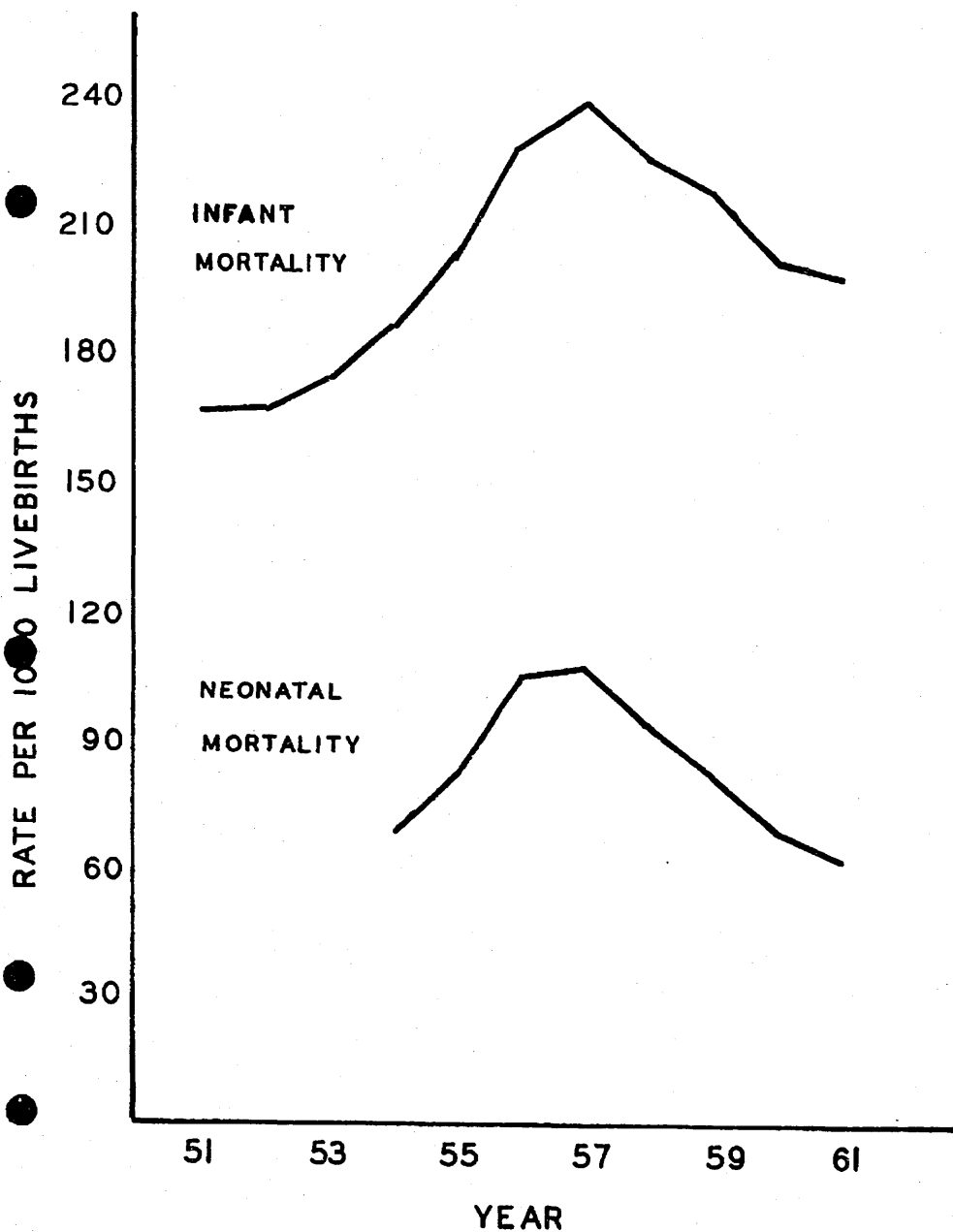
FIVE YEAR RUNNING AVERAGE



# VITAL STATISTICS. N.W.T.

