

EPI NORTH

The Northwest Territories Epidemiology Newsletter

Spring 2000

Vol 12, Issue 1

Major Causes of Death

Page 2

Corrections

Page 3

Breast Health/Breast Cancer Information and Support

Page 4

Conferences and Workshops

Page 5

Smoking in the Northwest Territories

Page 6

How many fewer cancers can be expected as a result of reduction in smoking prevalence in the Northwest Territories? - An ecological study

Page 9

What does smoking cigarettes have to do with kidney disease?

Page 11

Women's Nutrition: Important in the Childbearing Years

Page 12

Community Based Ice Safety Programs

Page 14

The Aurora Research Institute: Research North of 60°

Page 16

Injury Prevention 2000

Page 18

Notifiable Diseases

Page 20

Social Capital – measuring the fabric of society

André Corriveau,
Chief Medical Health
Officer

The 1999 NWT Health Status Report has highlighted the critical importance of socio-economic factors as determinants of health and well-being.¹ For example, educational achievement and quality of employment have a substantial influence on individual health. Another important economic determinant of health is that of income distribution within a society. How equally wealth is shared within a population has an important impact on population health.² Work is currently underway throughout Canada and elsewhere to better understand this relationship.³

In examining the socio-economic factors that impact on health, most of the attention has been focussed on the “economic” side of the relationship. Economic indicators are more readily available than social indicators since we routinely collect statistics on the Gross National Product (GNP), unemployment rate, income levels, etc. This information is important since it may affect the strategies used by a society to promote and sustain health, but it's only a part of the information that decision makers should have at hand.

Social indicators are more difficult to collect and utilize. Although the relationship between social environments and health makes intuitive sense, we are only just beginning to understand the complex interaction between social supports, economic opportunities and health. A relatively recent concept referred to as “social capital” has been developed to focus on the societal side of the health determinants equation.

Social capital is a term used to describe the degree of cohesiveness of a society. A community or nation in which there is a large degree of trust between individuals and groups, and where equity, cooperation and sharing are held as common values, can be described as having a high level of social capital. Furthermore, “*stock of social capital such as trust, norms and networks tend to be self-reinforcing and cumulative. Virtuous circles result in social equilibria with high level of cooperation, trust, reciprocity, civic engagement and collective well-being.*”⁴

The social environment of a community or a nation has a major impact on its people because it provides much of the substrate for the kind of nurturing, social support networks and workplace environments which will be encountered there. The well-being of individuals in large part depends on how well the community functions. As a result, social policy can have a direct effect on population health, for instance through income redistribution mechanisms and the provision of adequate social safety nets. The quality of our social environment, the strength of our social fabric, influences every aspect of our daily lives, from birth to death, at home, in the workplace and in our choices of leisure activities.

Because the concept of social capital is relatively recent, a standard set of indicators has not yet emerged to measure it, as a means to assess its impact on population health, track progress, and make comparisons between societies. Such indicators might include measures such as the percentage of the population involved in volunteer activities, rates of participation in community organizations, voter turnout, the number of self-help groups, per capita charitable contributions, the level of homelessness, the number of strikes and civil unrest incidents, the presence of gangs, the crime rate, etc.

For all of us concerned with population health, this is an area that deserves much more attention. Fortunately, it is also an area that is ideally suited for health promotion, defined as “*the process of enabling people to increase control over, and improve their health,*”⁵ where community development and individual empowerment are viewed as key strategies and processes. It will also be our challenge to ensure that measures and indicators of social capital receive an adequate level of attention in future health status reports.

EpiNorth Communication

Telephone: (867) 920-8946

Fax: (867) 873-0204

Mail: Research and Analysis
Unit — CST 6

Health and Social Services
Government of the NWT
Yellowknife, NT
X1A 2L9

E-mail:

Epi_North@gov.nt.ca

cc: Mail:

EPI North

EpiNorth Editorial Board

Marnie Bell
Dr. André Corriveau

Peter Hall

Anthony Leamon

Helen McPherson

David Martin

Rick Tremblay

Internet access

www.hlthss.gov.nt.ca



¹ The NWT Health Status Report 1999, Northwest Territories Department of Health and Social Services. Available at the website www.hlthss.gov.nt.ca

² Wilkinson, R.G., *Unhealthy Societies: the afflictions of inequality*. 1996. Routledge, London.

³ Kaplan, G.A. et al. *Inequality in income and mortality in the United States: analysis of mortality and potential pathways*. *BMJ* 1996; 312: 999-1003

⁴ Putnam R.D. *Making Democracy Work - Civic Traditions in Modern Italy*. Princeton University Press, 1993.

⁵ World Health Organization. *Ottawa Charter for Health Promotion*. Copenhagen: WHO Europe, 1986.

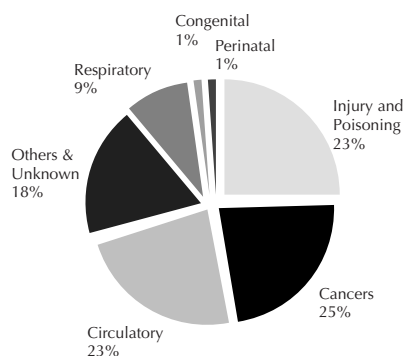
This article is a feature presentation from the 1999 Health Status Report. Selected articles will be published from the 1999 Health Status Report in EpiNorth to highlight current health topic "hot-spots" in the NWT. A complete copy of the report may be downloaded from the Health and Social Services website (<http://www.hltss.gov.nt.ca/publicat.ht>) or, a limited number of copies are still available, and can be requested from the Department's Planning and Communications Unit, Tel: (867) 920-8927.

Major Causes of Death, Northwest Territories 1991-1996

In the last issue, the feature article discussed NWT population health status. In this issue, we expand on the topic to include the major causes of death. Understanding the causes of death provides valuable information about major risks to health.

As can be seen in Figure 1, between 1991 and 1996 the leading causes of death in the Northwest Territories were cancers (25%), injuries and poisoning (23%), and circulatory disease (23%). Together, these three major causes accounted for almost 3/4 of all deaths.

Figure 1
Causes of Death
NWT, 1991-1996 (n=831)



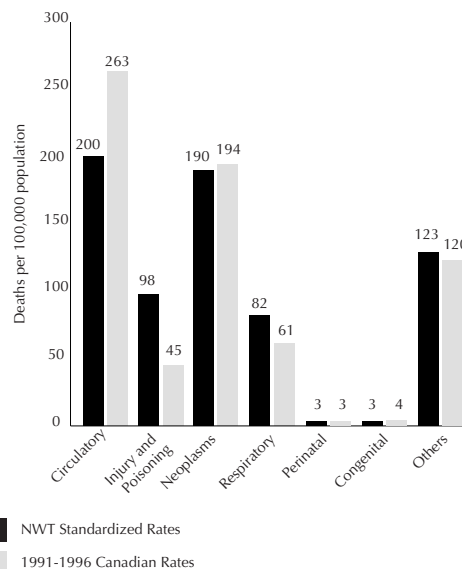
Source: Statistics Canada and NWT Bureau of Statistics

To some extent, the age structure of a population has an effect on leading causes of death (because younger people tend to die for different reasons than older people). Therefore, to compare the leading causes of death in the Northwest Territories to those for the rest of Canada requires an adjustment for the differing age structures of the two populations. This adjustment was made for Figure 2, which shows the age-adjusted mortality rates for the most common illnesses in the Northwest Territories, compared to Canada.

When adjusted for age of the population, mortality due to cancer in the Northwest Territories was about the same rate as for the rest of Canada, mortality due to circulatory disease was close to, although still lower than the rest of Canada, and mortality due to respiratory disease was higher than the rest of the country.

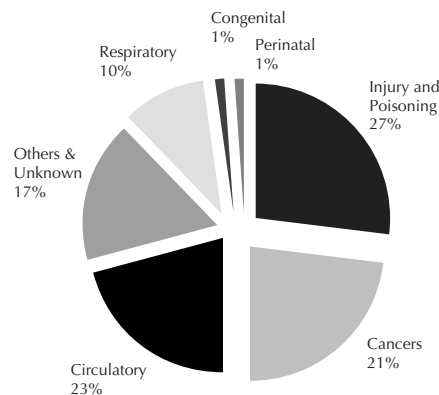
However, the rate of mortality due to injuries in the Northwest Territories was more than twice the rate for the rest of Canada.

