APPENDIX 1

Preliminary Findings of the Health Programme Data for
Children and Youth in the Arctic.

This appendix consists of an overview of 16 health indicators which includes a description and brief overview of the findings, conclusions and recommendations. The indicators examined in this report are listed below:

Population demographics	Major notifiable diseases:
Mean maternal age	*TB, HIV/AIDS, Chlamydia*
Prenatal care	Tobacco use
Immunization status	Substance abuse:
Preterm birth	*alcohol, solvents, illicit drugs*
Low birth weight	Education
Breast feeding	Child abuse
Infant mortality	Suicides
Cause specific incidence: *cancer, diabetes*	Unintentional injuries

The description of each indicator is followed by a series of figures which display the data collected to date. Where possible, comparisons were made between nations, between regions, between Indigenous populations and between genders. Data is displayed to reflect these comparisons. The table below provides a list of the 8 nations and their corresponding regions. There is one exception to the national/regional overview, which involves Denmark and Greenland. To date, there has been very little data collected from Denmark but a full complement of information has been provided from Greenland. For the purposes of this Appendix, the Greenland data is displayed as National data.

Comparisons involving the following nations and regions

Nation	**Region**
United States	Alaska
Canada	Northwest Territories, Nunavut (NWT/NU)
Denmark (no Danish National data)	Greenland
Iceland	
Norway	Troms
Sweden	Norbotten
Finland	Lapland
Russia	Archangelsk

Population Demographics

This indicator examines the ratio of the members of a given 5 year age group (eg. 0-4, 5-9, 10-14, 15-19) to the total population and in regional/Indigenous populations, by year.

Discussion

Population demographic data was available from most circumpolar jurisdictions. Demographic structure of the population is essential in understanding disease patterns in populations and possible success of or needs for specific types of health service interventions.

The arctic Indigenous People of Alaska, USA, and NWT/Nunavut (NWT/NU), Canada have a higher proportion of children and youth compared to their respective national populations. The proportion of children/youth in the USA, Canada, Norway, Sweden and Finland are very similar within the four age groups, while in Iceland and Russia, it is somewhat higher. The proportion of children/youth among the Indigenous population in Greenland is lower than the other Indigenous populations examined, but higher than the National populations surveyed. The northern regional populations of Norway, Sweden, and Finland, which consists of variable proportions of Indigenous people (Saami), are very similar to their national population profiles for children and youth. Only very limited data for one of the five Russian arctic regions (Archangelsk) has been supplied. This Indigenous population had a lower proportion of children and youth compared to the Arctic Indigenous people of Canada and the USA, but higher than most national populations.

Conclusions

Ongoing population data needs to be collected as it serves as a valuable benchmark when examining other health indicator data. It is an essential factor in health planning to properly target subpopulations and better define the required services.

The Arctic Indigenous populations of USA and Canada have a younger demographic profile than all other populations surveyed.

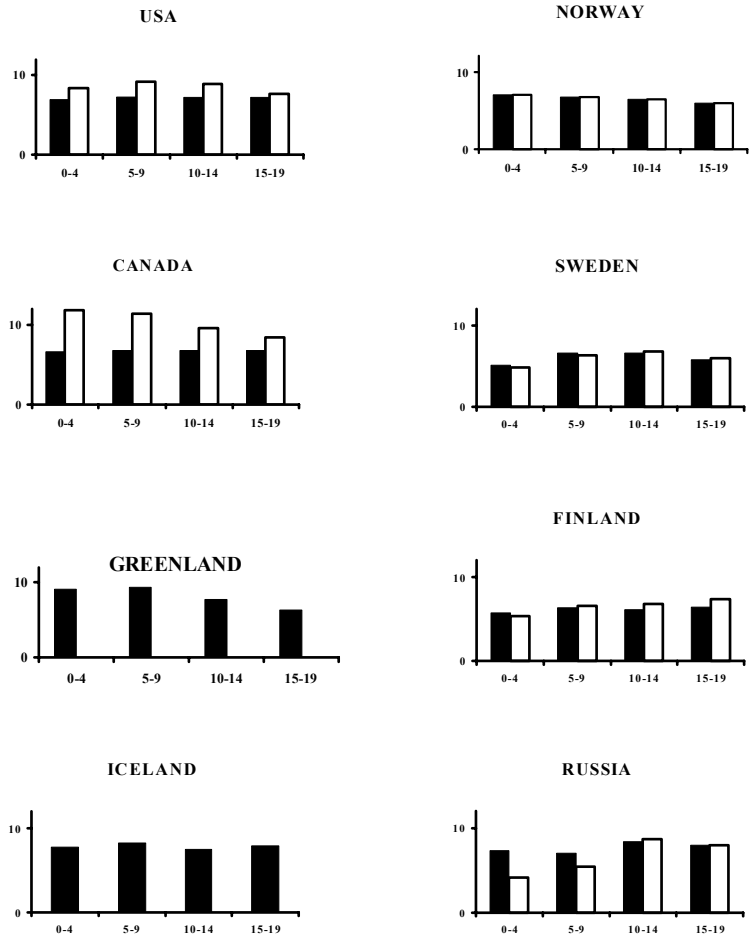
The Indigenous people of Greenland and one region of arctic Russia have an intermediate proportion of children and youth.

Recommendations

The expert panel recommended reporting on the percent of the population under 19 years of age. There needs to be a continued focus on youth health among circumpolar nations, even though the general emphasis, particularly for southern populations, will be on the senior population. Population data needs to be collected from all arctic regions of Russia to allow comparisons with other circumpolar populations.