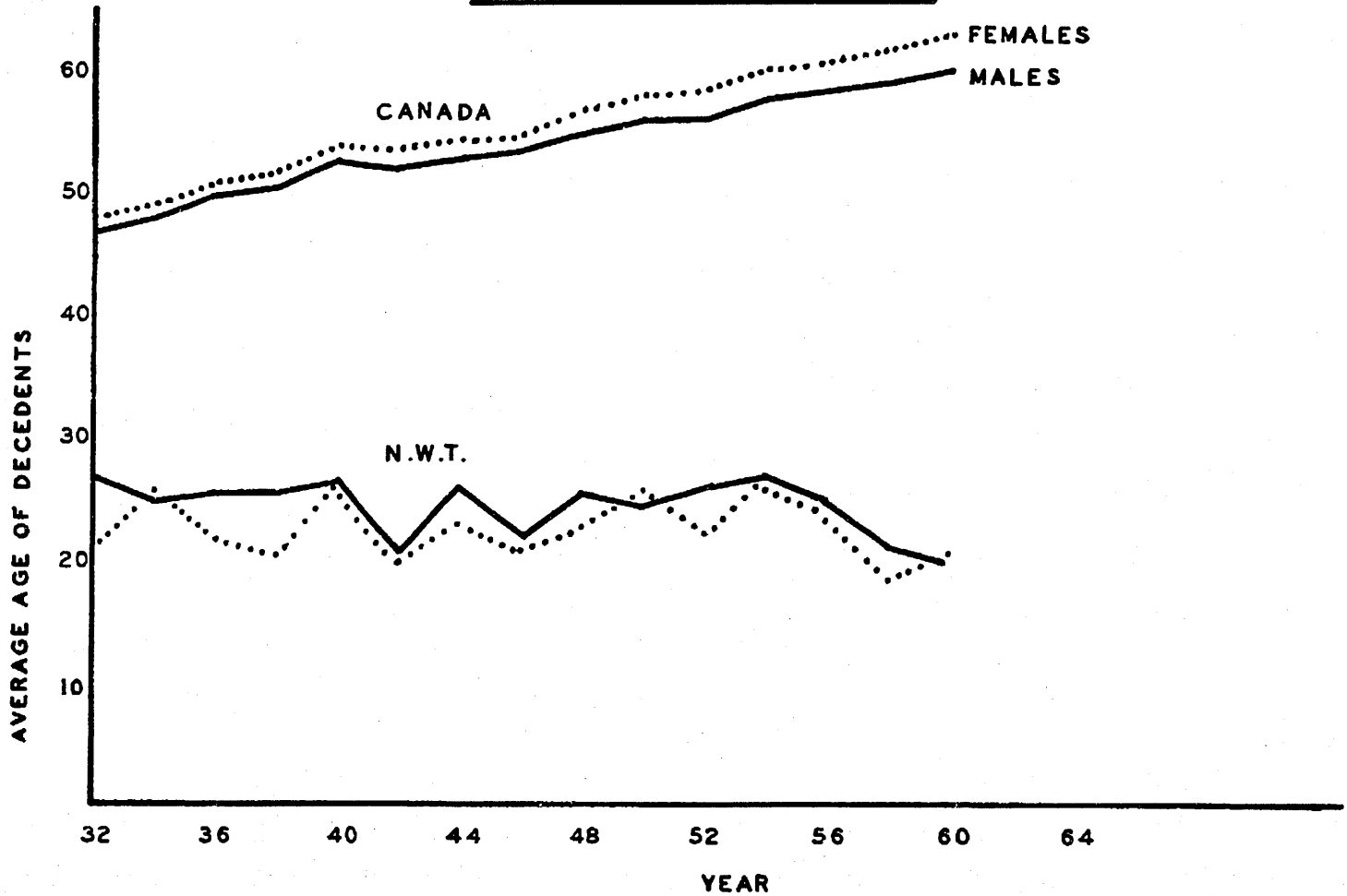
## ESKIMO

THREE YEAR RUNNING AVERAGE





VITAL STATISTICS . N.W.T.

