



Northwest
Territories Health and Social Services

Northwest Territories
Health & Social Services
Draft Strategic Plan



**MED-EMERG
INTERNATIONAL
INC.**

Northwest Territories Health and Social Services Draft Strategic Plan

A Review and Recommendations
for
An Integrated Health and Social Services System
in the
Northwest Territories, Canada

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Acknowledgements

There were many individuals who gave generously of their time and expertise to assist Med-Emerg International Inc. in the development of this Draft Strategic Plan for the Department of Health and Social Services. The list that follows is partial; the editors hope that those not listed individually will realize that their contributions were both noticed and greatly appreciated.

MEII would like to thank the Honourable Kelvin Ng, Minister of Health and Social Services, for his confidence in retaining us to assist him and his department at this critical juncture in the history of the Northwest Territories. The initiative demonstrated by Mr. David Ramsden, Deputy Minister of the Department of Health and Social Services, as well as his tireless efforts on our behalf were a great asset to all members of the team.

The various members of the regional board were most gracious in their hospitality and contributed extremely valuable feedback to us on our initial draft. The support received from the various department heads facilitated our fact-finding by removing barriers and delays. To the numerous physicians, nurses, social workers and local officials, we would like to express our sincere gratitude for your willingness to meet with us and for the cooperation we received from you as we tried to obtain the information needed. To all of you, MEII extends a hearty thanks.

If the recommendations in this document are to be successfully implemented and the development of an effective and efficient Health and Social Services System in the Northwest Territories is to proceed, then the leadership demonstrated by the above individuals bodes well for the future of the Northwest Territories.

PREFACE

This report is intended to be the basis for public discussion. It proposes a draft strategic plan for achieving safe community environments, supportive families and a healthy population in the Northwest Territories to and beyond Division in 1999.

The plan proposed involves the development of an integrated health and social services system. In the first section of the report (Chapters 1 and 2), the context and framework for a proposed integrated system is developed. Section two, which is a lengthy section of nine chapters, documents specific observations on various aspects of the current health and social services system in the Northwest Territories. Finally, the third section (Chapter 12) lists the priority recommendations, or those recommendations that build on the key components of the proposed integrated system.

For those readers interested in only an **executive summary** of the proposed strategic plan, we suggest reading Chapters 1, 2 and 12.

Section I

Introduction and Framework

Chapter 1

Introduction

Context

There are a large number of critical issues currently facing the Department of Health and Social Services (DHSS) of the Northwest Territories (NWT). Over the past several months, the Department has been addressing these issues through a series of initiatives aimed at reforming the health and social services system. Work has been undertaken, together with the Regional Boards, on issues such as addictions reform, care facilities reform, human resources planning, child welfare reform, identification of core services, development of a new funding formula and revisions to the Memorandum of Understanding (which sets out the terms of under which Regional Boards obtain their funding from the Department). In addition, the NWT will undergo division in 1999 with the creation of Nunavut. There are also a number of other policy reform initiatives at both the Territorial and National level that will have an impact on health and social services in the NWT.

In view of these issues, and in view of budget reductions that have occurred and are expected to continue, the Department has initiated a strategic planning process that will help set the direction for health and social programming well into the next century. This report represents one step in this strategic planning process. The intent of the report is to present a draft strategic plan that will subsequently become the focus of an extensive public consultation process across the NWT. This consultation process will include aboriginal and professional organizations, special interest groups, non-profit organizations and other partners in the health and social services system including the general public. Following this public consultation process, the Department will produce a Final Strategic Plan that will outline a rational plan for the development of health and social services across the two territories over the next five to ten years.

Terms of Reference

The terms of reference for this project are set out below, and are organized according to the three phases of activity that the project team undertook.

Phase I — Review and analyze information on current systems, programs and services.

This would include the following:

- a) Review the current system of health and social services delivery including the network of community health centres and social service programs.
- b) Review demographics as well as the health status data for the NWT.
- c) Evaluate epidemiological data, information and reports, and develop a profile of illness and injury in the NWT.
- d) Assess and analyze the existing management, financial, medical, remuneration and client/patient information systems.
- e) Review existing management structures for Boards and Department (Ministry).
- f) Review the Department's legislative, regulatory and administrative environment.
- g) Review the health and hospital board structures, as well as the business planning documents on board reform.
- h) Assess current human resources.
- i) Evaluate current training programs for all health and social services care providers.

Phase II — Document observations on the current system

In so doing, undertake the following:

- a) Identify needs in the area of health and social services, as well as human resources, information systems, facilities, governance, and funding mechanisms.
- b) Specify further analysis and research requirements.

- c) Identify any conflicts or lack of consistency between current reform work underway and strategic planning objectives.
- d) Identify any roles of private sector involvement in upgrade, construction and management of current or new facilities.
- e) Identify areas for private/public sector partnerships.
- f) Identify potential cost savings arising from more efficient utilization of resources.
- g) Identify financial implications for recommended enhancements.

Phase III — *Make recommendations for integration*

Include the following:

- a) Within the context of planning for Division in 1999, recommend an integrated health and social service system (IHSS) in the NWT. It should incorporate public health, primary care, and social service programs such as mental health, child protection and correctional services.
- b) Propose an appropriate governance structure for the new IHSS.
- c) Recommend options, within the proposed IHSS, that will most effectively and efficiently achieve strategic goals.
- d) Propose a program of continuous quality improvement.
- e) Specify strategic priorities for the implementation of the plan.
- f) Identify key support functions that will be needed to put the integrated delivery model into operation.

Steering Committee

To assist in providing guidance throughout the project, a Steering Committee, chaired by the Honorable Kelvin Ng, Minister of Health and Social Services, was assembled. As agreed to by the NWT Health Care Association, other members of the committee were:

- Ms. Ann Hanson, Chair of the Baffin Regional Health Board
- Ms. Nellie Cournoyea, Chair of the Inuvik Regional Health Board
- Ms. Sharon Ehaloak, Chair of the NWT Health Care Association

Review Activities

This Draft Strategic Plan is a result of a series of activities that were undertaken by a team of consultants assembled by Med-Emerg International Inc.. A list of the consultants with a description of their background is provided in Appendix A. Review activities included the following:

- **Visits to each region** and some of the communities within the regions, were conducted during the first two weeks of February, 1997, as follows:
 - Aklavik — February 6
 - Cambridge Bay — February 5 and 6
 - Cape Dorset — February 11
 - Churchill, Manitoba — February 13 and 14
 - Edmonton, Alberta — February 5
 - Fort Resolution — February 13
 - Fort Simpson — February 6
 - Fort Smith — February 7
 - Hay River — February 10
 - Inuvik — February 4, 5 and 6
 - Iqaluit — February 10, 11, 12 and 13

- Jeanne Marie River — February 6
 - Rae Lakes — February 6 and 7
 - Rankin Inlet — February 11 and 12
 - Tulita — February 6.
- **Personal interviews** were conducted with service providers including physicians, nurses, social service workers, long term care providers and allied professionals. Interviews were also conducted with hospital and regional board members, departmental staff, representatives of the NWT Medical Association, NWTNCA NWT Nursing Association, other government departments, economic development corporations, politicians, patients and facility residents.
 - Analysis of **previous studies and reports**, background documents, statistical data, financial and statistical reports, discussion papers, previously prepared community profiles, minutes of meetings, newsletters, correspondence, background files, blueprints, capital projects files and other relevant documents (listed in Appendix B).

Progress reports were provided to the Department during meetings throughout the project. Meetings were held with the Steering Committee on March 11 and April 21, 1997. A preliminary draft of this document was reviewed by the Steering Committee and the Department prior to its finalization. It is acknowledged that this early review was invaluable. The reviewers provided very constructive feedback, leading to substantial and major revisions to the document.

Organizationally, this report opens with a proposed framework for an IHSSS in the NWT. The framework provided in Chapter 2 defines the relationship between the Department and the Regions, describes the integrated relationship among health and social services within the Regions, including governance options, and outlines the manner in which Division in 1999 can be facilitated. With this, chapters 3 through 11 document the project team's observations on and recommendations for the current system. During these chapters reference is made back to the framework. Finally, listed in Chapter 12, are the priority recommendations, or recommendations that are relevant to key components of the framework.

Chapter 2

Framework of the Proposed Integrated Health and Social Services System (IHSS)

Vision and Guiding Principles

The Honourable Kelvin Ng, Minister of Health and Social Services, has articulated the vision of the Department. It is as follows:

The Department's vision is to have healthy children and families, based in safe community environments which support in leading long, productive and happy lives. This vision for health and social services in the NWT reflects the holistic approach of community wellness and empowerment so vital to northerners.

To achieve this vision, we must take up the challenge to work together for healthy families in healthy communities. This work includes several challenges: improving the health status of people in the NWT, the Government's financial reality, and community empowerment. Only through collaboration and partnership do we have an opportunity to meet these challenges creatively and improve client care as we operate more efficiently.

The proposals in this document are guided by this statement of vision. They are also guided by the Department's previously stated principles, which are as follows:

- *Universality* - All residents of the NWT are treated equitably in the Health and Social Services System.
- *Personal Responsibility* - Health and social needs are personal and family responsibility first.

- *Basic Needs* - Where health and social needs can not be met by an individual or family, publicly funded programs and services will address basic human needs first.
- *Sustainability* - The Health and Social Services System will operate in a way that does not threaten its ability to meet basic human needs over the long term.
- *Continuum of Care* - Programs and services will fit together as seamlessly as possible and will be integrated with other NWT government (GNWT) services wherever possible.
- *Prevention-Oriented System* - All activities of the Health and Social Services System will support the maintenance of physical, spiritual and mental health, in addition to the treatment of illness and injury.

Strategic Goals

Within the parameters of these principles, and pursuant to the vision statement above, The Department and the Project Team identified the following strategic goals. These goals actually operationalize the vision statement, and itemize the specific achievables that the strategic plan should deliver on.

1. Ensure that residents of the Northwest Territories will have a healthy environment and lifestyles;
2. Enhance prevention and promotion in the health and social service programs;
3. Ensure that programs and services directly address community needs;
4. Improve access to necessary health and social services;
5. Improve the quality of programs and services by developing standards of care and improving outcomes;
6. Ensure that traditional knowledge, healing and values are incorporated in the development of programs and services;
7. Ensure increasing responsibility and authority for programs and services at the community and regional level;
8. Plan for a responsive and effective delivery of programs and services after the division of the Northwest Territories in 1999 and the creation of Nunavut.
9. Ensure affordability in the implementation of the system reform.

It is proposed in this report that the main vehicle for meeting these goals is a fully integrated health and social services system. The following section of this chapter proposes a framework for an integrated system in the NWT. This framework is intended to describe what the system would look like, and to conceptualize the impact of division in 1999. It is not intended to detail how the system will work. Rather, it is intended to guide further development of policy and recommendations on the actions required to move from strategic vision to operationalizing the system.

The Integration Framework

Exhibit 2-1 schematically represents the NWT (IHSS). The basic template of this framework is also being considered by other jurisdictions in Canada, the U.S., and the U.K., as well as other European countries (Leatt et al, 1996; Marriot and Mable, 1996; HSRC, 1997).

Fundamentally, an integrated system aims to provide a full continuum of care to a rostered target population under a financing system of capitation¹. The system is supported by legislation, policies and standards, the development and maintenance of which would be the key mandate of the Ministry of Health and Social Services. In this model, the Ministry would also have the responsibility of maintaining an integrated² information system to identify population health needs, monitor adherence to program standards, and establish a needs-based funding formula for the transfer of funding envelopes to regionally- or locally-based Integrated Health and Social Service Authorities (IHSSA). The IHSSAs would have the responsibility for service and program delivery within their jurisdiction.

¹ Capitation is a funding system wherein a fixed envelope of money is transferred to the integrated unit based on the size, demographics and needs of its rostered population. Surpluses or deficits are retained by the integrated unit. Retention of surpluses provides an incentive to promote health and prevent illness, and thereby save on treatment costs.

² An integrated information system refers to an electronic database with a record on each rostered individual that captures key data on service encounters through data entry at the site of service.

It is proposed that there be IHSSAs established in Fort Simpson, Hay River and Fort Smith, each responsible for a fully integrated health and social service system in those respective communities (and their naturally affiliated communities). The Stanton Regional IHSSA would serve the balance of the Mackenzie Region.

The IHSSAs identified in Exhibit 2-1 are preliminary. They by-and-large reflect existing bodies, but the "Other(s) IHSSA" is intended to capture other authorities that may evolve. These authorities should become increasingly autonomous units through 1998 such that on territorial division in 1999 they are minimally impacted. The major impact of division is on the Ministry functions. In 1998, processes would be put in place to facilitate the distinction and separation of legislative, policy, standards and information functions in the two new Ministries, one in Nunavut and the other in the Western Territories.

The Integrated Health and Social Services Authority (IHSSA)

Exhibit 2-2 depicts the potential structure of the IHSSA. The structure of this authority will be a function of the organizations that are operating in the given jurisdiction. The IHSSAs will be responsible for integrating the work of these multiple operating units, that in the past may not have been connected. There is community care (i.e., home care, social services and public health) that can be delivered in all communities and settlements. Some communities in the IHSSA's jurisdiction will have a hospital, long term care facility (LTCF) or a social service facility (e.g., an alcohol/drug treatment centre). Most communities will have a health and social services centre, from which both health and social service workers operate. Some of these bodies may already be linked (e.g., one board for a hospital and a LTCF), but many are not.

The overlap of various circles in Exhibit 2-2 is intentional. The intent is to show potential linkages that can facilitate integration. For example, as is occasionally the case at present, public health and social service workers may operate out of office space in a hospital. Co-location, however, does not in itself mean

integration. “Integration is an economic and operational concept within which various components of the...system have the same interests and objectives” (Rice et al, 1996, p.215).

There are two principal integrating mechanisms: functional and client/patient integration. Functional integration is the extent to which key support functions such as financial management, human resources and information management are coordinated across operating units to add value to the overall system. Client/patient integration involves the co-ordination of care and maintaining continuity of care. It includes good communication amongst care providers, smooth transfer of information and resources, and making sure that no one “falls through the cracks”. These mechanisms of integration drive the premise that the delivery of services can be improved through integration, while at the same time costs can be contained through economies of scale and capitation.

IHSSA Governance

The governing body of the IHSSA is the only structure at the appropriate level and with the requisite authority to facilitate vertical integration within its jurisdiction. (Vertical integration refers to integration along the full continuum of care from prevention and primary care, through institutional services to in-home/follow-up care.) There are several governance models that may be applicable to the IHSSA. One is the “consortium model”, with a centralized umbrella governing body that collaborates and integrates service delivery, but the individual organizations remain autonomous and do not “report to” that governing body. On the other end of the spectrum, there is the “corporate model” of governance, where all operating units are of one corporate body, with one board (i.e., the IHSSA board).

The model of governance that the Project Team recommends for the IHSSAs is the “federated holding model”. In this model there is a formal reporting line from each operating unit to the IHSSA board, but existing boards for any operating units remain in place. The main advantage of the federated holding model is that it decentralizes decision making to the local units. Another advantage of this model is that the IHSSA board can focus on the population needs of their entire

jurisdiction, monitoring outcomes such health status indicators, while the board of the operating unit within the system (e.g., the hospital board) can focus on the quality of its individual care.

Key Components of the Integrated health and Social Services System

There are six key characteristics, or “building-blocks”, of the proposed framework for integration. They are as follows:

1. Shared mission and values

Typically, the mission of an integrated system is oriented to improving the health of its rostered population, or, in the case of the Ministry, the territorial population. Articulation of this mission requires specific information on the health status and needs of the population. Thus, this characteristic of the framework addresses the third strategic goal outlined earlier in this chapter, that of ensuring that programs and services directly address community needs.

The framework allows for shared values by moving responsibility for service delivery closer to the local level. The governance body of the IHSSAs should not only reflect the culture and values of its rostered constituency, it should provide mechanisms for community input on needs assessments. This attribute of the framework addresses the seventh strategic goal listed earlier, that of incorporating traditional knowledge, healing and values.

2. Supportive legislation, policy and standards

The framework identifies this as primarily a Ministry responsibility, however some work on policy and standards at the operational level should occur at the IHSSA board level. Supportive legislation and policy provide the foundation for the integrated system. Clearly identified performance standards can optimize

accessibility, quality of services and fiscally responsible services, thus addressing the strategic goals of increased access to, quality of and affordability of programs.

3. Integrated information system

An electronic record of service encounters for each rostered individual, with terminal access at the site of service, will facilitate the quality of programs by enhancing communication and information sharing among providers.

4. Capitation funding

Envelope funding allows the IHSSA to meet the health needs of its rostered population within the constraints of the Territories fiscal reality. It also provides an incentive for authorities to enhance programs of health promotion and illness prevention, and thereby reduce treatment costs. This addresses three of the strategic goals, those of shifting toward health promotion and illness prevention, and toward increased responsibility at the regional and community levels.

5. Focus on population health

An underlying principle of the framework is that the system is accountable for the outcomes and health status of the population it serves. This formalizes accountability for outcomes that are largely influenced by lifestyle and environmental factors, thereby addressing the first of the strategic goals stated earlier.

6. Vertical and horizontal³ integration

Creating strategic alliances across the continuum of care will facilitate communication, information sharing and joint decision making among providers, thus increasing the quality, accessibility and affordability of programs.

It should be apparent from this description of these six key characteristics of the proposed integrated system that a connection exists with the strategic goals of the NWT. Similarly, in subsequent chapters of this report, when recommendations are made that relate to these key components of the framework, the connection between such recommendations and

³ Horizontal integration refers to integration among like providers within a particular area of the continuum of care (e.g., hospitals in a given jurisdiction).

the framework will be pointed out. By way of summary in the last chapter of this report, all such recommendations will be listed by relevant framework component. These, then, will constitute the priority recommendations, or recommendations that can be seen as building-blocks to an integrated system that will achieve the vision articulated by the Minister.

Section II
Observations
on the
Current System

Chapter 3

Demographics and Health Determinants

The Department of Health and Social Services has a tremendous amount of data regarding the current demographic and epidemiological characteristics of the Northwest Territories. In this chapter, we provide an overview of the demographic, epidemiological and socio-economic characteristics of the Northwest Territories based on data provided by the Department and from other sources. Where possible, data are provided by the following regions: Inuvik, Mackenzie, Kitikmeot, Keewatin and Baffin. Regional data are presented in a west/east structure in order to reflect the reality of Division in 1999.

Epidemiological Profile of the Northwest Territories

Population Structure

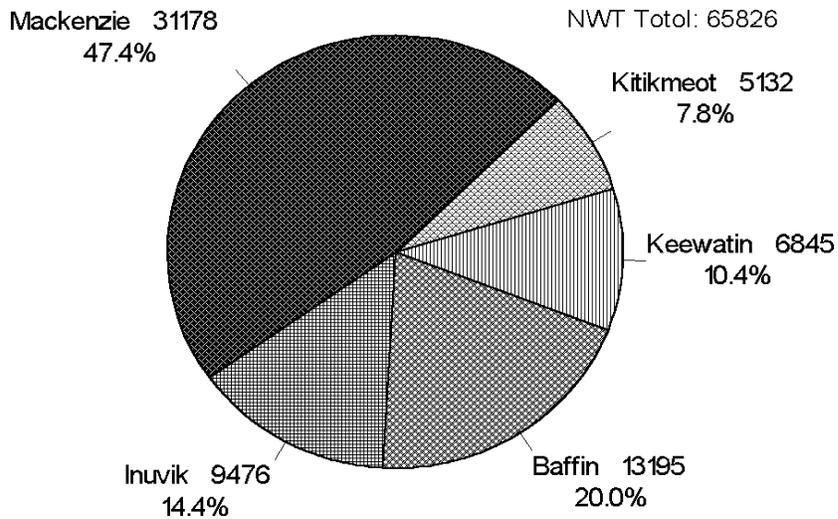
In 1995, the total population of the NWT was 65,826. The distribution of the population by regions is shown below and in Exhibit 3-1. The regions in the west (Inuvik and Mackenzie) accounted for 61.8% of the NWT population in 1995.

Region	Population	Percentage of Total
Inuvik	9,476	14.4%
Mackenzie	31,178	47.4%
Kitikmeot	5,132	7.8%
Keewatin	6,845	10.4%
Baffin	13,195	20.0%
Total	65,826	100.0%

Source: NWT Bureau of Statistics

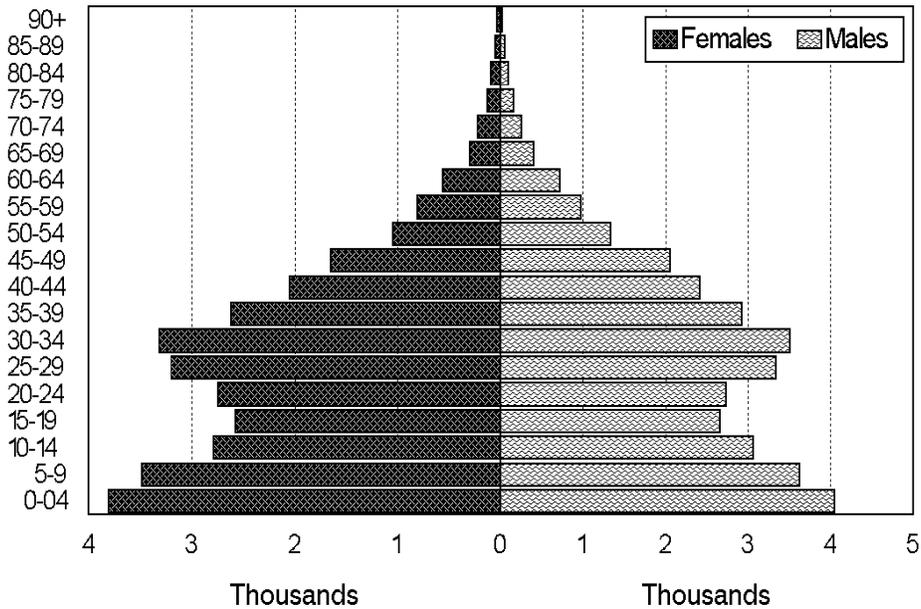
In both males and females, the largest age groups were 0–4 and 5–9 years (Exhibit 3-2). Combined, these two age groups accounted for 22.5% of the NWT population (Exhibit 3–3). Thus, the NWT population is young relative to Canada as a whole, where children aged 0–9 years account for 13.6% of the total population (Statistics Canada 1996). The regions vary in the proportional size of their child population, with Keewatin

Exhibit 3-1
Total Population by Region
Northwest Territories, 1995



Source: NWT Bureau of Statistics

Exhibit 3-2
Population Distribution by Age and Sex
Northwest Territories, 1995



Source: NWT Bureau of Statistics

having the largest proportion at 30.1% and Mackenzie having the smallest at 18.5% (Exhibit 3–3). In general, the regions in the east (Kitikmeot, Keewatin and Baffin) had larger proportional sizes of their child population. The proportion of each Region's population that was 70+ years old in 1995 is also shown in Exhibit 3–3.

By 2006, the population of the NWT is expected to grow 25.3% to 82,500 (NWT Bureau of Statistics 1997). The rate of growth in population size is comparable in each Region (Exhibit 3–4), with the largest rate of increase (28.9%) expected in Keewatin. In 2006, the total population for each region is expected to be as shown in the table below.

Region	Population
Inuvik	10,776
Mackenzie	39,464
Kitikmeot	6,604
Keewatin	8,824
Baffin	16,833
Total	82,501
Source: NWT Bureau of Statistics 1997	

No population projections by age group were available. If one assumes, however, that a specific age-group's proportion of the total regional population remains the same as in 1995, one can calculate the approximate size of that age-group in the year 2006. For example, given the proportions in Exhibit 3-3, the size of the 70+ population in the year 2006 by region is expected to be as follows: Baffin 159, Keewatin 93, Kitikmeot 123, Inuvik 240, and Mackenzie 760. The assumption here of the same proportion as in 1995 may be argued. Statistics Canada data for the NWT by age-group show, however, that the proportion that was 70+ was unchanged between 1964 and 1994 (Health Indicators, 1996). Furthermore, projections by age-group elsewhere in Canada have shown that the 70+ population is not expected to increase proportionally until beyond 2010 (Ontario Ministry of Finance, 1994).

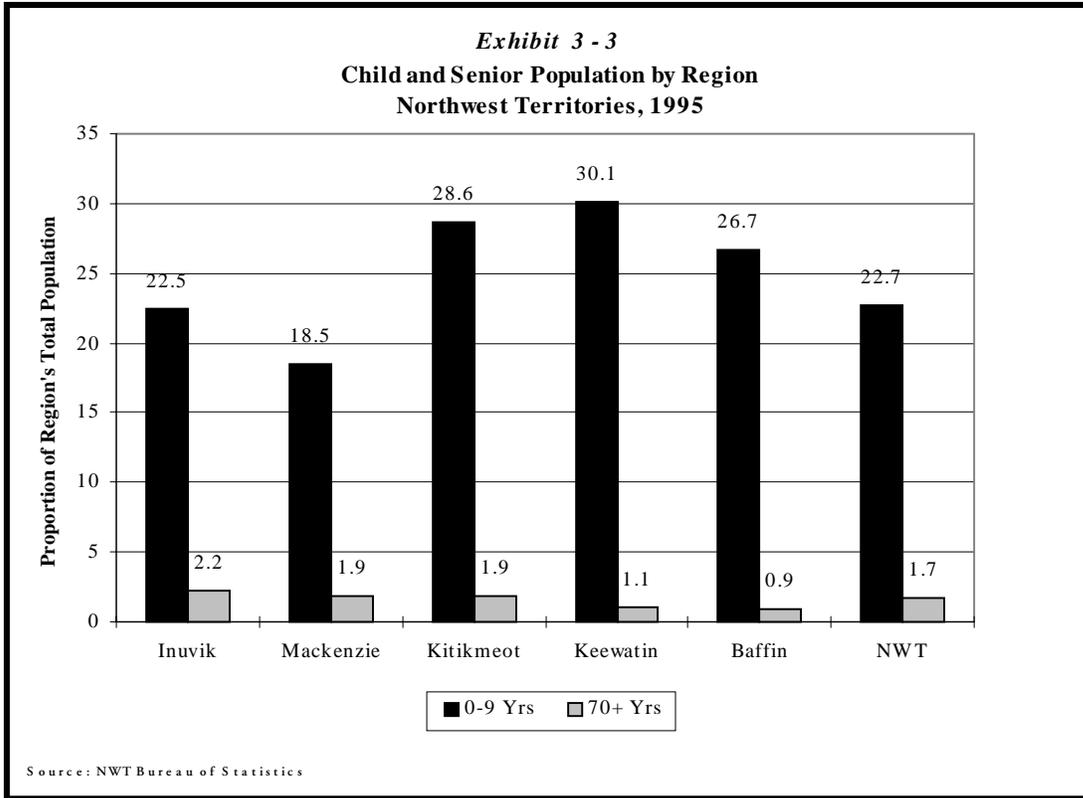
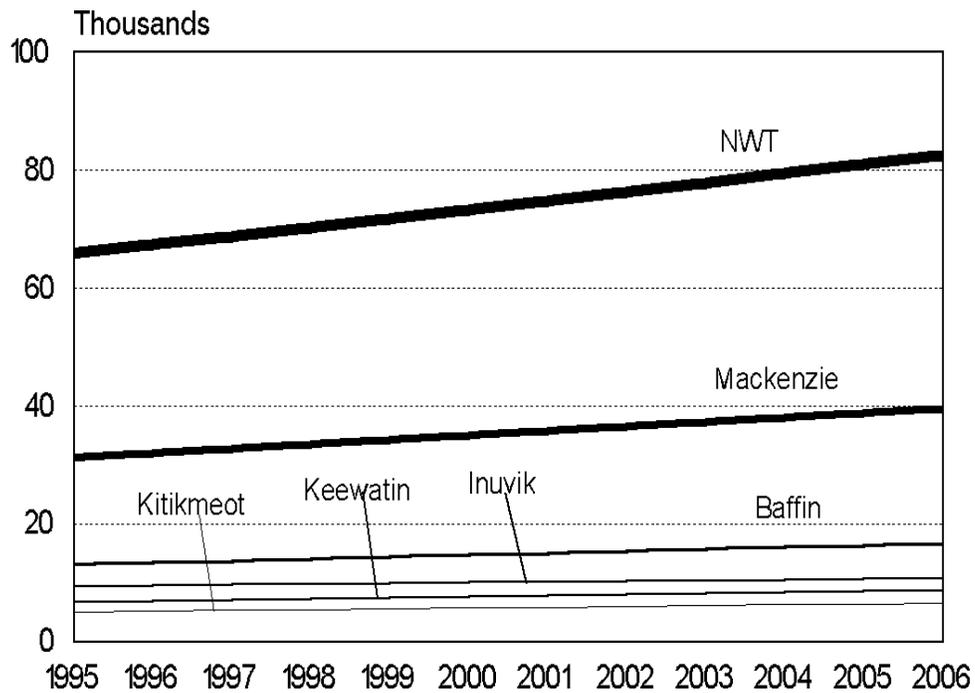


Exhibit 3-4
Population Projections by Region
Northwest Territories, 1995 to 2006



Source: NET Bureau of Statistics

Leading Causes of Death

Exhibit 3-5, shows the leading causes of death in the NWT over the six years from 1990 to 1995. The leading category was injury (including poisonings). Suicide was the largest single cause, accounting for nearly a third (31.8%) of the deaths in this category (Exhibit 3-6). Motor vehicle collision, drowning, fall/machinery and fire were also among the leading causes of injury death.

Injury was also an overwhelming cause of potential years of life lost (PYLL) (Exhibit 3-7). Again, suicide was prominent — accounting for 21.8% of the PYLL - though injury that is not self-inflicted was the leading cause. Taken together, injury accounted for nearly 60% of the PYLL during the early 1990s.

In 1990 - 1992, the latest years for which national comparison data were available, the age-standardized mortality rate for injury in the NWT was 2.39 times higher than the corresponding rate for Canada as a whole (Exhibit 3-8). The mortality rate for suicide was also more than twice the national average (Exhibit 3-8).

Cancer was the second leading cause of death in the NWT, accounting for 21.3% of all deaths (Exhibit 3-6) with the largest single cancer site being the lungs (Exhibit 3-5). Diseases of the circulatory system, in particular heart diseases, were the third leading category, and respiratory diseases constituted the fourth leading cause of death. Prominent among the respiratory diseases was chronic obstructive pulmonary disease (COPD) (i.e., asthma, emphysema, chronic bronchitis and unspecified chronic airway obstruction). In 1990 - 1992, the mortality rate for lung cancer in the NWT was 1.82 times that for Canada as a whole, and that for COPD was 3.9 times higher than the national average (Exhibit 3-8). Tobacco use plays a significant role in both of these conditions.

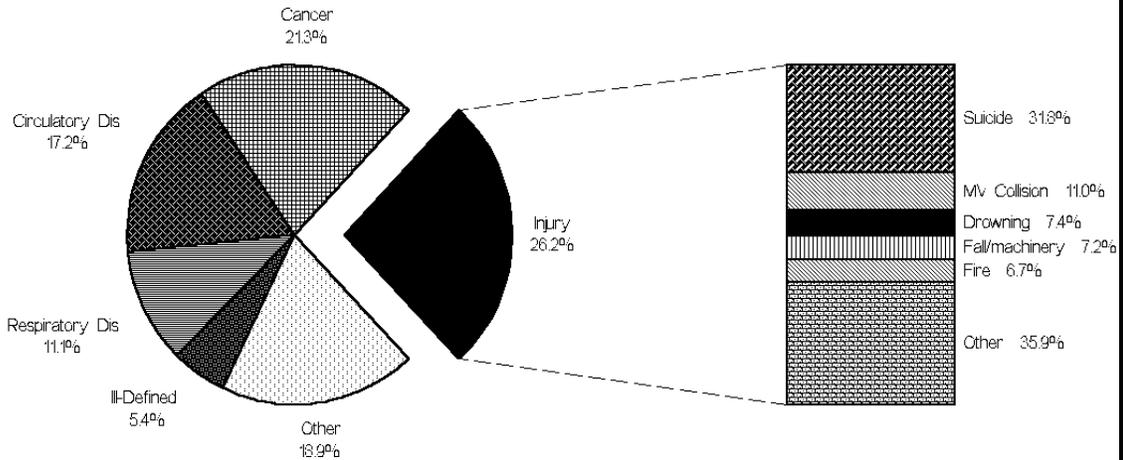
It is noted that the 1990 to 1992 mortality rate for non-ischemic heart disease in the NWT was 2.8 times the national rate (see Exhibit 3-8). This group includes conditions such as rheumatic heart disease, pulmonary heart disease, cardiomyopathies, dysrhythmias, and congestive heart failure. When the long-term trends (1950 to 1992) were examined (Statistics Canada, Health Indicators, 1996), it was apparent that there was a sporadic high peak during the early 1990s (data not shown). Thus, this elevated rate ratio is not likely to be sustained.

Exhibit 3-5
Causes of Death in the NWT
1990 to 1995

Cause of Death	Number of Deaths (Total Over 6 Years)
All Injuries & Poisonings	390
Suicide	124
Motor vehicle collisions	43
Drowning	29
Falls & machinery	28
Fire	26
Unintended poisoning	16
All Cancers	317
Lung cancer	123
Intestinal cancer	18
Female breast cancer	18
Prostate cancer	11
Cervical cancer	2
All Circulatory Diseases	256
Non-ischemic heart disease	96
Ischemic heart disease	87
Stroke	51
All Respiratory Diseases	165
COPD (Chronic obstructive dis)	103
Pneumonia & influenza	42
Digestive System Diseases	44
Nervous System Diseases	32
Infectious Diseases	25
Perinatal Conditions	22
Genitourinary Diseases	16
Congenital Anomalies	15
Endocrin/Nutrition/Metabol/Immun	13
Mental Disorders	13
Blood Diseases	10
Skin Diseases	2
Musculoskeletal Diseases	1
Ill-Defined Conditions	80
Total	1490

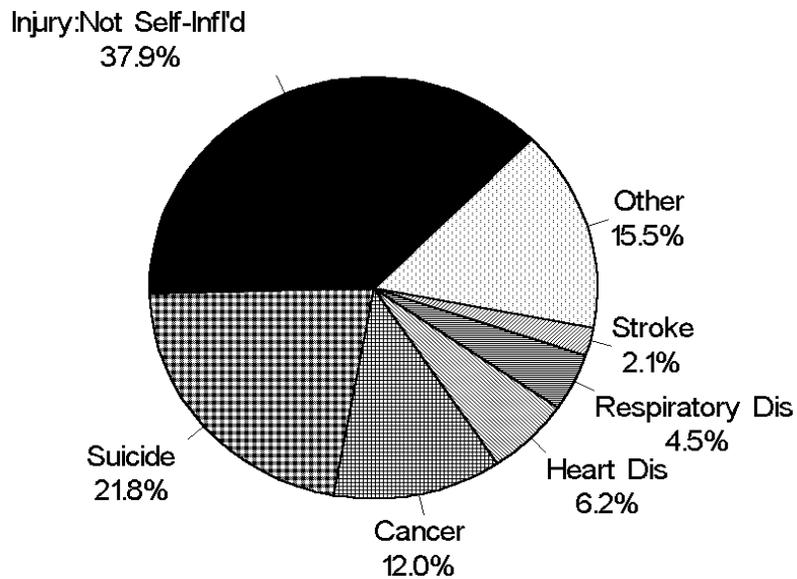
Source: NWT Department of Health and Social Services, Vital Statistics

Exhibit 3-6
Leading Causes of Death in the Northwest Territories
Males and Females, 1990 to 1995



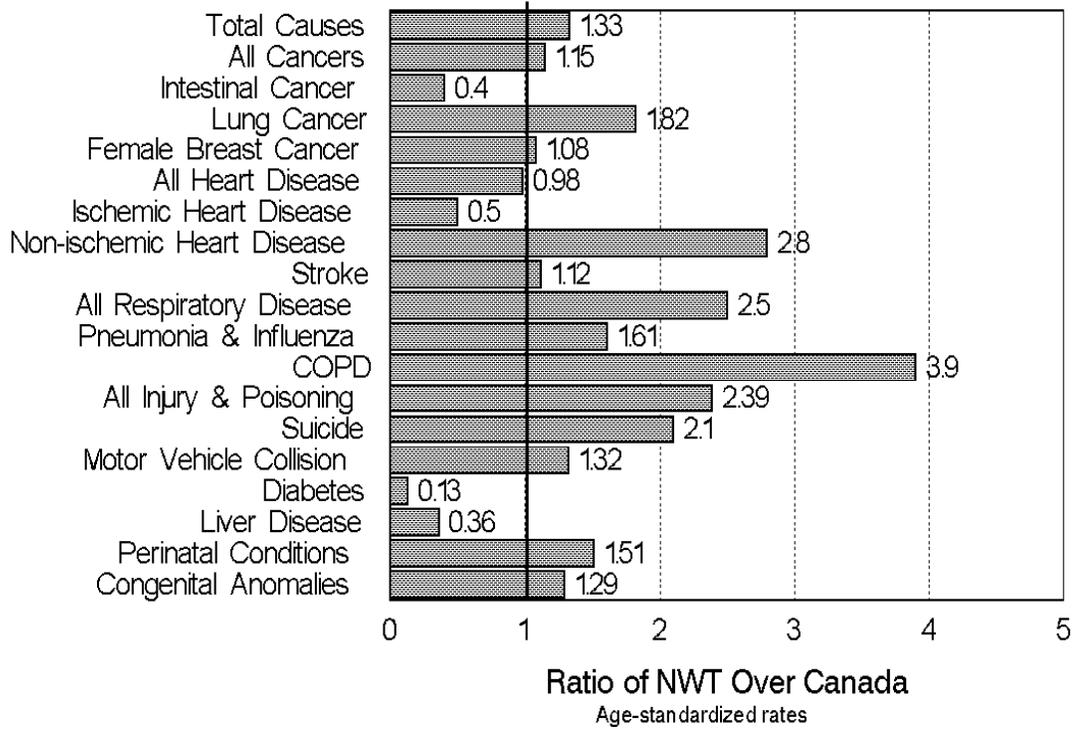
Source: NWT Department of Health and Social Services, Vital Statistics

Exhibit 3-7
Potential Years of Life Lost in Northwest Territories
Males and Females, 1990 to 1993



Source: Statistics Canada, Health Indicators, 1996

Exhibit 3-8
Mortality in Northwest Territories Relative to Canada
Males and Females, 1990 to 1992



Source: Statistics Canada, Health Indicators, 1996

The change in mortality rates between the early 1950s and the early 1990s for various diseases/conditions is shown in Exhibit 3–9 . As mentioned above, there is substantial random fluctuation in these rates over the four decades. Many of the conditions which appear to have increased showed no prevailing trend (data not shown). In the case of motor vehicle collision, associated mortality increased during the 1960s but have not trended upward since (Statistics Canada, Health Indicators, 1996). However, lung cancer, COPD and suicide did trend upward during these four decades, and these trends are shown in Exhibits 3-10 to 3–12. It should be noted that the data presented in these figures are age-standardized rates, and therefore, the trends are not explained by changes in population size or age distribution. In order to project to the year 2006 (the last year for which NWT population projections were available), a statistical model was fitted to the historical data and extended forward.⁴

Suicide

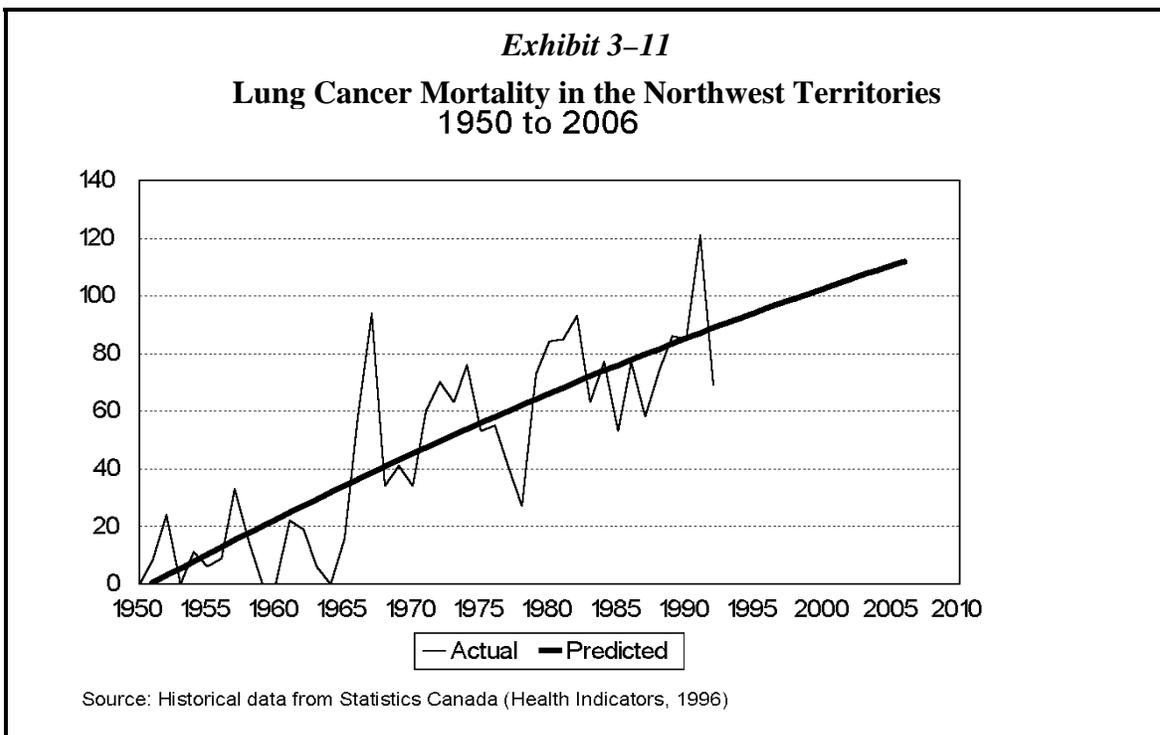
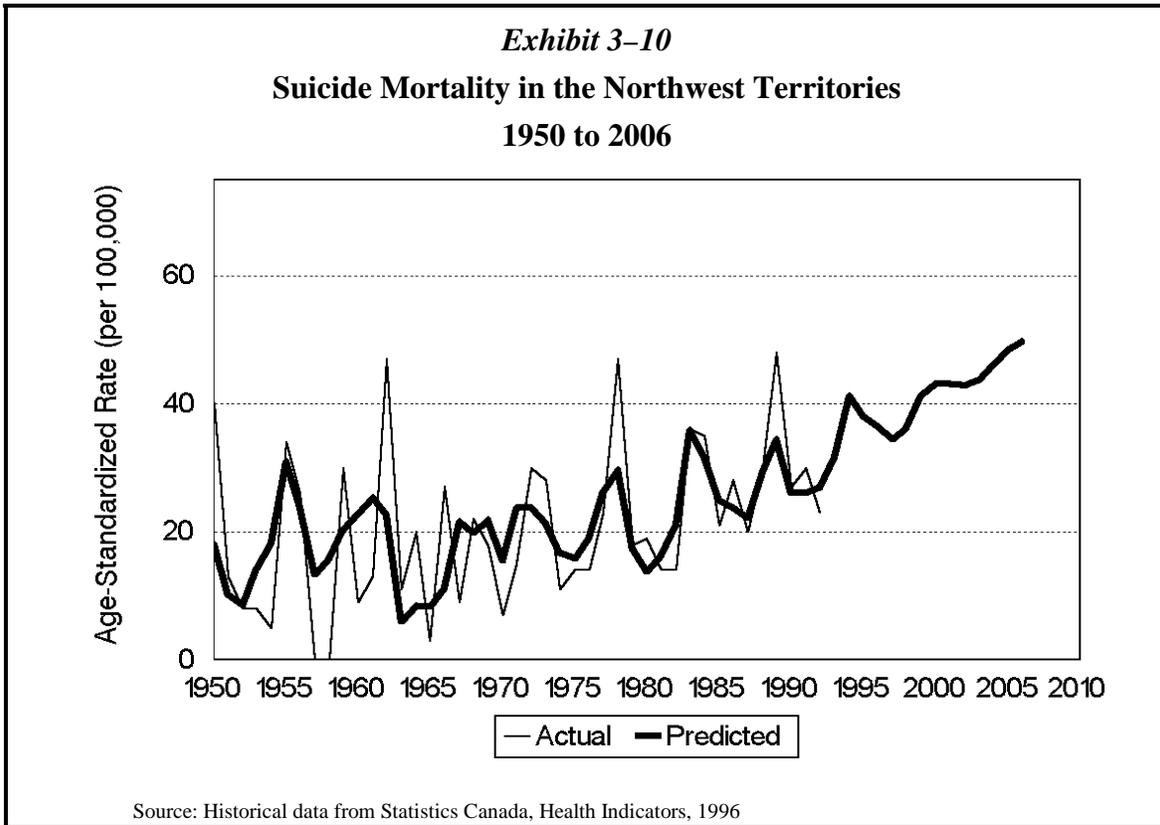
Between the early 50s and the early 90s, suicide mortality increased 34.2% (Exhibit 3–9). The reasons for this increase could be attributed to an array of factors, including shortages in housing, relocation of Inuit, residential school issues, high sexual abuse incidence, loss of traditional life style and identity, rapid increase in substance abuse, etc.. By 2006, the rate is expected to increase a further 86.1%, assuming the trends of the past four decades continue over the next decade. In the year 2006, the rate is expected to be 49.7 deaths per 100,000 population. Since the total population in the year 2006 is projected to be 82,500, it is expected that in that year alone there will 41 suicides in the NWT. The 95% confidence interval indicates that, given the fluctuations from year to year, the rate could be as high as 91.8/100,000 and the number of suicide deaths in one year as high as 76. This compares to an annual average of about 21 suicide deaths in the NWT during the early to mid 1990s (Exhibit 3–10). If the current age distribution still applies in 2006, then nearly two out three of these suicides will be in people under the age of 25. Unfortunately, these numbers do not take into account recent suicide prevention strategies, better mobilized mental health efforts, Nunavut job creation, etc.. Hopefully, the numbers in 2006 will not be as high as projected.

⁴ Three types of trend models were examined: linear, quadratic and exponential. Based on residuals analysis, the quadratic model was selected for suicide and lung cancer, and the linear for COPD. After fitting the underlying trend, residuals were further modeled using autoregression techniques. This was done using PROC FORCAST in the Statistical Analysis System (SAS) software on PC (SAS Institute Inc., 1988).

Exhibit 3-9
Changes in Mortality in the NWT
1950-1952 to 1990-1992

Disease/Condition (Males & Females Combined)	Age-Standardized Rate Per 100,000		% Change
	1950-52	1990-92	
Total Causes	2,375.4	918.6	-61.3
All Cancers	127.0	220.6	3.7
Colon Cancer	21.4	8.3	-61.2
Lung Cancer	10.5	91.5	771.4
Female Breast Cancer	20.9	33.1	58.4
All Heart Disease	159.0	193.8	21.9
Ischemic Heart Disease	78.2	78.0	-0.3
Non-Ischemic Heart Disease	80.8	115.8	43.3
Stroke	53.8	56.8	5.6
All Respiratory Diseases	278.0	149.0	-46.4
Pnuemonia & influenza	231.7	38.4	-83.4
COPD	28.4	107.4	278.2
All Injury & Poisonings	221.9	111.7	-49.7
Suicide	19.9	26.7	34.2
Homocide	15.7	3.5	-77.7
Motor Vehicle Collision	1.9	17.0	794.7
Other Unintended Injury	184.4	64.5	-65.0
Diabetes	0.0	2.0	++
Liver Disease	0.0	2.8	++
Congenital Anomalies	1.9	5.8	205.3
Perinatal Conditions	59.7	5.6	-90.6

Source: Statistics Canada, Health Indicators, 1996



Cancer

Lung cancer has increased dramatically since the early 1950s, up 771.4% in the early 1990s (Exhibit 3–5), and is expected to increase a further 22.2% by the year 2006 (Exhibit 3-11). In 2006, the rate is predicted to be 111.8/100,000, with an upper limit (based on 95% confidence interval) of 171.6/100,000. Thus, the number of deaths due to lung cancer in 2006 is expected to be over 90, and could be as many as about 140. In the early to mid 1990s, the annual average was about 20 lung cancer deaths. Since the NWT Cancer Registry indicates that there are about 1.2 incident cases of lung cancer for each lung cancer death (i.e., 147 cases versus 123 deaths in 1990 to 1995), then one would expect that in 2006 alone there will be about 110 incident cases of lung cancer, with an upper limit of about 170.

Pulmonary Disease

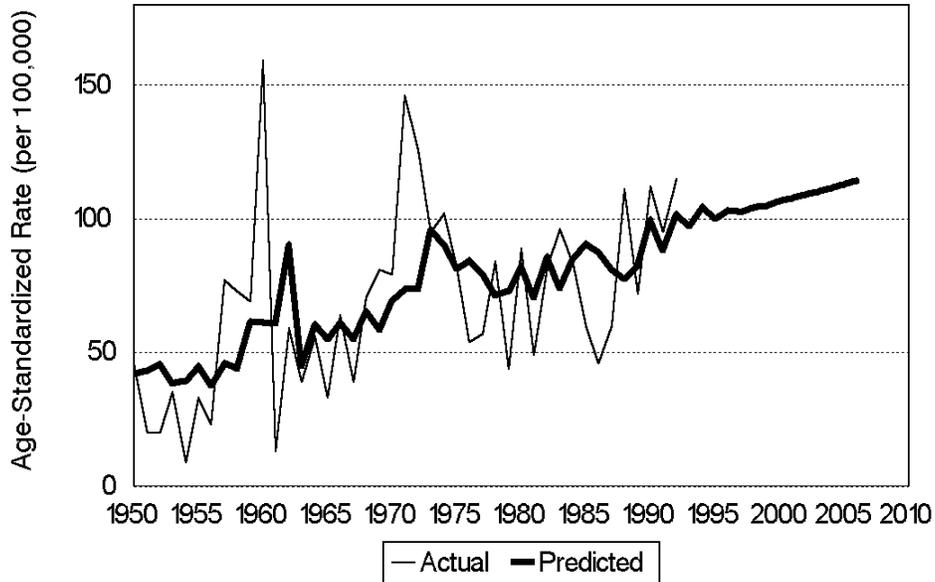
Chronic obstructive pulmonary disease mortality increased 278.2% between the early 1950s and the early 1990s (Exhibit 3–9). It is expected to increase a further 6.1% to 114.0/100,000 (Exhibit 3–12). This rate yields an expected number of 94 COPD deaths in 2006, with a possibility of being as many as 150 (based on upper limit of 95% confidence interval). The current average annual number is about 18.

