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Qanuippitaa?
HOW ARE WE?

TRANSPORTATION INJURIES AND SAFETY



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TRANSPORTATION INJURIES AND SAFETY

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BACKGROUND OF THE NUNAVIK INUIT HEALTH SURVEY

The monitoring of population health and its determinants is essential for the development of effective health prevention and promotion programs. More specifically, monitoring must provide an overall picture of a population's health, verify health trends and how health indicators vary over distance and time, detect emerging problems, identify priority problems, and develop possible health programs and services that meet the needs of the population studied.

The extensive survey conducted by Santé Québec in Nunavik in 1992 provided information on the health status of the Nunavik population (Santé Québec, 1994). The survey showed that health patterns of the population were in transition and reflected important lifestyle changes. Effectively, the Inuit population has undergone profound sociocultural, economic, and environmental changes over the last few decades. The Inuit have changed their living habits as contact with more southerly regions of Quebec increased. A sedentary lifestyle, the switch to a cash-based domestic economy, the modernization of living conditions and the increasing availability and accessibility of goods and foodstuffs imported from southern regions have contributed to these changes. These observations suggest the need for periodic monitoring of health endpoints of Nunavik Inuit to prevent the negative impact of risk factor emergence and lifestyle changes on subsequent morbidity and mortality from major chronic diseases.

In 2003, the Nunavik Regional Board of Health and Social Services (NRBHSS) decided to organize an extensive health survey in Nunavik in order to verify the evolution of health status and risk factors in the population. The NRBHSS and the Ministère de la Santé et des Services sociaux (MSSS) du Québec entrusted the Institut national de santé publique du Québec (INSPQ) with planning, administering and coordinating the survey. The INSPQ prepared the survey in close collaboration with the Unité de recherche en santé publique (URSP) of the Centre hospitalier universitaire de Québec (CHUQ) for the scientific and logistical component of the survey. The Institut de la statistique du Québec (ISQ) participated in methodology development, in particular the survey design.

The general aim of the survey was to gather social and health information on a set of themes including various health indicators, physical measurements, and social, environmental and living conditions, thus permitting a thorough update of the health and well-being profile of the Inuit population of Nunavik. The survey was designed to

permit a comparison of the 2004 trends with those observed in 1992. Data collected in 2004 also allowed researchers to compare the Inuit to other Quebecers.

Target population

The health survey was conducted among the Inuit population of Nunavik from August 27 to October 1, 2004. According to the 2001 Canadian census, the fourteen communities of Nunavik have a total of 9632 inhabitants, 91% of whom identified themselves as Inuit. The target population of the survey was permanent residents of Nunavik, excluding residents of collective dwellings and households in which there were no Inuit aged 18 years old or older.

Data collection

Data collection was performed on the Canadian Coast Guard Ship Amundsen, thanks to a grant obtained from the Canadian Foundation for Innovation (CFI) and the Network of Centres of Excellence of Canada (ArcticNet). The ship visited the fourteen villages of Nunavik, which are coastal villages. The study was based on self-administered and interviewer-completed questionnaires. The study also involved physical and biological measurements including clinical tests. The survey was approved by the Comité d'éthique de la recherche de l'Université Laval (CERUL) and the Comité d'éthique de santé publique du Québec (CESP). Participation was voluntary and participants were asked to give their written consent before completing interviews and clinical tests. A total of 677 private Inuit households were visited by interviewers who met the household respondents to complete the identification chart and the household questionnaire. A respondent was defined as an Inuit adult able to provide information regarding every member of the household. The identification chart allowed demographic information to be collected on every member of the household. The household questionnaire served to collect information on housing, environment, nutrition and certain health indicators especially regarding young children.

All individuals aged 15 or older belonging to the same household were invited to meet survey staff a few days later, on a Canadian Coast Guard ship, to respond to an interviewer-completed questionnaire (individual questionnaire) as well as a self-administered confidential questionnaire.

Participants from 18 to 74 years of age were also asked to complete a food frequency questionnaire and a 24-hour dietary recall, and to participate in a clinical session. The individual questionnaire aimed to collect general health information on subjects such as health perceptions, women's health, living habits and social support. The confidential questionnaire dealt with more sensitive issues such as suicide, drugs, violence and sexuality. During the clinical session, participants were invited to answer a nurse-completed questionnaire regarding their health status. Then, participants had a blood sample taken and physical measurements were performed including a hearing test, anthropometric measurements, an oral glucose tolerance test (excluding diabetics) and toenail sampling. Women from 35 to 74 years of age were invited to have a bone densitometry test. Finally, participants aged 40 to 74 could have, after consenting, an arteriosclerosis screening test as well as a continuous measure of cardiac rhythm for a two-hour period.