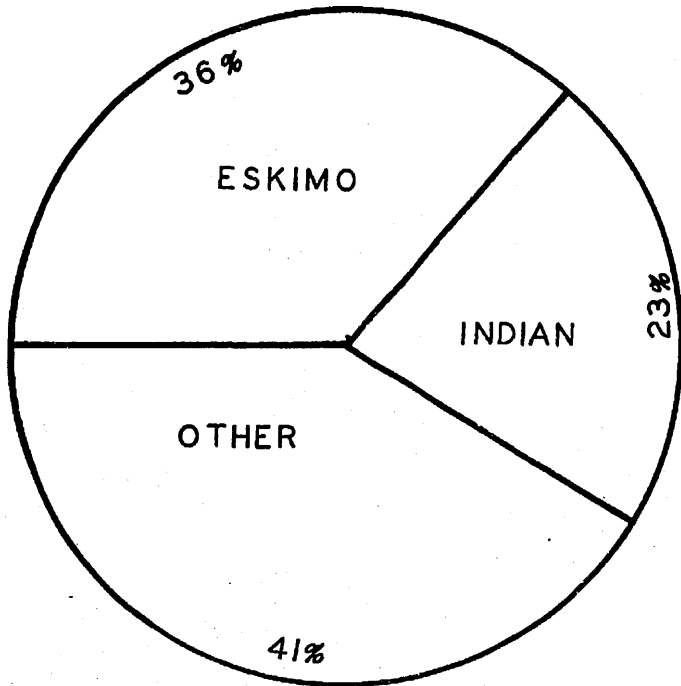


INSURED INPATIENTS. N.W.T.