Regional Variations

Exhibits 3–13 through 3–17, show the leading causes of death for each of the regions, and Exhibits 3–18 through 3-20, compare the regions on mortality rates for suicide, heart disease and COPD, respectively. Exhibit 3–21, compares the regions on lung cancer incidence. Injury accounted for the highest proportion of total deaths in the **Baffin Region**, where more than one in three deaths were attributed to injury. As discussed earlier for the NWT as a whole, suicide is the largest single cause of injury deaths. Indeed the suicide mortality rate in Baffin is the highest among all the regions (Exhibit 3–18), being 6.0 times higher than the rate in Mackenzie, which had the lowest rate among the regions (Exhibit 3–18).

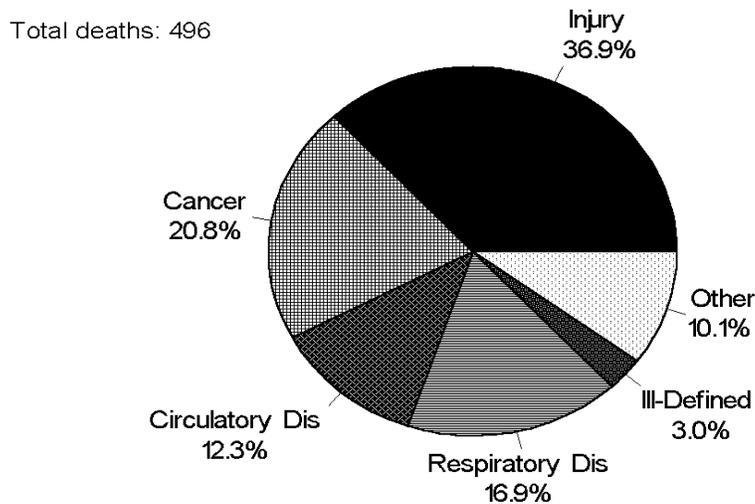
In the **Inuvik Region**, injury and cancer were the first and second leading causes of death, but it is noteworthy that the proportion attributed to circulatory system disease was substantially higher than in the Baffin Region. Further to this, Exhibit 3–19 indicates that the rate of heart disease in Inuvik is the highest among the regions; 1.8 times higher than that in Baffin, and 2.0 times that in Keewatin.

Exhibit 3-12
Chronic Obstructive Pulmonary Mortality in the Northwest Territories
1950 to 2006



Source: Historical data from Statistics Canada, Health Indicators, 1996

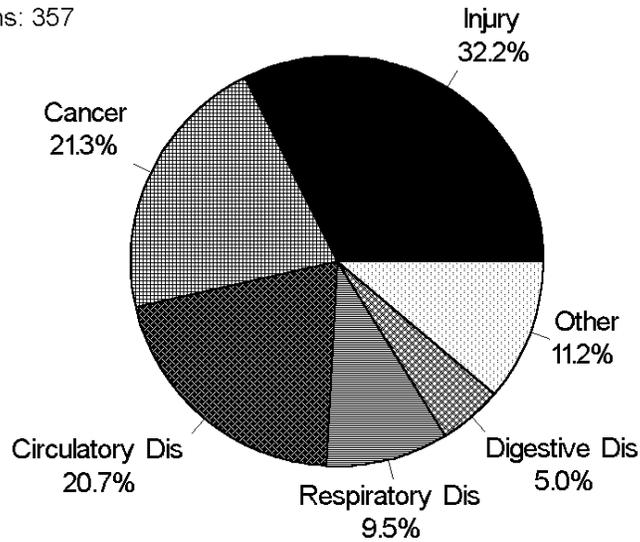
Exhibit 3-13
Leading Causes of Death in the Baffin Region
Northwest Territories, 1986 to 1995



Source: NWT Department of Health and Social Services, Vital Statistics

Exhibit 3-14
Leading Causes of Death in the Inuvik Region
Northwest Territories, 1986 to 1995

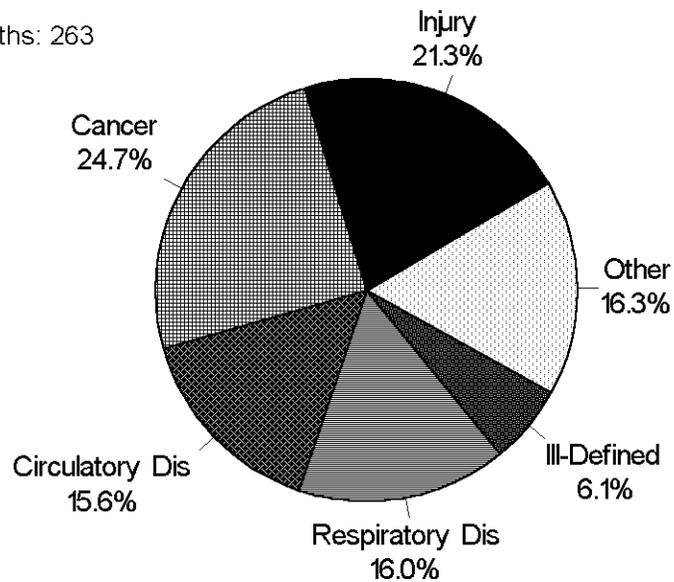
Total deaths: 357



Source: NWT Department of Health and Social Services, Vital Statistics

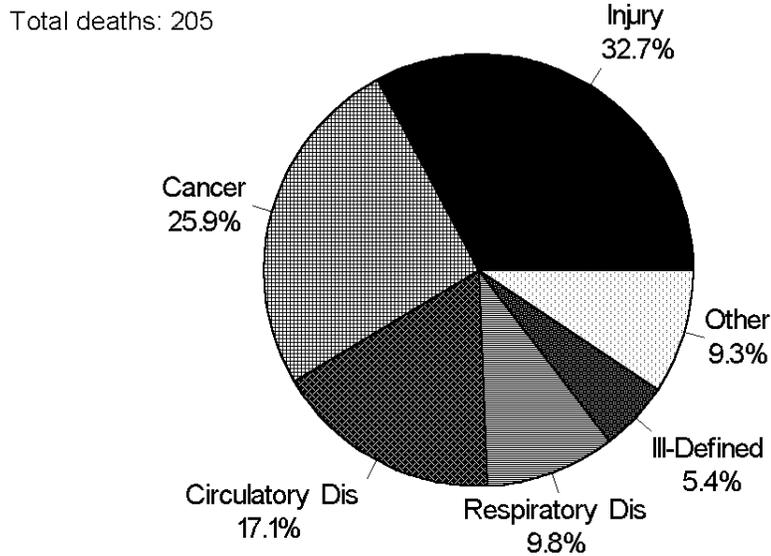
Exhibit 3-15
Leading Causes of Death in the Keewatin Region
Northwest Territories, 1986 to 1995

Total deaths: 263



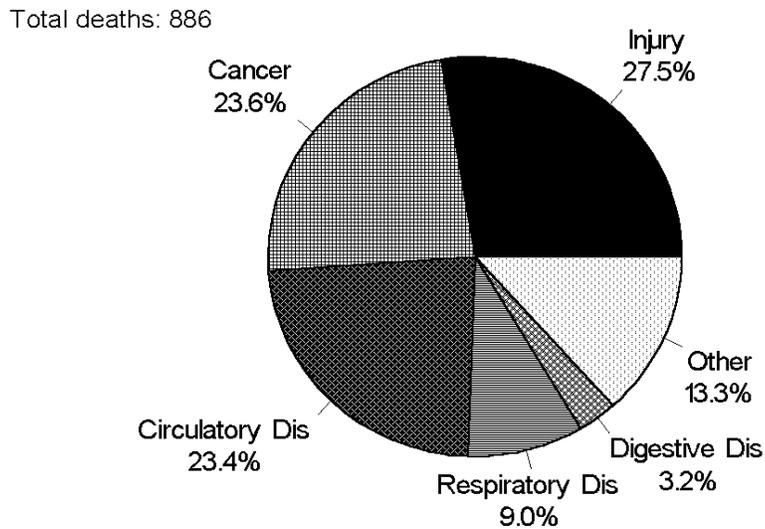
Source: NWT Department of Health and Social Services, Vital Statistics

Exhibit 3-16
Leading Causes of Death in the Kitikmeot Region
Northwest Territories, 1986 to 1995



Source: NWT Department of Health and Social Services, Vital Statistics

Exhibit 3-17
Leading Causes of Death in the Mackenzie Region
Northwest Territories, 1986 to 1995



Source: NWT Department of Health and Social Services, Vital Statistic

Keewatin had relatively few deaths attributed to injury — only a little more than 20% (Exhibit 3–15) compared to the approximately 33% in Baffin, Keewatin and Kitikmeot. On the other hand, cancer and respiratory disease are relatively more important in Keewatin. This region had the highest rate of both COPD (Exhibit 3–20) and lung cancer (Exhibit 3–21). While examining Exhibits 3–21 and 3–21, note that COPD mortality and lung cancer incidence have a similar profile across the regions — an observation that is consistent with the fact they share a key risk factor in tobacco use.

In **Kitikmeot**, injury and cancer were the prominent causes of death (Exhibit 3–16). This Region's suicide rate was second only to that in Baffin (Exhibit 3–18), and its lung cancer rate was second only to that in Keewatin (Exhibit 3–21).

In the **Mackenzie Region**, circulatory system disease accounted for a relatively larger proportion of all deaths (Exhibit 3–17). In fact, heart disease mortality in Mackenzie is among the highest in the regions (Exhibit 3–19).

When one examines Exhibits 3-18 to 3-21 for east/west patterns, some general observations can be made. Rates of suicide, chronic obstructive lung disease and lung cancer tend to be higher in the east than in the west. Conversely, heart disease mortality rates tend to be higher in the west than in the east.

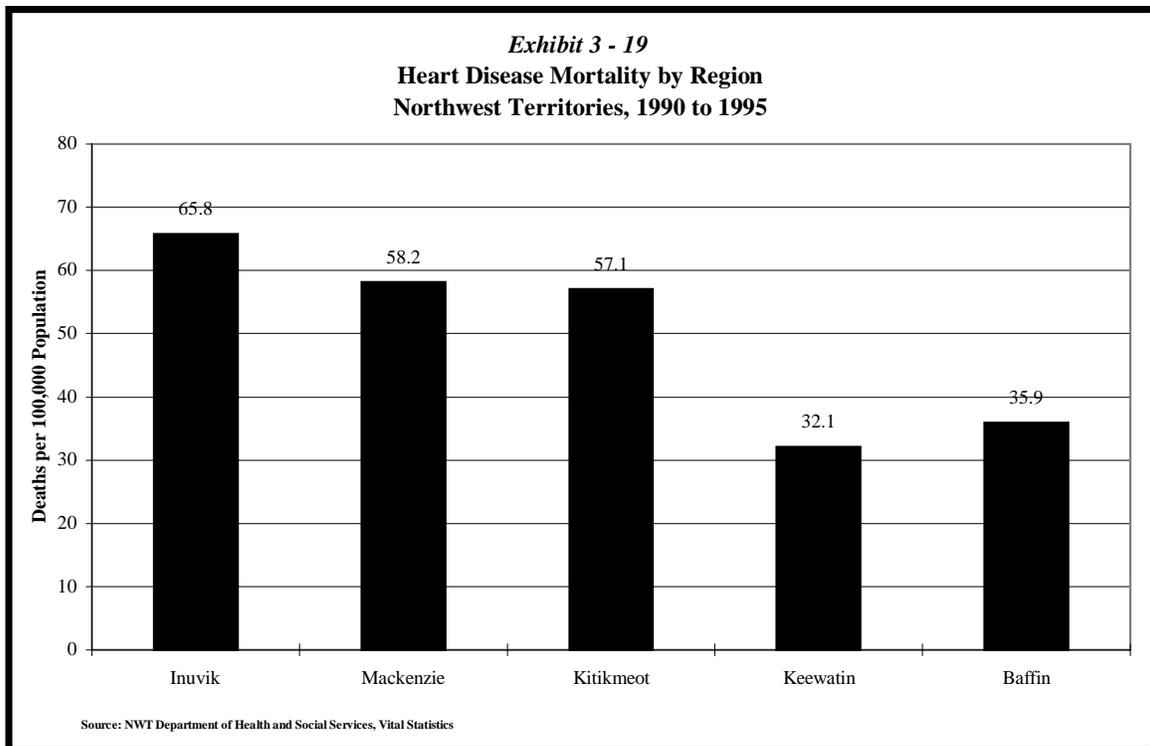
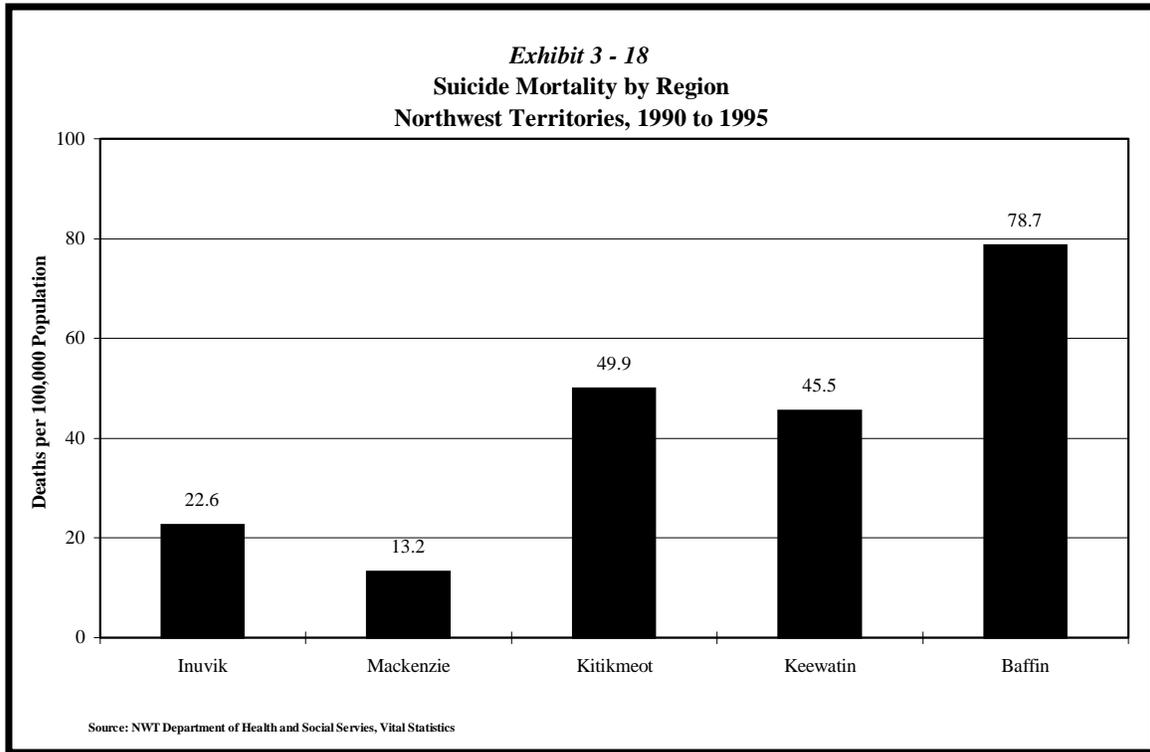
Leading Communicable Diseases

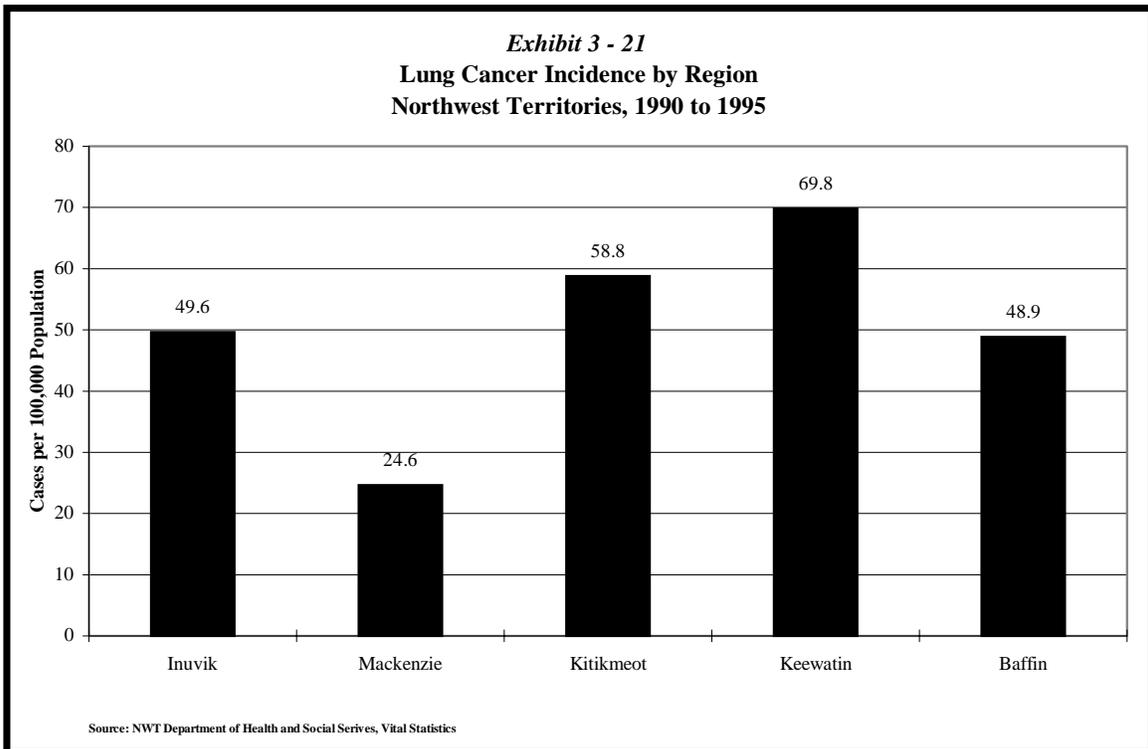
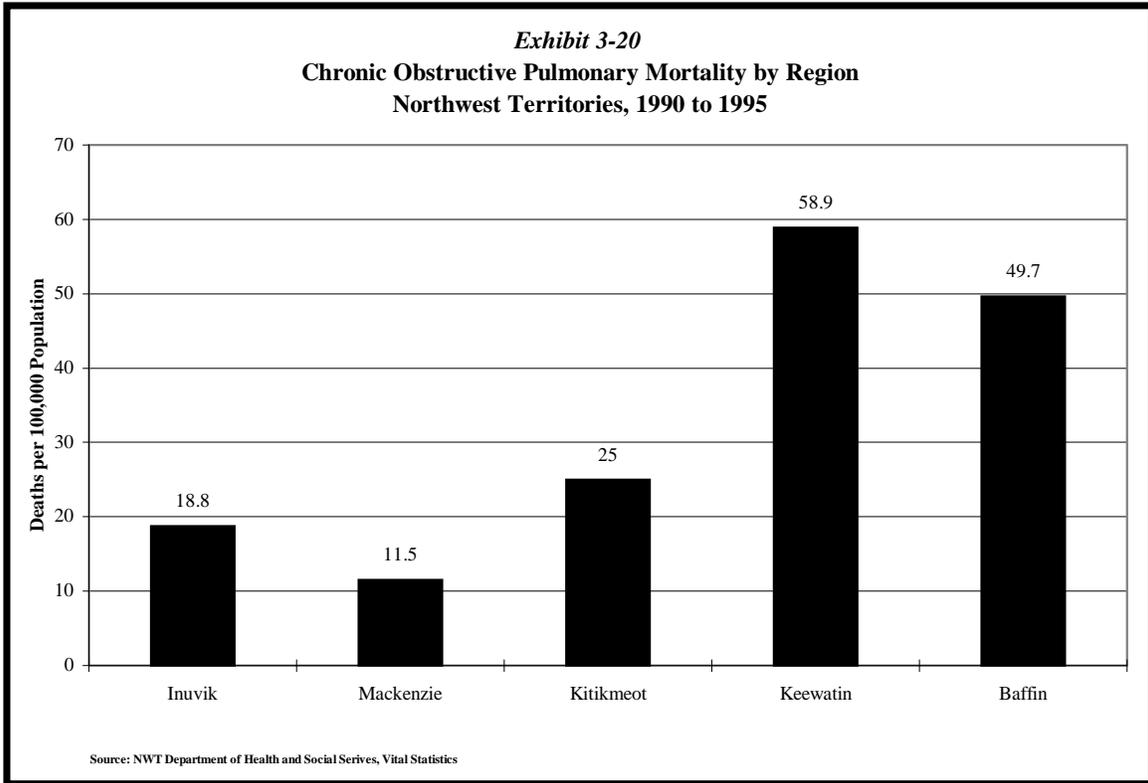
When dealing with mortality in the previous section, the data for the years 1990 to 1995 were collapsed in order to yield a more reliable picture. During this period of time there was a total of 1490 deaths from all causes. While communicable (infectious) diseases accounted for only 25 (1.7%) of these deaths (Exhibit 3–5), the actual burden of illness attributable to communicable diseases in the NWT is much higher than suggested by the mortality data. In fact, during this same period of time there was a total of 9741 cases of such disease reported to the registries maintained by the Department of Health and Social Services. Exhibit 3–22, presents the leading communicable diseases reported.

Sexually Transmitted Diseases

Chlamydia and gonorrhea accounted for approximately three quarters of all reported communicable diseases between 1990 and 1995 (Exhibit 3–22). Keewatin had the highest rate of chlamydia (Exhibit 3–23), while Baffin (followed by Keewatin) had the

highest rate of gonorrhoea (Exhibit 3-24). The lowest rate for each of these diseases was observed in





the Mackenzie Region, but even this region had rates that were five to eight fold higher than corresponding rates in Alberta, the most proximal province⁵. The rate of reported chlamydia in Keewatin was 3.3 fold higher than in Mackenzie; for gonorrhea, the rate in Baffin was 4.7 fold higher than in Mackenzie.

It should be noted that the rates presented here are crude rates, they have not been adjusted for differences in the age distribution of the regions' populations. Both chlamydia and gonorrhea are sexually transmitted diseases (STDs) and STDs are more common in young adults as they tend to be more sexually active. Since Keewatin and Baffin are relatively young populations (Exhibit 3–3), this could account for their higher observed rates.

Measles

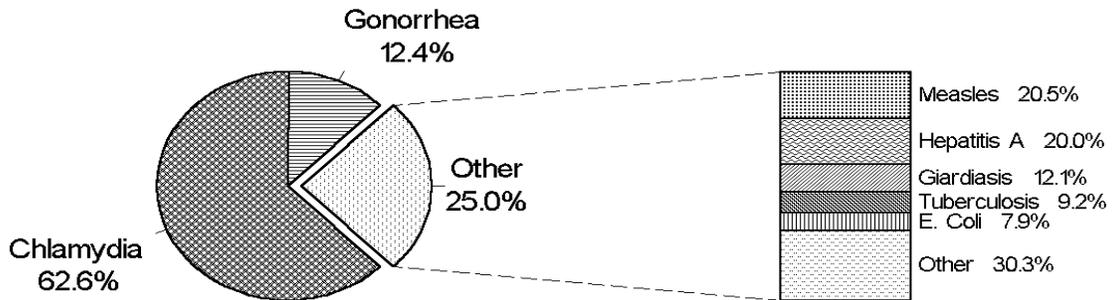
Measles was the third most commonly reported communicable disease, accounting for 20.5% of the reported cases that were not chlamydia or gonorrhea (Exhibit 3–22). The rate of reported measles was highest in the Baffin Region (Exhibit 3–25). Measles is one of the most highly communicable infectious diseases, and may require that a minimum of 94% of residents to be vaccinated in order to interrupt community transmission (Benenson 1995). Reliable data on vaccine coverage by region in the NWT were not available.

It should be noted that these observations are based on data collapsed over the years 1990 to 1995. While collapsing data as such adds reliability to the rates, it does obscure important differences over the individual years. This is more a concern for communicable than non-communicable disease rates since the latter are not subject to outbreak effects. The relatively high measles incidence in Baffin Region occurred in 1991/92, and a two dose MMR protocol has since been put in place. Thus, another outbreak such as the one in 1991/92 is less likely to occur at present.

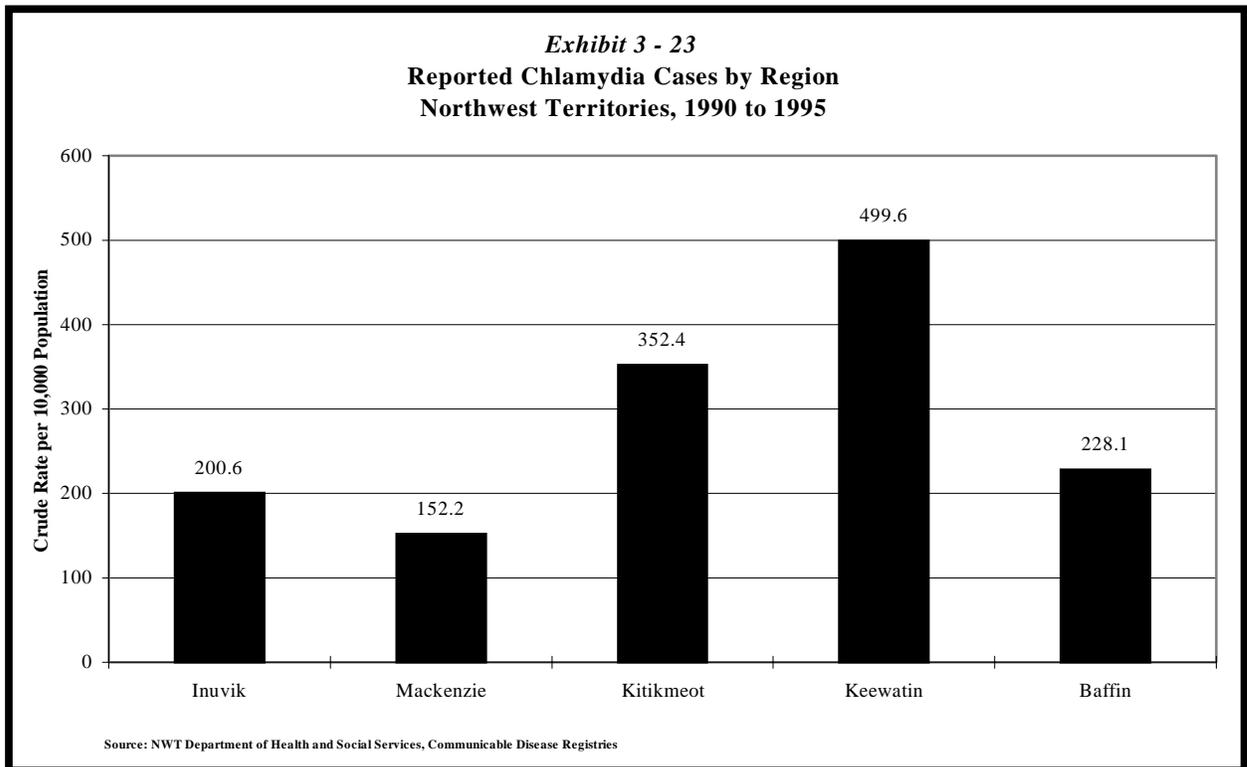
⁵ Unadjusted chlamydia rate in Mackenzie Region (1990-1995) was 152.2/10,000; corresponding rate in Alberta (1990-1994) was 19.5/10,000 (Health Canada, 1995). Unadjusted gonorrhea rate in Mackenzie Region (1990-1995) was 19.5/10,000; corresponding rate in Alberta (1990-1994) was 3.8/10,000 (Statistics Canada, Health Indicators, 1996)

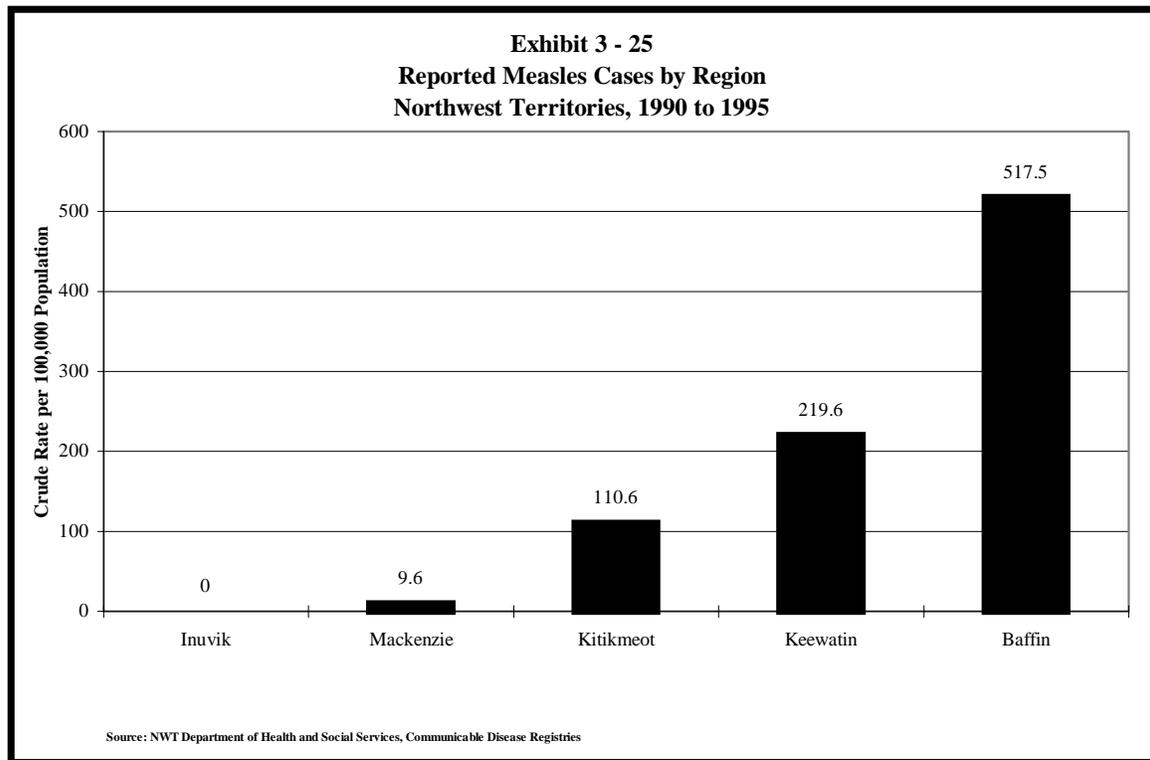
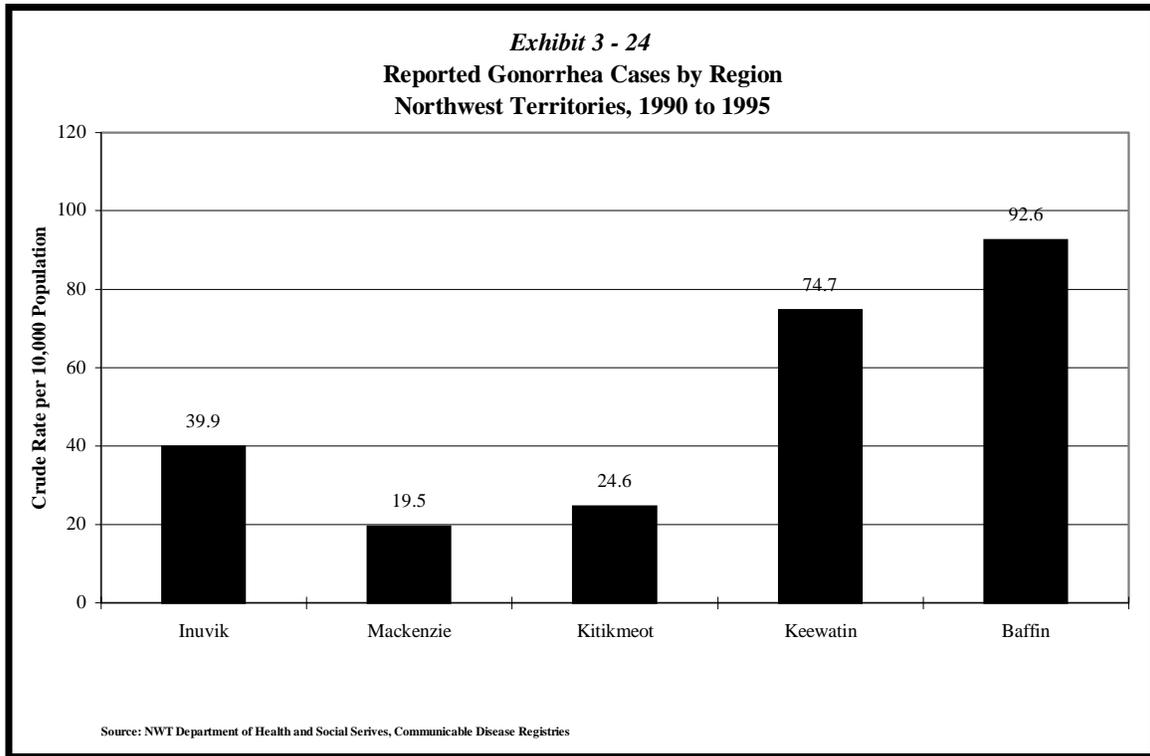
Exhibit 3-22
Leading Communicable Diseases
NWT, 1990 to 1995

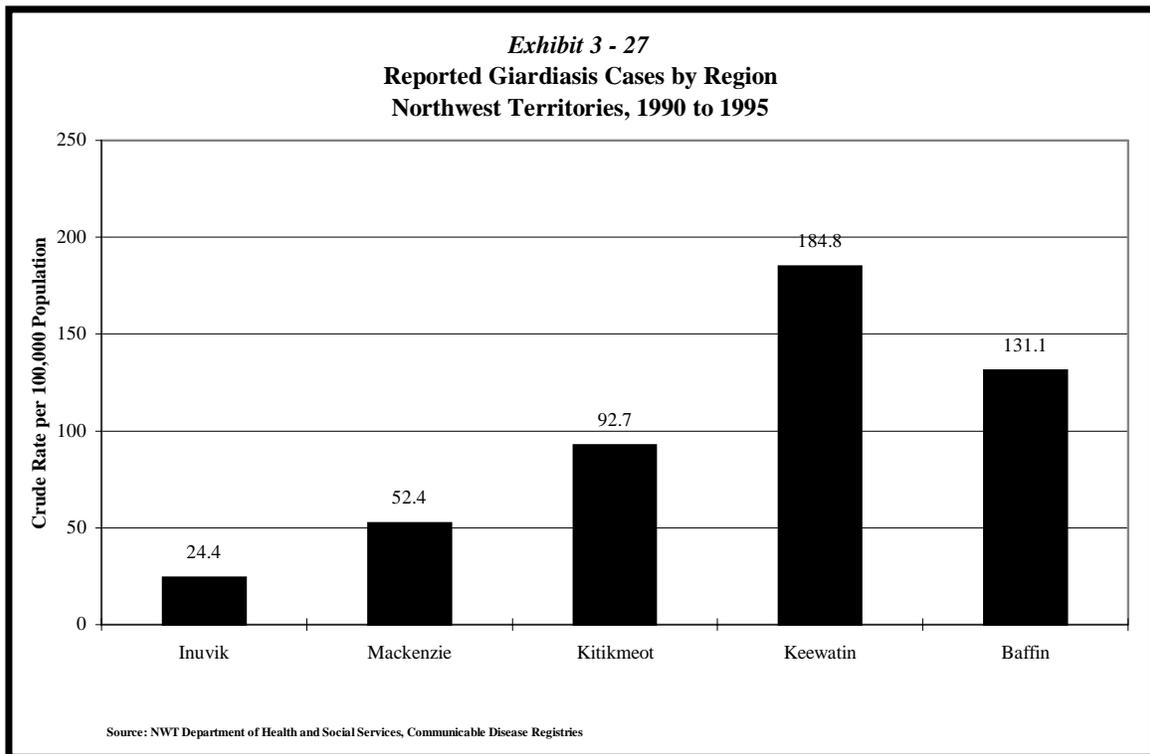
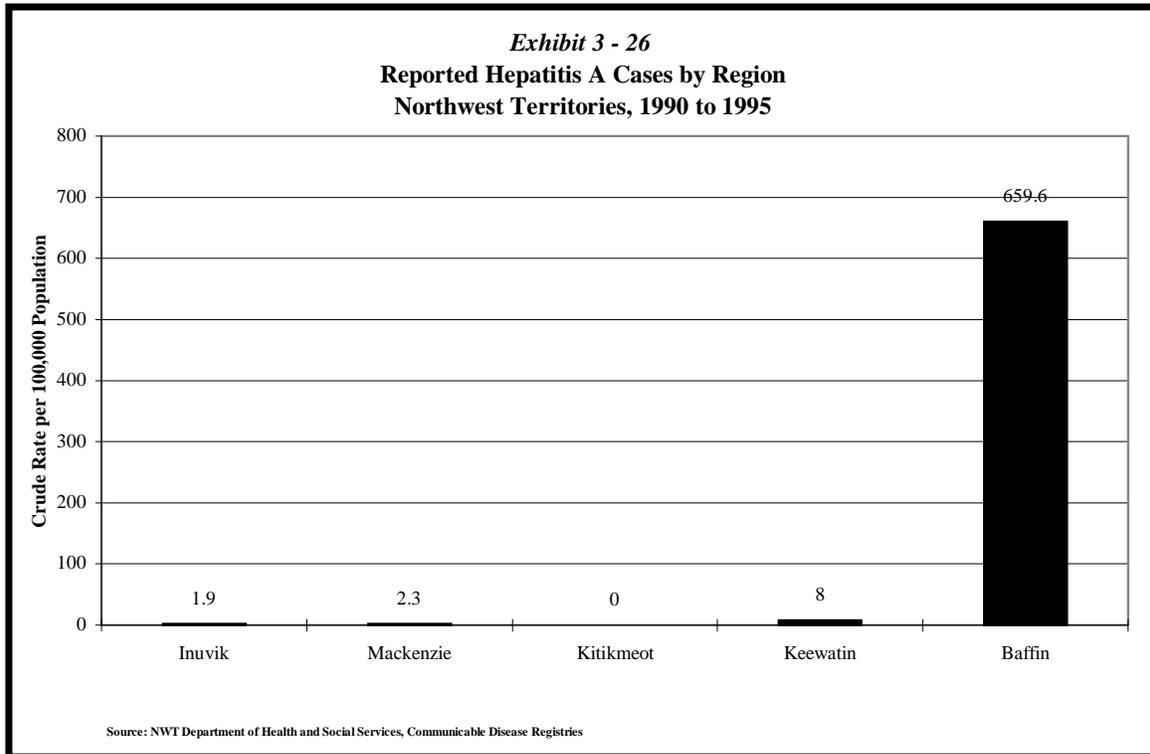
Total Number of Cases: 9,741



Source: NWT DH&SS, Communicable Disease Registries







Hepatitis A

Hepatitis A, the fourth leading communicable disease, was also most commonly reported in the Baffin Region. Since the infectious agent for this disease is found in the feces, the mode of transmission is person-to-person by the fecal-oral route. In the literature, common-source outbreaks have been related to contaminated water and food contaminated by infected food-handlers (Benenson 1995). Here again, the high rate in Baffin Region can be attributed to an outbreak in 1991/92.

Giardiasis

Giardiasis is another leading communicable disease in the NWT, and most commonly reported in the Keewatin and Baffin regions (Exhibit 3-27). The prevalence of this disease is known to be higher in areas of poor sanitation, and has been associated with drinking water from unfiltered surface-water sources. Unfiltered stream and lake waters that are open to contamination by human and animal feces are a source of infection. Person-to-person transmission by the fecal-oral route in institutions and day-care centres is also important (Benenson, 1995).

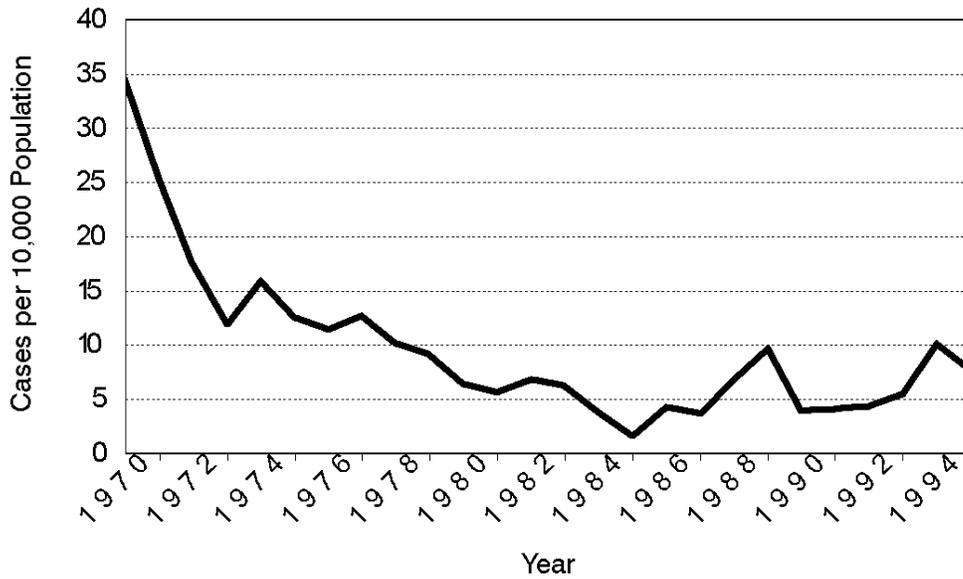
Tuberculosis

Tuberculosis (TB) was the sixth leading communicable disease reported in the NWT (Exhibit 3-22). While the rate of this disease has declined significantly since 1970 (Exhibit 3-28), the age-standardized rate for the NWT in 1993 was still 16 fold higher than that for Canada as a whole (Statistics Canada, Health Indicators, 1996). Between 1990 and 1995, the rate of TB was highest in the Baffin Region, followed closely by the Mackenzie and Keewatin regions (Exhibit 3-29). The rate in Mackenzie was more than 10 fold higher than that in Kitikmeot, which had the lowest rate.

HIV/Aids

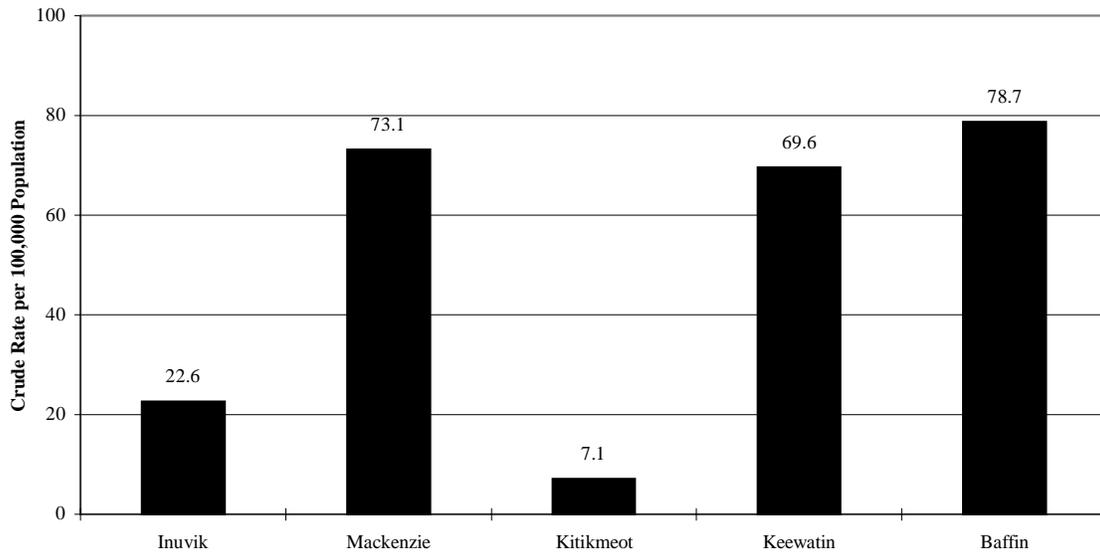
Between 1990 and 1995, there were only 20 cases of HIV/AIDS reported in the NWT. In fact, up to November of 1996, only 30 cases had been reported to the NWT Department of Health and Social Services, HIV/AIDS registry. Of these 30 cases, 12 (40%) had died by November, 1996, 13 (43%) were males, 14 (47%) belonged to the homosexual/bisexual risk group, 4 (13%) had a history of intravenous drug use, and 8 (27%) were attributed to heterosexual activity.

Exhibit 3-28
Reported Tuberculosis Cases in the Northwest Territories
1970 to 1995



Source: NWT Department of Health and Social Services, Communicable Disease Database

Exhibit 3 - 29
Reported Tuberculosis Cases by Region
Northwest Territories, 1990 to 1995



Source: NWT Department of Health and Social Services, Communicable Disease Registries

Before leaving communicable disease, a general east/west pattern is apparent for number of these conditions. Exhibits 3-23 through 3-27 suggest that the rates for chlamydia, gonorrhoea, measles, Hepatitis A and giardiasis tend to be higher in the eastern region than in the western regions of the NWT.

Reproductive Outcomes

The rate of low birth weight (i.e., under 2500 grams or 5.5 pounds) reflects the general level of reproductive health in a community. For this reason, it is encouraging that the rate has declined over recent years (Exhibit 3-30), and that the current rate for the NWT as whole (6.0% of all live births, Exhibit 3-31), is comparable to the national average (5.7%, Statistics Canada, Health Indicators, 1996). However, the rate in some regions of the NWT remains high (Exhibit 3-31). In the Baffin Region between 1991 and 1995, the rate was 8.6%, and in the Keewatin Region it was 7.7%. In contrast, the rates in Mackenzie and Inuvik were both at 4.5%, below the national average. Again, the general pattern is that rates tend to be higher in the east than in the west (Exhibit 3-31).

Factors that increase the risk of low birth weight include tobacco use, low pre-pregnancy weight, poor weight gain during pregnancy, poor maternal nutrition, maternal morbidity (e.g., genital infection), and exposure to toxins such as narcotics, marijuana, and alcohol (Kramer, 1987). The low birth weight rate is, therefore, an indicator of maternal health, and the above cited data would suggest that maternal health in Baffin and Keewatin is relatively poor. Furthermore, low birth weight is a significant determinant of childhood morbidity, particularly of neurodevelopmental impairments such as mental retardation and learning disabilities (Eisner et al, 1979 and Westwood et al, 1983). Thus, if it is not already the situation, Baffin and Keewatin can be expected to have a relatively high prevalence of neurodevelopmental impairments in the near future.

Infant Mortality

Since low birth weight is considered the most important risk factor for infant mortality (McCormick, 1985), it is not surprising that the infant mortality rate has also been declining over the past couple of decades (Exhibit 3-32), and that it was also highest in Baffin and Keewatin (Exhibit 3-33). However, other perinatal conditions can contribute to infant mortality, as well as congenital anomalies and factors in the infants living environment that increase the risk of injury and respiratory infections.

