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NORWAY HOUSE HOSPITAL

STUDY

Medical Services

Health and Welfare, Canada.

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NORWAY HOUSE STUDY

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NORWAY HOUSE STUDY

TERMS OF REFERENCE AND METHOD OF PROCEDURE

The study of Norway House Hospital was undertaken in the late spring and early summer of 1975 at the request of the Director General, Program Management, Medical Services Branch, Health & Welfare Canada.

Since the construction of Norway House Hospital in 1952, improvements in communications, transportation, new management concepts, and above all changing health needs, have made it timely to review the present and future health care requirements of those communities in the middle north of Manitoba presently served by this hospital.

The study group was given the following terms of reference:

(a) To determine the extent to which the hospital is presently effective in meeting the health care needs of the population served,

(b) To examine the interrelationship of the hospital and other local health care facilities (nursing stations, clinics, private practitioners, etc.),

(c) To prepare a report and recommend the appropriate role, facilities, personnel, organization, orientation and priorities to meet the present and future health care needs of the clientele; and wherever possible to outline the changes necessary to implement the new system of health care.

The present role, utilization and validity of Norway House Hospital could not be evaluated out of context of the health and medical needs, and general pattern of health care delivery in the area.

The study group accordingly attempted to examine not only the existing structure and effectiveness of health care delivery, but also inquired into the causes and antecedent events leading to the eventual admission of patients into Norway House Hospital. Available health data, in addition to medical and administrative reports, documents and related statistics were studied. This was supplemented by field visits to each community, two longer stays in Norway House itself and numerous discussions with individuals and groups in the Norway House area, Ottawa, Thompson, Winnipeg, Fisher River and Lac du Bonnet.

Health is influenced by the dynamic interaction of a complex of physiological, psychological, economic, educational, environmental and cultural factors. As the study progressed it was evident that data and information relating to the health status in the communities was either incomplete or unavailable and in some instances contradictory and misleading. Though the collection and correlation of such facts has not been systematically undertaken in the Northern Zone or Region of Manitoba it was nevertheless possible to identify most of the principal factors influencing the health-disease cycle.

PART I

THE PRESENT SITUATION

In the section which follows, the environment, life styles and living conditions in the Norway House area are examined in relation to their association with the status of health.

Analysis of the existing Health Care services will demonstrate that effective and efficient treatment of the perceived health problems cannot be achieved until the causes, rather than the symptoms, of ill-health are remedied.

CHAPTER I

ENVIRONMENT

LOCATION

Norway House, including the contiguous communities of Rossville, Jack River and Warren's Landing, is situated in the middle-north of Manitoba at the northern tip of Lake Winnipeg. It's latitude is approximately that of Edmonton, Alberta.

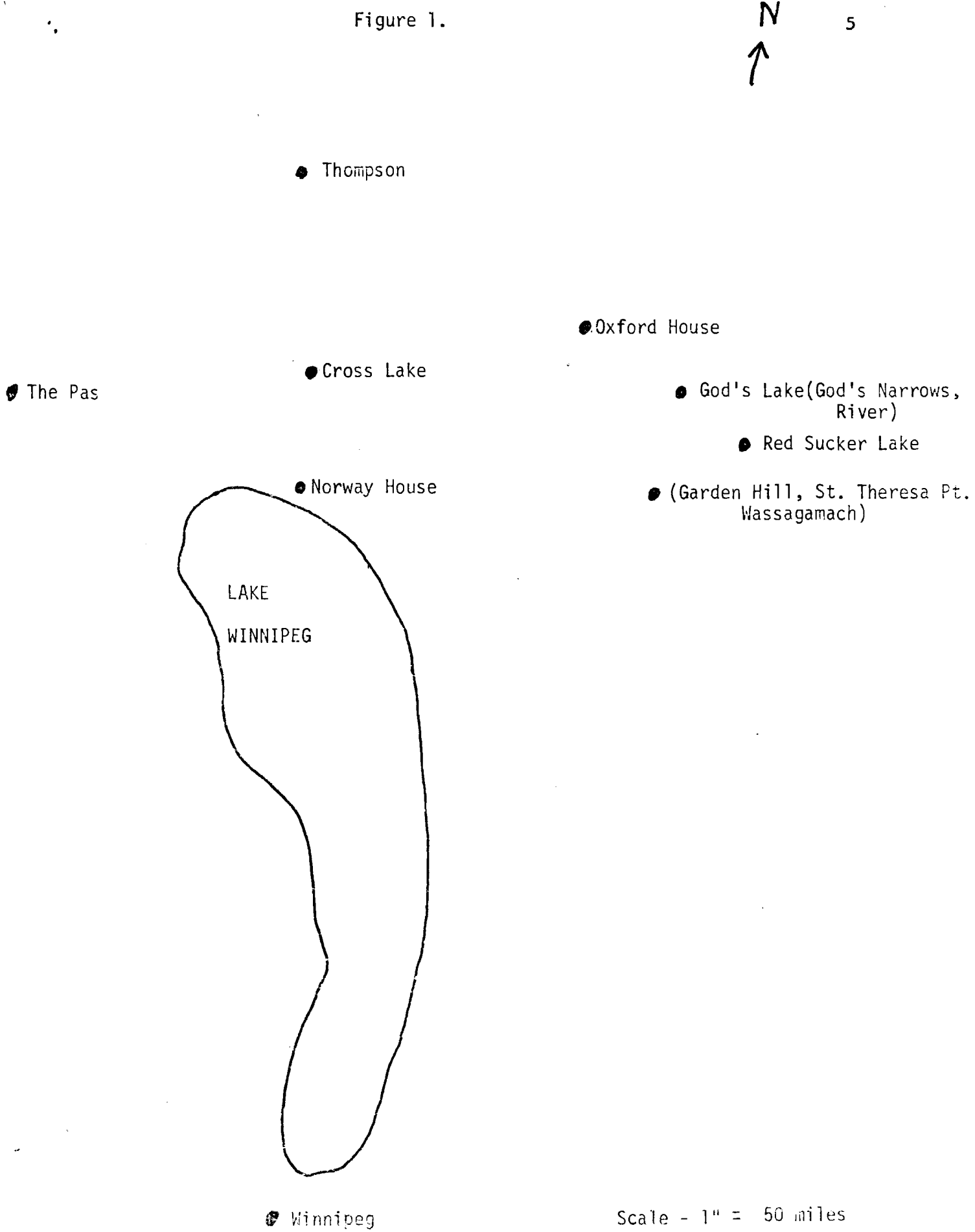
The hospital presently serves some of the medical needs of Norway House and to a lesser extent, those of eight nearby communities.

Cross Lake
Oxford House
God's Narrows
St. Theresa Point
Garden Hill
Wassagamach
Red Sucker Lake
God's River

The first four communities contain Nursing Stations, Wassagamach (and Norway House) have Health Centres, and God's River and Red Sucker Lake have Health Clinics.

The relative locations of the communities are shown in Figure 1. The close proximity of the communities of Garden Hill, St. Theresa and Wassagamach should be noted as well as those centred about God's Narrows.

Figure 1.


N
Thompson
Oxford House
Cross Lake
The Pas
God's Lake(God's Narrows, River)
Red Sucker Lake
Norway House
(Garden Hill, St. Theresa Pt. Wassagamach)
LAKE
WINNIPEG
Winnipeg
Scale - 1" = 50 miles

POPULATION

In 1974, the population of Manitoba was 992,000 while the Indian population served was 31,024. This represents 3.4% of the total, the third highest proportion in Medical Services Regions or Territories. The population of the Norway House Hospital area at the end of 1974 was approximately 11,500 plus or minus 1,000 (37% of Indians served by Medical Services, in Manitoba.)

Net population growth for the area recently has been at the rate of 2.5 - 3.0% annually, due largely to a birth rate almost twice the national average. Assuming this growth rate remains constant during the next five (5) years (i.e. - no immigration or emigration or dramatic changes in birth and death rates), the population by 1980 may reach 13,350. In the less likely event that emigration from the area increases (due to higher educational levels and improved road access), and using an estimated annual compound growth rate factor of 1%, the population by 1980 might reach 12,000, though this almost certainly represents the lower projected limit for the population.

Population by community is shown in Table 1. The combined population of Garden Hill, St. Theresa and Wassagamach is 3,050 and of the God's Lake area, 1,130. Almost 75% of the total population of the area is therefore concentrated in Norway House, Island Lake and God's Lake.

The relatively high birth rate in the area - 26.4/1000 population - accounts for the young population distribution. (Table 2). Sixty per cent of the local population is under 20 years of age (40% in the rest of Canada) and 91% is under the age of 50 years (80% in Canada). With such a high birth rate and low life expectancy, the age of the population will continue to fall.

TABLE I

POPULATION BY COMMUNITY(1974)

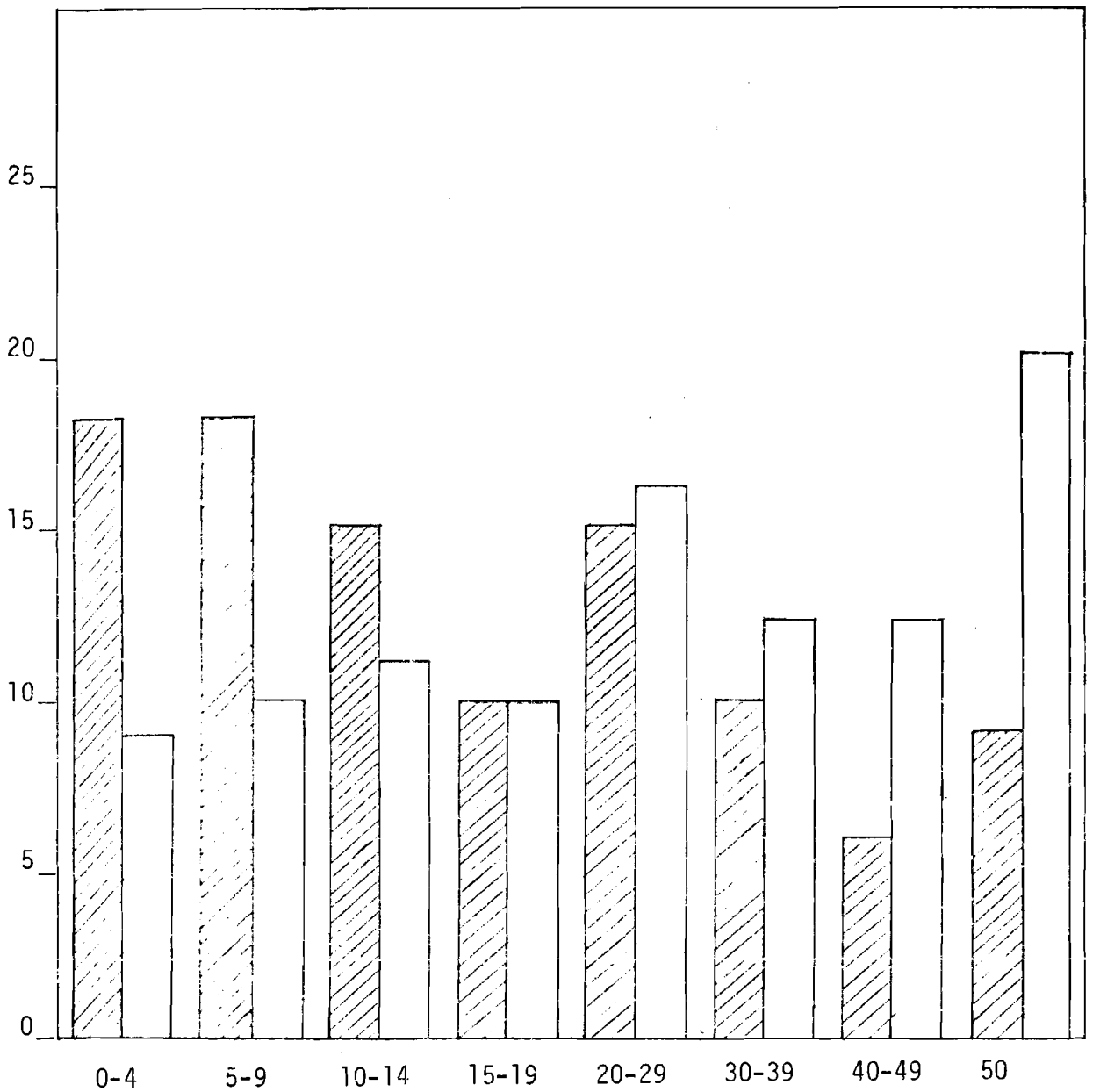
NORWAY HOUSE		3,590
GARDEN HILL	1,500	
ST. THERESE POINT	1,100	
WASSAGAMACH	450	
RED SUCKER LAKE	330	3,380
CROSS LAKE		2,400
GOD'S NARROWS	900	
GOD'S RIVER	230	1,130
OXFORD HOUSE		1,000
TOTAL		11,500

SOURCE: Census Data, Indian Affairs Report, Community Profiles and Public Health Reports.

TABLE 2

AGE DISTRIBUTION - TREATY INDIANS

NORWAY HOUSE AREA(1974)



NORWAY HOUSE AREA

CANADA

SOURCE: Norway House Area Percentages Calculated from Indian Affairs Data for Norway House, Cross Lake, Garden Hill, St. Theresa Point and God's Narrows.

Canada Percentages - 1971 Census.

Almost one third of this population attends school, where instruction ranges from kindergarten to Grade 10 or 11, depending on the community. Education levels vary dramatically between children and their parents and many of the latter are only semi-literate in English. Furthermore, they have a very strong preference for their native languages (Cree, Saulteaux, Ojibway). The level of general education will undoubtedly rise rapidly over the next 5-10 years.

The ethnic distribution in this population is difficult to determine precisely, because the term "Native" often, and variably, includes both registered Indians and Metis, but these two groups represent at least 90% of the total.

HOUSING

The condition of the houses varies considerably but generally compares unfavourably with homes in southern Canada. In 1974, an Indian Affairs (Manitoba) Housing Survey in these communities revealed that 49.6% were rated good or very good, 41.3% were judged to be poor or very poor, and the remainder, (9.1%), fair or unknown.

Houses in the area are either one storey frame or log construction without basements. The number of log house is steadily decreasing as new buildings are erected.

* It proved impossible to obtain an accurate figure for the actual number of houses in the communities, since the figures given in Indian Housing Survey and the Medical Services Community Profiles differed by as much as 50%.

Poor quality materials and construction, inadequate design, poor maintenance and abuse by the occupant s have all contributed to housing morbidity. Approximately two thirds of these homes range in age from 1-9 years, and about a third are over 10 years old, (no information was available for the remainder). Housing for Metis is a Provincial responsibility but the overall situation appears similar.

The annual housing replacement programme cautiously provides 36 new houses in Norway House (14% of total) and 18 (4.6%) in the Island Lake area at a cost of approximately $1,000,000. The number of families per house was 1.1, which compares favourably with the rest of Canada but the average number of people per house was 9.8. A housing survey in 1971 showed that 45% of Indian homes had less than 100 square feet per occupant, compared with 300-500 square feet per individual in the South. Only 68% of the houses had an electricity supply. The close proximity of large numbers of people and a lack of basic amenities, makes it difficult to prevent disease and facilitates its spread and recurrence. Lack of adequate ventilation, heating, and insulation creates an unhealthy home environment, especially for children.

ECONOMY

The Norway House area is very poor and is likely to remain so. None of these communities is self-sufficient and without exception all rely upon social assistance to survive. In 1975, Indian Affairs officials estimated that 55-60% of Norway House residents are in receipt of social assistance payments. The figures for other communities are probably higher (90% in God's Narrows). Employment is basically confined to trapping, commercial fishing

and lumbering, tourism, construction, Bay Stores, and Government facilities.* There is no mining in the area but Manitoba Hydro construction at Jenpeg (between Cross Lake and Norway House) is providing limited temporary employment.

In 1974, only 510 natives in the work force had permanent jobs, 76 (15%) of whom were employed by Medical Services. A further 879 had seasonal jobs. Thus the unemployment rate was at least 75%.

Future economic hopes for the area are not optimistic and Indian Affairs officials are not aware of any plans which could substantially improve the outlook. Manpower officials are meeting with limited success in their attempts to promote job training.

TRANSPORTATION AND COMMUNICATIONS

TRANSPORTATION

Transportation in the middle-north of Manitoba has improved greatly in the last 20 years - and will continue to improve - and has altered many aspects of living there. In the immediate future, air travel will be the primary method of moving people and most goods between the various communities and Winnipeg and Thompson.