Figure 2
Mortality Rates by Major Cause
NWT and Canada, 1991-1996



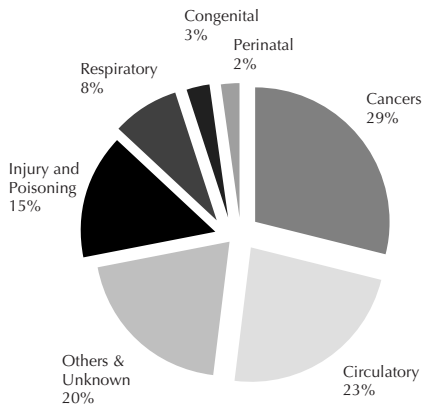
Figures 3 and 4 compare the major cause of death for men and women. The major differences are that men tended to die more often as a result of injuries, 27% compared to 15% for women, while women tended to die more often from cancer, 29% compared to 21% for men.

Figure 3
Cause of Death, Males
NWT 1991-1996



Source: Statistics Canada

Figure 4
Cause of Death, Females
NWT 1991-1996

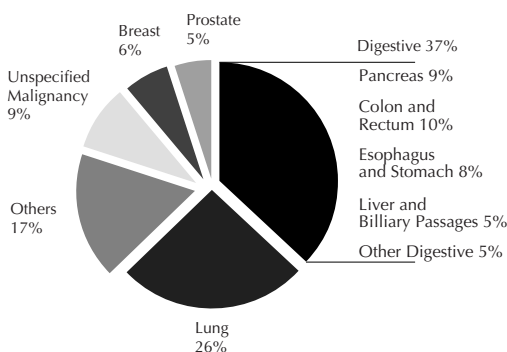


Source: Statistics Canada

As was seen in Figure 1, chronic diseases - cancer, circulatory diseases and respiratory diseases - accounted for over half of the deaths in the Northwest Territories. Figure 5 provides more information about the type of cancers leading to death in the Northwest Territories.

The major cancers leading to death were lung cancer and digestive cancer, which accounted for more than half of the cancer deaths. As can be seen in Figure 5, lung cancers accounted for 26% of all cancer deaths.

Figure 5
Cancer by type
NWT 1991-1996



Source: Statistics Canada

Heart attacks and strokes were the two major components of cardiovascular diseases, consisting of 44% and 17% of all circulatory deaths.

It is well known that tobacco use is a preventable factor associated with a wide range of diseases of both adults and children. Based upon territorial prevalence of smoking by age and sex, tobacco was estimated to be the source of nearly one-quarter of all deaths, including those from cancer, circulatory diseases, respiratory diseases, and perinatal conditions.

Focus Reports

Focus reports on smoking and injuries are set to be released by the Research and Analysis Unit, Population Health Division, Department of Health and Social Services by early summer.

The smoking report will examine the smoking behaviour among various subgroups in the Northwest Territories population. Using information from three surveys, the report will provide an indication of smoking prevalence according to age categories, gender, ethnicity, education levels, and community. Along with an overview of the general population, the report will focus on children and youth, and women of childbearing age, especially pregnant women. The report will also examine smoking attributed mortality and morbidity.

The injury report will be presented in two separate volumes: Injury Mortality Facts and Injury Morbidity Facts. Injury mortality facts describes, in detail, time-place-person distribution of injuries and external causes of injuries. Included in this volume is a separate study on injury risk assessment which identifies high-risk subpopulations that injury prevention programs should target. Injury morbidity facts will present similar information for hospitalizations in terms of time-place-person distribution of injuries and external causes of injuries.

For more information, please contact Andrew Langford, Acting Manager, Research and Analysis Unit (867) 920-8946.

Corrections

The following are corrections to the Winter 1999/2000 issue:

Page 3: Population Health Status Figure 3, Female should be 13 for NWT and 11 for Canada. Figure 4 should be 18-24 not 12-24.

Page 5: Title should read: Injury Mortality in the Northwest Territories (NWT), 1991-1996.

Page 15: Cumulative totals (1982 to June 30, 1999) of AIDS cases diagnosed and positive HIV test reports are 16 and 31 respectively (Database Correction).

Page 17: Phone numbers should read: Canadian Mental Health Association, NWT Division: (867) 873-3190 and Stanton Regional Hospital, Mental Health Clinic: (867) 873-7042.

*By Anne Whittaker,
Non-Communicable
Disease Consultant,
Department of Health
and Social Services*

*Vicki Lafferty,
Planning Advisor,
Department of Health
and Social Services*

*Deborah Hare-Colpitts,
Breast Health/Breast
Cancer Project
Co-ordinator,
Status of Women*

*Marsha Argue,
Director of Projects,
Status of Women*

Breast Health/Breast Cancer Information and Support

Breast Health/Breast Cancer (BH/BC) has been given a higher profile in the NWT since 1992, through the NWT BH/BC Action Group and the Status of Women Council of the NWT. Recently this work has been assisted by funding from the Canadian Breast Cancer Initiative and the Canadian Breast Cancer Foundation.

The unique and effective NWT BH/BC Action Group is primarily made up of women volunteers who have been personally affected by breast cancer. This group accomplishes their work by bringing together health professionals, breast cancer survivors, women's groups and other organizations with an interest in breast cancer information and support.

For example, in 1999 the BH/BC Action Group and the Status of Women Council conducted focus groups with Aboriginal women to determine strategies for providing BH/BC information and support in the unique and diverse communities of the NWT. These women identified the need for more one-on-one information from local health care providers and indicated a preference for short, plain language, culturally appropriate materials. To address this need pamphlets were developed entitled, "Breast Health: Caring for Yourself" in all of the aboriginal languages. These have been sent to the communities and there will soon be audio tapes and CDs available with similar information (with funding assistance from the NWT Department of Health and Social Services). Another accomplishment in 1999, was the development and distribution of a comprehensive resource binder with practical materials such as various pamphlets, articles and information about where to obtain support. This binder can be used by all health care providers and was distributed to all health centres and public health units in September 1999.

In February 2000, the BH/BC Action Group and the Status of Women Council also coordinated a planning session attended by twenty-four women with diverse backgrounds such as breast cancer survivors, health professionals, Community Health Representatives (CHRs) and women with a strong family history of cancer. Through small group discussion, they identified what they believed was needed regarding breast cancer information and support. It was encouraging that all groups, although working independently, selected the same top priorities. These priorities will be used as a guide to plan for the next year. The following is a survey of the priorities identified for information needs, support and public awareness.

Information Needs:

1. Develop a flow chart, showing the various steps a woman will encounter from the discovery of a lump through to post treatment.
2. Develop an information package to be available for women when diagnosed. This would include clear, plain information in both written and picture format. A "home grown" culturally relevant video would also be a great asset.
3. Explore the Hotline Information and Support which is available through the Canadian Cancer Society and through Willow, which provides peer support and information for women.

Support:

1. Examine support and information resources that have been developed to make them available to family members, including partners, close relatives and friends. Current support networks include, "Reach to Recovery" which is a support for women waiting for results and treatment. There is a need to broaden networks to include more Aboriginal, spiritual and community supports.
2. Advocate for funding for a family member or support person to travel as an escort.



3. Training for health care providers in the area of breast health/breast cancer.
4. Create a volunteer network of people to act as supporters for women from other communities who must travel to Yellowknife or Edmonton.

Public Awareness:

1. Increased awareness of the Breast Cancer Screening Guidelines within the NWT.
2. Reinforce the need for Breast Self Exam.
3. Increase awareness opportunities in the community such as in the school system.

Breast Cancer Screening Guidelines

In 1996, the Department of Health and Social Services established a Working Group to develop guidelines for an integrated Breast

Cancer Screening Program across the NWT. The Working Group completed its task in 1998. The Health and Social Services Boards are now making screening mammography available and making plans to improve access. There are representatives from both the Status of Women Council and the BH/BC Action Group on the NWT Breast Health Advisory Committee, that is mandated to guide the implementation of the breast cancer screening guidelines.

For more information contact:

Marsha Argue
The Status of Women Council of the NWT
(867) 920-6177

Anne Whittaker
Health and Social Services
(867) 920-3281

Conferences and Workshops

This section lists health related conferences and workshops that are being hosted in the coming year. If you would like to list an upcoming event please email, fax or mail the information to EpiNorth.

