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**CONFIDENTIAL**  
MACKENZIE RIVER AREA  
HEALTH SERVICES STUDY

*Table in Council*

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SECTION I  
INTRODUCTION

## SECTION I, INTRODUCTION

The Department of Social Development, Government of the Northwest Territories, has assigned to the Consultant the responsibility of conducting a study of the Mackenzie River Area with regards to present and future health program and facility requirements.

The Area Study identifies needs which must be considered and is the initial step in the evaluation program.

As this study is reviewed in detail and the decisions are made as to acceptance and/or modification of the recommendations therein, it follows that the approach to long-range planning will be affected. Obviously, such planning is dynamic rather than limited to a specific study or set of studies. Therefore, this study must be looked upon as an informational document representing the objective findings and recommendations of the Consultant and must be subject to revision and updating as time passes and area factors change.

SECTION II  
TERMS OF REFERENCE



## SECTION II, TERMS OF REFERENCE

The Terms of Reference for this study were outlined in our "Proposal for Consulting Services" and in the "Government of the Northwest Territories - Service Contract".

In summary the services to be performed were:

- 1.0 Conduct a review of previous documents and reports which relate to this study.
- 2.0 Conduct an in-depth study of all Health Care Programs and service needs and facilities in the Mackenzie River Area.
  - 2.1 Construct an inventory of and review all Health Care Programs, Services, and facilities in the Mackenzie River Area.
  - 2.2 Determine utilization rates.
  - 2.3. Conduct a demographic study of the regional population, using published sources where possible.
  - 2.4 Project population development for approximately a ten year period, using published sources where possible.
  - 2.5 Evaluate transportation and evacuation routes in the area.
- 3.0 Delineate the program and service requirements for the area.
  - 3.1 Project patient care program needs to 1983, including extended and chronic care programs and facilities.
  - 3.2 Identify and project ancillary, preventive, diagnostic and treatment program needs.
  - 3.3. For new facilities recommended, consider the health centre approach including social as well as health requirements.
  - 3.4 Identify other problems associated with other proposed development.
  - 3.5 Recommend, wherever possible, alternative delivery systems.

SECTION III  
SUMMARY OF RECOMMENDATIONS

## SECTION III, SUMMARY OF RECOMMENDATIONS

1. It is recommended that:
  1. immediate discussions be undertaken by the appropriate levels of the Government of the Northwest Territories and the Government of Canada to develop and approve a plan of action to accomplish the stated objective of transferring the responsibility for the administration of health services in the Northwest Territories to the Government of the Northwest Territories
  2. the Government of the Northwest Territories initiate action to develop the necessary expertise and resources to assume this responsibility
  3. the suggested move of the offices of the Northwest Territories-Medical Services from Edmonton to Yellowknife be reconsidered in the light of the above recommended developments.
2. It is recommended that a careful study of all the legislation and regulations related to health care be conducted.
3. It is recommended that a central "Clearing House" for information related to studies and/or research be developed in Yellowknife to prevent a duplication of effort and the unnecessary spending of funds. This is particularly important with regards to studies relating to health care - whether conducted by the Territorial Government, the Federal Government, Universities, or individuals.
4. It is recommended that the Territorial Hospital Insurance Service make immediate contact with the Arctic Transportation Agency. Discussions should be held at the earliest possible date in relation to changing medical referral patterns, health facility changes etc. This input will assist the Agency in formulating their recommendations.

5. It is recommended that:
  1. Present travel policies be carefully reviewed.
  2. Present referral patterns be reviewed.
  3. Health programs and facilities be planned for the Northwest Territories so that a high standard of health care can be provided in the North for Northern Residents. This matter is referred to in greater detail in the discussion relating to "Community" (Primary and Secondary), "Area" (Tertiary), "Regional" (Quaternary) and "Speciality" (Major Medical Centres) health care programs and facilities.
6. It is recommended that:
  1. Representatives of the Territorial Hospital Insurance Services, the Department of Social Development, and the Northwest Territories Region - Medical Service meet with representatives of the Arctic Transportation Agency regarding present and future medical evacuation requirements.
  2. Schedule and charter aircraft continue to be used - with the resulting improvements related to revised travel policies; revised referral patterns, and the understanding of "Community" (Primary and Secondary), "area" (Tertiary), and "Regional" (Quaternary) and "Speciality" (Major Medical Centres) health care programs and facilities.
7. It is recommended that the present system of recording expenditures be reviewed with the objective of establishing cost centres that will permit the easy retrieval of information relating to the cost of health services.
8. It is recommended that a detailed review be made of the total cost of the provision of Radiological Services and Laboratory Services for the residents of the Northwest Territories. This review to include special contracts and professional fees relating to these services.
9. It is also recommended that every effort be made to coordinate and consolidate programs in order to bring the average per capita cost for health services in the Northwest Territories more in line with the National average costs.

10. It is recommended that discussions be held immediately between the various departments and agencies involved in health service in order that a clear understanding is developed as to each others role and objectives. Wherever possible effort should be coordinated in order to prevent duplication, fragmentation, and a waste of the valuable resources - manpower and money.
11. It is further recommended that in the future an index be developed outlining the services and objectives of various departments and agencies involved in the provision of health services. This index would be a valuable resource for staff orientation programs and for public information.
12. It is recommended that a glossary of terms be developed.
13. It is further recommended that a Public Information Program be developed, using audio-video tapes if necessary, so that the citizens of the Northwest Territories will have a better understanding of health services, programs and facilities.
14. It is recommended that every effort be made to encourage the appropriate levels of governments to push ahead with programs that will ensure an improved water, sewer and garbage service for all Northern communities.
15. It is recommended that efforts be increased to provide adequate housing accommodation.
16. It is recommended that factors related to Northern climatic conditions be considered so that new housing units will prove successful.
17. It is recommended that:
  1. The alcohol education and control program be expanded.
  2. All efforts in this important program be coordinated.
  3. Citizens living in each settlement be involved in the alcohol education program.
  4. All business, companies, agencies, and governmental departments be made aware of their responsibilities related to the recruitment, selection, orientation, and supervision of personnel.

5. Recreational and sport activities and facilities, where Alcohol is not served, be encouraged and supported.
18. It is recommended that a coordinated program be developed for senior citizens to provide:
  1. Home Care Programs - these programs should be provided from the Hospital, Health Centre, or Nursing Station and should provide home care services to citizens requiring this service in their homes or in senior citizen lodges.

If this type of program is developed it will be possible for families to keep elderly individuals in their homes for longer period of time. Also it will be possible for senior citizens to remain in Senior Citizen Lodges for a longer period of time.

The important fact is that whenever possible we should provide assistance so that senior citizens remain in their homes. This is their natural environment and this type of program is beneficial to them in that it prevents early "institutionalization" (even from the cost point of view the program is less expensive).

2. Senior Citizen Lodges - Whenever Senior Citizen Lodges are planned in the future a facility should be planned in order to provide:
  - (a) a few low rental suites
  - (b) provision for the "personal care" of a few citizens (similar service to the Aklavik "Old Folks Home").

Combined with a "Home Care Program" this type of a facility will be more acceptable to communities and allow for a much better service.

Where Senior Citizen Lodges are presently in existence several of the units should be re-allocated for the provision of "personal care".

This approach is discussed further under the section dealing specifically with Senior Citizen Lodges.

3. Extended Care - Chronic Care Service - Wherever a hospital facility exists in a settlement consideration should be given to the allocation of a few beds to Extended or Chronic Care. It is important not to over-allocate beds for this service. However, it is very important to have the services located close to the original residence of the patients. Because of the level of care required it is essential to have the service associated with the local hospital.

In approving the allocation of Extended Care or Chronic Care Services consideration must be given to programs for the activation of patients. Facilities for occupational therapy, physiotherapy and recreation should be included in the planning.

As this program develops consideration should be given to the recruitment of a combined Physiotherapist/Occupational Therapist to provide a visiting-consulting service to the various institutions providing Extended Care - Chronic Care Services.

In the section of this report dealing with Hospital and Health Centres specific reference is made to the provision of Chronic Care - Extended Care services at Fort Simpson, Inuvik, Hay River, Fort Smith, and Yellowknife. As soon as this program can be approved and made operational the large ward for Chronic Care at St. Ann's Hospital in Fort Smith should be phased out.

19. It is recommended that:
  1. Arrangements be made so that all Dentists practising in the Northwest Territories are associated with the School of Dental Therapy. This development is important for the future coordination and expansion of the program.

2. Every Nursing Station, Hospital, or Health Centre planned for the future should be designed so that facilities for a Dental Service are available, or can be easily made available.
  3. The program should be expanded as quickly as possible in order that Dental Therapists are placed at an early date in outlying settlements (an early placement at such settlements as Fort Simpson, Fort Resolution, Cambridge Bay, Aklavik, etc. would act as a pilot study for the success of the program).
20. It is recommended that consideration be given to the development of day care programs for:
- (a) senior citizens
  - (b) the handicapped
  - (c) infants and children of mothers working in the health care field.
- Where possible it is important that such program be coordinated through the appropriate health care facility in the community.
21. It is recommended that every hospital, cottage hospital, nursing station, health centre, health station, be requested to list all unused equipment and supplies and that this information be submitted to the office of the Territorial Hospital Insurance Service so that a master list can be circulated.
22. It is recommended that this matter be discussed at a meeting of the Northwest Territories Health Coordinating Committee in order to establish an acceptable policy for the quick and easy transfer of unused equipment and supplies to where they are required.
23. It is recommended that regarding handicapped persons in the Northwest Territories:
1. A coordinating committee be appointed to coordinate the activities between the Department of Education, the Department of Social Development and the Health Care Plan.
  2. An index be developed for handicapped persons in the Northwest Territories.



3. The Government of the Northwest Territories encourage the Northwest Territories Regional - Medical Services to increase their efforts to recruit a full time Psychiatrist to be based in <sup>Yellowknife</sup> Edmonton.
4. Every effort be made to coordinate the efforts of the two full time Psychologists - one with the Department of Education, Government of the Northwest Territories and one with the Mackenzie Zone, Northwest Territories Region - Medical Services, in order to prevent a duplication of effort.
5. The Government of the Northwest Territories should consider the appointment of a Speech and Hearing Consultant in order to increase basic testing in the Northwest Territories. At the present time a limited amount of work is being done by the Northern Health Nurses and some cases are being referred to Edmonton. However, there is a tremendous gap in the provision of this service. It may be possible to provide this service through a hospital or as a consulting service from the Health Care Plan.
6. Discussions should be held with the Inuvik General Hospital and the Stanton Yellowknife Hospital to determine the possibility of utilizing their Physiotherapists as resource personnel for other health services. If a satisfactory arrangement can not be made consideration should be given to the appointment of a combined Physiotherapist - Occupational Therapist to act as a resource person for hospitals, health centres, home care programs, etc.
7. As soon as the index for handicapped persons has been completed consideration should be given to services and facilities within the Northwest Territories. Such Services as schools for the handicapped, sheltered workshops should be included in this review.

24. It is recommended that support be given to the development of Home Care Programs as an alternative to institutional care.
25. It is further recommended that Home Care Programs be developed as a service from hospitals, health centres, nursing stations, and not as a separate entity within the community. If true coordination is to be promoted it is important not to add to the present fragmentation of services, but rather to initiate new services on a coordinated basis - emanating where possible from existing services.
26. It is recommended that provision be made for a full time Dietitian to provide consulting services to hospitals and other institutions in the Northwest Territories. In order to prevent unnecessary travel, and in order to better utilize these services, it is recommended that this Consultant use Yellowknife as a base of operation.
27. It is recommended that the Northwest Territories Region - Medical Service be encouraged to develop a Territorial Ophthalmological Service with headquarters in Yellowknife. A suggested approach to the development of this service is:  
as follows:
  1. The appointment of the present Ophthalmologist as a Regional Ophthalmologist with headquarters in Yellowknife.
  2. The appointment of the present Technologist as a Senior Technologist with an appropriate salary scale.
  3. The recruitment of two technicians to function under the Senior Technologist and the Regional Ophthalmologist. Consideration should be given to the selection of one technician immediately and it is suggested that a possible source might be a graduate nurse who has completed the training program at the University of British Columbia. This individual could then be brought into a special on-the-job training program under the direction of the

Regional Ophthalmologist and the senior Technologist.

4. It would be necessary for the Regional Ophthalmologist to visit each of the zones and each of the Ophthalmologists providing a contract service. This would be an orientation fact finding visit.
  5. It is recommended that consideration be given to a central patient record system - with the central files at the Regional headquarters in Yellowknife.
28. It is recommended that immediate steps be taken to improve Psychiatric Services in the Northwest Territories. Consideration should be given to:
1. The appointment of a Psychiatrist, resident in Yellowknife
  2. The expansion of the program to utilize community Psychiatric Nurses in a role similar to the Northern Health Nurse.
  3. The provision of adequate information to professional personnel and to families regarding the progress of patients receiving treatment outside the Northwest Territories.
  4. Arrangements so that families and professional personnel are contacted prior to discharge of patients so that adequate preparation can be made. Complete discharge information should be provided so that the professional personnel in the community can provide adequate follow-up and support.
  5. The arrangement of discussions with representatives of the health care field in order to assure the use of health and chronic care facilities for psychiatric patients.
  6. A review of the patients receiving treatment inside and outside the Northwest Territories should be made in order to determine the facility requirements for patients that can appropriately receive services in the Northwest Territories.
29. It is recommended that a high priority be given to the maintenance and expansion of a broad Public Health Service throughout the Northwest Territories. Consideration should be given to:

1. A clear policy statement concerning the services should be distributed and personnel should be encouraged to use a broad interpretation of policies.
  2. Community involvement in program development and administration should be developed.
  3. Where a Medical Health Officer is appointed a mechanism should be worked out so that a system of communication is available concerning programs and services.
  4. Recruitment procedures should be reviewed and expedited.
  5. Staffing complements should be reviewed on an annual basis to assure adequate staff to meet program and service needs.
  6. Policies in relation to the involvement of Public Health personnel in school programs should be reviewed to assure adequate public health services.
  7. Community programs and appointments should be arranged on the most appropriate schedule for each community.
  8. Public Health Personnel should be encouraged to participate in programs that will lead to a better coordination of total health services.
30. It is recommended that discussions be held between the Department of Social Development, the Northwest Territories Housing Corporation, and the Central Mortgage and Housing Corporation to discuss;
1. The best utilization of existing Senior Citizen Lodges to meet the individual communities needs (special attention should be given to Fort Simpson, Fort McPherson and Fort Resolution).
  2. A coordinated approach to planning to meet community needs wherever new projects are being considered, ie: Fort Good Hope and Aklavik.
31. It is recommended that the planning for any new Senior Citizen Lodges be temporarily delayed and where construction has not been completed the activity be temporarily delayed, until the outcome of the above discussions is known.

32. It is recommended that where necessary an integrated program of services for senior citizens be developed including:
  1. When required, support services in their home through a Home Care Program operating from the local hospital, health centre or nursing station. In the future the emphasis should be on enabling citizens to remain in their own homes as long as possible.
  2. Only when required, a physical facility providing both a few low rental suites and also accommodation where some form of personal care is available. The Home Care Program should also provide services to the citizens of this facility.
  3. In settlements with hospitals planning should proceed so that a small number of beds are available for extended care or chronic care.
33. It is recommended that a transportable nursing station be considered for use in settlements which expand quickly on a temporary basis, as will take place during a major project such as the oil and gas pipeline.
34. It is also recommended that further work be conducted on the design of the transportable nurses station with special emphasis on:
  - (a) The functional design of the unit.
  - (b) The structure of the unit - it was pointed out that the unit could be moved into a particular location and assembled. However, it is apparently doubtful if the structure would stand being taken apart again, moved and re-assembled. Therefore, it is important that further consideration be given to the possibility of not only a transportable unit but a moveable unit.

- (c) Some experience has already been gained on different roof structures. This experience should be reviewed and incorporated into future design work.
  - (d) The operation of any existing units should be reviewed to obtain suggestions and recommendations for improvement.
35. It is recommended that with regards to physical facilities the following be considered (details concerning each recommendation are contained in the main body of this report):
1. An expanded Health Centre be planned for Hay River in order to provide a facility for health services for the lower Great Slave Lake Area.
  2. That a small health centre be planned for Fort Smith.
  3. That the oversized physical facilities at the Jnuvik General Hospital be re-organized to provide a Health Centre Service for that area - including a Home Care Program, Extended Care - Chronic Care Services, etc.
  4. That a major Regional Health Centre service be planned for Yellowknife and that this project be given top priority in order to integrate and coordinate services for the Northwest Territories.
  5. That at the Fort Simpson General Hospital immediate steps be taken to renovate the present sitting room so that a total of four chronic patients can be taken care of immediately. It is also recommended that consideration be given to a small addition to the hospital to provide six Extended Care - Chronic Care Beds. It is also recommended that a Home Care Program be developed and that the use of the Senior Citizens Lodge be reviewed.

36. It is recommended that:

1. An integrated, coordinated health system be developed in the Northwest Territories to provide services for the citizens of the Northwest Territories.
2. The emphasis be placed on prevention and ambulatory care - institutionalization should only take place when these programs fail to meet the medical needs of the particular patient.
3. Planning continue, "long term as well as short term, in order to avoid hap-hazard development, to respect defined priorities and to secure the most profitable use of limited resources. Even a minimum health plan can have a proper time - table and take into account bottle-necks. It is essential that the population concerned are represented from the very beginning in this planning (statement by Sixten Haraldson, Page 29, - "Evaluation of Alaska Native Health Service").

SECTION IV  
FINDINGS AND RECOMMENDATIONS



## SECTION IV, FINDINGS AND RECOMMENDATIONS

### Service Area

In this report the area under study is referred to as the Mackenzie River Area. In the specific terms of reference the area may be defined as that region of the Northwest Territories lying between a line drawn between Fort Smith and Cambridge Bay on the East side and the Yukon - Northwest Territories on the West side.

The Consultant was specifically requested to visit the following settlements: Aklavik, Cambridge Bay, Fort McPherson, Fort Providence, Fort Resolution, Fort Simpson, Fort Smith, Hay River, Inuvik, Norman Wells, Pine Point, Yellowknife. In the course of the study the Consultant visited each of the settlements listed and made repeated visits to several.

Although several of the recommendations contained in this report are specific to either this area or a settlement within the area, many of the recommendations can apply to settlements outside the area under study.

### Responsibility for Health Services

All residents of the Northwest Territories are entitled to receive the benefits of the N.W.T. Health Care Plan. The Health Care Plan includes medical and hospital insurance. The Medical Care Plan began on April 1, 1971 to complement Territorial Hospital Insurance Services which has been in operation since 1960. Both these plans are provided with no premiums payable. Costs of the programs are met from Territorial revenues and from the related Federal cost sharing programs.

Although the Ordinances and reports relating to the responsibility for the provision of health services are quite clear as to their intent, there is at present a definite dichotomy existing between the Territorial Government and the Federal Government.

For example with regards to hospitals, under the Ordinances of the Northwest Territories, Canada, Chapter 3 - "An Ordinance to provide Hospital Insurance for Residents of the Northwest Territories", 1959 Second Session it states:

1. Under Clause 6.(1) - "There shall be a corporation to be called the Territorial Hospital Insurance Services Board, consisting of three members to be appointed by the Commissioner"
2. Under Clause 8. - "Subject to this Ordinance and the regulations, the Board has power" ----
  - (e) "to license, supervise and inspect hospitals in the Territories, and ensure that adequate standards are maintained therein,"
  - (f) "to authorize the establishment of hospitals in the Territories or any change in such hospitals, and develop and maintain a coordinated system of hospitals, training schools and related facilities throughout the Territories;"

3. Under Clause 2. - "The Commissioner may make regulations":
- (f) "respecting the operation of hospitals, including the licensing, classifying, supervision and inspection thereof and the maintenance of adequate standards therein"
  - (e) "approving hospitals for the proposal of the hospital insurance plan"

In the "Regulations For The Control of Standards in Hospitals in the Northwest Territories: it states that:

- Clause 3. - "There shall be an advisory agency to be called the Hospital Services Planning Division, which shall be responsible to the Commissioner and which shall:
- (a) provide consultant services to the Commissioner on any of the matters referred to in sub-sections (e), (f), (g) and (h) of Section 8 of the Ordinance and all matters pertaining to any Regulations under the Ordinance;
  - (b) have the duty and power to inspect any hospital and make recommendations to the Commissioner;
  - (c) perform such other duties with respect to the supervision and planning of hospitals, hospital services and facilities and other related health services as the Commissioner may prescribe."

Clause 4. - "(1) These Regulations shall apply to every hospital except that the Board, in granting permission to any hospital authority to operate a hospital, may suspend temporarily the application of any of these Regulations."

- "(2) Any suspension by the Board of any of these Regulations shall be stipulated in writing to the hospital authority and shall include such terms and conditions for the completion of such alterations and/or additions to the buildings, installations, equipment and other facilities of the hospital, and/or such changes in the number and type of hospital personnel as may in the opinion of the Board be necessary for full compliance with such Regulations."

Clause 5. - "No building, institution, installation or facility may be constructed, acquired, altered or continue to operate hereafter as a hospital unless

- (a) an application is made to the Board on the prescribed form by the owner or other agency responsible for such building, institution, installation or facility;
- (b) a hospital authority for the proposed hospital is named in such application;
- (c) permission is granted by the Board in writing to such hospital authority to operate such building, institution, installation, or facility as a hospital subject to such conditions as the Board may determine;
- (d) in the case of proposed new construction or alterations, plans have been submitted beforehand to the Board in accordance with these Regulations".