Air mile distances between communities are shown on Table 3.

* Native Handicrafts and soapstone carving have recently started in Garden Hill.

Flight frequency is good, with most communities receiving scheduled service 5 or 6 days weekly. (Table 4). Reliability is estimated by the commercial carriers and area residents to be over 90%. Cost of a one way air trip averaged approximately $50-60 to Winnipeg, $25-70 to Thompson and about $25-30 between communities and Norway House. (Appendix A). Nevertheless, there are some disadvantages, notably discomfort due to the type of aircraft used (generally noisy and cramped) and slow travel due to frequent stops. (These problems may be considerably ameliorated by the use of chartered aircraft, though at a significantly higher cost.) Flying time between most communities and Winnipeg is between 2-4 hours, and to Norway House and Thompson from 1 to 3 hours. By 1980, it is expected that flight times will be reduced and that there will be daily schedules.

Recently, there has been a change in air service due to closing of some airports to commercial service. Briefly, scheduled flights are only possible if airports meet federal standards. A number of airports in this area do not meet the standards and have been closed to scheduled carriers. This has caused some short-term inconvenience and higher air movement costs, but it is the opinion of Ministry of Transport officials in Winnipeg that the net effect will be rapid improvements in airport standards and scheduled air services within the next year.

Transport by means other than air is limited. Winter roads link communities with each other and the outside for about six months of the year. This is important since winter road freight charges are one sixth of those by air. ($18 compared with $2.95 per 100 lbs.) Barges offer even cheaper costs between Winnipeg and Norway House during the summer - $2.25 per 100 lbs.

TABLE 3

AIR MILE DISTANCES BETWEEN COMMUNITIES

FROM	TO NORWAY HOUSE	TO WINNIPEG	TO THOMPSON
CROSS LAKE	45	325	83
OXFORD HOUSE	125	360	119
GOD'S LAKE, NARROWS RIVER	155	340	160
RED SUCKER LAKE	170	330	205
ST. THERESA POINT	125	285	181
GARDEN HILL	130	290	187
WASSAGAMACH	120	295	176
NORWAY HOUSE		283	127
AVERAGE DISTANCE	125	315	155

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TABLE 4

AIR SERVICE FREQUENCY (JULY - 1975 *)

FROM	TO NORWAY HOUSE	TO WINNIPEG	TO THOMPSON
CROSS LAKE	6 days/wk	6 days/wk	5 days/wk
GOD'S NARROWS	6 days/wk	6 days/wk	5 days/wk
GOD'S RIVER	1 day/wk	2 days/wk	5 days/wk
GARDEN HILL	6 days/wk	6 days/wk	5 days/wk
ST. THERESA PT.	6 days/wk	6 days/wk	-
RED SUCKER LAKE	1 day/wk	2 days/wk	-
OXFORD HOUSE	6 days/wk	6 days/wk	5 days/wk
NORWAY HOUSE	N/A	6 days/wk	5 days/wk

* Before closure of several airstrips.

SOURCE: Air Line Agencies.

An all weather road linking the Provincial highway system to Norway House and Jenpeg is planned for completion in the next 2-3 years.

Within each community, transportation is by car, truck, boat, snowmobile or foot. Most communities have at least a few miles of poor quality roads (crushed rock and clay), e.g., Norway House has 24 miles of road and Oxford 7. Others, e.g. God's River have no identifiable roads. Boats are used extensively since every village is situated on navigable waterways - as one observer stated "Norway House is 10 miles long and two house wide". In the winter, the ubiquitous snowmobile may travel virtually anywhere.

COMMUNICATIONS

Telephone networks are reaching into the area as the Manitoba Telephone system expands. Presently, only Norway House and Cross Lake have telephone service, the other communities expect to be connected by 1977.

Radio - There is a commercial broadcasting station in Cross Lake and plans are being made to install a local transmitter in Norway House. All Nursing Stations have their own S.S.B. transceivers; in each community, transceivers are generally available in Bay Stores, R.C.M.P., Indian Affairs Offices, Band Offices, some schools and M.O.T. officers.

Mail deliveries are generally adequate in all communities but depend on the vagaries of the climate and state of the airstrips.

Television is available in Norway House, and Cross Lake and will be seen in all communities by 1980.

SEWAGE

Although exact information is difficult to obtain (ref. 2), it appears that two thirds of the homes have either chemical or outdoor toilets, or, in some instances, both. The remaining homes have no known sewage disposal facilities.

Sewage systems exist for Government buildings including the Norway House Hospital compound (1970).

The cost of installing community sewage systems will be high, and is complicated, both by the large distances between homes, and by the terrain and soil conditions.

GARBAGE

Other than voluntary collections of garbage and its disposal, there are not organized methods for dealing with garbage except for incineration at most nursing stations. Poor waste disposal encourages the breeding of germs and vectors responsible for infectious and parasitic diseases.

Certain communities have dumps or pits but in most cases disposal is an individual responsibility.

WATER

Eighty per cent of all homes obtain water directly from the nearest lake or river. This is transported to the home, in all weathers, by pail or bucket. Suggested treatment is by boiling or the addition of javex, though in many instances this is omitted. Since raw sewage often flows, or is washed into the water source, this must result in some people drinking diluted sewage. (Appendix B)

There is a water system in 20 houses in the area (1.7%); very few wells, and a small number of stand pipes in Norway House, Garden Hill and St. Theresa Point. Many of these stand pipes freeze during the winter. All schools have bathing and drinking water facilities.

There are no definite plans to improve this situation in the immediate future. It is reasonable to assume that diseases of the digestive system are more likely when pure drinking water is unavailable. Lack of convenient clean water for washing also affects basic hygiene (bathing and dish washing), and a high evidence of skin infections is likely in such circumstances.

No potable water certificates were issued to Indian Reserves in Manitoba in 1974.

NUTRITION

No exact data are available. "Nutrition Canada" - 1973 (Reference 2) indicated that dietary deficiencies were present in most Indian communities

especially protein, iron, vitamins A, B, C and D, and calcium intake, as well as high carbohydrate ingestion. Almost all foods are imported into the area, (fresh vegetables and fruits are often scarce and expensive) and dispensed in most cases, from the only store (Hudson Bay).

Full appreciation of the dietary requirements of women and children is lacking, as is information concerning the selection, storage and preparation of foods. Ready access to candies and soft drinks in the stores contributes to a high incidence of dental disease, especially in children. In homes without electricity (32%), the absence of refrigeration storage allows food spoilage and wastage. The combination of unhealthy living conditions and dietary inadequacies endangers all, but most particularly pregnant women.

ALCOHOL

The high rated alcohol consumption was frequently mentioned as being a leading factor in injuries and deaths and undoubtedly affects morbidity in general.

RECREATION

Most communities around Norway House have playing fields, outdoor skating rinks and community halls. There are some children's playgrounds. The major organized sports are hockey in the winter and fastball in the summer. There are dances, Festivals (e.g. Treaty Days), many bingo games and regular film showings.

The Recreation Centre in Norway House was burnt to the ground in 1971 and is now being rebuilt about ½ mile from the hospital compound.

This year, for the first time, bicycles appear to be becoming popular in Norway House and Rossville.

SUMMARY

The overcrowding in homes, inadequate nutrition, economic depression, isolation and lack of potable water and sanitation problems perpetuate conditions which are not conducive to the maintenance of good health.

CHAPTER 2

HEALTH SERVICES

INTRODUCTION

Confronted with the environmental and life style conditions in this area, existing Health Services have attempted to deal with the problems by using a judicious mixture of preventive and treatment programmes. This approach acknowledges that progress will be slow as regards the correction of the real causes of ill-health intrinsic to this area.

To this end, Health professionals - Nurses and Doctors (mostly "treatmentoriented") and Community Health Representatives, have organized activities which may, for textual convenience, be considered in relation to:

A) Community Health Care

B) Community Health Facilities

C) Norway House Hospital.

A. COMMUNITY HEALTH CARE

Community Health Care, of increasing importance and significance in contemporary health care philosophy, is concerned with health promotion and maintenance, and the reduction, as far as possible, of demands for unnecessary treatment.

Although quantative measurements of health per se are unavailable, an indirect estimate of the amount and types of ill-health may be derived by examining the reasons for hospitalization or visits to Nursing Stations. Such an assessment is mandatory if Community Health programmes are to be effective, and if those factors, which need correction, are to be identified.

Current health care activities may be subdivided into those principally concerned with Health Promotion, (education and counselling), and those which are related to Preventive Medicine programmes.

1. Health Promotion The essence of health promotive tactics is to teach elementary physiological and hygienic principles which might serve to mitigate some of the miseries and dangers of the sub-standard living conditions in the area.

Health education was offered in the following way:-

a) Films - on a variety of Health topics (Reference 4). These are mostly in English and prepared for non-Indians. In the Norway House area, 25 films were shown to small groups during 1974; in Garden Hill 4, in God's Narrows, Wassagamach and Oxford House 2 each and in St. Theresa Point and Cross Lake 1 each. These 36 showings were directed at a total population of 11,500 persons. The reasons for this less than energetic effort may be due either to pre-occupation with treatment programmes, understaffing at Nursing Stations and Health Centres or simply lack of interest.

b) Lectures and Demonstrations - in Clinics and Schools on appropriate subjects.

c) Home Visits and Counselling were carried out in the communities on a number of topics including nutrition, home nursing and the care of the young and old.

d) Health Committees - In 1974, only Norway House and Cross Lake had Health Committees; the former had one meeting of a reorganized group during the year, and Cross Lake had two meetings, both of which were poorly attended by the members. In one or two other communities, urgent problems were discussed with the Band Council on an ad-hoc basis, but the others, apparently, had no regular meetings. Topics discussed concentrated on garbage disposal, sanitation problems and the transportation of patients to and from the Nursing Station.

2. Health Maintenance - (which extends beyond Preventive Medicine) included programmes directed at specific groups in the communities.

a) Maternal

In 1974 in the Norway House area, there were about 1508 women of child bearing age (15-45). During the year there were 303 live births, 8 perinatal deaths and no maternal deaths.

(i) Prenatal Visits (Table 5) - The frequency of prenatal visits and examinations of pregnant women varied considerably from community to community (17-100%). However, it should be noted that entries on the monthly nursing charts were often incomplete and sometimes quite unconvincing.

(ii) Births - Of the total of 303 live births, 70% were delivered in Norway House Hospital, 24% in Winnipeg or Thompson Hospitals, 5.6% in a Nursing Station and 3 (0.4%) at home (Table 6). The number of multiple births was unknown but believed to be very small.

TABLE 5

PRENATAL VISITS(1974)

	AVERAGE NUMBER PREGNANCIES/MONTH	PRENATAL VISITS
NORWAY HOUSE	29	4 (66%)
GOD'S LAKE	23	4 (17%)
OXFORD HOUSE	13	4 (31%)
GARDEN HILL RED SUCKER LAKE	22	18 (82%)
CROSS LAKE	22	11 (50%)
WASSAGAMACH	8	8 (100%)
ST. THERESA POINT	17	5 (29%)

SOURCE: Monthly Public Health Nursing Reports - 1974

TABLE 6

BIRTHS

NORWAY HOUSE AREA(1974)

	HOME	NURSING STATION	HOSPITAL	TOTAL
NORWAY HOUSE	2	0	73	75
GARDEN HILL RED SUCKER LAKE	0	5	33	38
ST. THERESA POINT	0	0	38	38
WASSAGAMACH	1	0	11	13
GOD'S NARROWS & RIVERS	0	4	34	38
OXFORD HOUSE	0	2	36	38
CROSS LAKE	0	6	57	63
TOTALS	3	17	282	303

SOURCE: Monthly Public Health Nursing Reports, Hospital Records, Northern Zone Office Manitoba.

(iii) Postnatal - an average of 57% of post-partum women received visits or examinations.

(iv) Family Planning - on an average 21.5% of child bearing women employed either permanent or temporary contraceptive methods (birth control pills 9%, I.U.D. 5.5%, sterilized 6.9%) (Table 7). Advice was offered to all mothers on contraceptive methods before their departure from Norway House Hospital.

b) Infant and Pre-School - Children in the 0-5 year group were seen either at home or in clinics held in the Health Centres or Nursing Stations. (Table 8). Home visits were most frequently carried out by the staffs of the two Health Centres, (Norway House and Wassagamach).

Norway House Health Centre staff conducted 70 clinics in 1974, while other stations held 3-4 monthly. In Oxford House there were 11.7 visits per child to a clinic, and 6.4 in Wassagamach. Children and infants made fewer clinic visits in the other communities. (Multiple visits to health facilities cannot be determined from the available data.)

c) School Health - Counselling was given to 1172 pupils (35% of student body) but some were counselled more than once. (Data incomplete for some communities). (Table 9). This programme is more effectively carried out in some communities than others.

TABLE 7

FAMILY PLANNING SERVICES(1974)

	NORWAY HOUSE	GARDEN HILL, RED SUCKER	ST. THERESA POINT	WASSA-GAMACH	GOD'S NARROWS & RIVERS	OXFORD HOUSE	CROSS LAKE	ALL LOCATIONS
NO. WOMEN CHILD BEARING AGE*	600	280	158	70	200	180	300	1,508
% EMPLOYING CONTRACEPTION	19.6	N/A	24	24	13.5	28	24	21.5

CONTRACEPTIVE METHODS USED

LOCATION / METHOD	NORWAY HOUSE	GARDEN HILL, RED SUCKER	ST. THERESA POINT	WASSA-GAMACH	GOD'S NARROWS & RIVERS	OXFORD HOUSE	CROSS LAKE	ALL LOCATIONS
PILL	49(8%)	N/A	5(3%)	6(8.5%)	15(7.5%)	32(17.7%)	31(10%)	138(9.1%)
I.U.D.	30(5%)	N/A	16(10%)	3(4.3%)	3(1.5%)	12(6.6%)	18(6%)	82(5.5%)
STERILIZED	39(6.5%)	-	17(11%)	8(11%)	9(4.5%)	7(4%)	24(8%)	104(6.9%)

*ESTIMATED

SOURCE: Public Health Monthly Nursing Reports.

TABLE 9

SCHOOL HEALTH PROGRAMME (1974)

	NORWAY HOUSE	GARDEN HILL RED SUCKER LAKE	ST. THERESE	WASSA-GAMACH	GOD'S NARROWS & RIVERS	OXFORD HOUSE	CROSS LAKE
NUMBER OF SCHOOLS	3	2	1	1	2	1	1
SCHOOL INSPECTIONS	4	1	2	15	2	0	0
NURSE/TEACHER CONFERENCES	69	6	8	19	35	8	3
NO. OF CHILDREN COUNSELLED (6-17 YEARS)	159	25	93	690	115	32	58
% OF SCHOOL POPULATION COUNSELLED	19	4	27	37	36	12	7
NO. OF CHILDREN FOLLOWED UP	N/A	4	24	41	41	24	17

SOURCE: Monthly Public Health Nursing Reports

d) Immunization - In Manitoba in 1974, 25,967 Indians were immunized (83.7% of Indian population served by Medical Services). (Figure 2.)

The situation in Norway House and the surrounding communities shows uneven progress towards the achievement of an acceptable community immunization status (70% of population).

e) Disease Control

i) T.B. - In 1974, 84 Manitoban Indians were found to have active tuberculosis of whom 9 lived in the Norway House area. Similarly, of the 12 reactivated cases discovered in Manitoba during 1974, 3 were from Norway House communities. Thus, the rate per 1,000 population was 104. The 1974 Provincial X-Ray Survey screened 2,662 Indians and 254 non-Indians and abnormal findings were seen in 8.3%.

The rates per 1,000 Indian population in Manitoba were 7.1 and 13 times higher in 1973 and 1974 respectively compared with the rate for the rest of Canada (1973). In the Norway House area 1974, the rate was 5.6 times higher than that in Canada (1973). (Table 10).

ii) V.D. - Although Venereal disease was considered to be prevalent in the Norway House area, only 187 cases of Gonorrhea and 11 of Syphilis were reported in Manitoba, 1974. This is probably in keeping with the generally low rate of reporting in the country as a whole.