Immunization in the 21st Century - Progress Through Education

4th Canadian National Immunization Conference

December 3-6, 2000

World Trade and Convention Centre, Halifax, Nova Scotia

The Laboratory Centre for Disease Control, Health Canada and the Canadian Paediatric Society are organizing the immunization conference to:

- Increase information exchange on immunization issues;
- Explore myths, truth and logic about immunization;
- Share information on immunization initiatives, new vaccines and vaccine programs;
- Discuss late breakers;
- Educate professionals and discuss the place of immunization in the medical and nursing curricula.

For a conference preview, to get on the mailing list or receive sponsorship opportunities visit the conference website:

<http://www.hc-sc.gc.ca/hpb/lcdc/events/cnic/index.html>

or fax your request to:

Jennifer Brousseau, Conference Coordinator
Fax: (613) 952-7948

By Anthony Leamon, Health Information Analyst, Department of Health and Social Services

Smoking in the Northwest Territories Preliminary Results from the 1999 Labour Force Survey



Introduction

Tobacco use has been identified as a leading cause of preventable death in Canada and the Northwest Territories (NWT). Diseases such as lung cancer, chronic bronchitis, coronary heart disease and emphysema have been clearly associated with regular smoking. However, despite the publicized harmful health effects linked with tobacco use, a large number of people in the NWT continue to smoke. According to the 1999 NWT Labour Force Survey, an estimated 12,100 people or 41% of the population 15 years of age and over, smoke cigarettes. The following article contains a number of highlights from the survey.

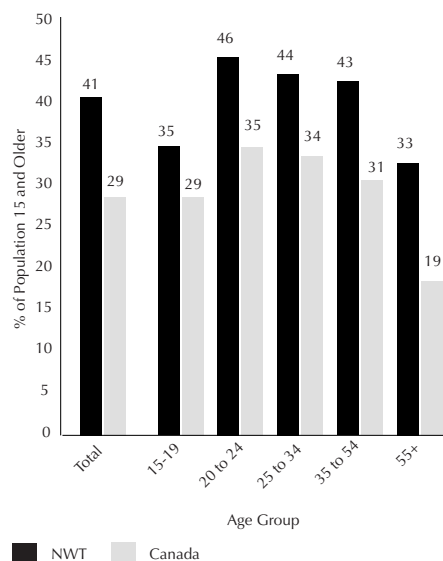
Methods

The NWT Bureau of Statistics conducted the 1999 Labour Force Survey during the winter of 1999 in every community in the NWT. Several questions related to smoking were included in the questionnaire on behalf of the Department of Health and Social Services. A total of 6,410 persons living in 2,990 households were interviewed. The requirement for statistically reliable estimates at the community level dictated sampling procedures. Random sampling procedures were used in ten communities where population size permitted. In all remaining communities, an attempt was made to survey all dwellings. The survey results were weighted so that statistics were based on the estimated number of males and females for specific age categories and ethnic groups.

Results

As Figure 1 reveals, the percentage of people 15 years and older in the NWT population who are smokers is higher than the percentage of smokers in the Canadian population. In 1999, an estimated 41% of the Northwest Territories population 15 years and older smoked. In comparison, national figures obtained from the 1996/97 National Population Health Survey showed that 29% of Canadians 15 years and older were smokers. Overall smoking prevalence varied by age, with those between 15 and 19 years of age and those 55 years and older exhibiting lower smoking rates than other age groups. However, the greatest difference between the Territories and Canada is seen among those 55 years and older, the age group where the negative health effects of smoking are most prevalent. Moreover, it is important to point out that proxy reporting was accepted in the 1999 NWT Labour Force Survey. While

Figure 1
Current Smokers by Age
NWT 1999 and Canada 1996/1997



Source: 1999 NWT Labour Force Survey and 1996/1997 National Population Health Survey

the degree to which proxy responses diverge from self-reported smoking behaviour is not known, previous research indicates that this form of non-sampling error could lead to a significant underestimation of smoking rates among youth.¹

Community of Residence

Table 1 provides the estimated smoking rate for each community in the NWT. Paulatuk had the highest smoking rate (69%) followed by Lutselke (68%), Tsiigehtchic (66%), and Aklavik (66%). The lowest smoking rates were in Kakisa (18%), Yellowknife (31%) and Hay River (31%). In general, smoking prevalence tended to be higher in communities in the northern part of the Territory. All but one of the 13 communities in the area north of Wrigley and Rae Lakes had a smoking rate above 50%. The smoking prevalence in communities in the southern part of the Territory tended to be lower, with nine of the twenty communities south of Tulita reporting smoking rates above 50%. However, in the south smoking prevalence varied substantially between communities. The rates in Lutselke and Fort Resolution were more than double the rates in Kakisa, Yellowknife and Hay River.

Table 1
Smoking Rates by Community
Northwest Territories, 1999

	Smoking Rate (%)		Smoking Rate (%)
Northwest Territories	41	Inuvik	52
Paulatuk	69	Rae Edzo	48
Lutselke	68	Fort Providence	46
Tsiigehtchic	66	Nahanni Butte	46
Aklavik	66	Fort Liard	46
Fort Good Hope	65	Enterprise	44
Tuktoyaktuk	65	Fort Smith	44
Fort Resolution	64		
		Detah	43
Holman	63	Norman Wells	42
Sachs Harbour	62	Trout Lake	38
Jean Marie River	59	Hay River	31
Tulita	59	Yellowknife	31
Deline	59	Kakisa	18
Fort Simpson	58		
Wekweti	58		
Colville Lake	58		
Hay River Reserve	56		
Fort McPherson	55		
Wrigley	54		
Rae Lakes	53		
Wha Ti	53		

Source: 1999 NWT Labour Force Survey; Prepared by NWT Bureau of Statistics

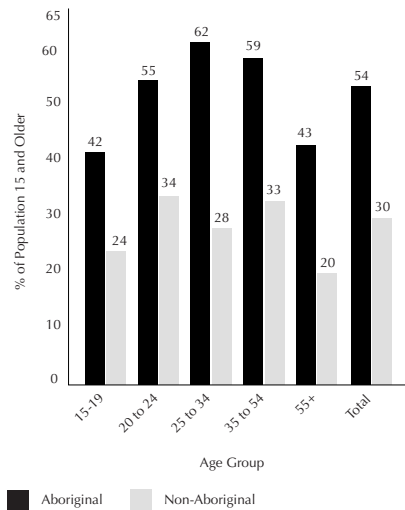
In general, the chances of being a current smoker appears to be higher for people who live in smaller communities than for those who live in Yellowknife or one of the regional centres of Hay River, Fort Smith or Inuvik. This pattern holds true regardless of age, ethnicity and educational levels. One of the more striking differences between the larger centres and the smaller communities is the number of people 15 to 19 years of age who smoke. In Yellowknife and the regional centres approximately 25% of the individuals in this age category smoked, compared with 53% in the smaller communities. This finding may be explained in large part to differences in smoking prevalence among the young Aboriginal and non-Aboriginal population.

Ethnicity

Smoking rates among Aboriginal people were higher than rates among their non-Aboriginal peers (Figure 2). This finding remained constant even when differences in age distribution and social factors such as education levels were taken into account. An estimated 54% of Aboriginal persons in the Northwest Territories who were 15 years of age and older smoked in 1999, compared with 30% of non-Aboriginal persons. In all but four communities, the Aboriginal population had a higher smoking rate than the non-Aboriginal population. (It should be noted that these four were small communities where the size of the non-Aboriginal population was very small.) Moreover, the smoking prevalence was higher among Aboriginal persons in every age group. The differences were the most dramatic for persons between 15 and 19, 25 and 34, and 55 and older. In these age groups, the

Aboriginal smoking rates were about two times the rates for non-Aboriginal persons. At 65%, Aboriginal males between 25 and 34 had the highest smoking rate of any group. The percentage of current smokers was also high among Aboriginal males between 20 and 24 and Aboriginal females between 35 and 54, with an estimated prevalence of 60% in both groups.