Population demographics
% of population in each age group

■ *National* □ *Regional*

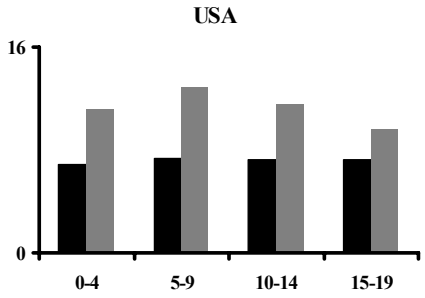


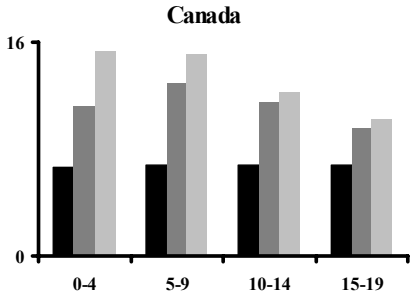
Population demographics:

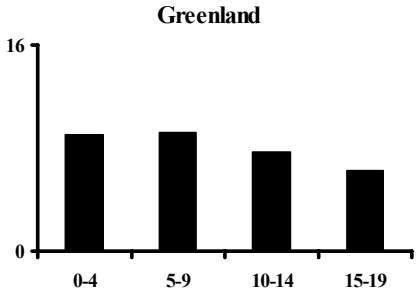
% of population in each age group:

■ National data ■ Alaskan Natives

■ Canada NWT/NU Dene ■ Canada NWT/NU Inuit







Maternal age at birth of child

This indicator examines the mean maternal age among the population.

Discussion

The youngest mean maternal age was found among Arctic Indigenous peoples from the United States and Canada. Their mean maternal age ranged from 23-25 years of age which is two to six years younger than the mean maternal age recorded among Indigenous peoples in Greenland and non-indigenous populations from Canada, Norway, Sweden and Finland.

Mean maternal age was younger among Arctic Indigenous peoples due to the higher rates of teen pregnancies in certain populations. Teen mothers have significant health concerns such as increased rates of lower birth weight and pre-eclampsia and thus need more intensive support.

The expert panel suggested that this indicator be modified to reflect the proportion of teen mothers in the population. This change would be consistent with health indicators currently used by the European Union and United Nations. Careful communications must be considered for Indigenous people. While some of the Indigenous populations have higher rates of teen pregnancy, they also have extended family support for teen mothers.

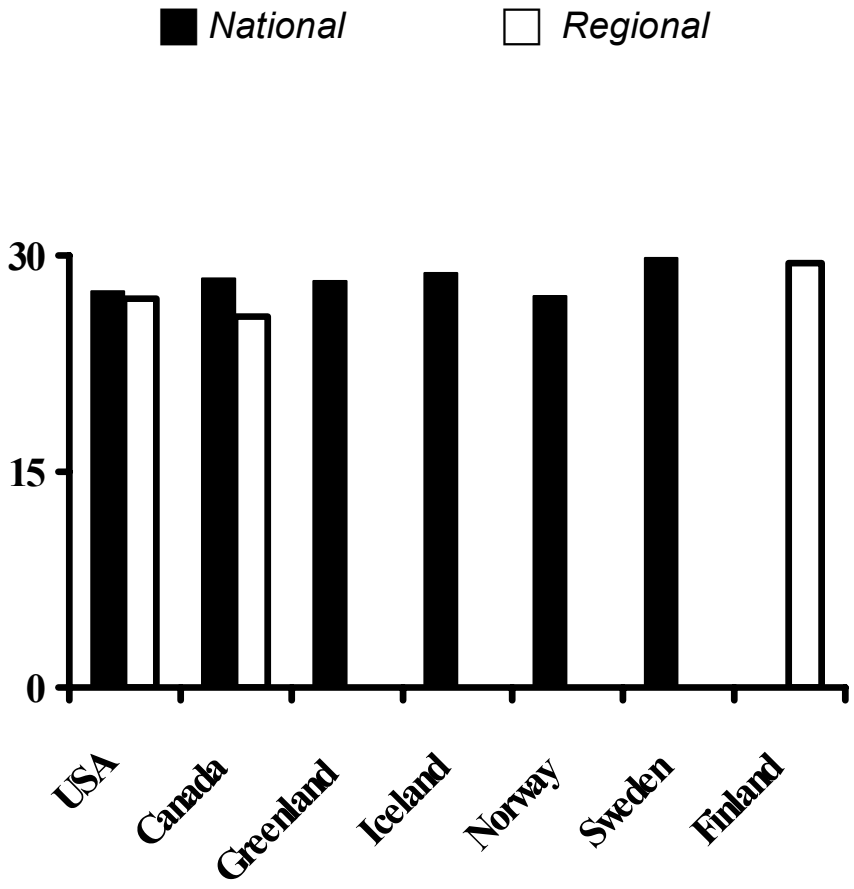
Conclusions

The mean maternal age among US and Canadian Arctic Indigenous populations are two to six years younger than in other populations.