FIGURE 2

"COMMUNITY IMMUNITY" STATUS

NORWAY HOUSE AREA (1974)

1.	B.C.G.	TOTAL POPULATION BELOW 19 YEARS OF AGE.
2.	D.P.T.	ALL EXCEPT CROSS LAKE, IN THE 1-4 AND 19+ GROUPS; RED SUCKER LAKE BETWEEN 1-19 YEARS AND GARDEN LAKE BETWEEN 1-4 YEARS.
3.	SABIN	TOTAL POPULATION, EXCEPT RED SUCKER LAKE BETWEEN AGES 0-1 AND 5-19 YEARS.
4.	LIRUGEN	TOTAL POPULATION IN GOD'S LAKE AND OXFORD HOUSE AND ST. THERESA POINT. ALL UNDER 1 YEAR IN CROSS LAKE AND IN 1-19 YEAR GROUP IN WASSAGAMACH.
5.	RUBELLA	ALL OVER 1 YEAR IN ST. THERESA POINT, OXFORD HOUSE AND WASSAGAMACH, THOSE OVER 5 YEARS IN RED SUCKER LAKE AND THE 1-19 YEAR GROUP IN GOD'S LAKE.
6.	SMALL POX	ALL OVER 5 YEARS IN ST. THERESA POINT AND WASSAGAMACH. ALL OVER 19 YEARS IN RED SUCKER LAKE AND OXFORD HOUSE AND THOSE BETWEEN 5 AND 19 YEARS IN GARDEN LAKE.

SOURCE: Northern Zone Office, Manitoba Region.

TABLE 10

INCIDENCE OF TUBERCULOSIS

	1973		1974	
	NUMBER	RATE/1000 POPULATION	NUMBER	RATE/1000 POPULATION
MANITOBA(INDIAN)				
NEW	48		84	
REACTIVATED	4		12	
		133		246
NORWAY HOUSE(INDIAN)				
NEW	-		9	
REACTIVATED	-		3	
				104
CANADA				
NEW	3,563			
REACTIVATED	567			
		18.7		N/A

SOUCE: Annual Report 1973-74 Manitoba
Statistics Canada

f) Visits to Health Facilities - There was a 19% increase in the number of visits to health facilities (excluding Norway House Hospital) during the first six months of 1975 compared with 1974. These increases were significant in Wassagamach, Norway House, Garden Hill and St. Theresa Point. (Repeat visits cannot be identified as such). (Table 11).

g) Late Calls and visits to Health Facilities - (Table 12). The number of calls and visits to Health Facilities after regular clinic hours have been specifically noted since January 1974. (After hour calls for treatment in the Norway House community were dealt with in the Hospital rather than the Health Centre).

h) Incidence of diseases - Patients with complaints related to the following disease categories were seen in the area in 1974. (Norway House Community data not documented).

Ear, nose and throat	307
Dermatology	282
Trauma	268
Upper Respiratory Infection	262
Digestive tract	191
Cardio vascular	152
Lower Respiratory infection	122
Genito urinary	99

TABLE 11

VISITS TO NURSING FACILITIES

	AVERAGE NUMBER MONTHLY VISITS			
	1974	1975 (JAN-JUNE)	CHANGE	VISITS PER 100 POPULATION
NORWAY HOUSE HEALTH CENTRE	785	985	+25%	25
CROSS LAKE	672	703	+5%	28
OXFORD HOUSE	583	550	-6%	57
GOD'S LAKE	470	430	-6%	40
GARDEN HILL	387	600	+55%	33
ST. THERESA POINT	364	550	+51%	42
WASSAGAMACH HEALTH CENTRE	250	374	+50%	69
TOTALS	3,511	4,912	19%	42

SOURCE: Northern Zone Office, Manitoba Monthly Public Health Nursing Reports, Nursing Station Records.

TABLE 12

AFTER-HOUR CALLS
AT HEALTH FACILITIES(1975)*

CROSS LAKE	514
GARDEN HILL	370
OXFORD HOUSE	341
GOD'S NARROWS	187
ST. THERESA POINT	103
WASSAGAMACH	7

*JANUARY - JUNE 1975

SOURCE: Northern Zone Office Manitoba.

Table 13 shows diseases arranged in ranking order according to community. Nearly half of these patients had symptoms (46%) related totally, or largely, to viral or bacterial infections. (The majority of those included under "genito-urinary" are due to infection - personal communication - Dr. S. David F.R.C.S. Norway House Hospital).

Trauma (mostly minor) was responsible for 9% of the total, while cardio vascular complaints accounted for a further 6%. The remaining patients suffered from a wide spectrum of diseases.

i) Epidemics - Oxford House experienced a moderate outbreak of mumps during the year with 9 cases of encephalitis, 4 of orchitis and 1 of pancreatitis. God's Lake, Oxford House and St. Theresa Point had mild epidemics of chicken pox. Only 7 cases of infectious hepatitis and 1 of paratyphoid were reported. The communicable diseases in the area in 1974 are shown in Table 14.

j) Dental - In spite of active preventive and treatment programmes, (Appendix D) observation and reports indicated that dental problems continue to be a major cause of discomfort and illness among Indians.

k) Mental - Once again, observation suggested that depression and despondency were present in many but quantitative data were unavailable. Frank psychosis is apparently rare. (See Selkirk Report, 1974, reference 4).

TABLE 13

RANKING ORDER OF DISEASES CATEGORY (1974)

	1	2	3	4	5	6	7	8
GARDEN HILL	ENT*	URI*	GI*	TRAUMA	SKIN*	LRI*	GU*	CVA
ST. THERESE	ENT*	URI*	SKIN*	GI*	TRAUMA	LRI*	GU*	CVA
WASSAGAMACH	URI*	ENT*	SKIN*	GI*	TRAUMA	LRI*	GU*	CVA
GOD'S LAKE	SKIN*	TRAUMA	ENT*	GI*	URI*	LRI*	GU*	CVA
OXFORD HOUSE	ENT*	URI*	SKIN*	GI*	TRAUMA	GU	CVA	LRI*
CROSS LAKE	TRAUMA	ENT*	SKIN*	URI*	LRI*	GI*	GU*	GYN

* Diseases, wholly or partly, associated with viral or bacterial infection.

ENT - Ear, Nose & Throat
URI - Upper Respiratory Infection
LRI - Lower Respiratory Infection
GI - Gastro-Intestinal
GU - Genito-Urinary
CVA - Cardio-Vascular Accident
GYN - Gynecological

SOURCE: Public Health Monthly Nursing Reports.

TABLE 14

COMMUNICABLE DISEASES (1974)

	GARDEN HILL	GOD'S LAKE	OXFORD HOUSE	ST. THERESA	WASSAGAMACH
MUMPS	1	-	198	-	-
CHICKEN POX	-	36	98	28	-
INF. HEPATITIS	5	2	-	-	-
MEASLES	1	4	-	-	-
STREP. THROAT	3	2	-	11	7
SHIGELLA	2	11	-	-	-
FOOD POISONING	-	11	-	-	-

SOUCE: Northern Zone Office, Manitoba Region
Public Health Monthly Nursing Reports.

1) Deaths - (Table 15). There were 64 Indian deaths reported in the Norway House area which represented 30% of all Manitoba Indian deaths in 1974. (There were also 3 Metis deaths reported).

Causes of death in the Norway area communities are compared with those for other Manitoban Indians in Table 16. The death rates per 1,000 population in Canada, Manitoba and the Norway House area are shown in Table 17. Reported accidents caused death in 21 (33%), which possibly reflects the hazardous environmental conditions and a lack of appreciation of safety rules (Table 18).

Respiratory diseases were associated with 10 deaths (16%), and diseases of the circulatory system were responsible for 9 deaths (14%). Perinatal and Infant Deaths - (Table 19) deaths, under 1 year totalled 26 (40.6% of all deaths) and included 5 due to infections, 5 caused by accidents and 8 perinatal deaths. Infants in the Norway House area communities had a death rate twice as high as the average for other Manitoba Indians.

TABLE 15

VITAL STATISTICS 1974
(CORRECTED JUNE 10, 1975)

		MANITOBA	RATE	NORWAY HOUSE AREA	RATE
	TOTAL POPULATION	992,000			
MANITOBA	INDIAN POPULATION	31,024		11,500	37%
	TOTAL REG'D INDIAN	39,077			
BIRTHS	TOTAL INDIAN LIVE BIRTHS	1,012	25.9	304	26
	BIRTHS IN NURSING STATION	37		17	
	BIRTHS IN HOSPITALS	451		283	
	BIRTHS - OTHER	524		3	
DEATHS	MATERNAL	0			0
	STILL BIRTHS	15	14.8	3	9.9
	PERINATAL	22	22	8	26
	NEONATAL	12	11.8	9	29.6
	POSTNEONATAL	29	28.7	17	55.9
	INFANT	41	40.5	26	85.9
	OTHER	172	4.4	38	3.3
	TOTAL	213	5.5	64	5.6
	NATURAL INCREASE	799	20.4	240	20.9

SOUCE: Statistics Canada 1974
Public Health Monthly Nursing Reports.

TABLE 16

DEATHS - INDIAN POPULATION

MANITOBA AND NORWAY HOUSE AREA(1974)

	MANITOBA		NORWAY HOUSE AREA	
	NUMBER	%	NUMBER	%
ACCIDENT, POISONING, VIOLENCE	81	40.5	21	32.8
DISEASES OF CIRCULATORY SYSTEM	32	16.0	9	14.1
DISEASES OF RESPIRATORY SYSTEM	22	11.0	10	15.6
NEOPLASMS	16	8.0	1	1.6
DISEASES OF DIGESTIVE SYSTEM	13	6.5	2	3.1
PERINATAL	10	5.0	8	12.5
SYMPTOMS & ILL-DEFINED CONDITIONS	10	-	4	6.2
INFECTIVE & PARASITIC DISEASES	9	4.5	1	1.6
DISEASES BLOOD & BLOOD FORMING ORGANS	7	3.5	1	1.6
CONGENITAL ABNORMALITIES	5	2.5	2	3.0
ENDOCRINE, METABOLIC, NUTRITIONAL	3	1.5	-	-
MENTAL DISORDERS	-	-	-	-
DISEASES OF NERVOUS SYSTEM AND SENSE ORGANS	3	-	-	-
DISEASES OF GENITO URINARY SYSTEM	2	1.0	-	-
COMPLICATIONS OF CHILD BIRTH	-	-	-	-
NOT STATED	-	-	-	-
REPORTED DEATHS	213		64	

SOURCE: Annual Report Manitoba Region 1974.

TABLE 17

DEATHS - INDIAN POPULATION

MANITOBA AND NORWAY HOUSE AREA(1974)

DEATHS/1000 POPULATION:

CANADA	7.8
INDIAN	8.8
MANITOBA	6.8
NORWAY HOUSE AREA	5.8

SOURCE: Statistics Canada 1974
Manitoba Region, Medical Services
Monthly Public Health Nursing Reports.

TABLE 18

ACCIDENT RATES PER HUNDRED THOUSAND

(1974)

	MANITOBA	NORWAY HOUSE AREA (INDIAN)
DROWNING	3.1	95 (11 DEATHS)
FIRE	3.6	34.5 (4 DEATHS)
MOTOR VEHICLES	23.2	8.6 (1 DEATH)

	MANITOBA	NORWAY HOUSE AREA (INDIAN)	CANADA (1973)
DROWNING AND FIRE	6.7	129.0	7.1

SOURCE: Statistics Canada 1973
Medical Services Manitoba, Annual Report, 1974.

TABLE 19

PERINATAL AND INFANT DEATHS (1974)

1. PERINATAL	-	NEWBORN	2
(CAUSE UNSTATED)	-	STILLBORN	3
	-	PREMATURE	3

2. INFANT	
ACCIDENTS	5
INFECTIONS	5
BLOOD DISORDER	2
CONGENITAL	2
UNKNOWN	4
TOTAL REPORTED PERINATAL & INFANT	26

INFANT DEATHS COMPRISE 40.6% OF DEATHS IN NORWAY HOUSE AND RELATED COMMUNITIES.

REPORTED ACCIDENTS	MANITOBA	NORWAY HOUSE AREA
DROWNING	20	11
UNSPECIFIED	18	-
BURNS	13	4
FIREARMS	9	2
EXPOSURE	8	3
MOTOR VEHICLE	7	1
FALLS	4	-
OVERDOSE	2	-
	81	21

SOURCE: Monthly Public Health Nursing Reports.

B. COMMUNITY HEALTH FACILITIES

There are few alternatives open to the inhabitants of this area with respect to their choice of environment and living conditions; in like manner they have no option other than to obtain their health care from the existing facilities, which are by now quite familiar to the inhabitants of each community.

Nursing Stations	Garden Hill	built	1949
	St. Theresa Point	"	1954
	God's Narrows	"	1954
	Cross Lake	"	1949
	Oxford House	"	1948
Health Centres	Norway House	"	1973
	Wassagamach - single storey building with Trailer		1971
Health Stations	Red Sucker Lake - (Trailer Unit)		1973
	God's River - (Trailer Unit)		1972

Each Nursing Station has residential quarters for the staff, a treatment area, a few in-patient beds and radio or telephone equipment.

The professional staff in these communities, however, do not have the same air of permanence, since their average stay was of the order of 11.6 months during 1974 and 1975. Furthermore, in the same period, seasonal staff shortages averaged 35% for Manitoba Northern Zone nursing stations.

This necessitated constant transfer of staff, often at short notice, to enable the operation of the stations to continue; inevitably this was responsible for loss of continuity of patient care and fluctuating levels of efficiency and effectiveness, especially of Community Health Programmes.

Clinic and Treatment programmes are carried out in each Community Health facility. In addition, a number of health programmes are conducted in the community, though there are occasions when an in-patient, or climatic extremes, may prevent the nurse leaving the facility, since there is no method of recall in the event of an unexpected emergency.

An individual patient may visit the Health facility by walking in, by appointment, or after referral by the Community Health Representative. (Appendix C) Transportation to the facility is by foot, vehicle, boat, or snowmobile according to the season. Services are available on a 24hr/7 days a week basis but efforts are made to regulate clinic hours and to discourage night and week-end calls and visits. Complaints about the attitude of the nurses may not always take account of the long hours and responsibilities carried out by the insufficient number of nurses.

Each patient may require examination, diagnosis and treatment by the nurse and, if necessary, admission or referral. In addition, the nurse acts as Station Manager. Records are kept of all decisions and prescriptions. Most patients need only simple counselling and treatment, (Bandaid, stitches or medication).

CLINICS

Patients requiring medical, dental, obstetric or paediatric consultation may be given appointments for clinics held at specific intervals by visiting specialists from either Winnipeg or Thompson, (Appendix E). Alternatively, appointments may be arranged for the patient to be seen by the fly-in Doctor who visits each community regularly. (Appendix F). If admission to hospital is required this is arranged in consultation with

the doctor on call in Norway House Hospital or by the fly-in doctor.

NORWAY HOUSE HEALTH CENTRE

Daily medical clinics are conducted by a resident physician on an appointment basis. The Public Health Nurses and Community Health Representative conduct special Prenatal, Diabetes Mellitus, Rheumatic Fever and Immunization Clinics. During 1974, a monthly average of 329 patients were seen by physicians and 65 patients by other health professionals respectively. A list of programmes carried out by the Health Centre staff appears on Table 20.

ADMISSIONS - to the Nursing Stations at Cross Lake, Garden Hill, God's Narrows, Oxford House and St. Theresa in 1974 and 1975 are indicated in Table 21. 501 patients and 17 new born were accommodated in 1974, and 223 and 5 new born in the first six months of 1975.

The bed occupancy rates for the five Nursing Stations were 6.3% and 2.3% respectively for 1974 and the first 6 months of 1975.

REFERRALS - in 1974 from Nursing Stations to Norway House Hospital are totalled in Table 22. An undetermined number of patients made their own arrangements for appointments or admission to hospitals in Winnipeg or Thompson. On completion of treatment, the patient returns to his community usually with a discharge note or medical prescription, though there have been several instances of patients returning in ignorant of their diagnosis and treatment.

TABLE 20

HEALTH PROGRAMMES, NORWAY HOUSE HEALTH CENTRE

PRENATAL

FAMILY PLANNING

IMMUNIZATION

T.B. & V.D. CONTROL

EYE AND EAR TESTING

INFECTION CONTROL IN THE HOSPITAL

SANITARY INSPECTION

WATER SAMPLING

SEWAGE

OIL POLLUTION

HIGH RISK INFANTS

SENIOR CITIZENS

HEALTH TEACHING

TABLE 21

ADMISSIONS TO NURSING STATIONS (1974)

CROSS LAKE	218
OXFORD HOUSE	102
GOD'S NARROWS	89
GARDEN HILL	64
ST. THERESA POINT	28
TOTAL	501

OCCUPANCY RATE = 7.08

(COMPARABLE RATE FOR JANUARY-JUNE 1975 = 2.64)

SOURCE: Monthly Public Health Nursing Reports
Northern Zone Office, Manitoba

TABLE 22

ADMISSIONS TO NORWAY HOUSE HOSPITAL BY COMMUNITY (1974)

		SUB-TOTAL	PERCENT OF TOTAL ADMISSIONS
NORWAY HOUSE	677		
NON-TREATY*	157	834	50%
GARDEN HILL	148		
ST. THERESA POINT	127		
WASSAGAMACH	53		
RED SUCKER LAKE	33	361	22%
GOD'S LAKE		180	11%
OXFORD HOUSE		123	8%
CROSS LAKE		102	6%
OTHER		55	3%
TOTAL ADMISSIONS		1,655	

*Mostly from Norway House

SOURCE: Admission Office, Norway House Hospital.