Survey sampling and participation

The survey used a stratified random sampling of private Inuit households. The community was the only stratification variable used. This stratification allowed a standard representation of the target population. Among the 677 households visited by the interviewers, 521 agreed to participate in the survey. The household response rate is thus 77.8%. The individual response rates are obtained by multiplying the household participating rate by the individual collaboration rate since the household and individual instruments were administered in sequence. The collaboration rate corresponds to the proportion of eligible individuals who agreed to participate among the 521 participating households. In this survey, about two thirds of individuals accepted to participate for a response rate in the area of 50% for most of the collection instruments used in the survey. A total of 1056 individuals signed a consent form and had at least one test or completed one questionnaire. Among them, 1006 individuals answered the individual questionnaire, 969 answered the confidential questionnaire, 925 participated in the clinical session, 821 had a hearing test, 778 answered the food frequency questionnaire, 664 answered the 24-hour dietary recall, 282 had an arteriosclerosis test, 211 had a continuous measure of their cardiac rhythm for a two-hour period and 207 had a bone densitometry test. More details on the data processing are given in the Methodological Report.

INTRODUCTION¹

Aboriginal people generally have higher trauma-based death and hospitalization rates than the rest of the population. Nunavik residents were characterized by much higher death rates, lost potential years of life and hospitalization due to trauma (intentional and non intentional) than Quebecers as a whole during the periods 1991-1993 to 1997-1998 (Hamel, 2001). It must be noted that the number of events is limited, the number of deaths having fluctuated from 18 to 23 during this period. The main causes of trauma-based deaths are suicides and, to a lesser extent, drowning.

The Inuit of Nunavik also have higher hospitalization rates for trauma than do Quebecers as a whole, with a predominance of falls, off-road vehicle accidents, attempted murders and attempted suicides (Hamel, 2001).

However, an analysis of the data from the 2003 Canadian Community Health Survey Cycle 2.1 (CCHS 2003) demonstrates that Nunavut, a territory north of Nunavik with more than 85% of its population Inuit, has one of the lowest rates of serious injury over a 12 month period (9%) of all Canadian provinces and territories. These self-reported CCHS statistics identify men and adolescents as the groups with the highest injury rates and with falls ranked as one of the major sources of injury (Wilkins, 2004). There is a seasonal variation, with a peak in reported injuries in the winter and a dip in the autumn. Generally speaking, the particular transportation conditions of isolated northern regions result in few traffic accidents; however, the accident rate related to snowmobiling and boating is higher than in areas in the south.

In the 1992 Santé Québec Health Survey Among the Inuit of Nunavik, Kapetanakis (1994) reported a 3.6% rate of injuries that limited normal activities, with a higher rate among men and young people aged 15 to 24. In the same 1992 survey, a problem resulting from increasingly powerful all-terrain vehicle and snowmobile use was observed (Therrien et al., 1994). The same authors also noted infrequent use of personal flotation devices, seatbelts and all-terrain vehicle helmets but observed that those travelling by snowmobile outside the village were usually accompanied by another vehicle. Driving under the

¹ For ease of readability, the expression "Inuit" is used throughout the theme paper to define the population under study even though a small percentage of individuals surveyed identified themselves as non-Inuit. Refer to "Background of the Health Survey" for further details regarding the definition of the target population.

influence of alcohol was determined to be a significant problem (Therrien et al., 1994).

Public health officials in Nunavik observed an increase in the frequency of health service use resulting from vehicle use in the communities. It is therefore appropriate to document certain at-risk behaviours and protective factors such as driving while under the influence of alcohol or drugs. The use of boats, off-road vehicles and preventive measures should also be subject to specific action for this isolated northern population where such vehicles are mainly used for practical purposes (transportation, hunting, fishing, trapping) and this much more frequently than in the rest of Quebec.

This module describes the prevalence of injuries among residents living in private households in Nunavik as reported during the 2004 survey. Circumstances surrounding the principal injury will be described and the main risk or protective factors related to the use of motorized vehicles and boats will also be presented.