Exhibit 3-30
Low Birth Weight Rate in the Northwest Territories
1970 to 1993

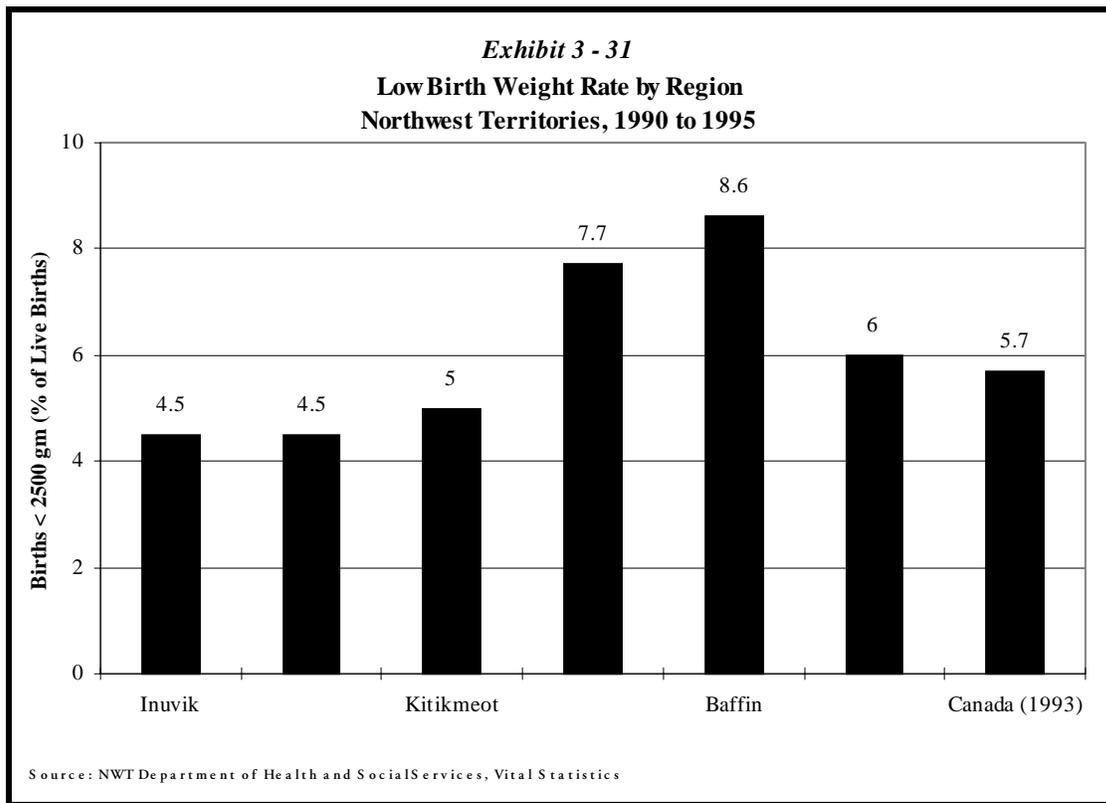
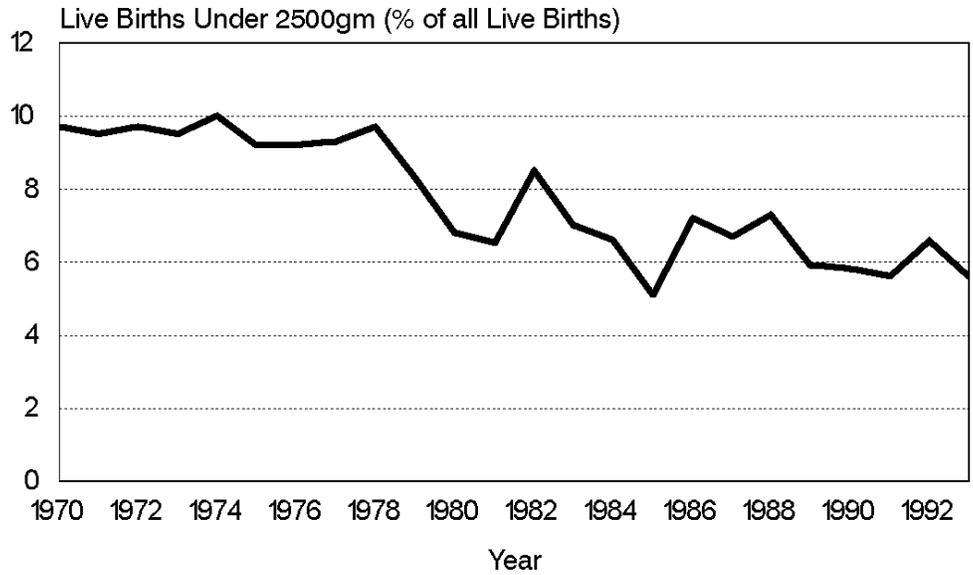
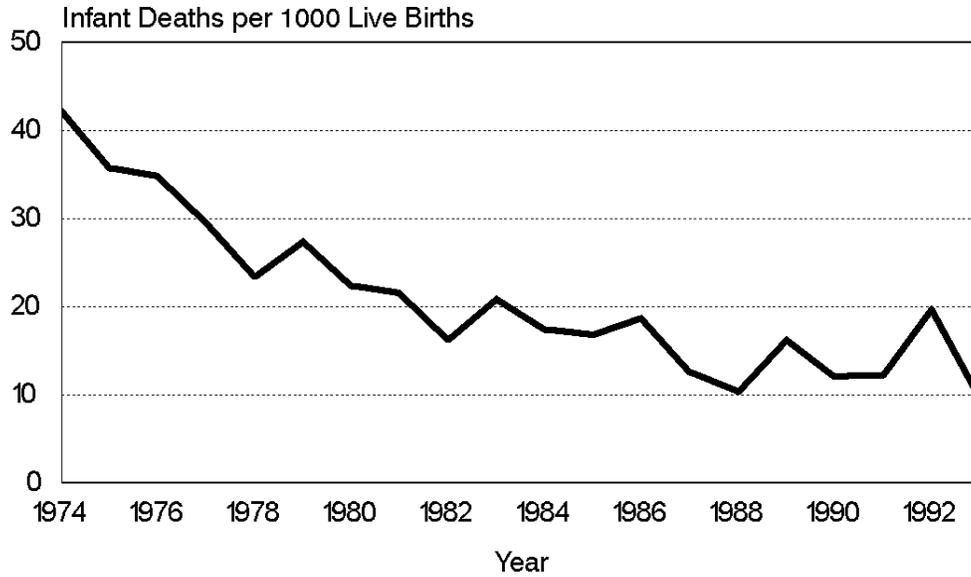
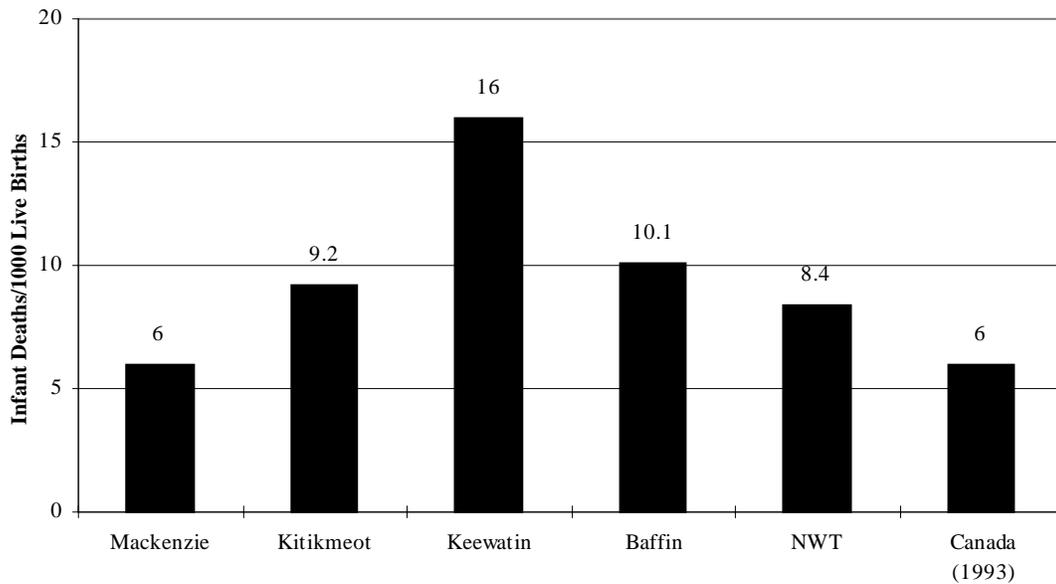


Exhibit 3-32
Infant Mortality in the Northwest Territories
1974 to 1993



Source: Statistics Canada, Health Indicators, 1996

Exhibit 3 - 33
Infant Mortality Rate by Region
Northwest Territories, 1990 to 1995



Source: NWT Department of Health and Social Services, Vital Statistics

Fetal Alcohol Syndrome

The fetal alcohol syndrome (FAS) reflects the specific toxic effects of ethanol ingested by the mother during pregnancy. A survey of all NWT mothers giving birth during 1993 showed that alcohol use during pregnancy varied by region with a low of 8.6% of respondents in the Keewatin Region and a high of 31.1 % in the Inuvik Region (Carr, 1996). In Baffin, it was 19.0%, 27.0% in Kitikmeot, and 22.0% in Mackenzie. Recently (February 6, 1997), the media reported data from Dr. John Godel (an Edmonton pediatrician) on the prevalence of FAS in children of grades one to three in the community of Inuvik. While none of the 30 Caucasian students were identified as FAS, 37.9% of 29 Inuit had FAS, as did 33.3% of 21 Dene students (Godel 1997). These numbers must be taken with caution, pending appraisal of Godel's report.

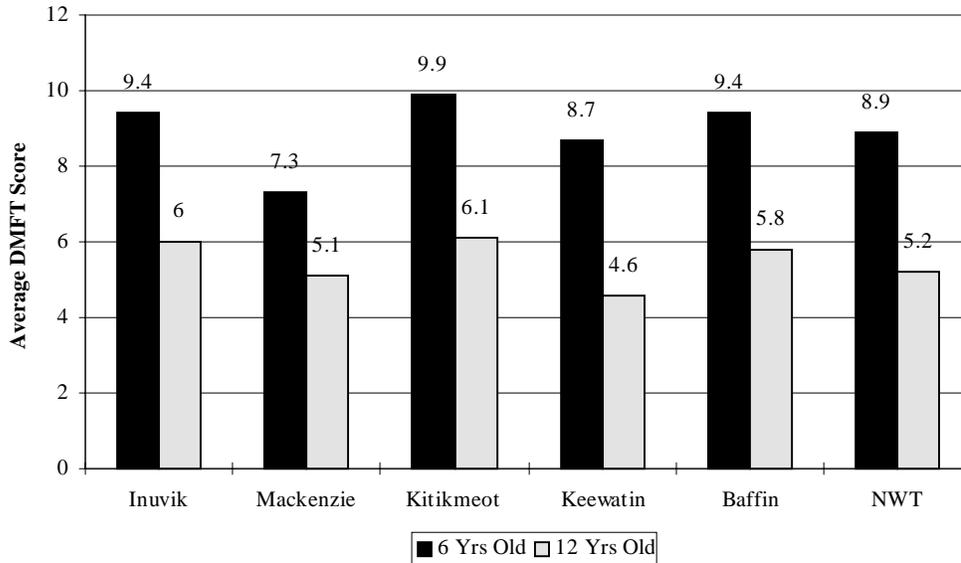
Dental Health Status

In 1990 and 1991, the University of Toronto carried out a survey of the dental health of aboriginal children in Canada (Leake 1992). In the NWT, all communities were eligible for inclusion in the survey except Yellowknife. One of the key indicators reported was the average number of decayed, missing or filled teeth (DMFT score) among all the children examined in a given community. For this indicator, higher scores reflect poorer dental health status in the community. Previous work estimated that the average DMFT score among non-aboriginal adolescents in Ontario to be 1.7. The corresponding score in the NWT was 5.2. Within the NWT, dental health status varied little by region (Exhibit 3–34). In communities where the access to dental care was difficult, (i.e. children in fly-in communities), the status of dental health was compromised. Other factors associated with relatively poor dental health included consumption of snacks containing sugar and the absence of fluoridated water.

Human Exposure to Environmental Contaminants

There is evidence that environmental contaminants generated by industry in other parts of the world are reaching the Arctic via the prevailing north-bound global winds and ocean currents (Arctic Environmental Strategy: Northern Contaminants Program, 1995). Data from the early 1980s have identified elevated body-burdens of methylmercury in the Baffin, Keewatin and Kitikmeot regions (Careau et al, 1992). More recent data have suggested a decline in these body-burdens (Careau et al, 1992). However, since these more recent data are of limited quality, continued monitoring is warranted. Dietary intake of PCBs in the NWT has only been assessed in Boughton Island of the Baffin Region

Exhibit 3 - 34
Decayed, Missing or Filled Teeth (DMFT) by Region
Northwest Territories, 1990 to 1995



Source: Faculty of Dentistry, University of Toronto

Note: Yellowknife not included

(Careau et al, 1992). While the intake was slightly higher than the maximum recommended, an exhaustive risk analysis which takes into account the benefits of a diet rich in marine products is yet to be done.

Social, Cultural and Economic Determinants of Health

The health status of the residents of the NWT and the pattern of health and diseases among them were discussed above. It is important to know what factors contribute to the health status of residents. Factors that have been shown to be associated with the development of health problems and the promotion of health are referred to as "health determinants." In general, health determinants can be divided into four categories: socioeconomic and cultural factors; the quality of the physical environment; personal lifestyles and health practices; and human biology and genetics.

Understanding these factors is essential to reforming the health system and designing and implementing interventions to improve the health of the people of the NWT. The concept of health determinants has been embraced by the conference of federal, provincial and territorial ministers of health in its position paper, *Strategies for Population Health: Investing in the Health of Canadians* (Health Canada 1994).

Socioeconomic and cultural factors are particularly important in the NWT. This is the only jurisdiction in Canada where Aboriginal people are in the majority (62%) and where disparity in socioeconomic status among ethnic groups within the Territories and between the Territories and southern Canada have long been recognized.

The association between social, cultural and economic factors and health has been observed for a long time. It exists in many countries around the world, and has persisted despite major improvements in the overall health and wealth of the population. The disparity in health status between Aboriginal and northern peoples and the larger national population to which they belong has often been attributed to socioeconomic status (Young 1994, Waldram et al 1995).

Socioeconomic Status

While the measurement of socioeconomic status is not an easy task, it is relatively simple to demonstrate the unfavourable socioeconomic situation of Aboriginal and northern

peoples by looking at various components of socioeconomic status derived from census data or special surveys.

Income

According to the 1991 Census (Statistics Canada 1995), the median income of the total adult population of the NWT (Aboriginal and non-Aboriginal combined) was \$25,241 for men and \$14,921 for women. This was slightly lower than the figure for Canadian men (\$25,571), but higher than for Canadian women (\$11,956). There was substantial disparity, however, among ethnic groups within the NWT, with Inuit and Dene reporting much lower median income than either the Territorial or national average. Median income among Métis men was also lower, whereas among Métis women it was higher.

Median Income of Residents of the Northwest Territories		
	Male	Female
Inuit	\$12,977	\$7,490
Dene	\$9,224	\$8,073
Métis	\$18,607	\$15,076
Source: Statistics Canada 1995		

In terms of source of income, some 20% of Inuit, 22% of Dene, and 11% of Métis received social assistance, compared to 8% for the NWT and 11% for Canada as a whole. Exhibit 3–35, shows the regional variation in the proportion of the population of the Northwest Territories receiving social assistance.

Cost of Living

While relative income is a good overall indicator of economic well-being, it is also important to consider the relative cost of living. In northern Canada, the cost of living is generally much higher than in southern cities. Using Montreal, Winnipeg or Edmonton as the base city with an index of 100, the living cost differential indices for most communities in the following regions would be as shown in the table below:

Cost of Living Indices	
Montreal, Winnipeg or Edmonton	Base of 100
Baffin Region	150—175
Keewatin Region	155—185
Kitikmeot Region	185—200
Inuvik Region	160—210
Mackenzie Region	120—170
Source: NWT Bureau of Statistics, 1996	

On the other hand, some expenses, such as public housing, are heavily subsidized. Offsetting the prohibitively high cost of food and supplies in the stores is "free" food available from the land. Obtaining this free food is, however, not without cost in terms of capital investment in snowmachines, boats and rifles and operating expenses such as gasoline and ammunition.

Food

Another measure of poverty is food security. In the 1991 *Aboriginal Peoples Survey* (Statistics Canada 1993), 13% of Inuit, 5% of Dene, and 3% of Métis reported not having enough food to eat some time during the past year. The proportion was highest among those aged 55 and above. As expected, individuals reporting the highest level of income were least likely also to report not having enough food.

Employment

The labour force consists of individuals who are employed or, if unemployed, seeking work. The "unemployment rate," as conventionally used in industrialized countries, measures the proportion of unemployed among those in the labour force. Individuals who have given up job seeking or are medically incapacitated are outside the labour force. The "labour force participation rate" refers to the proportion of the adult population (aged 15 and above) who are in the labour force. In Inuit and other Aboriginal communities, where few job opportunities exist, the unemployment rate does not truly convey the lack of employment and economic well-being.

Exhibit 3-35
Social Assistance by Region
Northwest Territories, 1993 - 1995

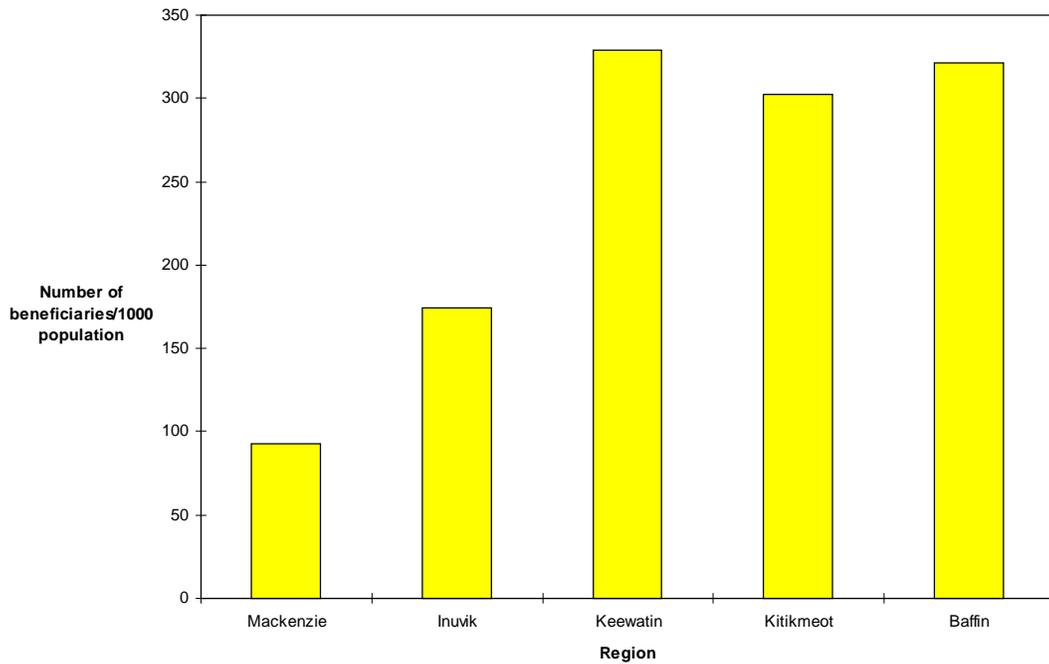


Exhibit 3–36, compares various labour force indicators for Inuit, Dene, Métis and non-Aboriginal people in the NWT. The percentage of Inuit and Dene who worked in the past year was in the range of 62%–76%, whereas the rate for Métis and non-Aboriginals was considerably higher at 76%–95%. Similarly, the proportion of the adult population aged 15 or over who were employed or looking for work was in the range of 50%–63% for the Inuit and the Dene and much higher for the Métis and non-Aboriginals at 65%–91%. The unemployment rate for the Inuit and the Dene was in the range of 24%–33%, lower for the Métis at 15%–19% and still lower for the Non-Aboriginals at 5%–7%.

Education

Academic educational levels are another useful measure of socioeconomic status. These can be measured as the highest grade (or number of years) of schooling completed. Within the NWT, Inuit tend to have a higher proportion of adults with less than grade 9 schooling, and conversely, a lower proportion with university education (Exhibit 3–37). The proportion with less than grade 9 was lower for the Dene, lower still for the Métis, and lowest for non-Aboriginal people. It should be noted, however, that some improvement has occurred, according to census figures over the past two decades. The younger generation also tends to have better formal education. For example, 76% of Inuit aged 50–64, compared to only 38% of those aged 15–49, had less than grade 9 education.

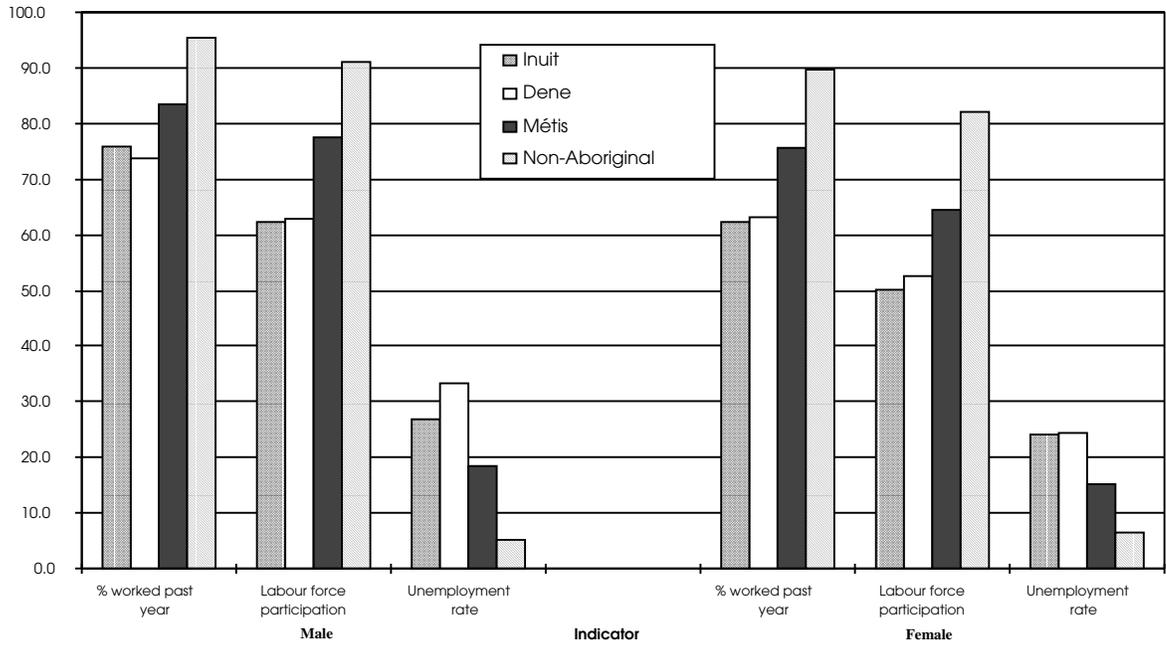
Housing Quality

Housing has been shown to have a major impact on the level of wellness in a community. Housing quality among the Dene is considerably poorer than that among the Inuit, which is generally not much different from non-Aboriginal people in the NWT. Exhibit 3–38, shows the proportion of dwellings requiring major repairs, minor repairs and regular maintenance only. Dene housing is most in need of major repairs and Non-Aboriginal housing is the least in need of major repairs. Exhibit 3–39, shows that as much as a third of Dene housing lacks central heating and almost a quarter has no interior running water or indoor flush toilet.

Prevalence of Crime

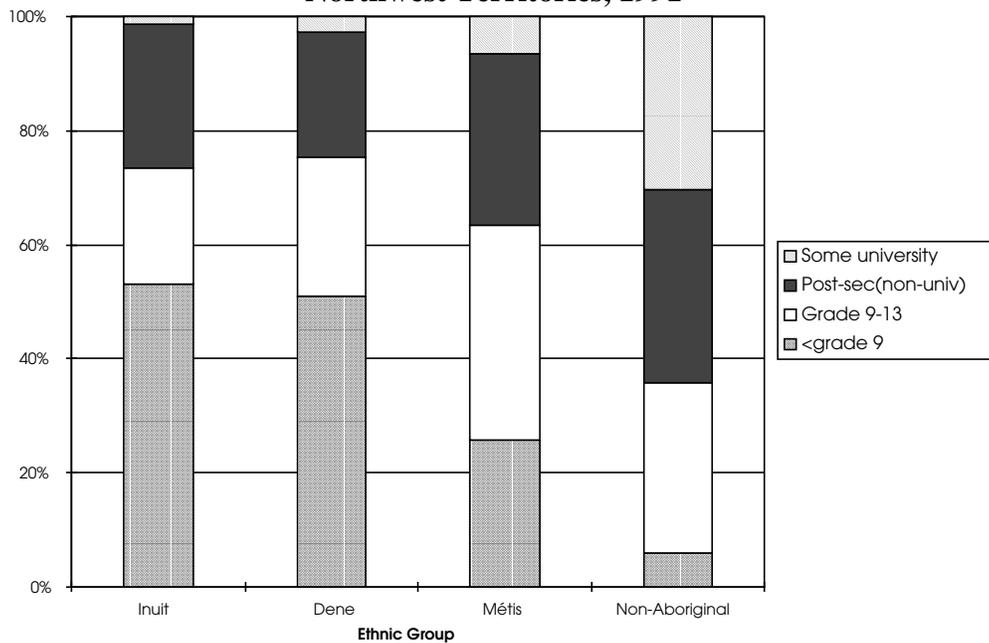
An important measure of social well-being is the prevalence of crime in a community. Criminal justice and law enforcement statistics are problematic because they depend on crimes being reported and investigated by police. Criminal offenses can be classified as

Exhibit 3-36
Labour Force Indicators by Sex and Ethnic Group
Northwest Territories, 1991



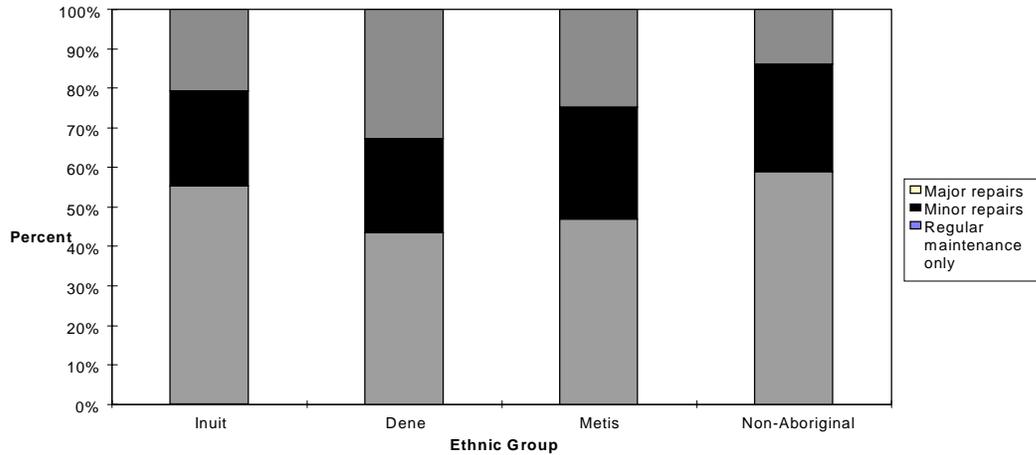
Source: Statistics Canada 1995

Exhibit 3-37
Highest Level of Education by Ethnic Group (Aged 15+)
Northwest Territories, 1991



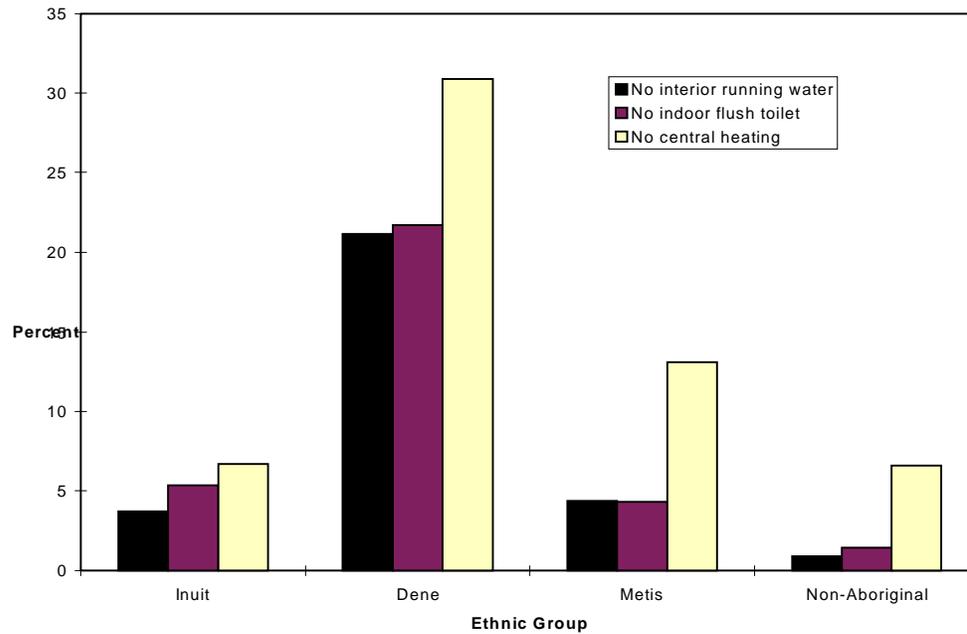
Source: Statistics Canada 1995

Exhibit 3-38
Housing in Need of Repairs by Ethnic Group
Northwest Territories, 1991



Source: Statistics Canada 1995

Exhibit 3-39
Housing Quality Indicators by Ethnic Group
Northwest Territories, 1992



Source: NWT Housing Corporation 1992

criminal code offenses — violence, property, and other, and as violations of federal statutes, Territorial statutes, and municipal by-laws. The Canadian Centre for Justice Statistics uses the "uniform crime reporting" system, to which the RCMP in the NWT and the Bureau of Statistics subscribe. The most meaningful indicator of criminal activity is the number and rate of "actual offenses," which comprise those reported to police, solved and cleared by charge; those not cleared by charge by police discretion or other criteria; and those reported but not solved. Exhibit 3–40, compares the rate of actual offenses in the NWT and Canada, indicating a consistently higher level in the former, but a decline in the rate of offenses in the NWT in more recent years. Exhibit 3–41, shows the distribution police reported crimes by type of offenses. It shows that the total number of actual offenses leveled off in the early 1990s and declined slightly in 1994 and 1995.

Cultural Factors

Culture affects health in many different ways. Among traditional cultures, there are many examples of how cultural beliefs and practices relating to diet, child care practices, religious rituals, etc., expose people to, or protect them from, diseases and injuries. In populations undergoing cultural change, health becomes affected when there is discrepancy between modern and traditional values. Conflicts at the cultural level can reinforce individual vulnerability and provoke disease among those already susceptible.

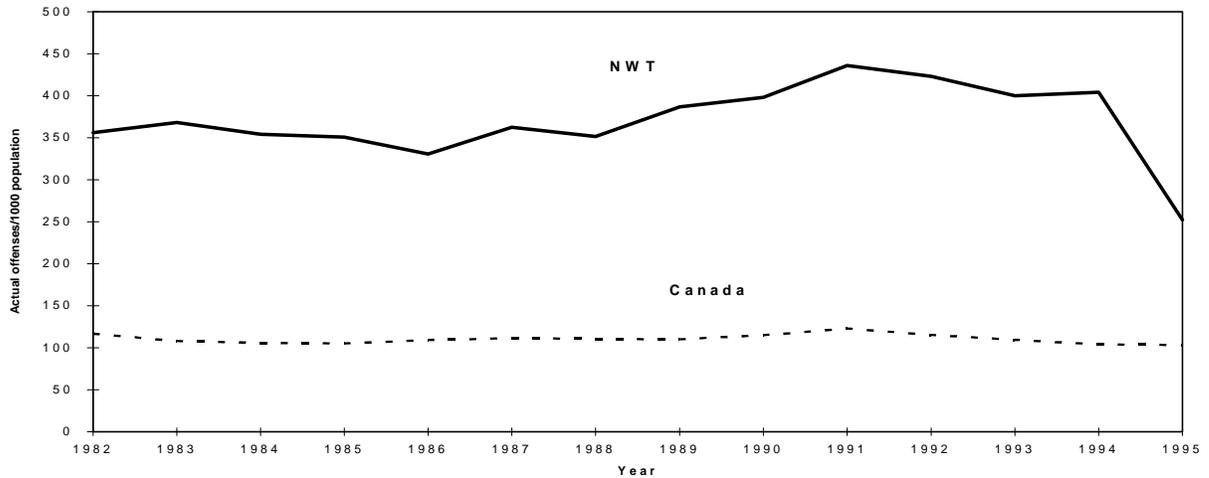
When groups of people belonging to different cultures come into contact, one or both groups may undergo cultural change, a process often referred to as acculturation. This is particularly acute in the case of traditional cultures coming into contact with modern cosmopolitan culture, the experience of the Inuit and Dene in the NWT being a prime example. In response to the stresses of "acculturation," individuals and groups may develop coping strategies, building on their cultural repertoire. These stresses may be so strong, however, that the protection of traditional culture can be overcome.

The degree to which cultural identity has been retained by an individual or group during the process of cultural change can be measured in terms of variables such as proficiency in the Aboriginal language, participation in traditional cultural activities, and the consumption of foods "from the land."

Among the Inuit in Canada, the Inuit language Inuktitut is very viable and strong. Indeed, it is only one of a handful of Aboriginal languages in Canada that are not in

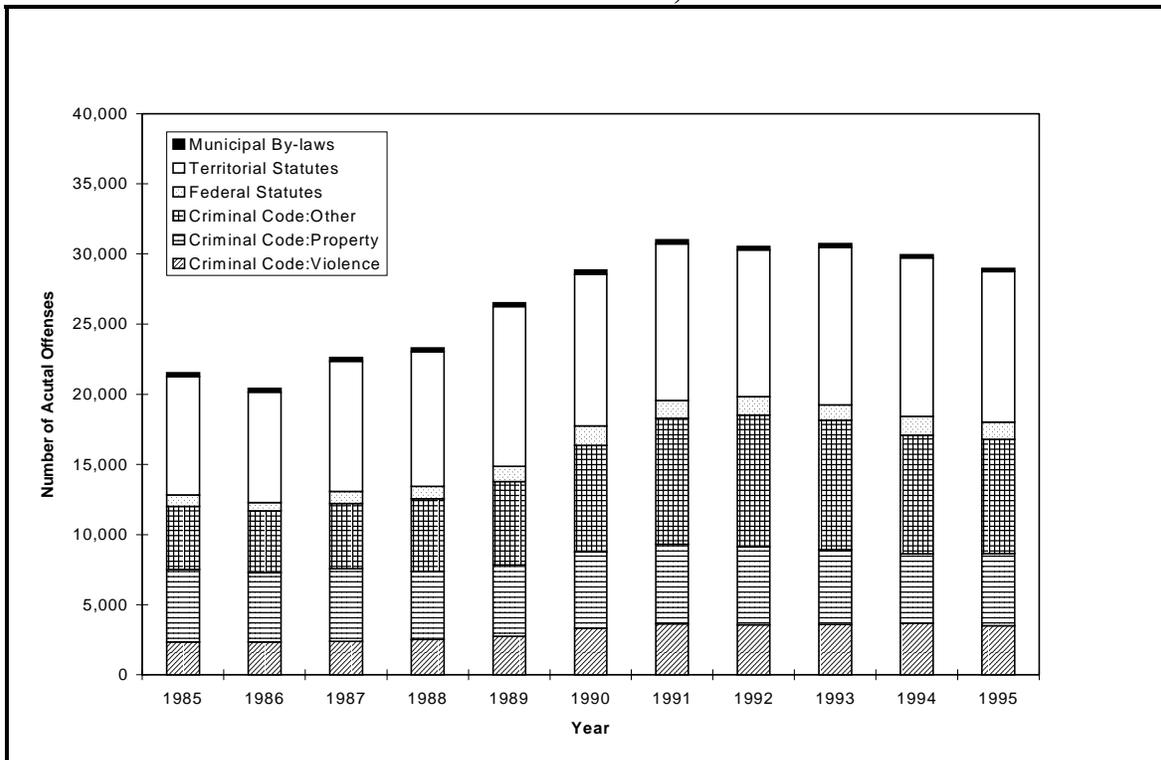
danger of becoming extinct. According to the 1991 Census (Statistics Canada 1995), 67% of

Exhibit 3-40
Police Reported Crimes
Canada and Northwest Territories, 1982-95



Source: NWT Bureau of Statistics 1996

Exhibit 3-41
Police Reported Crimes by Type of Offense
Northwest Territories, 1985-95



Source: NWT Bureau of Statistics 1996

NWT Inuit used Inuktitut at home, compared to 26% who used English. A further 6% reported using both English and Inuktitut at home. The proportion using an Aboriginal language at home was much lower among the Dene (35%) and the Métis (5%) (Exhibit 3-42).

According to the *Aboriginal Peoples Survey* of 1991 (Statistics Canada 1993), over 75% of Inuit and Dene in the NWT reported that they participated in traditional activities.

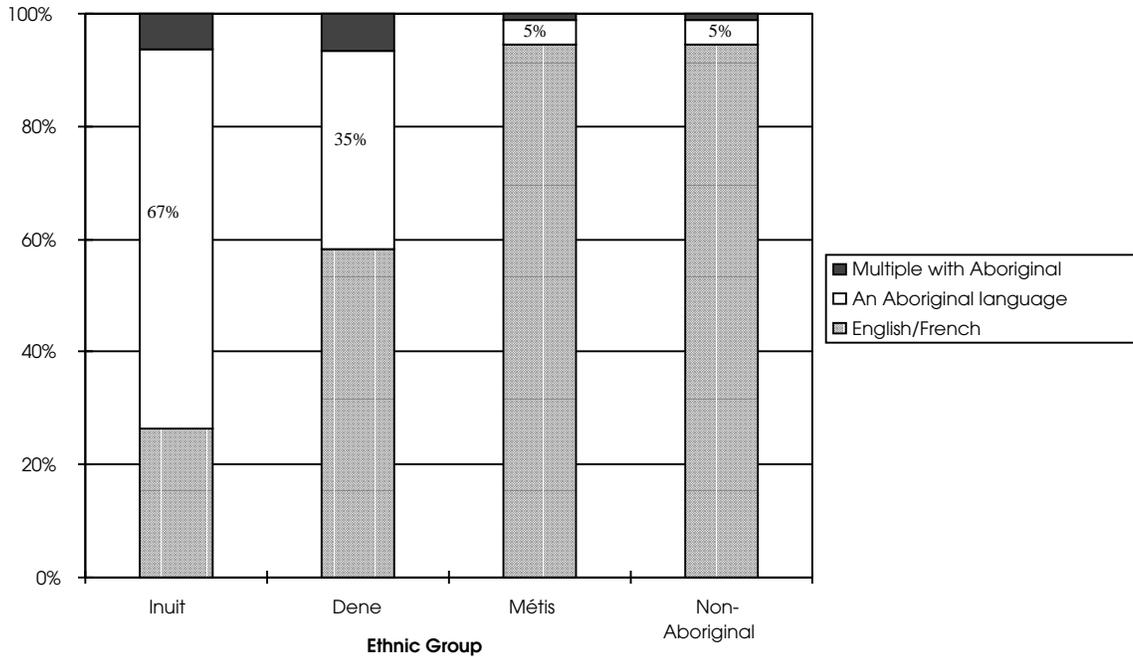
Of all the Aboriginal groups in Canada, the Inuit are still very much involved in the traditional pursuits of hunting and fishing to obtain foods from the land and the sea. According to the *Aboriginal Peoples Survey*, 27% claimed to have obtained all their meat and fish from hunting/fishing, another 28% did it most of the time, 15% half of the time, and 24% some times. Only 7% did not obtain any such foods. The high cost of imported foods and inadequate income from employment and social assistance mean that the nutritional value of country foods cannot easily be substituted and compensated in full. Subsistence and living off the land, besides the immediate nutritional benefits, promotes physical activity and enhances spiritual health.

Impact of Socioeconomic Factors and Housing on Health Status & Health Care Use

The association of some of the socioeconomic indicators with self-reported health status can be demonstrated using data from the *Aboriginal Peoples Survey*. Among Canadian Inuit, the proportion of respondents reporting excellent/very good health increases with the level of education. Those in the highest income category are also more likely to report excellent health than those in lower income categories (Exhibit 3-43).

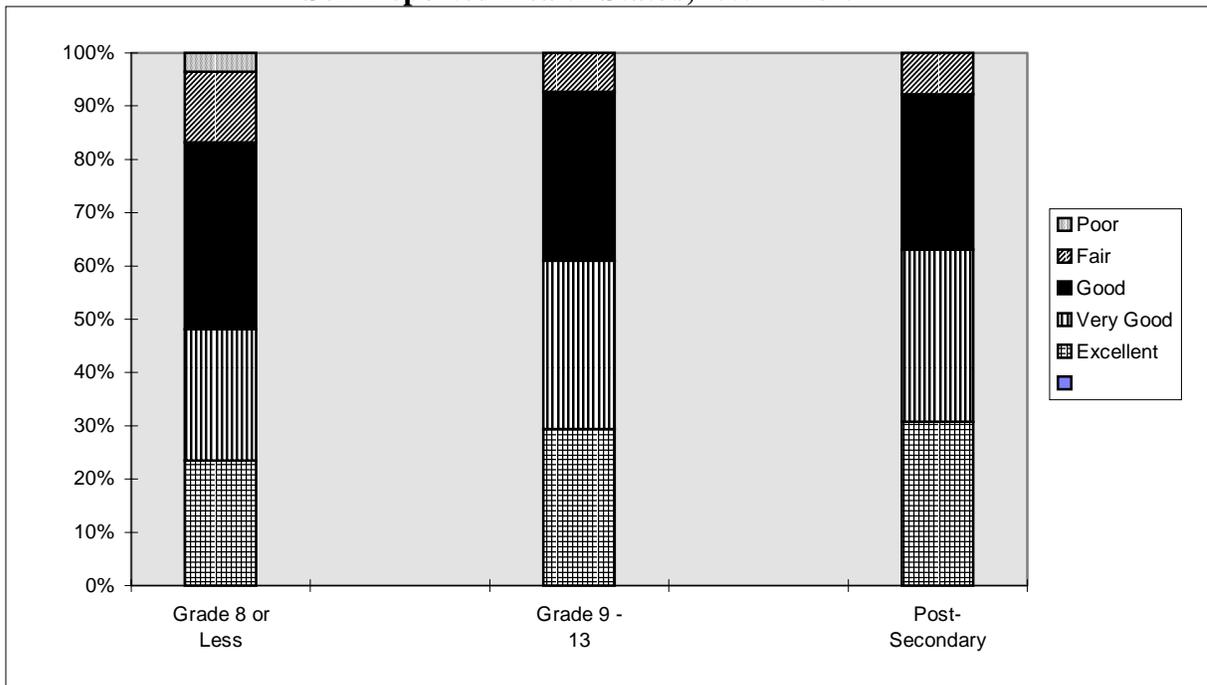
In an ecological study of 49 Inuit and Dene communities in the NWT, based on community-level data from the 1992 NWT Housing Survey and routinely reported health and social service agency data, Young and Mollins (1996) found a relationship between most socioeconomic indicators and the rate of health centre visits, e.g., those with lower incomes are likely to have a higher number of health centre visits. The strongest relationship was between housing and socioeconomic indicators.

Exhibit 3-42
Language Used at Home by Ethnic Group
Northwest Territories, 1991



Source: Statistics Canada 1995

Exhibit 3-43
Self-Reported Health Status, NWT Inuit



Source: Special Tabulation from Unpublished Data of the Aboriginal Peoples Survey, 1991

Summary

The epidemiological data for the NWT as whole suggest a growing and significant future need in the area of suicide, chronic obstructive lung disease and lung cancer. The rates of these conditions tend to be higher in the eastern regions (Kitikmeot, Keewatin and Baffin) than in the western regions (Inuvik and Mackenzie). The eastern regions also tend to have higher rates of some communicable diseases and low birth weight. These outcomes are largely influenced by social and environmental factors, as well as lifestyle behaviours such as tobacco use.

As the Ministries for the two new Territories (in 1999) and the each of the Integrated Health and Social Service Authorities (IHSSAs) develop their own shared mission and bring focus on their population's unique health and social service needs, these data will be particularly relevant. These data serve as outcomes for which the Ministries and the IHSSAs will be accountable. They drive the need for vertical integration, for strategic alliances among providers of health and social services, and for increased focus on health promotion and illness prevention. Clearly, effective measures to reduce the risk of suicide and to prevent tobacco use, particularly among the youth, are the most strategic foci for improving the populations' health.

Chapter 4

The Social Services System

Child abuse and neglect, addictions, mental health, family violence, sexual abuse and other crimes have complex origins and are inextricably interrelated. Rarely does one exist without some aspect of another. Most families in the child welfare system receive services in more than one of these areas. Unfortunately, the outcome of these problems can be tragic. Indeed, a point the previous chapter of this report made is that the outcome all too often is suicide.

As serious as suicide is in and of itself, it also has far reaching impact on the community, particularly in that the victim is frequently a young person. There is a contagion effect to suicide. One suicide can increase the risk of others in the victim's family or community. As guilt and shame surround the event, the impact can have inter-generational effects. Communities can remain in grief and in post traumatic stress for many years, contributing further to their breakdown, and that of their families.

Alcohol abuse is frequently a contributor in this context. Further, when alcohol is consumed by pregnant women the risk of foetal alcohol syndrome (FAS) is increased. Indeed, the previous chapter pointed out that the prevalence of FAS in school-aged children is high in the NWT. Obviously this impacts educational outcomes. The high prevalence of smoking in the NWT (NWT Bureau of Statistics, 1996. *The Northwest Territories Alcohol and Drug Survey*, Yellowknife, NWT.) contributes to low birth weight, which in turn carries risks for neuro-developmental problems and low academic achievement. Low educational levels can result in high unemployment and economic disadvantage, leading to low self-esteem and increased likelihood of substance abuse, sexual abuse and child abuse. And then there is an historical context which is particularly painful for aboriginal people in the NWT - a history of relocation and residential schools resulting in present-day parents who did not have past-day role models. Even as one writes these points the heart is wrenched and question arises, "How can we break this cycle?"

Before responding to this question, this chapter examines the current social services system in the NWT, and then details some strategies pursuant to a vision for the future - a vision of

vibrant communities, of supportive and nurturing families, with healthy and well-adjusted parents and children.

The Current Social Services System

To the extent that available administrative data reflect trends in child abuse and neglect, there is no suggestion that the problem is declining. Exhibit 4-1 provides the number of children in care in the NWT between the calendar year 1982 and the fiscal year 1995/96. A decline is apparent through the early to mid 1980s, but an increase since. This recent incline does not necessarily result from an increase in abuse and neglect. Other explanations could include an increase in the child population (though this is somewhat inconsistent with the earlier decline), an increased awareness of abuse and its effects on the family, increased reporting, and more children coming into care for mental health treatment or respite care as opposed to need for protection. Nevertheless, as Exhibit 4-2 indicates, in some regions of the NWT a significant proportion of child welfare investigations actually result in apprehension (i.e., taken into care). In the Inuvik Region, this proportion was 33.7%, or about one in three. For the entire NWT, however, the proportion was about 15%.

Whatever the reason for recent trends, current expenditures for family support and child protection services are up 31% over the past several years (Exhibit 4-3). Thus, in the present environment of contracting budgets, the sustainability of the current approach to child welfare is in question; and sustainability is one of the guiding principles of the current strategic plan, as mentioned in Chapter 1 of this report.

Existing Programs:

There are three types of programs currently administered by the Department of Health and Social Services that deal with social and mental health issues, directly or indirectly: 1) The Community Social Services Workers (CSSWs), 2) an array of problem-specific programs such as for suicide, family violence, addictions, sexual abuse, mental health, psychological and psychiatric services, and 3) medical and health-related personnel located in the community health centres.

Funds for the federal Brighter Futures/Building Healthy Communities programs are targeted at general categories of mental health and child development needs. These funds are administered

Exhibit 4-1
Number of Children in Care by Year
Northwest Territories, 1982 - 1995/96

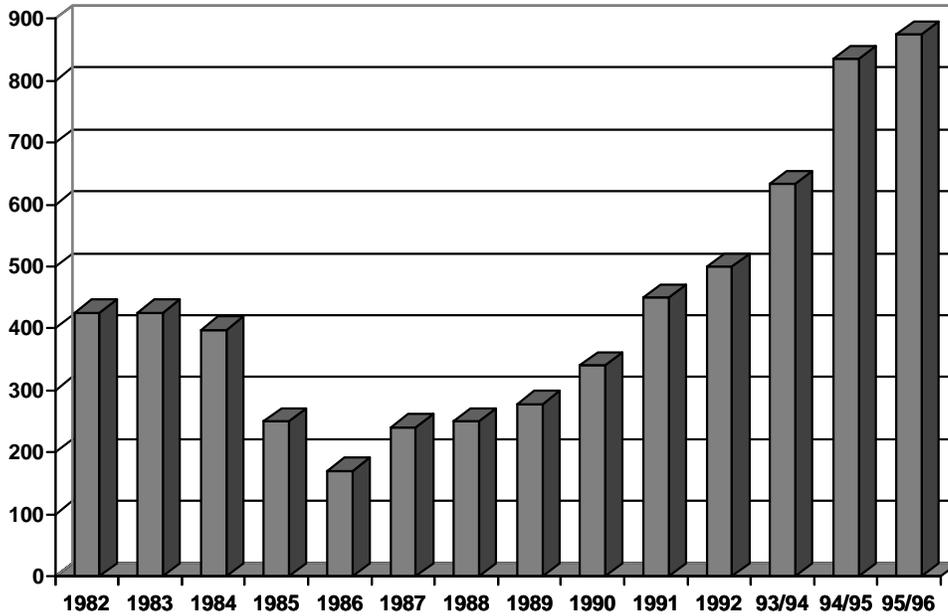


Exhibit 4-3
Child Welfare Information
Northwest Territories, 1995/96

Region	Investigations (# of children)	Apprehensions	
		Number of Children	% of Investigations
Baffin	332	61	18.37%
Yellowknife	745	85	11.41%
Inuvik	190	64	33.68%
Fort Smith	255	25	9.80%
Fort Simpson	125	21	16.80%
Keewatin	144	12	8.33%
Kitikmeot	47	9	19.15%
Total	1838	277	15.07%

Exhibit 4-3
Family Support and Child Protection Services Expenditures
Northwest Territories, 1991/92 to 1995/96

	1991/92	1992/93	1993/94	1994/95	1995/96
Group Homes					
Group Homes	\$1,708,272	\$1,539,212	\$1,475,962	\$1,994,461	\$1,427,406
Other Child Care Ins	2,405,330	2,343,972	2,203,048	2,231,148	1,921,433
Total	\$4,113,602	\$3,883,184	\$3,679,010	\$4,225,609	\$3,348,839
Foster Care					
Baffin	\$282,553	\$472,889	\$488,061	\$471,209	\$297,611
Fort Simpson	205,044	246,998	149,705	266,465	231,332
Fort Smith	121,651	221,164	332,567	380,012	365,644
Inuvik	355,932	344,062	311,174	586,676	724,574
Keewatin	164,345	200,090	291,560	201,081	185,574
Kitikmeot	114,517	95,981	174,838	221,100	195,447
Rae	105,577	98,653	221,310	465,278	369,101
Yellowknife (Headq	1,011,397	1,083,921	27,198	0	0
Yellowknife (Area Office)			1,338,063	1,721,299	1,754,149
Subtotal	\$2,361,016	\$2,763,758	\$3,334,476	\$4,313,120	\$4,123,432
Town of Iqaluit	328,974	452,986	491,031	455,037	
Total	\$2,689,990	\$3,216,744	\$3,825,507	\$4,768,157	\$4,123,432
<i>Increase in costs over 1991/92</i>					53%
Residential Care					
Insitutional Care (Headquarters)		\$491,885	\$764,610	\$1,489,354	\$1,888,665
TOTAL	\$15,968,200	\$17,455,499	\$19,108,120	\$23,790,006	\$20,956,640
<i>Increase in costs over 1991/92</i>					31%

by the Department but are under community control. Considerable flexibility surrounds the interpretation of how these needs can be addressed. One community, for example, addresses primary prevention needs by funding cultural activities for youth and traditional sewing classes for women from these programs. Generally, however, it was not known how these funds are being utilised.