REFERRALS TO HOSPITALS - from the three northern communities of Cross Lake, Oxford House and God's Lake in 1974 are shown in Table 23. This illustrates the small number of clinic patients who needed to leave their community for further treatment.

REHABILITION PROGRAMMES

Physio-therapy programmes are conspicuously absent in these areas.

SUMMARY

Treatment seems to be carried out efficiently and effectively by an extremely well motivated corps of nurses and it is generally accepted that services are good. On the other hand it was noted that there have been genuine differences of opinion, or misunderstandings, between patients and Medical Services Staff concerning admission to either Nursing Stations or Hospitals. Generally speaking there appeared to be some public uncertainty concerning the limitations and extent of care at the ambulatory level. There were also some justifiable complaints by both Nurses and patients concerning inadequate waiting areas in the Nursing Stations.

Though substantial progress in health care has been achieved in the last decade it is evident that many programmes designed to minimize the incidence of preventable ill-health, disease, and death are apparently not gaining ground. Furthermore, there are variances in the effectiveness of certain programmes amongst the various communities.

TABLE 23

PER CENT OF CLINIC PATIENTS
REFERRED TO HOSPITAL

(1974)

	CLINIC VISITS	NUMBER OF CLINIC PATIENTS REFERRED TO HOSPITALS	REFERRALS PER 100 CLINIC VISITS
GOD'S LAKE	5,638	435	7.7
OXFORD HOUSE	6,993	250	3.5
CROSS LAKE	4,370	628	7.8

SOURCE: Monthly Public Health Nursing Reports

Amongst contributing factors may be:

- The slow rate of improvement in the total environment,
- The shortages and high turn-over of professional staff - which promotes episodic, rather than continuous health care,
- The failure to integrate objectives and local policies by Medical Services Branch, Indian Affairs and the people of the communities,
- Over and under utilization of health care resources. Medical care is often sought for minor problems which could be self-treated; and conversely delays in seeking treatment are still too common.

(NOTE: Cross Lake is the largest single community which is served by a Medical Services Nursing Station.)

C. NORWAY HOUSE HOSPITAL

Norway House Hospital services both as a Community Hospital for the area, and as a Nursing Station (in conjunction with the Health Centre). The presence of medical staff and hospital beds increases the possibility of over utilization of out-patient and in-patient services.

Though not of prepossessing appearance, the hospital provides a comfortable refuge for sick people. It is well accepted by many and functions adequately in difficult circumstances, though its limitations are recognized by both the staff and the community. This two story building does not afford convenience of access to sick people who must climb to the upper floor for treatment or admission.

ADMISSIONS

Half of all admissions were from Norway House. (Table 22). The average length of stay per patient together with bed occupancy rates, are shown in Table 24. Norway House has a low bed occupancy rate compared with some other Indian hospitals (Table 25).

Admissions by medical category appear in Table 26. It will be seen that 61% of all admissions (excluding new born) were for paediatric, obstetrical and gynecological patients.

Detailed analysis of two three month periods in 1974-75 revealed that 75% of the 632 children under 12 years of age were admitted for treatment of diseases due primarily to infections. (Table 27a).

TABLE 24

ADMISSIONS TO NORWAY HOUSE HOSPITAL

	1969	1970	1971	1972	1973	1974	1975*
ADMISSIONS:	2026	1321	1379	1342	1245	1687	641
AVERAGE LENGTH OF STAY:	4.97	7.41	8.41	7.61	5.5	3.86	
BEDS AVAILABLE	45	44	42	44	44	44	44
% BED OCCUPANCY	51.76	61.00	75.86	63.75	42.84	46.18	

* JANUARY 1 - JULY 1, 1975

SOURCE: Regional Office, Manitoba Hospital Records

TABLE 25

OCCUPANCY RATES INDIAN HOSPITALS (1973)

HOSPITAL	TYPE	NO. OF BEDS	OCCUPANCY RATE %
NORWAY HOUSE	ISOLATED	43	49.58
FT. QU'APPELLE	ISOLATED	57	63.62
NORTH BATTLEFORD	RURAL	49	66.98
BLOOD INDIAN CARDSTON	RURAL	29	70.13

SOURCE: Statistics Canada, Hospital Statistics Section

TABLE 26

ADMISSIONS BY MEDICAL CATEGORY

	1974	1975(JAN.-APR.)
MEDICAL	26.6	25.7
SURGICAL	12.5	12.9
OBSTETRICS AND GYNEOCOLOGY	21	23.7
PEDIATRICS	39.8	37.6

SOURCE: Norway House Hospital Records.

TABLE 27(A)

ADMISSION DIAGNOSES NORWAY HOUSE HOSPITAL

PEDIATRIC - (TO 12 YEARS OF AGE)		NO. OF CASES
1. 1974 -	GASTROENTERITIS	55
	CHEST INFECTIONS	44
	PYREXIA OF UNKNOWN ORIGIN & GENITO-URINARY TRACT INFECTIONS	16
	OTITIS MEDIA	5
	TRAUMA	2
	CARDIAC	2
	RHEUMATIC FEVER	1
	PEDIATRIC ADMISSIONS (JUNE, JULY, AUGUST - 1974)	125
2. 1974 -	CHEST INFECTIONS	74
	GASTROENTERITIS	17
	PYREXIA OF UNKNOWN ORIGIN & GENITO-URINARY TRACT INFECTIONS	18
	TRAUMA	8
	OTITIS MEDIA	6
	RHEUMATIC FEVER	4
	CARDIAC	2
	PEDIATRIC ADMISSIONS (JUNE, JULY, AUGUST - 1975)	129

SOURCE: Norway House Hospital Records.

TABLE 27(B)

ADMISSION DIAGNOSES NORWAY HOUSE HOSPITAL

ADULT		NO. OF CASES
1. 1974 -	OBSTETRICAL	68
	GYNECOLOGICAL	24
	TRAUMA - (ALL TYPES, MINOR/MAJOR INCLUDES BURNS, FROSTBITE, ETC.)	31
	CHEST INFECTION	12
	CARDIAC (+ HYPERTENSION)	11
	BILIARY	9
	DIABETES MELLITUS	7
	URINARY TRACT INFECTIONS	3
	RHEUMATIC FEVER	5
	DRUG OVERDOSE	4
	GASTROENTERITIS	4
	ADULT ADMISSIONS (JANUARY, FEBRUARY, MARCH - 1974)	178
2. 1975 -	OBSTETRICAL	76
	GYNECOLOGICAL	38
	TRAUMA	26
	CHEST INFECTIONS	11
	BILIARY	10
	CARDIAC (+ HYPERTENSION)	11
	DIABETES MELLITUS	10
	URINARY TRACT INFECTIONS	10
	TRAUMA	8
	OVERDOSE	6
	RHEUMATIC FEVER	6
	ADULT ADMISSIONS (JANUARY, FEBRUARY, MARCH - 1975)	212

SOURCE: Norway House Hospital Records.

In the same period, 65% of all adult admissions were for obstetrical or gynecological reasons (Table 27b). The resident obstetrician/gynecologist stated that a complication rate of 60% made specialist expertise mandatory. There were no maternal deaths in 1974-5.

These findings illustrate the relative importance of Pediatrics, Obstetrics and Gynecology in health delivery care in this area.

OPERATIONS

Major and minor operations performed were as follows:-

	1974	1975 (6 months only)
Major	95	173
Minor	159	31
	227	204

During the first 5 months of 1975, 89 of the major operations (55%) were of an obstetrical or gynecological (35 of these patients (40%) were residents of Norway House.)

The increase in the number of major operations (i.e., with general anesthesia) is evidently related to the presence of a general surgeon, an obstetrician and an anesthetist. The decline in minor surgery for in-patients presumably indicates either a fewer number of minor surgical conditions or the increased use of general anesthesia.

CONSULTATIONS

Twenty consultations were requested in 1974 and 19 in the first 6 months of 1975. These were principally concerned with suitability for general anesthesia in high risk cases since the usual range of consultative services present in larger hospitals was not available.

TRANSFER OF NORWAY HOUSE HOSPITAL IN-PATIENTS TO OTHER HOSPITALS

A total of 99 (6.0%) of 1,655 in-patients was transferred from Norway House Hospital to other hospitals in Manitoba in 1974, either for treatment or observation, 54 of whom were residents of the Norway House community. During the first six months of 1975, 6.6% of in-patients were similarly transferred. In addition to these, an unidentifiable number of patients was directly referred from various communities to Winnipeg or Thompson for either admission or consultation. Increasing numbers of patients are journeying to Winnipeg and Thompson for follow-up visits by city hospital specialists. However, medical supervision of the majority of patients in the area was conducted by the resident physicians of the Interlake Medical Clinic.

In the same period, the three most northerly communities - Cross Lake, God's Lake and Oxford House, transferred 516 patients to Norway House Hospital, 424 to Thompson General Hospital and 356 to Winnipeg Hospitals for either consultation or admission (Table 23).

SUMMARY

Over the last 25 years, Medical Services has evolved from an organization dealing with widespread acute medical problems to a delivery system which has lost some of its momentum. A plateau has been reached

in which the health status of these communities is improving only slowly despite huge outlays of money and effort. A number of conceptually well-oriented programmes are not effectively meeting their goals. Personnel are often discouraged when confronted with recurrent episodes of disease due to conditions beyond their control. The outstanding medical problem is that caused by viral and bacterial infections and many of these illnesses are either preventable or could be treated at home.

It is no more possible to eradicate the "swamp" of community infection with antibiotics than it is to promote health by passively awaiting customers at the door of the health facility. The low rate of transfer from Health Facilities to Hospitals demonstrates that most conditions can be dealt with locally; there is a similarly low rate of patient re-transfer from Norway House Hospital, despite the fact that only a relatively limited range of services can be offered.

Whereas there is effective medical treatment for most common illnesses, this does not prevent recurrent disease. No new medical discoveries are required, only new approaches to health care.

PART II

ALTERNATIVES

In this section, the previously described health care needs are considered in terms of possible solutions.

The suggested new approach takes into account the necessarily close relationship of needs, resources, programmes and facilities in a Health Care Delivery System.

It concludes with a number of recommendations regarding priorities in future community health programmes, some methods by which they might be accomplished, and the type of Facility considered most relevant for Norway House.

CHAPTER 3

HEALTH CARE DELIVERY

The previous section of this report has dealt with our findings regarding the status of health and health delivery in this area. The health problems of most Indians do not come about because of lack of health services but result from the related poor environmental and economic conditions. The causes and consequences of health breakdown were evident in every community visited and regrettably many, especially infants and children had correctable problems related almost entirely to substandard living conditions. In the circumstances, the provision of medical treatment is analagous to the relief of symptoms rather than the disease.

To achieve permanent elevation of health status requires re-orientation of concepts and objectives by both consumers and providers and the co-ordinated efforts of all local agencies and Government Departments concerned. In particular, it is felt that the potential ability of the native people to make an effective contribution to their own health and welfare has been underestimated.

Contemporary planning in Federal, Provincial and Private medical sectors stresses the necessity of providing comprehensive health care, which is accessible, humane, relevant, efficient and effective, for every Canadian.

In proposing an increased emphasis on improved individual health, it is recognized that it will require the informed co-operation and active participation of each person. The new "combat zone" for these activities is the home, with "logistic" support from the community and health care delivery teams.

Regardless of the ultimate choice of Health Facility in Norway House, the study group strongly recommends the expansion of preventive medicine programmes and the adoption of the philosophy of total health care. It is suggested that the following programmes require particularly urgent attention:-

HEALTH PROGRAMMES

The outstanding health maintenance problems are closely allied to the lack of potable water and dietary inadequacies and to insufficient emphasis on maternal, infant and child welfare programmes. In short, the priorities may be described as "Women and Children First" and "Good Food and Water".

1) Maternal Health

The high rate of obstetrical complications underlines the need for more comprehensive surveillance during all stages of the maternal cycle. Pre- and post-natal programmes, family planning, dissemination of information regarding the physiology and implications of pregnancy, and baby care programmes should be intensified.

Recommendation

That all pregnant women in each community be identified by home visiting and examined and counselled regularly till full-term; and that at least 75% of mothers be instructed on breast feeding and infant care within the next years.

2) Infant and Child Care

It is a cruel paradox that despite the availability of health care, Indian infant morbidity and mortality rates should be so high in this area. Deaths due to pneumonia, and gastroenteritis and dehydration, are in large measure the outcome of environmental factors and although many such cases can be saved by heroic treatment, the ~~precipitating~~ predisposing causes of these diseases continue to be beyond Medical Services control.

Recommendation

That regularly scheduled health examinations of infants be carried out every month during the first year of life; together with routine immunization of all infants and children.

All water supplies be regularly tested, and home sanitation arangements be regularly inspected.

3) Nutrition

Since their traditional nomadic way of life has been curtailed by living in premanent settlements, the majority of Indians are now almost entirely dependent on imported foods retailed at Hudson Bay

Stores. There is a great need for nutrition education about the selection, storage and preparation of food. Supplementary vitamins may be necessary since the supply of fresh fruits and vegetables is limited.

Recommendation

a) The importance of breast feeding in providing protection against common diseases should be repeatedly explained, promoted and re-iterated.

b) That a Regional Nutrition Specialist be appointed to develop relevant nutrition programmes, and

c) that of at least 50% of all mothers be counselled concerning the selection, storage and preparation of food.

d) that the Nutrition Specialist be responsible for the development of Home Economic Educational programmes which stress food handling and preparation.

B. HOUSING

383 houses (33%) in this area are listed by Indian Affairs, Manitoba, as being in poor or very poor condition. At todays prices their replacement would cost over $7,500,000. (- but perhaps would be more relevant to raising the health status in the area than the building of a new hospital.)

Recommendation

That a coordinated and comprehensive administrative mechanism be established, in conjunction with Indian Affairs, to set health priorities, with immediate attention to the provision of adequate housing.

C. WATER

The rather primitive methods of water collection and handling are an embarrassment to all health workers, and a continuing danger to all inhabitants in the area.

Recommendation

That the responsibility for identifying water purity problems be given to a senior Regional Medical Officer and that close cooperation with Indian Affairs be established immediately to set priorities and objectives.

D. COMMUNITY HEALTH REPRESENTATIVES

There are only nine Community Health Representatives working in the entire area. The need for more native workers to establish "bridges" between the native population and Health Care Services, as well as the importance of promoting community participation, has been repeatedly stressed, and is a "sine qua non" for the structured expansion of community health services.

Recommendation

That the policy of employing native people as Community Health Representatives be expanded throughout the entire area.

E. HEALTH COMMITTEES

An immediate goal is the establishment of Health Committees in every community for the identification of "grass root" problems and the planning and development of health services.

Recommendation

It is recommended that active Health Committees be established in every community within the next six months; and that administrative responsibility for planning and developing local health services be assigned to them as soon as possible.

F. TRANSPORTATION SYSTEMS

Most communities have at least a rudimentary internal transportation system, especially in the winter. The lack of adequate roads and bridges in these island communities renders access to health care facilities difficult for ill-patients especially during freeze and break-up periods, as well as hampering home visits by Health Care personnel.

Improvement of internal road systems is a prerequisite for the institution of a garbage collection system.

Recommendation

It is recommended that the responsible Provincial and Federal Departments be alerted to the implications and importance of an adequate road system to Health Care Delivery.

G. COMMUNICATIONS

Methods of communication between some of the communities and the South are improving as Provincial Telephone systems extend into the area.

However, several of the communities will have to continue using the unreliable radio-telephone until a more sophisticated telecommunication system is introduced.

Locally, there is no method at present by which a nurse who is visiting in the community can be contacted directly by the Nursing Station should there be an unexpected emergency. This has the effect of inhibiting health programmes dependant upon home visiting.

