

Injury Prevention Indicators for Inuit Children and Youth



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What are Injuries?

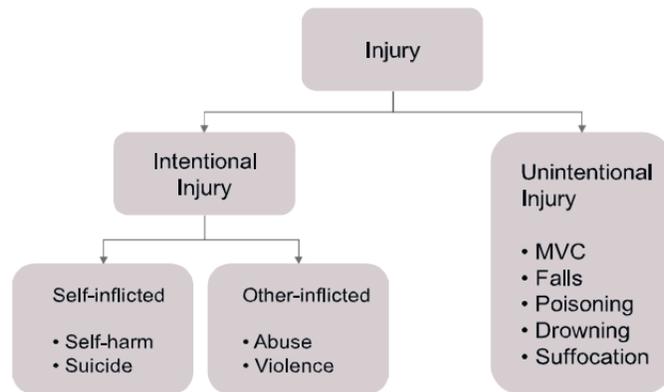
Injuries result from physical damage that happens when a human body is subjected to intolerable levels of mechanical energy (such as a snowmobile crash), thermal energy (a burn from a flame), electrical energy (such as a shock), physical energy (such as a punch to the face) or chemical energy (such as drinking poison). Injuries can also result from the absence of necessary elements such as heat (resulting in frost bite or hypothermia) or oxygen (resulting in drowning or suffocation).

Injuries can be divided into two types – unintentional and intentional injuries.

Unintentional injuries or unexpected injuries happen when a person is hurt by mistake such as falling or drowning.

Intentional injuries such as suicide or violence happen when a person physically hurts themselves or another person on purpose.

Injuries are not accidents, 90% of all injuries are the result of predictable and preventable events.¹



Why is Injury Prevention Important for Inuit Children and Youth?

Injury is the leading cause of death for Aboriginal children, youth, and young adults in Canada.

Injuries are a problem because of the large burden of mortality, morbidity and long-term disability that they cause within Inuit communities.

The Facts

- Injuries kill more Canadian children and young adults than all diseases combined.²

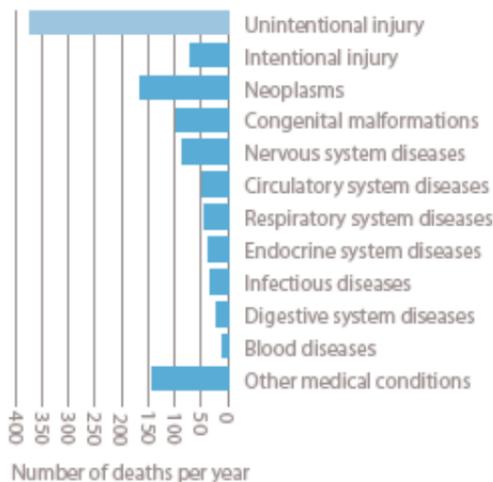


photographer unknown, courtesy of Science Netlinks

Causes of death to Canadian children age 1-14 years, 1994-2003*

Source: Statistics Canada

[Deaths for 2003 were estimated from trends for the years 1994-2002]



*data for all Canadian children including Inuit and Non-Inuit

- A high percentage of Inuit children aged 0–14 report having injuries that require medical attention. This number is estimated to be much higher because in the Arctic, due to lack of health professionals and services, injuries are more likely than elsewhere to go undiagnosed.³

Injuries requiring medical attention among Inuit children*

Characteristics	Selected Inuit communities in Labrador	Nunavik	Nunavut	Inuvialuit Region	All children in Canada (Inuit and non-Inuit)
% of children with serious injury in past 12 months	7	10	8	11	11

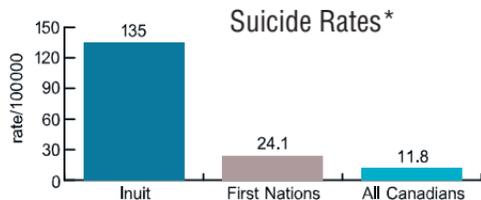
Source: Inuit Tapiriit Kanatami. 2008. Inuit in Canada: A Statistical Profile.