Figure 2
Current Smokers by Ethnicity
NWT 1999



Source: 1999 NWT Labour Force Survey

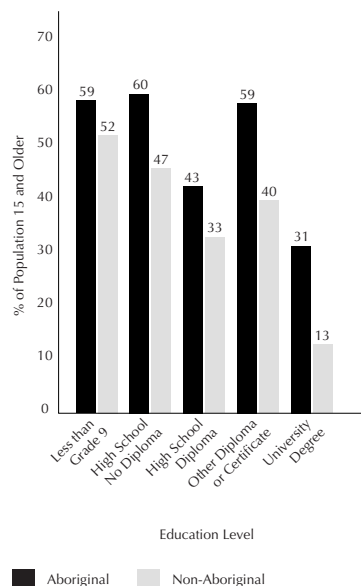
Education Levels

In general, the prevalence of smoking is higher among people with less education. Age-standardized smoking rates were calculated using 1999 population estimates of the NWT. As Figure 3 shows, persons with less than grade nine or some high school but no diploma were much more likely to smoke than were persons with a high school diploma or a university degree. However, it should be pointed out that the education level categories are not entirely hierarchical. For example, in many instances individuals who received a certificate or diploma may not have completed high school. This may account for the high smoking prevalence among persons in the “Other Diploma or Certificate” category.

Discussion

This article presents a brief overview of smoking rates obtained from the 1999 NWT Labour Force Survey. These results highlight the fact that smoking is a major public health problem in the Northwest Territories. Given the wide range of health problems related to tobacco use, the high rate of smoking among people 55 years of age and older most certainly has a direct negative impact on current health status, which in turn places a burden on the health care

Figure 3
Current Smokers by Ethnicity and Education Level
(Age-Standardized); NWT 1999



Source: 1999 NWT Labour Force Survey

system. This impact will likely increase significantly in the near future since the number of people 55 years of age and older is expected to double in the next twenty years. If smoking prevalence remains at current levels the health care system will be placed under tremendous pressure.

The high smoking rates in other age groups, particularly among Aboriginal teens, also raises concerns about the future health of the population. Research has indicated that smokers who start in adolescence are less likely to quit and more likely to smoke heavily.² If youth are able to resist smoking throughout their teen

years, they are less likely to become smokers in their adult years. Recognizing this fact, the GNWT health promotion strategy views youth as an important focus of anti-smoking programs.³

The survey results also show that a large proportion of the population who smoke live in smaller communities and have a less than high school education level. Health promotion and smoking cessation programs can take this into account when designing cessation messages and choosing the medium used to deliver these messages. For example, research indicates that smokers with lower education levels are more likely to respond to information about the risks of smoking when that information is provided by a health professional.⁴ The provision of training to health care and social service providers in the area of cessation counseling is seen as a priority in the GNWT health promotion strategy.

Personal health practices play a major role in determining people's health and general well-being. In order to address the large public health problem posed by smoking we need a concerted and sustained effort over the next decade by all those involved in promoting the health of the population of the NWT.

References

- 1 Millar, W.J., Smoking Prevalence Among Canadian Adolescents: A Comparison of Survey Estimates. *Canadian Journal of Public Health* 1985; Vol. 76: 33-37.
- 2 Chen, Jiajian and Wayne J. Millar, Age of Smoking Initiation: Implications for Quitting. *Health Reports* 1998; 9 (4): 39-46.
- 3 Government of the Northwest Territories, Health Promotion Strategy. Department of Health and Social Services 1999.
- 4 Millar, Wayne J., Reaching Smokers with Lower Educational Attainment. *Health Reports* 1996; 8 (2): 11-19.

How many fewer cancers can be expected as a result of reduction in smoking prevalence in the Northwest Territories? - An ecological study

By Daojun Mo,
Epidemiologist and Senior
Health Analyst,
Department of Health
and Social Services
André Corriveau, Chief
Medical Health Officer

Anthony Leamon,
Health Information Analyst,
Department of Health
and Social Services

Epidemiological studies¹ have established that cigarette smoking is a primary risk factor for a number of cancers: lip, oral cavity and pharynx (ICD-9 140-149), esophagus (150), pancreas (157), larynx (161), trachea, lung, bronchus (162), cervix uteri (180), urinary bladder (188) and kidney and other urinary (189).

To predict the effects of a reduction in smoking prevalence on these cancers in the Northwest Territories (NWT), current smoking prevalence and cancer incidence were obtained from the 1999 NWT Labor Force Survey and NWT Cancer Registry Database, respectively. 235 out of 824 newly diagnosed cancer cases were identified in the above disease categories over the period 1988-1997. The average smoking prevalence among the NWT population over 15 years old was estimated at 41%.

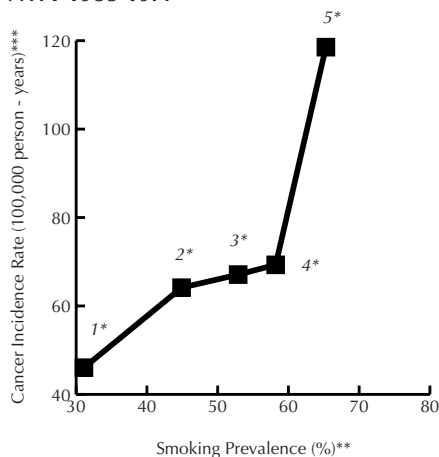
Since cancers are rare events and most of the NWT communities have small populations, the communities were aggregated into five groups based on each community's magnitude of smoking prevalence using Hierarchical Cluster Analysis in SPSS.² Cancer incidence rates and smoking prevalence rates were subsequently obtained for these five groups (Figure 1). Age

and gender structures were first compared between the communities and no significant differences were found. The relation between smoking prevalence and cancer incidence was log-linear³ as depicted in Figure 1. The best fitting model related the natural logarithm of the cancer incidence rate to the square of smoking prevalence ($r^2=0.86$). The obtained model from the linear regression was:
 $\text{Log}(\text{cancer incidence rate}) = 3.57 + 2.52 * (\text{smoking prevalence})^2$. This model indicated that the cancer incidence rate was positively associated with smoking prevalence ($P<0.05$). From the observed smoking prevalence data and the best fitting model, we predicted the cancer incidence rates. The predicted cancer incidence rates over the period 1988-1997 were in close agreement with the true value ($r=0.92, P<0.05$) (Figure 1).

This model was used to estimate the potential impact of smoking cessation on the occurrence of cancers in the NWT. The results suggest that if smoking cessation initiatives lead to a 5% reduction in current smoking prevalence (41%)[†], this could result in a 9% decrease in the incidence of smoking-related cancers (lip, oral cavity, pharynx, esophagus, pancreas, larynx, trachea, lung, bronchus, cervix uteri, urinary bladder and kidney). Alternatively, a 10% reduction in smoking prevalence may prevent



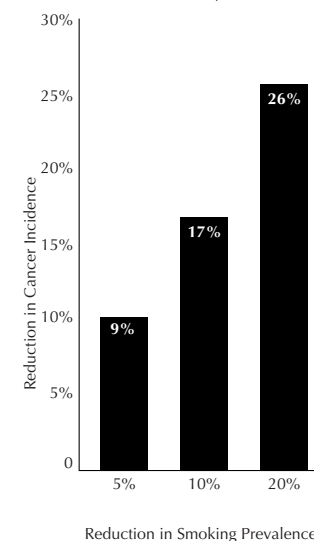
Figure 1
Smoking Prevalence and Cancer Incidence Rate, NWT 1988-1977



- 1* Yellowknife, Hay River, and Trout Lake
- 2* Norman Wells, Fort Smith, Enterprise, Fort Liard, Nahanni Butte, Fort Providence and Rae Edzo
- 3* Inuvik, Wha Ti, Rae Lakes, Wrigley, Fort McPherson
- 4* Colville Lake, Wekweti, Fort Simpson, Deline, Tulita, Jean Marie River
- 5* Sachs Harbour, Holman, Fort Resolution, Tuktoyaktuk, Fort Good Hope, Aklavik, Tsiigehtchic, Lutselke, and Paulatuk

** Source: 1999 NWT Labour Force Survey
*** Source: NWT Cancer Registry, 1988-1997

Figure 2
Predicted Preventive Effects of Smoking Cessation on Cancer* Incidence, NWT



*including: lip, oral cavity and pharynx (ICD-9 140-149), esophagus (150), pancreas (157), larynx (161), trachea, lung, bronchus (162), cervix uteri (180), urinary bladder (188) and kidney and other urinary (189)

17% of these cancers; or a 20% reduction in smoking prevalence may lead to a 26% decrease of these cancers (Figure 2).

It should be noted that while the NWT population is increasing, the age structure is also changing. Population projections⁵ estimate that the number of people over 44 years of age in the NWT will almost double within 20 years. Since the risk of cancer increases with age, if young people quit smoking today, a larger number of cancers can be prevented in the future based on the population size and the age structure projections.