Recommendation

It is recommended that short-range transceivers become standard equipment for all health facilities.

CHAPTER 4

FACILITY

The study group was aware that certain architectural defects, high operating costs, personnel shortages and other considerations made it necessary to consider the need for a new facility in Norway House. To simplify the process of assessing the most appropriate choice, five types of alternative facility were identified for detailed examination, ranging from renovation of the present hospital to the erection of smaller new facilities of different sizes and function. In all instances, the continuing, or expanded, role of the recently constructed Norway House Health Centre was a key component of the overall assessment.

Alternatives considered included:-

a) A renovated version of the existing Norway House Hospital containing 43 beds, and potentially offering the same services as now.

b) A new 32-36 bed unit, staffed by four physicians and serving the same area and population (11,500).

c) A new 22-26 bed unit with an operating suite and four physicians, serving only the three northern communities of Cross Lake, Oxford House and God's Lake, and Norway House. (Population 8,120).

d) A new 12-16 bed unit without an operating suite; and two resident physicians in Norway House who would serve only God's Lake and Norway House. (Population 4,720).

e) 3 people on.

PARTICULARS	ACTUAL 74-75 43 BEDS HOSPITAL	RENOVATED 32-36 BEDS	NEW HOSPITAL 32-36 BEDS	NEW HOSPITAL 22-26 BEDS	NEW HOSPITAL 12-16 BEDS	COMMUNITY HEALTH CENTRE 6 HOLDING BEDS
STAFF:						
- Medical	4	4	4	4	2	2
- Hospital	68.9 - 75.6	60.7	49.7	42.6	30.4	6.5
- Community Health	7	7	7	7	7	7
Personnel Cost ($)	$ 719,000	$ 652,120	$ 546,630	$ 479,500	$ 354,830	$ 129,465
Salaries - Medical Staff ($)	140,000	140,000	140,000	140,000	70,000	70,000
Operating Expenditure ($)	299,000	267,880	153,370	160,500	95,170	65,535
Additional Transportation Costs ($)	-	-	-	55,000	160,000	280,000
Area M.D.'s cost ($)	100,000	100,000	100,000	100,000	100,000	100,000
Capital Expenditures (On-going)	71,000	70,000	60,000	40,000	25,000	10,000
Forecasted Cost to Medical Service ($)	1,329,000	1,230,000	1,000,000	975,000	805,000	655,000
Recovery ($)	320,000	320,000	320,000	240,000	130,000	15,000
Forecasted Cost to Gov't ($)	$1,009,000	910,000	680,000	735,000	675,000	640,000
Savings (On-going) ($)	-	$ 99,000	$ 329,000	$ 354,000	$ 524,000	$ 674,000
Average Occupancy	21	21	21	15	8	.3
Cost per Patient-Day ($)	$117	$104	$74	$103	$126	-
CAPITAL:						
Square footage	21,000	21,000	20800-23400	14300-16900	7800-10400	1,500
Cost per sq. foot ($)	$47.62	$47.62	$100	$100	$100	$100
Construction Cost ($)	$1,000,000	$1,000,000	$2,080,000-2,340,000	$1,430,000-1,690,000	$780,000-1,040,000	$150,000
RENOVATION, Demolition Steam, ~~Renovation~~	250,000	250,000	600,000	600,000	600,000	600,000
Staff Residence	250,000	200,000	100,000	100,000	-	-
TOTAL ($)	$1,500,000	$1,450,000	$2,780,000-3,040,000	$2,130,000-2,390,000	$1,380,000-1,640,000	$750,000

NORWAY HOUSE HOSPITAL

NOTE:

1. The Hospital Facilities Design Unit (Health and Welfare, Canada) assessed the footage requirements for a hospital as 456-912 sq. feet per bed. A figure of 650 sq. feet per bed has been used in this costing exercise.
2. Hospital Facilities stated that $100. sq. foot was an acceptable average cost for hospital building estimates through this figure could vary according to the local requirements and environment. It was agreed that the figure of $100. per sq. foot be used in these calculations.
3. Actual costs in 1974-5 have been used to derive the average annual salary (9,590.) and this amount has been used to compute salaries for the different alternatives.
4. The gross annual cost was extrapolated from the H.S. series (C.H.A.M.)
5. All dollar figures refer to 1974-75 dollars.

e) A new 6 bed unit attached to the Health Centre. This alternative includes two physicians resident in Norway House who would serve other communities on a scheduled basis as required. (Population 3,590).

These alternatives call for a wide range of facility sizes, services and manpower requirement. The first 3 alternatives, 22 beds or more, include operating rooms all alternatives include laboratory facilities. The 3 alternatives need the minimum complement of 3 physicians as prescribed by the Manitoba College of Physician and Surgeons. In the light of the identified medical needs of the area they should be certified in Surgery, Obstetrics and Gynecology and Anesthesia respectively. Should one of these three be unavailable for any reason, surgical patients would have to be referred elsewhere for treatment.

The 12-16 bed hospital provides for the admission of patients with short-stay, non-urgent conditions of limited complexity, including simple deliveries. Limited diagnostic x-ray and laboratory facilities would be available.

The 6 bed unit would complement the range of preventive medicine programmes and services already available at the Norway House Health Centre by adding a "holding bed" capacity.

A more detailed analysis of the 12-16 and 6 bed units was then carried out for reasons to be presented later in this section. These

two alternatives were assessed against nine chosen factors, which were neither all-inclusive (every possible factor was not necessarily included) nor mutually exclusive (since some factors were obviously inter-related).

These factors were:

1. Health Care Needs
2. Accessibility
3. Staffing Requirements
4. Costs and Recoveries
5. Local Economy
6. Community Attitudes
7. Equity
8. Related Services
9. Relationship to Provincial Health Services.

1. HEALTH CARE NEEDS

The precise identification of the Health Care needs is critical and central to any solution, and a basic requirement of the selected alternative was that it must meet the perceived needs. In this respect, the prejudical environmental and living conditions and the general ineffectiveness of preventive medicine programmes were recognized as the principal problems requiring attention.

None of the larger hospital alternatives offer medical care of a standard comparable with that in Winnipeg or Thompson, nor was it deemed attempt to duplicate services already available in these two cities.

Though a larger hospital is generally able to deal more decisively and effectively with acute emergencies, there are relatively few such

cases in this area which could not be safely prepared for transfer elsewhere for total care. It is suggested that the 6 bed unit could meet all the essential therapeutic requirements of the area, since those needing more intensive investigation or treatment can be evacuated to a medical centre.

2. ACCESSIBILITY

The relative isolation of all the communities was an important dictate as far as accessibility to a hospital was concerned.

Local access to any facility depends on the presence or absence of passible roads and waterways, especially during freeze-up and break-up.

The present location of the facility in Norway House was considered preferable to a Rossville site because the Health Centre, and housing accommodation, (together with the related utilities), are already there; and moreover it is only 2 miles from the airport. Proximity to the airport is particularly desirable if in-patients from other communities are to be received into a hospital at Norway House. If a 6-bed unit is chosen, the closeness of the airport would allow the expeditious transfer of patients elsewhere. All other communities would continue to have access to Winnipeg and Thompson Hospital as at present.

Thus, since air transportation is available when required, it is our opinion that accessibility to sophisticated medical care is not dependent on the presence of a hospital at Norway House.

3. STAFFING REQUIREMENTS

Historically there has been a chronic shortage of physicians, nurses, technicians and administrative personnel in the area. The problem is compounded by the total absence of resident professionals among the local population. Since facilities and programmes cannot be run without suitable staff, it was important to judge each alternative by its manpower requirements now and in the future. As a general rule, those alternatives which employ fewer professionals will be easier to maintain.

The reluctance of qualified professionals to work in isolated areas affects all the alternative solutions equally.

Staff, shortages affect the operation of larger facilities more critically than smaller ones. Hospital In-patient service, with round-the-clock nursing, meals, etc., demands a minimum of 20 persons. An increase in the number of beds from 6 to 12-16 would require an estimated staff increase from 6 to 30 persons. In larger facilities, some staff economies are possible, particularly by job combinations in Housekeeping, dietary, laundry and linen services. But the loss, or unavailability, of either a surgeon, an obstetrician anesthetist or a number of nurses would decrease the number of occupied beds and correspondingly reduce its effective role as a hospital.

4. COST AND RECOVERIES

During our deliberations, the need to minimize the net cost including capital and operating costs (less recoveries), was considered important.

a) Capital costs - these are very difficult to project for an isolated area, particularly in an inflationary period. The following rough cost-estimates are based on the historic cost of comparable facilities together with contemporary estimates by surveyors. (To obtain a more accurate picture it is suggested that an engineering study be undertaken.)

Building a new hospital would cost a substantial $3,000,000. and the potential cost savings would not recover the investment in less than 10 years. Regardless of the nature of the future facility, certain renovations and replacements to existing buildings and systems will be necessary, for example, the uneconomical high pressure steam system should be converted to a low pressure system by re-planning the distribution system. Conversion would also reduce the need for the five stationery engineers presently employed there.

Choice of a unit of 16 beds or less would enable demolition of several buildings to be carried out including the unpopular nurse's dormitory); or their conversion to other uses. Whenever construction is carried out, certain deficiencies previously noted by the Fire Marshall and Building Inspector, should be rectified. The estimated cost of demolition and alterations is $600,000.

b) Operating Costs

i) Facility

The estimated net operating cost (total cost less recoveries from the Medical Staff and the Province) is approximately the

same for all new units with 12 beds or more.

Two main factors account for this:

a) higher occupancy levels; and

b) the incremental cost (the cost of providing care for additional patient days) which is approximately equal to the Provincial recovery rate of $34.50 per day.

Annual capital is also required for:

a) Raising the standards of fire security and safety,

b) To maintain the quality of facilities and equipment,

c) To provide for normal replacements.

ii) Salaries

More than 70% of hospital costs are due to salaries. The total costs rise with increases in staff. The estimated cost increase for salaries occasioned by the choice of a 12-16 bed unit instead of the 6 bed unit is estimated to be 110%.

iii) Savings and Recoveries

The net dollar cost savings (net operating cost reduction less increases in transportation expenses) for all alternatives requiring new construction are similar. The additional cost incurred by larger facilities, is offset by a reduction in the numbers of referred patients.

The net projected savings (in all but the 32-36 bed unit) will be in the range of $100,000. - $200,000. but the larger facilities would require larger initial and continuing expenditures.

iv) Fixed Costs

A fall in bed occupancy rates does not reduce costs (because the facility operation is related to potential, rather than actual, utilization). Thus reduced bed occupancy, due to the loss of staff from the hospital, or changing patient referral patterns after construction, would leave Medical Services unavoidably paying for empty beds!

v) Travel Expenses

Only new, or additional travel costs, have been identified in this cost analysis. Such travel costs naturally decline if more in-patients are treated locally. The cost of escorts, charter or regular flights, stretcher or emergency evacuations, is difficult to estimate and probably ranges from $55,000. to $280,000. annually.

vi) Overall costs

The true cost of operating small hospitals is high because the cost is often understated in the case of larger hospitals (with similar costs per patient day) which provide a wider range of services, e.g., Intensive Care Unit.

Projected costs for all the hospital alternatives considered (except the 32-36 bed facility) are over $100. per patient day (1974-75 dollars). Average annual gross costs for new units containing 12-36 beds would be $690,000. and for a renovated 32-36 bed unit $900,000.

In summary, the high operating and capital costs, as well as the potential fixed costs associated with low utilization, argue against the provision of a facility larger than a 6 bed unit.

5. LOCAL ECONOMY

The economic impact and lack of other employment are of real concern to the inhabitants of Norway House in the event that Medical Services should reduce the number of native employees at the hospital. Only in the case of the choice of a 6 bed unit will employment fall significantly and potential future jobs will be eliminated.

There would be a small additional reduction in local revenue should the boarding homes be closed.

To alleviate potential unemployment, the following community improvement projects are suggested:-

- Airstrip construction,
- Road and bridge construction,
- Municipal services development (garbage collection, water supply etc.)
- Private enterprises (taxi service, laundering services, etc.)
- Local building construction,
- Construction of wells and garbage pits,
- Tourism, guiding and fishing.

To perpetuate the uneconomical existence of the hospital is difficult to justify since it represents another form of welfare payment but loss of employment would nevertheless remain an important argument for the continuation of a hospital in Norway House - at least in the eyes of the community.

6. COMMUNITY ATTITUDES

There is general satisfaction with Norway House Hospital though many prefer Winnipeg or Thompson Hospitals especially since they affords an opportunity to shop or visit city relatives. However, it was felt that many people attached as much significance to the Hospital as a distinctive local symbol (compared with other communities in the area) as to its provision of medical care.

The choice of a hospital in Norway House, even if reduced in size, would probably preserve this sentiment. On the other hand, if a 6-bed unit replaced the existing hospital, the community would experience a real sense of deprivation in the immediate future.

Thus, whichever alternative is chosen, it must compensate for any actual loss which the Norway House community may experience. A new vital approach, directly related to their actual health care needs, would do much to restore their confidence in Health Services and would prove of lasting benefit. The most appropriate way of achieving this would to be intensify health care delivery by actively seeking the cooperation and participation of the community in the planning and development of new local health objectives and programmes.

7. EQUITY

This can be defined as the principle of treating people in similar circumstances in a similar manner. Two communities with the same needs for health care delivery and the same degree of isolation, should have the same medical services and programmes available to them. Equity is an inherent element of justice, which in this case should include a comparison of the services given to

a) each community in the Norway House area,

c) to all other similar communities in Canada.

Thus, if Norway House deserves a hospital, so do several other communities in the area - though the cost would be prohibitive. Similarly, if one community has a Community Health Centre or resident physician, others might legitimately claim an equal right. Thus, the choice of a Community Health Centre for Norway House would partially restore equity to the communities of the area, while a hospital would perpetuate inequity.

8. RELATED SERVICES

These do not form the core of any of the alternatives but their presence, or absence, can greatly affect the quality and acceptance of health care delivery. Such factors as reception services for patients in the community or city, transportation to and from hospital, interpreters of the Indian and English languages, escorts for the convalescent or ill patient, prosthetic services, boarding homes of acceptable quality, health education, and the provision of progress reports on hospitalized relatives are all most important, whether in Norway House, other communities, Winnipeg or Thompson.

9. FEDERAL/PROVINCIAL COORDINATION

Medical Services must co-exist with Provincial Health Services in Manitoba. Alternatives were therefore considered in terms of their compatibility and the degree of cooperation and mutual assistance that could be expected from the Province in each case.

There are several Provincial Health facilities and activities in the Norway House area, e.g.,

1. Thompson General Hospital
2. Personal Care Home, Rossville
3. Programmes related to:
   a) Homemaking
   b) Health Counselling
   c) Audiometric testing
   d) X-ray surveys for Tuberculosis
4. Keewatin Community College
5. Mental Health and Retarded Children Surveys (Selkirk)
6. Provincial Manpower and Rehabilitation programmes
7. Housing programmes for non-Indians.

There is incomplete correlation of these activities at the local level. This is perhaps strange, since Manitoba is considered to be a leader in the development of Community Health philosophy and innovative approaches to comprehensive Health Care, (Manitoba White Paper on Health Policy, 1972.) (Reference 5)

NORWAY HOUSE RECOMMENDATIONS

1. That a Community Health Centre be established in Norway House, and the existing hospital phased out. It is recommended that the Health Centre have 6 beds, employ 2 physicians (G.P.'s) and 13.5 man-years of professional technical and administrative staff. We recommend that the Health Centre be built next to the present clinic and that approximately 1,500 sq. ft. of space be added to the present building for the beds and additional storage. The capital cost of this alternative will be approximately $750,000. which includes $150,000. for additional space and approximately $600,000. for the demolition and renovation of old facilities and the addition of a low pressure steam plant. Forecast operating costs are less than $700,000. a saving of approximately $600,000. over the present hospital cost.

2. That the above recommendation be implemented within two years. To effect as smooth transition as possible we recommend consideration of the following:-

   a) Closing of some of the beds in the present hospital and a concurrent reduction of nursing staff.

   b) Notification of the proposed changes to all employees of Norway House Hospital as soon as possible.

   c) The appointment of a group of personnel specialists to study methods of minimising the effect of hospital closure on present employees.

   d) An information programme be developed to explain the proposed changes to all residents in Norway House.