A number of other territorial departments provide services that overlap with or are closely related to the programs administered by the Department of Health and Social Services. These include the education sector, the RCMP, and the justice committees. Thus, intersectoral collaboration should be a component of the integrated health and social services system.

The Community Social Services Workers and their Role:

The CSSWs serve as probation and child welfare officers. They have the sole responsibility for child welfare decisions and, until recently, have also had responsibility for social assistance. The CSSWs hold extraordinary legal authority and personal influence including the authority to take children from their parents without consent.

There are about 80 CSSWs in the current system. Most are aboriginal persons working in their own communities. Frequently, therefore, the social services workers knows their clients personally, or is related by blood or marriage. While knowledge of the community and culture is important, there are implications of this authority. Reports were heard of CSSWs being shot at, assaulted or shunned by the community and by friends.

The formal schooling level for the current social service workers varies from grade 10 to a masters' degree in social work. They must be accredited as child welfare workers before conducting child welfare investigations through a two day course offered by the Department. For some, this course is the only formal training they have received for this demanding job. However, there are 12 supervisors holding academic qualifications ranging from a college diploma to a doctorate in community mental health. While some social workers receive little or no continuing formal training, others receive much more. Due to costs, this in-service training is generally not easily accessible.

The length of experience ranges from 2 to 15 years. Many social service workers have been in the NWT for a number of years and some have related experience in developing countries. A number have married into the aboriginal community and are fluent in Inuktituk.

Concern was expressed about the inability of the social service workers to work with families in such a way as to prevent child abuse and neglect. One reason cited was being too busy with probation responsibilities and associated court work. In addition, in some instances the child welfare role was not perceived as including prevention-oriented activity.

There are opportunities for medical and nursing staff to assist in the early identification and resolution of social services issues (i.e., secondary prevention). Nursing and medical staff are often the first point of contact of a neglected child and have access to homes because of their public health roles. However, working relationships between nursing staff and social services staff range from positive and constructive on one hand to outright hostility on the other. In the absence of systematic structures to facilitate working together, a unified, holistic approach to service delivery is less likely to occur, thereby confusing clients and increasing the possibility of high risk persons falling through the cracks.

Social services staff reported feeling devalued by the current move to an integrated system. There were concerns that a medical person from outside the community will assume responsibility for supervision of the social services workers. This was a source of anxiety for some. They also expressed anger and frustration about the lack of basic resources such as vehicles or fax machines. One described being weary of being used as "travel agents", called only when a person needs transportation to a shelter or a foster home. A decrease in the workloads, the sharing of duties, and the provision of more in-home protection services - these were some of the desired outcomes of co-ordinated services that were expressed.

One last observation on the current system is noteworthy. Some of the older permanent wards (children) in the care of the Department of Health and Social Services experienced difficulty in moving toward adulthood and independence. Many suffer foetal alcohol effects (FAE) and need life skills and group living. However, there are no such services for older permanent wards. In addition, some need treatment facilities. There are two such facilities in the western part of the NWT. However, there are no culturally-appropriate treatment facilities for Inuit children. Many of these children are sent south for treatment, reducing the

chance of family involvement in treatment. Without the active involvement and support of the family, the benefits of treatment are limited.

Child Welfare Reform

The proposed child welfare legislation has passed second reading. The positive directions of this new legislation are as follows:

- mandating prevention services (Sections 5 and 6);
- increased community responsibilities through agreements for the establishment of Child and Family Services Committees that would assist social workers with decisions surrounding child protection matters;
- extension of services to children between the age of 16 and 19;
- the emphasis on parental responsibility;
- the allowance for community standards;
- limits on the time for temporary wardship and time to appear before a court.

While these are positive elements of the legislation, there are also potential problems that can be identified. In the proposed legislation, the Department retains administrative control of child welfare. Through the child protection worker (CSSW), the Department will continue to hold authority that supersedes that of the community if the Child and Family Services Committees do not fulfil their obligations. There are inherent difficulties with this approach in light of Land Claims and self-government initiatives. The constitutional jurisdictional position of child welfare for Status Indians and the Inuit is important to consider. Aboriginal groups in other jurisdictions have consistently argued that they have never relinquished their inherent right over child welfare.

The removal of the possibility of forming Children's Aid Societies eliminates the potential for full community control. While past attempts to establish Children's Aid Societies have

not been successful in the NWT, Land Claims, self-government negotiations and the creation of Nunavut may make this type of governance viable for the future. Its retention in the legislation would leave the door open for the new self-governing structures.

The new Act is written as if child protection matters only exist in isolated communities. It overlooks the reality that child abuse and neglect affect non-aboriginal and urban people. In addition, prescribing the time-frame within which a child protection matter must appear before the court may be academic if court is held only every several months.

Further, the legislation stands out as prescriptive for the removal of children. Section 7(3) contains 16 detailed criteria for judging a child "in need of protection". Strict adherence to the law could result in many more children being brought into the care of a system that, as was mentioned at the outset of this chapter, may not be sustainable in terms of expenditure trends.

Proposed Additions to the Child Welfare Legislation

- Establish a flexible Child and Family Services Committee structure that is not bound to the composition as outlined, would be appropriate to non-native and urban based families, and would allow for more community authority.
- Maintain the provision for a group of private citizens (e.g., a hamlet, municipality or regional Board) to form a Children's Aid Society.
- Incorporate a recognition of the right of Status Indians and the Inuit to develop child welfare agencies that reflect cultural ways of providing family support.

Future Strategies

The project team recommends the strategies listed below for integrating the existing range of social service programs as well as health and social service programs. Such vertical integration is one of the key components of the framework introduced in Chapter 2 of this report. It is also a strategy for meeting the vision articulated earlier in the present chapter - a vision of vibrant communities, nurturing families and well-adjusted children.

1. Remove probation responsibilities from the CSSW

Remove the responsibility for probation and associated court activities from the community social services worker's mandate. It would seem more appropriate to place these functions with Department of Justice officials. This action would free the social services worker to focus not only on child protection activities, but also on forging partnerships to support parents and families.

2. Expand the social services mandate of the CSSW

Child welfare responsibilities should be combined in one position with responsibilities for addictions, suicide, family violence, mental health, etc. This would essentially create a new CSSW position, for which other related workers (e.g., addictions, suicide, etc.) would be eligible after receiving accreditation as child welfare workers. This would expand the complement of CSSWs, each of whom would take on a reduced caseload but a broader spectrum of social service responsibilities. An additional responsibility of this position would be to liaison with other sectors such as Economic Development and Education officials, the RCMP, etc.

This move would constitute a mechanism which integrates child protection services with children's mental health programs and a range of family support services.

3. Integrate CSSWs with health service workers

The CSSW should become an integral member of a team of health and social services workers at the community health centres. With the expanded mandate for an array of social services, and with contacts with other related sectors, the CSSW should be seen as a key partner in the primary care team. Indeed, the CSSW may provide in-services to nurses and physicians regarding the broad social context of primary care services. Ultimately, the result would be that social services would become vertically integrated within the broader context of programs for health and well-being.

4. The community health centres be renamed “Health and Social Services Centres (HSSCs)”

The intent here is to have a name that reflects the broad range of integrated services that are offered at the centre.⁶ This then is the basis for the HSSCs that were shown in Chapter 2 as part of the framework for an integrated health and social services system in the NWT.

⁶ This recommendation may not be applicable to the Fort Smith Health Centre, which is functionally a hospital

Chapter 5

Health Services System

In the previous chapter, the social services component of the health and social services system was discussed, and opportunities for integration across an array of social services with primary health services were identified. In the present chapter, the health services component of the system is the main focus, and opportunities for equity across regions and integration across services ranging from primary through tertiary care are identified. Opportunities for reducing the costs of medical travel will also be examined.

Primary Care

Health Centres

Primary care or "first contact" care is provided through a system of Health Centres located throughout the NWT. The Department operates forty-three Health Centres as shown in Exhibit 5-1. With few exceptions, all Health Centres operate Monday to Friday, nine to five, and have a staff member on call for the remaining hours. Some Health Centres are considering operating an evening shift. Some of the larger Health Centres in the Keewatin Region will be staffing an evening shift in the near future.

The Health Centres are staffed by community health nurses, social services workers, community health aides, mental health workers and others who currently provide most of the primary care in the NWT. Physicians function principally to provide advice and back up to these workers.

In communities that have a resident physician, access to primary care services can be either by direct appointment with the physician or by referral through the nurse. These guidelines depend on the Region, physician or nurse preference. All referrals to medical consultants are arranged through physicians.

The level and quality of care provided in the Health Centres is directly dependent upon the level of preparation and experience of the health and social service professionals who are responsible for providing service. Based on our own observations as well as the comments of health and social service professionals working in the system, there is a

tremendous variation in the skill levels of providers and this affects the level of service in the communities.

The primary care system appears to be relatively cost effective as community health nurses and social service workers are paid substantially less than physicians. However, there is no way of adequately measuring the cost effectiveness of the current system because information related to the current costs and the benefits that occur from these expenditures is not readily available. However, our discussions with representatives of the communities that we visited indicated that there are large number of health and social service needs that are not being met. It is expected that the system of ongoing evaluation proposed in Chapter 7 will provide an opportunity to objectively evaluate the costs of the current primary care system against community benefits (e.g., increased wellness and/or decreased illness).

Concerns have been expressed by the public, health and social service providers and Departmental staff about the tremendous variation that exists within the primary care system. Services that are available in one community are not available in another (e.g., obstetrical services, physician services, nurse practitioners, etc.). There is a need to address this problem.

There is a widely held expectation among the public that they should receive the same level of primary health services to those living in other jurisdictions. The reality is that the level of care is not, and cannot be, equivalent to the range and level of services that are provided in southern jurisdictions because of the number of small communities, the geographic barriers and large travel distances that exist in the NWT.

Family physicians are funded either through global (salary) or fee-for-service arrangements. They provide primary care services in Health Centres as well as in hospital clinics, their own private offices and Hospital Emergency Departments. In addition, many physicians have agreed to visit smaller community Health Centres that do not have their own physician. These physicians provide some level of supervision of the primary care supplied by community nurses.

In many communities, the frequent changes in nursing personnel has lead to unnecessary duplication of services (e.g., repeat testing, examinations, increase travel, etc.) as new practitioners have familiarized themselves with their patients. A successful strategy that reduces the turnover of nurses and physicians is mandatory in order to

greatly improve the quality of services and reduce the increased inherent costs. No doubt, the public perception of services would also improve.

Emergency Services

Emergency care is provided by family physicians in the hospitals and by nursing staff in the Health Centres. This system appears to work well with the exception of those communities who do not have access to physicians or community health nurses. No doubt the limiting factor in the success of emergency care are the problems and challenges of distance and environment.

Staffing

The ability of Health Centres to provide primary care services depends on the staffing complement. Except for a few, very small communities that have a lay dispenser, the minimal staffing level for a Health Centre should be a community health nurse and a clerk interpreter. The level of qualification of the staff is the main factor in determining what level of care is provided in a Health Centre.

At present, there is a wide range of formal education and experience among the nursing staff. The education level of nurses ranges from a two-year diploma program to a masters-level nursing degree. The most important aspect of a nursing service is the level of physical assessment and treatment skills of the staff. Physical assessment courses can range from a few weeks to several years in length and this accounts for some of the differing levels of skill that exist among the nursing staff. At present, by and large, physical assessment education is only offered to new nursing staff, when the budget allows and when programs are offered. As a result, many staff receive only on the job training by existing staff who may not be the most appropriate trainers. Frequently, new nursing staff have to wait for over a year to start a formal training program in physical assessment and treatment, resulting in a compromised level of care.

Nursing recruitment practices differ throughout the Regions. One Region indicated that, rather than leave a position empty, they would fill the position with an agency nurse for a short time, while they attempted to find an appropriate longer term candidate. Another Region indicated they would leave positions vacant rather than fill them with agency nurses. The inability to recruit appropriately qualified nurses is a significant problem for the Health Centres, one that needs to be dealt with expediently.

Recruitment and retention of nursing staff has becoming increasingly difficult with the decreases in net salaries and benefits and the increases in rent and utilities. Whenever nursing salaries were discussed with Departmental staff, reference was frequently made to the sum of the regular and overtime payments (generally in the range of \$80,000 to \$100,000). This is considered to be more than adequate. Although there are many unemployed nurses outside the NWT, the Regions are experiencing considerable difficulty in filling their complements in the appropriately trained individuals.

A basic paycheck will not cover the costs of living in the north. Changes in the overall compensations package has made the financial package less attractive than those currently being offered in other jurisdictions.

All Regions are offering "job share" terms to staff. These positions are usually filled by very experienced NWT nurses who no longer wish to work full time for decreased benefits. For example, nurses are allowed only one vacation travel allowance (VTA) a year and the full costs of relocation after eight years of employment. By taking short term placements, nurses have their way paid in and out of the Territories every three or four months and have the flexibility of taking as much vacation time as they like. Although this is costly to the Department, it guarantees them well trained and experienced staff for the Health Centres, however it is not the most appropriate staffing model.

All Health Centres offer basic nursing care. The ability of the nursing staff to assess and treat patients/clients, as well as their willingness to care for patients/clients at the Health Centres, determines how many patients/clients receive care within the community. Because of the staff shortages, patients are frequently referred to larger centres for primary care. All Health Centres should be capable of providing primary care. If all primary care patients/clients were cared for in the Health Centres, there would be a need to increase the number of nursing staff, to improve the skill levels of nurses and to provide holding/observation beds in these Health Centres. At the same time, it should reduce the travel costs and ultimately improve the quality of care delivered in each community.

Observation Beds

Seriously ill patients/clients may be cared for in the Health Centres overnight. The number of patients/clients who are held in the communities for observation depends on several factors. If staffing levels are low, then seriously ill patients/clients are more

frequently sent out to larger centres whether their medical condition warrants it or not. This is done in order to prevent nursing fatigue and burnout. More patients/clients are held for observation in a Health Centre if a physician is in the settlement and if the nursing staff have a higher level of assessment and treatment skills. If the weather is going to be poor for flying, then patients/clients are frequently sent out rather than held for observation in anticipation of the requirement of secondary or tertiary care. As discussed later in this chapter, medical transportation costs are very high. We believe that there are opportunities to reduce the number of patients/clients who are referred out of the community.

Diagnostic Services

A great deal of time is devoted to taking x-rays and performing laboratory work in the Health Centres. Hiring and training local people to perform this function would significantly reduce the work load on the nursing staff. It would improve the quality of films by utilizing adequately trained individuals functioning in specific roles. It would also positively impact the overall delivery of care within the Health Centres. Some of these initiatives have already been implemented in some of the Regions in the NWT.

Equipment

The Health Centres are generally very well equipped. Defibrillators are only available in communities where there is a physician. There is no telemedicine or internet services currently available in any of the Health Centres. There are very few Health Centres with computers. There are numerous opportunities to improve communications, recordkeeping, productivity and the quality of the work environment, with the use of technology. With the appropriate use of technology, access can be gained to specialized care without the patients leaving their communities. The NWT, with its unique geocultural realities can be a model for the delivery of cost effective high quality health and social services. These opportunities are discussed in Chapter 7 of this report.

Summary

The Health Centres provide a valuable and important service to the communities. In many cases, they are the point of access for all health and social services. It is important that the range of programs and services provided by the Health Centres continue to be expanded. We believe that every community should have access to primary care services through a Health Centre. This requires Health Centres staffed with appropriately trained

nurse practitioners, social service providers and access to primary care physicians and specialists. We believe that well developed Health Centres in the communities, supported by community hospitals in larger centres, could substantially reduce the costs of transporting people out of their communities.

In order to address the issues outlined above, the proposed Integrated Health and Social Services Authority (IHSSAs) should consider the following strategies:

- All communities with more than 1500 population should consider having a resident physician. More physicians in the Regions could decrease the stress and workload on nursing staff by providing assistance with care of seriously ill or injured patients.
- Physicians should be located in twos or threes in larger communities with over 2,000 people. More physicians should be responsible for visits to smaller communities within a defined geographic catchment area.
- All nursing staff should have, at the very least, a one month training program within the first two weeks of arriving at a Health Centre.
- Computers with appropriate programs, including clinical differential diagnoses, should be provided in all Health Centres and staff should be provided with adequate training and support.
- More midwives should be hired in the Health Centres in order to permit the delivery of babies in their own communities.
- Staffing for Health Centres should be based on the health and social service needs of the communities.

These are to be considered merely as guidelines with each IHSSA designing its own staffing models to meet the needs of their Regions.

The implementation Human Resource recommendations outlined in Chapter 6 of this report will also greatly assist in meeting the needs of the Health Centres.

Links with Social Services

The Health Centres also act as referral agencies for those individuals who require social service assistance. Our research has indicated that there are many complex social issues in the communities that result in sexual abuse, assault, violence, addiction, mental illness, suicide and many other health and social problems. With the recent merger of health and social services, there will be greater opportunities for the integration of the health and social services to occur at the Health Centres. However, co-location alone will not achieve the level of integration that is required.

Clients may be referred by the RCMP, drug and alcohol counsellors, ministers, priests or other interest groups. The range of social services available in each Health Centre varies widely with each community visited, depending on the personnel. Staff may include social workers, social service workers, drug and alcohol counsellors or a psychologist. Each has a varied degree of expertise in counselling skills.

Shelters for women and children are being created in the communities. This allows women and children to have continued family support during a family crisis. Some very good programs operate from these shelters, including abused persons support groups, sewing and cooking classes. One community developed a preventative approach to abuse by allowing clients to use the shelter if they feel they are going to be abused, rather than having to wait until after they have been abused.

Most people must leave their communities for detox and addiction treatment only to return and find little in the way of ongoing support services. There is a need to develop more community-based after-care services for patients/clients with addiction problems.

Formal links between health and social services greatly depend on the services available and the personalities of the staff in each agency. In some communities, the two services have been working together along with education and police for many years. In other communities, the two groups hardly know each other's name, let alone work together.

There should be a greater focus on the integration of health and social services staff in the Health Centres. As mentioned in the previous chapter, some formal ways of doing this could include moving probation responsibilities from the community social services work (CSSW), combining several social service responsibilities (e.g. child welfare, addictions, suicide, mental health) into one position (a re-defined CSSW position), and the provision

of in-services or “case rounds” by CSSR to nurses and physicians on the social context of patients/clients. Even changing the name of “Health Centre” to “Health and Social Services Centre” would formalize the integration. Similarly, the “Nurse-in-charge” positions should be replaced by “Local Team Managers”, and should be open to non-nursing staff as well as nursing and other staff. In addition, a more comprehensive, community-based multidisciplinary delivery model should be established that, as stated by the Department’s discussion paper on Human Resource Issues in Health Reform (October, 1996), “avoids overlap and duplications of effort, makes maximum use of locally available resources and can respond quickly to changing circumstances”. Pursuant to this, we recommend that IHSSAs restructure service delivery along program rather than professional lines.

Community Health

The Department of Health and Social Services offers a broad range of community-based non-institutional services as shown in Exhibit 5-2. This list was developed by the Department in a recently released Discussion Paper, "Core Services of the Ministry of Health and Social Services," November 5, 1996. We support the overall direction proposed in this document and offer the following additional areas for consideration.

Prevention and Public Health

The public health programs provided by the Department have changed very little over the past twenty years. Core programs include pre-natal and post-natal support, well-baby and child clinics that include immunization, STDs, TB monitoring and screening, and school hearing and vision testing. New programs, such as HIV testing and Needle Exchange, parenting, and smoking cessation, are either non-existent or poorly attended. Comments from staff regarding the anonymous HIV testing program is that the protocol is far too cumbersome. In small communities, there is no "anonymous" testing as the staff know all of their patients/clients by name. The needle exchange program is only offered in Yellowknife and has a fluctuating attendance.

In those Health Centres that do not have a separate dedicated public health staff, nursing staff generally report that the acute care needs of patients/clients consume the major part of their time. As a result, it is difficult, if not impossible, to plan and present preventative programs unless they focus on acute care concerns such as a TB or Hepatitis outbreak.

The Department has adopted a major strategy to devote more time, funding and resources to illness prevention and public education. This is an important strategy that should be maintained by the IHSSAs. Further, in view of the high rates of mortality due to chronic

Exhibit 5-2

Draft Core Services for Health and Social Services

Prevention, Promotion, Protection Core Services	Diagnostic, Treatment, Rehabilitation Core Services
<p>Healthy Territories</p> <ul style="list-style-type: none"> wellness promotion monitoring/surveillance enforcement 	<p>Diagnostic</p> <p>Emergency Care</p>
<p>Healthy Community</p> <ul style="list-style-type: none"> screening early intervention wellness promotion disease control environmental health 	<p>Primary, Secondary and Tertiary Services</p> <ul style="list-style-type: none"> acute care chronic care rehabilitation services protection post-mortem
<p>Healthy Family</p> <ul style="list-style-type: none"> parenting healthy lifestyle promotion counselling intervention 	
<p>Healthy Elders</p> <ul style="list-style-type: none"> guardianship screening disease control 	
<p>Healthy Adolescents</p> <ul style="list-style-type: none"> child protection screening disease control 	
<p>Healthy Children</p> <ul style="list-style-type: none"> maternal care (pre-, peri-, post-natal) child protection screening disease control 	

Source: Discussion Paper, "Core Services of the Ministry of Health and Social Services,"

obstructive lung disease and lung cancer noted in Chapter 3 of this report, we recommend that these resources should be focused primarily on tobacco use prevention. To reiterate because of its importance, **we recommend that the main public health strategy of the future IHSSAs should be tobacco use prevention.**

Alternative Health Care Workers

More locally trained staff are required in all health and social services programs. These programs could be developed for distant learning and operated as an adult education or high school program. With adequate training and support, many health promotion, preventative and screening activities can be safely and effectively delegated to locally available workers. At present, however, very few local students are interested in a health care career. By creating more entry-level or mentorship positions in the Health Centres, such as clinic aides or clerical assistant positions, there may be more interest shown by Aboriginal people in entering the health and social services field.

Similarly, business administration programs in health care should be developed to encourage Aboriginal people to play a more significant role in the management of the health and social services system.

If the larger Health Centres were equipped to care for primary care patients/clients from their own and smaller adjacent communities, then newly graduated Aboriginal nurses would be able to obtain their clinical experience closer to home. This might increase the number of native graduates from the smaller communities and could offer employment to graduates of the CNA program.

This could also be part of an overall employment and job creation program for the NWT that would benefit the patients/clients, the student and the community.

Secondary Care

Secondary care services are provided in the six regional hospitals in Inuvik, Iqaluit, Hay River, Fort Simpson, Fort Smith and Stanton. The level of secondary care is different in each facility depending upon the skill of physicians. Inuvik provides some surgical services and is supported by secondary care ambulatory services provided by medical specialists from Stanton. Fort Simpson, Fort Smith and Hay River provide secondary care services based on the ability of the family physicians to admit patients to hospital for

more complex care. Patients are frequently referred to Stanton for secondary obstetrical, pediatric, surgical and internal medicine care. Baffin Regional Hospital provides secondary level surgical and medical care through specialists provided from McGill University. Visiting specialists in pediatrics, obstetrics, and psychiatry are also available when required. The Northern Manitoba Unit in Winnipeg provides both primary and specialist services for the Keewatin Region.

At present, there is no overall plan for the delivery of secondary care within the NWT that has been agreed to among the Regional Boards. There is a great deal of tension between the physicians in Inuvik and those at the Stanton Hospital about how secondary care services should be provided. There should be some resolution of this issue prior to planning for the replacement of the Inuvik Regional Hospital. A great deal of secondary care continues to be delivered to NWT residents in the provinces. Unfortunately, there is insufficient accurate information on the number of patients, types of diagnoses or costs of providing services in these locations. Without accurate and reliable information about the number of patients referred outside the Territories, it is difficult to develop realistic strategies to address this "perceived" problem.

A moderate amount of secondary care that could be delivered in the NWT is supplied through contracts with Alberta (Edmonton and Calgary), Manitoba (Churchill and Winnipeg) and Quebec/Ontario (McGill and Ottawa). The referral patterns are intrinsically linked to the air travel routes. There is likely to be great resistance to any initiatives to alter the current practice.

Virtually all transfers on Baffin go through Iqaluit. The secondary care delivered is limited to the services available there, comprising of general surgery and visiting consultants in other secondary care services. In addition, the comfort level of individual General Surgeons due to equipment, personal experience, etc., does appear to have a substantive driving effect, indicating the need for recruitment of a cadre of General Surgeons with the ability to give secondary surgical care of a broad range in this remote setting.

Interestingly, some secondary care is delivered via a pediatric resident in Iqaluit who is directly supervised by local physicians and indirectly supervised by Teaching Staff physicians at McGill. Other similar arrangements, in areas such as psychiatry, surgery and obstetrics, with teaching centres, such as McGill and Ottawa in the East and Edmonton and Calgary in the West, should be encouraged. Universities are beginning to

appreciate the significant education value in exposing residents-in-training to the underserved areas. For the NWT, there could be the potential benefit of recruiting some of these physicians upon the completion of their training. While this has not occurred, as yet, in the NWT, this has been the experience in other jurisdictions in Canada.

The referral system to the Stanton Hospital was not felt by the Inuvik physicians to be optimal. Though this issue is examined in the Stronell-Tyson report on specialist services at the Stanton Yellowknife Hospital, there is no detail contained therein. We feel that the sub-optimal relationship between Stanton and Inuvik vis-à-vis specialist referral is leading to avoidable costs and inconvenience to patients and practitioners alike.

Patients referred to a consultant physician at Stanton from Inuvik are transported there by air. Once at Stanton, the patient is assessed by a GP who admits the patient. The perception of the Inuvik physicians is that this physician adds little to the care process, and that the interpositioning of the GP may delay or avert the consultant's assessment of the patient, which had been the reason why transfer was initiated. The result of the foregoing is that the usual route of referral from Inuvik is to Edmonton (in about two-thirds of cases), where the patient will be assessed directly by the consulting service and admitted, if appropriate. It should, however, be recognized that the services that are often required by many of these transferred patients are unavailable at Stanton (e.g., neurosciences, Level 3 nursery care, etc.).

It appears that part of the problem relates to different expectations and practice patterns between the two groups of physicians. Similar problems occur in other jurisdictions and frequently the problems are referred to a qualified medical administrator for resolution. We suggest that the Stanton Board should give consideration to the hiring of a part-time Medical Director to address this and similar issues.

In summary, a systematic approach to secondary care in the NWT has not yet been delineated. Stanton Yellowknife Hospital has the capability to provide secondary care to most, but not all, patients in the NWT. In order to provide the full range of secondary care, we believe that recruitment of more obstetricians, pediatricians and general internists will be required to eliminate periods where consultants in these specialties are unavailable for emergency consultation. Until this can be accomplished, rationalization of referrals to the south for secondary care should occur based on the shortest distance of travel and competitive pricing. Later in this chapter, we provide some guidelines for the provision of secondary care services

In Chapter 8 of this report, we have recommended the following:

- The replacement of the Inuvik and Iqaluit Hospitals
- Construction of small expanded health centres in Cambridge Bay and Rankin Inlet
- Community needs assessments prior to redevelopment of the hospitals in Hay River, Fort Smith and Fort Simpson
- Further clarification of the role of the Stanton Hospital.

These initiatives will result in a definition of the level of primary and secondary care to be provided in each Region. They will also clarify referral practices and patterns to secondary care and tertiary level facilities.

Tertiary Care

Whatever the enhancements made to secondary care for the population of 65,000, with frequent tourists in a large and environmentally challenging situation, there will still be a need for tertiary care that can only be supplied outside the NWT. This 1-3% of total health care is probably not reducible given the expectations of Canadians and visitors to this country. Whether better block rates for this tertiary care activity is possible is dependent on the amounts of revenue and cost this activity would attract to tertiary care centres. Certainly net new revenue and the social and educational values of serving the North should make the servicing of tertiary care needs attractive to most university centres.

In general, the provision of tertiary level services by Edmonton, Winnipeg and Montreal based physicians appears to function well. Although there is a need to improve working relationships, reduce the costs of services and improve the overall contractual arrangements, the basic system meets the needs of the NWT. On this basis, we suggest that tertiary level medical services should continue to be provided in Edmonton, Winnipeg and Montreal (or Ottawa). The contractual arrangements with the teaching hospitals in these communities should be reviewed by each IHSSA and revised to meet the needs for support for their health care professions. These agreements should include continuing education programs, diagnostic services, telemedicine, telehealth, access to health promotion services and access to education programs. The IHSSA officials should also use these linkages to continue to attract medical students who may be interested in relocating to Nunavut and the Western Territories in the future.

Region-Specific Observations

This section documents observations on the health services that the proposed IHSSAs may wish to take into consideration. These IHSSA-specific observations are grouped by the post-Division east/west structure.

Western IHSSAs

The Inuvik IHSSA:

The Inuvik Region has approximately 9,500 people who are located in Inuvik and the adjacent communities. There is a well developed relationship between the Health Centres throughout the Region and the Hospital in Inuvik. There is a need to build on these relationships in order to address the unique needs of the individual communities serviced by the Health Centres. There is also a need to ensure that the services that are located in Inuvik, such as physician services, diagnostic services, social services, etc., are readily available to the local communities through the Health Centres. In planning for the replacement of the Inuvik Regional Hospital, there is a need to ensure that the current needs for acute and long term care services are addressed and that the level of secondary care services that should be provided in the Region is agreed upon. In particular, there is a need to identify the level of surgical and internal medical services that should be provided. The level of obstetrical services that should be provided in the Health Centres, the Regional Hospital and at the Stanton Hospital should be clarified. The use of midwives to enhance the level of obstetrical services at the Health Centres should be considered. The recruitment of physicians and other health care professionals will be an ongoing challenge for the Inuvik IHSSA. We believe that the development of an integrated delivery system that links the Health Centres and the Regional Hospital with secondary backup from Stanton medical specialists would be an attractive work environment for these professionals. The redevelopment of the Hospital (as discussed in Chapter 8 of this Report) will greatly assist in the development of this integrated system.

The Fort Simpson IHSSA:

Fort Simpson, with a population of 2,300, currently has a reasonable range of primary care services available locally. The current needs assessment should identify any unmet

needs that should be addressed. The Hospital has the potential for many uses and the long term care facility in this community is an excellent facility that meets the needs of a select group of long term care residents. Further integration of these services is required to make the best use of existing infrastructure. Needs-based planning with data from the Ministry-maintained information system and with community input processes, should determine the range of services that should be provided in this integrated primary care system. Secondary care services should continue to be provided in Yellowknife as transportation services and travel distances allow ready access to services in Yellowknife.

The Hay River IHSSA:

The Region of Hay River, with a population of 5,600, has an excellent primary and secondary level hospital, an excellent long term care facility and many apparent unmet community health and social service needs. There is the potential to develop a fully integrated health and social service system in this Region that builds upon existing resources including physical facilities, a group of family physicians and other health and social service providers in the community. All primary care services should be provided locally. There is the potential that some selected secondary care services could be provided depending upon the needs of the community and the cost effectiveness of these programs. Ready access to secondary care services in Yellowknife must be considered when considering these services.

The Fort Smith IHSSA:

The Region of Fort Smith, with a population of 2,600, is similar to other Mackenzie Region communities in that it has a well developed hospital, an excellent long term care facility and an extensive range of services. The ongoing provision of physicians in this community will continue to challenge the Board. However, the development of an integrated system of primary care services with selected secondary care services should be attractive to physicians as well as midwives, nurse practitioners and other health and social service professionals. Planning for the range of primary care services that should be provided in this community should be based on a comprehensive assessment of community needs.

The Stanton Regional IHSSA:

Yellowknife, with a population of approximately 20,500, has the most comprehensive range of services. The range of primary and secondary care services is the envy of many communities throughout Canada. The unique blend of family physicians and secondary level medical specialists is a model that should be considered in other jurisdictions. The unique features of this model include the payment of medical specialists on a salary basis and the focus of these specialists on secondary care. It appears that very few of these physicians provide primary care. The family physicians in Yellowknife appear to support this model. Consideration should be given to the recruitment of midwives, nurse practitioners and paramedics. The introduction of alternatives to a fee-for-service payment plan for family physicians should be considered for this community. For example, Yellowknife residents could be rostered across several medical clinics with capitation funding from the Stanton Regional IHSSA. There are an excellent range of both institutional and community-based long term care providers in this community as well as social services, addiction programs, public health and health promotion programs. The challenge will be to develop an integrated delivery system that ensures that these resources are well utilized, coordinated, cost effective, client sensitive and affordable. There is a need to focus on the development of linkages, referral mechanisms, lines of communication and information systems that make an integrated delivery system operate effectively and efficiently. No doubt, there are unmet needs in this community. However, the development of an effective integrated planning and delivery system will address these needs. The focus should be on the creation of an integrated system, not on the development of new services. Responsibility for the provision of secondary services in the Western Territories (after Division) will primarily be the responsibility of the Stanton Hospital. We have suggested that there are opportunities for some selected secondary care services to be developed in other Regions. Careful planning will be required to ensure that this occurs in a coordinated and cost effective manner. Tertiary level services should continue to be provided out of the Territories. Based on the total population, there is not sufficient critical mass to justify the provision of these specialist services in the Territories, except on an ambulatory care basis using visiting specialists.

Eastern IHSSAs

The Kitikmeot IHSSA:

The Kitikmeot Region has no physicians, no hospital and many patients are referred out to Yellowknife for primary care. There are many significant social needs that are not being addressed. These problem should be addressed as a matter of high priority by the Kitikmeot IHSSA. In Chapter 8, it is proposed that an expanded health centre with six to eight holding/observation beds, with family physicians, obstetrical services provided by midwives, a team of experienced social service workers and a full range of primary care services should be developed to meet the needs of this Region. Both acute and long term care service should be provided. The range of services should be based on a comprehensive needs assessment of the Region. The expanded health centre should be linked to the Health Centres in the Region to create an integrated system. Secondary care services should be provided in Yellowknife based on current airline routes. There may be a need to reconsider this direction if the traffic patterns change following division of the Territories. With a total population of approximately 5,100, high priority should be given to the development of a fully integrated system of primary care services for this Region.

The Keewatin IHSSA:

The Keewatin Region is comprised of a catchment population of approximate 6,900. There is no hospital in this Region. The primary care hospital for this Region is located in Churchill, Manitoba and appears to provide the range of services required by the community. In Chapter 8, it is proposed that an expanded health centre be built in the Region. This should be similar to the model proposed in the Kitikmeot Region. The range of services to be provided by this facility should be based on a comprehensive assessment of community needs. We anticipate that emergency services, six to eight holding beds, long term care, acute care, rehabilitation, mental health services and a full range of ambulatory health and social services should be provided. Referral of patients to Winnipeg for secondary level services should be developed in the future. Tertiary level referrals should also be directed to Winnipeg. Academic support in the form of visiting specialists, wellness and preventative programs, training and support should be negotiated

with the University of Manitoba and the NMU. The residents of Keewatin will benefit with the association both in the short and long term if medical students are residents are exposed to the Region.

The Baffin IHSSA:

The Baffin Regional Hospital services a catchment population of approximately 13,200. This population requires a full range of Health Centres providing primary care and a Hospital in Iqaluit providing primary care and selected secondary care services. The unique needs of this Region should be reflected in the range of programs and services that are provided in the Health Centres and the Hospital. Needs-based planning (based on health status information and community input) should determine the scope and range of these services. Redevelopment of the Hospital in Iqaluit is required to ensure that this facility can attract the necessary family physicians and specialists for the provision of primary care and selected secondary care. The referral of some secondary care patients and all tertiary level patients to physicians in Montreal (or Ottawa) should continue.

With the creation of Nunavut, it is expected that there will be a close working arrangement developed among the three IHSSAs that will operate within Nunavut. The potential for shared secondary care services appears to have some merit; however, this opportunity will require considerable cooperation among the three Boards. There are some initiatives currently underway in the area of diagnostic services between the Keewatin and Baffin Regions. Tertiary care services should continue to be provided through the Winnipeg and Montreal (or Ottawa) hospitals.

Summary

There is tremendous potential for the development of an integrated delivery system in the NWT (and the new Territories after Division) that builds upon the framework proposed in this report (Chapter 2). The focus of the model that we have proposed is on the delivery of primary care in the sixty-three communities through the Health and Social Services Centres (renamed from "Health Centres"). Each Centre should be linked in terms of its organization, systems, backup support, operations and management through an IHSSA board and management body (see Exhibit 2-2 of Chapter 2) to a community hospital located in each IHSSA jurisdiction. Primary care and some selected secondary care services should be provided by the community hospital. Similarly, there would be linkage to long term care and social service organizations in the jurisdiction. Computer systems

and other technologies should be utilized to facilitate the management and operation of the integrated delivery system. The range and scope of health and social services provided in a given region should be determined by the corresponding IHSSA, who should be responsible for governing the proposed integrated system. We are confident that such a system would not only meet current needs but also be responsive to future community expectations.

Medical Travel

Medical travel costs are budgeted at approximately \$25 million in 1996 and are estimated to exceed this amount by \$4 million. There are a number of factors that impact the utilization of medical travel. These have been alluded to in the three reports conducted to date on this issue. However, no review of medical travel has closely scrutinized the decision-making process leading to medical travel. Medical transport was felt by prior reviewers to be mainly appropriate. Areas that contribute to the need to evacuate people from communities include scarcity of nursing, community expectations, and lack of familiarity with medical conditions on the part of various personnel.

Frequently, patients who received medical care out of the Territories are asked to return for follow-up care by medical consultants. It is difficult for nurses in the Health Centres to decide whether the return trip is necessary or whether it could be handled by a physician during a settlement visit. Many unnecessary medical trips are made for this reason.

Patients are frequently moved to a location that can best meet their individual medical needs. Unfortunately, politics can play a significant role in this process. If a family pressures their politician enough and insists that their relative be sent to a larger centre, the patient is usually sent whether or not the medical condition warrants the transfer. Women who wish to deliver in their own settlements are required to go to a hospital for confinement, even if the Health Centre nurse is capable of handling the delivery.

Patients are frequently moved from Health Centres because of nursing staff shortages. Rather than observing patients for a few hours, patients are sent out if a scheduled plane is in the community, in order to avoid a costly medevac in a few hours if the patient's condition worsened. If the weather is predicted to get worse, then a patient may also be sent out in order not to get stranded.

Most aircraft are now designated for medevacs only and are partially or fully equipped with monitors, defibrillators, oxygen and intubation equipment.

Medical travel has been examined in several prior studies. However, there was little formal data on "appropriateness" of medical travel, particularly with respect to the mode chosen. This lack of data appears to be the result of reluctance on the part of system planners to make judgments on the clinical decisions involved in medical travel. Though this reluctance is understandable, failure to examine the multiple factors that lead to the movement of patients in the NWT (and elsewhere) is likely to be associated with higher costs.

Careful examination of these factors is required to quantify these costs. Many anecdotes were detailed of patients who would have been appropriate to wait for scheduled air travel who were sent by air charter instead. Multiple factors appear to contribute to this phenomenon, including overburdened community nurses, physician fear of litigation and community pressure to evacuate the patient. We have not seen any documentation of cost-benefit analyses examining the issue of the relationship between community nursing staff levels and the rate of medical evacuation. There does not appear to be a systematic examination of factors driving physicians to choose unscheduled travel over scheduled travel, nor has an examination of the basic reasons for medical travel been undertaken. Prior surveys have focused on the reduction of costs associated with medical travel after the decision to transfer the patient has occurred. The Aulaguma Travel report concluded that medical travel standards need to be developed, but we are unaware of any such standards developed in the period since delivery of that report in October 1993.

Clinical Guidelines

Based on our review of the many issues that affect medical travel, we suggest that medical standards need to be developed by a multi-disciplinary working group. These standards should be based on medical factors and should determine the timing, mode, and type of professional escort. Decisions about medical travel should be the responsibility of one individual in Nunavut and one individual in the Western Territories. These individuals should be appropriately trained emergency physician.

Transportation

Medical transport is not optimal throughout the NWT. Reasons for transport may be appropriate at the time of transport, but the mode of transport is more expensive than

would have been necessary with prior planning or with effective medical oversight. There is duplication in the travel planning and coordination structure. During non-business hours, the transport is coordinated by a private contractor at a fraction of the cost incurred by the governmental agency. It was felt that the Department would be not be able to negotiate a discount on scheduled medical air travel from the two major carriers in the NWT because of the profitability implications that would occur if Departments other than Health and Social Services were to demand similar concessions. However, others believe that the carriers would be receptive to price reductions negotiated by a private broker as there would be no overall implications for the government-carrier relationship.

Responsibility

It is attractive to conceptualize a system of medical travel wherein authority and accountability resides at the local level. However, due to the sparse population and vast land area, we believe that the resultant loss of purchasing power and bargaining ability would offset the ability of IHSSAs to economize on medical travel. We propose that local IHSSAs retain authority for medical travel, but that they join with other IHSSAs to contract for central co-ordination and dispatch services where this is operationally or economically advantageous. There would be one dispatch centre in Nunavut and one in the Western Territories. The dispatch centre could then be accountable to the IHSSAs by virtue of the contracts.

Out-of-Territory Transportation

At any given time, there are numerous residents of the NWT in Edmonton receiving medical treatment. The return of these patients is coordinated both by the Capital Health Authority and by Larger House. At present, unscheduled aircraft that arrive in Edmonton carrying a patient often depart for their home base with no passengers, despite the fact that there are usually a number of patients awaiting return to the NWT. Such patients usually return home via scheduled carriers. Virtually all scheduled medical travel is full fare in the NWT.

As recommended in prior reviews, an overarching information system for medical travel should be created that is capable of tracking all patients in the travel system at a given time. The information system should be compatible with other NWT information systems such as WellCom. It should also be able to optimize travel costs for repatriating

patients to their communities. This is discussed further in Chapter 7 (“Information Systems”).

Utilization Monitoring

There is a need to continuously review the utilization and cost of the medical travel system. This review should identify mismatched modes of travel, inappropriate escorts and payment of full fare for travel.

There has been no examination of the utilization of medical travel resources from a problem-based viewpoint. Such an analysis would allow the identification of potential efficiencies. For instance, given that the most frequent cause of medical travel is obstetrics, there may be an opportunity to augment local resources (e.g., midwives in communities) to minimize the need to travel for uncomplicated obstetrical patients. A cost-efficiency analysis would be required to determine if savings in medical travel would offset the cost of midwives.

We suggest that a study of medical travel from a problem-based perspective should be undertaken, with the purpose of identifying ways to avoid medical travel if cost-efficient alternatives can be found. The problems that the study should focus upon include obstetrics, ENT, orthopaedics, medical imaging and alcohol/drug treatment.

Use of Paramedics

Consideration should be given to the recruitment of Level III paramedics to provide some primary care in the communities. Level III paramedics have advanced patient assessment skills and full advanced life support capability (including cardio-pulmonary resuscitation, defibrillation, advanced airway skills and critical care). Paramedics who had received training such as ANSIP would be valuable caregivers in NWT communities.

Planning Guidelines for the Health and Social Services System

Community Profiles

We suggest that the IHSSAs give consideration to using the following general planning guidelines in all future program and facility planning projects. The 1995 community Profiles that have been prepared by the Department provide an excellent

starting point for community-based planning. Our understanding, however is that these documents are little used in the planning process.

Catchment Population

There is a need to define the most reasonable size of population that should be used for planning purposes. It is unreasonable to assume that communities of 25 to 50 people can plan and manage their own systems; however, social and health services need to be available in these communities. Similarly, larger communities of 100 to 300 individuals cannot be expected to plan and operate their own systems. Based on the experience of other jurisdictions and given consideration to the geographic challenges of the NWT, we suggest that the proposed IHSSAs use a guideline of a minimum catchment population of 1,500 people in planning for the future. The application of this guideline would require that small communities work with other small communities in order to form a catchment population of at least 1,500 people. In some Regions, such as the Mackenzie, this guideline will probably result in large planning areas. This should be considered a guideline and not a requirement.

Primary Care Planning Guidelines

Ideally, every community should have some level of primary care service available to its residents. Primary care is usually defined as "first contact care" provided by a health or social services professional. This may be a lay pharmacy dispenser, a community health representative, a nurse practitioner or visiting nursing or physician services. There should be some mechanism for every individual to have access to a health professional for basic, primary care services. This could include the use of traditional healers. Given the large number of small communities in the NWT, there will be the need for individuals in these small communities to travel to other communities for some primary care services. This traveling distance and time should be reasonable. Planning for the delivery of services should be based on this requirement.

All primary care services should be provided within each IHSSA jurisdiction and no one should be expected to have to travel outside of that jurisdiction to receive primary care. Because of the current shortage of physicians and nurses in most communities, many individuals from the Kitikmeot Region have to travel to Yellowknife to receive basic primary care. This is expensive, time consuming and not in the best interests of the patient/client, their family, children or the health care system. Changes are needed in the

health care delivery system to address this issue. The limited access to basic primary health and social services is one of the biggest weaknesses of the current system.

Each IHSSA should determine the number of social service workers, nurses, midwives, family physicians, nurse practitioners and other health care professionals that should be available throughout their jurisdiction and within each community. As mentioned, a great deal of information in the Community Profiles were developed in 1995 to guide these decisions. This information should be used to develop the IHSSA Human Resource Plan, together of course with the parameters of the fix envelope of funds transferred to the IHSSA (based on the funding formula described in Chapter 10 of this report). To assist in this planning, we suggest the following guidelines (again, these are presented merely as guidelines with customization left to the individual IHSSAs):

- One social worker per 300 population, adjusted for regional needs.
- One nurse per 300 population, adjusted for regional needs.
- One nurse practitioner per 800 population, adjusted for regional needs.
- One midwife for every 50 births, adjusted for regional needs.
- One family physician per 1,500 population, adjusted for regional needs.

In utilizing these guidelines, there is a need to consider the mix of the various professionals, the age of the population, the social determinants of health, the level of illness in the community, travel distances, access to health professionals in other communities and visiting professionals. These guidelines should be used as a starting point for planning purposes and should not be used without consideration of other determinants of need and the costs of providing services.

The Human Resources Issues Discussion Paper produced by the Department in October 1996 has taken a similar approach to planning for the human resource needs of the health and social services system of the NWT. We support this approach to planning in the future.

Secondary Care Planning Guidelines

At the present time, secondary care services are concentrated in Yellowknife, although some secondary care medical and surgical services are provided in the hospitals in Fort Simpson, Fort Smith, Hay River, Iqaluit and Inuvik. Secondary care medical providers

from Yellowknife also provide ambulatory secondary care in many smaller communities throughout the NWT.

There is a need to develop **clinical practice guidelines** for the provision of secondary care services throughout the NWT. For example, there is a need to agree on the appropriate level of surgical services that should be provided by family physicians in communities such as Inuvik, Iqaluit and Rankin Inlet. There is the potential that some family physicians, with specialty training in internal medicine, addictions, anaesthesia, psychiatry and surgery could provide these services. However, clinical guidelines should be developed to ensure that there is agreement on the scope of services, requirements for consultations and the need for backup. There is also a need to develop clinical guidelines for the direct transfer of patients to tertiary level facilities. The medical specialists in Yellowknife appear to be supportive of this approach and would probably be prepared to assist in the development of these guidelines.

Chapter 6

Human Resources

In this chapter of the report, we discuss the issues in human resources that confront the Department of Health and Social Services. Although many of these issues have been referred to in other chapters, we have repeated them here in order to emphasize the need for a human resource strategy for the Department. Approximately 80% of the Health and Social Services budget is allocated to human resources. There are approximately 2,000 full-time equivalent positions in the system. Without these individuals, the social and health care system in the NWT cannot operate. With a greater focus on human resource issues, the Department can significantly enhance both the quality and quantity of service provided.

The Department has produced a Discussion Paper, "Human Resources Issues in Health Reform," dated October 1996, that provides an excellent discussion of the human resources issues facing the Department. We support the overall directions set out in this document and comment on some specific issues in this section.

Recruitment/Retention

Most Regional Boards continue to experience difficulties in the recruitment of physicians, nurses, nurse practitioners, social services workers and other allied health professionals. In addition, there are problems in ensuring that individuals who are recruited to the NWT remain. Based on our discussions with Departmental staff and the Regional Boards, there is general agreement that a comprehensive recruitment and retention policy should be developed by the Department (i.e. future ministry).

In addition, each Region (i.e. future IHSSA), should develop its own specific strategies that respond to the unique geographic, cultural, socio-economic and professional requirements. We are impressed that some of the current Regional Boards have been creative in attempting to address their human resource needs.

In order to recruit and retain health care and social service professionals, the Department should consider innovations in providing salaries and benefits within the constraints of the current bargaining agreements.