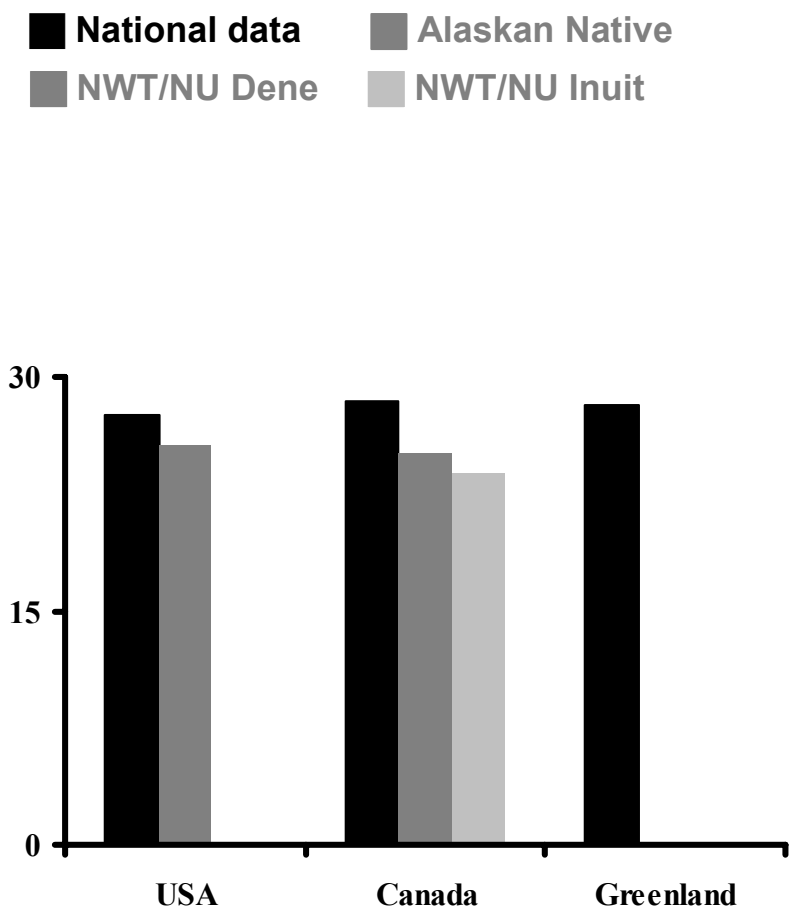
Recommendations

Future collection of maternal data needs to include the percent of teen mothers among all populations. In the interim, it may also be possible to collect data on the age of mother at the birth of her first child rather than mean maternal age at birth of child. Future data should include mothers giving birth to a stillborn.

Mean maternal age at birth of child:



Mean maternal age at birth of child:



Prenatal Care

This indicator provides a measure of the proportion (by year) of mothers in the entire population and by region who received varying levels of prenatal care. The three levels that were monitored were: i) complete care ($\geq$5 prenatal visits; ii) delayed care (prenatal visits starting in the third trimester) or iii) no care at all.

Discussion

Only five of the countries reported on the proportion of the populations completing the various levels of prenatal care. The availability of prenatal care is necessary if public health agencies are to provide early support to families. Inadequate prenatal care has been linked to specific diseases or disorders among newborns. The majority of birth mothers surveyed in Greenland, Iceland and Sweden received complete prenatal care. There was a considerably lower proportion of birth mothers from Indigenous populations in the Arctic regions of the United States and Canada that had complete prenatal care by comparison. Complete prenatal care was higher among non-Indigenous populations in the Arctic. However, among those surveyed, there were very few birth mothers that reported no care. The availability of prenatal care in isolated arctic regions is a significant public health success story.

Conclusions

The availability of complete prenatal care is necessary if public health agencies are to provide early support to families.

Complete prenatal care was also available to a significant majority in the Arctic. There was a smaller proportion of arctic Indigenous populations in the US and Canada receiving complete prenatal care compared to the arctic non-indigenous population.

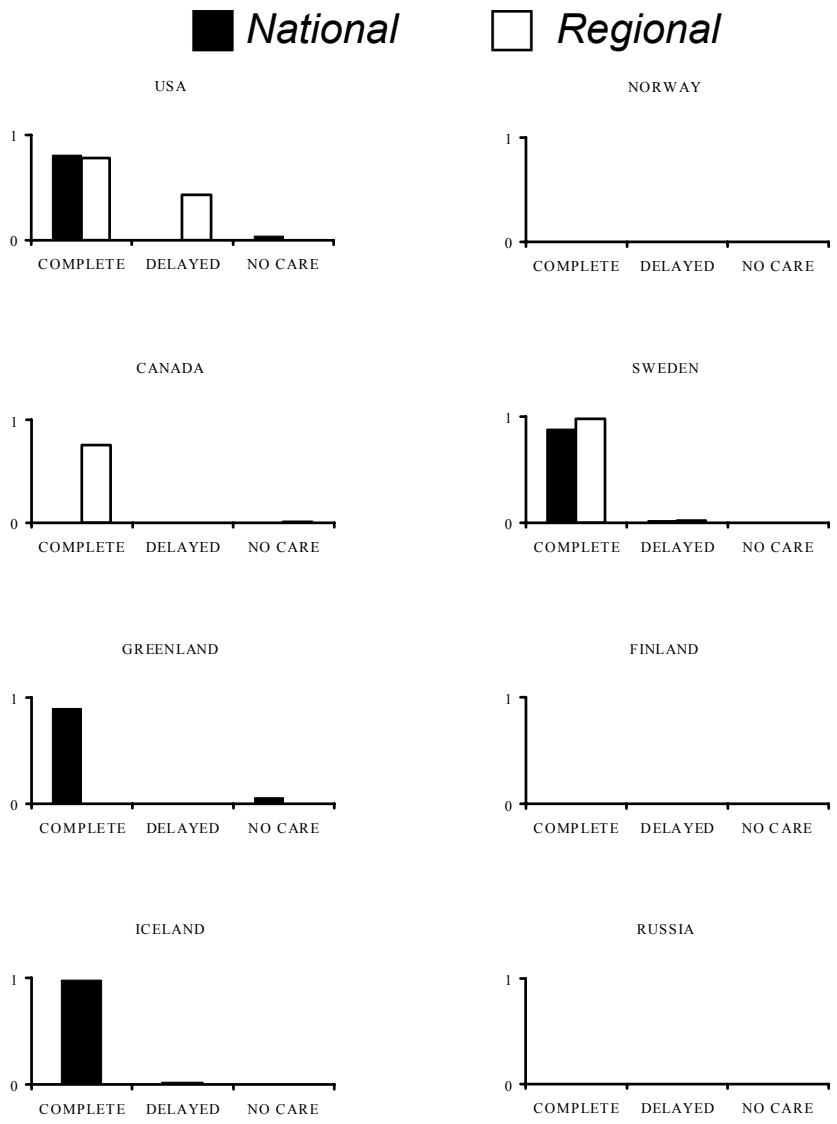
The availability of complete prenatal care in isolated arctic regions is a significant public health success story.