METHODOLOGICAL ASPECTS

The following issues were retained in the “Accidents and injuries” section of the Nunavik Inuit Health Survey (NIHS 2004) household questionnaire studying the prevalence of injuries resulting in a limitation in daily activities over the preceding 12 months according to the circumstances of the accident. Section 10 of the self-administered questionnaire, “Safety and mode of transportation”, verifies the presence of protective and risk factors during snowmobile and motorboat travel and when driving a motorized vehicle under the influence of alcohol or drugs. These questions were the same used in the previous 1992 Santé Québec survey who themselves are adapted from those in the general 1992-1993 Health and Social Survey.

An estimate of the extent of injuries among the entire population of residents in private households in Nunavik has been made which only takes into account injuries that are serious enough to limit daily activities. The circumstances surrounding the principal injury were retained and incidents were grouped into four categories. Safety measures during transportation were covered by two questions that verified the wearing of a personal flotation device (PFD) when boating and solitary snowmobile travel outside of the village. A series of questions measured the frequency of driving under the influence of alcohol or drugs for four types of motorized vehicle: automobile, all-terrain vehicle (ATV), snowmobile and motorized boat.

Comparison of the 1992 and 2004 Nunavik Inuit health surveys

The questions about injuries reported over the previous 12 months are identical to those in the 1992 Santé Québec survey, both in their wording and the type of instrument used. However, the 2004 NIHS list has a wider variety of circumstances surrounding the accidents, nine as opposed to six.

Comparison with the 1992 survey results is limited by a change in the time period under consideration in the questions on transportation safety measures. Specifically, the 1992 Santé Québec survey did not mention any reference period for this type of behaviour whereas the 2004 NIHS specified a 12-month reference period. Comparisons between these two timeframes must take this into account.

Accuracy of estimates

The data used in this module comes from a sample and is thus subject to a certain degree of error. The coefficient of variation (CV) has been used to quantify the accuracy of estimates and the Statistics Canada scale was used to qualify the accuracy of estimates. The presence of an “E” footnote next to an estimate indicates a marginal estimate (CV between 16.6% and 33.3%). Estimates with unreliable levels of accuracy (CV > 33.3%) are not presented and have been replaced by the letter “F”.

Statistical analyses for comparisons by sex, age group, region and other characteristics have been conducted at a threshold of $\alpha = 0.05$. The Nunavik territory has been divided in two regions because place of residence could influence life habits. The Hudson coast includes the villages of Kuujjuarapik, Umiujaq, Inukjuak, Puvirnituk, Akulivik, Ivujivik and Salluit while the Ungava coast includes Kangiqsujuaq, Quaqaq, Kangirsuk, Aupaluk, Tasiujaq, Kuujjuaq and Kangiqsualujuaq.

Some comparisons have been made with results obtained during the 1992 survey where the questions asked are comparable. Given the sampling procedures in the two surveys, these comparisons include an adjustment in proportions or rates to take into account the change in the population's age structure. This adjustment is made on a five years age groups basis using Nunavik 2001 census of Statistics Canada as reference population. However, only raw data is reported in the text, tables and figures to avoid any possible confusion with adjusted proportions.

Scope and limitations of the data

The questions on injuries exclude fatal injuries and those resulting in hospitalization at the time of interviewing. These questions on injuries are included in the household questionnaire for which the principal respondents supplied information on themselves and on other household members, which results in an underestimation of reported injuries. A memory bias may be present and could result in overestimating the prevalence of the most serious injuries in instances when respondents are confused in their recollection and neglect to mention less serious injuries and add more serious ones that happened beyond the 12-month period covered. This phenomenon has been demonstrated elsewhere (Harel et al., 1994). This memory bias could also act in the opposite direction by underestimating, even more greatly, less serious injuries that did restrict the main activity of the individual involved. The circumstances surrounding the accident are briefly described but there is no information on the number of injuries, type of injury, part of the body affected or mechanism involved. Neither the location nor the time of year when the accident occurred is specified.