* children are those aged 0–14



photo: Eric Loring, courtesy of Inuit Tapiriit Kanatami

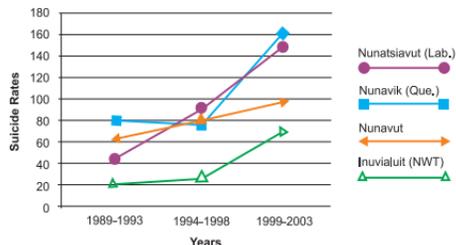
- The Inuit suicide rate is more than 11 times higher than the overall Canadian rate and has been increasing steadily since 1989.^{4,5}



Source: Inuit Tapiriit Kanatami. 2008. *Inuit in Canada: A Statistical Profile*. Referencing Health Canada, 2005.

- * The Inuit rate is for the period 1999–2003 while the figures for the First Nations and total Canadian Population are for 2000.

Suicide Rates in Inuit-inhabited Communities



Source: Bobet E. Suicide in Inuit-inhabited communities. An analysis of data from Vital Statistics records and an investigation of possible explanatory variables. Unpublished Report to Indian and Northern Affairs Canada, Strategic Research and Analysis Directorate, 2008.

- In Inuit communities 56% of the population is under age 25 years compared with 31% for the total Canadian population. The Inuit population is growing steadily at a rate of 26% compared to 8% for the total Canadian Population.⁶ Since injury is the leading cause of death among children, youth and young adults and young people make up such a large proportion of the Inuit population, injury prevention needs to become an important focus for Inuit communities.

Age distribution of Inuit and all Canadians, Canada, 2006

Age groups	Total Inuit Population		Total Canadian Population	
	#	%	#	%
0–4	5,875	12	1,690,400	5
5–9	5,800	11	1,808,280	6
10–14	6,035	13	2,078,135	7
Subtotal 0–14	17,705	35	5,576,805	18
15–24	10,555	21	4,207,810	13
25–34	7,095	14	3,987,075	13
35–44	6,635	13	4,794,100	15
45–64	6,640	13	8,600,935	28
65 and over	1,845	4	4,074,300	13
Total – All ages	50,480	100	31,241,030	100

Source: Inuit Tapiriit Kanatami. 2008. *Inuit in Canada: A Statistical Profile*. Referencing Statistics Canada, 2006 Census.

What are Indicators and How Can They Help with Injury Prevention?

Indicators are measurements. They are used to measure and track over time the changing story of a community or a group.⁷

Indicators can help:

- Describe different aspects of a community or population (e.g. life expectancy rates, disability rates, rates of chronic disease)
- Assist community leaders in determining priorities for action.
- Develop appropriate strategies, programs, services and policies.
- Evaluate the impact of current activities.
- Provide comparisons to other populations or communities over time (e.g. Nunavut compared to Nunavik)

Injury prevention indicators help Inuit leaders make informed decisions about what is required to make their communities healthy, injury free places to live. Indicators raise awareness of

local injury problems and issues and provide evidence to support Inuit concerns and positions. They are important tools to influence policy and measure the health of a community within an Inuit context. Communities can start small (collecting data on one or two indicators) and build toward collecting data on the full list of indicators over time.



photographer unknown, courtesy of Travel Broker Tours

About the First Nations and Inuit Children and Youth Injury Indicators Project

In 2007 the First Nations and Inuit Children and Youth Injury Indicators Project Task Group was formed through support from the First Nations and Inuit Health Branch (FNIHB) of Health Canada. Leadership and coordination was provided by Dr. Ian Pike (UBC) and Dr. Alison Macpherson (York). Participants were from the following groups: Inuit Tapiriit Kanatami (ITK), Pauktuutit Inuit Women of Canada, Nunatsiavut Department of Health and Social Development, Assembly of First Nations (AFN), Royal Canadian Mounted Police (RCMP), Indian and Northern Affairs (INAC), SMARTRISK, Plan-It-Safe, Katenies Research and Management Services (KRMS) and Statistics Canada.

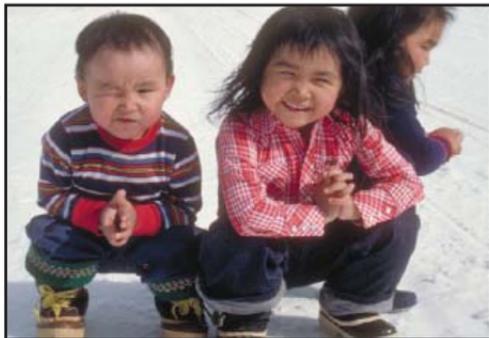


photo: Eric Loring, courtesy of Inuit Tapirisat of Canada

The Project Task group worked together on the following activities:

1. Conducted a literature review to identify established First Nations and Inuit child and youth injury indicators that were valid and evidence-based.
2. Established injury areas and created indicators for each injury area using three criteria questions: a) Is this indicator important in your community?; b) Would this indicator help you to track injuries in your community?; c) Does this indicator give you the information you need to take action to prevent injuries?
3. Reviewed and rated the indicators on their usefulness and ability to prompt action. This review resulted in a final list of 27 injury indicators for First Nations and Inuit children and youth.