Recommendations

All circumpolar countries and their arctic regions need to report on this indicator as it is an important assessment of early support to families.

Complete prenatal care in all arctic populations needs to be ensured.

Prenatal Care: proportion of mothers receiving: complete, delayed or no care



Immunization Status

This indicator represents the percentage of children in the whole population and among ethnic/ regional groups that are fully immunized against the following preventable childhood diseases: Diphtheria, Pertussis, Tetanus; Measles, Mumps, Rubella; Polio; Haemophilus influenza and Hepatitis B.

Eliminating Haemophilus meningitis In the industrialized countries, people think of the diseases prevented by immunization as ancient history. A more recent vaccine has made a large difference to many infants in the Arctic region in just the last 15 years. Meningitis (and other serious diseases) caused by the bacterium Haemophilus influenzae was a major cause of death and disability among infants in communities in Greenland, northern Canada and Alaska. Rates of disease were 5 to 20 times greater than in southern populations. In the Nunavik region of northern Quebec, for example, an infant had a 5% risk of suffering from Haemophilus meningitis in the first two years of life. Of these, one in five died and one in three had a serious disabililty (eg. deafness, partial paralysis, developmental delay) despite excellent medical treatment. Since the introduction of the Haemophilus vaccine, this disease has almost disappeared among children living in the Canadian arctic.

Hepatitis B in Alaska Alaska Natives, until 1980, experienced the highest rate of hepatitis B infection of any northern population. Many infants acquired the infection at birth, which put them at high risk to develop liver cancer as children. Tribal health programs, collaborating with state and federal agencies, designed and implemented a unique population-wide comprehensive hepatitis B prevention program, beginning at birth. This program has resulted in a dramatic reduction in new infections of hepatitis B. Additionally, liver cancer in children, previously one of the most frequent cancers among Alaska Native children, has virtually disappeared. This unique program may well be the first well-demonstrated instance of vaccine preventing a childhood cancer.

Hepatitis B in the Canadian North Encouraged by the early success of the Alaskan hepatitis B prevention program, a sero-prevalence survey of all communities in the Northwest Territories was undertaken in the mid 1980's. Communities with evidence of active hepatitis B virus infection were provided with vaccinations for all persons under 20 years of age. This program was later followed with universal hepatitis B immunization for all children and youth in the Northwest Territories, Nunavut and Yukon.

Discussion

All countries but Russia reported on the percent of children in the population that were vaccinated against the common child hood diseases. Most countries had greater than 90% coverage for common diseases such as Diphtheria, Pertussis, Tetanus, Polio, Measles, Mumps, Rubella and Haemophilus. While the percentage of Alaskan children vaccinated was comparable to the US national figures, the percent of children vaccinated in the NWT and Nunavut was lower than the Canadian national figures, particularly among the Indigenous population. Information concerning immunization status for Hepatitis B was only provided by the US. They reported that 90% of US children and 85% of Alaskan children were vaccinated against Hepatitis B,

This is a good indicator as it allows an assessment of availability and use of health services. Given that there are differences in vaccination protocol in terms of composition and age, it was felt that "the percent of children that completed their country's vaccination protocol" would be the easiest comparable indicator as long as the composition of the vaccine and age of the children were specified.

Conclusions

This is a good indicator as it allows an assessment of availability and use of health services and should be gathered for all circumpolar nations.

Most countries had greater than 90% coverage for common diseases such as Diphtheria, Pertussis, Tetanus, Polio, Measles, Mumps, Rubella and Haemophilus influenza..