Questions about transportation safety measures such as wearing a PFD in a motorized vessel or being accompanied during snowmobile travel are subject to social desirability bias and the answers may differ markedly from observed behaviour. The survey does not provide information on the frequency of use of these transportation methods in Nunavik. The same limitations applies for questions about drug and alcohol consumption when driving motorized vehicles, which concerns drivers only and not all users exposed to a driver under the influence. The driver's degree of intoxication is unknown and it is highly likely that these questions underestimate this socially unacceptable behaviour. It should be noted that Quebec law prohibits driving motorized vehicles while under the influence of substances.

In terms of the education variable, it is important to specify that the choice of answers for post-secondary training were not well adapted to the context of the survey's target population. The answers given for this category reveal that there was likely confusion during data collection between training that requires a post-secondary diploma and training that does not (e.g. driver's license, fishing license, etc). Therefore, the number of people with post-secondary education was likely overestimated.

RESULTS

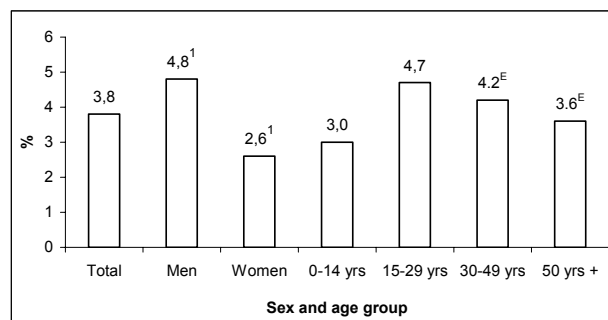
Injuries that limited daily activities

Injuries reported during the 12 previous months are defined as those that were sufficiently serious to limit the individual's regular activities. The description that follows describes their prevalence and the circumstances surrounding the accident leading to the injury.

Injuries reported in this survey are relatively infrequent and those that limited regular activities affected 4 of every 100 residents of all ages from the region (3.8%) in the 12 months preceding the survey, which represents about 370 people in a one-year period for all of Nunavik. Men are more at risk for injury than women; a statistically significant difference of 4.8% and 2.6% (Figure 1 and Table A1, Appendix). However, there are no significant differences between the various age groups although young people aged 15 to 29 tend to have higher rates of injury. There is a significant difference in injury rates reported in the two coastal regions, with a higher prevalence among Ungava residents than those from Hudson coast.

Figure 1

Proportion of people having experienced at least one injury limiting their regular activities in the 12 months preceding the survey by sex and age group (%), members of Inuit households, Nunavik, 2004



Estimates with the same exponent are significantly different ($\alpha = 0.05$).

E Interpret with caution.

Source: Nunavik Inuit Health Survey 2004.

A significant association is observed between the reported injury rate and relative education level, with the highest rate among residents who have completed secondary school or higher. Main occupation is also related to reported injuries, with a higher injury rate among preschool children and students. There is no significant difference between the injury rates reported in the 1992 and the 2004

surveys, for the population as a whole, by sex or by age group (Table A2, Appendix).

The description of the activity responsible for the injury demonstrates that injuries occur, in descending order of frequency: in sports activities (26%^E), on ATVs (22%^E), on snowmobiles (13%^E) or from falls (14%^E) (Table A3, Appendix). Accidents involving transportation represent 40% of all reported injuries. It is interesting to note that frostbite accounts for less than 2% of all injuries (data not presented).

Transportation safety measures

Certain behaviour helps reduce safety-related trauma during travel in northern regions. This includes travelling in groups during snowmobile outings outside the village or wearing a personal flotation device (PFD) when boating. Other behaviour increases these risks, including driving a motor vehicle while under the influence of drugs or alcohol.

In total, one quarter (25%) of snowmobile users (drivers and passengers) aged 15 and above state that they have rarely or never travelled in the company of another snowmobile. No differences in this behaviour are observed as a result of sex or age group (Table A4, Appendix). There are proportionately more residents from the Hudson coast than from the Ungava coast who travel unaccompanied. There is also a statistically significant association between travelling unaccompanied outside the village and education level, income and job status. People with the lowest level of education (elementary school or less), those having an income less than \$20 000 and those not having a job are more subjected to this behaviour.

In addition, three-quarters (76%) of Inuit aged 15 and over rarely or never wear a PFD when travelling in a motorized boat; this proportion is significantly higher among women than men. No significant difference is observed among age groups. Residents living along the Hudson coast wear PFDs less frequently than their counterparts from Ungava coast. This preventive measure does not vary with educational level, income or main occupation.