- Clause 13. - "Land shall not be used as a site for a hospital until approved by the Board."
- Clause 14. - "No building, institution, installation or facility shall be constructed or acquired for hospital purposes until provisional approval has been obtained from the Board. Applications for such provisional approval shall be submitted to the Board, and shall be accompanied by sketch plans in triplicate and such other information as the Board may require.
- Plans when approved shall not be altered without the written consent of the Board".
- Clause 15. - "No hospital shall be altered by enlarging or remodeling until provisional approval has been obtained from the Board. Application for such provisional approval shall be submitted to the Board and shall be accompanied by sketch plans in triplicate and such other information as the Board may require. Plans when approved shall not be altered without the written consent of the Board".
- Clause 16. - "Any hospital building erected or altered shall not be finally approved until examined by one or more inspectors and found to comply with all requirements of the Board".
- Clause 17. - "No reallocation of the use of areas within a hospital shall be made by a hospital authority so as to affect its rated capacity without the prior approval of the Board".

In the "Medical Care Ordinances - 1970, Third Session, Chapter 8."

Clause 22. - "The Commissioner may make regulations: establishing a Medical Care Plan for furnishing to insured persons insured medical services by medical practitioners that will in all respects qualify and enable the Territories to receive payments of contributions from the governments of Canada pursuant to the Medical Care Act of Canada."

The Consultant also noted that under the Ordinance of the Northwest Territories, Chapter 7, "An Ordinance Respecting Public Health" - 1957, First Session, reference is again made to the powers of the Commissioner with regards to hospitals.

It states that:

Clause 3. - "The Commissioner may make such rules, orders, and regulations as he deems necessary for the prevention and mitigation of disease and the promotion and preservation of health in the Territories, and, in particular, but not so as to restrict the generality of the foregoing may for such purpose make rules, orders, and regulations respecting:

- (c) the location, construction, ventilation, lighting, heating, equipment, water supply drainage, toilet and ablution facilities, excreta and garbage disposal, protection against rodents and vermin, cleansing, disinfection and disinfestation of, and the sanitary inspection and control of:
  - (i) hospitals, nursing homes, nursing stations, health centres, maternity homes, convalescent homes for physically and mentally handicapped persons";

Therefore, from these brief excerpts from the various official documents applying to hospitals and related facilities in the Northwest Territories the responsibilities and powers of the Commissioner, the Territorial Hospital Insurance Services Board, and the Hospital Services Planning Division should be clear. However, the Consultant noted that in practice these responsibilities were definitely not clear and in fact many Ordinances were not being adhered to.

The Consultant noted that the dichotomy between the Territorial Government and the Federal Government with regards to the responsibility for the provision of health services existed throughout the health system.

The dual responsibility for the provision of health services has led to a fragmentation of services and a dilution of the most valuable resources - manpower and finances. The Consultant was made aware of the program planning and implementation at one level of government which had not been adequately discussed with the other level of government.

The formation of the N.W.T. Health Coordinating Committee early in 1974 was a major step forward in improving communications relating to health programs and services. The Territorial Hospital Insurance Services Board and the Northwest Territories Region - Medical Services are both represented on this Committee with an Assistant Commissioner as Chairman.

In the Consultants opinion one of the major problems in the development of health programs and services is the divided responsibility for the provision of these services in the Northwest Territories.

The Royal Commission on Health Services in its report in 1964 - 1965 stated on page 280 of Volume II: "We have recommended that the Federal Government enter into similar arrangements with the territorial administrations as those envisaged for the provinces, for the introduction and operation of comprehensive and universal programmes of personal health services, ---"

In the Report of the Advisory Committee on the Development of Government in the Northwest Territories, 1966 the following statement is recorded on Page 48 of Volume I: "Under the Northwest Territories Act the territorial government has responsibilities in most fields of endeavour for which the Canadian provinces are responsible, with the principal exception of natural resources, which (apart from game management) has been retained within the jurisdiction of the federal government."

In perusing the Northwest Territories Act. R.S., c331, S.1 Ottawa 1970, the following is noted under Section 13 and Subsection (u):

Section 13. "The Commissioner in Council may, subject to this Act and any other Act of the Parliament of Canada, make ordinances for the government of the Territories in relation to the following classes of subjects, namely: -----"

Subsection (u). "the establishment, maintenance and management of hospitals in and for the Territories;"

Section 15. of the Act states: "The Commissioner in Council may make ordinances authorizing the Commissioner to enter into an agreement with the Government of Canada under and for the



purposes of any Act of the Parliament of Canada that authorizes the Government of Canada to enter into agreements with the provinces, but no such agreement shall be entered into by the Commissioner without the approval of the Governor in Council 1953 - 1954, c.8,S.10".

This fact has been recognized by the Council of the Northwest Territories. In the official report of the debates for the 48th session of Council, Thursday, January 25, 1973, Page 258 the following motion was recorded:

"Because the provision of health services in the Northwest Territories are provincial - type services which intimately touch the people, the committee recommends the Department of National Health and Welfare transfer to the territorial government the funding, staff and responsibility for the provision of health services to the people of the Northwest Territories".

The Federal Government has also been cognisant of the need to expand the responsibilities of the Territorial Government. In December 1970, the Cabinet approved the "National Objectives for Northern Canada" and on July 15, 1971, Cabinet approved the "Policy for Northern Development 1971-81".

The first objective in the approved "National Objectives For Northern Canada" states: "To further the evolution of government in the Northwest Territories. The objective is to establish effective and responsible political institutions so that northern residents have the means to regulate the quality of their lives". The seven northern objectives are attached to this report as Appendix I.

The Northern Region - Medical Services, Department of National Health and Welfare, have incorporated the philosophy of the "National Objectives for Northern Canada" into their planning. In the "Northern Region - Medical Services, Regional and Zone Objectives for 1972 - 1973" the second long term objective states: "To include in the Health Services Organization a plan for the development of a Territorial Department of Health for each of the Territories and for a phased transfer of responsibility for health services of all residents to these Departments over a period of three to five years".

On page 24 of this report it states: "To increasingly involve Northern Administration and residents in the operation of the Health Care system so that they gain the necessary experience to enable them to take over responsibility within a period of three to five years."

The division of responsibility between the two levels of government has been recognized by other researchers:

1. "Mackenzie Valley Social Impact Study" by Gemini North Ltd., May 1973, pages 239 - 240.

"We would also suggest that the existing split jurisdiction over health care in the Northwest Territories be examined either through transfer of complete responsibility, with adequate resources, to the appropriate Territorial Authorities, or through a joint board with full responsibility and adequate autonomy.

It is preferable that this be done quickly and with a minimum of public and political debate.

The primary intent of such a change is to greatly increase flexibility and responsiveness to development dynamics and to facilitate clear definition and coordination between the Government of the Northwest Territories, the Federal Government agencies involved, major developers and those responsible for inter-provincial hospital insurance schemes and payments."

2. "Mackenzie Valley Developments; Some Implications For Planners" Volume 1, by T.G. Forth, I.R. Brown, M.M. Keeney, J.D. Parkins: Page 64.

"Since Government has a major impact on the Northwest Territories, it was considered necessary to devote an entire section of the study to the cataloguing and the evaluating of Government activity in the Mackenzie Corridor."

In referring to government expenditures this report also referred to the National Northern Objectives (Page 73).

"In December of 1970, Cabinet approved the National Objectives for Northern Canada". On July 15, 1971, the "Policy for Northern Development 1971 - 1981", to be implemented by all Federal Departments and Agencies in the North, was approved by Cabinet."

One of the seven stated Northern Objectives was:

1. "To further the evolution of government in the Northwest Territories

The objective is to establish effective and responsible political institutions so that Northern residents have the means to regulate the quality of their own lives."

The transfer of responsibility by the Federal Government to the Territorial Government is not new. For example, full responsibility for the administration of northern education has been transferred from the Federal Government to the Government of the Northwest Territories.

Therefore, there is a precedent for the accomplishment of the stated objectives of the Government of the Northwest Territories and the Federal Government with regards to the transfer of full responsibility for health services to the Territorial Government. However, a definite plan to accomplish these objectives has not been developed and the dichotomy of responsibility, with its resulting fragmentation and dilution of valuable resources continues.

Without an approved plan of action it is only natural for alternate plans and even conflicting plans to develop. For example, tentative, plans are being made to transfer the offices of the Northwest Territories Region - Medical Services from Edmonton to Yellowknife. It has been suggested that this move may be scheduled for 1976.

This suggested move is a very major development since it will involve the transfer of approximately seventy-five to eighty-five positions from Edmonton to Yellowknife. (See Appendix for a listing of the present positions in the Regional office). The important fact is that the move would probably be unnecessary if and when the full responsibility for the administration of health services is vested with the Government of the Northwest Territories.

Therefore, it is recommended that:

1. immediate discussions be undertaken by the appropriate levels of the Government of the Northwest Territories and the Government of Canada to develop and approve a plan of action to accomplish the stated objective of transferring the responsibility for the administration of health services in the Northwest Territories to the Government of the Northwest Territories.
2. the Government of the Northwest Territories initiate action to develop the necessary expertise and resources to assume this responsibility
3. the suggested move of the offices of the Northwest Territories - Medical Services from Edmonton to Yellowknife be reconsidered in the light of the above recommended developments.

### Health Legislation

In a review of the various Ordinances and Regulations relating to the provision of health services in the Northwest Territories the Consultant noted major differences in the legislation and the present practice.

It is recommended that a careful study of all the legislation and regulations related to health care be conducted.

### Review of Previous Documents and Reports

In the conduct of this study it was forcefully brought to the attention of the Consultant that a great number of Studies had been carried out in the Northwest Territories, several relating to the terms of reference for this Project. Individuals expressed concern to the Consultant that information relating to the results of the various studies was never received. In the Consultants opinion input to future studies will be jeopardised if those participating in the studies are not made aware of the results.

This concern was also expressed in the discussions at the 53rd session of the Council of the Northwest Territories. On Thursday, June 20, 1974, the Council discussed Bill 3-53, "An Ordinance Respecting Scientists". During this discussion reference was made to the following:

- many papers are being published on similar topics
- often information is not reported back to those participating in the study
- the possibility of having several teams in the same settlement doing the same thing.

On page 3 of the June 26, 1974 issue of "News of the North" an article reporting the Council discussion of this matter was reported under the title: "Northerners are Tired of Being Studied".

The Consultant also noted an unnecessary duplication of effort with regards to the collection of certain information. In addition to the duplication of effort scarce financial resources were not being utilized to the best advantage.

A good example of the lack of coordination of effort is the "Community Profile" and "Medical Facility Profile" surveys conducted in the Yukon and the Northwest Territories during the summer of 1974. The information required for both surveys was already available in Yellowknife and in Edmonton. Further, if necessary the questionnaires could have been mailed to the appropriate individuals in each community for completion. Further, those involved with the Territorial Hospital Insurance Services were not aware that the surveys were being undertaken.

Realising the atmosphere developing with regards to studies the Consultant has attempted to present a concise, straight-forward, practical document. As a result it is anticipated that the recommendations can be quickly and easily reviewed.

It is recommended that a central "Clearing House" for information related to studies and/or research be developed in Yellowknife to prevent a duplication of effort and the unnecessary spending of funds. This is particularly important with regards to studies relating to health care - whether conducted by the Territorial Government, the Federal Government, Universities, or individuals.

A list of the reports reviewed by the Consultant and referred to in this report, is attached as Appendix 2.



## Population

In perusing the population figures and projections for the Northwest Territories the Consultant's experience corresponded to that of others who have attempted to correlate this information - "there was not much relevant data to work with. Of the little that was available, some was suspect, many were unreconcilable, while others contained yawning gaps ("Population Projections of the Northwest Territories to 1981" - by Chang-Mei Lu and D. C. Emerson Mathurin).

In particular the Consultant noted the large discrepancies in the population figures quoted for a particular settlement.

Due to the possible rapid changes in the population in the Northwest Territories should the Gas Pipeline, Oil Pipeline, and/or the Mackenzie Highway proceed, it is very difficult to project population figures.

Statistics Canada indicate that the 1971 Census figure for the Northwest Territories was 34,807 (see appendix 3). Table 1 compares the population, by subdivision from 1921 - 1971.

Table 2 indicates the breakdown of the population of the Northwest Territories by Specified Ethnic Groups. In particular the Consultant noted the lack of clarification of the large Eskimo Population of the Northwest Territories and the fact that it is included in the "Other" subdivision.

Table 3 provides an "Age" and "Sex" breakdown for the population.

Table 4 provides a breakdown of the 1971 Population by Ethnic Group, Sex, and Age Group. The percentage distribution of each age grouping is also indicated. This data indicates a relatively young population.

TABLE 1

Population of the Northwest Territories By Census Subdivision 1921 - 1971.

<u>Northwest Territories</u> <u>Territoires du Nord-Ouest</u> .....	8,143	9,316	12,078	16,004	19,313	22,999	23,738	34,437
<u>Franklin District</u> .....	203	2,426	2,968	3,424	4,408	5,758	7,167	7,747
Unorganized - Non municipalised .....	203	2,426	2,968	3,424	4,408	5,758	7,167	7,747
<u>Kuvviut District</u> .....	972	1,404	1,766	2,391	2,413	2,355	2,836	3,403
Unorganized - Non municipalised .....	972	1,404	1,766	2,391	2,413	2,355	2,836	3,403
<u>MacKenzie District</u> .....	6,946	5,285	7,274	10,279	12,492	14,885	18,695	23,657
Fort Simpson L.L.D. ....	...	...	...	...	493	563	712	...
Fort Smith L.L.D. ....	...	...	...	...	1,184	1,631	...	...
Hay River N.D. ....	...	...	...	...	942	1,373	...	...
Inuvik L.L.D. ....	...	...	...	...	...	1,200	...	...
Yellowknife ....	...	...	...	...	...	...	...	...
Unorganized - Non municipalised .....	6,715	5,286	7,274	6,763	6,791	6,820	8,000(2)	20,015(1,2)
Cities - Cities:								
Yellowknife .....	...	...	...	...	...	...	...	...
Towns - Villages:								
Fort Smith .....	...	...	...	...	...	...	...	...
Hay River .....	...	...	...	...	...	...	2,170(1)	2,354(1)
Inuvik .....	...	...	...	...	...	...	2,002(2)	2,454
							...	2,669(2)

Reference: Statistics Canada

TABLE 2 - Population by Specified Ethnic Groups, for Census Subdivisions, 1971

Subdivision	Total	British Isles	French	German	Hungarian	Italian	Jewish	Native Indian	Netherlands	Polish	Russian	Scandinavian	Ukrainian	Asian	Other and unknown
<b>NORTHWEST TERRITORIES</b>															
<u>Franklin</u>	7,750	885	235	130	5	15	10	30	25	20	10	20	30	15	6,320
Unorganized	7,750	890	235	130	10	15	5	30	25	20	10	20	25	10	6,320
<u>Keewatin</u>	3,400	245	60	20	-	-	-	5	15	5	-	20	15	-	3,015
Unorganized	3,405	240	55	20	-	-	-	5	15	5	-	15	15	5	3,020
<u>Mackenzie</u>	23,655	7,655	1,985	1,180	110	230	20	7,145	300	245	55	860	590	210	3,070
Unorganized	9,995	1,850	630	230	5	30	5	5,010	70	35	25	155	145	45	1,770
Cities															
Yellowknife	6,175	2,855	535	545	55	170	15	630	140	110	15	340	260	105	410
Towns															
Fort Smith	2,400	820	320	150	5	10	5	660	25	15	10	95	60	20	195
Hay River	2,440	990	265	140	25	10	-	565	40	55	-	185	60	20	75
Inuvik	2,645	1,145	230	115	20	5	-	280	25	25	5	85	60	10	625

Reference: Statistics Canada

Table 3

Population by Specified Age Groups and Sex, for Census Subdivisions, 1971 - Concluded  
 Population par certains groupes d'âge et selon le sexe, subdivisions de recensement, 1971 - fin

Subdivision	Total	0-4		5-9		10-14		15-19		20-24		25-34		35-44		45-54		55-64		65-69		70+	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
<b>NORTHWEST TERRITORIES TERRITOIRES DU NORD-OUEST</b>																							
Franklin .....	7,748	705	730	600	658	470	470	308	328	380	370	630	560	360	338	318	170	130	88	29	28	20	18
Unorganized - Non municipal .....	7,748	705	735	600	658	470	468	308	328	380	370	630	560	360	338	318	170	130	88	29	28	20	18
Keele .....	3,408	380	340	370	298	200	198	120	128	128	130	338	248	178	180	100	78	68	30	10	19	18	19
Unorganized - Non municipal .....	3,400	380	340	328	300	200	198	120	128	128	130	338	240	178	180	100	78	68	30	10	19	18	19
Mackenzie .....	22,688	1,720	1,870	1,790	1,820	1,430	1,388	1,068	1,040	1,280	1,180	2,080	1,780	1,410	1,180	920	768	580	428	280	118	128	178
Unorganized - Non municipal .....	10,078	848	728	840	768	630	640	438	448	440	418	808	620	510	430	368	288	248	188	78	70	110	110
Cities - Cities: Yellowknife .....	6,120	320	340	338	380	338	260	278	270	270	338	620	510	448	340	288	240	168	108	30	18	20	28
Towns - Villages: Fort Smith .....	2,368	108	160	208	188	168	128	108	108	108	170	168	128	128	78	10	68	48	18	18	20	18	18
Hay River .....	2,410	168	188	180	180	130	130	138	128	120	200	170	148	138	110	90	78	38	20	5	20	10	10
Inuvik .....	2,670	170	180	240	210	168	148	100	98	148	160	280	278	160	108	70	40	30	—	10	8	10	10

Reference:  
 Statistics Canada

TABLE 4  
1971 CENSUS POPULATION OF THE NORTHWEST TERRITORIES BY ETHNIC GROUP, SEX AND AGE GROUP

Age Group	Indian				Eskimo				Others				All Groups			
	Male	Female	Total	% Dist.	Male	Female	Total	% Dist.	Male	Female	Total	% Dist.	Male	Female	Total	% Dist.
0-4	615	570	1,185	16.5	1,120	1,125	2,245	19.7	1,075	975	2,045	12.6	2,815	2,660	5,475	15.7
5-9	585	555	1,140	15.9	1,040	1,000	2,125	18.6	1,125	1,005	2,135	13.1	2,770	2,615	5,390	15.5
10-14	425	500	925	12.9	765	755	1,515	13.3	915	700	1,615	10.0	2,110	1,970	4,075	11.7
15-19	330	365	695	9.7	510	530	1,040	9.1	660	590	1,250	7.7	1,500	1,495	2,990	8.6
20-24	325	270	595	8.3	470	450	915	8.0	960	965	1,930	11.9	1,755	1,600	3,435	9.9
25-29	235	220	455	6.3	300	350	725	6.4	1,050	885	1,940	12.0	1,665	1,455	3,120	9.0
30-34	190	170	360	5.0	325	340	665	5.8	775	615	1,385	8.5	1,275	1,125	2,405	6.9
35-39	175	165	340	4.7	300	290	595	5.2	615	445	1,055	6.5	1,100	910	2,005	5.8
40-44	145	175	320	4.5	230	185	415	3.6	485	325	810	5.0	845	700	1,545	4.4
45-49	130	135	265	3.7	190	140	335	2.9	430	300	710	4.4	725	575	1,305	3.8
50-54	125	75	200	2.8	165	125	290	2.6	265	240	505	3.1	550	440	990	2.8
55-59	100	75	175	2.4	100	95	195	1.7	230	150	380	2.3	415	320	740	2.1
60-64	80	80	160	2.2	85	75	155	1.4	185	70	255	1.6	350	230	585	1.7
65-69	75	65	140	1.9	45	35	80	0.7	70	45	115	0.7	180	145	325	0.9
70+	110	120	230	3.2	45	50	110	1.0	60	40	100	0.6	225	210	430	1.2
Total	3,645	3,540	7,185	100.0	5,755	5,640	11,400	100.0	8,880	7,345	16,225	100.0	18,280	16,525	34,805	100.0

Source of Data:

1. Data Processing Division, Statistics Canada, September, 1973.

\*Reference - Page 31 - "Population Projections of the Northwest Territories to 1981" by Chang-Mai Lu and D. C. Emerson Mathurin.

Population Projections - Northwest Territories

1. Report - "Mackenzie Valley Development - Some Implications For Planners, Volume 1 - September 1973 by T.G. Forth, I.R. Brown, M.M. Feeney, J.D. Parkins."

Reference - Page 13- "The population of Indian, Eskimos, and Other are projected to 1981 and are 9,874, 16,236, and 26,962". This provides a total projected population of 53,072 in the Northwest Territories by 1981.

In preparing these projections, growth rates by Ethnic origin were applied to Statistics Canada Ethnic Group figures for 1961. This enabled the writers to estimate ethnic group populations for 1972 and 1973 and project their number for the years 1974 and 1981 - table 5. indicates the information contained in Figure 1 of their report. ...