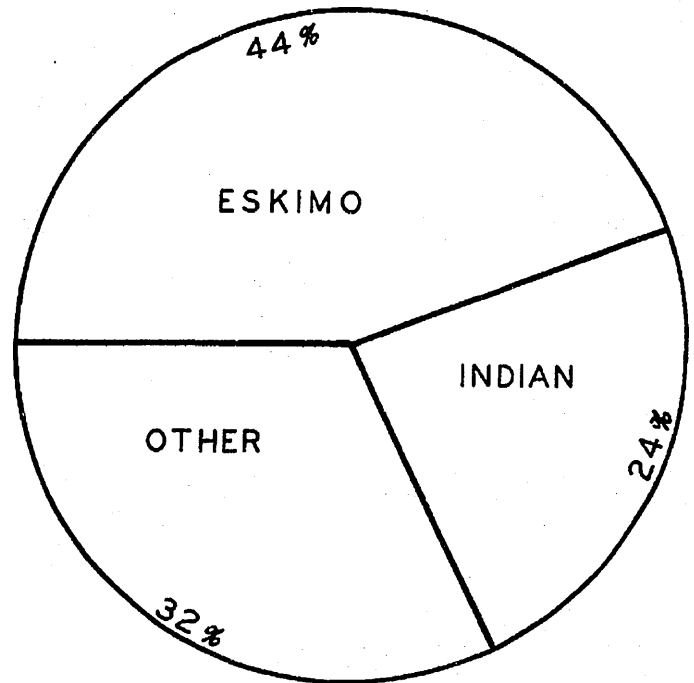
ETHNIC DISTRIBUTION

1962

SEPARATIONS



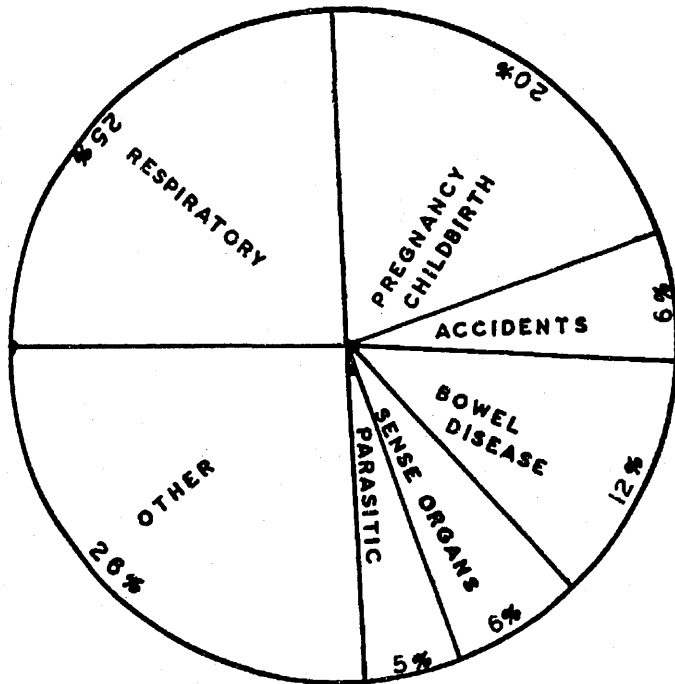
PATIENT DAYS



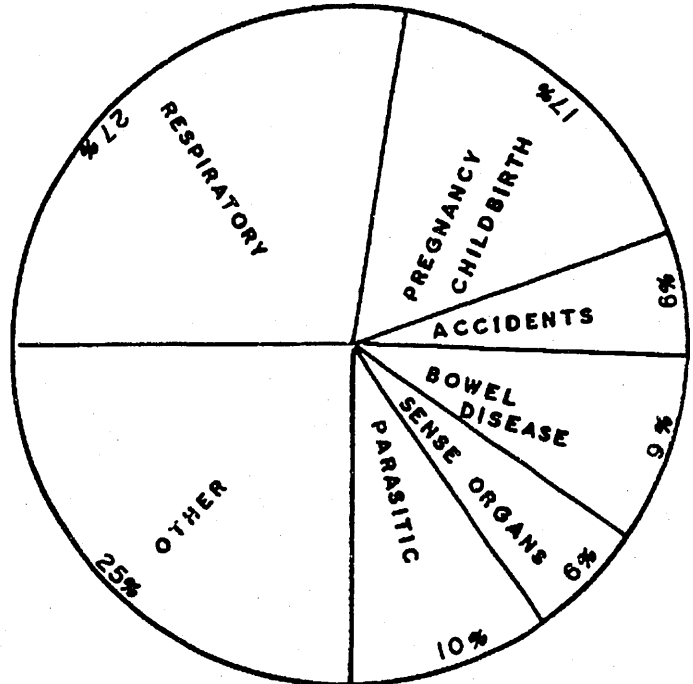
# INSURED INPATIENTS. N.W.T.

## DISEASE DISTRIBUTION

1961



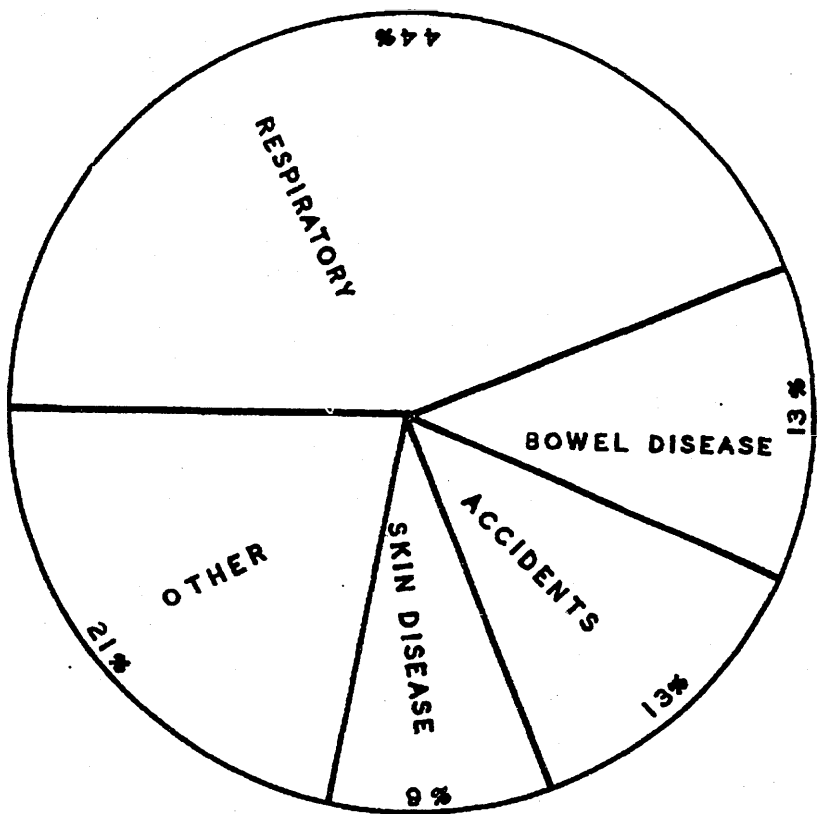
1962



OUTPATIENTS. N.W.T.  
TREATED AT NURSING STATIONS

1962

DISEASE DISTRIBUTION



MEDICAL AND HEALTH FACILITIES, NORTHWEST TERRITORIES

1964

(except where otherwise stated, all facilities are operated  
by the Northern Health Division of the Department of National Health and Welfare)