From this model, we estimated that at least 12 incident cases of cancers can be prevented annually in the coming 20 years if the current smoking prevalence drops to 21% from 41%. The projected number may be conservative because this model did not consider other types of cancers such as breast cancer, prostate cancer and stomach cancer, which may also be attributed to smoking.

It is hoped that the results of this study can be used to further motivate the development of a NWT tobacco strategy and strengthen smoking intervention programs. Smoking intervention programs will be enhanced if NWT decision makers at the local, regional and territorial government levels, people in business, school children, and the general public have a better understanding of NWT-specific quantified health outcomes related to smoking and the potential impact of prevention.

This study highlighted the preventive effects of smoking cessation on cancer incidence. The result was consistent with other studies globally.¹ However, as an ecological study, it could not identify the temporal relationship between smoking and cancer. Smoking prevalence data in the NWT at the community level prior to 1999 were not available. Therefore, it is necessary to assume that smoking prevalence in the 1999 Labor Force Survey reflected the smoking prevalence over the period 1988-1997. As well, due to the nature of the study, we could not explore the association between smoking status and cancer incidence at the individual level. Moreover, this ecological study is vulnerable to some confounding factors such as lifestyle (diet, exercise), socio-economic status and environmental agents, which were not considered in this study. However, age and gender were not assessed to be important confounding factors in this study because no significant differences in age and gender were observed across the five groups.

References

- ¹ Center for Disease Control and Prevention (CDC). Computer software and documentation: SAMMEC 3.0. Atlanta, 1996.
- ² SPSS Inc. Cluster Analysis in: SPSS Base 9.0 Application Guide. 293-316, 1999
- ³ SAS Institute Inc. The Reg Procedure in: SAS/STAT User's Guide. 3rd ed. Cary, NC 1351-1456, 1990
- ⁴ 1999 Labor Force Survey. NWT Bureau of Statistics.
- ⁵ 2000 Population projections. NWT Bureau of Statistics.
<http://www.stats.gov.nt.ca/Statinfo/Demographics/population/NWTtest/NWTpopesthome.html>

What does smoking cigarettes have to do with kidney disease?

Smoking is bad for your health and many people who smoke are aware of some of the possible risks, but you may be surprised to learn that smoking may also adversely affect your kidneys.

Most of us are probably aware that smoking causes heart disease, lung cancer, emphysema, and hypertension. Smoking has also been linked to cancer of the bladder, ureter and kidney. If you smoke, you are three times more likely to develop these cancers than non-smokers are.

If you are not yet on dialysis but have been told that you have kidney disease, stopping smoking may help your kidneys. There is good evidence that individuals with diabetic kidney disease benefit from stopping smoking. Kidneys of diabetics who smoke will leak more protein and the rate of progression from very small amounts of protein to larger amounts is faster in smokers than non-smokers. In addition, smokers develop kidney failure requiring dialysis earlier than non-smokers do. In one study of people with insulin dependant diabetes and kidney disease, 53% of those who continued to smoke progressed to kidney failure requiring dialysis, compared with 33% of those that stopped smoking. In contrast only 11% of non-smokers developed kidney failure. Kidney disease in individuals with non-insulin dependant diabetes also progresses faster if you smoke. This means that if you smoke your kidney will fail earlier than if you do not smoke and stopping smoking may buy you some time before you will need dialysis.

If you are not diabetic you may think that this information does not apply to you. The effect of smoking on non-diabetic kidney disease is less researched, but there are a few studies that indicate smoking affects all kidney diseases. Smoking increases blood pressure and affects the normal variation of blood pressure during daytime and nighttime. High blood pressure is harmful to the kidney. However the effect of smoking is not just related to effects on blood pressure. A study of people with lupus nephritis showed that non-smokers developed kidney failure at an average of 273 months after diagnosis compared with 145 months in smokers. This finding was independent of the effect of blood pressure control, suggesting that smoking itself contributes to the accelerated disease.

If you are already on dialysis you may think that the damage has already been done and there is no benefit to stopping smoking - think again. Atherosclerosis (narrowing) of the arteries is a huge risk to all dialysis patients. This is due to the problems with high cholesterol, high blood pressure, calcium and phosphate problems. If you also have diabetes the risk is higher. Smoking accelerates this process. This process can affect all arteries, leading to strokes, heart attacks, and circulation problems of the toes necessitating amputation. One study from the US showed that for diabetics the risk of death within 5 years of starting dialysis was 95% in the smoking group compared to 63% in the non-smoking group.

Kidney disease is often difficult to treat, as many diseases do not have specific treatments. The goal is therefore to do what we can to preserve kidney function and prolong the time before dialysis is necessary. This may include the use of medication to treat the kidney disease, control of the blood pressure and control of salt and water retention with diuretics. I sense that people are often frustrated that there are no other treatments. Stopping smoking is something that you can do to help your disease. In addition you will reduce the risks of heart attack, cancer and all the other known side effects of smoking.

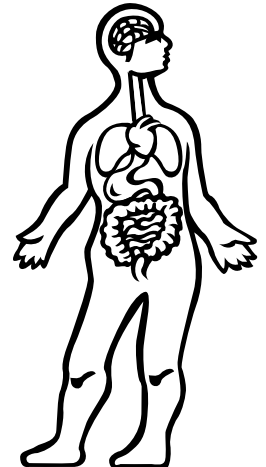
Nicotine is a very addictive drug and stopping smoking can be difficult. If you are motivated to stop smoking, and are having difficulty, you should ask your doctor for advice. Aids such as nicotine patches and Zyban (pills) can help in some cases but are not suitable for everyone.

References:

- 1 Remuzzi, G. Cigarette smoking and renal function impairment. *American Journal of Kidney Diseases*. April 1999, Volume 33 (4): 807-13.
- 2 Mehler, P.S. et. al. Smoking as a risk factor for nephropathy in non-insulin-dependent diabetics. *Journal of General Internal Medicine*. December 1998, Volume 13 (12): 842-5.
- 3 Orth, S.R. et. al. The renal risks of smoking. *Kidney International*. June 1997, Volume 51 (6): 1669-77.
- 4 Blesnabach, G. and Zazgornik, J. Influence of smoking on the survival rate of diabetic patients requiring hemodialysis. *Diabetes Care*. Volume 19 (6): 625-8.

*From News & Views,
Northern Alberta
& the Territories Branch,
The Kidney Foundation
of Canada.*

*Reproduced with
permission of
Dr. Patricia Campbell,
Nephrologist,
University of Alberta
Hospitals*



By Elsie De Roose,
Consultant,
Nutrition,
Department of Health
and Social Services

Women's Nutrition: Important in the Childbearing Years

There is increasing evidence that the health of women and their children is strongly influenced by nutritional well-being before, during, and after pregnancy.¹ This evidence further establishes the links between health and nutrition that are sometimes under-appreciated. It is valuable to emphasize this fact in public forums, including this publication, so that the importance of nutrition is considered in the development of programs and services directed at women in the childbearing years.

Women of Childbearing Age (age 15-44 years)

There are 10,705 NWT women between the ages of 15 - 44. This represents 53% of all women, and *one-quarter* of our total population.

1996 Statistics Canada figures indicate that amongst those women 45% are aboriginal (Dene, Inuit or Metis) and 55% non-aboriginal. In 1996 there were 447 aboriginal births and 370 births of non-aboriginal ethnicity. In part because of our young population, childbirth is a prominent aspect of life in the NWT with almost one-third of all hospital admissions for women in 1997 due to pregnancy and childbirth.²

Health and Nutrition Determinants

From a population health perspective, "health" is influenced by many factors, including: social support, coping skills, employment, physical and social environments, culture, genetic endowment, education, access to adequate health services and housing, and freedom from violence. Many of these health determinants greatly influence the availability of foods, and the capacity to make healthy food choices.¹

Given the scope of health determinants, substantial progress can be achieved only through partnerships at all levels of government and society. Nevertheless, there is obvious value in addressing nutritional well-being within health care settings, and to recognize other influences that take place at the societal level.

Promotion of nutritional well-being is most effective in the context of cultural practices and beliefs. However, women of all cultures can face the same barriers to healthy eating, such as limited money to buy nutritious foods, lack of knowledge or energy to devote to meal planning or preparation; and, conflicting messages about nutrition or healthy eating.¹

The National Academy of Sciences, in Washington, D.C. has developed a number of "predictors" for poor pregnancy outcomes and circumstances that place women at nutritional risk. These factors are particularly relevant in the north. The extent that they influence overall health depends on the effects of timing, duration and intensity.³

In this article, discussion will be limited to the first two risk factors, with particular attention to adolescence. Other risk factors outlined in Figure 2 will be reviewed in up-coming issues.