Examples may include:

- A realistic housing allowance related to local needs
- Funding for continuing education
- Assistance with education of children
- Provision of orientation assistance
- Assistance with employment for spouses
- Arranging for professional interaction and support
- Access to computers and the internet
- Arranging for vacation relief
- Travel allowances for family
- Payment of professional fees and education allowances
- Assistance in relocation costs
- Responding to individual personal and family requirements.

These items would need to be costed, prioritized and negotiated with the employees group with the view of facilitating recruitment and retention.

Continuing Education

Most health care and social services professionals commented on the absence of continuing education programs. If the social services system is to be responsive to the complex social environment in Nunavut and the Western Territories, there will need to be a greater focus on providing experienced staff with the skills to work effectively in this environment. Similarly, there is a need to ensure that nursing staff, at all levels, receive continuing education in order to maintain and enhance their skills.

We suggest that the future IHSSAs work closely with professional associations to develop continuing education programs that are sensitive to local needs. With the tremendous costs of transportation, it would appear more reasonable to offer continuing education programs at the IHSSA level. Similarly, we suggest that the future Ministry promote the use of video conferencing, use of the internet and use of technology to promote continuing education. During our discussions with physicians, we were impressed with their level of interest and commitment to assisting in the continuing education of personnel. This should be promoted, encouraged and facilitated at the Ministry, IHSSA and community levels. The IHSSA will need to consider setting aside a significant allocation of its budget to fund continuing education programs.

Management Practices

The project team was generally impressed with the quality of care provided at the community level by health and social services workers, who demonstrated professionalism and commitment. The physicians appeared to be cost-conscious and responsible in their utilization of health care resources. There was a well-developed system of primary physician care in some of the communities. However, numerous people expressed anger and frustration at the lack of information and communication at the provider level.

The management style of the current Boards and the Department was widely felt to be directive and non-participative. Concerns were expressed about the use of a "medical model" of care in the NWT. Many health and social services workers stressed the need for a more holistic approach to care. In particular, social service workers feel shunted aside or submerged as a result of the recent merger of health and social services (This issue was addressed in more detail in Chapter 4). Several Aboriginal workers expressed the belief that the unique perspective that they bring to care as knowledgeable sources of Aboriginal lore and culture was undervalued in the overall health care and social services system. As a result, there was a general lack of team spirit and mutual respect among social services and health care workers.

Based on the findings of this review, we suggest that the future Ministry undertake to incorporate shared governance into its operations. Furthermore, the principles of Continuous Quality Management should be adopted at both the Ministry and IHSSA levels.

Workload Guidelines

In our discussions with social service workers, nurses and physicians, there was considerable concern expressed about the caseloads of social service and nursing personnel. This results in considerable frustration, burn-out, poor patient/client service and low morale.

There does not appear to be any realistic staff/workload guidelines throughout the NWT. Each health centre, hospital or clinic functions independently. The development of realistic workload guidelines would be helpful in ensuring that staff are not overburdened. Throughout the social and health care industry, there are staffing guidelines based on caseloads, number of patients registered, length of visits, visits per health professional, etc. This information should be used to develop realistic workload and staffing guidelines for the NWT. The professional/population guidelines listed in Chapter 5 should be considered to determine and periodically update staff levels for health centres. There is also a need to expand the use of allied health professionals, clerical support staff and computers to improve the productivity and simplify workloads.

Confidentiality

Confidentiality is a complex inter-professional issue, and simple solutions are not in evidence. A statement of support regarding inter-professional exchange of confidential information for the benefit of patients/clients within professional guidelines would be helpful. Most interviewees expressed the belief that this initiative would succeed only if accompanied by local resolution of inter-professional concerns. In the near future, the Ministry should develop policy guidelines, with input from representatives of the Medical Association, the Nursing Association and representatives of the social service workers, that addresses the issue of confidentiality.

We also suggest that a forum on the ethical issues of confidentiality in the Territorial context should be convened with expert ethicists. The forum should include professional association representatives and other invitees, such as educated officials and the RCMP. The forum participants should be tasked with developing Ministry guidelines for the dissemination of confidential information concerning persons receiving care from among social services and health care workers.

Social Services

In Chapter 4 of this report, we commented on the need for enhancing the role of social services workers in the system. They are responsible for addressing many complex social issues that require a high degree of skill and experience. There is, therefore, a need to provide more continuing education support to social services workers to enhance their skills. There is also a need to create a team approach to service delivery as outlined in Chapters 4 and 5 of this report.

We support the proposal to form a professional association for community social services workers in the NWT. Such an association would identify opportunities for social services representatives to participate in task forces on human resource planning, continuing education, etc. To support the formation of a professional association, the Ministry will need to establish minimum qualifications and credentials.

Concerns were expressed regarding the shortage of human resources to supervise individuals on probation and parole. While social services workers view this responsibility as a useful way to identify at-risk clients, they indicated that they are frequently unable to meet judicially mandated supervision and custody requirements and, as a result, are often censured by the judicial system. As was mandated in Chapter 4 of this report, community social services workers are frequently placed in conflict-of-interest situations in their communities. Conflict arises because the social services workers are attempting to provide assistance to the same people that they are responsible for supervising under judicial mandate, or whose children they may be required to apprehend for child welfare concerns. These conflicting demands, while operating in small communities, have resulted in a great deal of animosity and hostility directed towards the social services workers.

Implementation of the plan to remove the administrative aspects of the Social Assistance Supplement (SAS) from the aegis of the social services workers on April 1, 1997 was viewed with skepticism. Social services workers were ambivalent about the effect of this plan on their ability to contact persons in need of social services, as the cheque distribution allowed the workers to find appropriate cases on a recurring basis. It was suggested that the people who will be given the responsibility for cheque distribution under the new system should be expected to refer clients to the social services workers when appropriate.

In general, there was support for the removal of this clerical/administrative aspects of the SAS task from the social services workers. Most respondents felt that the additional available time for social services could be used to improve client services. Similarly, in Chapter 4 we recommended that probation supervision responsibilities also be removed from the social services worker and shifted to the Department of Justice.

Nursing

Recruitment and Retention

Initiatives to recruit nurses for the Health Centres have been successful to varying degrees. We understand that the average time for a nurse in a Health Centre is approximately 1.8 years. High turnover of nursing staff is associated with the following:

- Stress of isolation
- Cross-cultural stress
- Long and unpredictable hours
- High cost of bringing goods from the south (e.g., a car)
- High cost of housing
- High cost of visiting family/friends
- Lack of adequate education for dependents
- Lack of family support in the community
- Lack of social/recreational outlets in small communities
- Sub-optimal professional enhancement program
- Lack of professional support.

Difficulties in recruitment and retention are also related to the perception that the total compensation package for nurses has decreased (with benefits reduced and vacation travel allowance eliminated). Although most nurses complained of low wages, we understand that the wages earned by some Health Centre nurses are in the range of

\$85,000–100,00, including overtime but exclusive of benefits. There are several incentives included in the basic nursing wage such as isolation pay and Northern allowance that augment the income received. Although housing allowances have been discontinued, there are tax credits offered to Northern residents.

Despite the foregoing, we believe that the compensation offered to community nurses is not competitive in the marketplace when compared with northern Alberta, northern Manitoba, and northern Ontario. As a result, there has been significant attrition of experienced and trained nurses who have been lured to higher paying jobs in the Federal Government providing health care to other communities in the other provinces. The loss of such skilled workers has had a significant impact on the level and quality of health services in the communities of the NWT.

On the basis of our findings, we suggest the following strategies:

- Each IHSSA should develop its own nurse recruitment and retention strategy. This should include, but not be limited to, competitive wages and benefits, education allowance, spousal employment, housing and Vacation Travel Allowance.
- A cost-benefit analysis of the institution of the overall recruitment and retention strategy should occur.
- Standardized basic training should be provided prior to postings in semi-isolated settings. The training should include cardiac, trauma, toxicological, pediatric and neonatal life support techniques.
- Physician support of the nurses should be improved. This would require that physicians adopt a greater collaborative and educational role when they visit communities.

Nursing Education

There are two components to consider with respect to current nursing education in the NWT. The first is the education of NWT residents in health careers, with emphasis on graduating Aboriginal students. The second is the need for both basic nursing and advanced skills training programs.

We recommend that there be a greater focus by the future IHSSAs on training Aboriginal and northern residents. This should include all levels of personnel from front-line nurses and social services workers to management and supervisory positions.

Nursing Diploma

In reviewing the course materials for health related careers, it was apparent that a great deal of effort and energy has been devoted to planning the courses and ensuring they meet the needs of northern students. The success of the current nursing program is acknowledged, as 100% of the first graduating class passed their CNATS exams on the first try (better than the national average). While the graduates have yet to prove themselves in the workplace, we support the overall direction of this program.

The cost of providing this program should be determined and compared with the cost of hiring, training and retaining southern trained nurses. These data would assist the decision makers in identifying the most cost effective approach to providing nursing education for northern students.

It has been suggested that a second nursing program should be offered in the eastern Arctic, as well as the current program in Yellowknife. This suggestion raises many questions, such as:

- Would this increase the number of eastern graduates?
- Are there enough people interested in a nursing career to offer a second program?
- Can the NWT government afford to operate two programs in nursing education?

The circumpolar Inuit population is approximately 120,000. We understand that the Baffin Regional Health Board has received requests for Aboriginal nursing programs from Russia, Denmark and Greenland. With the current size of the Aboriginal population in the NWT, it would not be economically viable to consider two nursing programs in the NWT, in addition to which there would be insufficient clinical exposure. On this basis, we suggest that:

- On Division, one coordinated, comprehensive nursing diploma program should be maintained, with cost-and revenue-sharing between Nunavut and the Western Territories.

- Problem-based learning, distance education, and affiliation with southern community colleges or universities to access faculty and multi-media education packages should be developed.
- Students should not be expected to leave their communities for extended periods of time.
- The nursing diploma program should be offered to the circumpolar region in order to enhance the NWT program and as an economic development strategy.

Nursing Degree

Although the current diploma program is two years in length, most students need to upgrade their education before entering the program and participate in a mentorship program after they complete the program. In reality, the two-year diploma program takes nearly four years to complete.

We understand that discussions have been held about the possibility of establishing a four-year nursing degree program. The program proposed would be organized in such a manner that the students would have the option of leaving the program after two years and receiving enough credits to write the National Registration Examination and receive their diploma in nursing.

The last two years of the degree program would be designed to incorporate the training offered in the current Outpost Nursing program that has been available for many years at Dalhousie University. Dalhousie University has been approached to develop this four-year program, but there are concerns about the concept of a two-year exit option leading to a diploma in nursing. Discussions are being held with other universities about this option.

We believe that the proposed approach is appropriate for the NWT. The current Dalhousie Outpost Nursing program has a proven reputation and graduating students are well prepared to meet the job requirements of a community health nurse in the North. Given the small number of nursing students currently enrolled in the diploma program and the hardships the students have to endure to complete that course, it is unrealistic to expect many to leave their families and communities with no incomes to enroll in a four-year program. If this approach were adopted, the graduates could seek employment, earn money and acquire experience between the basic and post basic programs.

Based on our review of nursing education programs offered in the NWT, we believe that:

- The two-year diploma program should be continued.
- The curriculum should ensure that graduates are prepared to function in a support role to the nurse practitioners or physicians.
- A four-year nursing degree program should be developed with an option to exit at two years and write the National Registration Examination.
- The last two years of the degree program should incorporate the outpost clinical skills curriculum.

Midwifery

With the increasing demand for more birthing services in the communities, there is a need to provide a full range of midwifery services to clients. In the past, some communities have shown little interest in the use of lay midwives. With birthing centres under consideration in several regions, there will be an increased demand for trained midwives, especially Aboriginal midwives. There is a need to develop practice guidelines, education requirements, mandatory consultation procedures, referral practices and caseload guidelines. The Department/Ministry should build upon the work that has been done in other provinces to address this issue.

In recent years, midwives have been licensed to practice in many provinces across Canada. Although Canada has been reluctant to adopt the midwifery model, many other countries have encouraged and supported the use of midwives for many years. Based on our discussions with family physicians and obstetricians, there is strong support for the development of an extensive midwifery program throughout the NWT. Midwives have been utilized in the Baffin Region for several years and this program has won international recognition.

Cultural and basic education realities might create barriers to staffing these birthing centres with individuals traditionally classified as midwives. Consideration should be given to a "NWT model" that would involve different levels of training. The long term goal would be to have Aboriginal diploma-trained nurses receiving a formal two-year post basic program in midwifery. Other Aboriginal midwives would have a basic

entrance education level, as yet undetermined, and receive a local problem-based midwife education program. These individuals would work under the supervision of appropriately trained nurse/midwives or physicians.

With the increasing need for obstetrical services projected throughout the NWT, the Department/Ministry should move quickly to implement a midwifery program.

The Expanded Role of Nurses

Nurses in the NWT are expected to function in a very expanded role. Weather, geography and limited access to physicians in many communities add to the need for nurses with expanded roles. The high degree of variance in training, supervision and competence of the community nurses has affected the quality of care in the communities and has resulted in significant medical travel costs being incurred by the system.

With the introduction of television in the North, consumers have become much more educated and aware of their rights to access to health care services. Demands are being made of the system and pressure is being placed on politicians to provide universal access to health services available in the south, with little consideration being given to the unreasonable nature of these demands.

In the ideal world, nurses working in communities in the NWT would have the following skills:

- Several years experience in nursing
- A bachelors degree in nursing
- Advanced clinical skills training.

In recent years, it has been difficult to fill the vacant nursing positions, let alone be highly selective in the qualification of candidates for these positions.

Currently, a diploma-trained nurses with little experience may be hired to fill community health nurse positions. These nurses are at the mercy of their coworkers to receive on the job training, until time, replacement staff and funding are available to allow them to attend an appropriate education program. No matter how competent nurses with diploma, bachelor or masters degrees are, until they have received training in physical assessment, medical diagnosis and treatment, they cannot be expected to perform

adequately in the expanded nursing role. Currently, training for this expanded role varies from on-the-job training to a highly advanced clinical skills training program.

The Northwest Territories Registered Nurses Association (NWTRNA) has previously addressed the expanded role of the nurse in the community by setting standards of practice. Now is the time to move to licensing nurses in this added-skills category. By setting educational requirements for community health nurses, the NWTRNA would move toward addressing quality assurance issues for nursing in the north. It is not important whether the nurse is called a "clinical nurse specialist," an "outpost nurse," a "nurse practitioner" or a "community health nurse." It is important, however, that these nurses receive the level of education required to perform their role and that all nurses receive the necessary training within an appropriate time frame

We believe that there are benefits to be gained by recognizing, both professionally and publicly, the specialized skills that nurses will acquire in this expanded role. We recommend that the title "nurse practitioner" should be used to provide this recognition throughout the NWT and Canada.

Other advanced skills education programs, such as ANSIP, Ontario's Nurse Practitioner program and Dalhousie University's Outpost Nursing Program provide graduate nurses with different skill levels. There is a need to develop a standardized nurse practitioner program that ensures that all nurses have the same skill levels. Based on our discussions with the NWT Medical Association, we believe that such an approach would be strongly supported by all physicians.

A four-month modular program cannot be expected to provide the same level of education as a two- or three-year program. Conversely, a three-year nurse practitioner program designed for an urban setting will not meet the needs of a nurse in the NWT. By setting standards for education and by assessing all current training programs, deficiencies could be identified and addressed.

The NWTRNA, the Department of Health and Social Services and the Department of Education should work together to develop an appropriate post basic registered nurse training program to prepare nurses to work in the expanded role as nurse practitioners. A specific Northern perspective must be integrated to a nurse practitioner training program. The programs currently offered are more appropriate for large urban settings where the expanded role is alongside a physician. In the NWT, the majority of community health

nurses do not work alongside physicians, but are independent practitioners creating the potential for liability.

Based on our review, we suggest the following:

- The NWTRNA, the Department/Ministry and the NWT Medical Association should jointly develop minimum education and experience qualifications for the designation of "nurse practitioners," based on an agreed scope of practice.
- Delegating and supervising physicians should be established to work closely with the nurses in ensuring appropriate supervision and maintenance of competency criteria for "nurse practitioners."
- A credentialing process for nurse practitioners should be established.
- Compensation for the nurse practitioners should be commensurate with the added responsibilities.
- An annual performance management system should be developed for all nurse practitioners.
- Education, continuing education, recruitment and retention strategies should be developed for nurse practitioners.

We cannot over-emphasize the need to address this issue. Nursing professionals throughout the system comprise the single largest group of health care workers. They are the heart, soul and backbone of the system. There is strong support among medical and nursing professionals and among consumers for the nurse practitioner model of care and for the recognition of those who currently perform this role. The implementation of the nurse practitioner role should be the highest priority of the Department/Ministry. We are convinced that this would have a tremendous impact on improving both the quality and the quantity of health services throughout the NWT.

Community Health Representatives

The Department has identified the need to focus on health promotion and illness prevention programs, services and activities. We strongly support this initiative and would encourage the proposed IHSSAs to assume responsibility for these activities. The Department has developed the Community Health Representative (CHR) program in

response to the needs of the communities for a focus on health promotion activities. Unfortunately, the CHR program is provided infrequently and many settlements have been without CHRs for years. It would be beneficial to have at least two CHRs in each community, so they could offer each other peer support. The CHR has frequently received little or no supervision or encouragement from the nursing staff due to staff shortages, heavy work load and a high turnover of nurses. A renewed focus on this valuable position should be adopted. We strongly recommend that the Department/Ministry and the IHSSAs promote the use of CHRs.

Allied Health Professionals

There are a number of allied health professionals in the NWT, including Certified Nursing Assistants, Long Term Care Aides, Homemakers, Personal Care Attendants, Community Workers, physiotherapists, occupational therapists, speech therapists, etc. Because of the wide distribution of the population, it is difficult to recruit some of these professionals. At the same time, there is a need for these types of professionals to support nursing, social service and medical professionals. The Department should examine the role of allied health professionals and encourage their use throughout the social services and health care system.

In developing education programs for allied health professionals, we would encourage the development of a "building block" type of programming similar to the Community Worker Certificate program. In this way, each completed block of a program would be worth a predetermined number of hours for a course at the next level. For example, if a Community Worker wished to enter the CNA or RN program, he/she would be able write exams for certain parts of the program. This would be time and cost effective and encourage candidates trained at one level to advance to the next level by knowing they would not have to repeat training they have already completed. For example, a CNA entering the RN program could write certain parts of the program if they had been covered in the CNA curriculum.

Physicians

There are long-standing issues associated with the recruitment and retention of physicians in the NWT. In the Inuvik Region, there have been recent positive developments that have resulted in the filling of all available medical positions. The physician recruitment strategy has been much the same as that used for nurses. There are shortages of family

physicians in the Mackenzie, Kitikmeot, Keewatin and Baffin Regions. Recruitment of physicians to rural or isolated settings has been the focus, particularly from provinces where the physicians have been subjected to relatively more severe cutbacks. The next challenge will be to retain these physicians.

Most physicians expressed a high degree of satisfaction with the varied and interesting patient problems that they encounter and the ability to operate as a family physician, providing a full range of services. Some frustrations were expressed regarding the fee reductions by the Department. In addition, physicians voiced concerns over the education of their children, housing, lack of continuing education, poor communication with the Department, lack of clear Departmental policies and directions, and the multitude of changes within the Department. These are issues that are important to the physicians and should be the focus of future discussions with the Department.

We discussed with physicians alternative approaches to payment. Most of the current salaried physicians are generally satisfied with this arrangement. Fee-for-service physicians appear to be interested in considering a salary scheme or a combination of these two approaches. There is an opportunity for physicians to play a leadership role in the education of allied professionals, promotion of healthy lifestyles, addressing the social determinants of health, recruitment and retention of health care professionals, promoting research activities, evaluating the effectiveness of health programs and the development of new approaches to health care delivery. Traditionally, the fee-for-service system does not reimburse physicians for these activities. There is a need to find a mechanism to address this issue.

On this basis, we suggest that:

- The Department/Ministry and the NWTMA should jointly examine an alternative payment plan for physicians in the NWT.
- The payment plan should include both a basic salary and incentive supplement. The incentive supplement should be given for extra work hours, extra patients served and activities related to the enhancement of the health and social services system in the NWT.

- The plan should make allowance for unique factors associated with Northern practice, such as travel, time away from home and principal practice site, VTA, lack of specialist back up, etc.
- The plan should align rewards with desired health outcomes.

Traditional Healers

Traditional healing has an important role to play within the health and social services system. There are, however, issues that require resolution, such as how to integrate the "traditional" and "western" systems. There is a need to develop mechanisms for cross-referrals, information sharing, and follow-up. Reimbursement arrangements for traditional healers need to be developed. Reimbursement to traditional healers for travel costs outside the region should be considered. The regulation and "certification" of traditional healers to protect individuals and communities, without imposing non-Aboriginal values on the traditional system, should be explored.

We support the use of traditional healers in the NWT. However, there are many complex issues that should be addressed in order to promote this important aspect of the health and social services system. We suggest that a Task Force of a cross-section of non-health professional lay-persons be established to address this issue. This Task Force should receive input from representatives of traditional healers, from other health care discipline, and from the public. The Task Force should examine the public's interest in this matter (i.e., their right to safe and effective alternatives in health care), and advise the Minister of Health and Social Services on the role and regulation of traditional healers.

Summary

The following human resource strategies are suggested:

- A comprehensive human resources recruitment and retention policy should be developed by each IHSSA.
- The IHSSA should work closely with the professional associations to develop continuing education programs that are sensitive to local needs.
- The Department/Ministry should undertake to incorporate shared governance into the operations of the Department. Furthermore, the principles of Continuous Quality Management should be adopted at the IHSSA and Department/Ministry levels.

- The Department/Ministry should develop policy guidelines, with input from the Medical Association, Nursing Association and representatives of social service workers, that addresses the issue of confidentiality.
- There is a need to provide more continuing education support to social service workers to enhance their skills.
- The Department/Ministry should establish minimum qualifications and credentials for community social service workers.
- With respect to nursing recruitment and retention,
 - Each IHSSA should develop its own nurse recruitment and retention strategy. This should include, but not be limited to, competitive wages and benefits, education allowance, spousal employment, housing and Vacation Travel Allowance.
 - A cost-benefit analysis of the institution of the overall recruitment and retention strategy should occur.
 - Standardized basic training should be provided prior to postings in semi-isolated settings. The training should include cardiac, trauma, toxicological, pediatric and neonatal life support techniques.
 - Physician support of the nurses should be improved. This would require that physicians adopt a greater collaborative and educational role when they visit communities.
- With respect to nursing education,
 - On Division, one coordinated, comprehensive nursing diploma program should be maintained with cost-and revenue-sharing between Nunavut and the Western Territories.

- With the increasing need for obstetrical services projected throughout the NWT, the Department/Ministry should move quickly to implement a midwifery program.
- The implementation of the nurse practitioner role should be the highest priority of the Department/Ministry.
- The Department/Ministry and the NWTMA should jointly examine an alternative to fee-for-service payment of physicians.

- The Department/Ministry should establish a Task Force to advise the Minister of the role and regulation of traditional healers.

Chapter 7

Information Systems

In this chapter, we provide an overview of the major information systems within Department of Health and Social Services and identify opportunities to re-engineer these systems. We also identify opportunities to utilize current and planned information and communication systems to monitor and improve the overall effectiveness and efficiency of the health and social services system.

Information Systems Review

The information systems review is comprised of five parts:

- Service Tracking Systems
- Claims Processing Systems
- Population Health Systems
- Tele-Health Systems
- Communications Systems.

Service Tracking Systems

WellCom

Service tracking, client scheduling and client registration are currently performed by an application called "WellCom". The pilot phase of this system is not complete, and wide-scale installation in Health Centres, Hospitals and social service settings throughout the health and social services system is currently in progress.

WellCom is designed to meet the needs of multi-program, multi-service, multi-site service organizations and the interdisciplinary teams that work within them. This application can handle the requirements of both health and social services. It can be used as a distributed database to link networks of offices, mobile workers and regional or territorial data storage centres to provide a complete, seamless client profile wherever a client receives service.

With data entry at the point of service, the quality of the data will be improved and will be automatically transferred to Departmental/Ministry and IHSSA repositories for analysis and reporting.

The application is an open system, and third party developers are encouraged to add to the functionality of the system in the form of "service details" to record particular aspects of client encounters that may be unique to a given situation within the Department/Ministry/Ministry. A "service detail" prompts the provider for more specific aspects of what they may be doing for a given client. For example, a tuberculosis diagnosis may prompt the user to complete a notifiable disease "service detail."

Alcohol and Drug Prevention Program System

This application is not currently in use due to problems with resources to maintain it. The primary purpose of the application was to monitor assessments, referrals and services related to alcohol and drug prevention activities. The application had no link to the health care plan registration database. Given the demand for alcohol and drug prevention activities, the need for this application should be reviewed. If it is reinstated, the application should be implemented at the point of service in the IHSSAs, rather than centrally. This could be accommodated as a service detail within WellCom for Alcohol and Drug Assessments.

Child Welfare Information System

The child welfare information system (CWIS) is a new application currently under development by the Alberta government. The Department/Ministry/Ministry plans to use this system. A project implementation team with a strong user representation should be brought together to review the application in detail prior to implementation. Furthermore, the application should be reviewed and a plan formalized as to how to link the details of child welfare to the health central repository prior to implementation.

Clinical Pharmacist

The Clinical Pharmacist is a pharmacy management application in use in the Stanton and Inuvik Hospitals. However, it has no link to the Hospital central patient index, nor to the dispensaries within Health Centres. In general, pharmacies, hospitals and health centres should have on-site access to an electronic record for each resident (client/patient) in order to identify possible polypharmacy scenarios.

Community Health Management Information System (CHMIS)

CHMIS records information related to encounters between providers and clients at Health Centres. Providers complete manual forms that are sent to Yellowknife where a staff of four key them into a central database that is tied to the health care plan registration database. There are approximately 500,000 records per year. WellCom will capture Health Centre encounter information at the point of service and these encounters will be automatically delivered to the central repository. Therefore, there will be no need for this system in the future.

Admissions, Discharge, Transfer System

The Hospitals are currently using an inpatient admissions, discharge, transfer (ADT) management system that is no longer supported by the vendor who is leaving the market. Because there is no link between the Territorial Health Insurance System (THIS) or Medicare for claims processing, considerable repetition of work is required. Abstracting of information from medical records is currently performed by the Health Medical Records Institute PRISM application.

Given that the ADT system is relatively new, the Department/Ministry/Ministry should continue to use this system and form a strong user group to provide mutual support until such time as the future ownership of the system has been resolved. The Department/Ministry/Ministry should also consider actively seeking a replacement solution for this system that is Windows-based in order to avoid potential problems in the future.

Laboratory Management

Currently, there is no laboratory management application in use across the NWT. If one is purchased, it should be linked to a laboratory requisition and reporting system within WellCom.

Radiology Management

Currently, there is no radiology management application in use in the Department/Ministry/Ministry. If one is purchased, it should be capable of linking to the tele-health system for remote consultations and the results of the consultation should be passed to the central repository in the form of a service event that can be available to providers in the field via WellCom.

Claims Processing Systems

The Department/Ministry operates a number of claims processing systems including:

- The Health Care Plan Registration System
- The Medicare System
- The Territorial Health Insurance System
- Medical Travel System

The Health Care Plan Registration System

This system captures patient/client demographic data, and is used to record and determine eligibility for NWT health care insurance coverage. Currently registration specialists in Inuvik and Rankin Inlet maintain this system. We understand that, every two years, new cards are sent to all NWT residents with a reply form and, if the reply form is not returned, the health card is no longer valid. The large number of invalid health cards resulting from failure to return these reply forms causes considerable re-processing and adjusting of Medicare claims by the service delivery sites.

The registration database currently operates on a mini computer and is inaccessible to all service delivery site applications for coverage verification at the point of service. If this were changed, a large number of claims errors could be corrected at the point of service rather than after the fact. Because the registration database is not linked to vital statistics and other death related databases, there is a great deal of duplication of effort and decreased quality of data. Division in 1999 will require that this registration system provide improved tracking of client place of residence for charge back purposes on services rendered out of jurisdiction. Based on these deficiencies, we suggest that the registration database should be replaced by a Windows-based, client server application, as soon as possible.

Medicare System

This system records and pays physician claims, including out-of-Territories billings and payables. It cannot, however, process physician claims for medical travel. The system has an electronic claims submission format that is used by a number of family practice physicians. It is maintained by four staff in Rankin Inlet and nine staff in Inuvik, who process approximately 500,000 records per year.

There are a number of limitations with the current Medicare system, including:

- There is no link between the hospital information systems and other claims processing system, resulting in multiple data entries.
- There is no link to the Health Care Plan Registration System (HCPRS)
- There are no management reports or decision support tools that properly utilize this data.
- Out-of-Territories billings are processed manually rather than submitted electronically.
- It takes approximately eight weeks from the time a service is provided to the time that it is entered into the database and available for analysis.

Review of the process for recording information about a patient/client visit indicates that there is a major opportunity to improve efficiency in the Medicare system. When a person shows up at a hospital for emergency services, the person is registered in the hospital Admissions, Discharge, Transfer (ADT) system and an outpatient discharge form is filled in manually. A nurse conducts an assessment and the details are manually recorded on the form; the doctor sees the patient/client and records his/her notes, including diagnosis on the form. To pay the physician, a separate claim form is submitted to Medicare and the outpatient discharge form is submitted to THIS. Both record similar information and none of the service details are input into the ADT system.

If the patient/client is from elsewhere in Canada, the claim is priced and the form is reviewed for completeness, signed by the patient/client and the provider. Then another form for the particular province, which summarizes all of the reciprocal billing for that province for a given time period, is completed manually. The summary form is then submitted manually to a processing center (in Inuvik/Rankin Inlet) which in turn pays the hospital or physician. The processing centre then manually submits the bill to the other province.

If the health care plan number is invalid in either of the above cases, the claim is reversed manually and set up as a receivable to be collected.

Territorial Health Insurance System (THIS)

This inpatient/outpatient claims system has no mechanism for electronically submitting information. The Stanton and Inuvik Hospitals are no longer submitting information directly to this system and are using the Canadian Institute for Health Information (CIHI) abstract data instead. The Hospitals in Baffin, Fort Smith, and Hay River submit discharge forms for inpatient and outpatient services that are keyed manually in Inuvik and Rankin Inlet. Approximately 100,000 records per year are processed. This system should be capable of receiving data electronically, directly from the admitting systems of all hospitals.

Medical Travel System

The medical travel system tracks warrants and payments for medical-related travel costs. Most of the users of this system indicated that the system is not user friendly and it is poorly integrated into their accounting systems. There is no documentation of the clinical reasons for the medical travel. Given the high costs of medical travel, the entire system should be replaced with a fully integrated solution as soon as possible. This should be a high priority requirement in order to obtain accurate information about the costs of medical travel. Without accurate information, it will be difficult to develop realistic and achievable strategies to reduce the \$25 million spent on medical travel.

Population Health Systems

The Department/Ministry operates a number of systems that gather information about the health status of residents of the NWT, including:

- Cancer Registry
- Child Fatalities Database
- Injury Database
- Family Violence Prevention Database
- Notifiable Diseases Database
- Suicide Reporting Database

- Vital Statistics Database.

These databases could provide a valuable source of information for the Department/Ministry/Ministry and the IHSSAs for monitoring changes in the level of wellness (or illness). In order to do so, however, the databases require upgrading.

Cancer Registry

The Cancer Registry records and monitors cancer incidents as legislated by the Disease Registry Act. Manual forms are completed by the service providers and forwarded to the Department/Ministry for processing. This application has a link to the HCPRS. The Cancer Registry could be part of the central data warehouse and should receive its data automatically from a notifiable disease service detail within WellCom that is prompted for at the point of service.

Child Fatalities Database

The Child Fatalities Database records the details of a child's death. The Health Protection Unit at the Department/Ministry is currently maintaining the database. There is no link, however, to the HCPRS or to vital statistics. The Child Fatalities Database should be linked to the completion of a death certificate (service detail) at a point of service which should, in turn, update the HCPRS database and the vital statistics system.

Injury Database

This application records patients' injuries and it is currently running at the Stanton Hospital, as part of a Federal research project. Data on injuries should be captured at the point of service, and point-of-service systems should have the capacity to suggest that an injury-related report (such as WCB) may be required, based upon the diagnosis or service codes used. This would involve a "service detail" for both a WCB Claim and Injury Reporting.

Family Violence Prevention Database

This database is designed to collect monthly survey forms from the Crisis Shelters and produce a yearly statistical package. The application is centralized and data are keyed manually, based upon reports submitted by the shelters. The shelters should have information systems installed to record their client registrations, admissions, discharges and transfers and any service tracking they require. The results of the information

captured through these systems could be automatically delivered to the central repository and all manual work in this area could be eliminated.

Notifiable Diseases Database

This database provides a record of notifiable diseases throughout the NWT that must be reported by legislation. The notifiable diseases database, the sexually transmitted disease database and the Tuberculosis Registry could be merged into the central repository and the data could be collected automatically at the point of service through the use of service details in the WellCom system.

Suicide Reporting Database

Summaries of suicides by year, region and demographics are produced by this database. It could be part of the central repository; there is no need to maintain a separate application for this reporting.

Vital Statistics Database

This database captures births, deaths and stillbirths throughout the NWT. Apparently, this database is not linked to the HCPRS. This application could be replaced and become part of the HCPRS. Birth and death certificates could be captured at the point of contact electronically through "service details" in the WellCom system.

Financial Management Systems

The Department/Ministry operates a number of financial management systems, including:

- Payroll System
- General Ledger System
- Financial Information System
- Government Human Resource System

There are opportunities to improve the efficiency and effectiveness of these systems as outlined below.

Payroll System

It appears that there are currently two payroll applications in general use, Computer Ease and ORMED. Stanton Hospital is the only user of Computer Ease and we understand that they are generally satisfied with this system. Other Hospitals and Health Centres use ORMED.

There are concerns about the quality of ORMED payroll and the costs, both hidden and obvious, that users are incurring to maintain it. The Department/Ministry should consider replacing it with a Windows-based application that links to the general ledger of ORMED, a human resource application and a staff scheduling system.

General Ledger System

ORMED is used by the Department/Ministry for all General Ledger and related functions (e.g., Accounts Receivable, Accounts Payable, Materials Management, and Fixed Assets). Accounts Receivable appears to have more functionality than is currently needed and it is difficult to learn how to operate this system. One-time billing is difficult; there is no batch report for receipts prior to posting; audit trails are poor; posting to a balance sheet account is not possible; and there is no link between Accounts Receivable and Accounts Payable.

The General Ledger appears to operate efficiently with the only complaint being that there is no supporting detail for transactions passed through from the sub-ledgers. Accounts Payable and Materials Management were very favourably reviewed by users. There is a need to integrate the Materials Management system across several organizations to take advantage of volume purchases.

There is currently no link between ORMED and the ADT system or the medical travel system, resulting in the need to re-key data and increasing the likelihood of errors. There is also no fixed asset tracking at present, which could create possible problems in the future. All of the above applications are currently DOS based and this will also cause problems in the future.

We recommend that an ORMED user group be formed to provide constructive criticism to the vendor on all of these applications. If the vendor is not prepared to correct these deficiencies, the Department/Ministry should consider changing applications.

Financial Information System

This system is used throughout the Department/Ministry for processing payables, receivables and monitoring budgets. The Department/Ministry should consider replacing this application with a PC-based, Windows client server solution that meets the requirements of the National MIS Guidelines. The Department/Ministry may also want to consider having all funded agencies report their financial activity according to the MIS Guidelines for consolidation purposes.

Government Human Resource System

The human resources system was consistently identified as a major problem that needs to be replaced with a system that integrates seamlessly with payroll.

Tele-Health Systems

An informal review of the proposed tele-health and video conferencing systems was conducted as there are currently none working. We are concerned that there may not be enough bandwidth to support user expectations. Given the number of challenges that exist within the basic requirements of integrating the above-mentioned databases, we recommend that the Department/Ministry put the tele-health and video conferencing systems on hold until such time as the databases can be linked into one integrated information system.

An Integrated Information System

System Goal

The large geographic area, the lengthy travel distances, the high costs of moving patients, clients and personnel, coupled with the need for accurate, reliable and current management information, requires that the Department/Ministry develop an integrated information system. This network should span all of the health and social service functions of the Department/Ministry to ensure coordinated care and a seamless electronic record for every person within the NWT. In order to provide integrated services, front-line service providers should have adequate management tools (e.g., hardware and software) to record and track the broad range of health and social services they provide.

System Design

The Department/Ministry has devoted considerable resources to the development of a broad range of information technology systems. There is, however, no overall plan that provides a framework for setting priorities for the ongoing development of these systems. Similarly, there is no plan for addressing the human resource requirements to successfully implement and maintain these systems.

We suggest a preliminary information system model which can be used as a guide to direct development initiatives until such time as a complete plan is finalized.

To define the requirements of an integrated information system, the context within which it will operate must be understood. This knowledge is best conveyed through a design standard known as a context diagram. A preliminary diagram is shown in Exhibit 7-1. A single bubble represents the information system in relation to the data that the system receives and supplies to the outside world. A data flow is information in motion and a line represents it with an accompanying arrow denoting the direction of the data flow. The data flow connects to external entities, which are represented by a square. An external entity represents people, organizations or systems with which the application communicates. Two parallel lines represent data at rest and they are called a data store. These data stores can be created outside the system and used by the system, or created by the system and used by the outside world. The context diagram has been expanded in Exhibit 7-2 to describe the major applications that will ultimately make up the integrated health and social services system.

System Development Priorities

The first priority would be to document the specific data fields that will ultimately constitute the electronic file. In other words, define the complete range of data elements to be captured as people come into contact with health and social services system. Many of these fields are already in the databases described earlier in this chapter. However, most of these databases deal specifically with the health sector. A review of the information requirements in the social services sector is yet to be conducted.

Subsequently, we suggest that integration of existing databases occur over three phases in the following order:

Phase 1: Integration of service tracking, claims processing and population health systems.

Phase 2: Integrate the financial management systems.

Exhibit 7-1
Preliminary Context Diagram
for an Integrated Information System

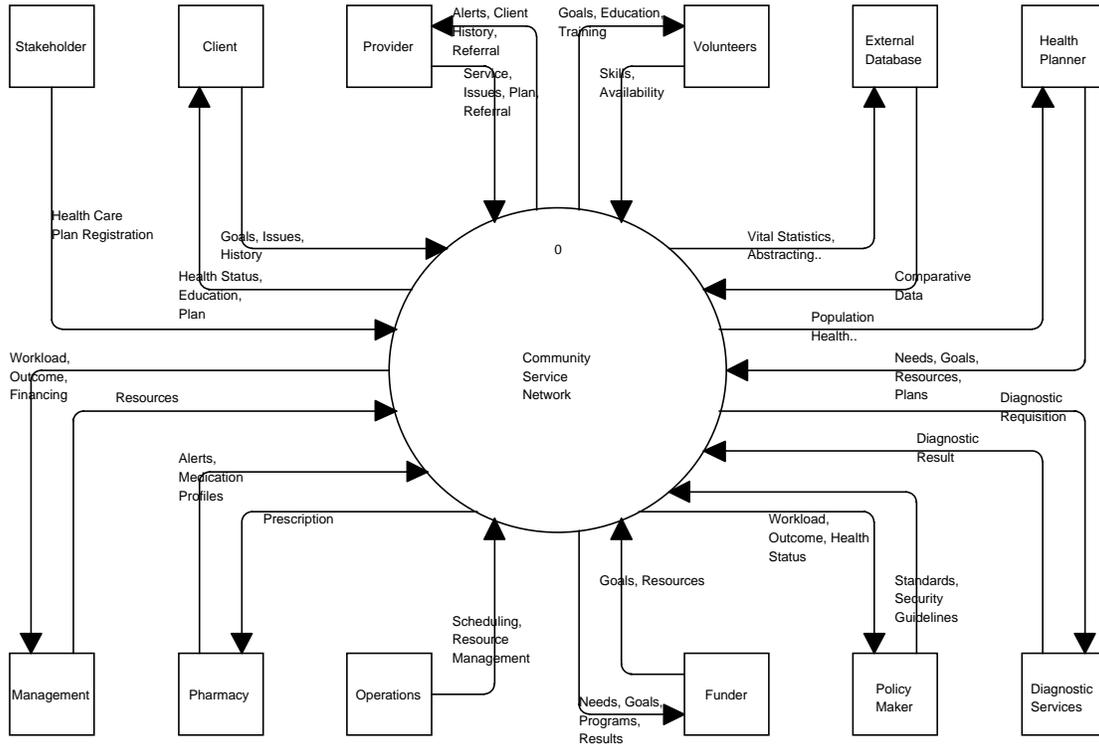
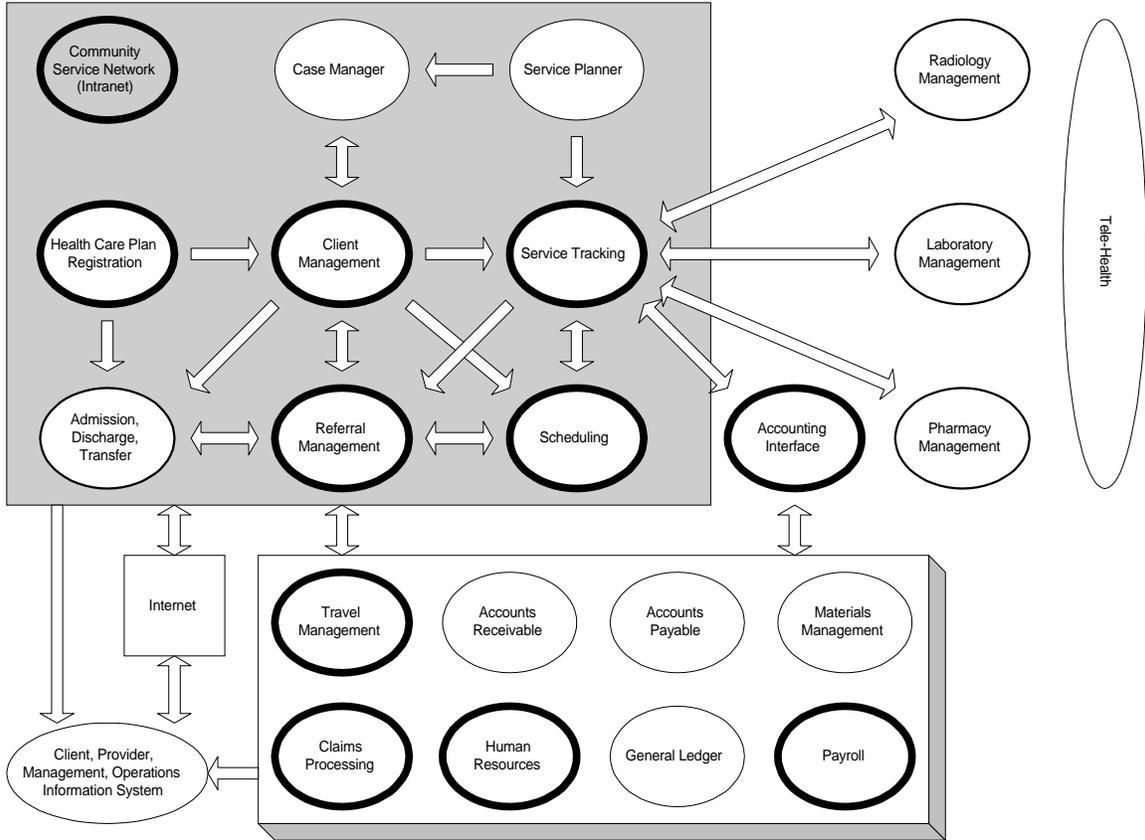


Exhibit 7-2
Major Applications for An Integrated Information System



Phase 3: Integrate the tele-health systems.

Completion of phase 1 integration would facilitate analyses such as medical travel costs by clinical condition. As mentioned in Chapter 5, such analyses should identify opportunities to reduce the \$25 million annual medical travel budget line.

Human Resources

To automate and maintain all organizations central and regional information technology personnel will need to be in place to support computer hardware and software in all local service delivery sites. Review of current systems has indicated that the majority of current system failings occur, not as a result of the technology or a commitment to the project, but from the lack of human resources to create, implement, install, train and support the applications.

To ensure that the technology succeeds, highly skilled people must be recruited and directed towards common goals. To this end, we suggest that an integrated information unit (IIU) should be created by the Department/Ministry with adequate resources to coordinate service with smaller IHSSA-based information units and their service sites. Such a unit would require a range of staff skills including high-level computer literacy and statistical analysis capabilities (examples include Database Administrators and Analysts, Network Engineers, PC-Specialists/Trainers, Systems Administrators). In addition, a well developed knowledge of health and social services and health economics (examples include Epidemiologists, Health Economists, Medical Officers, Social Service Workers), and leadership with experience in policy- and decision-making would be essentials.

General Application Guidelines

In order to assist in the future development of integrated information system throughout the Department/Ministry, we offer the following guidelines:

- Every application should be capable of being divided yet still share information across the two new Territories in 1999.
- Data should never be keyed twice.

- All applications must share information in a synergistic manner.
- All applications should be true Windows 95 systems and preferably operate in a client server environment.
- Every application should have a cost benefits analysis completed prior to implementing.

Privacy, Confidentiality and Security

Throughout our interview process, a great degree of concern was expressed about possible privacy and security confidentiality breaches when an integrated information system is established. These concerns are legitimate and should be addressed or fear of the unknown will stop any further advances in the improvement of information systems. We suggest that the Department/Ministry establish detailed privacy and security policies that address the concerns of inter-disciplinary providers and the delivery of coordinated care to their clients. These policies should be published and information system vendors should adhere to them through rigorous application testing and approval processes.

Disaster Recovery

Currently very few, if any, service delivery sites have backup strategies, fault tolerance measures and disaster recovery plans for their information systems. We believe that the Department/Ministry is at risk of a major accident that could lead to unrecoverable information loss at any time. It is strongly recommended that system backup strategies and disaster recovery plans be developed and implemented.

Communication

Based on our interviews, there appears to be an overwhelming lack of understanding of the existing and proposed Departmental/Ministry technology projects. This lack of understanding, combined with a lack of training, has proven to be the downfall of many technology initiatives, regardless of the quality of the proposed hardware and software.

In addition to a lack of understanding, there is also a great degree of skepticism among the staff, apparently due to many broken promises in the past. We suggest that the Department/Ministry should establish realistic and achievable goals that deliver

immediate benefit to the user. The Department/Ministry should not implement large projects, but should look for quick successes to build user confidence and skills. The Department/Ministry should develop a communication plan that informs users on a regular basis about the information technology plan, the progress made and other issues that are of interest or benefit to users.

A Continuous Monitoring System

In the NWT, the challenge in planning for health and social services is not so much the lack of data, but the lack of dedicated resources to systematically analyze and report in a timely manner the information contained in those data.

In this section, we outline a system for monitoring health status on an ongoing basis. The proposed system would be used to:

- Identify trends in health status (outcomes monitoring)
- Monitor the extent to which existing health and social services address those trends
- Examine system expenditures or refine the needs adjusters in a funding formula to ensure that these trends are given high priority (expenditure monitoring).

Outcome Monitoring

Relevant databases for outcome monitoring are those that can provide valid indicators of health status and the determinants of health (taking health as the state of physical, emotional and social well-being). Included here are the vital statistics database, the cancer registry, the communicable disease registries, socioeconomic data from the census, population data from the Bureau of Statistics, crime statistics from the RCMP, and a long list of special studies such as the National Population Health Survey and the Northwest Territories Alcohol & Drug Survey. This list is not intended to be exhaustive, but to confirm that a large number of relevant databases currently exist in the NWT for the purposes of outcome monitoring.

Service Monitoring

This refers to the monitoring of program standards, or the extent to which program components are implemented. Vaccinations administered by staff at a Health Centre or the volume of various services rendered by an Alcohol/Drug Treatment Facility are

examples. Examples of indicators generated for service monitoring are those referred to as "process standards" in the Community Health Nursing Program Standards and Protocols manual. Databases that are relevant here include, for example, the Community Health Management Information System (CHMIS), the Admission Discharge Transfer System, the Family Violence Prevention Database, and the Alcohol and Drug System.

Expenditure Monitoring

This type of monitoring addresses the question, "Are we spending the system's money where the health status trends are pointing?" Examples of relevant databases here are the Medical Travel System, Medicare System, and the Territorial Health Insurance System. Until patient-based data files are a reality in the NWT (i.e., a fully integrated information system), record-linkage software (e.g., LINKPRO from the University of Manitoba) would facilitate examination of per-patient expenditures. Ultimately, the intent is to monitor the dollars spent by the type of patient-need and the nature of service rendered, and thereby ensure that the dollars are directed toward the system's most pressing needs.

The Monitoring Cycle

We suggest that the Department/ Ministry adopt a three-year cycle for reporting. In the first year, a report would be generated that describes in detail the trends in health status as well as in the determinants of health among residents of the NWT as a whole (or Nunavut and the Western Territories after 1999), and by each IHSSA.

In the second year, a report would be generated on the health and social services being delivered by each IHSSA, with specific emphasis on the level of services aimed at the needs outlined in the year-one health status report.

In the third year, a report on the system's expenditures would be generated, again with specific reference to the extent to which dollars are spent on the priorities identified in year one. In the fourth year, the health status profile would be updated. Some of the indicators that might form the basis of the respective reports are described below.