<u>JACKENZIE ZONE</u>										
Place	Hospitals	No. of Beds	Nursing Stations	No. of Beds	Health Centres	Health Stations	Medical Clinics	Dental Clinics	Lay Dispensers (with emergency drug supplies)	Communit Health Workers
Uklavik			x to be replaced 1964	4						x
Arctic Red River									x	
Back River						x				
Bathurst Inlet						x			x	
Cambridge Bay			x	7			(1 Doctor NHS) vacant x			x
Coppermine			x	4						x
F.S.C. Sites									x	
Fort Franklin			New N.S. planned 1964			x (Resident Nurse)				
Fort Good Hope			x	4						
Fort Liard			x	4						
Fort McPherson			x	4						
Fort Norman			x	4						



Place	Hospitals	No. of Beds	Nursing Stations	No. of Beds	Health Centres	Health Stations	Medical Clinics	Dental Clinics	Lay Dispensers (with emergency drug supplies)	Community Health Workers
Lac La Martre						x			x	
Nahanni									x	
Norman Wells	x (Imperial Oil Co.)	13					x (1 Doctor, Imperial Oil Co.)			
Pelly Bay									x	
Perry River						x			x	
Rae	x (R.C. Mission)	71					x (1 Doctor NHS)			
Reindeer Station									x	
Rocher River									x	
Sachs Harbour						x			x	
Snowdrift									x	
Sponce Bay			x	4						x
Thom Bay									x (Paid)	
Tuktoyaktuk			x	4						x

Place	Hospitals	No. of Beds	Nursing Stations	No. of Beds	Health Centres	Health Stations	Medical Clinics	Dental Clinics	Lay Dispensers (with emergency drug supplies)	Community Health Workers
Yellowknife	x (Municipality Yellowknife)	44			x		x  (3 Private Practitioners)	x  (1 Private Practitioner)		
TOTAL JACKENZIE ZONE	7	367	10	17	6	7	8 Clinics (14 Doctors)	4 Clinics (4 Dentists)	16	6

CENTRAL ARCTIC ZONE

Baker Lake			x	4						x
Chesterfield Inlet			x (F.C. Mission)	31						
Doral Harbour			x	4						
Eskimo Point			x	4						
Rankin Inlet			x	6						x
Repulse Bay									x	
Whale Cove						Planned 1964			x	
TOTAL CENTRAL ARCTIC ZONE			5	49					2	2



EASTERN ARCTIC ZONE

Place	Hospitals	No. of Beds	Nursing Stations	No. of Beds	Health Centres	Health Stations	Medical Clinics	Dental Clinics	Lay Dispensers with emergency drug supplies)	Community Health Workers
Arctic Bay						x			x	
Broughton Island						Planned 1964			x	
Cape Dorset			x	4						
Clyde River						x			x	
Fox Point			x	4						
Frobisher Bay	x	28			x (attached to Hospital)		x (3 Doctors NHS)	x (1 Dentist NHS vacant)		
Grise Fiord									x	
Igloodik						x			x	
Lake Harbour						x			x	
Padloping						x			x	
Pangnirtung			x (Anglican Mission)	33						
Pond Inlet						x			x	