Adequate Diet and Nutrition

Preparing for pregnancy increases the potential for safe and successful pregnancy outcomes. All women need to consume foods that supply energy, protein and nutrients needed for pre-conception, during pregnancy, and in preparation for breast feeding.

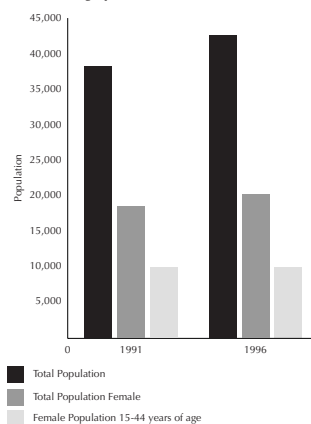
Nutrients of particular importance include folic acid, calcium, vitamin D, and iron. Although in the NWT information on women's nutritional well-being is limited and more research is needed, it is evident that some women have difficulty meeting the Recommended Nutrient Intakes (RNIs) for these nutrients.

• Folic Acid

Women in the childbearing years need to pay particular attention to their intake of folic acid. It is recommended that all women of childbearing age consume foods high in folic acid (see Table 1), and to take a supplement containing 0.4 mg of folic acid per day, well before and continuing through the early weeks of pregnancy.¹ Folic acid is needed during pregnancy to support



Figure 1
NWT Demographics



Source: Statistics Canada and NWT Bureau of Statistics and Department of Health and Social Services

Figure 2

Women defined as nutritionally at risk³:

- do not normally consume an adequate diet
- are adolescents
- have poor knowledge about nutrition or have insufficient financial resources to purchase adequate food
- have lactose intolerance
- are underweight or overweight at conception or gain inadequate or excessive weight during pregnancy
- use cigarettes, alcohol, or illicit drugs
- are carrying more than one fetus

expanding blood volume, the growth of maternal and fetal tissues and the prevention of neural tube defects. This is important for women of childbearing age because some pregnancies may be unplanned.²

Women with poor eating habits, chronic dieters, tobacco users, adolescents and women of low socio-economic status are at higher risk for low folic acid intakes.

- **Calcium**

Pregnant and lactating women need calcium and Vitamin D to maintain their bones, for skeletal development of the fetus and the production of breastmilk. Vitamin D increases intestinal absorption of calcium, and is essential for the body to use calcium efficiently.

Available data suggests that Canadian women of childbearing age consume less than the RNI for calcium (1200 - 1500 mg). Women most at risk for low calcium intakes are those of lower socio-economic status, some cultural groups and pregnant teenagers.¹ Restriction of foods high in calcium may also be due to varying degrees of lactose intolerance.

- **Iron**

Iron is needed during pregnancy to increase maternal red blood cell mass and to supply the growing fetus and placenta. If adequate iron stores are present prior to pregnancy, these stores should provide sufficient iron to meet increased needs. However, the RNI for pregnancy is based on an assumption that pre-pregnancy iron stores are not adequate and that iron supplements are needed. During pregnancy, the RNI for iron increases from 13 to 18 mg in the second trimester and to 23 mg in the third. Recent small-scale Canadian studies have suggested that many Canadian pregnant women suffer from iron-deficiency.¹

Adolescence

Between 1992 - 1996, the average teen birth rate (15 - 19 years of age) in the NWT was double that for Canada, although this rate has declined over the last 5 years, from 76.1 to 61.8 births per 1,000 females. The average birth rate for very young mothers, 15 - 17 years old, is triple the national rate, though this rate is also declining.²

Research on nutrient intake among adolescents has shown they are likely to obtain less iron and calcium than recommended and that they ingest more fat, sugar, protein and sodium than is

healthy.⁴ Lack of knowledge or interest in healthy eating habits, and a general lack of cooking skills, make it difficult for adolescents to obtain those nutrients needed for good reproductive health.

Twenty-two percent of Canadians aged 15 - 19 rate their eating habits as "fair" or "poor". Some studies suggest young women may not meet their RNIs for energy. When energy requirements are not met, as a rule, calcium and iron needs won't be met either. Many young women do not feel good about their bodies and more than one-third are trying to lose weight.¹

Independence from parents, and busy schedules also influence eating habits. In addition, by the time children reach adolescence, they will have watched over 100,000 food commercials, most of which are for products with high concentrations of sugar and fat.⁴

Promoting Health and Nutritional Well-being

Good nutrition needs to be promoted throughout life. This is especially true for women in the childbearing years. Nutritional well-being affects the health of women, their babies, and future generations. In the NWT, through federal funding, the Canada Prenatal Nutrition Program is the only prenatal nutrition program specifically designed to address the nutritional well-being of pregnant and breast feeding women. This program fills a significant program gap through the support and promotion of healthy eating through community-based programs run by community agencies and aboriginal organizations.⁵

The active promotion of healthy eating habits to young women in all possible settings, including schools, health centres and medical clinics should be encouraged. The benefits may last unborn children a lifetime.

References

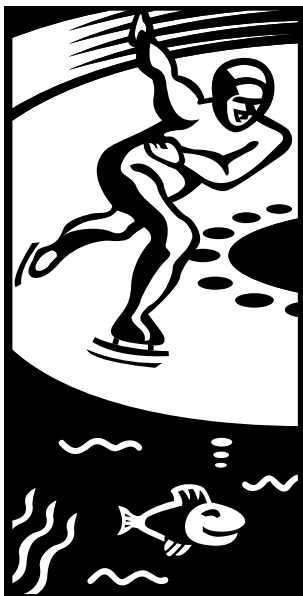
1. Nutrition for a Healthy Pregnancy, National Guidelines for the Childbearing Years, Health Canada, 1999.
2. The N.W.T. Health Status Report, Department of Health and Social Services, 1999.
3. Nutrition in the Community, The Art of Delivering Services, 3rd Edition, Frankle and Owen, 1993.
4. Food, Nutrition and Diet Therapy, 7th Edition, Krause and Mahan, 1984.
5. Canada Prenatal Nutrition Program First Nations and Inuit Component National Framework, 1999/00 (unpublished draft)
6. Good Sources of Folic Acid, NWT Traditional Food Fact Sheet Series, March 1995.

Table 1
Excellent Sources of Folic Acid (55 µg or more per serving - about 1/2 cup)^{2,6}

liver
sunflower seeds
spinach
asparagus
kidneys
orange juice from concentrate, or pineapple juice
soybeans
broccoli

By Mike Lowing,
Deputy Fire Chief,
Yellowknife Fire Department

Community Based Ice Safety Programs



Ice is a large part of our environment in the Northwest Territories. Every NWT community is situated on or near at least one substantial body of water. With ice present in many communities from October to as late as June, ice travel for hunting, fishing, trapping, transportation access, and recreation is an important part of northern life.

The Background

Because winter travel is so important and, frankly, enjoyable, people are often tempted to use ice even though they may not be sure of its safety. The results can be fatal; each year, approximately one third of the 8 to 10 drowning or water-related hypothermia deaths that occur in the NWT and Nunavut result from people breaking through an ice surface.¹ While some may not consider this number of deaths unreasonably high, ice in the NWT kills more people per capita than any other jurisdiction in Canada. The Lifesaving Society provides this overview on deaths related to ice:

“In absolute numbers, Ontario, the Prairie Provinces, Newfoundland and Quebec had the greatest number of ice related deaths... However when population was taken into account, the North had the highest ice-related death rate per million population - more than 20 times the national average! The Northwest Territories’ rate was the highest, followed by the Yukon’s, then Newfoundland’s.”²

To better understand the dangers of ice requires an examination of the interaction between people and ice. The following summary of key points from the Lifesaving Society’s community resource manual on ice safety and ice rescue provides an interesting perspective on ice related deaths in Canada:³

- there are 31,754 lakes in Canada greater than three square kilometers in area; the NWT, Nunavut and the Yukon have 11,545 of them;
- one in 12 Canadian water related deaths occurs when the victim plunges through unsafe ice;
- in the NWT almost half of the ice related deaths occur during daily living activities, usually traveling by snowmobile;
- nearly all snowmobiling water related deaths involved unsafe ice or open holes;
- the majority of victims (80% - 94%, depending on age group) are male;

- two thirds of snowmobiling fatalities occur after dark;
- people are more likely to die on a Saturday or Sunday;
- alcohol was known or suspected to be involved in 40% of deaths;
- other contributing risk factors included ice conditions, excessive snowmobile speed, visibility or light conditions and absence of safety equipment.