Some good thinking has already been undertaken by members of the NWT Department of Health and Social Services, as reflected in documents entitled "NWT Annual Health Status Report: Draft Table of Contents" and "Wellness Indicators." The outcome indicators suggested below build on those suggested in the Table of Contents document (Dr. A. Corriveau, Health Protection Unit, personal communication). They

include population distributions and projections as well as socioeconomic data on education, employment, housing, water usage, income, living arrangements, overcrowding, crime statistics, family structure (i.e., proportion of children in single-parent homes), and cross-tabulations of these with age (e.g., seniors living alone, and poverty level by age or family structure). Body-burdens of environmental contaminants should be monitored. Data on health-enhancing and health-risk behaviours (e.g., substance use/abuse, gambling activity, suicide thoughts, body mass index, exercise, age at first intercourse, number of sexual partners, use of prophylaxes, frequency of pap smears) should be drawn from the 1996 Northwest Territories Alcohol and Drug Survey and the National Population Health Survey. These surveys, together with the 1996 Census, are recent or pending databases that should be analyzed to the fullest.

In addition to the births, deaths and life expectancy indicators listed in the Table of Contents document, it is suggested that teen pregnancies (i.e., births and abortions per 1000 females aged 15–19) be addressed, as well as secular trends in disease-specific mortality rates with projections as are provided in Chapter 3 of this report.

Morbidity data should include those from the cancer and communicable disease registries and well as survey data on self-reported chronic conditions, disability, and even level of stress. Outcome indicators should also incorporate positive health and social factors such as family functioning, general level of happiness, and the extent to which people are involved as partners with service providers in managing/maintaining their own health (e.g., got their vaccinations, monitor their own blood pressure, seek information on nutrition, participate in decision making around their own health, and show willingness to teach peers). Indicators of a healthy community could also be monitored (e.g., low absenteeism at school, participation in traditional activities, frequency of "sober" events). For some of these data, standardized instruments would need to be developed for easy administration by community health workers.

For service monitoring, a large number of potential indicators are documented in the Community Health Nursing Program Standards and Protocols manual, under the rubric "Process Standards." Given the health status profile provided in the present report, these and other "process standards" should be reviewed in detail to develop a list of indicators for service monitoring. For many existing programs and services, such indicators may draw heavily from the Community Health Management Information System (CHMIS). For example, in the health status profile the incidence of measles was identified as

relatively high in the Baffin Region. The CHMIS should be expected to provide accurate data on the extent to which Baffin children are being immunized. The indicators of family, community physician and hospital services outlined in the Table of Contents document are also relevant here. Ultimately, service monitoring amounts to ongoing, albeit passive, program evaluation. Such passive program evaluation data can be useful to IHSSAs who, being responsible for program delivery, would presumably have staff dedicated to a more active program evaluation program.

For expenditure monitoring, medical travel costs and supplementary health benefits by various diseases/conditions would be the type of indicators reported here. A key objective would be to relate the expenditure patterns back to the health status trends. Another key objective would be to refine the needs adjuster(s) employed by the Ministry's funding formula.

Chapter 8

Facilities Planning

In this chapter, we provide an overview of the current capital planning process utilized by the Department. In addition, we comment on our review of some of the critical issues facing the Department with respect to facilities redevelopment. The focus of our review was on the status of planning for facilities in Cambridge Bay, Fort Simpson, Fort Smith, Hay River, Inuvik, Iqaluit, Rankin Inlet, and Yellowknife. In reviewing facilities in these communities, we also reviewed plans for other facilities in these communities, such as the long term care facilities, social service offices and other related buildings. During our visits to other communities, we also reviewed the general overall condition of health centres and other buildings utilized by the Department.

It was not within the scope of this project to conduct a detailed architectural assessment of all facilities currently operated by the Department. Our review focused on the major facility issues that are currently facing the Department in order to develop realistic strategies for facility development that are consistent with the overall strategic plan for the Department.

The Capital Planning Process

The process of planning a capital project has been developed and is managed by the Department of Public Works and Services on behalf of the Department of Health and Social Services. This process is clearly articulated and consistent with those of other jurisdictions throughout Canada. The planning process includes the following:

- Provides a structure to manage the scope, cost, quality and schedule of a capital project
- Facilitates communication between parties of the project so that all can understand the role, responsibility and authority of each party
- Within the context of ongoing change, provides a vehicle for the structured exploration of issues, needs, opportunities and limitations leading to the definition of the project's scope

- Provides a consistent framework for information gathering, processing and distribution so that the maximum benefit of the work of hundreds of people can be realized through effective communication.

The capital planning process is comprised of seven steps: role study, operational plan, functional programming, life cycle cost/benefit analysis & condition analysis, design, construction and post construction/occupancy evaluation (Dept. of Public Works and Services, 1997). For the successful implementation of a capital planning process, the work of each of these steps must be carried out. Unfortunately, the perceived drawback of this process is that the time required to implement it and thereby get a new building or significant renovation ready for use, is far too long. The length of time to implement capital projects has not changed as rapidly as other aspects of the health care delivery system. These system changes are partly based on the ongoing restructuring to improving care and service delivery and need to decrease costs due to declining funding.

Challenges

The challenge to the successful implementation of the capital planning process is to ensure that the scope of the work of the seven steps outlined above is completed in a timely manner. Successful implementation of a capital project is based on the effective management of the monitoring and controlling functions of the process. These monitoring and control functions facilitate the management of financial and human resources, the procurement of outside resources (i.e., contract consultants and constructors), as well as project communications and risk management. To reduce the time required to successfully complete new facilities, the management of the planning process needs to change rather than the scope of the work of the process.

Project Management

Documents related to the Inuvik and Baffin Hospital Replacement Project Planning and Management Process describe the issues surrounding the management of these projects:

“The key factors upon which the process is based are the identification of **ACCOUNTABILITY** and related **AUTHORITY / RESPONSIBILITY**. This determines the levels and stages of approval...

“The Department of Health and Social Services is the Client Department as it is the funding agency and has the mandate to deliver health and social services

programs. It is ACCOUNTABLE for ensuring that the necessary programs and services can adequately be provided in the facilities....

“The Department of Public Works and Services is the Service Department (project management) and is ACCOUNTABLE for the completion of the projects....

“Numerous other stake holders must be involved in the process in an advisory and consultative role. ...As these stake holders are neither providing funding for the project nor have the mandate for the construction, they will not be held ACCOUNTABLE and therefore do not have the project management AUTHORITY.”(Dept. of Public Works and Services, 1997)

As both the Department of Health and Social Services and the Department of Public Works and Services are accountable for aspects of capital planning projects, they jointly take responsibility for successful implementation. This includes the management of monitoring and controlling functions of the projects. Each department reviews and approves the work of each stage of the project from numerous standpoints, but particularly from the standpoint of risk. In the context of this report, the description of risk management is to:

- Identify factors that are likely to impact the project objectives of Scope, Quality, Time and Cost.
- Quantify the likely impact of each factor.
- Provide a baseline for Project Non-controllables.
- Lessen impacts by exercising influence over Project Controllables. (Wideman, 1992)

In general, risk management involves the identification of the barriers to project implementation and the development of approaches to remove these barriers. If the barriers cannot be removed, there is a need to manage the barriers in order to ensure that the project succeeds.

The point at which many projects stall or end is with the approval to proceed from one stage to the next. Often the schedule for implementation expands by years because of

the accumulative effect of delayed approvals rather than the time to complete the work of the process.

Project Implementation

Over the past decade in the NWT, numerous initiatives for facility replacement and redevelopment have been started and either lacked broad ownership, resulting in a lack of project momentum, or were halted. Much energy has been expended on starting projects. These "false starts" have led to the general attitude that the capital planning process, managed by public sector organizations, is flawed, no longer appropriate for the current financial environment and takes too long to implement. The notion that the private sector can "get out of the ground" faster is prevalent in society.

The public and private sectors each have different approaches to approving project stages. It is arguable that this is due to public and private sectors differences in the level of risk that each can or will assume for project outcomes. The relationships between project stakeholders and project authority is different for the public and private sectors. With plans for several new construction initiatives in the NWT, an open discussion on the issues of project management, particularly risk management, should take place between the public and private sectors and project stakeholders. Questions that need to be asked include:

- Does the public sector require a lower baseline for Project Non-controllables than the private sector? Is this baseline so low that it becomes difficult to achieve any acceptable level of risk for a public sector organization?
- Can project stakeholders who do not have project authority but are motivated by specific interest to place barriers in the path of success be more positively involved in the process?
- How can the public sector, who have the knowledge of the people they serve, work with the private sector, who have broad approaches to resourcing projects and services, be brought together in a partnership for mutual benefit, authority, accountability and risk?
- What is the impact on the capital planning process of potential changes in accountability/authority and risk with the delegation of health and social services responsibilities to the regions and/or the communities?

- Who will monitor the output of contract consultants to ensure that the information requirements of a specific stage are met?
- Weighing all of the benefits and drawbacks of public, private and partnership capital initiatives, which option for new hospital development/redevelopment is the most suitable for Arctic and Sub Arctic health care centre construction projects?
- What role can the economic development corporations play in the financing, project management and provision of other services for these projects?

There is also a need to articulate the role of the future IHSSAs (Integrated Health and Social Service Authorities) in this capital planning process. The IHSSAs will ensure that the design of facilities reflects the culture, heritage and environment of the communities they serve. This would be accomplished in the selection of architects, participation in the design process and considering alternative operating systems. The IHSSAs will need to develop realistic plans to facilitate timely planning and construction of these projects. This should include consideration of not only the capital funding requirements but also the operating cost implications of the creation of a new or upgraded facility. The IHSSAs will have the responsibility to resolve local issues, build consensus throughout their jurisdiction, develop realistic planning and funding approaches and establish a reasonable time frame for these projects.

One of the mandates of the present review was to assess opportunities for private sector participation in the renovation, construction or management of current or new facilities. (This issue is also discussed in detail in Chapter 9 of this report - “Financial Strategies”.) Whether the management of health care facility design, construction or operation is undertaken by the public sector, the private sector, the economic development corporations or a partnership, the issues noted above need to be discussed. From this discussion, an exploration of relationships should occur and opportunities for private sector participation can be evaluated within this framework. This framework should define the successful relationships that should exist between the public and private sectors, economic development corporations, the Department, the IHSSAs and the communities in undertaking a capital redevelopment project.

Hospital Facilities Assessment

In this part of the chapter, we outline strategies that should be considered in planning for the future development of the six hospitals in the Northwest Territories. Our comments are based on an assessment of the preparedness of each facility to undertake the capital planning process and to accommodate restructuring of the health and social care delivery system. Each facility faces a different set of challenges in preparing the physical resources to meet the needs of the community and accommodate changing care and service delivery models.

In conducting our review, we examined tables of area, replacement costs and facility condition analysis reports prepared by the Department of Health and Social Services and by the Department of Public Works and Services. Information on numbers of beds at each facility is included in the "1997/98 Business Plan, Hospital Services Reform Report (Draft)," prepared by the Department of Health and Social Services. Reference should be made to this report for a more detailed information about the six hospitals.

The planned replacement of the Inuvik Regional Hospital was part of the 1988 transfer agreement between the Federal Government and the GNWT. The replacement of the Iqaluit Hospital was agreed upon in an amendment to that transfer agreement. Since that time, there have been efforts to move these projects closer to implementation. From a review of available documentation, it appears that these efforts have not generated the broad project ownership and momentum needed to ensure that these redevelopment projects are successfully implemented.

As a part of its plan to phase out the Medical Services Branch of Health and Welfare Canada, the Federal Government is prepared to fulfill its obligations with regard to funding these hospital replacement projects. This has acted to stimulate and energize the planning process for these two facilities, as well as for other capital initiatives.

The following assessments of hospital facilities are organized by the western and eastern Integrated Health and Social Services Authorities (IHSSAs) proposed in the framework of Chapter 2 in this report. The intent is to accommodate east/west planning for Division in 1999.

Hospital Facilities in the Western IHSSAs

Redevelopment of the Inuvik Regional Hospital

The Inuvik Regional Hospital, a former military hospital, is an aging facility with building systems that will require extensive upgrading in the near future if replacement is not implemented. The physical plant cannot easily or economically be upgraded. We concur with the recent Department of Public Works and Services facility report that the hospital building must be replaced with a new facility.

The projected capital replacement cost of the existing facility, quoting from the Health and Social Service and Public Works documents, is between \$24.2 and \$33.7 million, depending on whether a low, average or high cost projection is used. The site provides an ample land base on which a phased demolition and construction program could occur without having to relocate the entire hospital to temporary quarters. Much of the existing diagnostic and treatment equipment is new or nearly new and could be utilized in a new facility.

The original hospital was constructed in 1963 and a major addition occurred in 1971. The Hospital is wood frame construction on wooden piles. There are 26 acute care beds operating at 41% occupancy and 16 long term care beds operating at 94% occupancy. Total operating costs for the Hospital are \$11.6 million. In planning for the replacement of this facility, there is a need to carefully review the utilization of these beds and consider the future need for both inpatient and ambulatory care services. The potential for new and expanded ambulatory care programs should be considered based on the needs of the community. In planning for accommodations of expanded programming, consideration should also be given to the fact that co-location of health and social services can (albeit not alone) facilitate vertical integration in the system as guided by the framework given in Chapter 2 of this report.

Current Status of the Planning Process

A Role Statement has been prepared that outlines the programs currently offered at the Inuvik Regional Hospital. The most significant aspect of the Role Statement is quoted below:

“The Role Statement, as presented, outlines a vision for the services and programs to be provided by the IRHB. Ultimately, the mandate and the activities of the IRHB will be determined, not by the needs identified

through the planning process, but by an array of regional and territorial policies and realities outlined below.” (Inuvik Regional Hospital Board)

The text continues to identify ten socio-political initiatives (e.g., Division, Consolidation, Community Transfer) that will have a significant impact on the delivery of health care and social services. Notwithstanding the impact of these initiatives, the Inuvik Regional Hospital Replacement Project Planning & Management Process document indicates that the scope of programs, volume of activity, number of beds and major operating systems that impact operating costs are to be identified. Although the document identifies what is currently being done at the Hospital, it lacks specific information regarding the current workload and utilization of Hospital programs and services. It should be noted, however, that some of this information is included in several other documents in a variety of forms, such as:

- Overview of Inuvik Regional Hospital Services, October 18, 1996
- Inuvik Region Update, Aged, Disabled and Chronically Ill, February, 1996.

We understand that consultants have been retained by the Board to prepare an operating plan for the new hospital. Physical facility planning should be commenced immediately in order to attempt to fast track planning for the facility. The total design and construction process could take up to five years. There is a need to initiate this process as soon as possible in order to minimize the overall planning and construction time frame. The Regional Board should be given the responsibility for determining this time frame. The Board should consider alternative fast-track approaches to this project.

Conclusions

Based on our review of the current status of plans for redevelopment of the Inuvik Regional Hospital, we suggest the following:

- Plans should be prepared for the replacement of the Inuvik Regional Hospital on its current site. Construction should be completed within the next three to five years.
- All of the information needed to fully articulate the role of the Inuvik Regional Hospital’s services should be consolidated into one planning document.

- Co-location of health and social service activities should be planned, by locating both services on the new hospital site.
- In preparation for functional programming and design, the requirements for all diagnostic and treatment equipment should be developed and updated throughout the planning process.
- A risk management plan should be developed to address the potential impact of policies and realities in the future development of the Department. A plan should be prepared to address the issues as part of the planning for replacement of the Inuvik Regional Hospital. This plan should also ensure that broad project ownership and momentum are maintained.
- Consultants should be retained to prepare a functional program concurrently with the design consultants, so that meaningful dialogue occurs on the scope, quality, cost and schedule of the project. This will increase the validity and reliability of planning information generated for the project.
- Strategies for the implementation of new facility construction should respond to the unique geographic and logistical requirements of the NWT.

Redevelopment of the Hospitals in Fort Simpson, Fort Smith and Hay River

The "1997/98 Business Plan, Hospital Services Reform Project: Draft Summary Report" identifies many of the issues of maintaining a sustainable community hospital. One of the problems with the many hospitals in the NWT appears to be under-utilized facilities from the standpoint of inpatient beds. The report identifies low occupancy rates in most of the facilities. Ideal goals are set for facility inpatient utilization: 80% for acute care; 100% for long term care; and 80% for birthing beds. However, the occupancy rate or number of beds in a hospital should reflect the actual seasonal variations experienced for urgent and emergent care.

The Business Plan proposes options to reduce costs and increase utilization:

- Reduce costs by providing selected services in an existing or proposed alternative regional or community setting which has lower operating costs
- Increase service use (and possibly lower costs) by pooling selected services to a single hospital facility

- Increase service use (and probably lower costs) by altering the mix/type of services provided in a given hospital.
- Reduce costs by closing hospitals.

It is suggested that these options should take into consideration the existing network of services, with the goals of:

- Providing services cost effectively and in an appropriate setting
- Developing a network of Western Territories hospitals that enhance (not define) the delivery of health care services.

The Executive Summary of the Business Plan suggests that a more detailed functional analysis should be done on all hospitals using an approach that allows better peer group comparison with hospitals both within and outside of the Territories. It also suggests that there be ongoing monitoring of financial and facility indicators.

The major weakness of this document is the lack of consideration of the health and social service needs of the communities served by these facilities. During our visits to these communities, the Hospital Boards, medical staff, nursing staff, social services staff and others identified many unmet community needs. Prior to determining the best use of these facilities, it is important to consider these health and social service needs. The IHSSAs proposed for these communities should ensure that this is done.

In the absence of a comprehensive business plan, a facility assessment of the hospitals in Fort Simpson, Fort Smith and Hay River can only suggest a pre-feasibility position or the preparedness of the facilities to accommodate redevelopment. Based on demographic profiles that have been prepared for most communities south of the lake, there are a large number of health and social service issues in these communities. A number of new programs are required in these communities. These programs will require accommodation and would benefit from sharing space at a hospital or health centre. These types of programs include group homes and sheltered workshops for cognitively challenged adults, custodial accommodation for children in transition, offices and support spaces for social services, public health workers' offices and support spaces, and Level III & IV long term care accommodation. These needs should be considered prior to determining the future use of the buildings, and such consideration should be the responsibility of the proposed IHSSAs for these communities.

Hospital buildings are generally unique and may not lend themselves to accommodating other non-hospital functions without renovations. Therefore, it is important to determine the facility requirements for potential new programs prior to determining the feasibility of using existing hospital facilities.

The key aspects of a pre-feasibility assessment should include the following:

- Review of the land base for future phased demolition and construction if appropriate.
- Review of the existing physical plant to determine the amount of service life left.
- Review of the site to assess appropriateness for redevelopment from the standpoint of traffic patterns.
- Assessment of the internal organization of space and departmental relationships to determine if the buildings lend themselves to efficient redevelopment for other functions which need larger or smaller spaces.

In formulating a planning process to deal with the facility utilization issues surrounding the hospitals in Fort Simpson, Fort Smith and Hay River, the following strategies should be considered:

- Recombination and relocation of services should be considered
- Guidelines for utilization of hospital services should be developed based on peer comparisons
- Operational plans should be developed and assessed from the standpoint of community needs, availability of beds and optional occupancy utilization goals.
- Existing and potential future programs in the communities should be identified, and the order of magnitude of functional space requirements for them should be developed to ascertain whether existing hospital facilities can accommodate them without renovations or with minor renovations.

In the following part of this chapter, comments are made on the specific physical aspects of the three southern hospitals.

Fort Simpson Hospital

The Fort Simpson Hospital was constructed in 1973 in anticipation of significant growth in the area due to the construction of the Mackenzie Valley Pipeline. The pipeline was not constructed and much of the facility has not been utilized to its potential. The Hospital operates 10 acute care beds at 37% occupancy and 4 long term care beds at 41% occupancy. Total operating costs are approximately \$2.7 million.

The building is wood frame with metal siding and a substructure of concrete grade beams on steel piles. Public Works estimates that the building has ten to fifteen years of useful life remaining. The building systems are in reasonable condition and have substantial service life left. The medical and diagnostic equipment, particularly radiology equipment, is reaching the end of its service life.

There is a significant land base available for any redevelopment of the hospital site. Co-location and consolidation of social services activities and the redevelopment of the Hospital for Levels III and IV, Long Term Care, are all possibilities to be examined. As well, consideration has been given to the construction of a group home and sheltered workshop in the community. This proposal has been put on hold pending the recommendations of this report.

The community has a well designed home for the elderly, Stanley Isiah Home, which offers Level II residential care. This twelve-bed facility was constructed in 1988 and is situated within a complex of independent elder housing units. All facilities operate at full capacity. The home for the elderly has limited vacant land for redevelopment. In addition, the geometry of the building does not easily lend itself to expansion with major changes to existing spaces in the building.

Social services personnel are currently operating from an office building that the Department leases from private owners at a cost of \$90,000 per year. Cost savings could be realized if the social services staff were relocated to the hospital facility in unused portions of the building.

During our discussion with hospital personnel and physicians, we identified a number of opportunities for consideration:

- There is the potential to expand the range of ambulatory care programs provided to the community.

- There appears to be the need for a day hospital program to meet the needs of seniors who are living at home but could benefit from physiotherapy, social interaction, reactivation, nursing assessment and follow up of health problems.
- Mental health and social service programs are needed in the community.
- There is a need for a greater focus on health promotion and illness prevention programs.
- Dental services should be expanded.
- The possibility of providing obstetrical services in the community should be considered.
- Social services should be fully integrated with hospital services.
- The need for long term care services in this community should be determined based on the current community needs assessment that is in progress.

In planning for the redevelopment of this facility, a comprehensive needs assessment should be undertaken by the proposed Fort Simpson IHSSA to identify the range and scope of health and social services that are required by this community.

We understand that a consultant has been retained to determine the future needs of the Deh Cho community. This should provide a starting point for determining future program requirements to meet community needs. These program requirements will also determine the need for facilities and potential use of the hospital.

Fort Smith Health Centre

The Fort Smith Health Centre is comprised of 13 acute care beds operating at 22% occupancy and 12 long term care beds operating at 52% occupancy. Total operating costs are \$4.9 million. There is unused capacity in several of the departments, particularly the birthing facility, inpatient beds and other support service areas.

The building is on a large site with ample land for redevelopment. It was built in 1979 and has not had any addition or major renovation work done. The building systems are in satisfactory condition and there is significant service life left in the building. The

internal organization of the public spaces, ambulatory and outpatient areas and entrances require re-planning to better accommodate these functions.

The building is currently home for approximately six cognitively challenged adults. One plan for the Centre is to expand on this service and act as the regional centre for cognitively challenged adults. Repatriation of physically challenged adults from Alberta hospitals may increase significantly the number of residents in this facility.

The Northern Lights long term care facility provides services for 20 residents, including 2 respite beds. The building was constructed in 1991 and is a wood frame building on a concrete foundation. The facility is owned by the Town of Fort Smith and is operated by a separate board that reports to a committee of the Town Council. There is potential for the development of shared services between the Hospital and the Home, but there has been no detailed examination of this possibility. Northern Lights is an excellent long term care facility and appears to meet the needs of its residents.

Discussions with Hospital Board members and staff indicated that the following services were needed in the community:

- Obstetrical services should be provided locally to the extent possible and a midwifery program should be considered.
- Basic primary care services should be provided in the community to the extent possible.
- Medical transportation costs could be reduced by providing more services in the community.
- The potential for shared services with Northern Lights should be considered in housekeeping, dietary, maintenance, laundry, finance, information systems, etc.
- A hostel for single men is needed in the community.
- Community outreach services, such as meals-on-wheels, homeless services, counseling, children's services, etc., should be provided.
- More recreational activities are needed.
- Mental health services should be expanded.

- More home support services for seniors are required.
- Social services for children, women, youth, elderly, unemployed, alcoholics, mentally ill, and others in the community should be expanded.
- Ambulatory services, such as a diabetic clinic, children's services, rehabilitation, occupational therapy, speech therapy, mammography, etc., should be enhanced.
- A Day Hospital should be considered for seniors, mental health patients and others.
- Specialty medical services provided by Stanton Hospital should be expanded.
- A children's day care program is needed.
- The potential for minor surgical services should be considered.

In order to determine the most appropriate use of the Fort Smith facility, the proposed Fort Smith IHSSA will need to conduct a comprehensive assessment of the health and social service needs of this community. In addition, there is a need to resolve a number of issues, including:

- What **social services** are needed in the community for the elderly, youth, women, children and other special groups?
- How will obstetrical services be provided in this community?
- How many family physicians are required for the community?
- What ambulatory care services are required?
- What is the projected need for long term care services?
- How can mental health services be provided in the community?

Based on a definition of program requirements, physical facility needs for these programs and services should be determined. The future use of the hospital to respond to these needs should also be determined.

The last step in this planning process should be to determine the extent of physical facility changes at the Fort Smith Hospital.

H.H. Williams Hospital, Hay River

The H.H. Williams Hospital was initially constructed in 1964, with an addition in 1977. The structural anomalies of the 1964 construction are well known as the building appears to float on a layer of transitional permafrost and moves a great deal. The Department of Public Works and Services has examined this building and deemed it structurally sound. This part of the building will require ongoing maintenance to replace sections of envelope that fail and re-hang doors and repair walls and ceilings that fail due to building movement.

The functions of this area of the building have already been downgraded to office activities. Few outpatient functions and no inpatient functions are carried out in this wing. Proposals have been prepared for the redevelopment of the building which would include demolition of this wing. The Department of Public Works and Services does not, however, consider its demolition appropriate in the absence of evidence of structural failure. The Hospital has an adequate land base for redevelopment.

The Hospital operates 34 acute care beds at 29% occupancy and 16 long term care beds at 60% capacity. Annual operating costs are \$6.7 million. The utilization of the inpatient beds of H.H. Williams Hospital is higher than the other two southern hospitals, though still of concern in this era of declining financial resources. It acts as a regional centre for several programs, particularly pediatric dentistry. Public health and social services workers are operating from the first level of the building. A medical office building with four family physicians is adjacent to the Hospital.

The Woodland Manor long term care facility is located adjacent to the Hospital. Constructed in 1989, this is an excellent facility for its current programs. The facility consists of 18 beds, including 2 respite beds. The building is wood frame construction with a concrete foundation and basement. This single-story building provides a home-like environment for residents with central dining and activity areas and private bedrooms. There appears to be the need for storage facilities, but use of vacant space at the Hospital should be considered. There is also the potential for the development of shared support services with the Hospital.

A review of the needs of the Hay River community was conducted in 1995. Based on our discussions with community representatives, we understand that this community profile does not accurately reflect the current needs of the community. Discussions with hospital staff identified many unmet community needs, including:

- Rehabilitation services, including speech pathology for children
- Ophthalmology services
- Mental health services
- Group home for mentally ill patients
- Expanded social services
- Long term care services for children
- Palliative care services
- Expanded diagnostic services in radiology and laboratory
- Alcohol and drug counseling services
- Health promotion and illness prevention
- Public education.

In general, there was a high level of commitment to the need to develop a "wellness plan" for the Hay River community that focuses on the community's needs, rather than on its physical facilities. Based on our review, we believe that prior to determining the most appropriate use of this facility, the proposed Hay River IHSSA will need to carry out the following:

- Conduct a comprehensive assessment of the health and social needs of this community.
- Define the range and scope of services that should be provided in the community.
- Determine the facility requirements of the services and programs that will be provided at the Hospital.

- Assess the ability of existing physical facilities to respond to the needs of the health and social services programs.
- Consider the potential for shared services with Woodland Manor and other agencies in the community.
- Develop a plan for renovation of Hospital facilities to meet program needs.

Conclusions

The Fort Simpson Hospital, Fort Smith Health Centre and H.H. Williams Hospital are all suitable for redevelopment with additional office and educational spaces. None of the facilities, however, adequately address the spatial needs of the long term care patient. The standard for long term care facilities, regardless of the level of care, has been set very high indeed with the Stanley Isiah and Northern Lights Long Term Care Homes. These are facilities worthy of national recognition as models of long term care facilities. Should the most advantageous redevelopment of the existing hospitals building prove to be long term care, renovations should be carried out for their improvement.

In their present configurations, none of the facilities appear suitable for accommodating custodial children awaiting permanent placement in a home setting, whether that be with their own families or in a foster home. Although support services such as dietary and laundry facilities and the location of social services personnel in the building make this an attractive option, renovations to accommodate the needs of children who would be staying more than a couple of days would need to be undertaken.

The three hospitals need to undertake renovations to improve the entrance, circulation, ambulatory space and outpatient facilities. However, comprehensive community needs assessments that accurately reflect the social and health care needs of these communities should be the first step in this planning process, and priority for the IHSSAs proposed for these communities.

Stanton Regional Hospital, Yellowknife

Stanton Regional Hospital was opened for operation in 1988 and underwent internal reorganization of some clinical and support areas in 1992. Its construction was part of the 1988 Transfer Agreement between the GNWT and the Federal government. The geometry of the three-floor building, a diamond at the centre of a double loaded corridor,

does not lend itself easily to vertical or horizontal reconfiguration. At present, there are several outpatient functions that would be better located near the outpatient department. In addition, the system of corridors through the diamond geometry is confusing for patients and families.

The Hospital serves as the secondary and tertiary care centre for the catchment population of the Western NWT, notwithstanding the tertiary care services provided by Edmonton hospitals. There is currently a plan at the hospital to undertake spatial reorganization resulting in renovation and new construction to accommodate a CT Scanner⁷ in the Department of Radiology. Although planning is tentative, current thinking includes construction of an adjacent service building with an interconnecting bridge, relocation of materials management and laundry out of the main building, relocation of the Department of Rehabilitation and expansion of the Department of Radiology. There is also a suggestion that additional space may be obtained by “blasting” downward into the bedrock under the existing hospital. This space could be used by Material Management.

The Hospital operates 84 acute care beds at 54% occupancy and 14 long term care beds at 89% occupancy. The annual operation cost of the Hospital is \$33.4 million. The Hospital is currently examining alternative ways in which the patient care units could be combined or reconfigured to improve the utilization of facilities. However, the current layout of the patient care units does not permit the reconfiguration of the units without major physical changes. There is the possibility that the relocation of outpatient activities to the patient care units could improve the cost effectiveness of these units during the day shift. Plans for redevelopment of the Hospital should address this issue.

Conclusions

Based on our brief review of this facility, there are a number of issues that should be addressed. A pre-feasibility study should be undertaken as a joint effort between the Stanton Regional Hospital and the proposed Stanton Region IHSSA to determine the preparedness of the facility to align its operations with the objectives of the Draft Business Plan. This study should address issues such as:

- The potential for locating all inpatient beds on a single inpatient floor

⁷ Note that the Project Team is not making any comments regarding the need for a CT Scanner

- The potential for moving ambulatory care services to inpatient units
- Operating cost implications of locating services into a separate, adjacent building
- Potential for the development of shared support services with the other public and private sector organizations in the community
- The need for additional ambulatory care programs and facilities
- Potential for integration of social service activities into the Hospital.

There is also the need to determine the level of secondary care services that will be provided at the Hospital after division. If referral patterns change, the volume of secondary care services could be reduced and utilization could decrease.

Hospital Facilities in the Eastern IHSSAs

Redevelopment of the Baffin Regional Hospital

The Baffin Regional Hospital was first constructed in approximately 1962 and received a major addition in 1977. Building services upgrading has taken place since that time. Many of its services are now, however, in need of either replacement or significant expansion to handle the electrical and mechanical demand. Medical and Diagnostic equipment is of varying ages and conditions; however, a significant amount of it is new and/or has much service life left. Utilization of the hospital facility is high and the existing building does not adequately accommodate current requirements for health care delivery.

Although the building's envelope and structure are serviceable, the layout of departmental space and circulation routes do not accommodate efficient operation, ease of movement or dignity for patients and families. Given the configuration of the long narrow building on the long narrow site, expansion, phased redevelopment or complete demolition and rebuilding are neither desirable nor feasible. We suggest that the construction of a new facility on a new site would be the most cost-effective approach to redevelopment of this facility.

There are currently two municipally owned sites that are available and suitable for the new Baffin Regional Hospital. These sites are desirable because they are in close

proximity to municipal services. Project costs would be significantly increased if a site were chosen which required the municipal services to be extended beyond its current boundaries.

Projected capital replacement cost has been estimated at \$18.8 to \$26.7 million (quoting from Health and Social Services and Public Works document). Our review of other documents indicates projected capital costs in the order of \$46.6 million. In light of Federal/Territorial negotiations, the magnitude of the project cost needs to be more clearly defined.

Current Status of the Planning Process

A Role Statement for the Baffin Regional Health Board has been developed. The Board is prepared to move on to the next stage of the project, that being Operational Planning. The scope of programs, volume of activity, number of beds and major operating systems that impact operating costs need to be consolidated from previous planning documents. There is also the need to define the level of secondary level care services that should be developed at this facility. This should not, however, result in delays in the planning process. In planning for this facility, there is a need to reflect the unique culture and heritage of the region in the design, delivery systems and operating environment. The creation of Nunavut in 1999 has the potential to act as a significant stabilizing influence on the planning process for the replacement of the Baffin Regional Hospital.

The Baffin Regional Hospital Board should be given the responsibility of developing the overall time frame for planning, design and construction of this facility. The Board should work with the Department and other interested parties, such as the Quikiqtaaluk Corporation, the private sector and other community groups to examine ways in which this project can proceed in a timely manner.

Conclusions

Based on our review of the status of this facility, we suggest that:

- Plans for the replacement of the Baffin Regional Hospital on a new site should be developed as quickly as possible by the Baffin Regional Board.
- A new site should be procured immediately in preparation for the new hospital facility.

- Consultants should be retained by the Regional Board to prepare a functional program for replacement of the hospital and design consultants should be retained concurrently to prepared block schematics for the proposed new building. In this way, a meaningful dialogue can begin on the scope, quality, cost and schedule of the project.
- The Baffin IHSSA Board should develop a realistic timetable for the planning, design and construction of this facility.
- Concurrent with the development of a functional program, the Baffin IHSSA Board should plan for consolidation of health and social services functions and co-location of Public Health activities.
- A risk management plan should be developed to identify the potential impact of Division in 1999.
- Strategies for the construction of the new facility should be developed to accommodate the creation of Nunavut and any new procurement requirements.

Cambridge Bay

The current physical plant of the Cambridge Bay Health Centre is inadequate to meet the current and future needs of the Cambridge Bay community and the Kitikmeot Region. In February, 1997, the Kitikmeot Region had no physicians and the nursing staff were responsible for the provision of all primary care. Patients requiring medical assessment are referred to Yellowknife for further assessment and treatment. The lack of physicians in Cambridge Bay places a great deal of undue pressure on the nursing staff at the Health Centre to assess, diagnose and treat patients without sufficient medical backup and support.

The Cambridge Bay Community Profile prepared in 1995 indicates that in 1990 alone, there were 490 chartered airline medical evacuations from the Kitikmeot Region at an average unit cost of approximately \$3,000. This results in a total annual cost of nearly \$1.5 million, the highest of any region in the NWT. This high cost is a function not only of high utilization rates in the Kitikmeot Region, but also the distance to the referral centre and related high costs of accommodation. We believe that many of these medical evacuations could be eliminated, or, at least, the costs reduced, if an appropriate range of services was available in the Cambridge Bay community to serve the needs of the

Kitikmeot Region. The issue of medical travel costs were discussed in more detail in Chapter 5 of this report.

The need for a birthing centre in the Region was identified during our interviews in this community. The establishment of a birthing centre staffed by midwives, a model that has successfully implemented in Rankin Inlet, was frequently mentioned as an ideal model for Cambridge Bay.

On the basis of our review of the health centre facilities in this community, the annual medical travel costs, and our understanding of the social and health care needs of the community, we suggest that an expanded health centre be constructed in Cambridge Bay to meet the primary social and health care needs of the Kitikmeot Region. This facility should have four to six holding beds, a birthing centre, emergency department, ambulatory care clinics and a range of diagnostic and support services. There is also a need to recruit three to four family physicians for the whole region and one or two nurse practitioner/midwives to support existing health and social services staff in the Kitikmeot Region.

In planning for this new facility, a comprehensive community needs assessment should be undertaken to identify the health and social service needs of the Kitikmeot Region and Cambridge Bay. Based on this assessment, the range and scope of social and health services that should be provided in Cambridge Bay, as well as in other communities throughout the Region should be defined. Appropriate facilities should be designed to meet the needs of these programs and services and a plan should be developed to construct these facilities as soon as possible. The proposed Kitikmeot IHSSA should be responsible for this planning process. The Department should transfer the appropriate envelope of funds to the Kitikmeot IHSSA as a matter of priority to facilitate completion of the above mentioned planning process within the next six to nine months (i.e., by early 1998). This will permit an early reduction of medical travel costs in a region where such costs are highest.

Rankin Inlet

The Health Centre in Rankin Inlet has undergone several modifications since its initial construction, including the addition of a birthing centre. However, during our interviews, there was a high level of frustration expressed regarding the working conditions of the facility. The physicians and nurses should be commended for providing the current level

of service under less than ideal conditions. There are currently only two physicians in the Keewatin Region both located in Rankin Inlet. Based on the needs of this community, we support the plan to relocate some services currently being provided in Churchill, Manitoba to the Rankin Inlet facility and to expand the range of services provided to the region and the community. The initiatives in the areas of dental care and greater regional involvement in specialist services should be commended. Current contract talks with the Northern Manitoba Unit are focused on a greater regional administrative role while maintaining the much-needed academic links. Efforts are underway to recruit four primary care physicians for the Region.

To respond to needs, we suggest that an Expanded Health Centre be constructed in Rankin Inlet with four to six holding beds, a birthing centre, emergency facilities, ambulatory care clinics and consolidated social and health services. Planning for this new facility should be based on a comprehensive community needs assessment that should be prepared by the proposed Keewatin IHSSA. Based on this needs assessment, the range and scope of services to be provided in the community should be determined. Finally, the facility needs of these programs should be determined based on expected volumes of services and requirements for diagnostic and support services. Overall responsibility for proceeding with this planning should rest with the Keewatin IHSSA.

Summary of Future Strategies

On the basis of our review of selected physical facilities currently operated by the Department, we suggest that the following strategies should be considered:

- A task force comprised of Public Works, Department (future Ministry of Health and Social Services (MHSS)) and Regional Board (future Integrated Health and Social Service Authority (IHSSA)) representatives should review the current capital planning process and identify opportunities to streamline this process.
- The MHSS should work with the private sector, economic development corporations and the IHSSAs to determine the roles that each can play in facilitating the timely completion of capital projects.
- The Inuvik IHSSA should prepare plans for the replacement of the Inuvik Regional Hospital on its current site. Construction should be completed within the next five years.
- Co-location of health and social service activities on the new hospital site should be planned by the Inuvik IHSSA.

- The Baffin IHSSA should prepare plans for the replacement of the Baffin Regional Hospital on a new site as soon as possible.
- A new site should be procured in preparation for the new Baffin Regional Hospital.
- Concurrent with the development of a functional program, the Baffin IHSSA should consider co-location of health and social services functions at the new Baffin Regional Hospital.
- Comprehensive community health and social service needs assessments should be conducted by the Fort Simpson, Fort Smith and Hay River IHSSAs prior to developing plans for changing programs or altering physical facilities in these communities.
- Planning for an Expanded Health Centre to be located in Cambridge Bay and Rankin Inlet, should be undertaken by the Kitikmeot and Keewatin IHSSAs.

Chapter 9

Financial Strategies

In this chapter, a brief overview of the financial status of the Department of Health and Social Services is provided. We also comment on the approach to financial management used by the Department and offer some suggestions for improvement.

Overview

The Department's main estimate budgets for 1995/96, 1996/97 and plans for 1997/98 were reviewed. Significant changes since 1995/96, particularly the inclusion of Social Services in 1996/97, make relevant comparisons difficult on a line-by-line basis. See Exhibit 9-1 for the estimate budget for 1996/97 and the plans for 1997/98.

The chart below compares the estimated budget for 1996/97 and the targets for 1997/98. Departmental expenditures have been grouped into the following five categories to assess the overall allocations:

- **Administration** (at Department level only, this category does not include Regional Health Board level administration)
- **Medical Payments** (administered by the Department on behalf of all Regional Boards)
- **Medical Travel** (administered by the Department on behalf of all Regional Boards),
- **Social Services**
- **Medical Delivery** (administered by Regional Boards).

	1996/97	1997/98
Administration	6.8%	5.8%
Medical Payments	23.6%	24.0%
Medical Travel	10.6%	8.9%

Social Services	19.3%	25.3%
Medical Delivery	39.7%	36.0%
	100.0%	100.0%

This comparison indicates that the Department directly or indirectly controls approximately 60% of the expenditures and the Regional Boards are effectively only accountable for about 36% to 40% of budgeted funding. However, decisions made by Regional staff affect, directly or indirectly, the majority of expenditures, particularly Medical Travel and utilization of services. These decisions determine the amount of Medical Payment and Social Service expenditures.

Medical Travel

After Territorial Hospital Insured Services, medical travel continues to represent the single largest line item expenditure when examined in detail (Exhibit 9-1). The projected growth from the 1996/97 estimate of \$20.8 million (which is expected to be significantly exceeded) to \$25.6 million for 1997/98 represents a 23% increase. Despite Departmental awareness and several studies to assess the expansion of Medical Travel expenditures, it appears that the Department is still unable to control expenditure growth in this area.

Decisions to initiate Medical Travel across the vast space of the Territories are made at the community level. However, the Regional Boards, who are responsible for services in the communities, are not held accountable nor have budgetary flexibility with Medical Travel budgets. It appears that proper accountability for management of Medical Travel is lacking.

Budget Allocation

It is doubtful that any similar jurisdiction exists in Canada or the rest of the world from which to base trend analyses due to the diversity of cultures, dispersion of the population, extreme climatic conditions, and severity of health and social service issues identified. In addition, identification of reasonable targets for future expenditures based on historical trends should not be determined given uncertainties whether current levels of expenditures are reasonable (e.g., medical travel, staffing, delivery of health and social services). Opportunities to reduce costs, eliminate waste and improve effectiveness

should be assessed before extrapolation of past trends are used as proxies for reasonable future expectations.

The budget estimates allocated for Administration and the growth in both dollar and percentage of total budget should be reviewed to determine potential redundancies and/or cost savings. Administration staffing numbers at the Department appear to be unduly high

Exhibit 9-1
 Department of Health and Social Services
 Main Estimate Budgets for 1996/97 and 1997/98

		Health & Social Services 1997/98		Health & Social Services 1996/97	
Deputy Minister's Office	Administration	893,000	0.4%	943,000	0.4%
Superintendents	Administration			710,000	0.3%
Chief Medical Health Officer	Administration	553,000	0.2%	553,000	0.2%
Policy & Legislation	Administration	801,000	0.3%	806,000	0.3%
Communications	Administration	124,000	0.1%	191,000	0.1%
Information Systems	Administration	6,453,000	2.7%	1,487,000	0.6%
Strategic Planning	Administration	1,574,000	0.7%	1,733,000	0.7%
Vital Statistics	Administration	260,000	0.1%		
Professional Registries	Administration	64,000	0.0%		
Accounting and Administration	Administration	514,000	0.2%	1,877,000	0.8%
Financial and Capital Planning	Administration	879,000	0.4%	789,000	0.3%
Health Services Administration	Administration	1,788,000	0.7%	1,815,000	0.8%
Population and Board Dev Admin	Administration	2,462,000	1.0%	2,783,000	1.2%
Supplementary Health Benefits	Medical Payments	2,733,000	1.1%	2,667,000	1.1%
Non-Insured Health Benefits	Medical Payments	15,795,000	6.5%	15,750,000	6.7%
Out of Territories Hospitals	Medical Payments	19,866,000	8.2%	19,045,000	8.1%
Physicians Inside the NWT	Medical Payments	15,239,000	6.3%	14,812,000	6.3%
Physicians Outside the NWT	Medical Payments	3,446,000	1.4%	3,996,000	1.7%
Medical Travel - To be revised	Travel	25,579,000	10.6%	20,782,000	8.9%
Direct Program Delivery	Social Services			7,547,000	3.2%
Child Protection Administration	Social Services	1,638,000	0.7%	1,088,000	0.5%
Child Sexual Abuse Prevention	Social Services	937,000	0.4%	937,000	0.4%
Foster Care - To be revised	Social Services	5,354,000	2.2%	5,189,000	2.2%
Residential Care - Children	Social Services	3,835,000	1.6%	3,696,333	1.6%
Children's Group Homes	Social Services	1,226,000	0.5%	1,226,000	0.5%
Intervention Services	Social Services	583,000	0.2%	583,000	0.2%
Community Health Administration	Social Services	5,091,000	2.1%	5,153,000	2.2%
Community Based A&D Programs	Social Services	3,939,000	1.6%	3,939,000	1.7%
Residential Care	Social Services	4,048,000	1.7%	5,143,000	2.2%
Family Violence Shelters	Social Services	2,491,000	1.0%	2,491,000	1.1%
Community Wellness Programs	Social Services	1,723,000	0.7%	4,614,000	2.0%
Home Care	Social Services	4,275,000	1.8%	4,275,000	1.8%
Residential Care E&H	Social Services	5,622,000	2.3%	7,709,000	3.3%
Southern Placements / E & H	Social Services	6,019,000	2.5%	5,699,000	2.4%
Territorial Hospital Insured Services	Medical Delivery	96,238,000	39.8%	84,699,001	36.1%
		\$ 242,042,000	100.0%	\$ 234,727,334	100.0%

in light of the number of administrative personnel at Regional Health Board level as well as the size of the Department as a whole.

Departmental Budgeting Processes

A review of the capital planning and budgeting processes of the Department were undertaken by interviewing personnel of the Financial and Management Services Division, as well as reviewing Departmental budgets for 1996/97 and plans for 1997/8 (see Exhibit 9-1).

Departmental capital and operating budget planning for the current year has not considered the planned Division of the Territories. The administrative support structures to service the forthcoming needs of Nunavut and the Western Territories after April 1, 1999 have not been identified for Departmental personnel. Therefore, current capital and budgeting processes are not focused on providing the Minister and Deputy Minister with realistic expectations regarding human resources requirements, systems requirements, facilities requirements and funding required to support planned expenditures when the division of the Territories occurs.

Current Departmental capital and operating budget planning is primarily dedicated to the allocation of funds provided by the Federal government and other sources of funds. Operating budgets are not prepared based on the health care needs of communities and Regions in the Territories.

Based on our interviews, there appears to be a prevalent attitude among Departmental staff that expenditures will continue to increase. There is no evidence that Departmental staff question whether funds are efficiently used by the Regions and whether efficient use of funds can achieve Departmental objectives. In order to develop a more effective budgeting process, there should be a commitment to identify cost savings on a continuing basis and to question attitudes that assume that increased expenditures are inevitable. This should be a clearly articulated objective of the Department and policies should be developed to support this objective.

Funding allocations are determined by the Corporate and Capital Planning section of Financial and Management Services. Currently, input from the Regions as to the apportionment of available funds is not solicited by Corporate and Capital Planning. A

general sense of distrust is observable between the staff of the Region and the Department regarding the reasonableness of funding allocations. The budgeting process should include input from a larger range of Departmental staff who have useful insights and experience and understanding of the needs of the Regions, in order to identify the most appropriate allocation of funds.

At present, the Department's budgeting process focuses on the process rather than on the objectives of the Department. This attitude exists both in the capital and operating budgeting processes. For example, Corporate and Capital Planning provides recommendations for next years' budget based on prior year expenditures rather than a needs-based decision-making process. It is not apparent that budgeting processes include "value-for-money" approaches to expenditure allocation. Rather, prior year's expenditures are presumed to be a base level from which next year's budget will probably increase.

Forced Growth

The concept of "Forced Growth" appears to be widely accepted in the Department as a significant and, perhaps, a primary determinant of budget overruns. More detailed analysis of current expenditures and control systems should be completed prior to acceptance that Forced Growth is a justifiable cause of budget overruns. There is a need to undertake more comprehensive financial analysis and to coordinate this activity with needs-based funding studies.

Variance Analysis

For the most part, it is not apparent that detailed analysis of the causes and potential solutions to variances between budgeted and actual expenditures are adequately identified, or that recommendations for corrective actions are pursued. Discussions of major expenditure variances were frequently attributed to mismanagement by the Regional Boards.

Financial Role of Regional Boards

Capital and operating budget planning processes do not receive formal input from the Regional Health Board Chief Executive Officers or their staff prior to determination of the priorities of health and social services at each Regional Health Board. There is also no attempt to determine the operating funds required to meet the health care needs

determined by the Boards. Moreover, Regional Boards indicated that they are considered parochial administrators with limited real authority. They feel, however, that they are held responsible for budgetary excesses. There is no sense of unity of objectives between the Department and the Regional Boards. Lack of ongoing consultation between the Department and the Regional Boards is responsible for attitudes of antagonism and distrust between these two levels of governance in the Territories.

There is a general attitude among Departmental staff that Regional Boards are not sufficiently experienced nor motivated to effectively and efficiently administer their budgets. Departmental staff complain that their directions are not always followed by the Regional Boards. Regional Board staff complain that Departmental staff are out of touch with the needs of the Regions.

Given these attitudes of mutual distrust, there is little or no motivation for Departmental and Regional Board staff to identify, design and propose feasible financial cost savings.

Capital Funding

Capital asset funding for 1996/97 was \$13.6 million, which includes funds for new capital projects as well as contributions for specified maintenance projects. The historic cost of capital assets under administration is not accurately determinable. Values for all capital assets transferred from the Federal Government in 1988 are not complete. Notwithstanding the lack of detailed and accurate valuation information, it appears that funding for required capital assets is being curtailed in order to fund operating financial requirements.

It is estimated by Departmental staff that the construction value of capital assets is about \$600 million, although Public Works records indicate about \$109 million. The latter figure, however, reflects only physical buildings and does not include all facilities. The estimated costs of vehicles, medical equipment, communications, information systems, office equipment, and other assets are not available. Nonetheless, capital expenditure allocations of \$13.6 million in 1996/97 (\$6.5 million for buildings and works, \$790,000 for equipment acquisitions, and \$6.3 million contributions for planning new facilities) is insufficient to maintain capital assets across the NWT.