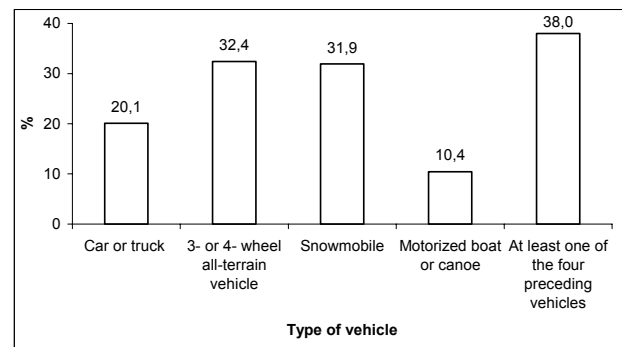
There was no significant difference in the proportion of snowmobile users indicating they travel alone between the 1992 and 2004 surveys. However the proportion of Inuit who reported wearing most of the time or always a PFD significantly increased between 1992 and 2004, from 8% to 24% (Table A5, Appendix). However, note that the

questions asked in the 1992 survey did not specify a reference period, contrary to that in 2004.

Driving motorized vehicles under the influence of drugs or alcohol multiplies the risk of trauma. The following proportions relate only to individuals aged 15 and over who drive these vehicles. One car/truck driver in five (20%) aged 15 and over reported having driven under the influence of drugs or alcohol on at least one occasion in the previous 12 months (Figure 2 and Table A7, Appendix). This proportion reaches 32% in the case of ATVs and snowmobiles and is less frequent (10%) in the case of motorized boats. Among all motor vehicle drivers aged 15 and over, 38% had driven a vehicle while under the influence of a substance in the 12 months preceding the survey.

Figure 2

Proportion of drivers who reported driving a motor vehicle at least once while under the influence of alcohol in the 12 months preceding the survey by type of vehicle (%), population aged 15 and over, Nunavik, 2004



Source: Nunavik Inuit Health Survey 2004.

There is a significant relationship between driving a motor vehicle while under the influence of a substance and sex, age group, sub-region of residence, level of education, job status and alcohol consumption. Specifically, men, younger drivers, Ungava residents, individuals with higher education and those with a job more frequently state having driven a vehicle while under the influence of alcohol or drugs in the 12 months preceding the survey (Table A7, Appendix). No relationship was observed between driving under the influence of a substance and community size or income level.

Two aspects of alcohol consumption were examined: the quantity of alcohol consumed on a single occasion and the frequency of heavy consumption. Drivers who consume substantial quantities of alcohol (six drinks or more on the same occasion) and those who frequently drink heavily are

significantly more likely to drive a motor vehicle under the influence of alcohol or drugs, regardless of the type of vehicle (Table A7, Appendix). More than half (60%) of drivers who drink significant amounts of alcohol (six drinks or more on the same occasion) and those who drink significant amounts one or more times per week stated that they drive a motor vehicle while under the influence of a substance at least once in the past 12 months.

The proportions of drivers aged 15 and over who have driven an automobile, ATV or snowmobile while under the influence of alcohol or drugs did not vary significantly between 1992 and 2004 (Table A6, Appendix). However, the proportion that drove a motorized boat decreased from 15% to 10% between the two surveys. Note that the questions asked during the 1992 survey did not specify a reference period, contrary to the 2004 study.

DISCUSSION AND CONCLUSION

The prevalence of injuries reported in this survey is lower than those observed in Quebec and in Canada, and than those measured among the Aboriginal communities of the Northwest Territories, Nunavut and among the James Bay Cree (Légaré & Robitaille, 2006; Tjepkema, 2005; Wilkins & Park, 2004). The prevalence reported in these recent studies is three to four times higher than that measured in Nunavik. Tjepkema (2005) estimated this prevalence at nearly 20% among off-reserve Aboriginals aged 20 to 64, a proportion almost four times higher than that observed in Nunavik. Those surveys used an individual questionnaire and not an instrument addressed to a single respondent per household as was the case in the Nunavik Inuit Health Survey 2004. The prevalence measured here is also lower than that of the 1992-1993 and the 1998 Health and Social surveys that used a methodology comparable to the Nunavik survey, i.e. a complete questionnaire conducted by an interviewer and addressed to one respondent per household (Robitaille et al., 2000).