What Issues Came Forward?

Based on the literature review, group ratings and discussion, the First Nations and Inuit Children and Youth Injury Indicators Project Task Group agreed on the following nine key injury areas to develop indicators that would be useful for Inuit communities.

- Indicators Across All Injury Areas
- Community Training/Response Systems
- Animal Bites
- Hypothermia/Frostbite
- Violent/Inflicted Injury
- Burns and Falls
- Drowning
- Suicide/Self-Harm
- Motorized Vehicle Collisions



photo: Mance Rose, courtesy of Care2.com Inc.

What indicators were identified?

For each injury area the following injury indicators were identified by the First Nations and Inuit Children and Youth Injury Indicators Project Task Group. The Group felt that collecting information on each of these indicators would provide

a complete picture of injury issues for Inuit communities. It was acknowledged that for some indicators data would be easy to gather and for others data will either be non-existent or hard to find.

Injury Area	Injury Indicator
Indicators across all injury areas	1. Mortality Rate: per 100,000 population for a particular year
	2. Hospital Separation Rate: The number of child and youth hospital separations per 100,000 population for a particular year
	3. Self-reported alcohol, solvent and substance use for a particular year
	4. Potential years of life lost (PYLL): PYLL is an indicator of premature mortality. It represents the total number of years NOT lived by an individual who died before age 75.
Community TRNG/response systems	5. Proportion of community members who complete injury prevention training
	6. Presence of an emergency preparedness communication plan for community (i.e. flooding, fires, blizzards, etc.)
	7. Availability of fire and ambulance services in a community within a defined response time
Animal bites	8. Rate of child and youth injuries due to animal bites and maulings per 100,000 population for a particular year
	9. Number of communities with Animal Control Services
Hypothermia/ frostbite	10. Rate of children and youth who experience hypothermia or frostbite, injuries per 100,000 population for a particular year
Violent/inflicted injury	11. Rate of police calls and charges related to violent injury involving children and youth per 100,000 population
	12. Self-reported rate of inflicted injury (assault) among children and youth per 100,000 population
	13. Percentage of violent offenders participating in restorative justice

Injury Area	Injury Indicator
Burns and falls	14. The proportion of homes with presence of working smoke detectors, tested fire extinguishers and carbon monoxide detectors in a community for a particular year
	15. The number and proportion of self-reported burns (including circumstantial details of each case) among children and youth for a particular year
	16. The number and proportion of self-reported falls (including circumstantial details of each case) among children and youth for a particular year
Drowning	17. Availability of Emergency Response Teams for a particular year
	18. The number and proportion of communities with access to water safety education / programs
	19. The number and proportion of children and/or youth (ages 0–19) drowning (by body of water type) for a particular year
	20. The number and proportion of children/youth (0–19) enrolled in learn to swim programs for a particular year
Suicide/self-harm	21. The rate per 100,000 population of suicide attempts/self harm among children and youth (ages 0–19) for a particular year
Motorized vehicle collisions	22. The motor vehicle crash rates per 100,000 population involving children and/or youth, by type of vehicle and by circumstances for a particular year
	23. The number and proportion of road users, aged 19 and under, seriously injured or killed in crashes who were unrestrained (not wearing a seatbelt)
	24. The number of youth enrolled and who complete Driver Education Courses – skills for car, snowmobile, boat, and ATV drivers for a particular year
	25. The number and proportion of proper use of child vehicle restraints (car seats) and booster seats for a particular year
	26. Age and sex of drivers and occupants involved in a motor vehicle crashes (including cars, ATVs, and skidoos) for a particular year
	27. The number and proportion of children and youth seriously injured or killed while riding ATVs, snowmobiles, and/or bicycles who were not wearing a helmet for a particular year

Using Indicators as a Framework for Data Collection

Indicators provide a framework for collecting data. By using a framework, data is collected and reported in a coordinated way to provide a complete picture of the current situation – what is working, what is missing and what can be changed to make things better.