2. Report - "Population Projections of the Northwest Territories to 1981" by Chang-Mei Lu and D. C. Emerson Mathurin, November 1973

The writers of this report; on page 27 indicate: "that the population of the Northwest Territories is expected to range from 42,711 to 43,208 in 1976, and from 49,425 to 50,298 persons to 1981"

x x x

The above two projected populations for the Northwest Territories by 1981 therefore, are 53,072 and 49,425 to 50,298.

If one averages the lowest and highest projections a figure of 51,249 is obtained.

Table 5

## Estimated Population Growth by Ethnic Group

(Figure 11 - Report "Mackenzie Valley Development - Some Implications for Planners)

	1,24%	3.23%	3.61%	6.01%	5.21%
	INDIAN <sup>1</sup>	INDIAN <sup>3</sup>	ESKIMO	OTHER <sup>2</sup>	OTHER <sup>4</sup>
1961 <sup>A</sup>	5227	5227	8007	9764	9764
1962 <sup>E</sup>	5291	5396	8295	10,351	10,272
1963 <sup>E</sup>	5357	5570	8594	10,973	10,808
1964 <sup>E</sup>	5424	5750	8903	11,632	11,371
1965 <sup>E</sup>	5491	5936	9224	12,331	11,963
1966 <sup>E</sup>	5559	6127	9556	13,073	12,587
1967 <sup>E</sup>	5628	6325	9900	13,859	13,242
1968 <sup>E</sup>	5698	6530	10,256	14,692	13,932
1969 <sup>E</sup>	5768	6741	10,625	15,575	14,658
1970 <sup>E</sup>	5840	6958	11,008	16,510	15,422
1971 <sup>A</sup>	5910	7185	11,400	17,500	16,225
1972 <sup>E</sup>	5983	7417	11,810	18,552	17,070
1973 <sup>E</sup>	6057	7657	12,236	19,667	17,960
1974 <sup>P</sup>	6133	7904	12,676	20,849	18,895
1975 <sup>P</sup>	6209	8159	13,132	22,102	19,880
1976 <sup>P</sup>	6285	8423	13,605	23,430	20,916
1977 <sup>P</sup>	6364	8695	14,095	24,838	22,005
1978 <sup>P</sup>	6442	8976	14,602	26,330	23,151
1979 <sup>P</sup>	6522	9266	15,128	27,913	24,358
1980 <sup>P</sup>	6603	9565	15,673	29,591	25,627
1981 <sup>P</sup>	6685	9874	16,236	31,369	26,962

A. Actual Figures From Statistics Canada Publications.

E. Estimated Figures

P. Projected Figures

All figures for June 1, rounded to nearest 5.

1. Includes only treaty or band Indians

2. Includes all person not found under Indian for Eskimo Categories

3. Includes non-band or non-treaty Indians along with Metis People as well as those persons identified in "1" above.

4. Includes only those person not categorized as Eskimo or identified by "3" above.

3. Report - "Study of the Tourism Potential For The Mackenzie Valley Communities: Wrigley; Arctic Red River, Fort Norman, Fort Good Hope, Fort Franklin" prepared by Acres Consulting Services Limited.

In this report the historic and projected population in the Northwest Territories is discussed on pages 20 - 21. It is stated that the population of the Territories will almost double by 1986. The suggested population is outlined in Table 6.

4. Report - "Regional Impact of a Northern Gas Pipeline"; Volume 1 - Summary Report, prepared by MPS Associates Ltd., December 1973.

On page 46 of this report a comparison is made of the survey population results with the census counts in 1961 and 1971 and a population count of November, 1970 made by the Government of the Northwest Territories. This comparison also contains the final estimate for 1970 used as a basis for all analysis in their study. Table 7 provides the results of their comparison.

In this report more detailed estimates were prepared showing:

- (a) total Indigene and Other population, (b) working age population (those 14 years old plus) and (c) what has been termed the active working age population (those between 15 - 64 years). Finally, using manpower survey data, estimates of male and female, Indigene and Other labour force were prepared. The results are summarized in Table 8.

In describing the table the report states:



Table 6  
POPULATION GROWTH  
NORTHWEST TERRITORIES AND DISTRICT  
OF MACKENZIE

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	Northwest Territories	District of Mackenzie	
		Population	Percentage of N.W.T.
		1951 - 1971 Actual	
		1976 - 1986 Projected	
1951	16,004	10,279	64%
1961	22,998	14,895	65%
1971	34,807	18,685	54%
projected			
1976	42,900	22,500 <sup>1/</sup>	53%
1981	52,500	26,000 <sup>1/</sup>	49%
1986	64,500	30,000 <sup>1/</sup>	47%

<sup>1/</sup> Acres; estimated based on past trends.

Source: Statistics Canada, Census 51; 71 D.C. Emerson Mathurin and N. Lafreniere, The Supply of and Demand for Labour in the Yukon and Northwest Territories, Dept. of Indian Affairs and Northern Development.

Reference - Page 21 - "Study of the Tourism Potential for the Mackenzie Valley Communities: Wrigley; Arctic Red River; Fort Norman; Fort Good Hope; Fort Franklin". By Acres Consulting Services Limited

**Table 7**  
**COMPARISON OF CURRENT POPULATION ESTIMATES**  
**FROM VARIOUS SOURCES FOR THE NORTHWEST TERRITORIES**

	<u>Census (Total)</u>		<u>Manpower Surveys</u> (1969 & 1970)			<u>N.W. Gov't Survey</u> (Nov. 1970)			<u>Final Estimate Used</u> - 1970		
	<u>1966</u>	<u>1971</u>	<u>Indigene</u>	<u>Other</u>	<u>Total</u>	<u>Indigene</u>	<u>Other</u>	<u>Total</u>	<u>Indigene</u>	<u>Other</u>	<u>Total</u>
<b>A) Pipeline Corridor</b>											
- Lower Mackenzie											
Fort McPherson	654	679	555	29	584	780	60	840	555 )		
Aklavik	611	677	576	63	639	450	200	650	576 )		
Arctic Red River	86	100	95	1	96	80	10	90	95 )	1,794	4,179
Inuvik	2,040	2,672	662	804	1,466	800	1,900	2,700	662 )		
Tuktoyaktuk	512	596	497	-	497	570	40	610	497 )		
Total Lower	3,903	4,732	2,305	897	3,282	2,680	2,210	4,890	2,385	1,794	4,179
- Central Mackenzie											
Norman Wells	199	301	*	100	100	20	270	290	* )		
Colville Lake	67	65	51	-	51	65	5	70	51 )		
Fort Franklin	311	339	333	49	382	275	25	300	333 )	410	1,246
Fort Good Hope	335	327	253	21	274	330	20	350	253 )		
Fort Norman	216	248	199	35	234	275	25	300	199 )		
Total Central	1,128	1,280	836	205	1,041	965	345	1,310	836	410	1,246
- Upper Mackenzie											
Fort Simpson	712	747	309	115	504	300	450	700	389 )		
Fort Liard	177	263	237	15	252	230	30	260	237 )		
Fort Providence	378	587	290	4	294	350	200	550	290 )		
Fort Wrigley	136	152	133	21	154	145	30	175	133 )	2,316	3,902
Jean Marie River	51	47	50	-	50	45	5	50	50 )		
Mahanni Butte	71	66	44	-	44	60	5	65	44 )		
Trout Lake	30	46	40	-	40	40	-	40	40 )		
Hay River	2,002	2,420	403	1,003	1,406	700	2,300	3,000	403 )		
Total Upper	3,557	4,330	1,586	1,158	2,744	1,870	3,020	4,890	1,586	2,316	3,902
Total Pipeline Corridor	8,586	10,342	4,807	2,260	7,067	5,515	5,575	11,090	4,807	4,520	9,327
<b>B) Remainder Mackenzie District</b>	8,699	12,077	3,551	5,784	9,335	3,555	9,701	13,256	3,551	11,568	15,119
<b>C) Total Mackenzie District</b>	17,287	22,419	8,358	8,044	16,402	9,070	15,276	24,346	8,358	16,088	24,445
<b>D) Rest of Territory</b>	10,693	11,947	9,283	*	9,283	9,455	1,666	11,121	9,283	1,666	10,949
<b>Total Northwest Territories</b>	28,180	34,366	17,641	*	25,685	18,525	16,942	35,467	17,641	17,754	35,395

Notes:

- "Indigene" and "Native" are used synonymously.

- In Manpower Surveys and Estimates Used in Volume 7, "Indigene" includes Métis. In N.W. Gov't Survey no information was available on where Métis are included.

\* Not available.

Reference: Page 46 - "Regional Impact of a Northern Gas Pipeline" Volume 1 by MPS Associates

Table 8

ESTIMATED POPULATION AND  
LABOUR FORCE IN THE N.W.T. - 1970

	<u>Pipeline Corridor</u>				<u>Remainder Of Mackenzie District</u>	<u>Rest of Territory</u>	<u>Total Northwest Territories</u>
	<u>Lower Region</u>	<u>Central Region</u>	<u>Upper Region</u>	<u>Total Corridor</u>			
Population							
Indigene	2,385	836	1,586	4,807	3,551	9,283	17,641
Other	1,794	410	2,316	4,520	11,568	1,666	17,754
Total	4,179	1,246	3,902	9,327	15,119	10,949	35,395
Working Age Population (14 Plus)							
Indigene	1,271	472	870	2,613	1,918	5,752	9,263
Other	1,154	244	1,450	2,848	7,752	1,097	11,697
Total	2,425	716	2,320	5,461	9,670	5,829	20,960
Active Working Age Population (15-64)							
Indigene	1,123	408	748	2,279	1,673	4,128	8,080
Other	1,062	240	1,374	2,676	7,278	1,030	10,984
Total	2,185	648	2,122	4,955	8,951	5,158	19,064
Labour Force							
Indigene							
Male	433	157	317	877	602	1,593	3,072
Female	114	27	42	183	144	217	544
Sub Total	517	184	359	1,060	746	1,810	3,616
Other							
Male	484	124	600	1,208	3,440	461	5,129
Female	226	34	278	538	1,186	178	1,902
Sub Total	710	158	878	1,746	4,626	659	7,031
Total	1,227	342	1,237	2,806	5,372	2,469	10,647
<u>Labour Force Participation Rates</u>							
<u>(Proportion of Active Working Age Population)</u>							
Indigene - Male	-	-	-	.73	.66	.73	.72
- Female	-	-	-	.17	.18	.11	.14
Other - Male	-	-	-	.68	.87	.87	.87
- Female	-	-	-	.41	.36	.37	.37

Source: Volume 7, Figure 1.

Reference: Page 48 "Regional Impact of a Northern Gas Pipeline: Volume 1 - by MPS Associates Ltd.

"The latter part of this table shows the estimate of labour force for the Territory. The basis for this estimate was an analysis of the territorial manpower surveys and, more specifically, the Mackenzie Manpower Survey on a census basis with respect to Indigenes and on a sample basis with respect to Others. It is presumed that the participation rates shown are near the ceiling that can be expected through to the end of the forecast period. It is recognized, however, that there could be quite substantial skill shifts within the labour force as it becomes more highly trained".

"The proportions of Indigenes and Others in the active working age groups combined with the participation rates results in a substantially difference proportion of Indigenes and Others in the labour force compared with the total population. The present Indigenes labour force in the Northwest Territories is about 3,600. Indigenes constitute only 34% of the total labour force of 10,600. Furthermore, slightly over 3,000 or 85% of this Indigene labour force consists of males and only about 600 are females. Geographically, the Indigene labour force is split with approximately one-half being in the District of Mackenzie and one-half in the rest of the Territory".

"The pipeline impact corridor has an Indigene labour force of about 1,100 of whom 900 are males and 200 females. Of the male Indigene labour force in the Corridor, 400 are in the lower region, slightly over 300 in the upper region and the remainder in the central region".

"Approximately 25% of the Other labour force is in the corridor, 65% is in the remainder of the District of Mackenzie and the balance in the rest of the Territory".

In preparing forecasts of selected territorial indicators the report states:

"It was considered that the indicators which had to be projected were; (a) population, (b) active male working age population (15 - 64), and (c) male labor force. In order to provide an adequate range of impact evaluation it was essential they be projected showing Indigenes and Others separately for the total Northwest Territories as well as the regions within it including the three impact regions of the corridor. These projections were based upon the population and labor force analysis of 1970 described above. They also incorporated a separate appraisal and projection of Indian, Eskimo and Other population change in the pipeline corridor". The results are summarized in table 9 for the profile year, 1985.

The report states further:

"Although these projections might well prove to be conservative, it is considered they are realistic within the context of their purpose; which is to serve as an indicator of possible changes in the Northwest Territories assuming a minimum growth situation designed specifically as a base against which to measure pipeline impact. They are based on the assumption that no other major developments take place to attract population into the Territories from the south or from one part of the Territories to another. They also presume that the resident white, i.e. "Other", population, essentially from the south, will grow at a minimal rate experiencing a birth rate equivalent to the

Table 9

ESTIMATED POPULATION AND MALE LABOUR  
FORCE IN THE N.W.T. DURING THE POST  
CONSTRUCTION PERIOD OF CAPACITY OPERATION  
(Profile Year - 1985)

	<u>Pipeline Corridor</u>				<u>Remainder Of Mackenzie District</u>	<u>Rest of Territory</u>	<u>Total Northwest Territories</u>
	<u>Lower Region</u>	<u>Central Region</u>	<u>Upper Region</u>	<u>Total Corridor</u>			
Population (Male & Female)							
Indigene	3,339	1,130	2,374	6,843	5,032	13,154	25,029
Other	1,853	569	3,212	5,634	14,367	2,069	22,070
Total	5,192	1,699	5,586	12,477	19,399	15,223	47,099
Active Male Working Age Population (15-64)							
Indigene	905	331	601	1,837	1,344	3,367	6,548
Other	560	180	976	1,716	4,899	685	7,300
Total	1,465	511	1,577	3,553	6,243	4,052	13,848
Male Labour Force							
Indigene	661	242	436	1,341	925	2,458	4,724
Other	492	158	857	1,507	4,267	593	6,372
Total	1,153	400	1,293	2,848	5,192	3,056	11,096

Source: Volume 7, Figure 8.

Reference: Page 54 "Regional Impact of a Northern Gas Pipeline" Volume 1, by MPS Associates Ltd.

rest of Canada and a continued high degree of out-migration of older groups and young adults. The projection for Indigenes reflects a decrease in the fertility rate plus the assumption that the dramatic improvement in the mortality rate experienced during the past few decades is slowing up at present and will continue to slow up even more quickly in the next decade".

"Based on a combination of such factors, it is projected that the total population of the Northwest Territories will increase from 35,400 in 1970, to 41,000 in 1977/78, 43,400 in 1981 and 47,100 in 1985. This represents a total increase in the next 15 years of 33%, a rate of growth under half of the increase which occurred during the past 15 years and much closer to that experienced in all Canada".

Projected Population for Various Settlements in the Study Area

In the Report "Mackenzie Valley Development - Some Implications for Planners" the writers also projected the population for certain settlements. Figure 14 of their report projected settlement populations for 1976 and 1981. This information is reproduced in Table 10.

In the "Mackenzie Valley Social Impact Study" prepared by Gemini North Ltd., May 1973 projected population figures were given for certain communities in the study area. This information is listed in Table 11.



Table 10

COMMUNITY	1976								M & F 1976 TOTAL		1981								M & F 1981 TOTAL
	MALE				FEMALE						MALE				FEMALE				
	Indian	Eskimo	Other	Total	Indian	Eskimo	Other	Total			Indian	Eskimo	Other	Total	Indian	Eskimo	Other	Total	
AKLAVIK	106	167	142	415	123	180	103	406	821		124	199	183	506	144	214	132	490	996
ARCTIC RED R.	65	-	19	84	47	-	6	53	137		76	-	24	100	55	-	8	63	163
COLVILLE LAKE	35	-	6	41	35	-	-	35	76		42	-	8	50	42	-	-	42	92
HAY RIVER & ENTERPRISE	346	5	1270	1621	317	5	1142	1464	3085		406	7	1637	2050	371	7	1472	1850	3900
FT. FRANKLIN	170	-	25	195	182	-	19	201	396		200	-	32	232	213	-	24	237	469
FT. GOOD HOPE	158	-	31	189	170	-	31	201	390		186	-	40	226	200	-	40	240	466
FT. LIARD	135	-	6	141	99	-	6	105	246		158	-	8	166	117	-	8	125	291
FT. McPHERSON	311	5	90	406	340	-	71	411	817		364	7	116	487	399	-	92	491	978
FT. NORMAN	117	-	52	169	105	-	31	136	305		137	-	67	204	123	-	40	163	367
FT. PROVIDENCE	293	-	84	377	270	-	71	341	718		344	-	108	452	316	-	92	408	860
FT. SIMPSON	228	-	213	441	246	5	213	464	905		268	-	275	543	288	7	275	570	1113
FT. WRIGLEY	76	-	13	89	76	-	13	89	178		89	-	16	105	89	-	16	105	210
INUVIK	158	263	1301	1722	176	310	1121	1607	3329		186	313	1677	2176	206	370	1445	2021	4197
JEAN MARIE R. & NAHANNI BUTTE	65	-	-	65	65	-	6	71	136		76	-	-	76	76	-	8	84	160
EKISA LAKE & TROUT LAKE	18	-	155	173	12	-	96	108	281		21	-	200	221	14	-	124	138	359
NORMAN WELLS	18	5	192	215	30	-	123	153	368		21	7	248	276	35	-	159	194	470
TUKTOYAKTUK	18	335	31	384	12	293	31	336	720		21	399	40	460	14	349	40	403	863
TOTAL.	2317	780	3630	6727	2305	793	3083	6181	12908		2719	932	4679	8230	2702	947	3975	7624	15854

Reference: Figure 14 - "Mackenzie Valley Development: Some Implications for Planners"

TABLE 11

POPULATION PROJECTIONS  
BY  
LEVEL OF IMPACT AND COMMUNITY

Level of Impact	1972	1973	1974	1975	1976	1977	1978	1979	1980
<b>High Impact Communities</b>									
Inuvik	3,320	3,352	3,801	4,067	4,351	5,356	5,692	6,031	6,404
Fort McPherson	860	894	930	967	1,006	1,045	1,088	1,131	1,176
Arctic Red River	100	105	110	116	121	127	134	140	147
Norman Wells	335	363	388	416	445	1,176	1,209	1,245	1,283
Wrigley	185	185	185	185	185	185	185	185	185
Fort Simpson	1,200	1,284	1,374	1,470	1,573	2,383	2,501	2,627	2,762
Enterprise	50	50	50	54	57	61	66	70	75
May River	3,000	3,210	3,495	3,735	3,992	4,268	4,562	4,877	5,212
<b>Medium Impact Communities</b>									
Tuktoyaktuk	695	720	750	780	811	844	872	912	949
Fort Norman	268	268	268	268	268	268	268	268	268
Aklavik	680	680	680	680	680	680	680	680	680
Fort Good Hope	380	380	380	380	380	380	380	380	380
Trout Lake	45	45	45	45	45	45	45	45	45
<b>Low Impact Communities</b>									
Fort Liard	270	280	290	302	314	326	339	353	367
Nahanni Butte	65	65	65	65	65	65	65	65	65
Fort Franklin	460	485	505	525	546	568	591	614	640
Fort Providence	675	700	725	754	784	816	848	882	917
Jean Marie River	50	50	50	50	50	50	50	50	50
High Impact Total	9,050	9,443	10,333	11,010	11,730	14,602	15,427	16,306	17,244
Medium Impact Total	2,068	2,093	2,123	2,153	2,184	2,217	2,245	2,285	2,322
Low Impact Total	<u>1,520</u>	<u>1,580</u>	<u>1,635</u>	<u>1,696</u>	<u>1,759</u>	<u>1,825</u>	<u>1,893</u>	<u>1,964</u>	<u>2,039</u>
Total Population	12,638	13,116	14,091	14,859	15,673	18,644	19,565	20,555	21,605

Compiled by Gemini North Ltd. May 1, 1973.

Reference: Table 13, Page 95 - "Mackenzie Valley Social Impact Study" by Gemini North

### Population Projections - Industrial Development

The development of the Mackenzie Valley Oil and Gas Pipelines, and the development of the Mackenzie Valley Highway, have been the object of careful study by a number of individuals and groups.

The studies generally agree that although there is the possibility of a considerable influx in population if industrial developments move ahead the permanent work force required for operation and maintenance would be relatively small. For example: In the report "Mackenzie Valley Development: Some Implication for Planners: the writers suggest that by 1977 there could be 7000 more man years of employment required than in 1973. Table 12 provides the data for their projections

In the "Mackenzie Valley Social Impact Study: by Gemini North; Page 25, the writers state that the Oil Pipeline Construction "would create an estimated 17,000 jobs, mostly with general and sub-contractors, peaking at any one time at 8,000 to 10,000 employed".

In a presentation to the Educational Seminar, Inuvik, N.W.T., December 5, 1972, Mr. A. Earle Gray in referring to the northern pipeline system stated:

1. "Up to 7,000 men will be employed on construction ---" (page 4 of Mr. Gray's paper)
2. "We estimate that at least 150 people will be required to operate our proposed pipeline in the Yukon and Northwest Territories" (page 5 of Mr. Gray's paper).

Another paper prepared to Canadian Arctic Gas Study Limited, and dated June 12, 1972 states:

1. "Construction of multi-billion dollar gas pipeline from Alaska and Northwest Canada will provide employment for some 5,000 men over a period of two to three years".