The data of the Nunavik Inuit Health Survey 2004 do not allow one to detect significant differences in injury prevalence by age group, although a tendency towards more injuries among young people and a significant difference among men are observed. This same observation was made in the 1992 survey. In all studies on injuries among other populations, a higher prevalence among men and among young people is noted (Légaré & Robitaille, 2006; Tjepkema, 2005; Wilkins & Park, 2004). Given the significance of trauma among the causes of death and hospitalization in Nunavik, the results of this study appear

to underestimate the true prevalence of injuries occurring in this population. The methodology used and a bias associated with the perception of the significance of the injury's severity may have contributed to an underestimate of the prevalence of these injuries due to underrating by the household respondent. The circumstances surrounding the injuries are frequently associated with the transportation methods so it is important to target preventive measures, specifically those related to snowmobile and ATV use.

Only a minority of snowmobile users report travelling alone when driving outside of the village. This tendency towards cautious behaviour must be maintained due to the region's geography and communication difficulties when one gets the slightest distance away from the village, worsening the consequences of a potential trauma. Inuit frequently travel by boat and only a low proportion wear a personal flotation device. This behaviour is associated with an increased risk of drowning, although hypothermia remains an ongoing risk. There has been noticeable improvement in the wearing of PFDs since 1992, but promotional actions must be continued.

Driving a motor vehicle while under the influence of drugs or alcohol increases the risk of an accident with injuries; 38% of motor vehicle drivers reported this behaviour on at least one occasion in the 12 months preceding the survey. The proportion was one third for those driving snowmobiles and ATVs, the most frequently used vehicles in Nunavik. This is a high proportion and is nearly double that observed in other Quebec Aboriginal communities, although the frequency of driving while under the influence of alcohol or drugs and the quantity consumed when driving in Nunavik are unknown (Légaré & Robitaille, 2006). As is the case in other surveys that estimated the prevalence of this behaviour, men and young people are represented in higher proportions (Légaré & Robitaille, 2006). Driving while under the influence of a substance is strongly associated with both heavy alcohol consumption on a single occasion and with the frequency of heavy consumption. Driving while under the influence of drugs or alcohol is more prevalent on the Ungava coast, among more educated individuals and among those with a job. This proportion has not decreased since 1992, except in the case of driving motor boats where this behaviour decreased from 15% to 10%. The survey results thus permit at-risk groups to be identified to allow for the introduction of efforts to reduce the frequency of driving of motor vehicles under the influence of substances.

KEY ISSUES

- ↪ 3.8% of Nunavik residents had experienced an injury limiting their regular activities over the 12-month period preceding survey.
- ↪ The prevalence of injuries reported did not vary between 1992 and 2004 and was much lower than that observed in other Canadian Aboriginal populations; this leads to an assumption that the true prevalence of injuries in Nunavik has been underestimated.
- ↪ Men experienced more injuries than women and a higher tendency towards injuries was observed among teenagers and young adult.
- ↪ Transportation-related injuries, including those resulting from a snowmobile or ATV accident, represent the main circumstances surrounding reported injuries.
- ↪ One quarter of snowmobile users sometimes or often travelled alone when driving outside the village and three-quarters of motorized boat users rarely or never wear a PFD. Such behaviour was more common among women and Hudson residents.
- ↪ Driving a motor vehicle while under the influence of alcohol or drugs remained a frequent behaviour reported by nearly four out of ten drivers.
- ↪ Men, young people and individuals who consumed heavy amounts of alcohol on a single occasion were at greater risk of accident with injuries.

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APPENDIX

Table A1

Proportion of people having experienced at least one injury limiting their regular activities in the 12 months preceding the survey, by certain characteristics (%), members of Inuit households, Nunavik, 2004

| | % |
|--------------------------------------|--------------------|
| Total | 3.8 |
| Sex | |
| Men | 4.8 ¹ |
| Women | 2.6 ¹ |
| Age group | |
| 0-14 years | 3.0 |
| 15-29 years | 4.7 |
| 30-49 years | 4.2 ^E |
| 50 years + | 3.6 ^E |
| Coastal region | |
| Hudson | 3.1 |
| Ungava | 4.6 |
| Education level | |
| Elementary school completed or less | F |
| Secondary school not completed | 3.8 ^{E 1} |
| Secondary school completed or higher | 9.9 ^{E 1} |
| Occupation | |
| Work | 4.4 |
| Student or preschool age | 2.7 |
| Other ^a | 4.8 |

^a Other: keeping house, on the land, not working, holidays, retired or other (disability, maternity leave, etc.).