A Community Based Approach

The surest way to prevent ice related deaths is to avoid travel until ice has been demonstrated safe. In the absence of a comprehensive community ice safety program, this may be easier said than done. A good ice safety program includes a public education campaign as well as safety interventions to reduce risk. To date, much of ice safety promotion has consisted of posters and media advertising provided by national organizations such as the Lifesaving Society and the Canadian Red Cross.

Unfortunately, these actions alone are not reducing ice related deaths. The most effective way to reduce ice related deaths in the NWT is for communities to deliver local ice safety programs that focus on public intervention rather than relying on the delivery of national public education campaigns from southern Canada.

Components of an effective ice safety public intervention program should include:

- ice thickness and safety assessments;
- posting ice safety information in readily accessible locations within the community;
- accessing ice safety information through the Internet;
- school based ice safety presentations;
- forming partnerships within and outside of the community to deliver ice safety programs.

There are other community specific tools that might prove useful. The important point is that communities should develop an approach through partnerships that works for their residents and then is delivered locally.

An Ice Safety Approach in Yellowknife

In 1998, GNWT Department of Transportation and the Yellowknife Fire Department formed a partnership to develop an ice safety program that focuses on public intervention. Yellowknife has 18,000 people living on the shore of Great Slave Lake, with eight other major lakes within the municipal limits, so a comprehensive approach was needed. The agencies developed an ice safety program that focuses on the safety of residents while they are walking, skiing or snowmobiling on frozen lakes. While still in its infancy and under revision, the program includes:

- weekly testing of ice during the freeze-up period to determine when ice conditions are safe for pedestrian and snowmobile travel;
- posting ice thickness information on a billboard at a busy intersection in the city;
- creation of an ice safety web site (<http://ice.ssimicro.com>) with ice thicknesses, specific lake advisories and ice safety information. The ice thickness assessments are conducted only until ice conditions are safe, usually late December;
- residents without Internet access can call the Fire Department 24 hours a day (867) 873-4506 to access ice thickness and safety information;
- media alerts on radio, newspapers, and schools during the freeze-up and spring thaw periods, or when hazardous conditions are found;

- an emergency number (867) 873-2222 the public can call 24 hours a day to report people on unsafe ice. Firefighters respond immediately to get people off the ice;
- the development of a school-based interactive presentation for children up to grade five which targets ice and water safety with mascots, props, and a robotically controlled talking rescue boat.

The Yellowknife Ice Safety and Ice Thickness Assessment Program is delivered at very little cost. The major resource used is the time it takes firefighters to test ice, post the information, and make school presentations. Whether borrowed from someone else or created with partnerships in the community, locally delivered ice safety programs can go a long way to making the north a safer place to live.

For further information on ice safety, contact Stephen Sherburne at the Department of Transportation at (867)873-7494 or Mike Lowing at the Yellowknife Fire Department at (867)873-4506.

References

- ¹. Mr. Stephen Sherburne: Assistant Program Coordinator, Safety and Public Affairs, Department of Transportation. *Personal Communication*.
- ². Lifesaving Society, Ice: The Winter Killer - A Resource Manual About Ice Safety and Ice Rescue, Lifesaving Society, 1998, Page 9.
- ³. Ibid. page 2-11.

By Kathleen Lindhorst,
Manager,
Scientific Services,
Aurora Research Institute

Shelly Ann Kovalench,
Researcher/Analyst,
Department of Health
and Social Services



The Aurora Research Institute: Research North of 60°

There are a number of health and social service related research projects being conducted in the Northwest Territories (NWT). However research, especially northern specific research being conducted by organizations outside of the NWT, is often under-reported making it difficult for health care professionals to be aware of current, innovative work. The Aurora Research Institute (ARI) is working towards making northern research readily accessible to northern residents.

ARI is a division of Arctic College and is mandated to "improve the quality of life in the NWT by applying scientific, technological and indigenous knowledge to solve northern problems." Primary responsibilities of the institute include:

- licensing and coordinating research in accordance with the Northwest Territories Scientists Act and promoting communications between researchers and the people of the Northwest Territories;
- providing support services to researchers conducting work in the Northwest Territories;
- supporting and conducting research of value to the residents of the Northwest Territories;
- promoting scientific and traditional knowledge and making this knowledge available to the public;
- providing research funding programs.

Licensed researchers must submit summaries of their work in the north to ARI, which are compiled in a compendium by year (available since 1985). Listed below are several 1998 health and social service related research initiatives (summaries for 1999 will not be available until the Fall of 2000). For further information please contact: Kathleen Lindhorst, Manager, Scientific Services, Aurora Research Institute, P.O. Box 1450, Inuvik NT, X0E 0T0, Tel:(867) 777-4628 Fax:(867) 777-4264 (website: <http://www.auresint.nt.ca>)

Research Projects Related to Health and Social Services, 1998

- The **Inuvik Regional Human Contaminant Monitoring Program**, managed by the Inuvik Regional Health and Social Services Board, is nearing the final stage of this three-year program. A

baseline of exposure levels is determined for contaminants in the blood, umbilical cord blood, and hair from pregnant women in the Inuvik region, NWT. In addition to this baseline data, the amount of contaminant exposure through the diet of traditional food will be estimated. This analysis will include portion size data and contaminant levels in country foods calculated by the Centre for Nutrition & Environment of Indigenous peoples (CINE) for the Inuvik region. CINE will also use this information to develop a model that can be used to identify which parameters (maternal blood, cord blood, hair or dietary estimate) are better indicators of mercury exposure, and to develop a model that can be used to relate the exposure parameters. This model can then be used to interpret results generated from other monitoring programs in other regions. The study will be completed by March 2000 and a report will be available, including a detailed analysis of the information collected. For further information contact: Inuvik Regional Health and Social Services Board (IRHSSB) Contaminant Project Coordinator.

- The project: **Gathering information about traditional and market food among Inuit in five regions (Inuvialuit, Kitikmeot, Keewatin, Baffin and Labrador)**. The objectives of this study were to get quantitative estimates of traditional and market food intake, to build databases of nutrient and contaminant contents of traditional food as prepared and consumed, to define the benefits of traditional food in terms of nutritional, socioeconomic and cultural significance, and lastly, to define the levels of dietary exposure to contaminants (Mercury, Cadmium, Arsenic, Lead and organochlorides). This was the second year of a three year initiative. During the fall (Oct-Nov) of 1998 and the late winter (Feb-March) of 1999, 212 food samples were collected for analysis of nutrients and contaminants. At this time dietary survey data was also collected by six project field coordinators in the 18 representative communities (Aklavik, Tuktoyaktuk, Paulatuk, Holman, Kugluktuk, Cambridge Bay, Baker Lake, Chesterfield Inlet, Rankin Inlet, Resolute Bay, Pond Inlet, Igloodik, Kimmerut, Qikiqtarjuaq, Nain, Hopedale, Makkovik, and Rigolet). A draft report will be produced by February 2000 and will be

discussed in a workshop with delegates from all regions. For further information contact: Dr. H.V. Kuhnlein, Centre for Indigenous Peoples' Nutrition and Environment, Macdonald Campus, McGill University, Ste Anne de Bellevue, PQ H9X 3V9.

- **Self-Empowered Community Team:** The Inuvik Regional Health and Social Services Board (IRHSSB) provides social services and primary health care to residents of twelve communities. The opportunity pursued by this project was to develop an organization that would engage all community employees in one of these communities - Fort Good Hope was chosen. This project advanced the opportunity through an action research strategy in order to: 1) stimulate participation for all community employees; 2) further develop a collaborative approach towards service provision; and 3) reinforce the benefits of a team approach in fostering healthy communities. The project provided an example of a "Self-Empowered

Community Team" (SECT) to serve as a model for the development of other community teams. The results of the project identified components necessary for the achievement of this type of organizational culture. The results suggest that the design, implementation, and evaluation of SECT needs to be a collaborative process and include all stakeholders. The project supports literature that suggests physical co-location is an important factor and optimally should precede the SECT process. Recommendations are made for additional work in order to understand the relationships between various components of an empowered team culture and other factors that may impact the implementation and success of SECT's. For further information contact: Mr. Ray Scott, Inuvik Regional Health & Social Services Board / Royal Roads University, Inuvik Regional Health & Social Services Board (IRH&SSB), Box 1747, Inuvik, NT, X0E 0T0

EpiNorth is a publication of the Department of Health & Social Services. Contributions are welcome and should be sent to the Managing Editor by e-mail or regular post (electronic copy). Inclusion of material in EpiNorth does not preclude publication elsewhere. Views expressed are those of the authors and do not necessarily reflect departmental policy.