Table 12

Figure 15

## MAN YEARS OF EMPLOYMENT - MACKENZIE REGION

	1973	74	75	76	77	78	79	80
Water Transport	450	450	700	700	700	700	700	700
Highway Const.		250	250	250	250			
Mineral Operatns	1500	1500	1700	1900	2100	2200	2300	2500
Mineral Expl. & Development	15	15	15	20	35	40	45	50
Petroleum Dev.		200	1800	2300	2800	2000	2000	2000
Petroleum Expl.	500	750	1000	1250	1500	1700	1850	1950
Gas Pipeline			500	500	2100	2200	1700	200
TOTAL	2465	3165	5965	6920	9485	8840	8595	7400

Figures obtained from graphs contained in Gemini North Ltd.  
Mackenzie Valley Social Impact Study., Yellowknife, May 1973.

Reference: Page 155 "Mackenzie Valley Development: Some Implications  
for Planners" - Volume 1

2. "While initially only about 150 permanent jobs in the Yukon and Northwest Territories will be provided in the operation and maintenance of the system, indirectly an appreciably greater number of permanent jobs will be created for ancillary support and services, and in anticipated gas production operations in the north".

In the report "Regional Impact of a Northern Gas Pipeline" - Volume 1 - Summary, by MPS Associates Ltd. an estimate is made of total man years of labour required for the pipeline.

Table 13 indicates their estimates.

Table 13

LABOUR REQUIREMENT FOR A GAS  
PIPELINE ON BASIC MACKENZIE ROUTE  
DURING THE THREE PROFILE PERIODS  
(1975 - 1995)

Type of Activity	Period of Major Pipeline Construction		Post Pipelaying Compressor and Operating Facility Construction Period		Post Construction Period Of Capacity Operation	
	Total Man-Years Required 1975 to '79	No. of Workers In "Profile Year" 1977/78	Total Man-Years Required 1979 to '83	No. of Workers In "Profile Year" 1981	Total Man-Years Required 1984 to '95	No. of Workers In "Profile Year" 1985
- Pipeline Construction	15,216	4,735	-	-	-	-
- Compressor Station and Operating & Maintenance Facility Construction	2,341	725	2,016	423	-	-
- Operation of Construction Camps (including Catering & related services)	2,306	768	259	65	-	-
- Off-site Transportation Plus Material Handling Related To Pipeline Construction	1,309	310	-	-	-	-
- Off-site Transportation Plus Material Handling Related To Compressor Plus O & M Construction	-	-	284	49	-	-
- Continuing Operation And Maintenance	-	-	517	105	2,364	197
- Total Direct Labour Required	20,667	6,538	2,913	642	2,364	197
(Maximum Estimate @ 115%)	(23,997)	(7,519)	(3,350)	(738)	(2,719)	(226)
(Minimum Estimate @ 85%)	(17,737)	(5,557)	(2,476)	(546)	(2,009)	(168)
-----						
Special Skills	10,642	3,326	1,777	389	1,702	141
General Skills	10,225	3,214	1,136	253	662	56

Source: Volume 7, Appendix 5.

Note: Total Required is the intermediate estimate of man-years of labour during the respective period, (see Figure 11).

Profile Year is an estimate of the number of workers in the representative or peak year of the period.

Reference: Page 61 - "Regional Impact of a Northern Gas Pipeline" Volume 1, By MPS Associates Ltd.

### Permanent Work Force

With regards to a permanent work force the Gemini North Report (page 26) estimates "a permanent operating organization of 600 to 700 employees is estimated although some of these positions will be located in Edmonton and Fairbanks."

In another section of the Gemini North Report, (page 52) it states that "under 100 permanent jobs (direct pipeline employment) will be added to each of the three regional sub-growth centres by this project above".

It is also pointed out by previous studies that there will be a few major impact centres with regards to permanent work forces. In the report "Mackenzie Valley Development; Some Implications for Planners", page 156 it is stated: "The major impact of the development activities outlined in Figure I is expected to occur in Fort Simpson, Inuvik, Norman Wells, and Fort McPherson. Apart from Water Transport activities, which are based in Hay River, it is the general consensus that the four named settlements will receive the bulk of the noted workers".

The Gemini North Report; "Mackenzie Valley Social Impact Study" states on pages 50 - 51 that: "Pipeline operations would also require maintenance and administrative personnel on a regional and a sub-regional basis. Because of the natural trend noted earlier of settling where economic, administrative and communications facilities converge, geography and existing infrastructure would indicate likely sub-regional growth centres at Fort Simpson, Norman Wells and Inuvik, which are the major communities along the proposed route".

x x x

Therefore, with regards to population related to industrial development two factors must be recognized:

1. During the construction phases a varied number of workers will be required.
2. Following the initial construction the number of permanent operational and maintenance personnel will be small.



Health Care Facilities Existing in the Mackenzie River Area  
at the Time of the Study

The following information was obtained from the Northwest Territories Region - Medical Services and the Canadian Hospital Directory. The source material from the Northwest Territories Region - Medical Services is attached to this report as Appendix 4.

The code used for the information in Table 14 is as follows:

H	-	Hospital
C	-	Clinic
NS	-	Nursing Station
HC	-	Health Centre
HS	-	Health Station

TABLE NO 14

Location	Facility	Beds	Population		
			1971 Population (1)	1981 Projected Population (2)	1980 Projected Population (3)
Inuvik	H	88 (Presently being expanded to 129 beds)	3000	4197	6404
Inuvik	C				
Inuvik	HC				
Aklavik	NS	5	680	996	680
Fort Franklin	NS	5	450	469	640
Ft. Good Hope	NS	4	380	466	380
Ft. MacPherson	NS	5	840	978	1176
Ft. Norman	NS	4	268	397	268
Tuktoyaktuk	NS	4	667	863	949
Norman Wells	NS	approximately 9 beds could be utilized	363	470	1283
Arctic Red River	HS				
Sachs Harbour	HS				
Paulatuk	HS				
Colville Lake	HS				
Ft. Simonsen	HC	14	1000	1113	2762
Cambridge Bay	C				
Cambridge Bay	NS	7	670		
Coppermine	NS	5	7732		

Table No. 14 cont'd

Location	Facility	Beds	1971 Population (1)	1981 Projected Population (2)	1980:Projected Population (3)
Ft. Liard	NS	2	260	291	367
Ft. Providence	NS	5	648	860	917
Ft. Resolution	NS	5	680		
Ft. Wrigley	NS	2	185	210	185
Gjoa Haven	NS	5	284		
Holman Island	NS	3	243		
Pelly Bay	NS	3	157		
Snowdrift	NS	2	256		
Spence Bay	NS	4	350		
Ft. Smith	NS				
Ft. Smith	H	26 bed short term plus 22 bed chronic care			
Ft. Smith	C		2500		
Hay River	HC				
Hay River	H	22	3000	3900	5212
Hay River	C				
Rae	HC & C	6 (Presently being altered to provide a total of 8 to 12 beds)	1170		

Table No. 14 cont.d

Location	Facility	Beds	1971 Population (1)	1981 Projected Population (2)	1980 Projected Population (3)
Yellowknife	HC	73	7100		
Yellowknife	H				
Yellowknife	CS				
Lac La Martre	HS				
Perry River	HS				
Nahanni Butte	HS				
Pine Point	C				

1. 1971 Figures - "Population Statistics as Recorded by the Department of Local Government, N.W.T., June 1, 1971"
2. 1981 Figures - "Mackenzie Valley Development: Some Implications for Planners 1973"
3. 1980 Figures - "Mackenzie Valley Social Impact Study, 1973"

Reference for bed size: Northwest Territories Region - Medical Services (See appendix 4)  
Canadian Hospital Directory

Facilities for Senior Citizens

In addition to the 22 bed Chronic Care Ward at Fort Smith there are the following facilities for Senior Citizens:

1. Old Folks Home - Aklavik - 12 beds
2. Senior Citizens Lodges at Inuvik, Fort McPherson, Fort Good Hope, Fort Simpson, Hay River, Yellowknife, Fort Resolution and Fort Smith. There are plans for an additional Senior Citizens Lodge at Aklavik. Discussions have also been held in the regard with Arctic Red River and Tuktoyaktuk.

Utilization of Inpatient Beds - Active Acute Health Care Facilities

The Consultant reviewed the Statistics Canada "Annual Return of Hospitals - Form HS - 1" for the years 1970 - 1973. The resulting utilization figures are shown in Table 15.

From Table 17 the following points are noted:

1. With regards to Nursing Stations:
  - (a) In general the inpatient use of Nursing Station beds decreased over the four year period 1970 - 1973. This was true for Aklavik, Cambridge Bay, Coppermine, Fort Franklin, Fort McPherson, Fort Norman, Fort Providence, Fort Resolution, Norman Wells, Spence Bay.
  - (b) Several Nursing Stations showed a sporadic use of beds with a small increase over the four year period. This was true at Fort Good Hope, Fort Laird, Gjoa Haven, Tuktoyakluk.
  - (c) Other Nursing Stations were too new to establish a trend. This was true for Holman Island, Pelly Bay, Snowdrift, Wrigley.
  
2. With regards to Hospitals:
  - (a) Information was not available for the Fort Simpson General Hospital.
  - (b) For St. Ann's Hospital in Fort Smith there was a decrease in patient days for both adult and children and for newborns during 1973. For the four year period 1970 - 1973 the hospital showed an increase in adult and children days but a decrease in newborn days.

Table 15

Utilization of Inpatient Beds in Acute Health Care Facilities

Location and Facility Description	Year	Rated A. and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
<b>Aklavik</b>									
Nursing Station	1970	4	1	111	37	7.6	8.7		
	1971	4	1	98	15	6.7	4.1	(11.7)	(59.5)
	1972	4	1	73	24	5.	6.5	(25.5)	60.0
	1973	4	1	39	10	2.7	2.7	(46.6)	(58.3)
Percent Increase or (Decrease) in days over four year period								(64.9)	(73.0)
<b>Carbridge Bay</b>									
Nursing Station	1970	7	2	330	121	12.9	6.5		
	1971	7	2	303	142	11.8	19.4	( 8.2)	17.4
	1972	4	2	358	86	24.9	11.7	18.2	(39.4)
	1973	5	2	182	65	9.9	8.9	(49.2)	(24.4)
Percent Increase or (Decrease) in days over four year period								(44.8)	(46.3)

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
Coppermine									
Nursing Station	1970	4	1	78	18	5.3	4.9		
	1971	4	1	109	27	7.5	7.4	39.7	50.0
	1972	4	1	36	20	2.5	5.5	(67.0)	(26.0)
	1973	4	1	27	11	1.8	3.0	(25.0)	(45.0)
Percent Increase or (Decrease) in days over four year period								(65.4)	(38.9)
Fort Franklin									
Nursing Station	1970	5	1	80	28	4.4	7.7		
	1971	5	1	41	15	2.2	4.1	(48.8)	(46.4)
	1972	5	1	25	11	1.4	3.0	(39.0)	(26.7)
	1973	5	1	3	0	.2	0	(88.0)	(100.0)
Percent Increase or (Decrease) in days over four year period								(96.3)	(100.0)
Fort Good Hope									
Nursing Station	1970	4	1	31	21	2.1	5.8		
	1971	4	1	141	41	9.7	11.2	354.8	95.2
	1972	4	1	79	40	5.4	11.0	(44.0)	(2.4)
	1973	4	1	33	10	2.3	2.7	(58.2)	(75.0)
Percent Increase or (Decrease) in days over four year period								6.5	(52.4)



Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C , Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
<b>Fort Laird</b>									
Nursing Station	1970	2	1	62	13	8.5	3.6		
	1971	2	1	37	14	5.1	3.8	(56.5)	7.7
	1972	2	1	72	29	9.9	7.9	94.6	107.1
	1973	2	1	73	21	10.0	5.8	1.4	(27.6)
Percent Increase or (Decrease) in days over four year period								17.7	61.5
<b>Fort McPherson</b>									
Nursing Station	1970	5	2	58	35	3.2	4.8		
	1971	5	2	42	27	2.3	3.7	(27.6)	(22.9)
	1972	5	2	38	19	2.1	2.6	( 9.5)	(29.6)
	1973	5	2	31	15	1.7	2.1	(18.4)	(21.0)
Percent Increase or (Decrease) in days over four year period								(46.6)	(57.1)
<b>Fort Norman</b>									
Nursing Station	1970	5	2	39	12	2.1	1.6		
	1971	5	2	4	0	.2	.0	(89.7)	(100.0)
	1972	5	2	3	0	.2	.0	(25.0)	-
	1973	5	2	33	0	1.8	.0	1000.0	-
Percent Increase or (Decrease) in days over four year period								(15.4)	(100.0)

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
Fort Providence									
Nursing Station	1970	-	-	-	-	-	-		
	1971	5	2	173	46	9.5	6.3		
	1972	5	2	146	53	8.	7.3	(15.6)	15.2
	1973	5	2	80	27	4.4	3.7	(45.2)	(49.1)
Percent Increase or (Decrease) in days over four year period								(53.8)	(41.3)
Fort Resolution									
Nursing Station	1970	5	2	55	10	3.0	1.4		
	1971	5	2	86	9	4.7	1.2	56.4	(10.0)
	1972	5	2	54	12	3.0	1.6	(37.2)	33.3
	1973	5	2	36	45	2.0	6.2	(33.3)	275.0
Percent Increase or (Decrease) in days over four year period								(34.5)	350.0
Fort Simpson									
Nursing Station	1970								
	1971	- Not available from T.H.I.S.							
	1972								
	1973	14	5	765	104	15.0	5.7		

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
Fort Smith Hospital									
	1970	44	7	5943	385	37.0	15.1		
	1971	44	7	7939	461	49.4	18.0	33.6	19.7
	1972	36	7	8326	532	63.4	20.8	4.9	15.4
	1973	26	5	6817	347	71.8	19.0	(18.1)	(34.8)
Percent Increase or (Decrease) in days over four year period								14.7	(9.9)
Gjoa Haven									
Nursing Station									
	1970	5	2	93	19	5.1	2.6		
	1971	5	2	42	9	2.3	1.2	(54.8)	(52.6)
	1972	5	2	63	16	3.5	2.2	50.0	77.8
	1973	5	2	95	16	5.2	2.2	50.8	0
Percent Increase or (Decrease) in days over four year period								2.2	(15.8)
Hay River Hospital									
	1970	22	8	4749	619	59.1	21.2		
	1971	22	8	4444	744	55.3	25.5	(6.4)	20.2
	1972	22	8	4895	776	61.0	26.6	10.1	4.3
	1973	22	8	5921	775	72.5	26.5	18.9	(0.1)
Percent Increase or (Decrease) in days over four year period								22.6	25.2

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
<b>Holman Island</b>									
Nursing Station	1970	-	-	-	-	-	-	-	-
	1971	3	2	0	0	0	0	-	-
	1972	3	2	17	1	1.6	.1		
	1973	3	2	34	4	3.1	.5	100.0	300.0
<b>Inuvik Hospital</b>									
	1970	80	23	17412	1328	60.0	15.8		
	1971	80	23	18391	1381	63.0	16.5	5.6	4.0
	1972	96	13	15207	1543	43.3	32.5	(17.3)	11.7
	1973	101	13	11272	1330	30.5	28.0	(25.9)	(13.8)
*It was pointed out that these figures include a number of Welfare "Border" days - however the correct numbers were not available.									
Percent Increase or (Decrease) in days over four year period								(35.3)	.2
<b>Norman Wells</b>									
Nursing Station	1970	10	1	39	6	1.1	1.6		
	1971	9	1	11	0	.3	0	(71.8)	(100.0)
	1972	Not available							
	1973	4	1	10	0	.7	0	-	-
Percent Increase or (Decrease) in days over four year period								(74.4)	(100.0)

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
Pelly Bay									
Nursing Station	1970	-	-	-	-	-	-		
	1971	-	-	-	-	-	-		
	1972	3	1	19	11	1.7	3.0		
	1973	3	1	25	9	2.3	2.5	31.6	(18.2)
Rae Edzo									
Hospital	1970	24	4	4521	360	51.6	24.7		
	1971	15	4	3652	295	70.3	20.2	(14.8)	(18.1)
	1972	15	4	3074	381	50.1	26.1	(20.2)	29.2
	1973	15	4	2445	281	44.6	19.2	(20.5)	(26.2)
Present Increase or (Decrease) in days over four year period								(45.9)	(21.9)
Snow Drift									
Nursing Station	1970	-	-	-	-	-	-		
	1971	3	2	0	0	0	0		
	1972	2	1	5	0	.7	0		
	1973	2	1	37	0	5.1	0	640.0	

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
Spence Bay									
Nursing Station	1970	4	1	87	29	5.6	7.9		
	1971	4	1	92	29	6.3	7.9	5.7	.0
	1972	4	1	101	12	6.9	3.3	9.8	(58.6)
	1973	4	1	42	14	2.9	3.8	(58.4)	16.7
Percent Increase or (Decrease) in days over four year period								(51.7)	51.7
Tuktuyaktuk									
Nursing Station	1970	4	1	51	23	3.5	6.3		
	1971	4	1	17	9	1.2	2.5	(66.7)	(60.9)
	1972	4	1	76	15	5.2	4.1	347.1	66.7
	1973	4	1	96	20	6.6	5.5	26.3	33.3
Percent Increase or (Decrease) in days over four year period								88.2	(13.0)
Wrigley									
Nursing Station	1970	-	-	-	-	-	-		
	1971	-	-	-	-	-	-	-	-
	1972	2	1	1	0	.3	0	-	-
	1973	2	1	6	0	.8	0	.5	-

Table 15 cont'd

Location and Facility Description	Year	Rated A and C Beds	Rated Newborn Bassinets	Total A and C Days	Total Newborn Days	Percent Occupancy A and C	Percent Occupancy Newborn	Percent Increase or (Decrease) over Previous Year - A and C	Percent Increase or (Decrease) over Previous Year - Newborn
Yellowknife									
Nursing Station	1970	36	7	10428	1518	79.4	59.4		
	1971	36	9	11981	1621	91.2	49.3	14.9	6.8
	1972	73	7	12246	1380	45.9	54.0	2.2	(14.9)
	1973	73	9	15938	1637	59.8	49.8	30.1	18.6
Present Increase or (Decrease) in days over four year period								52.8	7.8

Reference: "Annual Return of Hospitals - Form HS-1"

- (c) For the H. H. Williams Hospital in Hay River there has been an increase in both adult and newborn days over the four year period.
- (d) The Inuvik General Hospital shows a marked decrease in adult and children days over the four year period.

It is estimated that for 1974 the percent occupancy for adults and children will only be about 27% to 28%.

The consultant noted that even with a decreasing utilization of inpatient beds a major expansion for the hospital is in progress. This matter will be referred to again under Programs and Facilities.

- (e) The Stanton Yellowknife Hospital went through a major re-construction project during this four year period. However, there was a marked increase in the utilization of adult and children beds (52.8%) and a smaller increase in the utilization of newborn beds (7.8%).
- (f) The hospital at Fort Rae (Rae Edzo) showed a marked decrease in Adult and Children total days and newborn total days over the four year period 1970 - 1973.



Health Manpower - Northwest Territories

In reviewing health care programs and services it is essential to look at the manpower involved in the system. Details concerning health manpower were obtained from the Northwest Territories Region - Medical Services and the Territorial Hospital Insurance Services. (Appendix 5).

In addition to the major lists of personnel it should be noted that fourteen (14) physicians have privileges at the Stanton Yellowknife Hospital, and five (5) physicians have privileges at the H. H. Williams Hospital in Hay River. Also at Fort Smith in addition to the physicians listed by the Northwest Territories Region - Medical Services, there are two dentists and one physician who also have privileges. (The St. Ann's General Hospital have three physicians and two dentists with hospital privileges).

Therefore, with regards to Medical Practitioners and Dentists with hospital privileges the Consultant was informed that there were a total of:

Northwest Territories Region - Medical Services	
- Physicians	16
- Dentists	7
Fort Smith	
- Physisicans	1 (Plus 2 included under the Northwest Territories - Medical Services)
- Dentists	2
Yellowknife	
- Physicians	14
Hay River	
- Physicians	5
Total	36 Physicians plus 9 Dentists with hospital privileges

A summary of the Medical Practitioners (Physicians) in the Northwest Territories is as follows:

Northwest Territories Region

Headquarters in Edmonton	3	
Inuvik Zone	7	
Baffin Zone	1	
Keewatin Zone	1	
Mackenzie Zone	4	16
Hay River		5
Yellowknife		14
Fort Smith		
In addition to the Northwest Territories Region		1
Total Physicians		<u>36</u>

A summary of health manpower working in hospitals, nursing stations, health centres is provided in table 16. This information was obtained from the headquarters of the Northwest Territories Region - Medical Services in Edmonton, and the Territorial Hospital Insurance Services in Yellowknife.