Recommendations

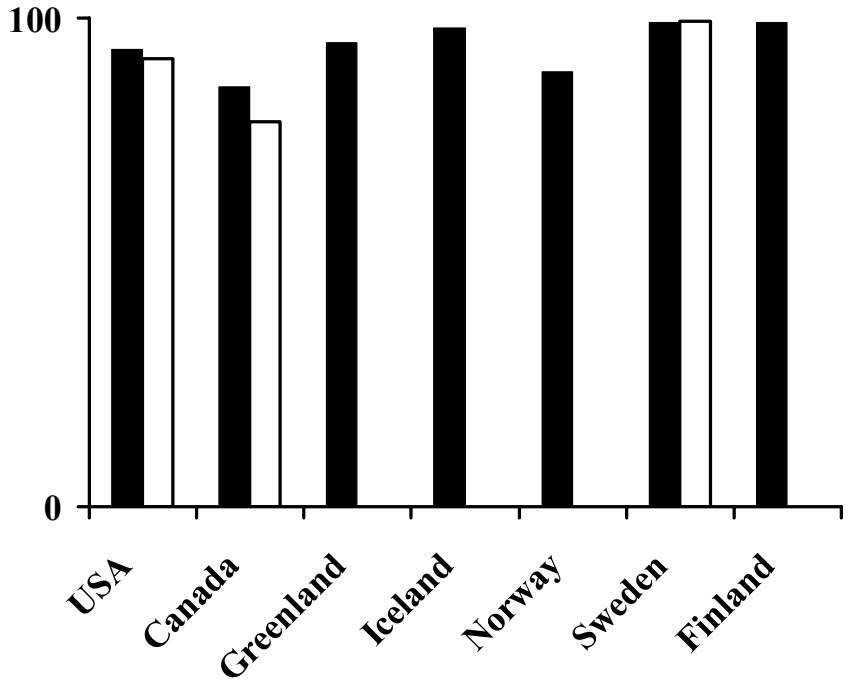
Recognizing that the there are differences in vaccination protocol, it was felt that the percent completion of the countries protocol would be the easiest comparable indicator as long as the vaccine composition and age were specified.

Immunization status

% of children immunized against:

Diphtheria, Pertussis, Tetanus

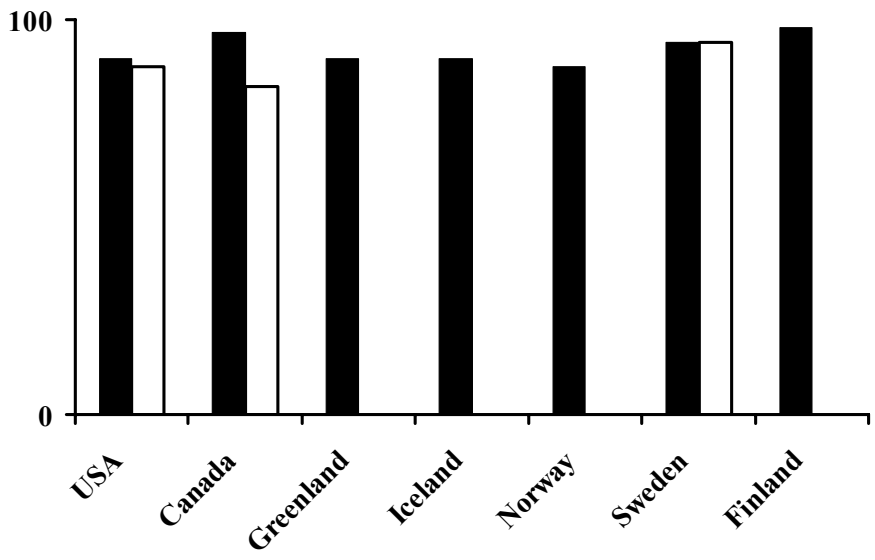
National *Regional*



Immunization status

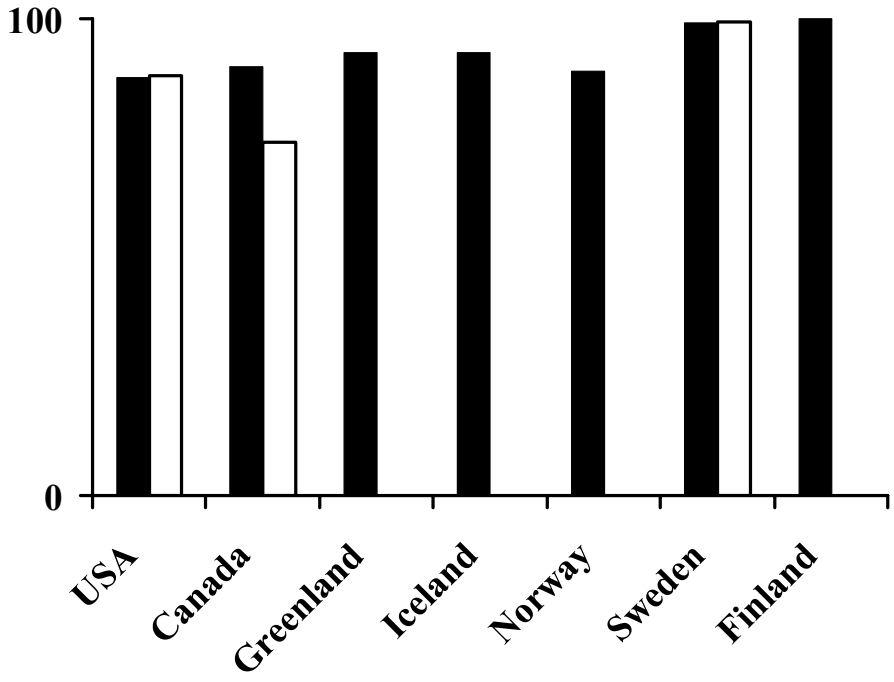
% of children immunized against:

Measles, Mumps, Rubella



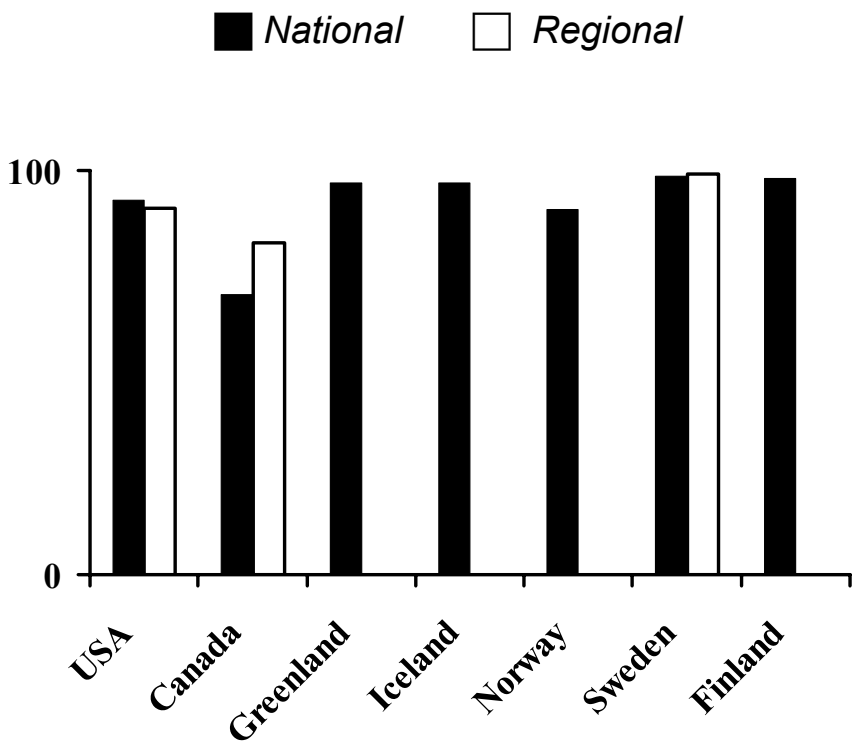
Immunization status

% of children immunized against Polio



Immunization status

% of children immunized against: Haemophilus influenza



Preterm Birth

This indicator measures the annual incidence of preterm births per 1000 total live births for the entire population. Preterm birth can be used as an indicator of intrauterine exposure to tobacco and alcohol. Preterm births account for a large percent of perinatal mortality

Discussion

There was considerable variation in the incidence of preterm births among the circumpolar nations. The lowest incidence was reported in Iceland, while the highest incidence was recorded among Arctic Indigenous populations in the US and Canada. However, these rates must be interpreted cautiously as many Indigenous peoples of the north do not have access to early ultrasound which is essential for accurate pregnancy staging and determination of a preterm birth. Without accurate staging of the pregnancy, the preterm birth rates may not be comparable among populations. Furthermore, it may not be possible to distinguish between premature births and intrauterine growth retardation. Similar rates of preterm birth were found among populations from Canada, Greenland, Norway, Sweden and Finland.

Conclusions

There are markedly different rates of preterm births among the circumpolar nations.

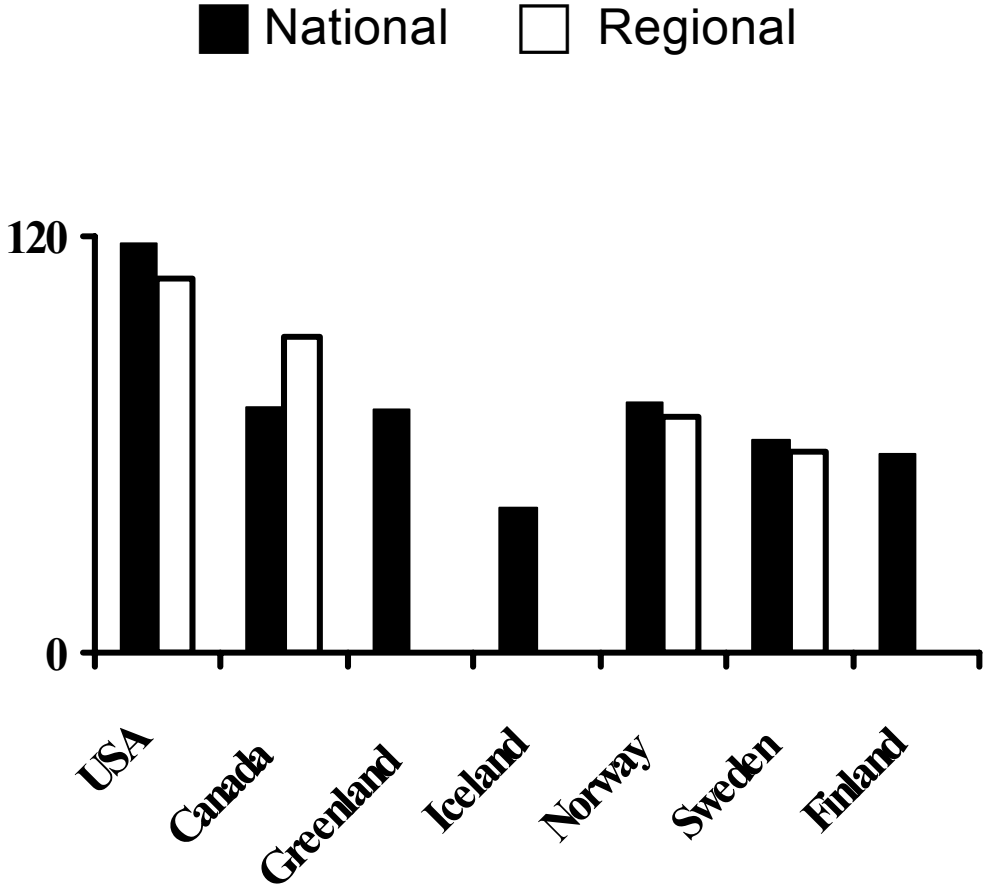
Without accurate staging of the pregnancy through the use of early ultrasound exams, the preterm birth rates may not be strictly comparable among countries. It may not be possible to differentiate premature births from intra-uterine growth retardation.