3. That Health and Preventive Medical Care be emphasized. Specifically we recommend that:

a) All pregnant women in each community be identified by home visiting and examined and counselled regularly till full term; and that at least 75% of mothers be instructed on breast feeding and infant care within the next two years.

b) Regularly scheduled health examinations of infants be carried out every month during the first year of life; together with routine immunization of all infants and children.

c) Visits by General Practitioners to all communities in the area be increased.

d) A Regional Nutrition Specialist be appointed to develop relevant nutrition programmes, and that at least 50% of all mothers be counselled concerning the selection, storage and preparation of food. In addition, it is recommended that the Nutrition Specialist be responsible for the development of Home Economics Educational programmes which stress food handling and preparation.

e) The responsibility for identifying water purity problems be given to the Senior Regional Medical Officer, and that close cooperation with Indian Affairs be established immediately to set priorities and objectives.

f) All water supplies be regularly tested, and home sanitation be regularly inspected.

g) A coordinated and comprehensive administrative mechanism be established, in conjunction with Indian Affairs and the Native Organizations concerned, to set health priorities with immediate attention to the provision of adequate housing.

h) Immunization programmes be completed as follows:

- Red Sucker Lake	- Sabin and Rubella	- 0-5 years
- St. Theresa Lake	- Rubella	- 0-1 years
- Wassagamach	- Lirugen	- 0-4 years
	- Rubella	- 0-1 years
- Cross Lake	- D.P.T.	- 0-4 years
	- Lirugen	- 1-19 years
- Oxford House	- Rubella	- 0-1 years
- God's Lake	- Rubella	- 0-1 years

i) That of 13.5 man-years devoted to the Health Centre, 7 be allocated solely to Community Health.

4. That residents of other communities presently served by Norway House Hospital be referred for hospital care to either Winnipeg or Thompson depending upon such factors as cost, convenience, and personal preferences. ?

5. That increased native participation in health care delivery be aggressively sought, both in actual health care delivery and in decisions concerning the health care system. Specifically we recommend that:

a) Health Committies be established in every community within the next six months for the identification of "grassroot" problems and the planning and development of local health services.

b) the policy of employing natives as Community Health Representatives be expanded throughout the entire area.

c) that new mechanisms be developed, or existing mechanisms strengthened, for consultation with native groups at both Regional and Head Office levels.

6. That Communications and Transportation systems be improved to the greatest degree possible. We suggest the following:

a) that short range transceivers become standard equipment for all health facilities.

b) that the responsible Provincial and Federal Departments be alerted to the implications and importance of inadequate road system to health care delivery.

7. That Medical Services and Indian and Northern Affairs activities be coordinated to the greatest degree possible and, in turn, coordinated with the Provincial Governments. We recommend that:

a) the various Federal and Provincial medical, paramedical and social (in the broadest sense) workers be considered as members of a Health Team and that they should occupy adjacent offices in the Community Health Centre.

b) that meetings between local Medical Services personnel and other Federal and Provincial workers be initiated. The obvious advantage of this approach is that decisions at the local level will be made on a more pragmatic basis; on the other hand, there is a risk, which we feel is warranted that policies may not always be followed.

8. That a formal evaluation of the chosen alternative be conducted after one year in operation. The review group should include representatives of Medical Services Head Office and Manitoba Region and, if possible, a representative of Native groups concerned.

9. That all administrative functions be centralized to the greatest degree possible in the Manitoba North Zone Office. Specifically we recommend that:

   a) all personnel functions and programs be administered by the Zone Office, and all personnel records be retained there.

   b) all financial functions, including purchasing, be administered by the Zone Office.

   c) inventory and records systems, which stress simplicity and ease of maintenance, be established in the Norway House Community Health Centre by Manitoba North Zone.

   d) supervision of administrative staff be the responsibility of resident health professionals.

   e) maintenance be administered by Zone, and actual work be done by local employees. The number of maintenance employees required in Norway House will be determined in part by the reliability and simplicity of heating systems, vehicles, etc., but based on Nursing Station experience two man-years would appear adequate.

10. That a complete review of the Health and Medical Information System be conducted.

11. That Native Groups, including Band Chiefs, be provided with a copy of the report and a "plain language" summary.

REFERENCES

1. Manitoba Region Housing Survey, 1974, Department of Indian Affairs and Northern Development, Manitoba Region.

2. Nutrition Canada National Survey, 1973.

3. Education Film Topics, 1974.
   - Pregnancy, Childbirth, Breast Feeding, Family Planning, Sex Education, Sanitation, Water, Nutrition, Infections, Communicable Diseases, First Aid, Safety, Dental Care, Drug Abuse.

4. Selkirk Report on Norway House, 1974. Northern Mental Health Team.

5. Manitoba White Paper on Health Policy, Queen's Printer, Winnipeg, July 1972.

SCHEDULED AIR TRANSPORT COSTS

FROM	TO WINNIPEG	TO NORWAY HOUSE	TO THOMPSON
CROSS LAKE	$50.00	$10.00	$23.00
GOD'S RIVER	60.00	33.00	-
GOD'S NARROWS	60.00	33.00	62.00
GARDEN HILL	50.00	27.00	70.00
ST. THERESA PT.	50.00	27.00	-
RED SUCKER LAKE	60.00	34.00	-
OXFORD HOUSE	60.00	27.00	45.00
THOMPSON	-	30.00	-

SOURCE: Transair - Midwest
Lambair

APPENDIX B

BACTERIOLOGICAL LEVELS REPORTED IN WATER SAMPLES AT SELECTED SITES*
(1974-75)

		SITES			SAMPLES			RATIO	
LOCATION	YR.	NO. OF SITES	TOTAL SITES CONTAMINATED (1)	NO. RATED HIGHLY CONTAMINATED (2)	TOTAL WATER SAMPLES	NO. SAMPLES CONTAMINATED	NO. SAMPLES HIGHLY CONTAMINATED	% OF SITES CONTAMINATED (3)	% OF SAMPLES CONTAMINATED (4)
NORWAY HOUSE	1975	6	5	3	21	14	4	83	67
ST. THERESA	1975	17	10	6	34	12	6	59	35
GOD'S NARROWS	1974	16	10	5	27	12	5	62	35
& RIVER	1975	11	6	2	18	6	2	55	33
CROSS LAKE	1974	20	9	2	27	9	2	45	33
CROSS LAKE	1975	35	23	8	50	26	8	66	52
OXFORD HOUSE	1974	9	7	5	56	23	6	78	41
OXFORD HOUSE	1975	5	5	3	24	11	4	100	46

* Reporting incomplete. Data related to routinely chlorinated water supplies including health facilities and other government buildings not included in this table.

(1) Contamination levels of 40 coliforms + per cc recorded at least once.

(2) Contammination levels of 1000 coliforms + per cc recorded at least once.

(3) i.e. at least one reading of 40 coliforms + per cc.

(4) 40 coliforms + per cc recorded.

Source: Northern Zone Bacteriological Water Reports. Sampling by C.H.R.

NATIVE PERSONNEL EMPLOYED BY MEDICAL SERVICES

GARDEN HILL

Caretaker	John Little
Housemaid	Isabelle Beardy
C.H.R.	Priscilla Fiddler
Clerk	Nattie Flett

RED SUCKER LAKE

C.H.R.	Kenneth Harper

WASAGAMACK

Caretaker	Louie P. Wood

ST. THERESA POINT

Caretaker	Alex Mason
Housemaid	Lucy Rose Mason
C.H.R.	Louis Wood
Clerk	Ambrose Wood

OXFORD HOUSE

Caretaker	William Colon
Housemaid	Emma Jane Okemow
C.H.R.	Louis Mason
Clerk	Loraine Whiteway

GOD'S NARROWS

Caretaker	Bernard Bland
Housemaid	Georgina Captain
C.H.R.	Harold Okemow
Clerk	Henry Nazzie
Nurse	Mabel Horton (New Employee)

GOD'S RIVER

C.H.R.	Jemima Ross

CROSS LAKE

Caretaker	Frank Trout
Housemaid	Amelia Garrioch
Part-time Casual Housemaid	Josephine Garrioch
Ward Aide	Isabelle Ross
C.H.R.	Jane Mabel Ross
C.H.R.	Susan McKay
Clerk	Emily Carriere

NORWAY HOUSE HEALTH CENTRE

C.H.R.	Amy Monias
Clerk	Elsie Keeper

DENTAL VISITS TO COMMUNITIES 1974-1975

LOCATION	MONTH	LENGTH OF STAY	TYPE OF VISIT	NAME OF DENTIST
GOD'S LAKE NARROWS / RIVER	1974			
	June/July	30 days	Dental Clinic	
	August	10 days	Dental Clinic	Dr. Powell
	* Sept/Oct.	32 days	Dental Clinic	Dr. Powell
	* Nov/Dec.	23 days	Dental Clinic	Dr. Powell
	1975			
	February	21 days	Auxiliary Team	Janet West
	February	11 days	Dental Clinic	Dr. Powell
	March	24 days	Dental Clinic	Dr. Powell
	May/June	25 days	Dental Clinic	Dr. Powell
	July	10 days	Restorative Clinic	
* - Did Clinic at Narrows and River				
CROSS LAKE	1974			
	February	days	Dental Clinic	
	March	4 days	Auxiliary Team	
	March	5 days	Dental Clinic	Dr. P. Hanson
	April	5 days	Dental Clinic	Dr. P. Hanson
	June	5 days	Dental Clinic	Dr. P. Hanson
	July	5 days	Dental Clinic	Dr. P. Hanson
	September	5 days	Dental Clinic	
	October	3 days	Dental Clinic	Dr. McKibbon
	November	2 days	Dental Clinic	Dr. McKibbon
	December	5 days	Dental Auxiliary +	Dr. McKibbon
	1975			
	January	7 days(2Clinics)	Dental Clinic	
	February	6 days " "	Dental Clinics	Dr. McKibbon & Dr. White
	March	4 days	Dental Clinic	Dr. McKibbon
	May	6 days(2 Cl)	Dental Clinics	Dr. McKibbon
	June	4 days	Dental Clinic	Dr. McKibbon

All Dentists are hired through Regional Office in Winnipeg and all Dental personnel are paid on a per diem basis.

Dr. Peter Powell usually goes into the Island Lake areas. Dr. Peter Hanson has now left Medical Services and is in private practice in Thompson.

Dental Auxiliary and Restorative teams also go into these areas, usually for a 2 - 3 week period prior to a dental clinic. The team treat minor discomforts, give dental hygene lessons to the school children and screen the community before the Dentist arrives.

DENTAL VISITS TO COMMUNITIES 1974-1975

LOCATION	MONTH	LENGTH OF STAY	TYPE OF VISIT	NAME OF DENTIST
GARDEN HILL/ RED SUCKER	1974			
	Feb/March	22 days	Dental Clinic	
	Feb/March	27 days	Auxiliary Team	
	June	10 days	Dental Clinic	
	July	19 days	Dental Clinic	
	October	11 days	Dental Clinic	Dr. Ruparella
	1975			
	January(R.S.L)	4 days	Dental Clinic	Dr. R. Glenn
	March	17 days	Dental Clinic	Dr. E. Assad
	June	18 days	Dental Clinic	Dr. Ruparella
	January	11 days	Auxiliary Team	+ Dr. McMillan & Dr. R. Glenn
WASAGAMACK	1974			
	January	12 days	Dental Clinic	Dr. Peter Powell
	July	10 days	Dental Clinic	Dr. Peter Powell
	1975			
	January	3 days	Auxiliary Team	
	February	1 day	Dental Clinic	Dr. B. Glenn
	March	17 days	Dental Clinic	Dr. E. Assad
	June	10 days	Dental Clinic	Dr. R. Desai
	July	3 days	Denture Fitting Cl.	Dr. R. Desai
ST. THERESA POINT	1974			
	June	11 days	Dental Clinic	Dr. Powell
	September	10 days	Dental Clinic	Dr. Ruparella
	1975			
	February	3 days	Auxiliary Team +	Dr. E. Assad
	June	5 days	Dental Team	Dr.Steve Tse & Dr. MacMillan
OXFORD HOUSE	1974			
	March	11 days	Auxiliary Team	
	March	2 days	Dental Clinic	Dr. Schartz
	June	9 days	Dental Clinic	Dr. McKibbon
	Oct/Nov	11 days	Dental Clinic	Dr. Powell
	May/June	17 days	Auxiliary Team	
	1975			
	February	5 days	Auxiliary Team	Rona Engler
	February	10 days	Dental Clinic	Dr. Powell
	April	11 days	Dental Clinic	Dr. Powell

OPHTHALMOLOGIST/OPTOMETRIST VISITS

LOCATION	YEAR	NO. OF VISITS	DAYS	VISITING DOCTOR
GARDEN HILL / RED SUCKER	1974	2	7	April/May - September - Dr. Wood
	1975	2	5	February - Dr. Wood May - Dr. Wood & Dennis Vandale
RED SUCKER	1975	1	1	MAY - Dr. Wood & Dennis Vandale
WASAGAMACK	1974	2	4	June - Dr. Wood September - Dr. Wood
	1975	1	1	May - Dr. Wood
ST. THERESA POINT	1974	2	4	June - Dr. Wood & Gordon Holmes September - Dr. Wood
	1975	1	2	February - Dr. Wood
OXFORD HOUSE	1974	2	6	May - Dr. Wood & Gordon Holmes October - Dr. Wood & Dennis Vandale
	1975	1	3	April - Dr. Wood
GOD'S LAKE NARROWS / RIVER	1974	2	7	May - Dr. Wood & Gordon Holmes October - Dr. Wood
	1975	1	4	February - Dr. Wood
CROSS LAKE	1974	3	9	March - Dr. Moola & Gordon Holmes June - ? September - Dr. Wood
	1975	1	4	March - Dr. Wood

Ophthalmologist visits are usually done twice a year, once between September and January in an effort to see the schoolchildren when the new term begins and between February and June before the end of the school year, and before the community goes out fishing, trapping etc.

Dr. R. Wood, and an assistant, usually go out to the Communities from Thompson.

Spectacles are supplied by AOCO Ltd. on a contract which is reviewed every year. AOCO do not have staff or facilities in Thompson, hence the involvement of S.N. King, (private optometrist).

OBSTETRICIAN/GYNECOLOGIST VISITS

LOCATION	YEAR	NO. OF VISITS	DAYS	VISITING DOCTOR
GARDEN HILL	1974	NIL		
	1975	NIL		
WASAGAMACK	1974	1	1	?Gynecologist from Norway House
	1975	NIL		
ST.THERESA POINT	1974	NIL		
	1975	NIL		
OXFORD HOUSE	1974	NIL		
	1975	NIL		
GOD'S LAKE & RIVER	1974	NIL		
	1975	NIL		
CROSS LAKE	1974	9	21	Jan- Dr. Peddle Feb - Dr. McCarthy Mar - Dr. McCarthy Apr.- Dr. Morrison Jne - Dr. Mitchell Jly - ? Aug - Dr. Livingstone Oct - Dr. Peddle & Dr. Yuen Nov - Dr. Barnes
	1975	6	11	Jan - Dr. Coopland Feb - Dr. Peddle & Dr. M. Jones Mar - Dr. Morrison May - Dr. Barnes Jne - Dr. Mitchell Jly - Dr. Coopland & Dr. S. Pingwardi

PAEDIATRIC VISITS

The Regional Paediatric Advisor, Dr. F. Coodin visited some of the areas. There were no other paediatric visits for 1974/5, in the areas involved in this Survey. There is a programme within the Zone which co-ordinated by Dr. Coodin in Regional Office and North Zone personnel. Nine paediatricians are visiting various communities this year.

Dr. Coodin's visits are as follows:

LOCATION	NUMBER OF VISITS		REMARKS
	1974	1975	
Garden Hill	2	1	
Wasagamack	Nil	Nil	
St. Theresa Point	1	Nil	
Oxford House	Nil	Nil	
God's Narrows	Nil	Nil	
God's River	Nil	Nil	
Cross Lake	4	2	Survey

E.N.T. CLINICS

NIL for all Stations

PATHOLOGIST VISITS

Nil for all Stations

LIST OF VISITING G.P.'S

NAME OF DOCTOR	NO. OF VISITS 1974	1975*
DR. DALE	68	22
DR. KEANE	43	49
DR. DUGGAL	15	20
DR. MASILIAMANI	3	-
DR. DAVID	-	1
DR. DONNELLY	-	25
DR. MISRA	-	1
DR. BURLINGHAM	-	1

AREAS VISITED BY THE ABOVE DOCTORS:

GARDEN HILL - DR. DALE

WASSAGAMACH - DR. DALE

ST. THERESA PT. - DR. DONNELLY & DR. KEANE

OXFORD HOUSE - DR. DONNELLY

GOD'S NARROWS/RIVER - DR. KEANE & DR. DALE

CROSS LAKE - DR. DUGGAL (DR. MASILIAMANI & DR. MISRA RELIEVING)

DR. BURLINGHAM WAS ALSO DOING A RELIEF CLINIC.