In 1988, the Federal Government identified the need to replace the hospitals in Inuvik and Iqaluit. We understand that funding from the Federal Government towards the

renovation of the Inuvik hospital and the replacement of the Iqaluit hospital has been spent as part of the Territorial consolidated revenues. The contingent liability associated with unfinished negotiations, which will determine the actual Federal commitment, is currently in excess of \$10 million. As a result, capital planning for potential renovations and reconstruction of hospital facilities in Inuvik and Iqaluit is significantly constrained by the past expenditure of funds.

Departmental Financial Management Processes

In order to assess the potential for operating cost savings throughout the Department, we reviewed Departmental structures and management control systems. Our review has indicated that the current structure is based on centralized controls at the Department, with implementation at the Regional Board level. This structure is inherently in conflict with the diverse cultures of the Aboriginal peoples of the NWT.

Central Control

There are major difficulties in managing a large organization, such as the Department, over vast distances with restricted lines of communication, physical contact and technical infrastructure. There are numerous examples of private sector organizations failing due to a centralized control approach to management, in which those responsible for strategic decisions have limited contact with and, perhaps, limited understanding of, the challenges of front-line operations. Frequently, such organizations evolve to a decentralized management structure in order to achieve their objectives.

Regional differences and geographic distances tend to alienate the Departmental staff based in Yellowknife from Regional staff.

Decentralization

Based on our review, we believe that there are opportunities to achieve operating cost savings by decentralizing many of the activities of the Department to the Regions. Support should be provided by the Department. Devolution of authority to the Regional level should be more than a token policy statement. Allocations of funds to the Regional level should be accompanied by Departmental policies that foster efficient use of those funds at the Regional and community levels.

We believe that operating cost savings could be achieved by providing front-line staff at the community and Regional Board levels with the ability to make prudent decisions

regarding expenditures, within reasonable policy parameters and guidelines. At the same time, there is a need to provide the front-line staff at the Regions with the systems and information that will allow them to effectively and efficiently managed their resources. These requirements were discussed in Chapter 7 of this report.

Surplus/Deficit Retention

At present, the Department has not implemented a viable surplus/deficit retention policy that would permit Regions to reallocate any surpluses they generate. As a result, Regional Boards do not have the ability to fully re-deploy operating surpluses for use in other health and social service programs. In addition, the Regional Boards do not have the ability to reallocate funds from programs controlled by the Department to other community needs. Thus, there is no incentive to conserve funding that does not have to be spent.

Accountability

The current structure of the Department and the Regional Boards does not make those responsible for administration and delivery of health and social services fully accountable. Departmental staff exercise direct control over many activities that occur at the community level under the authority of the Regional Boards. This functional control circumvents the operating authority of the Chief Executive Officers of the Regional Boards and undermines their accountability.

A prevalent attitude among Regional Board staff is that Departmental staff should be held accountable for their decisions. At the same time, Departmental staff maintain an attitude that Regional Boards are not implementing Departmental policy as prescribed.

Based on our review, there is no evidence that either Departmental or Regional Board staff are fully accountable for ensuring that financial expenditures are maintained within approved budgets. Career progression and compensation of Departmental staff are not integrated with the achievement of performance objectives. Financial incentives for cost savings are not evident at either the Regional Board or Department level. Financial decisions at the Regional Board level are focused on determining the best allocation of scarce funding dollars. Policies are based on administration of funds rather than on determining financial savings opportunities.

Micro-management

The management process used by the Department is admittedly generally one of "micro management." For example, even though Regional Boards have annual budgets, we were advised that the advancement of budgeted funds is sometimes held in abeyance pending receipt of monthly financial reports. This behaviour suggests that support staff believe that they are responsible for control of Regional Boards. The Department should develop policies that clearly indicate the level of authority of Departmental staff and Regional staff. Departmental staff should focus their activities on the achievement of the objectives of the Department. The Department should clearly communicate that the delivery of health and social services is the domain of the Regional Boards.

Responsibility for Medical Travel

Medical travel is a singularly large and growing expense. Despite improved information systems, financial accountability for personnel recommending and approving travel is not reviewed, assessed, and managed on an ongoing basis. In the future, financial information regarding medical travel expenditures will be routinely distributed to Regional Boards. Standard reports showing current and prior year expenditures by health care practitioner, community and Region will be reported. These reports will enable Regional Boards to know who is traveling, where they are traveling, for what reason, and at what cost.

The Department has recently identified numerous opportunities to improve the management of medical travel costs, including:

- Conduct a zero base review of all travel expenditures.
- Increase the use of discount airfares through a combination of advanced planning, training and measuring of results. (Medical travel is often on a full fare basis and often one way tickets.)
- Negotiate volume discounts with airlines, hotels and travel agents.
- Reduce administration costs by streamlining approval and payment processes and travel/accommodation warranted processes.
- Improve discharge planning to reduce time patients spend in facilities.

- Repatriate patients currently receiving care in out-of-Territories facilities.
- Establish medical travel guidelines (reason for travel, need for escorts, correct planes, etc.).

To realize the potential of these opportunities, the Department and the Regional Boards must hold those staff who are responsible for administration of medical travel services fully accountable. Budgetary allocations for medical travel should be agreed to with Regional Boards, who should have the flexibility to use funds as needed, but be required to fund deficits within their overall Regional budgets and not expect them to be funded by the Department. As indicated earlier, a surplus/deficit retention policy should be established.

Maintenance Costs

Historically, maintenance costs have been absorbed by the Department of Public Works. Thus, Regional Boards thus have no incentive to manage these costs. In 1997/98, Public Works' budgets for vehicle maintenance will be transferred to the Department and the annual costs of maintenance will become increasingly apparent. It will be important to develop Departmental policies ensuring that Boards are held accountable for the management of these costs.

Other potential opportunities for operating cost savings or reallocation include:

- Adjusting staffing levels at community health and social service facilities
- Reducing the number of referrals to non-Territorial facilities
- Improvements to program spending in areas such as residential care, child welfare services, out-of-territories hospitals
- Improvements to information systems to enhance reporting, case management, decision making, and reduce medical and non-medical travel
- De-listing of services not deemed medically necessary
- Standardized drug prescriptions
- Elimination of duplicate financial systems.

Opportunities for Private Sector Funding

Opportunities for private sector participation in the renovation, construction and management of current or new health care facilities requires:

- A politically acceptable approach
- Reasonable economic returns for the private sector to justify the deployment of human and capital resources
- Potential cost savings that could be achieved from private sector participation
- Identification of private sector partners who would be interested in entering into agreements with the Department.
- A positive contribution to the cultural and economic environment of the community and region.

Structuring politically acceptable private sector participation agreements will require the advocacy of the Department and the GNWT and a perception of overall benefits by the broader community.

Private sector participation in the renovation, construction or management of current or new facilities will be primarily motivated by profitability of such participation. Profitability in the renovation, construction or management of current or new facilities depends upon several factors:

- Determination of the need for renovation or construction of new facilities, based on the assessment of existing facilities and health care needs
- Location of facilities and availability of land, utilities, accessibility, staffing, etc.
- Coordination of all phases of the capital planning process (functional programming, design, pre-construction operating budgeting etc.)
- Availability of professional management for such facilities.

Private sector participation for construction of new facilities may prove alluring to assist in financing the capital cost of such facilities, but it is also extremely important to consider the annual operating costs of such new facilities. This further reinforces the

urgency for developing a coordinated strategy for the capital planning projects associated with the building of new facilities in Inuvik, Iqualuit, Cambridge Bay and Rankin Inlet (see Chapter 8). The models for financing the development and subsequent on-going operations and maintenance costs would be a critical central coordination role that could be outsourced by the Regional Boards and the Department to the private sector.

Alternative Funding Strategies

Alternative funding strategies for both capital and operating costs, including the possibility of private/public partnerships, were discussed with Departmental staff and the Deputy Minister of Finance. Review of the Financial Administration Act of the Northwest Territories indicates that the GNWT is not specifically precluded from issuing securities and entering into financing transactions, if deemed appropriate, for the financial management and administration of the Government.

The existing sources of funds available to the GNWT are exclusively Federal government grants, transfer payments, and recoveries administered from the Government of Canada pursuant to numerous programs. A brief summary of these sources of funds is provided below:

Federal Government Grants

- *Alcohol and Drug Abuse Treatment Program.* Agreement between the Government of the Northwest Territories and the Federal Government for the provision of an Alcohol and Drug Abuse Treatment Program to Inuit and Registered Indians living in the Northwest Territories.

Transfer Payments

- *Canada Health and Social Transfer.* The Canada Health and Social Transfer implemented April 1, 1996 replaces Established Programs Financing (EPF) and the Canada Assistance Plan Agreement (CAP).
- *Vocational Rehabilitation of Disabled Persons Agreement.* Recovery of 50% of all Government expenditures related to the rehabilitation of disabled persons under the Vocational Rehabilitation of Disabled Persons (VRDP) Agreement.

- *Hospital Care Indians and Inuit.* The dispute between the Government of the NWT and the Department of Indian Affairs and Northern Development on the issue of utilization of Status Indians and Inuit for the provision of Hospital Services has now been resolved. As a result, the Government of Canada has entered into a Contribution Agreement between the Government of the Northwest Territories and the Government of Canada for the recovery of 95% of the cost for Status Indians and Inuit for "hospital services."
- *Medical Care Indians and Inuit.* Contribution Agreement between the Government of the Northwest Territories and the Government of Canada for the recovery of the cost for Status Indians and Inuit for physician services as rendered by a medical practitioner.
- *Medical Transportation.* Contribution Agreement between the Government of the Northwest Territories and the Government of Canada for the recovery of Non-Insured Health Benefits for Status Indians and Inuit. This portion of the revenue represents the recovery of the co-payments for medical travel of Status Indian and Inuit.
- *Provision of Non-Insured Services.* Contribution Agreement between the Government of the Northwest Territories and the Government of Canada for the recovery of Non-Insured Health Benefits for Status Indians and Inuit.
- *Medical Transportation Other Agents.* Represents 100% cost recovery of medical travel from patients with medical benefits outside Non-Insured Services and the Government of the NWT Medical Benefits. This includes benefits provided under the Workers Compensation Board, or through Private Business Coverage.

Recoveries

- *Reciprocal Billing - Inpatient Services.* Recovery of Hospital Services provided to Out of NWT residents under reciprocal billing agreements with all Provinces and Territory.
- *Reciprocal Billing - Medical Services.* Recovery of Physician Services provided to Out of the NWT residents under reciprocal billing agreements with all Provinces and Territory.

- *Medical Transportation User Fees.* Represents the co-payment on Medical Transportation for return airfare for those individuals not covered under any form of medical plan including but not limited to Non-Insured Services, GNWT Medical Travel, Workers Compensation Board, or Private Business coverage.
- *Special Allowances.* The Department of Health and Social Services receives the Child Tax Credit from the Federal Government for children who are in the care of the Superintendent of Child Welfare. The rate is \$85.00 per month per child.
- *Personal Care Unit.* Payments received from persons residing in personal care units in Fort Simpson, Rae, Aklavik, and the Baffin, Inuvik and Keewatin Regions.
- *Children in Care By Custody.* Payments received by custody agreements for children in care.
- *Medical Transportation/Ambulance.* Represents 100% cost recovery of ambulance from patients with medical benefits outside Non-Insured Services and the Government of the NWT Medical Benefits. For example Workers Compensation Board, Private Business Coverage.
- *Health Care Premiums.* A Health Care Premium to the Northwest Territories. Represents a new revenue budgeted line item to the Department of Health and Social Services.
- *Sundry Revenue:* Miscellaneous revenue received throughout the budget year.
- *Sundry Revenue/PYE.* Miscellaneous revenue from previous budget years received in the current budget year.
- *Recovery Contributions/PYE.* Reimbursement of surplus contribution funding provided in previous budget years received in the current budget year.
- *Foster Care PYE.* Reimbursement of Foster Care payments made in previous budget years received in the current budget year.

The development of alternative funding strategies to Federal Government grants, transfers and recoveries for operating expenditures are constrained by economic and political concerns:

- The Northwest Territories does not have a broad tax base from which to generally raise large amounts of funds from capital markets.
- The GNWT is not a taxable entity and therefore tax-motivated financing strategies have limited merit.
- For the most part, private sector sources of funding are not applicable to support operating expenditures due to the inherent lack of investment return on health and social services expenditures.
- The concept of private sector equity ownership of the health care system in the NWT is a political issue.

In spite of these limitations, there are opportunities in many areas to assess the economic advantages of outsourcing Departmental activities, which may prove to be alternative sources of funding. Possibilities for outsourcing health and social services to private sector providers that should be reviewed and that might reduce operating expenditures include:

- Outsourcing responsibility for Medical Transport to the private sector in order to create a coordinated air ambulance system for the Territories
- Outsourcing of physician and nursing staffing in hospitals in Iqaluit, Inuvik, and Stanton to private sector companies who specialize in providing such services
- Outsourcing support services (e.g., laundry, food service, housekeeping) currently provided at hospitals and other health and social service facilities throughout the Territories
- Outsourcing Departmental functions, such as Information Systems, that are not directly involved with the delivery of health care and social services.

Social service initiatives from Federally funded programs are not integrated with Departmental social service programs. While we are not recommending consolidating the different revenue streams, we strongly suggest that while protecting the continuing Federal funding of these programs, there needs to be greater integration with the programs being funded by the Department.

Capital Equipment

The Department has historically purchased the majority of capital equipment from annual budgeted funds. A limited amount of equipment has been lease financed, primarily limited to office equipment such as fax machines. The Department's current allocation of funding and accounting policies do not encourage widespread analytical reviews of lease-financing alternatives by Departmental financial administrators. Such reviews could identify savings and/or reductions in inefficient uses of funds. The Department should review leasing as an alternative method of financing a broader range of equipment, particularly specialized hospital equipment, information systems capital equipment and vehicles. Lease financing may be applicable where:

- Assets are required only for short periods of time and readily available on an operating lease basis. (Departmental staff stated that equipment is generally purchased despite the expected term of use.)
- Lessors, particularly in the computer industry, can provide upgrades which might be more difficult to obtain otherwise. In addition, such lessors can remove the necessity to dispose of equipment that has been replaced having in house marketing facilities.
- Assets are subject to a high degree of technical obsolescence.
- The costs of maintenance of owned assets, particularly vehicles, becomes high.
- Specialized medical equipment where several large financial institutions have particular expertise in tailoring financing, and where the equipment will not appreciate in value.

Departmental policy does not permit the disposition of assets for trade-in purposes when it becomes evident that substituting Departmental equipment and vehicles with more modern, effective or efficient replacements would be prudent. This is a significant deterrent to assessing the economic merits of lease-financed assets. Proceeds of asset dispositions are currently required to be remitted to GNWT consolidated revenue rather than being used to offset the financing costs of replacement assets. The Department should review asset disposition policies in consultation with GNWT to ensure greater efficiency with capital assets.

We do not suggest that the Department consider sale and lease-back transactions involving currently owned assets. These refinancing mechanisms only add undue debt service charges to subsequent years' budgets without procuring new capital assets.

Capital Expenditures

Capital expenditures have historically been made without the use of external financing. Although external financing will incur interest, such financing may enable the Department to amortize the cost of capital expenditures over several years as opposed to current practice. Debt funding for capital expenditures could be secured from traditional institutions who have established relationships with the Northwest Territories to supplement Federal funding. These institutions include commercial banks, life insurance companies, and trust companies. Pension funds also represent a significant source of debt financing. The possibility of Canada Mortgage and Housing Corporation support of mortgage financing for new hospitals and additions to existing hospitals should be investigated.

The ability to secure such funding is dependent on the lender's assessment of the covenant of the Department (i.e., the covenant of the GNWT), debt service capacity and security pledged or assigned. The perceived strength of the covenant of the Department will depend on the legal obligations of the financing contract and the lender's rights and remedies in the event of default. With adequate assurance of the Department's covenant to service debt obligations, the GNWT should be able to finance at least 90% of the value of capital expenditures with debt financing. Debt service coverage ratios of in the range of 1.1 to 1.2 times annual principal and interest charges are generally required by institutional lenders. Security interests over the financed assets will be required; however, the perceived liquidation value of assets located in the North may be low.

Thus, long-term debt financing of new hospitals and additions to existing hospitals and other long-term capital equipment may prove advantageous to the Department. Funding long-term assets with long-term financing can free up annual cash flow for allocation to the operating budget and should be reviewed.

Private/Public Partnerships

Private/public partnerships represent a viable alternative strategy to finance capital assets in the NWT. Potential sources of such capital include:

- Aboriginal supported investment companies
- Venture capital sources, including Northern domiciled funds
- Institutional investors, pensions funds, insurance companies, merchant and commercial banks, which include Northern domiciled or beneficiaries
- Private sources of investment capital.

Financing structures could involve joint ownership of assets, either directly or through investment vehicles (e.g., joint ventures, limited partnerships, corporations, investment societies). Such vehicles could also borrow funds and issue debt securities to supplement equity capital. Shareholder agreements could be drawn to address issues such as ownership, management and governance, dispute resolution, cash distributions, and procedures regarding dissolution. Separation of "ownership" from "delivery of services" could alleviate political concerns.

Public/private partnerships could be designed to accommodate the needs of both the Boards and the private sector. Cash flow to service expected investment returns of debt and equity partners could be structured to balance reasonable investment rates of return for public/private investors with the level of cash flow dedicated from annual Departmental operating budgets to service the partnerships.

The Legislature of the NWT has been financed employing a separate society with private and public ownership, which in turn floated debentures. As a matter of Government policy, investment and tax advantaged regulations could be enacted to foster and support such public/private partnerships.

Summary

Based on our review of the financial management practices of the Department, we believe that the following strategies should be considered:

- The Department should develop a new approach to budgeting that allocates funds to the Regions based on their health and social needs.
- Regional Boards should be responsible for the development of their budgets.

- The roles of Departmental staff should be revised to reflect a supportive, consultative approach.
- The roles of the Regions should be revised to reflect their responsibility for preparing budgets and monitoring expenditures in accordance with Departmental policies.
- Departmental staff should be held accountable for achieving the objectives of the Department.
- Regional staff should be held accountable for achieving the objectives of the Regions.
- New methods of financing facilities should be explored
- The mechanics and benefits of capital leasing should be conveyed to the Boards.

Chapter 10

A New Approach to Funding

In this chapter, we provide advice on a new approach to funding that the Department (future Ministry) should consider. This advice builds on the work of the Department in the development of a new funding formula.

Current Levels of Funding

The poor health levels and high risks to health of the residents of the NWT relative to the rest of Canada have been documented in Chapter 3 of this report. There is no evidence that this is the result of inappropriately low levels of spending on social programs by the GNWT. For example, the level of health care expenditures per resident in the NWT and Yukon, combined, in 1991 was 65 per cent higher than the average for all Canada and 60 per cent higher than the province with the highest expenditure per capita.

This high level of spending could represent a public policy response to the higher levels of need of the residents of the NWT. Consideration might also be given, however, to whether this greater commitment of resources to health care services is being put to use in ways that might be expected to have greatest impact on the levels of health and well-being in the NWT population.

Given the increasingly constrained fiscal climate and the prospect of further reductions in transfer payments from the Federal government, future attempts to improve the level of health of the population of the NWT should be focused on making better use of existing resources. This strategy requires that policy options be considered in the context of a broader framework of the determinants of health, illness and recovery.

The Social Determinants of Health, Illness and Recovery

Increasing recognition is now given by policy makers to the notion that the level and distribution of health in a population are determined by a wide range of factors that include, but are not confined to, health care programs and services.

In the case of the NWT, the major causes of morbidity and mortality are related more to social and environmental factors than to biological factors. Traditional health care

programs may be able to reduce the burden of these conditions, but health care interventions do not address the causes of the conditions and, hence, are unlikely to have a significant impact on health, illness and recovery in the Territories.

Effective⁸ use of resources to address the health problems of the NWT's population must therefore take a broad perspective on the determinants of health in the population. A simple representation of this notion of the "social determinants of health, illness and recovery" is presented in Exhibit 10-1.

There are two important features of this framework:

- Resources allocated to health care programs represent lost opportunities for using the same resources for other potentially health-enhancing ways.
- In order to make the most efficient use of resources, there is a need to consider multi-program approaches to improving the level of health of the population.

Resource Allocation

Traditionally, the allocation of health and social care resources has been based on existing levels of services and the distribution of providers, irrespective of the relative levels of need for those services among the target population. This perpetuates inefficiencies in resource use and inequities in service provision. Furthermore, attempts to reallocate resources across sectors are undermined where there are no limitations on expenditures. In this way, no consideration is given to the effective use of resources in meeting community needs or the potential of using the same resources to meet health needs in different ways.

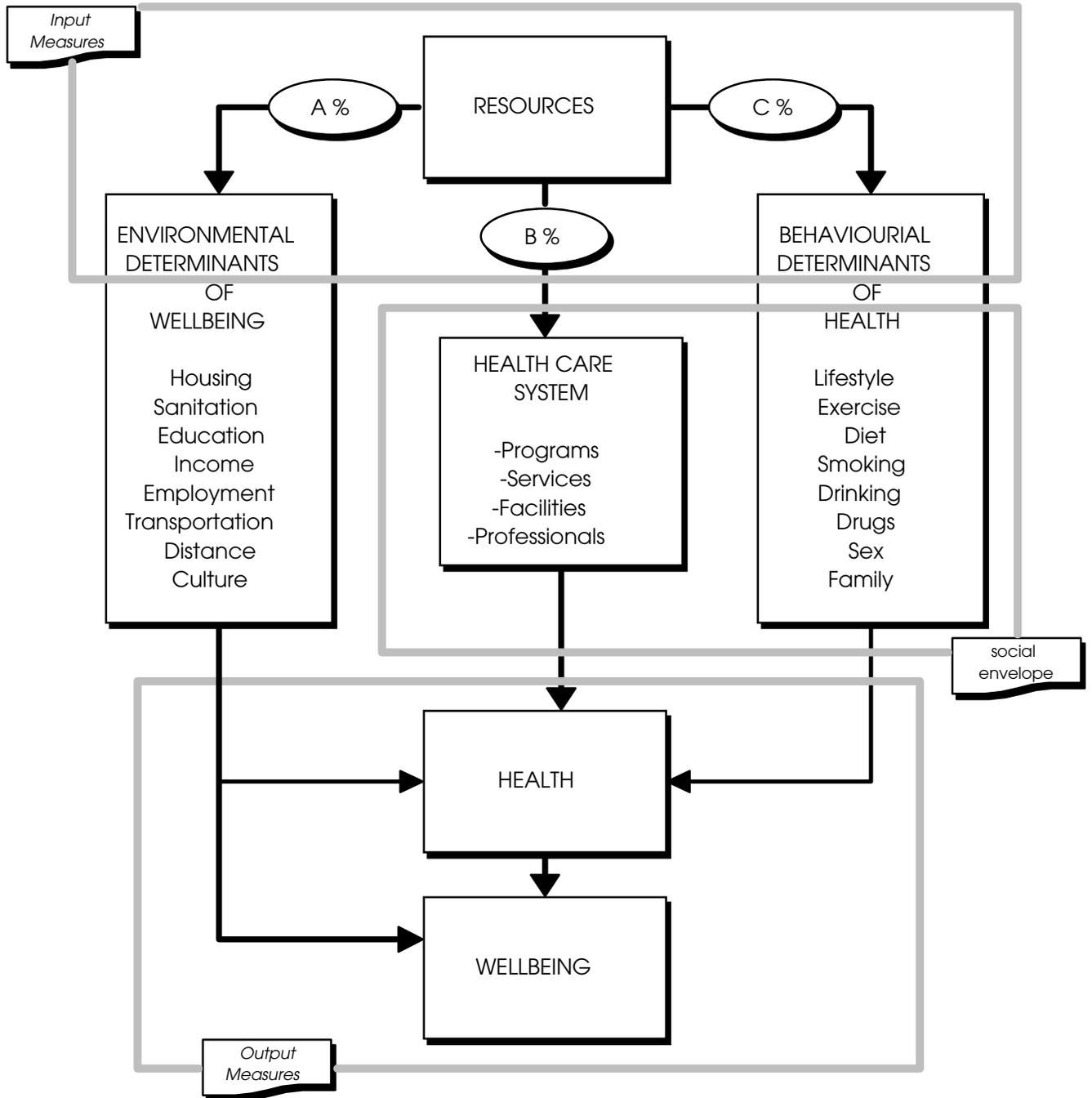
Population Needs-based Funding

In recognition of some of these issues, the Department of Health and Social Services is considering adoption of a population needs-based approach to the allocation of health and social care resources. We strongly support this initiative. Under this approach, the focus of resource allocation is shifted from providers of care and programs to target populations and their health problems. This population needs-based approach will enhance efficiency in the use of resources and provide a more equitable allocation of resources.

⁸ Effectiveness refers to the achievement of goals or objectives. Efficiency refers to the extent to which the best value has been obtained for the resources allocated.

Exhibit 10-1

A Model for Resource Allocation



From an efficiency perspective, population needs-based funding allocates resources in accordance with the relative needs of the population for care. From an equity perspective, populations with similar levels of need receive similar levels of resources. Populations with different levels of need receive different levels of resources. In this way, the population's relative capacity to fund service provision responds to the population's relative capacity to benefit from those services.

Envelope Funding

Population needs-based approaches have been used in several provinces and one has been in use in Saskatchewan for several years. Under these approaches, resources are initially allocated to population groups (e.g., IHSSAs, counties, communities etc.) according to the size of the group. Adjustments are then made to these per capita amounts to reflect the differences in demographic characteristics (e.g., age and sex specific health care needs), and the costs of providing a given level of service. The resources allocation to a population group represents a fixed envelope of resources for the provision of care for that group. In this way, health care resources are allocated based on a population's needs. In addition, health care professionals earn incomes by serving populations and their earnings are related to the health needs of the population.

This population needs-based approach is compatible with the forthcoming division of the NWT. Decisions about the level of total health expenditure would presumably fall with the individual Territories following Division. However, the population needs-based funding formula is robust to different total levels of expenditure and hence would provide a basis for resource allocation within each of the new Territories post-division.

The approach has implications, however, for the use of alternative funding sources. For example, non-government funds might be found to support the construction of a new hospital in a region. Because the characteristics of the population groups being served by this new facility have not changed, there would be no effect on the share of government funding allocated to the population groups. Under the needs-based approach to funding, the operating costs for any such facility would have to be found from within the existing funding envelope for the population groups being served. Any supplementary allocations to the funding envelope would undermine the principle of allocating resources on the basis of relative needs and represent an inefficient allocation of resources as well as an inequitable distribution of services.

The population needs-based funding approach represents a way of allocating the health care budget, regardless of the level of funding. It is important to recognize that this approach does not determine what the total level of funding should be for the NWT. The total level of funding is essentially a political decision to be made by government. A funding formula is compatible with whatever a government decides to allocate to the health care sector.

Made in the North

Current population-based funding approaches differ in many ways, reflecting differences in geographic, social, economic and policy environments. It is therefore important that any population needs-based approach developed for use in the NWT incorporate and reflect the unique socioeconomic characteristics of the NWT, as well as the particular challenges these characteristics present. For example, it will be important to build into the funding formula, factors that address the high levels of suicide, chronic obstructive lung disease and lung cancer that exist throughout the Territories (as demonstrated in Chapter 3). These and other determinants of the level of wellness among the NWT population must be recognized in any new funding formula.

A New Approach

In this section, we comment on the development work of the Department's Funding Allocation Formula Team.

Allocation of Responsibility

Traditionally, the Department has used a programmatic structure for the allocation of resources between sectors (health care and social service) and within sectors (e.g., hospitals, physician services, etc.). Such an approach fails to allow for differences between the IHSSAs in the distribution of resources among and within service sectors in accordance with each Region's needs. In contrast, the framework proposed in this report calls for much broader responsibility for IHSSAs (IHSSAs or "Authorities") who determine the allocation of resources between the sectors within their jurisdiction and with the parameters of the fixed envelope of funds received from the Department (Ministry).

Although funding formulas could be used to develop population needs-based shares for each program (or combination of programs), thus maintaining the current

programmatic funding structure, there is no reason why the funding envelopes from the Ministry need to be earmarked to specific programs.

Accountability

Responsibility for decisions about service provision must be linked to accountability for the resource implications of those decisions. Because the IHSSAs will be in a better position than the Ministry to determine the service needs of their Region, the IHSSAs should be given full responsibility for managing their envelope of funds. In this way, the opportunity costs of decisions made by the IHSSA are also incurred by the IHSSA.

The Size of IHSSAs

The ability to spread risk is linked to the size of the population under consideration. The funding formula team is currently working on the basis of nine defined IHSSAs plus a notional tenth ("other") residual population. Three of these IHSSAs have fewer than 3000 residents which is probably too small for the effective management of risk within populations. Even in our proposed framework, which has eight IHSSAs, this concern may exist. "Safety net" provisions could be developed for smaller IHSSAs. For example, arrangements could be made in which the Ministry and the Authority share funding of the costs of care beyond a pre-specified limit for any individual resident.

Coverage of the Funding Formula

Currently, in the work being done on the funding formula, consideration is being given to including approximately 87 per cent of total Department/Ministry expenditures under the formula. The main exceptions relate to administration and central policy making, planning and evaluation along with expenditures billed to federal government programs. The regionalization of responsibility and accountability will place major expectations on the IHSSAs. Additional managerial resources will be required at the IHSSA level. It would therefore seem appropriate to include a considerable proportion of administrative expenditures, particularly that proportion pertaining to program administration, within a funding formula in order to provide the financial capability for IHSSAs to increase their management capacities.

Medical Travel

There would appear to be no good reason to exempt medical travel from the needs-based approach to funding. A disaggregation of expenditure on medical travel into separate

determinants (e.g., number of cases/episodes, number of trips per case, distance per trip, cost per trip mile) and separate levels of care (primary, secondary, tertiary) could be used to identify "standards" that could then be applied to each IHSSA's population characteristics. This could then be used to determine needs-based shares of medical travel expenditures.

Approaches to Developing Funding Formulae

There are two broad approaches to developing population-based funding formulas. One involves analyzing each current program, or group of related programs, and aggregating a population's needs-based shares for each program across all programs. This is referred to as the "bottom-up" approach. The other approach involves analyzing across all programs combined. Funding for relative needs are then applied to demographically adjusted aggregate measures to produce population needs-based shares. This is the "top-down" approach.

The data requirements of the "top-down" approach are more modest than the "bottom-up" approach. For example, it uses a single adjustment for relative needs. This implicitly assumes, however, that the distribution of needs among populations is the same across all programs. For example, if region A has 5 per cent greater needs for, say, drug dependency treatment programs than region B, it also has 5 per cent greater need for, say, obstetrical care than region B. The "bottom-up" approach uses different needs indicators to reflect the heterogeneity of needs for care and the multi-dimensional nature of health.

The intention of the new funding formula is to develop a "bottom-up" approach. As a pilot project, Statistics Canada data on health care expenditures by age and sex in NWT are being used. The precise nature of these data are currently being explored. It would seem likely, however, that they include a mixture of different programs.

Indicators of Relative Need Among Populations

The purpose of the needs-adjustment is to provide a mechanism to allow for funding alternatives that take into consideration factors other than purely the demographic distribution within each Region. For example, differences between the Authorities in aspects of the physical environment may mean that the risks to health and hence needs for health care among a particular segment of the population (e.g., women aged 25–45) in one Authority are greater than for women in the same age group in another Authority.

Because the purpose of the adjustment is to "correct" for inequalities in service provision, it is inappropriate to use data that are based, directly or indirectly, on service use as an indicator of need. For example, residents of Authority A may have twice as many bed days for heart conditions as residents of Authority B. This tells us nothing about the relative levels of need for care for heart conditions in the two Authorities. It may simply reflect a greater supply of beds in Authority A, or a preference for inpatient admission and longer lengths of stay among providers in Authority A.

Similarly, data that may be manipulated by stakeholders, if used as a means of resource allocation, must be avoided. For example, self-assessed health status asked in the context of population health surveys has been found to be a valid measure of relative need for many aspects of care at the population level. To build this type of information into a funding formula would, however, provide incentives for individuals to respond to future questions strategically.

In developing the proposed funding formula, the Department/Ministry has focused on the summary measures of mortality as indicators of relative needs for some program areas. Many applications of population needs-based resource allocation use the Standardized Mortality Ratio (or SMR) based on the research findings of the correlation between SMR and various measures of population morbidity and population need for care. The small size of the populations of the NWT Authorities means, however, that small, chance fluctuations in the number of deaths in a Authority would lead to considerable changes in the value of the Authority's SMR.

The Person Years of Life Lost (PYLL) is being considered as an alternative to the SMR. Both are based on weighted sums of age specific death rates. Under the SMR, weights are related to the overall age distribution of deaths (i.e., greater for deaths in older age groups). In contrast, greater weights are attached to deaths in younger age groups in the construction of the PYLL measure. Chance fluctuations in death rates are greater in younger age groups because of the smaller numbers of young deaths. The greater weighting of deaths in younger age groups in the calculation of the PYLL measure further magnifies this problem. Moreover, whereas the SMR has been the subject of much empirical research to justify its use as a proxy for relative needs for care, no evidence has been presented to suggest that the weighting of mortality rates used in the PYLL measure provides a better proxy for population relative need for care.

In view of the "small numbers" problem in the NWT, consideration could be given to using the weighted relative mortality rate (a variant of the SMR) for weighting per capita allocations of primary and non-obstetrical acute care. This would capture differences between Authorities in relative mortality rates. These differences would, however, be weighted in accordance with the distribution of the population of the NWT. This would give lesser weight to differences in mortality rates in older age groups than in younger age groups, but the difference in weights would be related to the actual size of the populations "at risk."

Children

Generally, infants (age less than one) are considered as a separate age category in funding formula calculations because of the particular, and potentially intensive, needs for care in this age group. Because of the small number of deaths in this age group, however, it is particularly inappropriate for this to be included in the needs indicator. Alternatively, the relative incidence of very low birth weight (<1500 grams) is often used as an indicator or relative need for care in this age group. This could be included in the "relative mortality" proxy weighted in the same way as age specific mortality rates in accordance with the proportion of the NWT population in this age group.

Obstetrical Services

The relative needs for obstetrical care among populations are related directly to the relative rates of fertility in the Authorities. An age standardized fertility ratio would therefore provide a valid indicator of relative need to be applied to obstetric utilization data by age group.

Health Promotion and Prevention

For specific health promotion and prevention programs, particular indicators of relative needs might be identifiable. For example, expenditures on services for family planning might be allocated in accordance with the relative size of the female population in the "target" age groups weighted by the relative incidence of teenage pregnancies. Similar approaches could be used for allocating resources aimed at particular screening programs. Each requires discussion about the objectives of the program as well as the risk factors associated with needs for the program. For less well-specified programs, the relative prevalence of premature death as measured by the PYLL provides a reasonable proxy for the relative needs for health promotion and protection. As noted above, however, the

measure is created by a subjectively-determined weighting of age-specific death rates which need not reflect the relative needs for the programs in question.

Social Services

Social services programs are concerned with services for children; services concerned with alcohol and drug dependency; and services concerned with violence. There is no reason to believe that the relative needs for these services among the IHSSAs are reflected in measures of mortality. In other jurisdictions, mortality has been used to identify funding formula indicators for services associated with accidents and violence. However, the "small numbers" problem facing the NWT (alluded to above) is magnified greatly when mortality data are disaggregated by cause.

As an alternative approach, consideration could be given to identifying data measuring the risk factors closely associated with the types of events giving rise to these needs. Data on the population living in overcrowded conditions and children in one-parent households are examples of possible risk factors that may be appropriate. It is important to remember that these factors are not being used to plan services on an individual client basis. On the contrary, it provides a way of adjusting funding allocations to the IHSSAs based on the relative prevalence of these risk factors in the populations.

Relative Needs

Finally, it is worth noting that weighting for relative needs is not an option. On the contrary, the failure to introduce an explicit needs-based adjustment indicates that funding allocations assume that the relative needs for the program area under consideration are the same for all IHSSAs (equal weighting by default). It would appear that there are few if any areas of activity under the funding formula for which this would seem a reasonable assumption.

Instead, the GNWT might look to invest resources into developing and refining relative needs indicators based on empirical research of the relationships between variations in needs or risks to health among populations in the NWT and various proxies. This could be an important part of a program of continuous quality improvement in resource allocation. In Chapter 7, it was suggested that this could be one activity of the Integrated Information Unit (IIU).

Performance Monitoring

The proposed funding formula is concerned with dividing the health and social care expenditures among IHSSAs. The formula cannot, however, be used to determine the way resources are used within IHSSAs. This requires a separate performance monitoring system.

Performance monitoring is a separate function and was discussed in the context of the IIU in Chapter 7. The purpose of the funding formula is to allocate funds on the basis of relative needs for care, irrespective of the causes of those needs. Increases in needs associated with ineffective delivery of health services by providers should not be used as a basis for reducing allocations to the IHSSAs. Similarly, reductions in needs associated with the effective delivery of services by providers should not be used as a basis for increasing allocations to the IHSSAs. These actions would conflict with the principle of allocation of resources in accordance with relative needs of the population for care. Alternatively, consideration should be given to the way that resources are used (or misused), rather than reducing the resources allocated, and, hence, further reducing the Authority's capacity to respond to its population's needs.

In practical terms, the variables used to monitor performance must be separate from the variables used to adjust per capita allocations for needs. For example, the relative mortality rate in an IHSSA's population may fall because the mortality rate has been reduced in that IHSSA, but remained the same in other IHSSAs. Alternatively, it may fall because the mortality rate in that IHSSA is the same, but it has increased in other IHSSAs. These two scenarios say the same thing for the determination of relative needs-based shares of a budget, but different things in terms of how effectively the resources provided by those shares are being used.

There may be concerns that improvements in a health indicator of an IHSSA (for example, a reduction in a region's weighted relative mortality) will result in reductions in the IHSSA's envelope of funds. This would not occur, however, because of the "blended" nature of the formula in which population size is "blended" with demographic and health-related weights. Hence, a reduction in mortality rate in the IHSSA would reduce the allocation of funds, while increasing the population and changing the demographic characteristics of the IHSSA, both of which enhance its allocation of funds.

Moreover, the population needs-based funding approach provides the opportunity to identify changes in the needs within an IHSSA by use of program-specific indicators of needs. For example, a reduction in the mortality rate in an IHSSA might be the result of extending the lives of the elderly in ways that create more demands on home care services. This, however, would result in an increase in an IHSSA's funding allocation due to:

- An increase in the size of the IHSSA's population
- A change in the demographic characteristics of the IHSSA's population
- An increase in the need for home care services.

In this way, the proposed funding formula would be responsive to the increasing needs of the population resulting from a reduction in needs in one area.

The performance monitoring system would be customized to meet the specific needs of the populations and their characteristics. Each IHSSA, together with the Ministry, should identify the major health challenges for the IHSSA and the strategies required to meet those challenges.

In this way, the funding allocation process would be one of negotiation between each Region, as manager of the population's funding envelope, and the Ministry, as the source of those funds. This process would require the collection of information about the level of illness (or wellness) within the IHSSAs in a systematic and consistent manner.

In Chapter 7, we have suggested the establishment of an Integrated Information Unit that would be responsible for the collection of information to be used in this funding formula.

Need for Ongoing Adjustment

Introducing population needs-based allocations is likely to involve considerable redistribution of resources between populations. It is therefore important to consider possible approaches to implementation.

One approach is to expand the coverage of the needs-based approach gradually to an increasing range of programs. However, this risks creating "bottlenecks" at the interface between programs allocated according to needs and those allocated in non-needs ways. It also creates incentives to redistribute demands onto non needs-based programs.

Moreover, it implies earmarking of funds which is inconsistent with a "social determinants of health" approach being used in the planning of services.

An alternative approach, more conducive to the notion of the "single envelope," is to compare needs-based allocations with existing allocations. Funds would then be reallocated between IHSSAs in accordance with a gradual movement to needs-based shares over an identified time period. This, together with the "safety-net" provisions for managing risk would seem to provide a practical basis for implementation.

An accelerated pace of adjustment may be in order to support the division of responsibilities arising from the forthcoming Division of the NWT. This could be accommodated by using the funding formula to determine shares of current expenditures for the two groups of IHSSAs that are to form the new Territories post-Division. The adjustments required at the larger population level would be potentially more modest and hence the movement towards equitable shares could potentially be achieved within a shorter time frame. Moreover, the use of larger populations as the population unit enhances the sharing of risk within the funding pool. The 'down side' of focusing of the two prospective Territories is that it might reduce the pace of change to need-based shares among IHSSAs within the Territories.

Summary

We believe that a population needs-based approach to allocating resources for health and social services is an essential strategy to ensure that the Department (future Ministry) is making best use of existing resources. However, the successful development and introduction of needs-based formula funding will depend on

- The active involvement of the Regions (future IHSSAs) in all stages of formula development
- The continued commitment of resources to the development and refinement of a formula "for the North, by the North"
- The political commitment to adhere to the "funding envelopes" and to resist the use of supplementary funding allocations to satisfy the demands of vested interests.

Summary of Recommendations

The following strategies are proposed to develop a new approach to funding by the Ministry:

- The population needs-based funding formula should not " earmark " funds to particular sectors or particular programs within sectors.
- "Safety-net" provisions based on shared funding of high-cost residents should be developed to support the sharing of risk for smaller IHSSAs.
- We recommend that a substantial share of expenditures on program administration should be included in the funding formula. This should be increased over time in line with the transfer of responsibilities to IHSSAs.
- The nature and validity of data sets used as a baseline for the funding formula should be carefully explored. Wherever possible, disaggregated (program-specific) data on relative levels of use by age and sex within the NWT population should be used.
- Consideration should be given to the identification of combinations of programs associated with common or similar needs. These would then form the program areas for which separate indicators of relative needs among populations are required.
- Data related directly or indirectly to service utilization at the IHSSA level should not be used as a basis of needs-adjustment unless this can be shown empirically to be a valid indicator of relative need among populations.
- The data used to measure relative need for care should be independent of the behaviour of stakeholders (providers or populations).
- Needs indicators should be selected based on their established empirical relationship with the relative need or risk status among populations for particular services or service areas. The process for determination of needs indicators should involve IHSSA representation at all stages.

- Data not suitable or not available for use in funding formula calculations should be used where appropriate to validate other data as potential proxy measures for relative need.
- In response to the small numbers of age-specific deaths in IHSSA populations, a weighted relative mortality indicator should be considered as a proxy for relative need in the allocation of non-obstetric acute and primary care resources.
- Other proxies for relative need that might be considered for program areas include:
 - standardized fertility ratios (obstetrical care)
 - PYLLs (health promotion and prevention)
 - incidence of teenage pregnancies (family planning)
 - populations in overcrowded residences (alcohol and drug dependency)
 - children in one parent households (child welfare).
- Non needs-adjusted allocations should be considered only where there is good reason to believe that the relative needs for care are the same between similar age groups across IHSSAs.
- Research into the further development and validation of needs indicators should be funded as part of a continuous quality improvement program. This research might form part of the mandate of an Integrated Information Unit (IIU).
- The introduction of population needs-based approaches to resource allocation should be linked to the introduction of an explicit program of population needs-based performance monitoring. This too could be a role for the IIU.
- A phased approach to implementation together with the use of "safety-net" provisions should be used to support the transfer of responsibilities to the IHSSAs.

Chapter 11

Governance

In this chapter, we review the current governance structure of the Department of Health and Social Services (Department) and of Regional Boards and suggest areas for improvement. We further suggest that these areas for improvement be applied to the corresponding bodies in the proposed Framework (of Chapter 2); i.e. the Ministry of Health and Social Services (Ministry) and the Integrated Health and Social Services Authorities (IHSSAs).

Introduction

The Government of the Northwest Territories (GNWT) is committed to providing a flexible, modern, properly funded accessible health service that meets challenging public needs and expectations. Furthermore, the GNWT will respect the Canadian Charter of Rights and Freedoms and the Canada Health Act as it facilitates this comprehensive restructuring initiative. The Department is committed to a publicly funded health care system that encourages cooperation and collaboration between sectors. This approach is consistent with the principles of an integrated system.

The NWT health and social services system that is in existence today can be characterized as a "system-in-transition" with loosely associated fragmented parts that exhibit limited cooperation. This system operates in an environment of tremendous cultural and political pressures. These pressures, if not accounted for, may contribute to preventing a comprehensive and integrated system from forming. The present strategy of co-location will not in itself guarantee integration. There is a need to fundamentally rethink and redesign the current system in order to create a fully integrated health and social services system.

A blue print for such a strategy has been articulated in the revised Memorandum of Agreement between the Department and the IHSSAs. Work undertaken by the Department to redefine its role and delegate certain responsibilities for core services to a "delivery agent" is encouraging. In addition, the draft "Social Policy Framework" points

out the desire of the Department to delegate direct service delivery to the IHSSAs and assume a supportive role by facilitating decentralized decision making.

Board Governance and Management Style

The current governance model within the Department is one of command and control governing and the resultant micro-management. This management style is characterized by central hands-on involvement of the Department in all levels of the system. Such a style usually operates within a context of loosely defined expectations, outcomes, and operating parameters.

Moreover, such a system usually functions within an information vacuum which is typified by the lack of information and the lack of an evaluation framework that monitors system performance. In the current situation, there is a lack of confidence in the ability of most Regional Boards and communities to conduct needs assessments, to design and implement programs, and to establish monitoring and evaluating processes. This fact is substantiated by a considerable infrastructure of resource "specialists," based in Yellowknife, who devote significant time to activities that should be devolved to the IHSSAs.

Desire for Change

These observations come at a time in the history of the NWT that is both exciting and turbulent. In an environment of self government, community empowerment, land claims negotiations, and the formation of Nunavut, there is tremendous internal pressure to reform the current health and social service system. These changes, along with the global trend to restructure and reform, will demand that the current system change.

There is a palpable desire for change and a willingness and dedication among the people, both consumers and providers, to carry out this change. There is ample evidence that initiatives undertaken thus far are steering the NWT in the right direction. For example, the amalgamation of the health and social services sectors, the move to develop a funding formula that factors in needs adjusters, advances in child welfare reform and addictions services, the delegation of medical travel budgets to the IHSSAs and the adoption of the Carver model of board governance by most of the Regional Boards are all positive signs of the acceptance of change and a willingness to move forward.

Strengths, Weaknesses and Opportunities

The current roles and responsibilities of Regional Boards, as outlined in the document, "Institutional Structures — GNWT Health System, 1988," and the February 7, 1997 draft Memorandum of Agreement form a paradox within the Board environment. On the one hand, the roles and responsibilities as stated in these documents allow for more strategic planning and oversight by the Boards but, in point of fact, these boards are micro-managing the community-based initiatives and not focusing on strategic and operational planning which is vital to program and service delivery.

If roles and responsibilities are not clearly defined at the Regional and community levels, a conflict will develop. This conflict will develop between the role for program and service provision at the community level which is being propagated by the community transfer/empowerment initiative and the role of the Regional Boards as it relates to these same programs and services. A broader viewpoint is needed at the regional board level. If the IHSSAs adopt a corporate model, their role will focus on strategic planning, policy and standard setting and providing assistance to the communities.

The strength of the Regional Boards is in the quality of the trustees appointed from the communities. The trustees are hard working, dedicated and experienced in addressing complex issues in the NWT. It is important that the Regional Boards represent an entire region and not the interests of any one community. Frequently, trustees are consumed with community issues and the regional perspective is overshadowed. Furthermore, when a regional perspective is lost, it is easier to get involved with deliberating and eventually micro-managing specific issues that pertain to community interests.

In today's regional board structure, there is no structured and consistent method by which the governance function of a board is evaluated. Self evaluation by boards would minimize dysfunctional activity at an early stage.

The "Memorandum of Agreement" or the "Preferred Futures" document formulated in February 1995 articulates the intent of the Department to enter into a partnership with the "Health Boards of Management" to develop a shared vision and strategic plan. This document refers to several key deliverables under the section, "Commitment to Health Renewal Strategies":

- A mutually agreeable community, regional and territorial partnership between the Boards and the Ministry (Department)
- A funding formula to equalize funding across the NWT
- A schedule for the revision and/or replacement of Health and Social Services legislation necessary to support strategic planning
- Funding for all Boards to provide their own services as opposed to the current practice of service provision through Government departments and agencies
- A collaborative approach to standards development with input from the Boards.

In review, all preferred futures relate to a health and social service system that is planned in partnership with the Department and designed, implemented, evaluated, and most importantly, managed in the IHSSAs and their communities.

Although the Memorandum of Agreement and the Memorandum of Understanding are related, the current draft Memorandum of Understanding (February 7, 1997) articulates a "master-servant" relationship. The preferred futures of the Memorandum of Agreement will not be realized by implementing the roles and responsibilities set out in the Memorandum of Understanding. In short, the Memorandum of Agreement communicates the shared vision to form a partnership between the Department and the Regional Boards, but the Memorandum of Understanding is too constraining.

As we move forward, all parties would be better served if these two works were merged into one comprehensive document which could be called "Preferred Future". This document would consist of two sections. The first would deal with the health transfer agreement which would ostensibly be a legal agreement. The second refers to the relationship between the Department and the Boards but should be considered a "living document". The flexibility which is intrinsic to a document of this type would accommodate the dynamic nature of the relationship as the North moves forward through these turbulent times.