Recommendations

Due to the above methodological difficulties discussed above, the expert group recommended that low birth weight be considered as the best indicator for circumpolar comparisons.

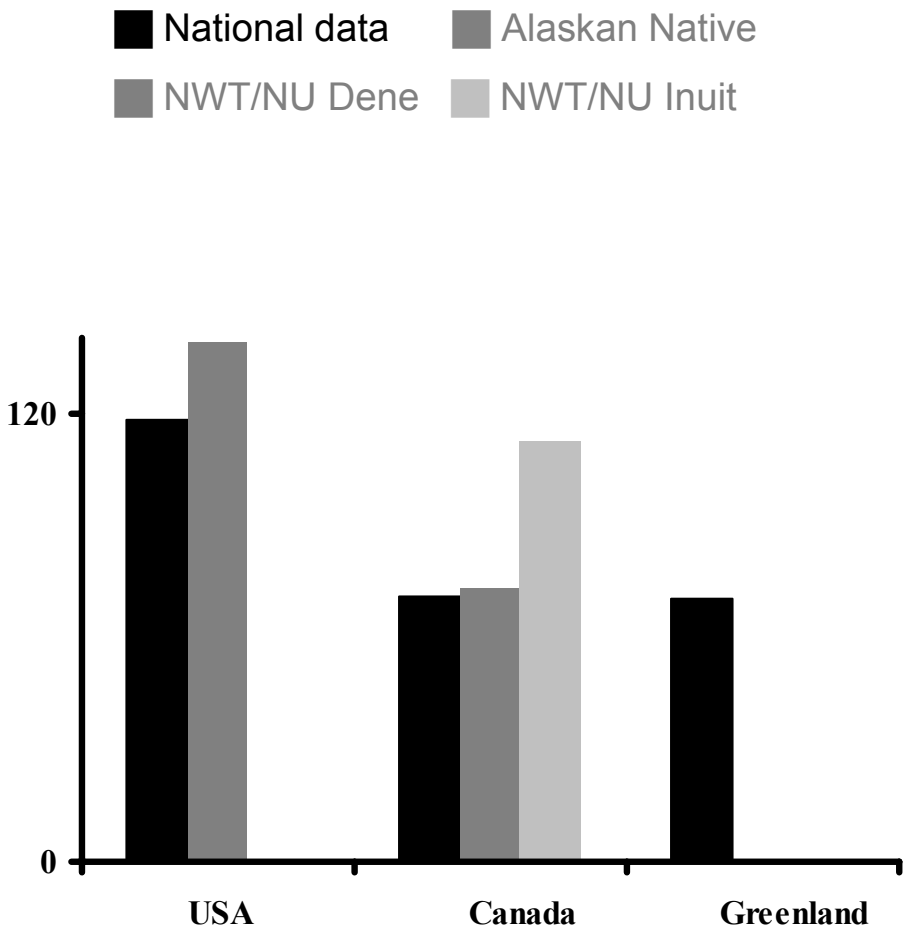
Preterm birth:

Incidence per 1000 live births



Preterm birth:

Incidence per 1000 live births



Low Birth Weight

The annual incidence of low birth weight (LBW) is measured as the number of live born infants weighing under 2500 g per 1000 live births for the entire population. LBW infants are at an increased risk of suffering severe physical and developmental complications.

Discussion

The lowest incidence of LBW was reported by Finland and Sweden. Canada, Norway and Greenland had a slightly higher incidence, while the highest incidence was recorded within the National US population. Among Indigenous peoples, Inuit from NWT/NU had the highest incidence of low birth weight. The incidence among Alaskan Natives, Greenlanders and the NWT/NU Dene were similar.

Rather than reporting on the incidence of LBW, the expert panel recommended that a distribution of all birth weights be reported. In addition, special studies may be needed to separate intrauterine growth retardation from preterm infants. They felt that it was important to separate these two classes as there would be different public health strategies to address these health concerns.