Dr. Duggal is on a 'Fee for Service' basis. He visits Cross Lake every week, going in on Tuesday and coming out on Wednesday.

* JANUARY - JULY

HOSPITAL FACILITY

SITE

The site, which occupies a peninsula on the Little Playgreen Lake, is irregular in shape, and comprises approximately 17.5 acres of enclave equi-distance from the main population groups (Figure 3). It is about half a mile down the road from the historic Hudson Bay Post and the current site of the modern Hudson Bay store and Post Office. The airport is 2 miles distant by an all-weather gravel road. The hospital is easily accessible by car or truck, by boats in summer and by snowmobile in winter.

EXISTING BUILDINGS

The following units are on the compound:

1.	The Hospital (replacing the 1920 facility)	erected 1952
2.	Accommodation Building	1952
3.	Maintenance Building (with additions in 1966)	1952
4.	Medical Superintendents' Residence	1952
5.	Pump House	1952
6.	West Residence	1955
7.	East Residence	1955
8.	Nurses' Residence	1960
9.	Two Dwellings, (Administration & Maintenance Supervision)	1964
10.	Single Mens' Residence	1966

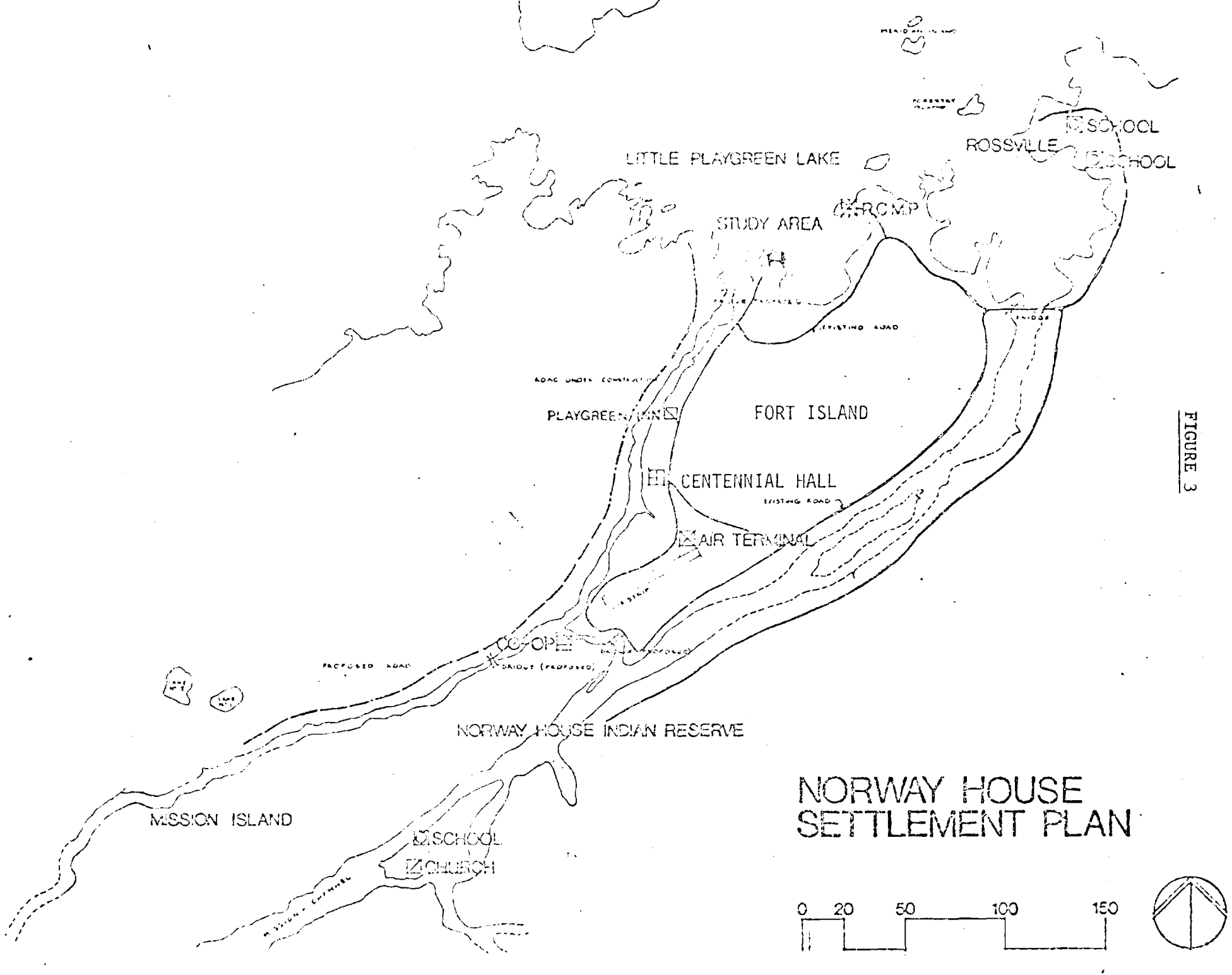

LITTLE PLAYGREEN LAKE
ROSSVILLE
SCHOOL
SCHOOL
RCMP
STUDY AREA
EXISTING ROAD
PLAYGREEN INN
FORT ISLAND
CENTENNIAL HALL
EXISTING ROAD
AIR TERMINAL
COOPE
PROPOSED ROAD
NORWAY HOUSE INDIAN RESERVE
MISSION ISLAND
SCHOOL
CHURCH
NORWAY HOUSE
SETTLEMENT PLAN
0 20 50 100 150

FIGURE 3

11.	Open Storage & Vehicle Storage (at entrance)	1970
12.	Sewage Treatment Plant	1970
13.	New Health Centre	1973
14.	New Staff Units (5 Town Houses)	1973

These units contain over 78,000 square feet of space of which the hospital comprises 21,000 and the clinic 5,000. (Figure 4)

The Hospital

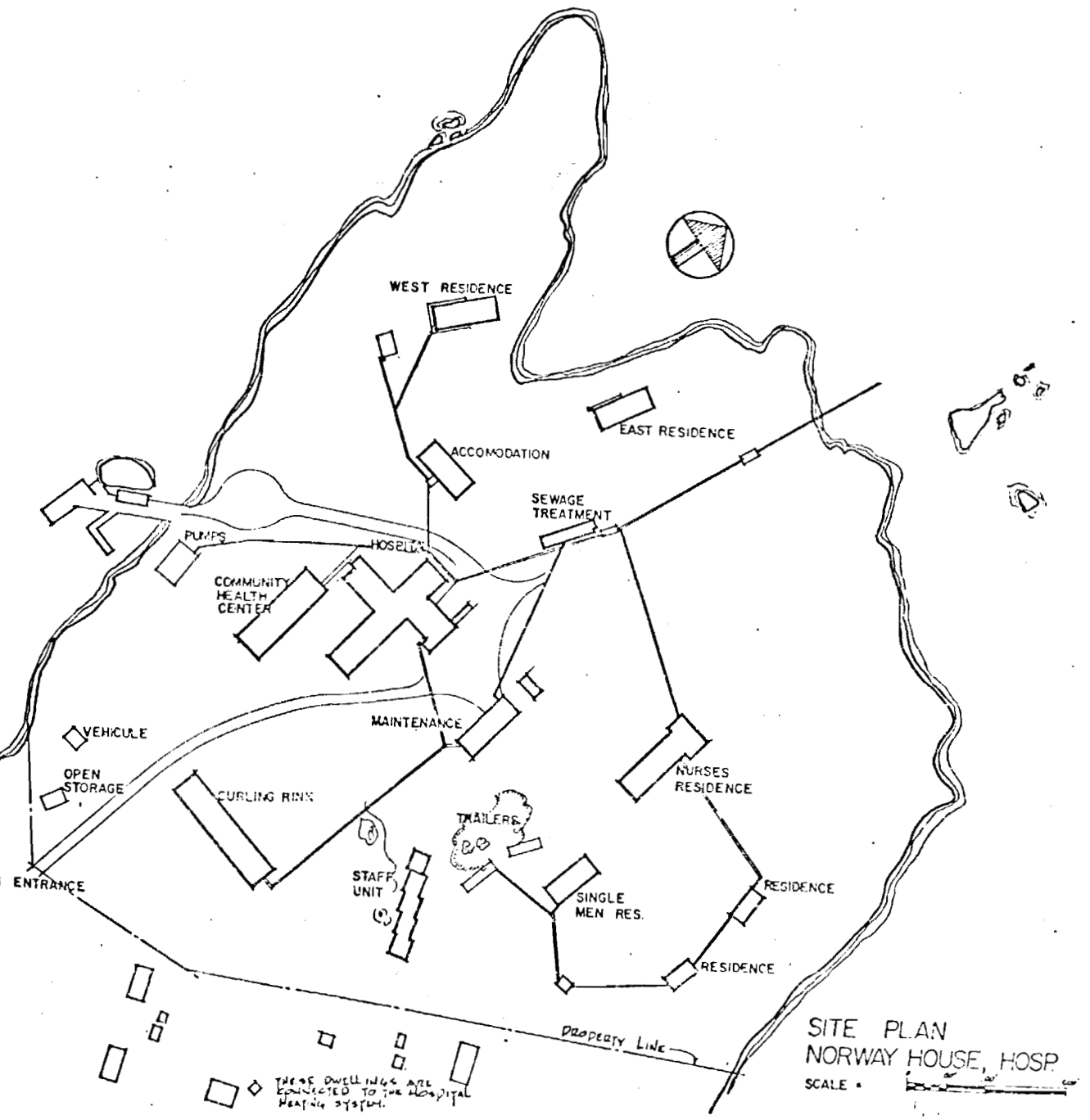
The Hospital, a two story building, is of frame construction. The main hospital door and admitting entrance in the northwest wing face the water, which necessitates a lengthy detour round the building to reach the patient entrance. (Figures 5 and 6)

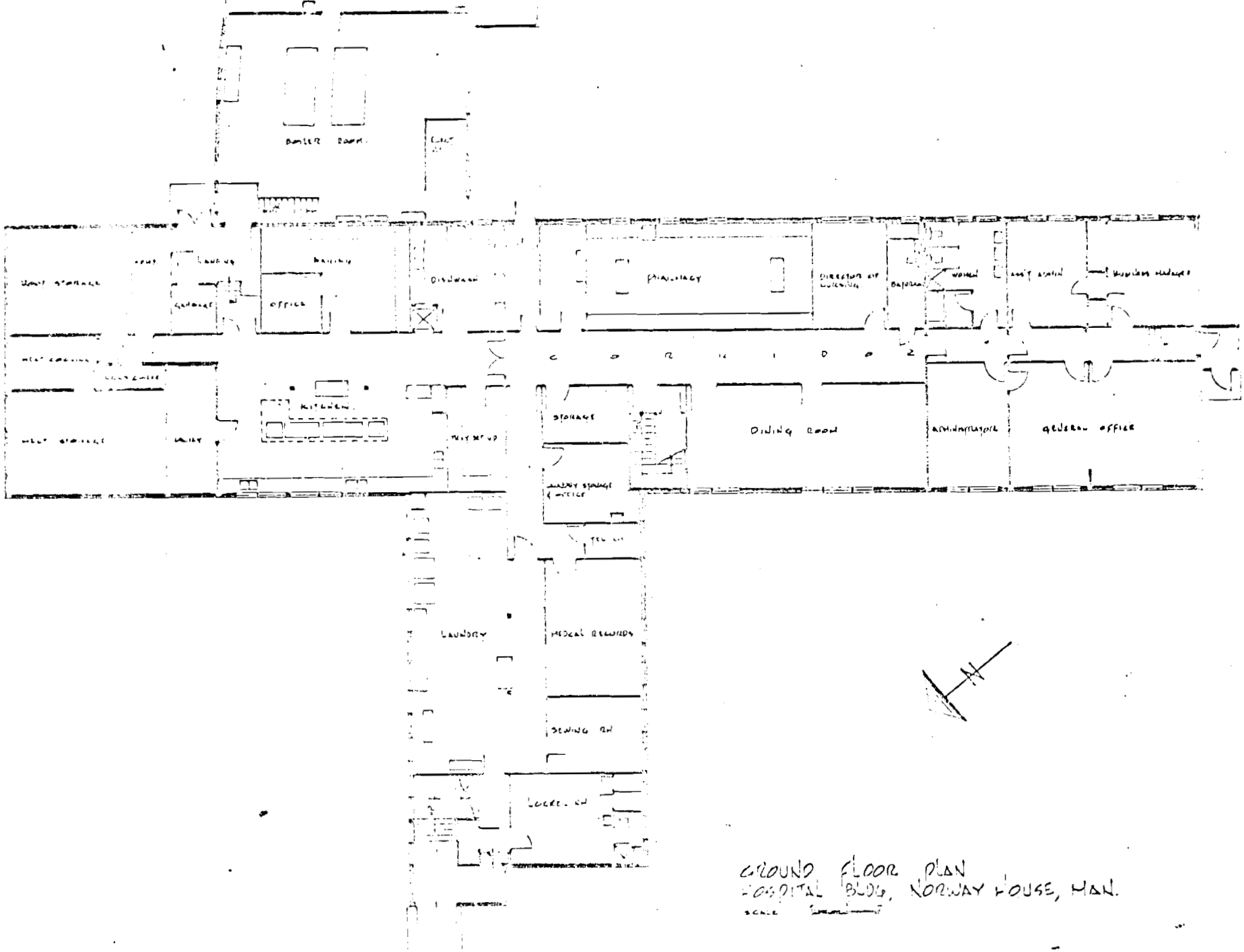
The emergency treatment room and in-patient wards are on the upper level, 13 steps above the entrance. Other buildings in the communities have ground level entrances.

It has stud walls and 4" laminated floors. It would appear that the original wood used in construction was un-seasoned and a damp local variety. This has resulted in abnormal settlement and twisting in various areas of the hospital.