Table 16

Health Care Personnel Working in Hospitals, Nursing Stations,  
Health Centres in the Northwest Territories

---

<u>Location</u>	<u>Number of Personnel</u>
<u>Northwest Territories Region - Medical Services</u>	
Headquarters (Edmonton)	47
Inuvik Zone	167
Baffin Zone	143
Keewatin Zone	59
Mackenzie Zone	137
	<u>553</u>
Health Care Planning - Yellowknife	12
<u>Fort Rae</u> - Farad Hospital	24.8
(Please note this Hospital is scheduled to close when the new Edzo Cottage Hospital opens)	
<u>Fort Smith</u> - St. Ann's General Hospital	
Active Care	44.2
Chronic Care	13
	<u>57.2</u>
<u>Hay River</u> - H. H. Williams Hospital	36.5
<u>Yellowknife</u> - Stanton Yellowknife Hospital	118
<u>Total Positions</u>	<u>801.5</u>

Reference: 1. Northwest Territories Region - Medical Services  
in Edmonton  
2. Territorial Hospital Insurance Services in  
Yellowknife.

## Air Transportation

Discussions concerning present and future scheduled airline routes were held with the various companies providing this service and with the Arctic Transportation Agency.

Chart 1 is a map showing the present scheduled routes. With regards to the Mackenzie River Area, it is noted that Yellowknife provides a very important focal point in the scheduled airline service.

Appendix 6 provides a listing of the airline "schedules" which were readily available to the consultant.

The Department of Transport and the Department of Indian and Northern Affairs have been concerned about the safety of air transportation in the North. They have also been concerned about the improvement and expansion of air services. As a result a "Policy for the Provision of Air Transportation Facilities and Services in the Yukon and Northwest Territories" has been developed. This report classifies Airports and indicates the facilities and equipment that must be available for each classification. The "Policy", therefore, provides minimum standards for airport facilities in the North. This Policy Statement is attached as Appendix 7.

A news release, dated March 7, 1974 indicated that further improvements with regards to Air Transportation in the Canadian Arctic will be forthcoming. The release stated:

"A new policy to provide improved air transportation facilities to a large number of communities in the Yukon and Northwest Territories was jointly announced today by Transport Minister Jean Marchand and Indian and Northern Affairs Minister Jean Chrétien.

CANADIAN TRANSPORT COMMISSION  
 COMMISSION CANADIENNE DES TRANSPORTS  
 AIR TRANSPORT COMMITTEE  
 COMITE DES TRANSPORTS AERIENS  
**CLASS 2 AND 3 COMMERCIAL  
 AIR SERVICES  
 SERVICES AERIENS COMMERCIAUX  
 DE CLASSE 2 ET 3**  
 CARRIERS - TRANSPORTS  

ALASKA ALBERTA BRITISH COLUMBIA MANITOBA ONTARIO QUEBEC SASKATCHEWAN YUKON	ATLANTIC CENTRAL PACIFIC WESTERN	AIR CANADA AIR ONTARIO AIR QUEBEC AIR TRANSATLANTIC AIR WESTERN AIR YUKON AIR ALBERTA AIR BRITISH COLUMBIA AIR MANITOBA AIR ONTARIO AIR QUEBEC AIR SASKATCHEWAN AIR TRANSATLANTIC AIR WESTERN AIR YUKON
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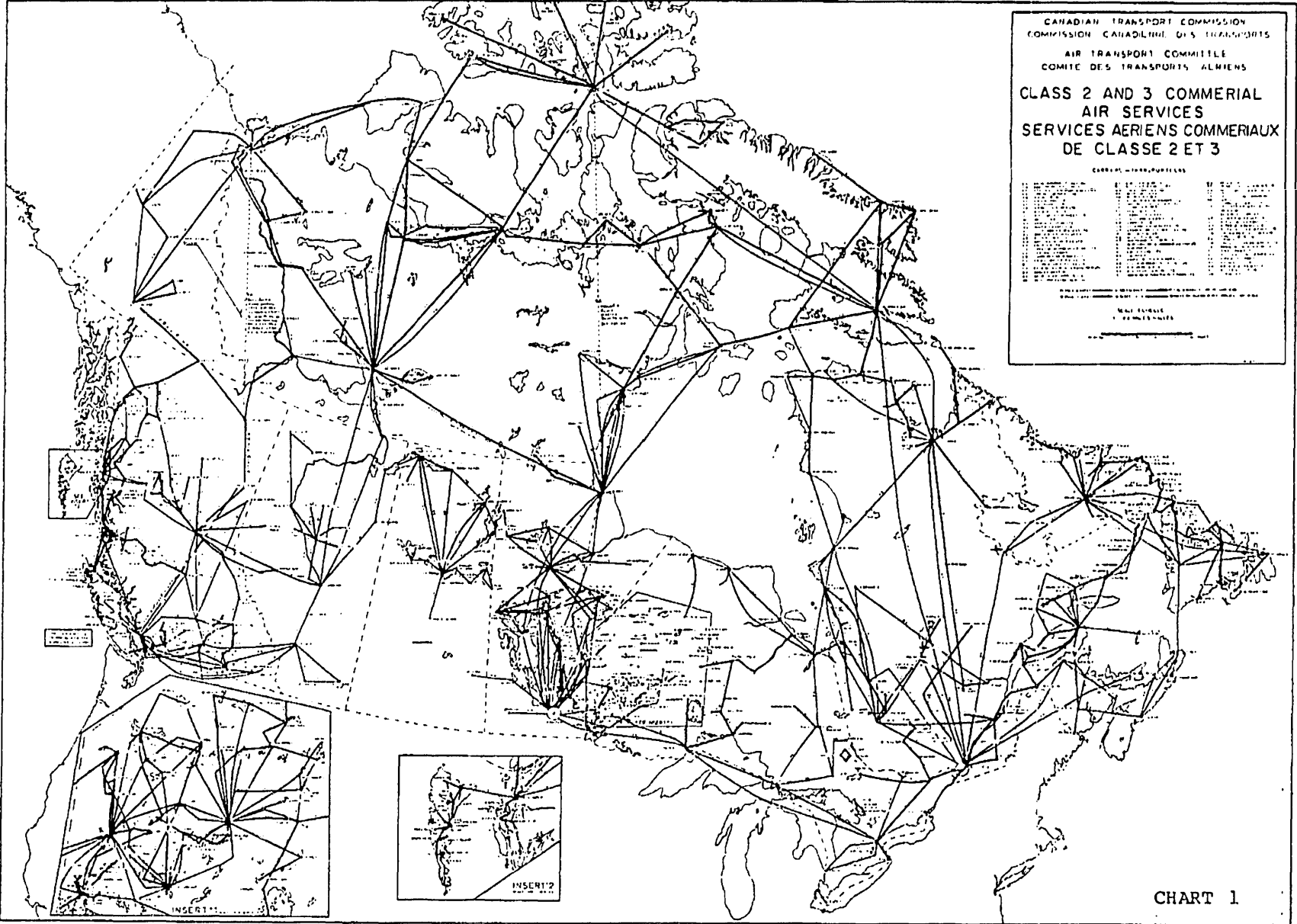


CHART 1

Implementation of the policy will be spread over a period of at least five years and will cost about \$40 million. The object of the program is to provide minimum standard facilities to improve reliability and regularity of services to Northern communities dependent on air transportation for vital travel and supplies. These facilities will include all those normally found at comparable airports in southern Canada.

The Ministry of Transport will be responsible for the provision of all facilities except for the airport maintenance equipment which will be used for other community services as well. This equipment will be provided by the Department of Indian and Northern Affairs in cooperation with the Territorial Governments.

The evolution of the minimum standards for airport facilities stemmed from extensive consultations over the past two years. The Ministry of Transport solicited the views of northern aircraft operators, chambers of commerce, transport associations, territorial governments and national Indian and Inuit associations.

Similar and even more comprehensive consultation is now under way in four Indian languages and two Inuit dialects involving direct contact with people in over 60 communities. The purpose of this in depth consultation is to establish northerner's views on the type and quality of air services they feel are required. This approach ensures that the people living in the North have a greater opportunity to make their views known and that they will have more say in the way air services develop in the future.

The new policy outlined by Mr. Marchand defines Arctic airports into three categories depending on the length of runways and depending on the size of the community served. The Ministry of Transport will continue to operate and maintain eleven major airports at locations such as Yellowknife, Inuvik, Resolute and Frobisher. Under the new policy the Ministry of Transport will have overall responsibility for the maintenance and operation of airports to be constructed or improved in over 50 other communities across the Yukon and Northwest Territories. However, the actual site operation of these airports will be undertaken by the Territorial Governments employing residents of the communities served to the greatest possible extent.

The program for the installation of Very High Frequency Omni-Ranges with Distance Measuring Equipment (VOR/DEM) on the most frequently used air routes in the Territories will be continued. Completion of this navigational aid program over the next few years will enhance regularity and reliability of all aircraft operations in the North."

The Arctic Transportation Agency is presently conducting a study to:

- (a) Examine the present air transportation service.
- (b) Determine problems related to the present service.
- (c) Make recommendations for the future. Hopefully, the objective will be the provision of ongoing, regular air service in all remote points.

It is recommended that the Territorial Hospital Insurance Service make immediate contact with the Arctic Transportation Agency. Discussions should be held at the earliest possible date in relation to changing medical referral patterns, health facility changes etc. This input will assist the Agency in formulating their recommendations.

### Medical Evacuation

In considering the medical evacuation of patients the consultant noticed the following:

1. Present medical evaluations are made on the basis of outdated policies.
2. Patterns for the provision of medical services often dictate the evacuation route - rather than the needs of the patient.
3. Transportation policies, and payment for the costs for such transportation, are divided between two levels of government - Northwest Territories Medical Services, and the Department of Social Development. The policies are not understood by the workers in the field and considerable confusion exists.
4. The cost relating to the evacuation of patients is staggering.

The following case is an indication of what is presently taking place. The example, is presented to indicate the problems relating to present policies and is not meant to criticize the action taken. The professional personnel involved carried out the present policies and their action is not in question.

The day prior to my visit to Fort Resolution, an Orthopedic Surgeon held a Clinic at Pine Point. During the day of my visit, this Specialist was also holding a Clinic in Hay River. At Fort Resolution an outpatient had been receiving treatment through the Nursing Station. This patient was able to continue in her home but the treatment was not progressing as well as planned. Through consultation with the Physician at Fort Smith, an aircraft was chartered and the patient was flown to Fort Smith. Since the individual was now out of her own community, she was provided services by placing her in a hospital bed - although she was an outpatient in Fort Resolution.



This example shows that the patient could have been reviewed by the Specialist in Pine Point which is a relatively short distance away - or even at Hay River. However, due to the present referral pattern to Fort Smith, and due to a lack of communication throughout the area, a very expensive method of providing service was utilized. It is estimated that the cost of the charter service was approximately \$226.00. In addition, the patient was removed from her home and community - whereas, it may have been possible to continue treatment as an outpatient after the clinical review by the Specialist.

During the 1973 - 1974 fiscal year the Northwest Territories Region - Medical Services spent \$1,034,774.36 for the transportation of patients. This figure includes air and ground transportation and patient maintenance. It is important to note that the costs do not include the salary costs of patient escorts. A summary of these costs is outlined in Table 17, the information was provided by the Northwest Territories Region - Medical Services, in Edmonton.

During the same year, the Department of Social Development paid \$291,884.00 in patient travel. A breakdown of this expenditure is provided in Table 18.

Therefore, according to the details presented to the Consultant, a total amount of \$1,326,658.36 was spent on patient transportation for the Northwest Territories during the fiscal year 1973 - 1974. This is a very sizeable amount of money.

Therefore, it is recommended that:

1. Present travel policies be carefully reviewed.
2. Present referral patterns be reviewed.

Table 17

Transportation Charges, 1973 - 1974, Patients and Escorts  
by Northwest Territories Region - Medical Services

	Yukon 3020	Inuvik 3302	Baffin 3501	Keewatin 3702	Mackenzie 3801
Air - Scheduled	25,935.30	107,559.13	106,317.95	59,696.00	124,943.86
Charter	5,618.32	18,941.73	123,009.02	75,229.97	117,623.56
Ground	28,349.88	5,727.15	1,524.00	9,242.40	12,860.05
Sub-Total	59,903.50	132,228.01	230,850.97	144,168.37	255,427.47
Patient Maintenance	4,561.10	9,984.03	51,811.67	96,547.90	49,291.34
Total	64,464.60	142,212.04	282,662.64	240,716.27	304,718.81

GRAND TOTAL = \$1,034,774.36

Reference: Northwest Territories Region - Medical Services

Table 18

Travel Expenditures for Patients - Fiscal Year 1973 - 1974  
Department of Social Development

<u>Travel Classification</u>	<u>Amount</u>
<u>Indigents under Health Ordinances</u>	
	23,068.00
	169.00
	9,304.00
	<u>37,474.00</u>
	<u>\$ 70,015.00</u>
Returning of Patients	
Headquarters	689.00
	11,256.00
Fort Smith	58,256.00
Inuvik	21,465.00
Baffin	81,864.00
Keewatin	<u>48,339.00</u>
	<u>\$221,869.00</u>
Total	<u><u>\$291,884.00</u></u>

Reference: Department of Social Development, Yellowknife.

3. Health programs and facilities be planned for the Northwest Territories so that a high standard of health care can be provided in the North for Northern Residents. This matter is referred to in greater detail in the discussion relating to "Community" (Primary and Secondary), "Area" (Tertiary), "Regional" (Quaternary) and "Speciality" (Major Medical Centres) health care programs and facilities.

Schedule and Charter Medical Evacuation Versus Central Air Ambulance Services

The Consultant considered the use of Schedule and Charter Medical Evacuation and the alternate possibility of having a Central Air Ambulance Service. The following factors were considered:

1. The area involved and the distances travelled
2. The ready availability of schedule and charter services in most of the Mackenzie Valley Area.
3. The cost of purchase or rental of aircraft and the maintenance and operational costs relating to a government owned and operated service. In this regard discussions were held with representatives of the Saskatchewan Air Ambulance Service.

Discussions were also held regarding a study presently being conducted in Alberta relating to air transportation of patients.

It is recommended that:

1. Representatives of the Territorial Hospital Insurance Services, the Department of Social Development, and the Northwest Territories Region - Medical Service meet with representatives of the Arctic Transportation Agency regarding present and future medical evacuation requirements.
2. Schedule and charter aircraft continue to be used - with the resulting improvements related to revised travel policies; revised referral patterns, and the understanding of "Community" (Primary and Secondary), "Area" (Tertiary), and "Regional" (Quaternary) and "Speciality" (Major Medical Centres) health care programs and facilities.

Costs of Health Service In the Northwest Territories

In reviewing the health care costs for the Northwest Territories, the following was noted.

1. The Department of Social Development (Health) budgeted a total of \$9,700,000.00 for health for the year 1974 - 1975. Of this amount, \$274,000.00 was for Capital Expenditures - leaving a total of \$9,426,000.00 for Operating Expenditures.
2. The Northwest Territories - Medical Services budgeted \$16,317,860.00. Included in this amount was \$2,992,000.00 Capital Expenditures - leaving a total of \$13,325,860.00 for Operating Expenditures.
3. Therefore, a total of approximately \$22,751,860.00 was budgeted for the operation of health services in the Northwest Territories for the year 1974 - 1975 (\$13,325,860.00 plus \$9,426,000.00).
4. Using the 1971 Statistics Canada figure for the population of the Northwest Territories - 34,807 people - the cost of all health services in the Northwest Territories can be estimated at approximately \$653.66 for every man, woman and child. However, it is recognized that the population has increased since the 1971 Census; but it is estimated that the total operating costs for health services would still be about \$600.00 per capita for the 1974 - 1975 year.
5. In preparing the Government of the Northwest Territories Main Estimates - 1974 - 1975, the National per capita cost for Medical Care in Canada was stated to be \$68.00. The National per capita costs for Hospital Insurance and Diagnostic Services in Canada was stated to be \$146.03. This provides a total average per capita cost of \$214.03 for Medical Care, Hospital Insurance and Diagnostic Services in Canada.

6. In the "Task Force Reports on the Cost of Health Services in Canada" it was estimated that between five and six percent of the total expenditure for health was spent on Public Health.

Therefore, it is noted that the average per capita cost for health services in the Northwest Territories is considerably higher than the National average per capita cost.

With regards to the costs of specific services the Consultant ran into problems in obtaining cost information. Good examples of the lack of specific cost information are:

1. The total costs for Radiological services in the Northwest Territories. Also the total cost of the interpretation of X-ray films.
2. The total costs for Laboratory Services in the Northwest Territories.

This information was not readily available and it would have required many man hours for clerical work to pull the information from existing computer print-outs.

This fact has been noted by other investigators. On page 62 of the report, "Mackenzie Valley Development: Some Implications for Planners", Volume I, it states: "The unavailability of hard data on health and welfare programs is ample evidence that either new procedures of recording expenditures or future research programs are required to assist planners".

It is recommended that the present system of recording expenditures be reviewed with the objective of establishing cost centres that will permit the easy retrieval of information relating to the cost of health services.

It is recommended that a detailed review be made of the total cost of the provision of Radiological Services and Laboratory Services for the residents of the Northwest Territories. This review to include special contracts and professional fees relating to these services.

It is also recommended that every effort be made to coordinate and consolidate programs in order to bring the average per capita cost for health services in the Northwest Territories more in line with the National average costs.



## Programs and Facilities

### Coordination of Programs

In North America one of the major problems facing the health care field is the fragmentation of programs and services and the dilution of our valuable resources - manpower and finances.

It became readily apparent to the Consultant that the same problem existed in the Northwest Territories and in fact, because of the two levels of government involved (as previously mentioned) the problem was amplified.

It was noted that where gaps in the service had existed in the past someone had, with good intentions, moved in to provide the required service. As a result many services are duplicated.

One of the examples of the above is the Home Management program through the Department of Education. This program was developed to provide assistance in "home tasks" for families moving into modern homes. Other needs were identified and the program was expanded to include family planning and health education. These services were also being provided by the Northern Nurse - through the Nursing Stations or Health Centres and by the Department of Social Development. Therefore, in any one settlement conferences and programs could be developed independently by more than one agency.

Several other investigators have pointed to the same problem:

1. Report - "Mackenzie Valley Development: Some Implications For Planners" Volume I, Page 10.  
"The concern is not so much with this multiplicity of public programs but the degree to which they are planned and well coordinated."
2. Report - "The Royal Commission on Health Services, 1965" Volume 2, page 273:

"What is needed though is closer integration of the Various Administrations so that the planning, the actual operation, and the financing can be undertaken most effectively."

3. Report - "Non-insured Medical/Social Services, Department of Social Development, Government of the Northwest Territories, December, 1973. Pages 12 - 13.

"There is not a clear, documented understanding between the agencies as to their respective roles and responsibilities. Through the years agreements have been reached, verbal and written, often superceded by others. These have been made at various levels of authority in each agency and have not always been adopted and implemented uniformly. Consequently there is a lack of consistency of program application and administration throughout the Territories".

"Written policy and operational guidelines, agreed to by both agencies, do not exist. This coupled with the high rate of staff turnover has created a lack of continuity of program application and frustration with many field and administrative staff. Verbal instructions are too often subject to interpretation".

"Sharing of administrative and financial responsibility although not as easy and effective as if not shared, can be achieved effectively only if the partners have full knowledge of and agree to their own and each others responsibility. There must also be provision for co-ordinating policy and operations on a continuous basis. Further, respective responsibilities and operational guidelines must be documented and distributed from the decision makers to the staff of each organization".

4. Report - "Observations and Recommendations Respecting Alcohol and Drugs In the Northwest Territories" by Wm. J. Wacko, August 1, 1973, page 15:

"A visit to the communities of N.W.T. quickly reveals that professionals and service agency leaders do not work closely or harmoniously. It appears more like representatives of competing empires than various people working harmoniously for the welfare of the residents of a community."

It is recommended that discussions be held immediately between the various departments and agencies involved in health service in order that a clear understanding is developed as to each others role and objectives. Wherever possible effort should be coordinated in order to prevent duplication, fragmentation, and a waste of the valuable resources - manpower and money.

It is further recommended that in the future an index be developed outlining the services and objectives of various departments and agencies involved in the provision of health services. This index would be a valuable resource for staff orientation programs and for public information.

### Terminology

In general the Consultant noted a lack of understanding in relation to the terms used relating to health services or health facilities. For example there was considerable misunderstanding and confusion over the terms Health Station, Nursing Station, Health Centre, Cottage Hospital, Health Clinic, Public Health Clinic and Hospital.

In many cases when the term "hospital" was used the individual was thinking of the services and facilities at the Charles Camsell Hospital in Edmonton.

Another group of terms which were misunderstood included: Old Folks Home, Nursing Home, Extended Care, Chronic Care, Senior Citizen Lodges.

In the minutes of Commissioner S.M. Hodgson's Tour of the Mackenzie Delta - November 15 - 16, 1973 and December 4 - 8, 1973 the confusion in the meaning of an "Old Folks Home" and a "Senior Citizens Lodge" is mentioned on several occasions. As a result Senior Citizens Lodges were being built and their utilization was very low. On page 35 of the record of the minutes of the meeting at Fort McPherson it is stated that: "Council explained how the Home (referred to as an "Old Folks Home" instead of as a Senior Citizens Lodge) is not being used by old people who can care for themselves because they prefer to live out on the land. On the other hand, those old people who are in some way or another disabled and who have moved into the home have no-one to look after them".

This particular facility was designed as a Senior Citizens Lodge.

However, citizens in the Mackenzie Delta were more familiar with the services of the "Old Folks Home" at Aklavik - and thus the confusion.

It is recommended that a glossary of terms be developed.

It is further recommended that a Public Information Program be developed, using audio-video tapes if necessary, so that the citizens of the Northwest Territories will have a better understanding of health services, programs and facilities.