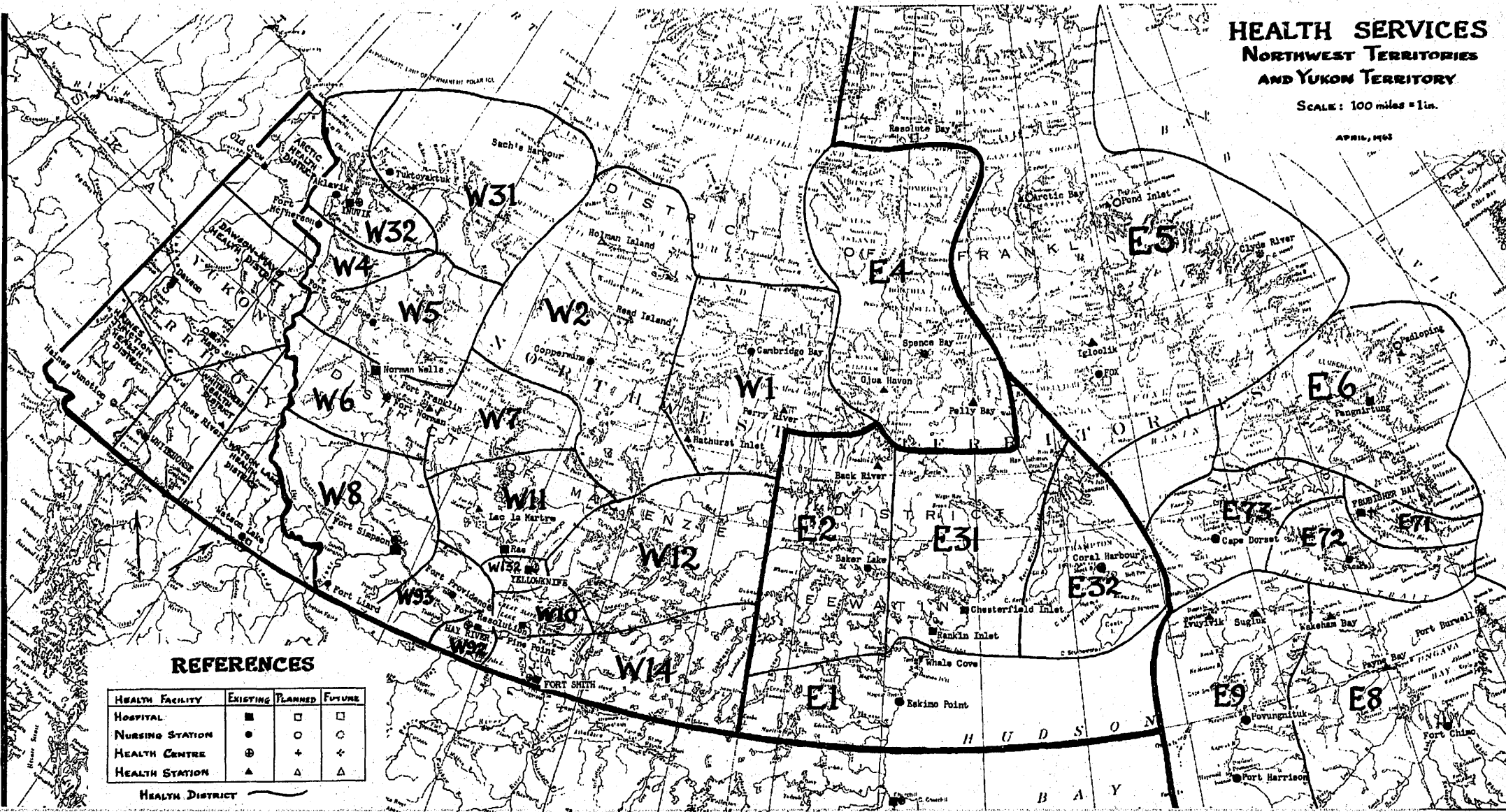
Place	Hospitals	No. of Beds	Nursing Stations	No. of Beds	Health Centres	Health Stations	Medical Clinics	Dental Clinics	Lay Dispensers (with emergency drug supplies)	Community Health Workers
Resolute Bay									x	
Port Burwell						Planned 1964			x	
ANTARCTIC EASTERN ARCTIC ZONE	1	28	3	41	1	6	1 Clinic (3 Doctors)	1 Clinic (No Dentist)	9	
ANTARCTIC NORTHWEST TERRITORIES	8	395	18	137	7	13	9 Clinics (17 Doctors)	5 Clinics (4 Dentists)		

(Hospitals at Chesterfield, Fort Resolution and Pangnirtung are listed as Nursing Stations, due to the fact that there is no resident Doctor at these institutions)

# HEALTH SERVICES NORTHWEST TERRITORIES AND YUKON TERRITORY

SCALE: 100 miles = 1 in.

APRIL, 1962



## REFERENCES

HEALTH FACILITY	EXISTING	PLANNED	FUTURE
HOSPITAL	■	□	◻
NURSING STATION	●	○	◉
HEALTH CENTRE	⊕	+	⊖
HEALTH STATION	▲	△	△

HEALTH DISTRICT

REPORT ON HEALTH CONDITIONS

in the  
NORTHWEST TERRITORIES

1963

ERRATA

Revised figures received from the field make necessary the following alterations.

Under sub-heading 'Tuberculosis' -

Line 2	-	0.94%	should read	1.08%
Line 3	-	2.1%	should read	2.48%
Line 6	-	37%	should read	31%

TABLE 12 should be altered as follows -

Eskimos - 1963

178	should read	212
2.1	should read	2.48
76	should read	37

Total Population 1963

227	should read	261
0.94	should read	1.08
94	should read	55