Estimates with the same exponent are significantly different ($\alpha = 0.05$).

E Interpret with caution.

F Unreliable estimate.

Source: Nunavik Inuit Health Survey 2004.

Table A2

Proportion of individuals having experienced at least one injury limiting their regular activities in the 12 months preceding the survey, by sex and age group (%), members of Inuit households, Nunavik, 1992 and 2004

| | 1992 | 2004 |
|------------------|------------------|------------------|
| Total | 3.6 | 3.8 |
| Sex | | |
| Men | 4.5 | 4.8 |
| Women | 2.6 ^E | 2.7 |
| Age group | | |
| 0-14 years | 2.0 ^E | 3.0 |
| 15-29 years | 5.1 ^E | 4.7 |
| 30-49 years | 4.3 ^E | 4.2 ^E |
| 50 years + | 4.5 ^E | 3.6 ^E |

E Interpret with caution.

Sources: Nunavik Inuit Health Survey 2004.
 Santé Québec survey 1992.

Table A3

Description of the circumstances surrounding the most serious injury experienced limiting regular activities in the previous 12 months (%), members of Inuit households, Nunavik, 2004

| Circumstances | % |
|------------------------------|-------------------|
| Sports | 26.0 ^E |
| All-terrain vehicle | 22.1 ^E |
| Snowmobile | 12.9 ^E |
| Fall | 13.6 ^E |
| Other ^a | 25.4 ^E |
| <i>During transportation</i> | 43.0 |

^a Other: Car/truck/van accident, fight, boat accident, frostbite, other kind.

E Interpret with caution.

Source: Nunavik Inuit Health Survey 2004.

Table A4

Proportion of behaviours associated with transportation safety, by certain characteristics (%), population aged 15 and over, Nunavik, 2004

| | Rarely or never accompanied by another snowmobile when travelling outside of the village | Rarely or never wear a PFD ^a when travelling by motorized boat |
|--------------------------------------|--|---|
| Total | 25.2 | 75.5 |
| Sex | | |
| Men | 23.4 | 70.8 ¹ |
| Women | 27.3 | 81.1 ¹ |
| Age group | | |
| 15-29 years | 25.6 | 78.6 |
| 30-49 years | 23.0 | 71.7 |
| 50 years + | 28.3 | 75.3 |
| Coastal region | | |
| Hudson | 28.1 ¹ | 80.8 ¹ |
| Ungava | 21.2 ¹ | 68.1 ¹ |
| Education level | | |
| Elementary school completed or less | 31.9 ¹ | 75.2 |
| Secondary school not completed | 26.1 | 75.6 |
| Secondary school completed or higher | 17.4 ¹ | 76.6 |
| Income | | |
| Less than \$20 000 | 27.4 ¹ | 77.3 |
| \$20 000 and over | 18.7 ¹ | 73.0 |
| Job status | | |
| Work | 21.3 ¹ | 75.0 |
| Other ^b | 31.5 ¹ | 75.4 |

^a Personal flotation device.

^b Other: hunter support program, housework, retired or on pension, unemployment insurance, social welfare, student or other (disability, maternity leave, etc.).

Estimates with the same exponent are significantly different ($\alpha = 0.05$).
 Source: Nunavik Inuit Health Survey 2004.

Table A5

Safety-related behaviour when travelling, by certain characteristics (%), population aged 15 and over, Nunavik, 1992 and 2004

| Safety-related behaviour | 1992 | 2004 |
|--|-------------------|-------------------|
| Rarely or never accompanied by another snowmobile when travelling outside of the village | 23.4 | 25.2 |
| Rarely or never wear a PFD when riding in a motorized boat | 92.0 ¹ | 75.5 ¹ |

Estimates with the same exponent are significantly different ($\alpha = 0.05$).

Sources: Nunavik Inuit Health Survey 2004.
 Santé Québec survey 1992.