Utility Services - Water, Sewer and Garbage

In many of the settlements the basic water, sewer and garbage services are inadequate.

With an inadequate supply of water it is most difficult to introduce a good public health program.

The lack of a good system for collection of sewer and garbage also can lead to a situation which can possibly effect the health of the local citizens.

The importance of sanitation can not be overemphasized. It has a direct relationship to the utilization and cost of health services.

Therefore, it is recommended that every effort be made to encourage the appropriate levels of governments to push ahead with programs that will ensure an improved water, sewer and garbage service for all Northern communities.

### Housing

In most settlements adequate housing is a problem for two reasons:

1. Not sufficient accommodation available.
2. Some houses fall below an acceptable standard.

Problems have also arisen with some of the new houses: due to services which could not stand up to Northern conditions. For example, at Cambridge Bay a number of new houses were installed and the sewer system did not have adequate insulation for Northern conditions. As a result the sewer system froze during the winter months and could not be used.

It is recommended that efforts be increased to provide adequate housing accommodation. It is also recommended that factors related to Northern climatic conditions be considered so that new housing units will prove successful.

## Alcohol

One of the greatest problems in the Northwest Territories is the use and abuse of alcohol. The resulting conditions relating to the individual, the family, and the community are most serious. Situations leading to death, child neglect, accidents and other community related problems are common.

The 1973 "Report on Health Conditions in the Northwest Territories" by the Chief Medical and Health Offices, Government of the Northwest Territories, states on Page 42:

"Amongst adults both young and old the heavy dependence on beverage alcohol causes further deterioration in Nutritional level both by diverting food dollars from the entire family and by reducing, by substitution, the intake of necessary Nutrients by the alcohol dependent subject.

One also obtains the impression that considerable effort is presently being put forth to improve the situation. The magnitude of the problem however, often dwarfs the efforts for improvement.

Although the problem is recognized the Consultant noted that in many instances steps were being taken in direct conflict with corrective recommendations: For example:

1. It has been suggested that present social assistance and "Hand-out welfare" policies have contributed to the native alcohol problem. It was pointed out to the Consultant that the ease of obtaining social assistance discouraged the natives from putting forth an effort to hunt, fish, or be employed. The resulting idleness lead to increased consumption of liquor.
2. In many communities eating, sports or recreational facilities where Alcohol was not served were not available. For example:



the new recreational facility at Cambridge Bay is being planned so that alcohol is available.

In Norman Wells the recreational centre operated by Imperial Oil was closed in favour of a new, more central facility. However, the hours of operation were reduced and at the time of the Consultants visit lunches were not available - in fact the facility was not being utilized due to the lack of funds to pay for a supervisor or steward.

A special report, "Observations and Recommendations Respecting Alcohol and Drugs in the Northwest Territories" has been prepared for the Department of Social Development, Government of the Northwest Territories, by Wm. J. Wacko. Most of the findings outlined in this report support the observations of the Consultant.

The consultant also noted that:

1. Companies, businesses, agencies, departments in governments, either do not understand or fail to recognize their responsibilities with regards to the recruitment, selection, orientation, and supervision, of personnel to work in the North.
2. There is a real need for more involvement by native people in Alcohol education and control programs.

The recent appointment of a Chief, Alcohol and Drug Program in the Department of Social Development is a major step forward and the results of his efforts should soon be noticed.

With regards to Alcohol it is recommended that:

1. The alcohol education and control program be expanded.
2. All efforts in this important program be coordinated.
3. Citizens living in each settlement be involved in the alcohol education program.

4. All business, companies, agencies, and governmental departments be made aware of their responsibilities related to the recruitment, selection, orientation, and supervision of personnel.
5. Recreational and sport activities and facilities, where Alcohol is not served, be encouraged and supported.

### Chronic Care

The program for Chronic Care in the Northwest Territories is not well developed. An attempt was made to provide a service by opening a ward at St. Ann's Hospital at Fort Smith. As a result, senior citizens requiring Chronic Care were removed from their communities, taken away from their families and friends and moved to Fort Smith.

Although the program at Fort Smith included a basic level of nursing care it was a relatively static program. Medical review, occupational activities, recreational activities, etc. were either nominal or absent.

Therefore, there is an urgent need to develop a coordinated program for the aged including: home care programs, senior citizen low rental accommodation, and chronic care or extended care services.

In a special Proposal - "An Indigenous Approach to Care for the Aged", E. W. Drake, Area Supervisor, Yellowknife Area Office, Department of Social Development made reference to the central approach to the provision of service for the aged: "This means that the aged must leave their homes for an area which holds no meaning for them. Larger Centres are often traumatic after the small settlement where everyone was able to be on a first name basis. Identities are totally lost. Language variations leave them helpless in communications. The lands where they hunted and fished in their youth are removed from them".

In considering chronic care - extended care programs one must therefore, take into consideration local culture and traditions. This fact was pointed out by R. James Arnett in his report "A Study of the Needs of Older Adults in Selected Communities in the Northwest Territories", April, 1973. On page 3 of this report Mr. Arnett states:

"Since the roles of older adults and their pattern of living in a society are largely determined by culture, ethnic differences must be taken into account. In the Indian and Eskimo cultures, older adults traditionally had very well defined and understood roles within their cultures. Especially in the case of the Indian peoples, their social structure, was largely a gerontocracy which controlled a system of extended families. In a gerontocracy, the older people are seen as the source of wisdom and experience to be consulted in all things. Following contact with the white culture however, the extended family began to decline, and with it the importance and clarity of the roles once played by older adults. Are the older adults suffering because of this resultant displacement and diffusion? This is an important question."

In the Newsletter - "On Growing Old" Volume 12, Number 1, February, 1974, Published by the Canadian Council on Social Development, Ottawa, the following statements were noted:

"The proportion of old people in Canada is rising in relation to the rest of the population, and institutional facilities for their care are increasing even faster. Not so, however, with home-care programs that make it possible for old people to remain in their own homes as long as they are able and wish to do so. If present trends continue, and unless new policies on domiciliar and community services for old people are developed and implemented, Canada could earn the questionable distinction of having more of its elderly citizens in institutions (special care facilities, nursing homes and, mainly homes for the aged) than almost any other industrialized country in the world".

"Is this really necessary? It is suggested that there are substantial numbers of old people in Canada who are admitted to such institutions because their communities lack services such as home nursing, meals, housekeeping, social, educational and occupational services, and friendly visiting which would make it possible for many of them to remain in their own homes longer. Unless these services are available, institutions tend to become dumping grounds for old people who could be better and more economically serviced in the community in their own home".

"It takes much more than bricks and mortar to make adequate homes for older Canadians, although there isn't even enough of that, a study just released by the Canadian Council on Social Development shows".

"The study found, that, despite the influence of managers on the quality of life in housing for the elderly, sponsors and managers of federally financed developments generally aim only to provide elderly people with decent housing at a reasonable cost, without taking major responsibility for the physical, psychological, and social well-being of residents. In short, they do not regard their task as appreciably different from that of private landlords, except for ensuring lower rent".

Dr. Heinz Lehmann, Research Director of Douglas Hospital and Chief of Psychiatry at McGill University has stated that:

"To avoid depression elderly people require three things - a lot of personal contact with other people, some meaning to their lives and some gratifications, little pleasures to look forward to".

In the Northwest Territories we have the following developments relating to care for the elderly:

1. Home Care Program - The "Coordinated Home Care Program" operating in Yellowknife does provide services to elderly citizens in their homes and in the Senior Citizens Lodge.
2. Senior Citizen Lodges - The development of Senior Citizen Lodges will be discussed under a separate heading. Suffice is to say that this is a good example of a program which was successful in Southern parts of Canada but which has had very limited success in the Northwest Territories.
3. Old Folks Home - Aklavak - This facility can accommodate up to twelve guests. At the time of the Consultant's visit there were five guests (1 from Arctic Red, 1 from Cambridge, 1 from Fort Good Hope, 2 from Aklavik).

Although the physical structure was in a condition where consideration should be given to replacement, the program was good. Native people received some personal care from the Native staff. The food served was also in keeping with the past experience of the guests and included such items as Cariboo, Rabbit, Muskrat, Raw Fish, etc.

4. Chronic Care Ward - St. Ann's Hospital, Fort Smith. This ward was meant to provide a central chronic care program for the Northwest Territories. Facilities are available for twenty-two (22) patients. Only three of the patients on the ward were from Fort Smith at the time of the Consultants visit.

It is recommended that a coordinated program be developed for senior citizens to provide:

1. Home Care Programs - these programs should be provided from the Hospital, Health Centre, or Nursing Station and should provide home care services to citizens requiring this service in their homes or in senior citizen lodges.

If this type of program is developed it will be possible for families to keep elderly individuals in their homes for longer period of time. Also it will be possible for senior citizens to remain in Senior Citizen Lodges for a longer period of time.

The important fact is that whenever possible we should provide assistance so that senior citizens remain in their homes. This is their natural environment and this type of program is beneficial to them in that it prevents early "institutionalization" (even from the cost point of view the program is less expensive).

2. Senior Citizen Lodges - Whenever Senior Citizen Lodges are planned in the future a facility should be planned in order to provide:
  - (a) a few low rental suites
  - (b) provision for the "personal care" of a few citizens (similar service to the Aklavik "Old Folks Home).

Combined with a "Home Care Program" this type of a facility will be more acceptable to communities and allow for a much better service.

Where Senior Citizen Lodges are presently in existance several of the units should be re-allocated for the provision of "personal care".

This approach is discussed further under the section dealing specifically with Senior Citizen Lodges

3. Extended Care -- Chronic Care Service - Wherever a hospital facility exists in a settlement consideration should be given to the allocation of a few beds to Extended or Chronic Care. It is important not to over-allocate beds for this service. However, it is very important to have the services located close to the original residence of the patients. Because of

the level of care required it is essential to have the service associated with the local hospital.

In approving the allocation of Extended Care or Chronic Care Services consideration must be given to programs for the activation of patients. Facilities for occupational therapy, physiotherapy and recreation should be included in the planning.

As this program develops consideration should be given to the recruitment of a combined Physiotherapist/Occupational Therapist to provide a visiting-consulting service to the various institutions providing Extended Care - Chronic Care Services.

In the section of this report dealing with Hospital and Health Centres specific reference is made to the provision of Chronic Care - Extended Care services at Fort Simpson, Inuvik, Hay River, Fort Smith, and Yellowknife. As soon as this program can be approved and made operational the large ward for Chronic Care at St. Ann's Hospital in Fort Smith should be phased out.



### Dental Care

Another urgent problem in the Northwest Territories is the provision of basic dental care to the residents. Fortunately steps have already been taken to alleviate this serious health problem.

The program for Dental Therapists was reviewed by the Consultant. The facilities at Fort Smith were visited and discussions were held with Doctor Keith W. Davey, Director, School of Dental Therapy.

The Northwest Territories is taking the lead in the true utilization of trained auxiliary or paramedical personnel. The accomplishments and the services provided by the Northern Health Nurse are most impressive. It is expected that the Dental Therapist will prove to be as useful.

#### It is recommended that:

1. Arrangements be made so that all Dentists practising in the Northwest Territories are associated with the School of Dental Therapy. This development is important for the future coordination and expansion of the program.
2. Every Nursing Station, Hospital, or Health Centre planned for the future should be designed so that facilities for a Dental Service are available, or can be easily made available.
3. The program should be expanded as quickly as possible in order that Dental Therapists are placed at an early date in outlying settlements (an early placement at such settlements as Fort Simpson, Fort Resolution, Cambridge Bay, Aklavik, etc. would act as a pilot study for the success of the program).

### Day Care Centres

There are three aspects to Day Care Centres:

1. Centres in a community where Senior Citizens can gather to participate in interesting "activation" programs. Such centres should be associated with Health Centres, Home Care Programs, Senior Citizen - Personal Care Lodges.
2. Centres in a community for educational programs, activation programs, and work projects for the handicapped. Such programs should be associated with a Sheltered Workshop or a Health Centre.
3. Centres in a community for the care of infants and children while their mothers work in other health related programs and services. The reason for the development of this type of service is to enable local married ladies with children to work.

It is recommended that consideration be given to the development of day care programs for:

- (a) senior citizens
- (b) the handicapped
- (c) infants and children of mothers working in the health care field.

Where possible it is important that such program be coordinated through the appropriate health care facility in the community.

### Unused Equipment and Supplies

Capital equipment is a major expenditure for the health care plan. In visiting hospitals throughout the Mackenzie River Area the Consultant noted a number of pieces of equipment in good condition that was presently not in use. Certain pieces of equipment were actually new and would never be used in the particular hospital.

Also the Consultant noted certain supplies that were either overstocked or no longer required by a particular hospital.

If we are concerned about total health costs a method should be developed so that hospitals are aware of unused equipment and supplies. Also an acceptable procedure must be developed in order that these items can be easily and quickly transferred between hospitals - Federal and Territorial.

Therefore, it is recommended that every hospital, cottage hospital, nursing station, health centre, health station, be requested to list all unused equipment and supplies and that this information be submitted to the office of the Territorial Hospital Insurance Service so that a master list can be circulated.

It is further recommended that this matter be discussed at a meeting of the Northwest Territories Health Coordinating Committee in order to establish an acceptable policy for the quick and easy transfer of unused equipment and supplies to where they are required.

### Services for the Handicapped

In reviewing the services for the Handicapped it was noted:

1. It is practically impossible to obtain an up-to-date list of handicapped persons in the Northwest Territories or handicapped persons from the Northwest Territories receiving care outside the Territories. There is not an "index" of handicapped persons.

It was estimated that there are seventy (70) handicapped persons from the Northwest Territories receiving care in various provinces across Canada.

2. Diagnostic and treatment services are very limited.
  - (a) There is only one full time Psychiatrist and he is located at the Northwest Territories Region Office in Edmonton. With a heavy program development load and administrative responsibilities the time for clinical work is practically nil.
  - (b) Until recently there was one Psychologist - located in the Mackenzie Zone Office, Northwest Territories Region - Medical Services. The Department of Education has now appointed a full time Psychologist and this is a very major step forward.
  - (c) There are no Speech and Hearing Consultants in the Northwest Territories. Although the Northern Nurse does carry out some basic testing the school program is at present very inadequate.
  - (d) There are only two Physiotherapists - one in Inuvik and one in Yellowknife. Both Physiotherapists function within the hospital.
  - (e) There is a small school for the retarded in Yellowknife with nine students and two staff - The Abe Miller School for the Retarded.

Therefore, the Consultant was repeatedly informed that the known cases were only the very severely handicapped and that there were many severely handicapped persons who's problem had not been identified.

3. At the present time there are no Sheltered Workshops in the Northwest Territories. Apparently some of the seventy (70) handicapped persons are capable, and are now reaching the age where a sheltered workshop environment would be most appropriate.
4. With regards to programs for the handicapped at least three departments - Education, Social Development and the Health Care Plan, are presently involved.

Therefore, it is recommended that regarding handicapped persons in the Northwest Territories:

1. A coordinating committee be appointed to coordinate the activities between the Department of Education, the Department of Social Development and the Health Care Plan.
2. An index be developed for handicapped persons in the Northwest Territories.
3. The Government of the Northwest Territories encourage the Northwest Territories Region - Medical Services to increase their efforts to recruit a full time Psychiatrist to be based in <sup>Yellowknife</sup> Edmonton.
4. Every effort be made to coordinate the efforts of the two full time Psychologists - one with the Department of Education, Government of the Northwest Territories and one with the Mackenzie Zone, Northwest Territories Region - Medical Services, in order to prevent a duplication of effort.
5. The Government of the Northwest Territories should consider the appointment of a Speech and Hearing Consultant in order to increase basic testing in the Northwest Territories. At the present time a limited amount of work is being done by the Northern Health Nurses and some cases are being referred

to Edmonton. However, there is a tremendous gap in the provision of this service. It may be possible to provide this service through a hospital or as a consulting service from the Health Care Plan.

6. Discussions should be held with the Inuvik General Hospital and the Stanton Yellowknife Hospital to determine the possibility of utilizing their Physiotherapists as resource personnel for other health services. If a satisfactory arrangement can not be made consideration should be given to the appointment of a combined Physiotherapist - Occupational Therapist to act as a resource person for hospitals, health centres, home care programs, etc.
7. As soon as the index for handicapped persons has been completed consideration should be given to services and facilities within the Northwest Territories. Such Services as schools for the handicapped, sheltered workshops should be included in this review.

### Home Care Programs

Home Care is viewed as an important segment of the health care delivery system and as a desirable alternative to institutional care.

A Home Care Program is one which is centrally administered and through coordinated planning and follow-up procedure provides for physician - directed medical, nursing, social and related services to selected patients at home. In this respect, home care is part of a continuum of patient care. The range of services available in a home care program may include nursing, orderly, homemaking, social case work, physiotherapy, occupational therapy, and where possible the provision of special equipment.

At the present time one Homecare Program is operating in the Northwest Territories - The Coordinated Homecare of Yellowknife. One or two other communities are considering the development of a program.

The Northwest Territories Region - Medical Services have also indicated that they will be including Home Care in their objectives for the future.

In Yellowknife, the Coordinated Homecare Program was organized as a separate entity. As a result it was noted that the degree of coordination and cooperation between the program and hospital services was not as good as one would expect. This is unfortunate and must lead to additional administrative and service costs for the Home Care Program.

If steps are to be taken to reduce the fragmentation of the health care system, and if the costs for health services are to be controlled, it is essential to coordinate and integrate services. Therefore, it is to be hoped that discussions will be held between the Coordinated Home Care Program of Yellowknife and the Stanton Yellowknife Hospital to determine the possibility of a closer working relationship.

Therefore it is recommended that support be given to the development of Home Care Programs as an alternative to institutional care. It is further recommended that Home Care Programs be developed as a service from hospitals, health centres, nursing stations, and not as a separate entity within the community. If true coordination is to be promoted it is important not to add to the present fragmentation of services, but rather to initiate new services on a coordinated basis - emanating where possible from existing services.



### Nutrition and Dietetic Services

On page 42 of the "Report on Health Conditions in the Northwest Territories 1973" by the Chief Medical and Health Officer, Government of the Northwest Territories, the following statements were noted:

"The problems related to nutrition in the Northwest Territories are manifested in a variety of forms and have multiple causes".

"In general, the problems of dietary imbalance that were defined in Southern Canada are exaggerated in the Northern scene".

"High food costs coupled with selective non-availability of certain foods (e.g. fresh fruit, eggs) lead to excessive reliance on foods which may assuage hunger but do little to foster metabolic well being. Candy, cookies, soft drinks and carbohydrate products in general tend to usurp the place of green vegetables, milk, eggs and other such sources of necessary minerals, amino-acids and trace elements, with the all too obvious devastating effect on dentition, and the less obvious but equally present deficiencies of Iron and Vitamin C".

"Amongst adults, both young and old, the heavy dependence on beverage alcohol causes further deterioration in nutritional level, both by diverting food dollars from the entire family and by reducing, by substitution, the intake of necessary nutrients in the alcohol dependent subject."

During 1973 a Nutritionist was employed by the Northern Region - Medical Services in Edmonton. Her time was divided between the Yukon and the Northwest Territories. However, the full time service has now been discontinued.

With the number of institutions throughout the Northwest Territories - hospitals, health centres, nursing stations, institutions operated under the Department of Social Development, etc. there is ample work for a full time Dietitian working in the Northwest Territories. The fact that hospitals have been operating without this consulting service is serious.

It is recommended that provision be made for a full time Dietitian to provide consulting services to hospitals and other institutions in the Northwest Territories. In order to prevent unnecessary travel, and in order to better utilize these services, it is recommended that this Consultant use Yellowknife as a base of operation.

### Ophthalmological Services

At the present time Ophthalmological Services in the Northwest Territories are being provided as follows:

1. A full time Ophthalmologist, a full time Technologist, and staff in the Mackenzie Zone with offices in Yellowknife.
2. Consulting Ophthalmological Services to the other zones from Ophthalmologists residing outside the Northwest Territories.
3. A private Ophthalmologist practising in Fort Smith.

The service in the Mackenzie Zone could well serve as an example for providing services throughout the Northwest Territories. The use of auxiliary or paramedical personnel has been discussed. previously, it would appear that the Northwest Territories has taken the lead in utilizing the Northern Nurse, the Dental Therapist, and the Ophthalmological Technician. It is expected that the rest of Canada will carefully observe these programs and hopefully gradually introduce the necessary changes in the health care system.

The present Ophthalmologist and Technologist are keys to the success of the present and future programs. Therefore, it is imperative that their efforts be supported. It would appear that the most appropriate approach would be to create this service as a Territorial Service and not just a Mackenzie Zone Service. This could probably be accomplished as follows:

1. The appointment of the present Ophthalmologist as a Regional Ophthalmologist with headquarters in Yellowknife.
2. The appointment of the present Technologist as a Senior Technologist with an appropriate salary scale.
3. The recruitment of two technicians to function under the Senior Technologist and the Regional Ophthalmologist. Consideration should be given to the selection of one technician immediately and it is suggested that a possible source might be a graduate nurse who has completed the training program

at the University of British Columbia. This individual could then be brought into a special on-the-job training program under the direction of the Regional Ophthalmologist and the Senior Technologist.

4. It would be necessary for the Regional Ophthalmologist to visit each of the zones and each of the Ophthalmologists providing a contract service. This would be an orientation fact finding visit.
5. It is recommended that consideration be given to a central patient record system - with the central files at the Regional headquarters in Yellowknife.