By Dr. Penny Sutcliffe,
Medical Health Officer,
SRHB

Melanie Grindlay, Injury
Prevention Project Officer,
SRHB

Injury Prevention 2000

Stanton Regional Health Board's Health Promotion and Protection Office has initiated an Injury Prevention Project, headed by the Regional Medical Health Officer. This project is one effort to respond to the high burden of injury-related morbidity and mortality in the Northwest Territories (NWT).

The project is described as:

"A short term collaborative project to develop a regional injury prevention program... to identify injury prevention program needs in the NWT, identify funding sources and develop a program description and proposal for ongoing funding."

The project is funded by the Health Promotion Strategy fund of the Population Health Division, Department of Health and Social Services (DHSS). It encompasses all regional Health and Social Services Boards in the NWT with the exception of the Inuvik Regional Health & Social Services Board, which has recently hired an Injury Prevention Coordinator.

A Project Officer was hired in January 2000 to start the work, and to achieve the following objectives over a 12 week period:

- review injury related statistics;
- review literature and practices in other jurisdictions;
- assess and inventory current regional injury prevention initiatives;
- identify gaps in provision of injury prevention services;
- develop an appropriate program description including role descriptions;
- identify appropriate funding sources;
- develop a program proposal for submission to an appropriate funding source.

A final report is scheduled for completion on April 30, 2000, however significant progress has been made to date. The following summarizes project accomplishments:

80% of the communities served by the eight community and health & social services boards in the southern part of the Territories were visited to gather qualitative information concerning the perception of the types of injuries occurring most frequently, attitudes toward injury, and the types of injury prevention initiatives that are currently taking place. In addition, information was gathered concerning the feasibility of new programs or projects from which communities could most benefit;

A wide variety of community and agency contacts with knowledge of injury prevalence and/or control were identified in each community and interviewed either personally or by telephone. In total, 128 community and 19 government/ NWT agency interviews were conducted;

Community Interview Summary

Key Community Contact Type	Number Interviewed
(defined as knowledgeable about various aspects of injury prevalence and/or control)	
First Nations	16
Metis Nation	2
Municipality	6
Health and Social Services Boards	65
Education	7
RCMP	9
Recreation	8
Seniors/Elders	7
Fire and Ambulance	3
Parents	2
Dentist	1
Youth/Child	2
GNWT/ NWT agency	19
Total interviews	147

An inventory of measures that communities are undertaking to reduce the risk of injuries has begun. Some examples include a car seat safety program for infants and toddlers, training coaches and referees, controlling stray dogs, and hiring By-law officers to monitor snowmobile usage in community limits. The inventory will be useful to share amongst communities.

Common Themes

Common themes emerged from the interviews, including the following:

1. The abuse of alcohol and drugs is perceived as a prominent community problem that contributes substantially to the risk of injury. Over 90% of injuries are perceived as being alcohol related.

"Alcohol abuse is related but not the biggest cause (of injuries due to fighting). It is a symptom of an underlying problem. Statistics say there is a high incidence but a Social Worker's perspective is that people are in pain." Social Worker

Statistics indicate that motor vehicle crashes, drowning and suicides are the three leading causes of injury mortality in the NWT.¹

In the Northwest Territories, injury ranks as the second leading cause of death for all ages groups, and is the leading cause of death for 1 - 44 year olds. The NWT injury-related death rate was more than double the national rate for 1991-1996 (97.8 versus 45 per 100,000 population). Twenty three percent (23%) of all deaths in the NWT and 47% of all PYLLs* are caused by injuries.¹

2. Children are at risk of injury on the street, at school and in their homes.

"It infuriates me to see some people placing children on their laps while they drive"

Public Health Nurse

"Rough play on the playground is horrendous. Children play WWF and jump on each other from behind. They play wolf and are biting each other. Teachers have to keep a close eye on the students on the playground."

Educator

3. There is cause for hope that with innovative preventive programs we can change high-risk behaviors.

"Kids attitudes towards drinking and driving are changing. Now they wrestle the keys away or they don't get into the car with a drinking driver. SADD works!"

Parent

4. Vehicles, quads and snowmobiles are increasing in number in the communities, but the controlling mechanisms are not keeping pace (e.g. speed limit enforcement).
5. Injuries are preventable. Although community leaders are asking for help they need to be involved in the solution.

Summary

The Injury Prevention Project is progressing well. 147 interviews have been conducted. Much of the remaining work will include analyzing the findings from the interviews, reviewing the literature for relevant preventive techniques that could be applied in the NWT, and developing an integrated report with recommended options for reducing injuries.

¹ The NWT Health Status Report, Department of Health & Social Services, Government of the Northwest Territories, 1999, Chapter 4

* Potential Years of Life Lost - The sum of the years of life lost by NWT individuals who died before the age of 70



Notifiable Diseases by Territory and Region: for the Northwest Territories (NWT) and Nunavut (NU), January 2000 - March 2000*

	January - March 2000		2000 Totals		Regional Totals - 2000				
	NWT	NU	NWT	NU	Inuvik	Fort Smith	Baffin	Keewatin	Kitikmeot
<i>Vaccine Preventable Diseases</i>	Hepatitis B	0	0	0	0	0	0	0	0
	Influenzae	0	151	0	151	0	0	1	150
	Pertussis	2	0	2	0	0	2	0	0
<i>Sexually Transmitted/Bloodborne Diseases</i>	Chlamydia	115	179	115	179	49	66	60	98
	Gonorrhoea	43	27	43	27	15	28	11	13
	Hepatitis C	9	2	9	2	5	4	0	1
	Hepatitis, Other	0	0	0	0	0	0	0	0
	Syphilis	0	0	0	0	0	0	0	0
<i>Diseases by Direct Contact/Respiratory Route</i>	Chicken Pox	5	120	5	120	4	1	13	2
	Group A Strep	0	1	0	1	0	0	0	0
	Invasive Strep Pneumoniae	0	4	0	4	0	0	4	0
	Legionellosis	0	0	0	0	0	0	0	0
	Meningitis, Pneumococcal	0	0	0	0	0	0	0	0
	Meningitis, Other Bacterial	0	0	0	0	0	0	0	0
	Meningitis/Unspecified	1	0	1	0	0	1	0	0
	Meningitis, Viral	0	0	0	0	0	0	0	0
	Meningococcal Infections	0	0	0	0	0	0	0	0
	Tuberculosis	3	10	3	10	0	3	8	2
<i>Enteric, Food and Waterborne Diseases</i>	Botulism	0	0	0	0	0	0	0	0
	Campylobacteriosis	1	0	1	0	0	1	0	0
	Cryptosporidiosis	0	0	0	0	0	0	0	0
	E.Coli 0157:H7	0	2	0	2	0	0	0	0
	Food Poisoning	0	0	0	0	0	0	0	0
	Giardiasis	3	0	3	0	2	1	0	0
	Hepatitis A	0	0	0	0	0	0	0	0
	Salmonellosis	0	3	0	3	0	0	0	2
	Shigellosis	0	0	0	0	0	0	0	0
	Tapeworm Infestation	0	0	0	0	0	0	0	0
<i>Antibiotic resistant micro-organisms</i>	Trichinosis	0	0	0	0	0	0	0	0
	Yersinia	0	0	0	0	0	0	0	0
	Brucellosis	0	1	0	1	0	0	0	1
	Malaria	0	0	0	0	0	0	0	0
	Rabies Exposure	0	1	0	1	0	0	1	0
	Methicillin-resistant Staph. Aureus	2	0	2	0	0	2	0	0
	Vancomycin-resistant Enterococci	1	0	1	0	0	1	0	0

HIV Infections Reported in NWT Residents

YEAR	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
NWT	2	1	1	2	1	8	0	2	0	2	0	1	0
NU	0	1	2	1	2	1	3	0	0	0	1	0	0

* Statistics are based on currently available data and previous data may be subject to change.

Annual Database Correction - 1999

Tuberculosis: July-December 1999: 13 Nunavut

Tuberculosis: 1999 Totals: 22 Nunavut with 20 in Baffin