The original interior wall surface of fibrous material was unsuitable for institutional use because it was easily damaged and difficult to clean. Part of this has since been replaced with painted dry wall. The

FIGURE 4


WEST RESIDENCE
EAST RESIDENCE
ACCOMODATION
SEWAGE TREATMENT
PUMPS
HOSPITAL
COMMUNITY HEALTH CENTER
MAINTENANCE
VEHICULE
OPEN STORAGE
CURLING RINK
NURSES RESIDENCE
TRAILERS
STAFF UNIT
SINGLE MEN RES.
RESIDENCE
RESIDENCE
ENTRANCE
PROPERTY LINE
THESE DWELLINGS ARE CONNECTED TO THE HOSPITAL HEATING SYSTEM.
SITE PLAN
NORWAY HOUSE, HOSP.
SCALE

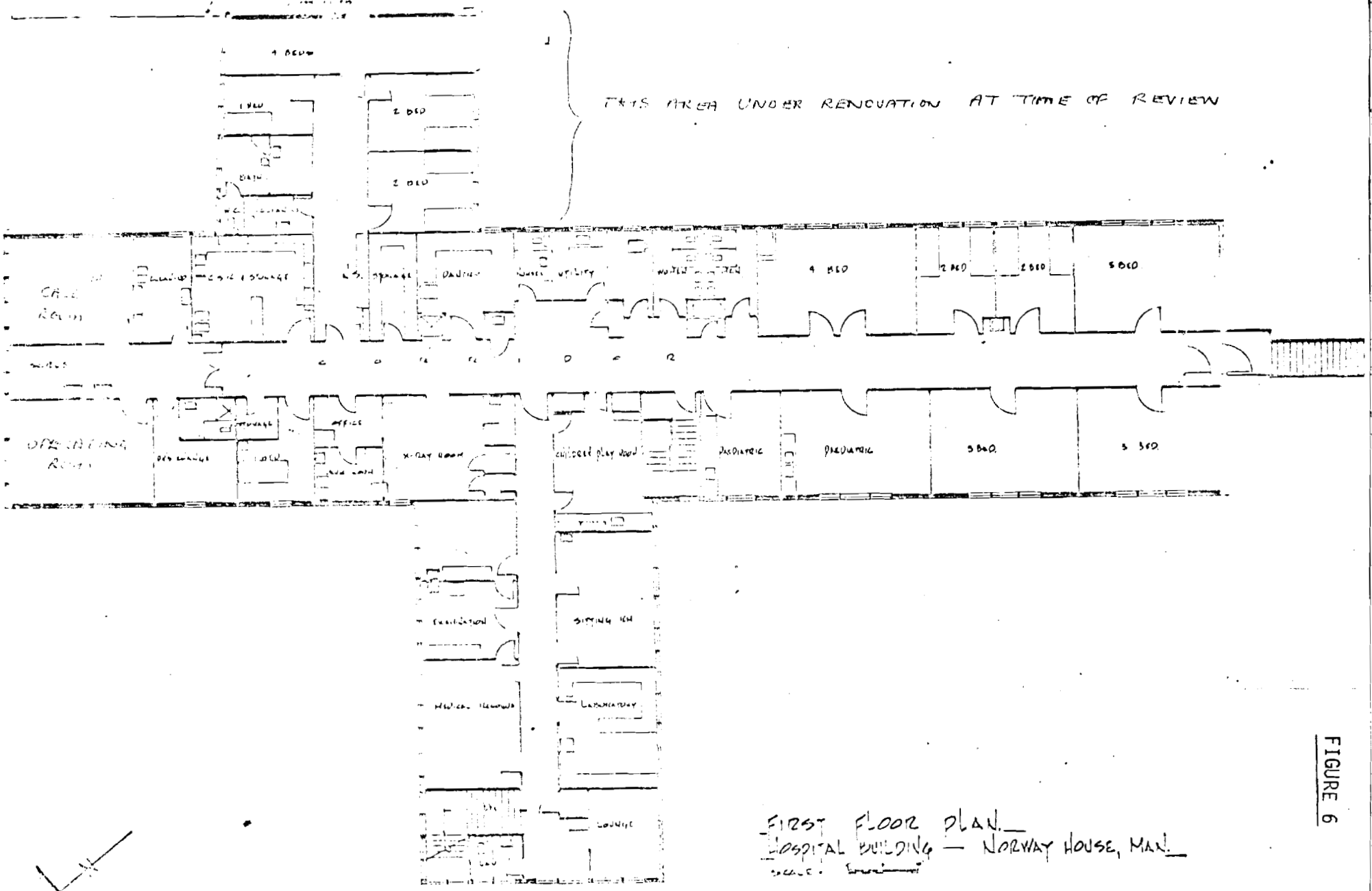


GROUND FLOOR PLAN
HOSPITAL BLDG, NORWAY HOUSE, MAN.

SCALE

HFUL MAY 75

FIGURE 5



FIRST FLOOR PLAN
HOSPITAL BUILDING — NORWAY HOUSE, MAN.

FIGURE 6

original floor covering is in poor condition due to normal wear and twisting of the laminated floors.

The Accommodation Building, East Residence and West Residence

These multiple family residences of 4 units each are of the same vintage and construction as the hospital, and in much the same condition as the hospital.

The Nurses Residence

This building is of frame construction, 2 stories plus basement. There is accommodation for 17 nurses, an apartment for the Director of Nurses and the usual lounges, kitchenette, etc. The basement contains a general stores area.

This building was erected in 1960 and is typical of nurses accommodation of that period in that only centralized bathing facilities are provided. This building and the single mens' residence are unpopular with staff who prefer apartments.

The exterior siding is a composition press-board which does not retain paint well and will eventually require replacement.

Single Mens' Residence

This is a one story building with crawl space. It contains 6 bedrooms, 2 bathrooms and a living-dining-kitchen.

Sewage Treatment Plant

This building, erected in 1970, accommodates the treatment tank, and is well built.

Norway House Health Centre

This modern (1973) single story building standing within 50 feet of the hospital is in excellent repair and had just had air-conditioning installed. The building (4018 sq. ft.) contains four (4) doctors consulting/examining suites, two (2) dental suites and laboratory, a treatment room, a small pharmacy, a small library/health education room, a waiting area (435 sq. ft.), offices for the Public Health Nurses and staff and a number of other rooms. The equipment is modern and well maintained.

The Pump House (The Annex)

This building, erected at the same time as the hospital, contains the mechanical equipment for the water supply, and the Morgue. The walls and ceilings are faced with painted $\frac{1}{4}$" plywood.

Maintenance Building

This building, well built and maintained, was erected in 1952, with additions in 1966, and incorporates carpentry shops, maintenance storage, and the garage, as well as a small paint shop, and a lumber storage shed.

Miscellaneous

On the property there are 3 other single family houses, small storage sheds, and curling rink.

Parking

Though not strictly necessary in this northern locality, there is ample parking for the staff.

Residential Row Housing

This comprises five 2 story wooden family units assembled in row house concept, each with three bedrooms, dining and living room and kitchen. Construction is fairly good but leaks have recently appeared in at least two of the units.

Hazards: Fire, Infection and Accidents

Many of the buildings are constructed of flammable material. Furthermore, the finish makes effective cleaning difficult and increases the risk of cross infection.

Progressive alterations have included the addition of fire warning and fighting equipment and other renovations and replacements to reduce the hazards of fire and infection, but, even so, the hospital has not rectified all the deficiencies identified by the Fire Marshall and fire training has not been continuous or compulsory. The periodic absence of a supervisor for dietary, housekeeping and laundry services has allowed lapses in standards to occur.

TABLE 28

NORWAY HOUSE HOSPITAL

Norway House, Manitoba

SPACE ANALYSIS

	Existing Area
28 Beds (total nursing unit)	5,320 Sq. Ft.
Administration	1,793 Sq. Ft.
Out-patient & Treatment	305 Sq. Ft.
Surgical & Delivery Suite	1,089 Sq. Ft.
Radiology	419 Sq. Ft.
Laboratory	243 Sq. Ft.
Pharmacy	603 Sq. Ft.
Dietary Dept. (kitchen, dining room, storage)	3,232 Sq. Ft.
Stores	289 Sq. Ft.
Laundry	1,044 Sq. Ft.
Employee Facilities	690 Sq. Ft.
C.S.R.	266 Sq. Ft.
Mechanical Room	1,620 Sq. Ft.
Corridors & Stairs	2,211 Sq. Ft.
Total Net Functional Area	19,124 Sq. Ft.
Total Gross Square Foot	21,400
Size of Site (useable)	17.5 Acres

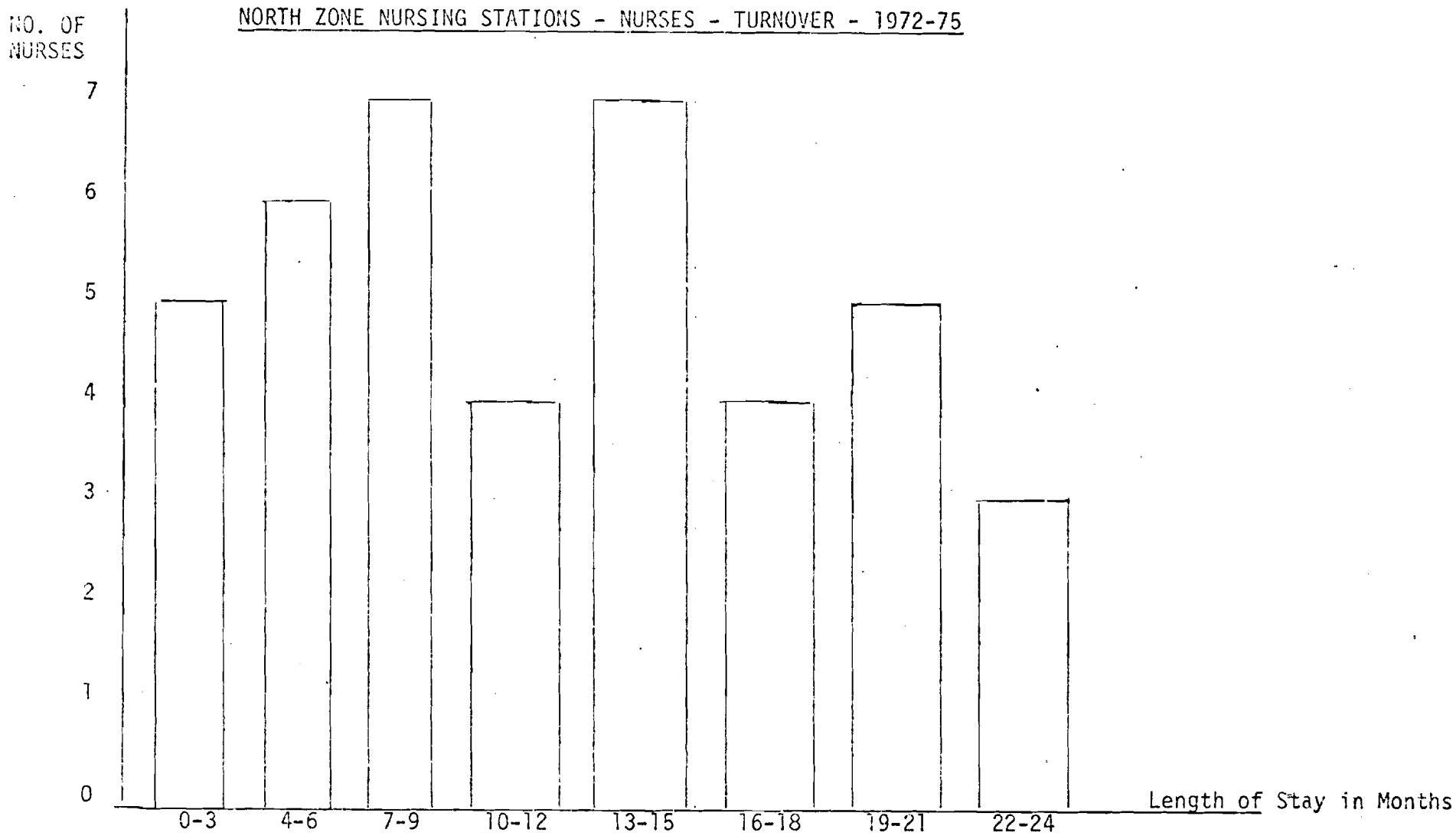
NORWAY HOUSE - TIME REQUIRED TO RE-STAFF VACANT NURSE OR TECHNICIAN POSITIONS

Mean time required to re-staff nurse & technician positions - 2.2 mos.

Mean stay of nurses & technicians in Norway House Hospital - 12.2 mos.

. Anticipated vacancy rate averages approximately 20% over time

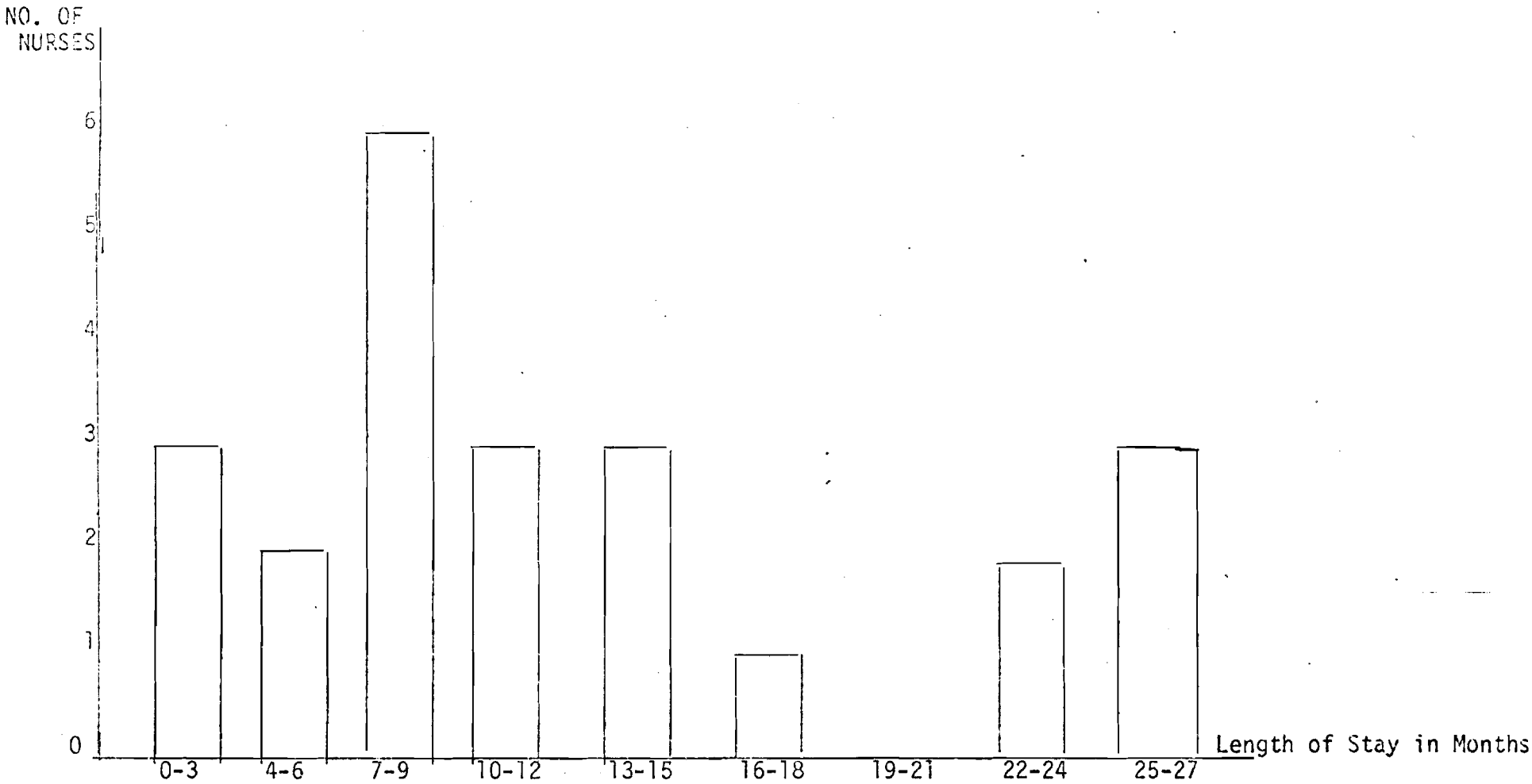
NOTE:
1. Because of data limitations, 20% calculated is minimum vacancy rate.
2. Upper limit of vacancy rate estimated at 30%, assuming that person leaves job 2 weeks before quit date to liquidate leave, and that present vacancies will continue for one month before being filled.



$\overline{X}$ = 11.6 mos.

NORWAY HOUSE HOSPITAL - NURSES - TURNOVER

1972-75



$\overline{X}$ = 12.2 mo.

Appendix J

ORGANIZATION CHART - NORWAY HOUSE HOSPITAL

ADMINISTRATOR AS-4

- SECRETARY SEC-1
- STENOGRAPHER STN-1

DIRECTOR OF NURSING NU-3

1 Head Nurse - NU-2
11 Nurses - NU-1
6 L.P.N'S - PHS-5
1 Nursing Orderly - PHS-5
5 Ward Aides

HOUSEKEEPING, LAUNDREY, LINENS DIETARY SUP. HDO-7

4 Cooks - HDO-4
1 Laundry Mgd. - HDO-3
2 Laundresses - HDO-2
1 Seamstress - HDO-2
2 Dietary Maids - HDO-1
5 Housemaids - HDO-1

BUSINESS MGR. ACCT. CR-5

1 Storesman - HDO-5
1 Procurement/Inv. Clerk - CR-3
2 Transport/Comm Clerks - CR-3
1 Accts. Rec. Clerk - CR-2
1 Accts. Payable Clerk - CR-2

MAINT. SUP. & CHIEF ENGINEER EIM-11

5 Shift Engineers - HP-2
1 Chief Maint. Mech. - MAM-8
1 Maint. Mech. - MAM-8
1 Electrician - EIM-10
1 Carpenter - WOW-9
2 Groundskeepers - HDO-4
5 Drivers

PERSONNEL CLERK CR-4

MEDICAL RECORDS CLERK CR-4

LAB. TECHNICIAN HOT-5

X-Ray Lab. Tech. - HOT-4

SR. X-RAY TECHNICIAN HOT-5

TOTAL NURSING - 25
TOTAL HOUSEKEEPING, LAUNDRY, LINENS, DIETARY - 16
TOTAL BUS. MGT. ACCOUNTING - 7
TOTAL MAINT. & ENG. - 17
TOTAL PERSONNEL - 1
TOTAL MED. REC. - 1
TOTAL LAB. -2
TOTAL X-RAY - 1

TOTAL POS'NS 71 (incl. Administrator)

NOV 28 1984