Therefore, it is recommended that the Northwest Territories Region - Medical Services be encouraged to develop a Territorial Ophthalmological Service with headquarters in Yellowknife. A suggested approach to the development of this service is as follows:

1. The appointment of the present Ophthalmologist as a Regional Ophthalmologist with headquarters in Yellowknife.
2. The appointment of the present Technologist as a Senior Technologist with an appropriate salary scale.
3. The recruitment of two technicians to function under the Senior Technologist and the Regional Ophthalmologist. Consideration should be given to the selection of one technician immediately and it is suggested that a possible source might be a graduate nurse who has completed the training program at the University of British Columbia. This individual could then be brought into a special on-the-job training program under the direction of the Regional Ophthalmologist and the senior Technologist.

4. It would be necessary for the Regional Ophthalmologist to visit each of the zones and each of the Ophthalmologists providing a contract service. This would be an orientation fact finding visit.
5. It is recommended that consideration be given to a central patient record system - with the central files at the Regional headquarters in Yellowknife.

### Psychiatric Services

The provision of Psychiatric Services in the Northwest Territories is one of the serious gaps in the health care program.

At the present time the services are provided by visiting Psychiatrists from Southern centres. The Regional Psychiatrist from Edmonton coordinates these services. However, his involvement in program development and administrative duties is such that his involvement in case work is very limited.

The visits by Psychiatrists from Southern centres is very short and there is little follow-up.

Serious problems arise concerning the lack of current case information on patients referred out of the Northwest Territories for treatment. The professional personnel involved with the case prior to referral, and often the patient's own family, are not presently adequately informed as to the progress of treatment.

In addition patients are often returned without prior warning, consultation, or adequate discharge information. It is common to receive a "Telex" or "Telephone Call" indicating a patient has been placed on an airplane for return. This allows little time for preparation to receive the patient by the family or the community. The fact is that local family situations may be such that the discharge timing was inappropriate. The lack of discharge information also prevents the local professional personnel from providing adequate service. Follow-up and ongoing assistance is, therefore, very limited.

The acceptance of general psychiatric patients into the total health care system has also been very slow. Cases that could be best treated in the local general hospital, with follow-up in the community after discharge are referred to centres outside the Territories. This is very disruptive to the patient, to the family, and this type of service is very costly.

There are serious delays in obtaining assessments. In fact in some of the institutions assessments are not obtained on individuals which would have been required if Psychiatric services were readily available.

In the Consultant's opinion Psychiatric Services must be available and such services must be coordinated with all other services in the health care plan, including acute general hospital care, chronic care, and services for the handicapped. Highly specialized care, such as "Forensic" services should at this time be purchased outside the Northwest Territories.

This opinion is supported by the recommendations of the "Mental Health Survey Team". On pages 38 - 43 of their report, prepared April 5 - May 3, 1969, the following statements are recorded:

"In offering recommendations for the creation of mental health facilities, the general principle of treating a mentally ill person as close to his own community as possible is maintained. It has been accepted for a considerable period of time that a major principle of treatment of the mentally ill is to maintain close contact with the environment to which they will be rehabilitated. This purpose cannot be achieved if large mental hospitals are built far from the patient's environment or if people are transported long distances for treatment, and to an environment with unfamiliar personnel and very often barriers to communication because of language difficulties.

Accepting this general principle, it is our opinion that the first line of treatment is the consultant, in the community, working at an out-patient level. This would include the Public Health Nurse, the Welfare Worker, the indigenous worker and others who ~~contact~~ the human being at the point in the community where his problem is being created".

"It has been successfully demonstrated in the southern communities that the majority of psychiatric casualties can be successfully treated in the general hospital setting".

"We would recommend that as far as possible, general hospitals such as Whitehorse, Yellowknife, Inuvik and Frobisher Bay should have appropriate beds set aside for psychiatric care. Arrangements might also be made for similar facilities at the hospital in Churchill, Manitoba. If consultation and permanent psychiatric personnel can be achieved, there will be little difficulty in treating the majority of psychiatric disorders in these five centres. It would also necessitate equipping these units appropriately with equipment for physical treatment, and with appropriate pharmacological stocks. Training of personnel will be most important ...."

"We would recommend that until consultants can be employed, that arrangements be made for each of these general hospitals for immediate telephone consultation".

Provided that adequate medical care, adequate acute care facilities and adequate consultation were available the majority of chronically mentally ill and grossly defective individuals, who are for the most part passive in behavior, the multi-handicapped patients, and also the majority of sclerotic geriatric patients could be cared for in selected communities in the Northwest Territories.



The Mental Health Survey Team also recommended that support be given to the Department of Education in providing classes for the mentally retarded who are educable and trainable.

We also support the Mental Health Survey Team in their recommendation that a full-time Psychiatrist be located in Yellowknife (page 29 of their report).

In discussion with the Regional Psychiatrist, Northwest Territories Region.- Medical Services, Edmonton, the use of Psychiatric Nurses as a part of the Psychiatric Service in the Northwest Territories has been explored. The Consultant has already referred to the value of the Northern Health Nurse, the Dental Therapist, the Ophthalmic Technician - the Psychiatric Nurse is another example of the use of professional personnel in the provision of health services.

Therefore, the Consultant strongly supports the program to introduce Psychiatric Nurses as part of the community Psychiatric services for the Northwest Territories - in a role similar to that of the Northern Health Nurse. It was encouraging to note on Page 37 of the "Report on Health Conditions in the Northwest Territories 1973" that: "plans are afoot to begin programs involving psychiatric nurses in selective settlements in 1974".

It is recommended that immediate steps be taken to improve Psychiatric Services in the Northwest Territories. Consideration should be given to:

1. The appointment of a Psychiatrist, resident in Yellowknife
2. The expansion of the program to utilize community Psychiatric Nurses in a role similar to the Northern Health Nurse.
3. The provision of adequate information to professional personnel and to families regarding the progress of patients receiving treatment outside the Northwest Territories.

4. Arrangements so that families and professional personnel are contacted prior to discharge of patients so that adequate preparation can be made. Complete discharge information should be provided so that the professional personnel in the community can provide adequate follow-up and support.
5. The arrangement of discussions with representatives of the health care field in order to assure the use of health and chronic care facilities for psychiatric patients.
6. A review of the patients receiving treatment inside and outside the Northwest Territories should be made in order to determine the facility requirements for patients that can appropriately receive services in the Northwest Territories.

### Public Health Programs

The "Report on Health Conditions in the Northwest Territories 1973" by the Chief Medical and Health Officer, Government of the Northwest Territories, clearly indicates the importance of Public Health programs:

1. Reference is made on Page 21 to "a notable increase in Infectious Hepatitis" and in "Red Measles".
2. On Page 23 - "The year 1973 saw an increase of 38% of confirmed gonorrhoea over the comparable figures for 1972".
3. On Page 26 - "There are currently 1,091 people on Tuberculosis preventive drug treatment".

In the Northwest Territories there is a need for a very broad Public Health Program. In order to develop and maintain a program of this nature one requires ample professional personnel who are highly motivated and who function within clearly understood policies which enable them to provide a comprehensive service.

In visiting settlements in the Northwest Territories the Consultant noticed the following:

1. In general, the Northwest Territories Region - Medical Services are responsible for the provision of public health services.

In Yellowknife for example, the city appoints a Medical Health Officer. However, this Medical Health Officer does not have any direct control, influence or input into the actual provision of Public Health Services. This is due to the fact that the staff providing these services are responsible to the Zone Office, Northwest Territories Region - Medical Services.

Therefore, in larger communities where the number of transient personnel, the number of people - including school children, requires a constant expansion of Public Health Services, there is really little input by the community.

If services are to be expanded and developed to meet the community requirements it is essential to have more community input and more community control over public health services.

2. There is a considerable difference in the interpretation of policies. It would be unfortunate if a philosophy developed to interpret policies in a very restrictive manner.

For example; in most Nursing Stations programs are community orientated, house visits were made, and educational programs were scheduled at the most appropriate time with some programs being held in the evening. However, at a few Nursing Stations, a 9:00 A.M. to 5:00 P.M. philosophy was being developed, without home calls, and with appointments or programs arranged to suite the schedule of the staff rather than the public.

3. Staffing to meet increased service and program demands also appears to be a problem. It is recognized that during the past year it has been difficult to recruit personnel. However, at the same time it is essential that a high priority be given to positions for public health.

For example; at the Public Health Clinic in Yellowknife the permanent full time nursing complement during this summer was reduced to two nurses for a period of time (approved staff complement is five registered nurses). It was impossible to maintain existing programs and at the same time service demands were increasing. This situation is

a good example of the need for community involvement in the program in order to emphasis program requirements and to initiate the necessary influence when critical situations develop.

4. In some instances the participation in school health programs was below what would be expected in a good Public Health Program. It is essential that a higher priority be given to this segment of the service in the future.

It is recommended that a high priority be given to the maintenance and expansion of a broad Public Health Service throughout the Northwest Territories. Consideration should be given to:

1. A clear policy statement concerning the services should be distributed and personnel should be encouraged to use a broad interpretation of policies.
2. Community involvement in program development and administration should be developed.
3. Where a Medical Health Officer is appointed a mechanism should be worked out so that a system of communication is available concerning programs and services.
4. Recruitment procedures should be reviewed and expedited.
5. Staffing complements should be reviewed on an annual basis to assure adequate staff to meet program and service needs.
6. Policies in relation to the involvement of Public Health personnel in school programs should be reviewed to assure adequate public health services.
7. Community programs and appointments should be arranged on the most appropriate schedule for each community.
8. Public Health Personnel should be encouraged to participate in programs that will lead to a better coordination of total health services.

### Senior Citizen Lodges

The development of Senior Citizens Lodges in the Northwest Territories is probably the best example of:

1. A decision to take a program from Southern Canada and introduce it into the North without careful consideration and discussion.
2. A Community misunderstanding of terminology being used in the health and social field. Most people in the Communities felt that a Senior Citizens Lodge was more like a Nursing Home or an Old Folks home.
3. A lack of discussions at the community level with local involvement.

It would appear that Senior Citizen Lodges have only been successful in larger communities ie: Fort Smith, Hay River, Yellowknife, and Inuvik.

In the smaller communities the lovely new, modern facilities are often more than fifty percent vacant. At the time of the Consultant's visits the following was noted:

1. Senior Citizen Lodge - Fort Resolution - 100% Vacant.
2. Senior Citizen Lodge - Fort Simpson, five of the eight units were occupied. However, two units were occupied by individuals who were still actively involved in the work field and perhaps their eligibility for occupancy should have been reviewed. Therefore, perhaps three of the eight units were occupied by individuals eligible for senior citizen accommodation.
3. Senior Citizen Lodge - Fort McPherson. The occupancy varies from 0 to 50%. At the time of the Consultants visit there were only four individuals in the Lodge.

At the present time piles are being driven and plans are being developed to build the same type of Senior Citizen Lodges in other communities. It is expected the occupancy record previously discussed will also apply.

Reference has been made to a misunderstanding of terminology. In the Inuvik Zone the local citizens took the term Senior Citizen Lodge to mean the same as the "Old Folks Home" at Aklavik where a certain level of "personal" care is provided. The minutes of Commissioner S.M. Hodgson's tour of the Mackenzie Delta, November 15 - 16, 1973 and December 4 - 8, 1973 substantiates the misunderstanding in this terminology.

On Page 35 of these minutes it is stated that: "Council (Fort McPherson) explained how the Home (Senior Citizen Lodge) is not being used by old people who can care for themselves because they prefer to live out on the land. On the other hand those old people who are in some way or another disabled and who have moved into the home have no one to look after them".

Therefore, it is apparent that a new approach to the planning for senior citizen accommodation is required. It is suggested that consideration should be given to a combined Senior Citizen Lodge and Personal Care Home ("Old Folks Home"). This type of facility would provide a few small low rental suites and also accommodation where a level of assistance in personal care could be obtained.

This matter has been discussed individually with the Manager of the Central Mortgage and Housing Corporation and the Director of the Northwest Territories Housing Corporation. It would appear that it is possible to finance multi-purpose senior citizen housing provided:

1. The mortgage payments are looked after.
2. Any costs relating to home-maker services or homecare programs are covered separately.

It is recommended that discussions be held between the Department of Social Development, the Northwest Territories Housing Corporation, and the Central Mortgage and Housing Corporation to discuss:

1. The best utilization of existing Senior Citizen Lodges to meet the individual communities needs (special attention should be given to Fort Simpson, Fort McPherson and Fort Resolution).
2. A coordinated approach to planning to meet community needs wherever new projects are being considered, ie: Fort Good Hope and Aklavik

It is recommended that the planning for any new Senior Citizen Lodges be temporarily delayed and where construction has not been completed the activity be temporarily delayed, until the outcome of the above discussions is known.

It is recommended that where necessary an integrated program of services for senior citizens be developed including:

1. When required, support services in their home through a Home Care Program operating from the local hospital, health centre or nursing station. In the future the emphasis should be on enabling citizens to remain in their own homes as long as possible.
2. Only when required, a physical facility providing both a few low rental suites and also accommodation where some form of personal care is available. The Home Care Program should also provide services to the citizens of this facility.
3. In settlements with hospitals planning should proceed so that a small number of beds are available for extended care or chronic care.



### Facility Planning for the Future

Recognizing the need for an overall plan for the Mackenzie River Area, and recognizing the changing patterns of health and social services will rapidly develop in the North, it is important not to overbuild facilities at this time. Rather it is of vital importance that any facility under consideration be designed from a very flexible point of view:

- (a) flexible from within so that space may be used for other purposes in the future, if necessary
- (b) flexible from without so that addition can be made when and if required.

The Consultant is well aware of the hazards in forecasting population figures for the future. This is particularly true of the North where so much depends on industrial development, possible development of the Mackenzie River Pipeline and Highway, etc. The various statistics already quoted in this report, from other studies, indicate the differences in population projections. For these reasons the development of functional programs and services is of even greater importance.

It would be unfortunate to have under-utilized facilities in the North. On the other hand, essential medical and social services are and will be required.

### Hospitals and Health Centres

Due to the possible developments in the Mackenzie River Area it is necessary to consider two approaches to the provision of health care facilities:

1. A transportable facility which can be moved into a community to provide basic emergency and nursing services. This type of facility is really a Nursing Station. The important fact is that the construction can be carried out in a central location (probably Edmonton or Calgary), the delivery date would be relatively short, and the cost would not be prohibitive.
2. An integrated pattern of health programs and facilities including Nursing Stations, Health Centres, Area Referral Centres, and a Regional Centre. This approach provides a first level or primary care at the Nursing Station, Ambulatory Care Units, Physicians Offices; Secondary Care at Small Health Centres and Hospitals; Tertiary Care at Area Referral Centres (such as Hay River, and Inuvik); Quaternary Care at the Regional Referral Centre ie: Yellowknife, and highly specialized services such as open-heart surgery at Major Centres outside the Northwest Territories.

### Transportable Nursing Stations

Considerable work has already been carried out on Transportable Nursing Stations by the Northwest Territories Region - Medical Services in Edmonton. The design is for a unit which can be constructed at one location in three sections, transported to another location, and assembled into a Nursing Station approximately 36' x 52'.

The delivery time on such a unit is estimated at between three to four months. The contract for such a unit would include delivery; set up costs; and all major equipment such as stove, fridge; deep freeze; washer; dryer; two furnaces; emergency power; water tank; sewer tank; oil tank; etc. It is estimated that the cost of this unit, set-up and ready for operation, would be approximately \$125,000.00.

Sketch plans for a transportable unit are attached as Appendix 8.

It is recommended that a transportable nursing station be considered for use in settlements which expand quickly on a temporary basis, as will take place during a major project such as the oil and gas pipeline.

It is also recommended that further work be conducted on the design of the transportable nurses station with special emphasis on:

- (a) The functional design of the unit
- (b) The structure of the unit - it was pointed out that the unit could be moved into a particular location and assembled. However, it is apparently doubtful if the structure would stand being taken apart again, moved and re-assembled. Therefore, it is important that further consideration be given to the possibility of not only a transportable unit but a moveable unit.

- (c) Some experience has already been gained on different roof structures. This experience should be reviewed and incorporated into future design work.
- (d) The operation of any existing units should be reviewed to obtain suggestions and recommendations for improvement.

### The Health Care Centre Approach

The Consultant is concerned about the fragmentation of health and social services and dilution of our resources, namely manpower and finances. These problems have been aired throughout the North American Continent and concepts in relations to a health centre approach are now being recognized as a system in which manpower and finances are most effectively utilized. This approach relates to the real active community spirit that has existed in the North in the past.

The need to improve and expand the health care delivery system, in order to satisfy rapidly increasing demands for service and to provide more accessible services in a more effective manner, is a subject of widespread interest. In recent years, the general public has become acutely aware of system inadequacies, and this awareness has been demonstrated by increasing pressure on public bodies and elected officials for corrective action.

The Health Centre Concept, with its coordinated and shared service programs, represents one of the practical options available to health care institutions as a means to meet increasing demands for service without adding unreasonably to the cost structure. Generally, shared service programs refer to a wide range of different ways in which the various segments of a Health Centre can cooperate to care for patients. The mechanisms of sharing may take a variety of forms, depending on the particular service, and the types of services shared will differ mainly because of physical location and the extent of participants or users of the service.

The fundamental premise upon which the practicality of coordinated services or shared services is based is the economic assumption that as an investment is personnel, equipment and supplies is necessary to provide a minimum necessary volume of service,

the investment does not rise proportionately as the volume of service is increased. Stated another way, it assumes that the productive capability of a given investment in equipment, personnel and supplies can be expanded to a predictable level without a requirement for additional investment in equipment and personnel, recognizing supplies or materials as a more directly variable expense. This results in a lower unit cost of production. If two or more segments within a Health Centre, or two or more separate institutions can participate and benefit without increasing capital or personnel investment, the objectives of shared services can be realized.

A Health Centre site provides many opportunities. Not only does it bring together the elements of acute care, extended or convalescent care and long-term care, in what can be described as a health care "campus", it also makes immediately evident certain opportunities to avoid unnecessary duplication of specialized and expensive services -- which has been so readily apparent in the North.

Certain advantages of this proximal placement of patient care services are immediately obvious. In the context of combined service, they provide for the health care needs of the citizenry literally from the time of birth, through the acute illness phases of maturation, through the more prolonged periods of disablement of chronic illness. With the exception of problems for which more highly specialized treatment services must be sought in other locations, the grouping of these services on a common site constitutes a Health Care Centre. With the inclusion of the functions of public health and a concentration of physician's offices on the site, the Centre will even further approach the realization of constituting a community health centre in all respects.

Other advantages are created by the proximal location, which, while not as immediately apparent as the specialization in levels of care, do become rather obvious and feasible when one considers the numerous common services demanded by the respective roles in patient care or in the basic requirements of building operation. Opportunities exist for the sharing of services to the economic benefit of the respective services of segments of the Health Centre.

A variety of methods may be used to organize and operate a shared service. The differences in methods relate mainly to the physical location of the service, who will utilize it, and legal agreements among various participants in the project.

The opportunity to develop a Health Centre approach with the resulting coordination of services should be a real motivation to all concerned. A very brief summary of this concept is as follows:

1. Goal: A community orientation of services
2. Objectives: To provide a high standard of service
3. The Need: Hard nosed planning - in order to get better value for our money and provide quality service
4. Advantages to the Patient: One Centre providing all levels of care  
Ready availability of diagnostic services  
Ready availability of medical services
5. Advantages to the Physician: Ready availability of diagnostic services  
Saving in time

## 6. General advantages:

Efficient utilization of  
personnel and services

Services to meet the needs of  
the citizens at one location

Economy achieved:

- only one central storage  
service required
  - only one kitchen required
  - only one laboratory and  
X-ray required
  - only one purchasing depart-  
ment required
  - only one accounting service  
required, with separate books  
if necessary
  - only one housekeeping service  
required
  - only one maintenance service  
required
  - only one linen and laundry  
service required
  - only one heating or power  
plant required
  - etc.
- \* Additional Services
- by a community orientation it  
may be possible to add additional  
services

The advantages in the coordination and sharing of services in a health centre will depend to some extent on the particular service involved. In all instances, the objectives should include: the potential for reduction in capital outlay; the possibility for extending the scope and quality of services available; the elimination of duplicated facilities or avoidance of duplication; and, the containment of operating costs.



## Health Centre Services

### 1. Ambulatory Care, Outpatient and Emergency Service

If the new health centre fulfills its role, the use of the Ambulatory Care Service will continue to increase in the future. It is important that this service is provided so that all patients' needs can be met; so that the acute care facilities can be utilized only by those patients needing hospitalization; and, as a result, contribute to a reduction in operating costs.

In the functional planning for the Health Centre this service must relate closely to the Physicians' offices in order to prevent a duplication of examination facilities, etc.

### 2. Inpatient Acute Care Services

The functional planning of the inpatient services, and their relation to other services within the Health Centre, is of great importance. It is essential that the total facility is designed so that it is flexible -- internally and externally -- and so that future expansion can be easily provided.

With development of a Health Centre concept it is expected that the inpatient services will be efficiently and effectively utilized.