Data sources are critical to supporting and validating Inuit injury indicators. The problem is that injury and trauma data are not gathered in Arctic health centres, nursing stations and hospitals in ways that allow for detailed analysis. Additionally, where data does exist it is often fragmented (found in many places) and difficult to compare. It is the absence of quality data that makes it difficult to make informed decisions about injury prevention policies and programs in Inuit communities.

By using the Injury Indicator Framework, injury and trauma data could be collected by many different groups in a similar way allowing information to become more useful and complete. Through a coordinated approach using the framework, data could be analyzed to better understand trends in injury and

trauma among the Inuit population, especially for vulnerable groups such as children and youth.

Overtime as data collection becomes more compatible and comparable, surveillance opportunities would increase allowing for additional information to come forward to even better describe the situation.



photo: Jan-Michael Breider,
courtesy of PBase.com LLC

Inuit Injury Data Sources

There are already a number of existing and potential data sources available within Inuit communities that could be accessed to provide information based on the Injury Indicator Framework. Here are just a few data sources available to many Inuit communities:

- Provincial/Territorial Databases (e.g. coroner data, death registries)
- Regional offices of the Health Canada, First Nations and Inuit Health Branch (FNHB) (e.g. vital statistics using an Inuit identifier, injury code and nature of injury)
- Statistics Canada (www.statcan.gc.ca) (e.g. Aboriginal Peoples Survey and Aboriginal Children's Surveys)
- Existing survey data or new survey data (e.g. universities, researchers)
- Nursing station charts, registers and records
- Sales in local stores (e.g. alcohol, cigarettes, first aid supplies, floatation devices)
- Police statistics (e.g. assault, car crashes)
- Treatment centre statistics (e.g. drug abuse, mental health)
- Community meetings such as feasts, cultural events, training sessions (e.g. number of participants, frequency)
- Local schools (e.g. dropout statistics)
- Hunters and Trappers (e.g. changes in environment, animal patterns)
- Inuit Knowledge Centre (www.inuitknowledge.ca)
- Local Inuit Traditional Knowledge (e.g. working with Elders and community leaders to discuss trends, changes, etc.)
- Negotiating Research Relationships with Inuit Communities, a Guide for Researchers (www.itk.ca/publications/negotiating-research-relationships-inuit-communities-guide-researchers)

The Inuit Tapiriit Kanatami also compiles an Inuit Statistical Profile (http://www.itk.ca/sites/default/files/InuitStatistical-Profile2008_0.pdf) on a regular basis. This report provides data taken from government and academic sources and is intended to provide a snapshot of life in Inuit communities. There is already some information on things like age distribution, life expectancy, suicide rates and injuries requiring medical attention but more injury data could be added if it was available.

Next Steps

- **Engage Communities in injury prevention:** To advance the injury agenda in Inuit communities it is important that the entire community sees injury prevention as a priority. Plan to meet and share the injury indicator framework with the leaders (Elders, Councils, etc.) to ensure the framework meets their needs and ask them to prioritize areas for immediate action. Once they are on board it will be much easier to engage workers and community members who will be responsible for collecting, inputting and sharing data.
- **Share ‘wise’ practices:** If there are already good (or ‘wise’) practices happening in Inuit communities around data collection work with partners to find ways to share what is being done.
- **Start Small:** Collecting information on all the indicators might not be possible for every community right away. It is important to start small (collecting data on one or two indicators) and build toward collecting data on the full list of indicators over time.
- **Collect Data:** Develop partnerships to collect/input data and conduct research. Training and education needs to be included to ensure those managing data are comfortable

with processes, methods and equipment. It is also important that any research be community based and participatory incorporating traditional knowledge, local customs, language, etc.

- **National Surveillance:** Advocate for the development of a national surveillance program that collects and monitors injury prevention information on Inuit communities. Although difficult to develop, national surveillance is needed to ensure quality, comparable data is available.
- **On-going Leadership:** Determine who in your community, organization or department will take the lead on data coordination using the Injury Indicator Framework. It will be their responsibility to review what data is available, mobilize partners around the collection and sharing of quality data and monitor the data collection process on an on-going basis to develop reports using the indicator framework.



photo: Guytaine Charbonneau



photo: Brad Barlage, courtesy of Black Diamond Equipment

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Injury Prevention Indicators for Inuit Children and Youth



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PARTNERS



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