Table A6

Proportion of drivers who reported driving a motor vehicle while under the influence of alcohol at least once in the 12 months preceding the survey, by type of vehicle (%), population aged 15 and over, Nunavik, 1992 and 2004

| Type of vehicle | 1992 | 2004 |
|-----------------------------------|-------------------|-------------------|
| Car or truck | 25.2 | 20.1 |
| 3- or 4-wheel all-terrain vehicle | 30.4 | 32.4 |
| Snowmobile | 32.0 | 31.9 |
| Motorized boat or canoe | 15.4 ¹ | 10.4 ¹ |

Estimates with the same exponent are significantly different ($\alpha = 0.05$).

Sources: Nunavik Inuit Health Survey 2004.
 Santé Québec survey 1992.

Table A7

Proportion of drivers who reported driving a motor vehicle at least once while under the influence of alcohol or drugs in the 12 months preceding the survey, by type of vehicle and certain characteristics (%), population aged 15 and over, Nunavik, 2004

| | Type of vehicle | | | | At least one of the four preceding vehicles |
|--|----------------------|-----------------------------------|-----------------------|-------------------------|---|
| | Car or truck | 3- or 4-wheel all-terrain vehicle | Snowmobile | Motorized boat or canoe | |
| Total | 20.1 | 32.4 | 31.9 | 10.4 | 38.0 |
| Sex | | | | | |
| Men | 24.6 ¹ | 37.8 ¹ | 39.9 ¹ | 15.8 | 47.4 ¹ |
| Women | 13.7 ¹ | 26.4 ¹ | 22.7 ¹ | F | 32.7 ¹ |
| Age group | | | | | |
| 15-29 years | 21.8 ¹ | 41.9 ^{1,2} | 38.6 ¹ | 10.6 ^E | 49.0 ^{1,2} |
| 30-49 years | 24.5 ² | 28.5 ^{1,3} | 30.9 ² | 13.2 ^E | 39.2 ^{1,3} |
| 50 years + | 7.5 ^{E 1,2} | 13.5 ^{E 2,3} | 16.4 ^{E 1,2} | F | 19.6 ^{2,3} |
| Coastal region | | | | | |
| Hudson | 10.5 ¹ | 28.1 ¹ | 26.6 ¹ | 6.8 ^{E 1} | 34.1 ¹ |
| Ungava | 31.1 ¹ | 38.0 ¹ | 39.0 ¹ | 15.7 ¹ | 48.6 ¹ |
| Education level | | | | | |
| Elementary school completed or less | 7.0 ^{E 1,2} | 15.7 ^{E 1,2} | 16.5 ^{E 1,2} | F | 21.8 ^{1,2} |
| Secondary school not completed | 17.6 ^{1,3} | 34.7 ¹ | 31.9 ^{1,3} | 9.5 ^E | 41.0 ^{1,3} |
| Secondary school completed or higher | 33.6 ^{2,3} | 40.7 ² | 44.5 ^{2,3} | 13.9 ^E | 54.4 ^{2,3} |
| Job status | | | | | |
| Work | 24.8 ¹ | 36.1 ¹ | 35.5 ¹ | 11.3 | 45.6 ¹ |
| Other ^a | 9.4 ^{E 1} | 23.9 ¹ | 23.8 ¹ | 9.4 ^E | 29.7 ¹ |
| Number of drinks on a single occasion | | | | | |
| 1 to 5 | 18.1 ¹ | 32.1 ¹ | 30.6 ¹ | 8.1 ^{E 1} | 39.6 ¹ |
| 6 or more | 32.3 ¹ | 49.6 ¹ | 48.7 ¹ | 16.4 ¹ | 60.7 ¹ |
| Frequency of heavy drinking | | | | | |
| Once a week or more | 34.1 ¹ | 50.5 ^{1,2} | 51.2 ¹ | 19.5 ^E | 59.9 ^{1,2} |
| 1 to 3 times a month | 27.0 | 45.7 ^{3,4} | 41.2 ² | 11.6 ^E | 55.7 |
| Less than once a month | 18.3 ^{E 1} | 28.4 ^{1,3} | 35.2 | F | 42.3 ¹ |
| Never | F | 22.8 ^{E 2,4} | 17.1 ^{E 1,2} | F | 23.9 ^{E 2} |

^a Other: hunter support program, housework, retired or on pension, unemployment insurance, social welfare, student or other (disability, maternity leave, etc.).

Estimates with the same exponent are significantly different ($\alpha = 0.05$).

E Interpret with caution.

F Unreliable estimate.

Source: Nunavik Inuit Health Survey 2004.

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HOW ARE WE?