It is recommended that the services include, among others, the following:

- Laboratory and X-ray
- A combined Operating and Delivery Suite
- Inpatient Adult and Children beds
- A room to be used as a Quiet Room - Chapel

- A Morgue and Autopsy Room
- Etc.

### 3. Chronic, Extended, and Nursing Home Care

The provision of these services within the Health Centre will provide for a better utilization of the acute care beds. Their inclusion will also enable the Health Centre to provide a more complete service to the citizens of the community.

### 4. Home Care Program

We recommend the development of an active Home Care Program using the Health Centre as a base of operation. A good Home Care Program can help to reduce levels of institutional confinement and can help to prevent re-admission to institutional care.

The Home Care Program should include the normal home care services, including a "Meals on Wheels" service where appropriate.

### 5. Public Health and Social Services

It is recommended that consideration be given to the provision of facilities in the new Health Centre for Public Health and Social Services.

- Public Health Nurses
- Social Workers
- Associated Services - such as a visiting Nutritionist or Dietician

The physical facilities of the new Health Centre should be designed to provide adequate office facilities, clinical facilities, education facilities, waiting rooms, etc., for a very active Public Health and Social Service, even though segments of this service may not be on a full-time basis, but rather in the form of special visits or clinics.

#### 6. Special Clinic Services and Facilities

We recommend that consideration be given to the provision of special clinic services, on a regular or periodic basis, through the Health Centre. Clinic services which may be considered would include:

- a. Ophthalmological Clinics
- b. Hearing Disability Clinics
- c. Speech Therapy Clinics
- d. Rehabilitation Clinics
- e. Handicapped Children Clinics
- f. Diabetic Clinics
- g. Mental Health Clinics
- h. Drug Use Prevention Clinics
- i. Clinic for the Prevention of Alcoholism
- j. Etc.

#### 7. Educational Facilities

A Health Centre has an active role to play in education:

- a. Participation in the educational programs for health care workers.
- b. Public health education.

In the design of the new Health Centre, provision should be made for locker space, lounge areas, work areas, and lecture rooms, so that the Health Centre will be able to fulfill its role in the education of health care personnel.

It is also recommended that consideration be given to using the facilities, and the health care personnel, in an active public educational program. The development of this ongoing public educational program should include subjects related to prevention, health, welfare, safety, St. John Ambulance, etc.

#### 8. Physicians' Offices

As the coordination of health professionals and organizations is considered in total, then it is logical to include physicians' offices within the Health Centre.

- a. The physicians will be convenient to their hospitalized patients. More frequent visits are encouraged; the result is better supervision of care; swift response to emergency calls, whether inpatient or outpatient, is enhanced.
- b. The creation of a Health Centre will benefit the public, in terms of having easier access to a doctor when one may be out-of-office.
- c. There will be better use of one of the physician's most valuable assets - time.
- d. The availability of adequate offices will be a recruitment attraction to new doctors.

#### 9. Dental Offices

It is recommended that facilities for a Dental office be included in the Health Centre. If it is not feasible to provide for these services during the initial stage of construction, it is recommended that the Health Centre be planned so that a Dental Clinic can be added at the appropriate time.

10. Ambulance Services

Provision should be made for covered Ambulance entrance and for indoor storage of the vehicle.

11. Facilities to be Used by Volunteers

Often the maximum advantage of Volunteer Services is not received due to lack of coordination of their many services, and due to a lack of facilities.

One step aimed at taking greater advantage of the resources of individuals and agencies is the acceptance by the Health Centre of the responsibility to assist in the coordination of services and the provision of space: for the storage of supplies and equipment, for the development of a library, for meetings, for a canteen or service counter, for a gift counter, etc.

With regards to the library service it is suggested that the Volunteers consider a cart system in the Health Centre and that an arrangement be made to utilize the resources of other libraries.

12. Lastly, for a Health Centre to be effective, there must be an active communication with other larger centres. Personal professional contacts and programs of continuing education assist in the maintenance of good communication.

## Area Referral Centre

In order to integrate and coordinate services it is necessary to consider, where appropriate, Area Referral Centres and a Regional Centre.

In this report two Area Centres will be discussed - one in detail in order to explain the concept (Hay River and Inuvik).

In the lower Great Slave Lake a number of settlements relate to one another. It is, therefore, feasible to consider Hay River as an Area Centre. The settlements will each be briefly discussed:

### 1. Fort Providence

The population of Fort Providence was listed as 658 by the Department of Local Government on June 1, 1971. The Consultant is informed that the present population is very close to that number.

The present Nursing Station has four (4) holding beds. This provides a bed population ratio of 6.2. beds per 1,000.

In addition, patients requiring hospitalization and constant medical supervision are referred to Hay River or a larger centre.

Therefore, the present facility is very adequate for the present and will be adequate until the population reaches 1,000 to 1,200.

### 2. Fort Resolution

The population for Fort Resolution was listed as 680 by the Department of Local Government on June 1, 1971. The Consultant was informed that the present population was certainly not greater, and probably slightly lower.

The Nursing Station has four (4) holding beds. This provides a bed population ratio of 5.9 beds per 1,000. In addition, at the present time patients are referred to Fort Smith or a larger centre. Also some patients are themselves attending the Pine Point Medical Clinic and as a result are being referred to Hay River or to a larger centre.

However, because of the Medical Clinic service in Pine Point, because of the proximity to Hay River, and because of the highway connecting these communities, it is recommended that the medical referral pattern be changed from Fort Smith to Hay River

This recommendation is supported by a concrete example of the lack of communication and the lack of coordination of services in this area. The day prior to the Consultants visit to Fort Resolution, an Orthopedic Surgeon held a Clinic at Pine Point. During the day of the Consultant's visit, this Specialist was also holding a Clinic in Hay River. At Fort Resolution an outpatient had been receiving treatment through the Nursing Station. This patient was able to continue in her home but the treatment was not progressing as well as planned. Through consultation with the Physician at Fort Smith, an aircraft was chartered and the patient was flown to Fort Smith. It is estimated that the cost of the aircraft above would be approximately \$226.00. Since the individual was now out of her own community, she was provided services by placing her in a hospital bed - although she was an outpatient in Fort Resolution.

This example shows that the patient could have been reviewed

by a Specialist in Pine Point which is a relatively short distance away by highway - or even at Hay River which is also connected by a highway. However, due to the present referral pattern to Fort Smith, and due to a lack of communication throughout the area, a very expensive method of providing service was utilized. In addition, the patient was removed from her home and community - whereas it may have been possible to continue treatment as an outpatient after the clinical review by the Specialist.

It is further recommended that the policy with regards to the capital expenditure in relation to Senior Citizen Lodges in very small communities, be very carefully reviewed. At the time of the Consultants visit to Fort Resolution, a very fine new facility was sitting 100% vacant. This is a clear example of an attempt to superimpose a philosophy which may work in a southern community on a small northern native community.

It is further recommended that the possible future use of this expensive, modern facility be immediately reviewed. If it is not to be used for its planned purpose, or an acceptable alternate purpose in Fort Resolution, consideration should be given to the feasibility of moving the structure to Pine Point, Hay River or Fort Smith. (Please note the expenditure relating to a consideration of this nature would have to be carefully reviewed). The fact is that it is unfortunate to see capital funds, a very, very scarce resource, being utilized for projects that are not utilized or perhaps even required in the first instance.



### 3. Pine Point

On June 1, 1971 the Department of Local Government listed the population of Pine Point as 1,200. The Consultant was informed that the present population was 1,800 to 1,900 and that by the end of 1974 the population would reach a maximum of 2,000 to 2,100.

At the present time health services are provided by:

- (a) Emergency First Aid at the mine by trained personnel. Two ambulance are available at the mine site.
- (b) Three Registered Nurses are available in the village and provide services twenty-four hours a day through the Medical Office. The nurses do make house calls.
- (c) A physician provides office services in Pine Point three days per week from Hay River. A physician is also on call from Hay River for emergencies.
- (d) The hospital at Hay River is utilized and referrals are also made to other larger centres.
- (e) Medical Specialists do hold clinics (re: orthopedics) in cooperation with the physicians providing services to Pine Point.
- (f) At the time of my visit to Pine Point, two Public Health Nurses were travelling to Pine Point from Hay River each Wednesday morning and return on Thursday. It is my understanding that Northwest Territories Region - Medical Services plan to station a Public Health Nurse in Pine Point.
- (g) It is also my understanding that a Social Worker from Fort Smith visits Pine Point once every two weeks. This service may also be expanded in the future to include a full time staff person.

From the above, it should be noted that health and social services are readily available to the citizens at Pine Point.

In fact if all the human resources, equipment and costs were pooled, one would find a substantial expenditure of our resources - manpower and finances.

Therefore, one of the prime factors in the provision of health and social services in Pine Point is the coordination of services and resources.

Meetings have been held between the council of Pine Point and representatives of the Department of Social Development and Northwest Territories Region - Medical Services. The priorities of the Council were stated to be as follows:

1. A resident full-time Social Worker.
2. A resident full-time Public Health Nurse.
3. Improved transportation for residents of Pine Point going to Hay River.
4. Improved outpatient diagnostic facilities for Pine Point so that the number of trips to Hay River would be reduced.

It is the Consultants understanding that the appropriate action has been initiated to meet the stated priorities.

#### 4. Fort Smith

It is recommended that a small health centre be considered for Fort Smith.

The concept as previously outlined should be considered with the following inpatient beds:

- (a) Acute care - approximately a total of 15 beds including adults and children
- (b) Extended care, chronic care and nursing home - approximately 5 beds.

It is further recommended that consideration be given to having minor surgical cases referred to Hay River and Yellowknife instead of to Edmonton. This change in referral pattern would promote a coordinated, cooperative area service. It would also initiate a program to provide more essential, required services in the Northwest Territories - for citizens residing in the North.

#### 5. Hay River

It is suggested that consideration be given to Hay River as a Minor Referral or Area Centre. It should also be recognized that in the future more referrals will be made to Yellowknife-- the Regional Centre, and that specified referrals will continue to be made to major medical centres outside the Northwest Territories.

The Consultant recommends that a Health Centre be planned for Hay River, utilizing the present facilities and incorporating the following services:

- (a) Ambulatory Care, Outpatient and Emergency Service.
- (b) Inpatient Services - a maximum of fifty (50) inpatient beds are recommended. (This complement of beds to include acute, extended, chronic, and nursing home care).

This number of inpatient beds should very adequately accommodate the forecasted population for 1984. By that time the Health Centre concept will be well developed and operational. At that time the Health Centre at Hay River should be able to serve an even higher population, ie: 10,000.

- (c) Home Care Program
- (d) Public Health and Social Services
- (e) Educational Facilities for public health education and staff training

- (f) Special Clinic Services and Facilities.
- (g) Physician's Offices - if it is necessary for the physicians to expand their office facilities in the near future, discussions should be initiated to determine the feasibility of providing office facilities within the Health Centre.
- (h) Ambulance storage and covered Ambulance entrance.
- (i) Facilities to be used by Volunteers
- (j) Other services to be discussed as the Hay River project develops.

In planning the Hay River Health Centre a flexible facility should be designed - flexible internally and externally - so that if required parts of the building can be utilized for other purposes in the future and so that if required the building can easily be expanded.

### Inuvik Area Health Centre

The Inuvik General Hospital already has far more beds than required for the present and for the foreseeable future. The hospital has just been expanded from 88 to 129 beds.

It is unfortunate that this additional capital expenditure has been made rather than utilizing the existing 88 beds more efficiently. The fact is that the utilization figures for the past three years, and the estimated utilization for 1974, indicate that even 88 beds are too many.

It is also unfortunate that additional capital funds were allocated to a facility that is not functionable and therefore, the costs of operation and maintenance will be high.

This is a prime example of the need to integrate health services for the Northwest Territories, and the need to utilize our resources as efficiently as possible.

It is recommended that the Inuvik General Hospital be gradually changed to an Area Health Centre philosophy, utilizing the presently oversized facilities for additional programs.

In particular consideration should be given to:

1. The development of an active Home Care Program.
2. The utilization of one of the existing inpatient wings for and Extended Care - Chronic Care ward.
3. The inclusion of Psychiatric Services - inpatient, outpatient and community orientated programs - in the total schedule of services.
4. Consideration of the area requirements for services for the handicapped - inpatient, outpatient and sheltered workshop type of services.

5. The possibility of "Day Care Programs" for senior citizens, etc.
6. The provision of certain area services - such as Physiotherapy Consulting Services.

### Regional Health Service - Yellowknife

One of the vital requirements in the provision of health services in the Mackenzie River Area is the development of a Regional Health Service in Yellowknife. Several facts support this concept:

1. There is a need to develop basic programs in the Northwest Territories in an effort to provide services for the citizens of the Northwest Territories, to reduce the inconvenience of having to leave the Northwest Territories for basic services, and to reduce the tremendous expenditure in travel.
2. The air transportation network for the Mackenzie River Area funnels through Yellowknife. Charter service is also readily available.
3. The present physician complement, supplemented with one or two specialists, is sufficient to form a sound base for medical manpower requirements.

The City Council for Yellowknife have just completed an updating of their population estimates and indicate that the present population is 9,200.

Some of the Regional type services can be introduced gradually, without a major increase in operational or capital expenditures.

Other services will require additional operational and/or capital expenditures.

In developing a Regional Health Care Service at Yellowknife it is recommended that:

1. Immediate steps be taken to initiate a Regional Laboratory Service. It has been stated that the present laboratory at Stanton Yellowknife Hospital can handle a 25% to 30% increase in the work load without any additional staff or equipment.

The use of Laboratory facilities by different agencies should be reviewed in order to determine the possibility of a central laboratory providing services to all agencies. For example, the Consultant was informed of certain environmental studies where special grants were received for laboratory equipment, personnel, etc. It may be that the present equipment and personnel - if integrated into a central laboratory could handle a much larger work load.

Laboratory samples from Hospitals and Nursing Stations in the Mackenzie River Area are being flown through Yellowknife to Edmonton. As a result there are lengthy delays in obtaining reports. It would appear much more appropriate to develop a Regional Laboratory Service at the Stanton Yellowknife Hospital.

2. Pediatrics

An effort should be made to attract a qualified Pediatrician to Yellowknife.

3. Psychiatric Services

Previously a recommendation has been made that the Northwest Territories Region - Medical Service recruit a full time Psychiatrist, to be located in Yellowknife. In the meantime it is recommended that a system of telephone consultations be arranged so that Psychiatric patients can receive basic treatment at the Stanton Yellowknife Hospital.

4. Obstetrics

Consideration should be given to the cost of a limited amount of new equipment which would enable the Obstetrics service to expand its services (ie: Fetal Heart Monitor).



5. Radiology

A review should be made of the costs for the interpretation of X-ray films. If possible an arrangement should be made for a Radiologist to visit the hospital on a regular basis ie: once per month. Payment for this service should be on the standard per diem basis - as for other specialists in the Northwest Territories.

6. Extended Care - Chronic Care

There is an immediate need for Extended Care - Chronic Care services in Yellowknife. This factor has been taken into consideration in the recommended number of additional beds.

7. Hostel Type of Accommodation

Due to the number of referred patients, which will increase as the services are developed to the level of Regional Services, consideration must be given to hostel type accommodation. This type of accommodation would prevent the utilization of expensive hospital beds for patients who are from out of town and only require diagnostic services, or for patients who have been discharged and who are waiting for transportation home.

8. Home Care

There should be a closer integration of the Coordinated Home Care Program and the Stanton-Yellowknife Hospital.

9. Consulting Services

As Yellowknife becomes the Regional Referral Centre there should be a gradual development of professional consulting service. A priority should be given to Dietetics, Psychiatry, Nursing, Physiotherapy-Occupational Therapy, Speech and Hearing, Pharmacy and Purchasing.

It is recommended that planning proceed for the extension of the present Stanton Yellowknife Hospital to a Regional Health Centre of one hundred beds (85 acute care beds including approximately 10 general beds for Psychiatry, plus 15 Extended Care - Chronic Care Beds). The planning should proceed so that the health centre can be expanded to 150 beds in 10 year time - 120 beds acute care and 35 beds Extended Care - Chronic Care.

Fort Simpson Health Centre

The Fort Simpson General Hospital is really a form of Health Centre.

Population estimates for the various communities surrounding Fort Simpson varied. Therefore, the following figures as recorded by the Department of Local Government, June 1, 1971 will be utilized for calculating bed requirements:

Fort Liard	260
Fort Simpson	1000
Fort Wrigley	185
Jean Marie River	50
Nahanni Butte	65
Trout Lake	<u>45</u>
	<u>1605</u>

If one considers the estimated population of the service area (1605) to be reasonable, then the present bed complement of 14 beds should be more than adequate. This provides a bed population higher than that presently existing in Alberta (including the major teaching and referral hospitals). Therefore, an active bed complement of 14 should prove adequate for a considerable expansion in the population, even taking the native population into consideration.

The administrator of the Fort Simpson Hospital indicated that the "rated capacity" for the hospital was 12 beds. However, 14 beds are set up. The present 14 bed complement consists of 5 Pediatrics and 9 Adults. The 9 adult beds are provided in three single bed wards and three - two bed wards.

Since opening the hospital in May 1973 the total patient days have varied from a low to 60 in January 1974 to a high of

198 in March 1974. This provides an average daily occupancy of from 2 patients per day in January 1974 to 6.4 patients per day in March 1974.

Using the utilization figures for the hospitals for active adult and children and including chronic care one notes the following:

- (a) January 1974 - A total of 60 patient days for an average of 1.9 patients per day.
- (b) February 1974 - A total of 101 patient days for an average of 3.6 patients per day.
- (c) March 1974 - A total of 198 patient days for an average of 6.4 patients per day.

#### Suggested Recommendations Concerning Fort Simpson General Hospital

1. That immediate approval be obtained for the addition of six Extended Care - Chronic Care - Nursing Home beds to the hospital. Planning and construction should proceed as soon as possible. In addition to the six beds provision should be made for a dining area, lounge area, Occupational and Physiotherapy area (including crafts, games, etc.) The latter services can really be provided in one area.

Therefore, if the present width of the hospital is retained, without the central corridor, these areas can be provided in the centre and at the end of the addition.

2. That the staffing pattern be considered so that two personnel Nurse and aid, are provided on each "day shift". At the time of the Consultant's visit one nurse was alone during the day, for a number of days per month.

Even with a normal acute care load - ie. 5 Pediatrics, several adults and a maternity - a hazardous situation could exist with only one staff member on duty during the busy day-time shift.

3. That immediate steps be taken to add a bathroom and door to the present sitting room. This will provide a two bed ward - the same as all other two bed wards in the hospital.

With this minor addition, and with an adjustment in the staffing pattern, the hospital can provide services for four Extended Care Patients on a short term basis (2 male and 2 female).

4. That the present Senior Citizens Lodge be utilized for senior citizens and those requiring "Home Care Services".

At the present time it is understood that only three units are occupied by individuals that should be eligible. One double unit and one single unit are occupied by individuals who are in the work force. Three units are also vacant at present.

Therefore, with proper terms of reference five units would be available for use by senior citizens and those requiring very limited assistance through a "Home Care Program".

5. That an active "Home Care Program" be developed from the health centre. This service could include - visiting health nurse, meals on wheels, visiting social service, etc.

### Nursing Stations

The number of beds in each of the Nursing Stations in the Mackenzie River Area is adequate for the present population, and also for an increase in population.

The following matters should be considered:

1. The present policies related to the provision of services should be reviewed to assure a broad public health program.
2. A good orientation program for all personnel should be implemented.
3. Recruitment procedures and policies should be reviewed in order to expedite recruitment. It is essential that staffing patterns are maintained.
4. Home visiting, and community services should be expanded. As required, this service can be developed into a Home Care Program.
5. Adequate follow-up services should be developed for all patients returning to the community from other health care facilities. This program should include follow-up services for Psychiatric Patients.

It is recommended that with regards to physical facilities the following be considered (details concerning each recommendation are contained in the main body of this report):

1. An expanded Health Centre be planned for Hay River in order to provide a facility for health services for the lower Great Slave Lake Area.
2. That a small health centre be planned for Fort Smith.
3. That the oversized physical facilities at the Inuvik General Hospital be re-organized to provide a Health Centre Service for that area - including a Home Care Program, Extended Care - Chronic Care Services, etc.
4. That a major Regional Health Centre service be planned for Yellowknife and that this project be given top priority in order to integrate and coordinate services for the Northwest Territories.
5. That at the Fort Simpson General Hospital immediate steps be taken to renovate the present sitting room so that a total of four chronic patients can be taken care of immediately. It is also recommended that consideration be given to a small addition to the hospital to provide six Extended Care - Chronic Care Beds. It is also recommended that a Home Care Program be developed and that the use of the Senior Citizens Lodge be reviewed.

SECTION V  
CONCLUSION



## SECTION V, CONCLUSION

In concluding this report it is recommended that:

1. An integrated, coordinated health system be developed in the Northwest Territories to provide services for the citizens of the Northwest Territories.
2. The emphasis be placed on prevention and ambulatory care - institutionalization should only take place when these programs fail to meet the medical needs of the particular patient.
3. Planning continue, "long term as well as short term, in order to avoid hap-hazard development, to respect defined priorities and to secure the most profitable use of limited resources. Even a minimum health plan can have a proper time - table and take into account bottle-necks. It is essential that the population concerned are represented from the very beginning in this planning (statement by Sixten Haraldson, Page 29 - "Evaluation of Alaska Native Health Service").