A Model for Board Governance

There is a tremendous opportunity to adopt, across all Boards, the Carver model of board governance which focuses on policy setting. This policy governance model is a conceptual model created by John Carver, meant to enable strategic leadership by governing boards. It addresses board job design and the board management partnership. The board governs on behalf of some identifiable "ownership," deciding the values and perspectives that will characterize the organization. This model will focus the board on setting policies that will govern its organization and set clear results or "ends" which in the case of the NWT will guide the program and service design in the communities. It is the responsibility of the communities to set about defining the processes or "means" that will achieve the desired outcomes. The Carver model has been accepted, through consensus, by the Regional Boards, as the governance model of choice. The strength of the Carver model is the clear definition of roles and responsibilities. It allows governors to govern and managers to manage.

Currently, there appears to be a lack of skills within the Boards to actually implement the Carver model. This model can only be implemented through a comprehensive educational program. Some Boards are more advanced than others and have begun to develop a "mentorship" program. We suggest that the Department support this initiative by providing funding support to the NWT Health Association for the development of board education programs.

Board Roles and Responsibilities

To be effective, boards of health and social service systems must have a clear and precise image of the work they should be doing to govern their organizations. In general, the main purpose of a board is to govern, not to manage and operate the systems they oversee. At one time, boards may have had the ability to assist in the management of health care organizations, but as the administrative and clinical complexity increased, the authority and contribution of the boards has been gradually superseded by professional management and staff.

A noted authority on board governance, Dennis Pointer (1995), states that there are five main responsibilities of boards:

- Boards are responsible for envisioning and formulating organizational ends.

- Boards must assume responsibility for ensuring high levels of executive management performance.
- Boards must assume ultimate responsibility for ensuring the quality of patient/client care.
- Boards are responsible for ensuring their organizations financial health.
- Boards must assume responsibility for their own effective and efficient performance.

A review of the literature (Carver 1991, Alexander 1990, and Houle 1989) suggests that boards must execute three roles in order to fulfill the above listed responsibilities; policy formulation, decision making, and oversight.

We believe that Regional Boards throughout the NWT should be given greater authority and responsibility by the Department and be held accountable for their actions. There is also a need to empower Regional Boards within the system in a manner consistent with the risks they assume. Fama (1980) states that, if the transfer of risk to agents is not accompanied by effective control over outcomes on the part of the agent, dysfunctional behaviour will result.

This "risk" must be governed at the board level by the formulation of policies that guide the performance of management. Such policies provide organizations with direction and are the means by which authority and tasks are delegated to management and the professional staff.

Board Committees

Traditionally, health care boards, in keeping with their responsibilities, instituted standing committees to govern such functions as human resource planning, finance, quality assurance, professional staff credentialling, strategic planning, etc. The Carver model of governance assigns these functions to management and the professional staff. The only committees that exist at the board level are time limited and task oriented ad hoc committees. The functions listed above are governed and ultimately managed by management and the professional staff through a series of comprehensive policies. In point of fact, several Boards are in the process of drafting policies consistent with board

bylaws and the enhanced mandate of the IHSSAs with respect to governing and managing both health and social services.

In general, the current Regional Boards do not have standing committees. If the Boards were to adopt a series of standing committees, the threat of assuming a micro-management role would be promoted. This point notwithstanding, a small subcommittee could be formed to perform specific activities and be disbanded when this task is completed.

Alternatively, policy formulation could be assigned to the committee of the whole with assistance from the Department as needed. The Department should act as a facilitator, but it must be fully understood that the process of policy formulation is owned by the Boards, not the Department. The Department must be confident that the fiduciary duty of both the Department and the Boards will be maintained through these policies and monitoring process. To this end, the Department must develop an effective Memorandum of Agreement to ensure that the policies eventually formulated by the Boards are in keeping with their mandate.

Board Composition

As needs assessments are conducted and as effective monitoring and evaluation processes are developed, communities will have greater confidence that their needs are being met and that programs and services are both effective and efficient.

In the past, the Regional Boards tended to be large in membership due to the needed vigilance of the appointed members to ensure that their community was being cared for. In the future, regional boards should be able to govern with fewer members, especially if every board member represents the entire region not just their home community. Smaller Regional Boards would not only facilitate discussion and decision making but also reduce operating costs. In addition, the logistics of organizing board meetings would be simplified.

There is a long standing debate about whether regional board members should be appointed or elected. A recent survey conducted in the NWT indicated that respondents were divided on this issue. If the criteria for selecting board members are well defined, if the expectations of individuals are clearly stated and if board members are evaluated, then the appointment process can be successful. When the accountability of board members is

in question, an election process is generally proposed, with the perception that there is accountability to the electorate. This assumption is not entirely accurate.

Education and Evaluation

Regardless of the size of a board, two essential functions are necessary: education and evaluation. The mandates of the Regional Boards has recently been expanded to include both health and social services. This adds a level of complexity that should not be underestimated. Although the Boards are not involved in management, they require a solid understanding of the needs of their communities and the implications of various treatment and preventive approaches. This responsibility requires continuous education. It is reassuring that all Regional Boards have a regularly scheduled education component during board meetings.

To be effective, the Boards should monitor their performance on a regular basis as suggested in the Carver model. Each Board should develop a performance management system that effectively evaluates the operation of the Board. This system should apply to the overall Board and to individual members.

Community Linkages

Board members should be expected to develop linkages with their communities. In most instances, Board members are also members of a Community Health Committee (CHC) or another advisory group from within their community.

Board members must be held accountable to their communities. Board members should be responsible for communications within their communities to ensure that linkages are maintained and valuable information is provided to the communities. Board members should be communicating with their hamlet councils, band councils, health centres and other forms of municipal government in order to fulfill their responsibilities.

Regional Boards should use CHCs to assist in activities such as needs assessment, program planning and evaluation of service delivery options. However, in order to benefit from using CHCs, an extensive education program will be required for both Board members and CHCs.

An Overview of the Regional Boards Throughout the NWT

In this section, we provide a brief overview of the composition of, and challenges facing, each of the Regional Boards. First we discuss Board within the Nunavut area, and then those within the Western Territories.

Keewatin Regional Health Board

The Keewatin Regional Health Board is comprised of ten appointed members, one from each of the eight hamlets, a chair, and a representative from the Kivalliq Inuit Association. This Board meets three times per year. The Board has one standing committee, which is an Executive Committee, and it utilizes ad hoc committees as needed.

Board functioning is currently guided by its bylaws. These bylaws need to be modified to reflect the new mandate for the Board following the amalgamation of health and social services. In addition, the trustee training manual, which was last updated in 1988, needs to be updated and revised to reflect this new mandate.

There are regularly scheduled education sessions but there is no process for board monitoring and evaluation. There are a number of challenges facing this board, namely:

- The implementation of a community-based health program model which is different from the health-centre-based treatment model usually followed. This approach requires more education of trustees and the communities.
- Obtaining the authority to administer programs and services, including greater control over purchasing.
- The recruitment, hiring, and retention of staff. This Board feels that if they could obtain a two-year commitment from new staff to work in the Region, it would alleviate the manpower pressure.
- More experienced social workers are needed in the communities to engage in more proactive counselling. In addition, the placement of social workers in the health centre would facilitate health and social service integration.

Baffin Regional Health Board

The Baffin Regional Health Board is comprised of fifteen appointed members, one from each of the twelve outlying communities and three from Iqaluit, including a Chair. The

Board meets four times per year and utilizes ad hoc committees as needed. The Board is guided by its bylaws, which are requiring updating to reflect its new mandate for social services. This Board has implemented the Carver model and is in the process of developing constraint policies. There are regularly scheduled education sessions but there is no process for board monitoring and evaluation.

We propose that with the formation of Nunavut in 1999, there will be three IHSSAs corresponding to the three current regional boards within the Nunavut boundaries.

Issues facing the Baffin (and hence the proposed Baffin IHSSA) Board include:

- Encouraging more Inuit personnel to assume roles in the health and social services system.
- Increasing the number of Inuit interpreters and Community Health Representatives (CHRs) in the communities.
- Overcoming the coordination and logistical difficulties that are encountered in responding to the needs of this large geographic area.
- Improving coordination between MACA and the amalgamated health and social services system.

Kitikmeot Regional Health Board

The Kitikmeot Regional Health Board is comprised of eight members appointed by the Minister of Health and Social Services, one from each of the six hamlets, one from the KIA and a Chair. The Board meets four times per year and utilizes ad hoc committees. This Board has implemented the Carver model and has developed constraint policies within its new bylaws. There are regularly scheduled education sessions and the Board is in the process of developing a performance monitoring and evaluation process. There are a number of issues facing this board, including:

- The need for expanded programs and services
- The impact of the formation of Nunavut in 1999 on referrals patterns to Stanton Regional Hospital
- Development of the concept of community empowerment.

Inuvik Regional Health Board

The Inuvik Regional Health Board is comprised of six appointed members, one from each of the three claimant groups, one from Norman Wells, one from Inuvik and a Chair. The Board meets four times per year and utilizes ad hoc committees as needed. Board bylaws have been modified to reflect its new mandate for social services. This Board is following the Carver model of governance. There are regularly scheduled education sessions and this Board is in the process of developing a monitoring and evaluation process. The Board has been reduced from sixteen to six trustees and is developing new policies with a new governance model for an expanded mandate.

The Board is focused on planning for the replacement of the Inuvik Regional Hospital, a process that has been under way for over fifteen years. The formidable task of obtaining approvals throughout the planning process, securing capital funding for the project and undertaking a major construction project will challenge the resources of the Board. In addition, the amalgamation of health and social services is putting a strain on existing space for staff and more space will be required in the future.

Stanton Regional Health Board

The Stanton Regional Health Board is comprised of twelve appointed members, six from Yellowknife and six Regional representatives. The Chairs of the other Regional Health Boards, including the Fort Smith, Hay River and Fort Simpson Boards, are members. This Board has adopted the Carver model and has several subcommittees:

- Interim Issues Committee
- Joint Conference Committee
- The Pierre Lessard Education Award Committee.

This Board has developed constraint policies that adhere to the new bylaws in the following four areas:

- Results Policies
- Board Operations Policies
- Board – CEO Relationship Policies

- CEO Constraint Policies.

There are regularly scheduled education sessions and a monitoring and evaluation process is in place.

The Stanton Board is facing several major issues. There is a need to determine the impact of the proposed governance structure for the Western Territories beyond 1999. We propose that in the Mackenzie Region there be an IHSSA in each of Hay River, Fort Smith and Fort Simpson (each to include naturally affiliated communities), and that the Stanton Regional IHSSA serve the remainder of the Mackenzie Region (Exhibits 2-1 and 2-2; Chapter 2). The Stanton Board has recently contracted with the communities of Fort Resolution and Lutselk'e to integrate health and social services. The impact of the proposed IHSSA structures in the Mackenzie Region on these agreements should be considered.

The Stanton Board's role in the provision of medical specialist services and the funding of these services may change in the future. There is a need to clarify the role of Stanton Hospital in the provision of secondary level medical services to both the Western Territories and Nunavut. When these issues are resolved, the governance structure of the Stanton Hospital should be reviewed to ensure that it reflects the agreed role of the institution.

Finally, there is a need to improve regional representation on the Stanton Board. There is, however, no clear direction on how this might be accomplished. Yellowknife should not assume an overpowering role in the process. Yellowknife, as a community, should represent its interests in the same way as other communities. There will be, however, a need to discuss applications of the proposed IHSSA governance structure (Exhibit 2-2), not only to the Stanton Hospital, but also to the Aven Senior's Centre, as well as public health, social services and other community-based health and social service agencies.

Fort Smith Health Centre Board

The Fort Smith Board is comprised of three status members, three from the Métis Association, three from the Fort Smith Town Council and a Board Chair. All members are appointed by the Minister of Health. The Board meets ten times per year and it has no standing committees.

The bylaws of the Board have been modified to reflect the new mandate of the Board for social services and the Board is in the process of implementing the Carver model. There are regularly scheduled education sessions and this Board is in the process of developing a monitoring and evaluation process.

The Board is faced with a number of issues, including:

- A community empowerment initiative that requires the coordination of stakeholders
- Balancing the public expectations regarding medical travel, the realities of shrinking funding, and the need for more stringent guidelines for travel
- Elimination of the needless "red tape" that exists between the Board and the Department
- The need to build a trusting relationship between the Board and the Department.

Hay River Community Health Board

The Hay River Board is comprised of ten members appointed by Town Council, including one from Fort Resolution, one from Hay River, one Métis representative and one representative from Town Council. This Board has implemented the Carver model and has modified its bylaws to include its new mandate for social services. There are regularly scheduled education sessions and a monitoring and evaluation process is being developed. There are a number of challenges facing the Board, namely:

- The requirement to resubmit budgets to the Department several times a year is inefficient.
- The Board believes that its membership should be reduced to 5-7 members.
- This Board believes that it should operate at arms' length from the Town Council.

The Mackenzie Region

Over the past several months, the Department has been transferring responsibility for health and social services in the Mackenzie Region from a single regional board to several community boards and councils. This has been a complex process requiring a great deal of negotiation and political sensitivity. We support the overall directions of

this decentralization process and would encourage the Department to complete this process as soon as possible. As indicated above, we propose that, in addition to IHSSAs in Hay River and Fort Smith, there be an IHSSA in Fort Simpson, with the Stanton Regional IHSSA serving the rest of the Mackenzie Region.

There are several challenges that face the Mackenzie Region as it pursues decentralization. Firstly, there is a need to maintain existing funding levels and to address the perceived need for more funding. The proposed new Departmental funding formula should result in a more equitable allocation of resources based on needs. It will be necessary for the Stanton Regional IHSSA to examine the health and social service requirements of Yellowknife specifically and ensure that resources are allocated to meet those needs. The other IHSSAs within the Mackenzie Region may choose to contract with the Stanton Regional IHSSA for the provision of some services in Yellowknife, particularly at the secondary level.

Future Strategies

As all IHSSAs evolve into customer-focused and outcomes-oriented organizations, they should set standards for community-based needs assessments, human resource planning and education and staff development. It will be important to recognize that the most precious resource is the people who work in the communities assessing needs and delivering services.

We suggest the formation of several advisory committees within the Department/Ministry to assist in the ongoing planning of reform initiatives. These should include:

- Health Promotion Advisory Committee
- Long Term Care Advisory Committee
- Mental Health Advisory Committee
- Emergency Health Services Advisory Committee/Disaster Plan Sub-Committee
- Aboriginal Language Health and Social Services Advisory Committee

- Acute and Primary Care Advisory Committee
- Addiction Services Mobilizing Committee.

The IHSSAs (Authorities) should be responsible for determining organizational objectives, ensuring the quality of care and assessing the effectiveness and efficiency of governance. Authority roles should include formulating policy, making decisions and maintaining oversight. Moreover, Authorities should be linked through the NWT Health Care Association (NWT HCA) to coordinate educational activities, collective labour agreements, inter-regional program and service cooperatives and group purchasing collectives.

Governance of integrated systems requires a broader perspective on community needs. Authorities will need a different mix of skills and expertise to fulfill a broader community service mission. An integrated system may be faced with the dilemma of how to simultaneously address both community accountability and coordination of system components. One possible approach is to assign the strategic function of governance to IHSSA Boards and the service function of governance to the community-based providers.

Department (Ministry) of Health and Social Services

The document, "Social Policy Framework, GNWT" dated January 1997, provides a basis for planning policy and programs in a complex environment. Moreover, this framework provides a comprehensive context within which innovative initiatives can be developed and refined to create a shared vision among stakeholders within the health and social service sector. Furthermore, these initiatives should address the special needs of residents of the NWT in an integrated and holistic fashion. This document also identifies areas that require further discussion and development. It should be used to assist in the further development of a social policy framework for the NWT.

For many years, other jurisdictions in the western world have been struggling to develop a social policy framework that would enable their governments to provide programs and services in a consistent manner that addresses the determinants of health, namely, education, housing, and economic well being.

As in other western jurisdictions, the need for such a framework is vital as governments are faced with more difficult challenges. In addition, the GNWT is faced

with its own unique challenges; namely, the establishment of two new governments (Nunavut and the Western Territories) and Aboriginal self-government.

In summary, the Department/Ministry has a responsibility along with the GNWT to comply with the Canada Health Act and to ensure that Departmental/Ministry expectations and outcomes for programs and services are met by the IHSSAs and the delivery agents in the communities. It would not be prudent for the Ministry to devolve themselves of this ultimate authority, accountability and responsibility. At the same time, the IHSSAs should be given the authority and associated accountabilities and responsibilities to design, implement and evaluate programs and services with their community partners.

Efficiency and Effectiveness of the Department/Ministry

We support the Department's move towards a corporate or ministerial role in the future. The preferred futures set out in the Memorandum of Agreement would be best served by a policy/standard setting organization that is concerned with ensuring that expectations and outcomes are met as in the ministerial model.

In order to assume the role of a "ministry," the Department must take on a policy-setting role and avoid micro-management approaches to problem solving. This can be achieved by modifying the Memorandum of Agreement and the Memorandum of Understanding to reflect true partnership roles and responsibilities and facilitating the devolution of responsibilities to the IHSSAs.

The Ministry should focus on long-range strategic planning, policy setting, monitoring health status, and support services. Other functions should be centralized, such as the integrated information system and the Medical Officer of Health role.

In order for the Department to evolve to a true corporate or ministerial structure with functions that pertain to policy setting and support services, the current organizational structure has to change. The current organizational structure and culture inherently promotes micro-management. A new structure is required that focuses on policy setting, research, information and standard setting. Program delivery should be delegated to the IHSSAs.

The devolution of resources to the IHSSAs does not mean a dismantling of the Department. It does imply a new organizational structure and new organizational

behaviors as the culture shifts to Enabler, facilitator and coach. The functions that should be resident in the Department include:

- Financial planning
- Human resource planning
- Strategic planning and evaluation
- Information systems planning.

The scope of these functions is described below.

Financial Planning

As it further defines itself as a ministry, the Department should be concerned with financial planning and monitoring, along with maintaining the proposed new funding formula. The Financial control policies and guidelines for operational and capital planning and management should be established in partnership with the IHSSAs. The Authorities should be given the responsibility to manage within these policies and guidelines and should be held accountable to the Department/Ministry for any financial mis-management.

Human Resources Planning

The Department/Ministry has the responsibility to set broad policy standards to ensure that the IHSSAs have policies with which they can develop their specific plans. In Chapter 6 of this report, we have provided guidelines for human resource planning. These guidelines should be reviewed by the Department/Ministry on a regular basis to ensure that they are appropriate and reflect health care delivery trends. The Ministry may facilitate a Territorial health and social services recruitment strategy with the support of the IHSSAs.

Strategic Planning and Program Evaluation

The tremendous body of information used to plan health and social services for the NWT should be maintained centrally. A Integrated Information Unit (IIU) (as discussed in Chapter 7) should be formed to collect, analyze and distribute information related to the determinants of health. Services that address infant mortality, addictions, or sexually transmitted diseases should be based on research conducted by this Unit.

This Unit should also be responsible for monitoring and evaluating these health indicators within the IHSSAs. Program evaluation protocols should originate in the communities through systems established by the IHSSAs in compliance with Department/Ministry policies and guidelines.

Information Systems Planning

The information, both clinical and non-clinical, that is required to plan and evaluate a health and social services system is substantial. Central information system planning should be facilitated by the Ministry (i.e., the IIU) and be conducted with full participation of all IHSSA stakeholders. The danger of allowing decentralized information systems is that disparate systems emerge which makes data integration difficult. Furthermore, the actual data elements collected, stored, processed and shared within the system may not be complete or compatible. Strategies to address information systems planning were discussed in Chapter 7.

Partnerships with other Agencies

In keeping with its role and mission within the broader social policy context, the Ministry should establish partnerships with other related agencies. Linkages usually promote minimal communication or liaison; what will be needed in tomorrow's integrated health and social service environment are partnerships with shared vision and ownership. There needs to be broad based long range strategic planning and policy setting if the goals of the social policy framework are to be realized. These partnerships should be established with:

- Education
- Justice
- Housing
- Income Support.

Impact of Division in 1999

The new role of the Ministry of Health and Social Services of the NWT described above should also apply to the two Ministries that will be formed with Division in 1999. We believe that two similar Ministries would promote community empowerment while being

mindful of the unique cultural and geographic needs of the three IHSSAs that will comprise Nunavut. We believe that this flexible structure would serve Nunavut and the Western Territories well into the next millennium.

It will be important to allow existing referral patterns to be maintained after division in order that the people of Nunavut can continue to travel to the Western Territories to receive care. In addition, there are visiting medical specialists in Yellowknife who may continue to service the people of Nunavut. To facilitate joint cooperation after Division, there is need for a cross-territorial service agreement and a reciprocal billing policy. In order to accurately assess the impact Division will have on service delivery, a detailed inventory of services that are currently provided by the West would have to be compiled and analyzed and a strategy would have to be developed to maintain these referral patterns.

As indicated in an earlier section, the IHSSAs should be linked through the NWT Health Care Association. We suggest that this organization continue after Division to coordinate health professional recruitment strategies, group purchasing collectives, labour collective agreements, inter-territorial program and service cooperatives, and board development programs.

Division may have an effect on several associations that deal with, among other concerns, self-governance. The proposed Health Professions Act will fill this void and ensure consistency for licensing and discipline. This proposed new act will not preclude each profession from retaining their individual legislation covering scope of practice and qualification criteria.

Legislative Changes

There are numbers pieces of legislation that provide a framework for the provision of Health and Social Services in the NWT. With the pending Division of the Territories, in addition to the new framework proposed in this report, there is a need to conduct a comprehensive review of all legislation governing the responsibilities of the Department (Ministry), the Regional Boards (IHSSAs) and related agencies. Specific legislative changes that should be addressed include:

- The **Financial Administration Act** should be amended to consolidate the powers and extend authority to manage the financial resources in the integrated health and social service system.
- The **THIS Act and the Public Health Act** should be consolidated and amended. This newly consolidated act should expand the powers of the IHSSAs to allow them to deliver health and social service programs with more authority, accountability and responsibility.
- As part of the information technology strategy, the current **Change of Name Act** should be amended to allow Vital Statistics to process change of name.
- The new **Extended Health Benefits Act** should be given a high priority in an effort to control costs.
- A **Medical Travel Act**, similar to that which has been established in the Yukon, should be established to control costs.
- The new **Health Professions Act** should be given a high priority. In order to facilitate the operation of an Integrated Health and Social Services System (IHSS) it is vital that the NWT have an overarching Health Professions Act to govern all self-regulating health professionals. This legislation would provide uniformity in the areas of licensing and discipline. This Act should have a high priority as it represents a part of the essential groundwork that will be needed as an IHSS is designed and implemented.

Summary

Previous studies of the Department (Ministry) have suggested that the Regional Health Boards (IHSSAs) should be given more decision-making authority and responsibility. The Department should become a "Ministry" and facilitate the work of the IHSSAs. Now is the time for action on this issue. To develop a new approach to governance at the Ministry and IHSSA level, the following strategies are proposed:

- The Department should move towards a corporate model and redefine itself as a Ministry of Health and Social Services.
- The Ministry should establish a centralized Integrated Information Unit
- The Ministry should create a new organizational structure comprised of the following functions:

- Administration
 - Strategic planning and policy development
 - Financial planning and allocation
 - Human resource planning
 - Maintaining and monitoring the integrated information system
- IHSSA Board trustees should continue to be appointed by the Minister, based on recommendations from the Boards and other community organizations.
 - IHSSA Boards should continue to implement the Carver model of board governance.
 - IHSSA Boards should adopt bylaws that ensure that the following functions are performed by the Boards:
 - Integration of health and social services
 - Local human resource planning
 - Board evaluation
 - Program quality assurance monitoring/evaluation
 - Local strategic planning, including community needs assessment
 - Community consultation and communication
 - Financial monitoring
 - Assessment of the credentials of all health care professionals.
 - Each Board should establish a Professional Advisory Council, comprised of physicians, nurses, midwives, social service workers and others, as appropriate, to assist in the development of quality assurance processes, the review of the credentials of health professionals and the development of recruitment and retention strategies.
 - The roles and responsibilities of the IHSSA Boards, their CEOs and staff should be clearly delineated.
 - Responsibility for IHSSA Board education and development should be transferred from the Ministry to the NWT HCA along with the appropriate portion of the Ministry's current operating budget.
 - Operating and capital budgets for the IHSSA Boards should be developed on a three-year planning horizon.
 - IHSSA Boards should be given authority for the selection, hiring, evaluation and dismissal of Chief Executive Officers .

- An Integrated Policy and Planning Committee (IPPC) should be formed, comprised of representatives of:
 - IHSSA Board Chairs (not CEOs)
 - Deputy Minister of Health and Social Services
 - Medical Association representatives
 - Nursing Association representatives
 - Social service representatives
 - Others, as appropriate.

The terms of reference for the IPPC should include:

- To advise the Minister of Health and Social Services
 - To monitor the implementation of the Strategic Plan, including the community consultation process
 - To identify barriers to implementation of the Strategic Plan
 - To develop new policy initiatives
 - To develop a Human Resource plan for the Ministry
 - To develop a transitional plan for the Ministry in preparation for Division in 1999
 - To perform such other duties as the Minister may request.
- A comprehensive review of all health and social services legislation should be conducted and appropriate revisions introduced as soon as possible.
 - A transitional plan should be developed for the Ministry in preparation for Division in 1999.

Section III

Recommendations for Integration

Chapter 12

Priority Recommendations

Exhibits 2-1 and 2-2 of Chapter 2 schematically presented the proposed framework for an integrated health and social services system in the NWT. In Section II, numerous recommendations were made pursuant to the development of this system. Listed below are the sub-set of recommendations that speak to either the framework or the key components of the integrated system. As described in Chapter 2, the key components of the integrated system are: 1) shared mission and values, 2) supportive legislation, policy and standards, 3) an integrated information system, 4) capitation funding, 5) a focus on population health, and 6) vertical and horizontal integration. Therefore, the recommendations listed below are the priority recommendations.

System Components	Recommendations
Framework	<ol style="list-style-type: none"> 1. By 1998, the NWT Department of Health and Social Services should change its name to the Ministry of Health and Social Services (“Ministry”). 2. The key roles of the Ministry, which maintains ultimate responsibility for the System, should be establishing and maintaining the legislation, policy, standards and integrated information system that support the entire System. 3. The Ministry should create a new organizational structure comprised of the following functions: <ul style="list-style-type: none"> Administration Strategic planning and policy development Financial planning and allocation Human resource planning

	<p>Maintaining and monitoring the integrated information system</p> <p>4. Responsibility for the provision of health and social services should be transferred to eight Integrated Health and Social Service Authorities (IHSSAs or “Authorities”). The following Authorities are recommended:</p> <p style="padding-left: 40px;">Baffin IHSSA Keewatin IHSSA Kitikmeot IHSSA Inuvik IHSSA Fort Simpson IHSSA (serving naturally affiliated communities) Fort Smith IHSSA (serving naturally affiliated communities) Hay River IHSSA (serving naturally affiliated communities) Stanton Regional IHSSA (serving the balance of Mackenzie)</p> <p>5. Each IHSSA should have a Board of Trustees appointed by the Minister of Health and Social Services.</p> <p>6. All health and social service organizations in the IHSSA jurisdiction (including Hospital Boards) should report to the IHSSA Board according to a federated model of governance.</p> <p>7. IHSSA Boards should adopt bylaws to ensure that the following functions are performed by Board management/staff:</p> <p style="padding-left: 40px;">Integration of health and social services Local human resource planning Board evaluation Program quality assurance monitoring/evaluation Local strategic planning, including community needs assessment Community consultation and communication</p>
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	<p>Financial monitoring Assessment of credentials of all professionals</p> <p>8. IHSSA Boards should be given authority for the selection, hiring, evaluation and dismissal of the Chief Executive Officer.</p> <p>9. On Division in 1999, there should be two Ministries - one Nunavut and one in the Western Territories.</p> <p>10. On Division in 1999, the Nunavut Ministry should support three IHSSAs - Baffin, Keewatin and Kitikmeot.</p> <p>11. On Division in 1999, the Western Territories Ministry should support five IHSSAs - Inuvik, Fort Simpson, Fort Smith and Stanton Regional.</p>
<p>Shared Mission and Values</p>	<p>12. The Ministry should collaborate with the IHSSAs to develop a “Preferred Futures “ document. This document should deal with both the legal transfer agreement and the preferred relationship between the Ministry and the IHSSAs.</p> <p>13. The IHSSA Boards should adopt the Carver model of governance.</p> <p>14. The Health Centres should be renamed as Health and Social Service Centres (HSSCs).</p>
<p>Supportive Legislation, Policy and Standards</p>	<p>15. The Territorial Hospital Insurance Act (THIS) and the Public Health Act should be consolidated and amended. This newly consolidated act should expand the powers of the IHSSAs to allow them to deliver health and social service programs with more authority, accountability and responsibility.</p> <p>16. The Ministry should prepare a Health Professions Act to govern all self-regulating health professions. This Act should provide</p>

	<p>uniformity in the areas of licensing and discipline.</p> <p>17. The Ministry and IHSSAs should develop clinical guidelines for medical travel and ensure they are complied with.</p> <p>18. The IHSSAs should have responsibility for medical travel costs, and following Division, IHSSAs should jointly contract for central co-ordination and dispatch, with compliance to clinical guidelines as a term of contract.</p>
<p>Integrated Information System</p>	<p>19. The Ministry should establish an Integrated Information Unit. This body would have the following functions:</p> <ul style="list-style-type: none"> • Define data fields of the system-wide electronic client/patient record • Integrate existing databases by this record • Support end-users at their site-of-service • Report trends in health status and determinants • Monitor program activities in relation to trends • Examine system expenditures in relation to trends • Refine needs-adjuster in funding formula <p>20. A high priority should be given to examining medical travel expenditures by clinical cause.</p>
<p>Capitation funding</p>	<p>21. The Ministry should transfer funding envelopes to the IHSSAs based on their rostered population size and needs.</p> <p>22. The IHSSAs should have full responsibility for development of and control over their budgets, and be accountable for their budgets through deficit/surplus retention.</p> <p>23. The Ministry should develop “safety-net” provisions based on shared funding of high-cost residents to support the sharing of risk for smaller IHSSAs.</p> <p>24. The Ministry should include a substantial share of expenditures</p>

	<p>on program administration in the funding formula. This should be increased over time in line with the transfer of responsibilities to IHSSAs.</p> <p>25. Opportunities for private sector funding and private/public partnerships should be explored as methods for financing facilities.</p> <p>26. The mechanisms and benefits to capital leasing should be explored.</p>
<p>Focus on Population Health</p>	<p>27. The population needs-based funding formula should not “ earmark ” funds to particular sectors or particular programs within sectors.</p> <p>28. The following proxies for relative population-needs should be considered in the funding formula:</p> <ul style="list-style-type: none"> • Relative mortality indicators (non-obstetrical primary care) • Standardized fertility ratios (obstetrical care) • PYLLs and low birth weight (health promotion and prevention) • Teen pregnancies (family planning) • Overcrowded residences (substance abuse and communicable disease) • Lone-parent households (child welfare) <p>29. A prominent public health strategy for IHSSAs should be tobacco use prevention.</p> <p>30. A prominent social services strategy for IHSSAs should be reducing risk of suicide.</p>
<p>Vertical and Horizontal Integration</p>	<p>31. Probation supervision responsibilities should be removed from community social service workers (CSSWs).</p> <p>32. The social services mandate of the CSSW should be expanded (e.g., child welfare responsibilities should be combined in one position with responsibilities for addictions, suicide, family violence, etc.).</p>

	<p>33. The CSSW should be responsible for liaison with other related sector workers (e.g., RCMP, Economic Development and Education officials).</p> <p>34. The CSSW should become an integral member of the team of health and social services workers at the Health Centres (i.e., Health and Social Service Centres).</p> <p>35. The title “Nurse-in-Charge” should be replaced by “Local Team Managers” and be open to non-nursing staff as well as nursing and other staff.</p> <p>36. IHSSAs should restructure service delivery along program rather than professional lines.</p> <p>37. The Ministry should implement a midwifery program.</p> <p>38. The Ministry should implement the nurse-practitioner role.</p> <p>39. The Ministry should establish a Task Force to advise the Minister on the role and regulation of Traditional Healers.</p>
Facilities Development	<p>40. The Inuvik IHSSA should prepare plans for the replacement of the Inuvik Regional Hospital on its current site. Construction should be completed within the next five years.</p> <p>41. Co-location of health and social service activities on the new hospital site should be planned by the Inuvik IHSSA.</p> <p>42. The Baffin IHSSA should prepare plans for the replacement of the Baffin Regional Hospital on a new site.</p> <p>43. Concurrent with the development of a functional program, the</p>

	<p>Baffin IHSSA should consider co-location of health and social services at the new Baffin Regional Hospital.</p> <p>44. Planning for Expanded Health and Social Service Centres to be located in Cambridge Bay and Rankin Inlet should be undertaken by the Kitikmeot and Keewatin IHSSAs.</p> <p>45. The establishment of a Capital Coordinating Committee (CCC) to work with the Inuvik, Baffin, Cambridge Bay and Rankin Inlet Regional Boards to expedite the commissioning of the facilities in their respective Regions.</p> <p>46. Consider outsourcing the facilitator role in the CCC.</p> <p>47. The role of the CCC is to ensure appropriate Role Studies, functional and operational programs, design of facilities, assessment of operations and maintenance costs and to review public/private partnership models for financing of these facilities.</p> <p>48. The CCC should have representation from all stakeholders including the Aboriginal Economic Development groups.</p> <p>49. The CCC is to complete its mandate within 90 - 120 days and should address all four facilities concurrently in that time period.</p>
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References

"Judge orders kids out of Native child welfare agency" *Wawatay News* (Sioux Lookout, Ontario), November 5, 1992, 6.

"OPP asked to probe death of young child." *The Globe and Mail.*, January 18, 1979.

1996/97 YTD Medical Travel Expenditures by Diagnostic Classification, Monitoring and Compliance Working Group, February 3, 1997

Alexander, J.A. 1990 . Governance for Whom? "The Dilemmas of Change and Effectiveness in Hospital Boards." *Frontiers of Health Service Management* 6(3); 38-41.

Arctic Environmental Strategy: Northern Contaminants Program, 1995. *Contaminants in Northern Canada*. Métis Nation - NWT, Yellowknife.

Baffin Health Network Document, revised January 1997

Bagley, Christopher. 1985. "Child Abuse by the Welfare System." *Journal of Child Care* 2(3): 63-69.

Benenson, A. S. 1995. *Control of Communicable Diseases Manual.*, Sixth Edition. American Public Health Association, Washington, DC.

Blomquist, Geraldine M. 1992. *Coping as a Foster Child*. New York: Rosen Inc.

Bowlby, John. 1969. *Attachment and Loss*. New York: Basic Books.

Canada. Royal Commission on Aboriginal Peoples. 1996. "Relocations." In *Report of the Royal Commission on Aboriginal Peoples* Vol.1.

Canada. Royal Commission on Aboriginal Peoples. 1996. "Residential Schools." In *Report of the Royal Commission on Aboriginal Peoples* Vol.1: 333-410.

Careau, H., E. Dewailly, A .Vezina, et al. 1992. *State of Contamination of Northern Canada and Greenland*. Environmental Health Service, Community Health Department, Laval University Hospital Centre. Quebec.

Carr, C. 1996. *Database on Breastfeeding*. Department of Health and Social Services, Government of the Northwest Territories, Yellowknife.

Carver, J. 1991. *Boards That Make a Difference: A New Design for Leadership in Non-profit and Public Organizations*. San Francisco: Jossey- Bass Publishers.

Cummings, Stu. "Review questions Tikinagan's competency." *Wawatay News* (Sioux Lookout, Ontario), November 7, 1991, 1.

Department of Health and Social Services, February 1997 "Wellness Indicators"

Department of Health and Social Services, February 6, 1997 "Recruitment and Retention of Community Health Nurses"

Eisner, V., J. V. Brazie, M. W. Pratt, and A. C. Hexter. 1979. "The risk of low birthweight." *Am J Pub Health* 69: 887–893.

Fahlberg, Vera. 1979 *Attachment and Separation..* Michigan Department of Social Services.

Fama, E.F. 1980 "Agency Problems and the Theory of the Firm." *Journal of Political Economy* 88, No. 21

Giesbrecht, Judge Brian Dale. "Respecting the Death of Leslie Desjarlais." Office of the Chief Medical Examiner of Manitoba. August 31, 1992.

Godel, J. 1997. "Elementary School Assessment, Inuvik – 1996: School Problems by Racial Origin." Reported in *Inuvik Drum* (Inuvik, NWT), February 6, 1997.

Goldstein, Joseph, Anna Freud and Albert Solnit. 1973. *Beyond the Best Interests of the Child*. MacMillan: New York.

Goldstein, Joseph, Anna Freud and Albert Solnit. 1979. *Before the Best Interests of the Child*. MacMillan: New York.

Health Canada. 1994. *Strategies for Population Health: Investing in the Health of Canadians*. Discussion paper prepared by the Federal, Provincial and Territorial Committee on Population Health. Ottawa.

Health Canada. 1995. *Notifiable Diseases Annual Summary, 1993. Canada Communicable Disease Report* Vol 21S1.

Houle, C.O. 1989. *Governing Boards: Their Nature and Nurture*. San Francisco: Jossey Bass Publishers

Hudson, Peter. 1987. "Manitoba's Indian Child Welfare Services: In the Balance." *In Perspectives on Social Services and Social Issues*, ed. Jacqueline S. Ismael and Ray L. Thomlison. Ottawa: Canadian Council on Social Development 251–264

Inuvait Development Corporation et al, October 1993, *Aulaguma Travel Management Project*

Inuvik Hospital Replacement Briefing Paper, February 3, 1997

Johnston, Patrick. 1983, *Native Children and the Child Welfare System*. Toronto: Lorimer.

Kramer, M. S. 1987. "Determinants of low birthweight: methodological assessment and meta-analysis." *WHO Bull.* 65: 663–737.

Leake, J. L. 1992. *Oral Health Survey of Canada's Aboriginal Children Aged 6 and 12*. Faculty of Dentistry, University of Toronto, Toronto.

McCormick, M. C. 1985. "The contribution of low birthweight to infant mortality and childhood morbidity." *N Eng J Med* 312: 82–90.

Medical Travel: Systems/Data and Management/Board Support; Findings and Recommendations, November 1996

Morse, Bradford. 1984. "Native Indian and Metis Children in Canada: Victims of the Child Welfare System." *In Race Relations and Cultural Differences: Educational and Interpersonal Perspectives*, ed. Gajendra K. Verma and Christopher Bagley. New York: St. Martens Press.

Noble, Gail. 1976. "The Canadian North: Economic and Social Development." *The Social Worker* 44 : 12–14.

Northwest Territories Bureau of Statistics 1996. *Statistics Quarterly*, vol. 18, no.3.

Northwest Territories Department of Health, January 1992 *Medical Travel Study 1990 – 1992*

Penner, Keith, ed. 1983. *Indian Self Government in Canada Report of the Special Committee*. Ottawa: Queen's Printer.

Pointer, D., "Really Governing: What Type of Work Should Boards Be Doing." *Hospital and Health Services Administration* Vol.40 (3) Fall 1995.

Roberts, David. "Manitoba Indian leaders criticized in boy's suicide: 'The government chose not to notice,' inquest judge says." *The Globe and Mail.*, September 5, 1992.

SAS Institute Inc. 1988. *SAS/ETS User's Guide*, Version 6, First Edition. Cary, NC.

Scudder, T and E. Colson. 1979. "Long term research in Gwembe Valley, Zambia." In George Foster, Thayer Scudder, Elizabeth Colson, Robert V. Kemper (Eds.), *Long term field research in Social Anthropology* 227–252. New York: Academic Press.

Shkilnyk, A. 1985. *A poison stronger than love: The destruction of an Ojibwa community*. New Haven: Yale University Press.

Stanton Regional Health Board, January 31, 1997 "Physician Specialist Services"

Statistics Canada. 1993. *Language, Tradition, Health, Lifestyle and Social Issues: 1991 Aboriginal Peoples Survey*. Ottawa. [Cat.No.89-533].

Statistics Canada. 1995. *Profile of Canada's Aboriginal Population*. Ottawa. [Cat.No. 94-325].

Statistics Canada. 1996. *Health Indicators*. Statistics Canada Catalogue No 82-221-XDE.

Stronell, RD, Tyson JE, "A Review of Specialty Services at the Stanton Regional Hospital", November 1996

Taylor-Henley, Sharon and Peter Hudson. 1992. "Aboriginal Self-Government and Social Services: First Nations-Provincial Relations." *Canadian Public Policy*. XVIII (1):13–26.

Thomlison, Ray. 1984. *Case Management Review: Northwest Region of Alberta Social Services and Community Health*. University of Calgary: Faculty of Social Welfare.

Waldram, James B., D. Ann Herring, and T. Kue Young. 1995. *Aboriginal Health in Canada: Historical, Cultural, and Epidemiological Perspectives*. Toronto: University of Toronto Press.

Western Territory Health Network – Pilot Project, February 1997 "Draft Terms of Reference"

Westwood, M., M. S. Kramer, D. Munz, et al. 1983. "Growth and development of full-term nonasphyxiated small-for-gestational-age newborns: follow-up through adolescence." *Pediatrics*. 71:376–382.

Wideman, R. Max, ed. 1995 *Project and Program Risk Management: A Guide to Managing Project Risks and Opportunities*. Project Management Institute, Drexel Hill.

Young, T. Kue, and Joan Mollins 1996. "The impact of housing on health: an ecological study from the Canadian Arctic." *Arctic Medical Research* 55:52-61.

Young, T. Kue. 1994. *The Health of Native Americans: Towards a Biocultural Epidemiology*. New York: Oxford University Press.

Appendix A

The Consulting Team

Med Emerg International Inc. assembled a team of consultants with experience in a relevant range of health and social services to undertake this project. The experience and qualifications of the team is outlined below.

Ramesh Zacharias, Project Director

As the founder and Chief Executive Officer of Med-Emerg International Inc., Dr. Zacharias has extensive experience in the review of health systems in both urban and rural communities. He has conducted reviews of health care systems in international communities as well as in communities throughout Canada. He is a graduate of the Faculty of Medicine at the University of Western Ontario with specialty training in general surgery and emergency medicine. He has been the Emergency Medical Director of several hospitals through Ontario and has conducted operational reviews of emergency departments, urgent care centres and walk-in clinics in both rural and urban communities.

David Coulson, Project Manager

David Coulson has over twenty years of health services planning experience. He recently held a senior management position at a large teaching hospital in Toronto. His health care planning experience includes strategic planning, program planning, facilities assessments, feasibility studies, mergers, strategic alliances and health system design. He has worked with provincial governments, regional health organizations, hospital boards, community health agencies, social service agencies and regional planning organizations. He has extensive experience in health system design in small rural communities and is currently the Vice-Chairman of a rural hospital Board that has responsibility for the development of an integrated health system.

Rob Alder, Epidemiologist

Dr. Alder specializes in community health, epidemiology, financial management and health system governance. As the epidemiologist at the Middlesex–London Health Unit, he is responsible for monitoring the health status of this community. He is also an Assistant Professor in the Faculty of Medicine at the University of Western Ontario. He has extensive experience in the utilization of population statistics and health status

indicators in the determination of community health needs. His health system planning experience includes children's services, trauma services, emergency services, health promotion and wellness programs in both Canadian and international environments.

Don Ardiel, Architect

As a registered architect, Don has participated in numerous health facility planning projects including master and functional programming, master planning, detailed design, facilities assessment and feasibility studies. He has participated in the design of small rural hospitals, ambulatory care facilities, emergency departments, mental health facilities and long term care facilities. He has also participated in feasibility studies and the assessment of facilities for private sector clients.

Frank Baillie, Medical Consultant

Dr. Baillie is Deputy Head of the Department of Surgery at Chedoke McMaster Health Sciences Centre in Hamilton and Associate Professor in the Department of Surgery. He has extensive experience in the design and management of emergency and trauma systems both in Canada and internationally. His clinical experience includes positions in large urban centers as well as assignments in Inuvik and Iqaluit. He has been a consultant to the Ontario Ministry of Health on the design of air transportation systems, critical care transportation systems, patient information systems and critical care educational programs. His special areas of interest include pre-hospital emergency care, rural surgical services, patient transportation systems, medical resource management and continuing education for health professionals.

Stephen Birch, Health Economist

Dr. Birch has been a consultant to many provincial and regional planning organizations in the assessment of the economic impact of health policy. He is currently Assistant Professor in the Department of Clinical Epidemiology and the Centre for Health Economics and Policy Analysis at McMaster University, Hamilton. He has published extensively in the health care literature on a variety of topics including medical manpower planning, caring for the elderly, public health expenditures, alternative payment mechanisms for physicians, needs based health care capitation, community health services, the implications of capitation payment mechanisms, allocation of health resources on the basis of health needs and population based planning.

Cheri Bruce, Administrative Coordinator

Cheri was responsible for the coordination of travel arrangements, on-site interviews, research and team meetings. She is a registered nurse with extensive training in advanced life support systems, intensive care nursing and occupational health services. She is Manager of the Emergency Medical Clinic at the Pearson International Airport and has extensive experience in disaster planning, medical emergency services and training of health care professionals.

Byron Darlison, Information Systems Consultant

Byron Darlison, a consultant with Rise Information Systems Inc., is currently involved in the implementation of a new community health information system (WellCom) that will be introduced over the next year in the NWT. Byron is familiar with health information and communication system requirements based on his NWT experience and similar assignments with community health centres throughout Canada.

Florence Headrick, Nursing Consultant

Florence Headrick has over thirty years of nursing experience in small rural hospitals and isolated communities. She is a registered nurse with specialty training in coronary care, emergency care, trauma care and emergency life support. Florence has held a variety of senior nursing administrative positions in hospitals in Campbellford, North Bay, Sturgeon Falls and Nova Scotia. She has also participated in a number of medical missions to rural communities and worked in international health care systems in Haiti, Belize, Ecuador, Dominican Republic, Albania, Guatemala and the Ukraine.

Andrew McCallum, Medical Consultant

Dr. McCallum is a graduate of McMaster University with specialty training in internal medicine, surgery and emergency medicine. He has worked as a flight surgeon, occupational medicine specialist and emergency physician. He was Chief of Urgent Care for the first free standing primary care centre in Ontario. He is currently Head of the Department of Emergency Medicine at Sunnybrook Health Sciences Centre and has held similar positions in several teaching and community hospitals. He has participated in the review of emergency medical services in both urban and rural communities in Canada and internationally.

Patrick Michaud, Financial Consultant

Patrick has over twenty years of financial management experience providing strategic planning, restructuring and financial advice to both public sector and private sector organizations. His clients have included nursing homes, home health organizations and primary care organizations. He has held senior financial management positions with several large private sector organizations with responsibility for all aspects of budgeting, financial reporting, inventory management, information systems and capital asset management. He has assisted several organizations in obtaining investment capital and restructuring their financial affairs.

Carl Pahapill, Chief Operating Officer, Med–Emerg International Inc.

As the Chief Operating Officer of Med–Emerg International Inc., Carl has overall responsibility for the operations of this diverse health care management organization. His previous experience includes chief operating officer and chief financial officer of a private sector organization and partner with a major financial management firm. He has participated in numerous strategic planning, financial management and operational planning projects for both private sector and public sector organizations. He has special expertise in the development of innovative financing mechanisms for public and private sector organizations.

Susan Pauhl, Nurse Practitioner and Midwife

Susan Pauhl is a nurse, nurse practitioner and a midwife. She has specialty training in obstetrics, surgical services and pharmacology. Her twenty years of practical experience includes positions in hospitals and health centres in communities such as Moose Factory, the Yukon, Rankin Inlet, Inuvik and Iqaluit. Susan has been involved in planning for the renovation of several hospitals and health centres. She has also played a major role in the development of new health care programs and services that are responsive to rural community needs. In Inuvik, she was instrumental in the development of a new model of obstetrical care that utilized the skills of midwives for low risk obstetrical patients. She is currently employed in a community health centre and is developing an independent practice role for nurse practitioners.

Joyce Timpson, Social Services and Mental Health

Joyce Timpson has post-graduate degrees in social work and public administration. As a professional social worker, she has worked for the Children's Aid Society in Kenora

directed a counseling service in Sioux Lookout and taught social work at the university level. She has been a consultant in mental health for a number of Native groups including the Shibogama First Nations Council, the Northern Chiefs Council, the Sioux Lookout First Nations Health Authority and the Wunnumin Lake First Nation. She was retained by the Royal Commission on Aboriginal Peoples to research issues related to child and family services. She has extensive experience in the development of community-based mental health and social service programs in rural communities.

Frank Vassallo, Governance

Frank Vassallo has over ten years of health care consulting experience in a variety of health care environments. His expertise includes health system design, management information systems, medical clinic administration, private physician practice management, reengineering, operational and strategic planning and health system redesign. He has undertaken numerous projects requiring the critical analysis of financial, utilization, market share and demographic information. He has conducted organizational and operational reviews and participated in health system redesign studies for multi-institutional organizations. As Vice-Chair of the Niagara Region District Health Council, he has recently participated in a comprehensive review of health care needs in this community.

Kue Young

Dr. Young is well known for his extensive health research and planning activities with northern and Native organizations throughout Canada and internationally. He is a family physician with specialty training in community health. He is a Professor in the Department of Community Health Sciences at the University of Manitoba and Director of the Northern Health Research Unit. Dr. Young has published numerous articles and research papers in both medical and social science literature regarding the health and social service needs of Native communities. Dr. Young's international experience includes health care planning projects in the Philippines, India and Zimbabwe, Greenland, Alaska, Arctic Russia and Brazil. He has conducted numerous health system planning projects in northern Saskatchewan, Manitoba, Labrador, northern Quebec and the Northwest Territories. He is currently President of the International Union of Circumpolar Health.