Conclusions

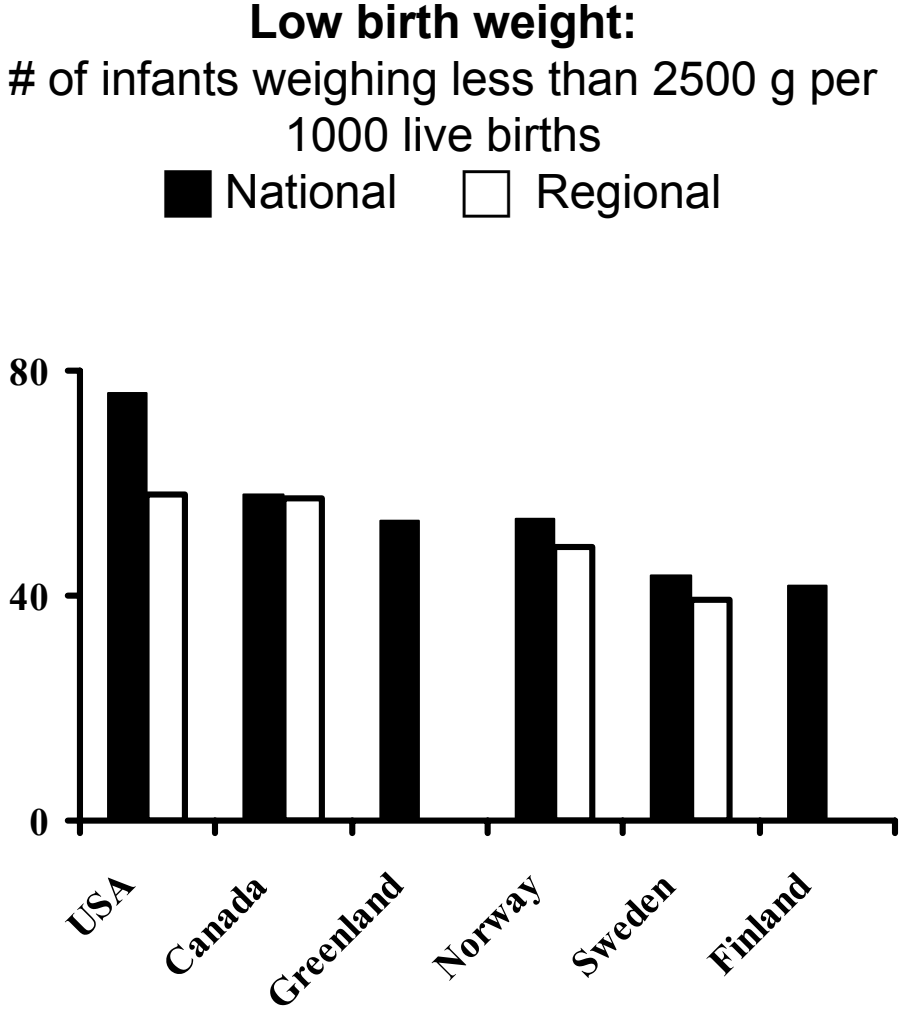
The highest incidence of LBW was reported among the National US population and the NWT/NU Inuit populations.

Recommendations

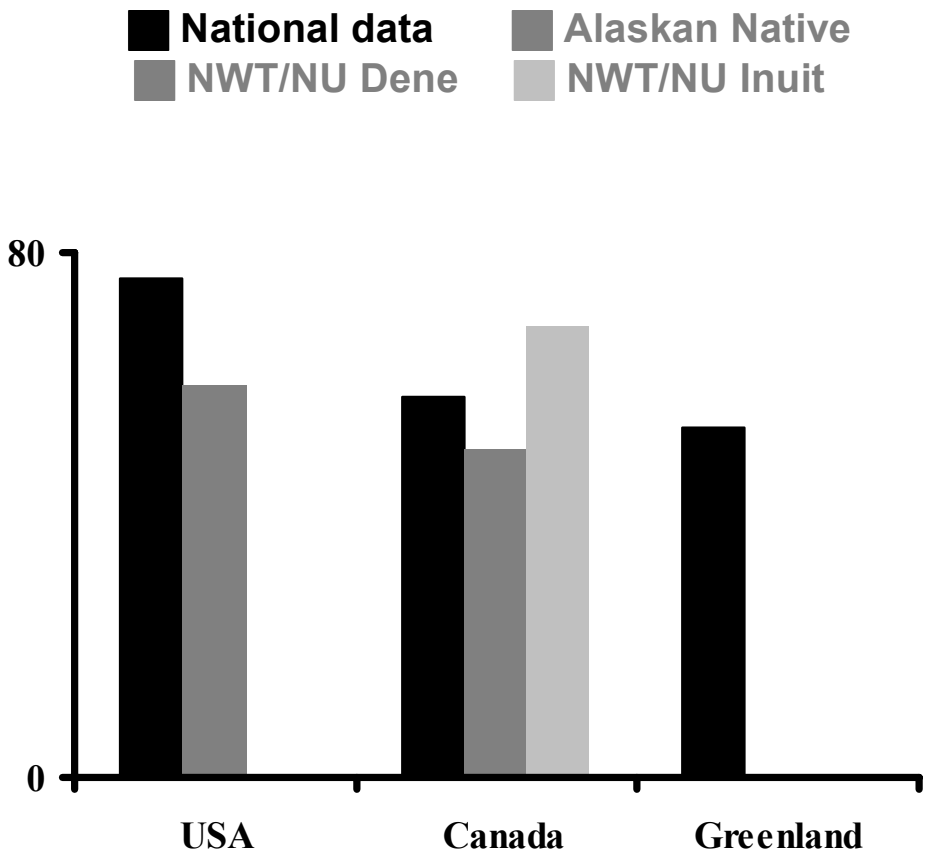
The expert group recommended that the distribution of low birth weights be presented and the need for studies that separate intrauterine growth retardation from preterm infants be assessed. There was also a recommendation that the entire range of birth weights be reported so the incidence of high birth weights as well as low birth weights can be monitored. The incidence of high birth weights can provide an indication of gestational diabetes among the mothers. These mothers may be at higher risk of developing Type 2 diabetes later on in life.

Low birth weight:

# of infants weighing less than 2500 g per 1000 live births



Low birth weight:
# of infants weighing less than 2500 g per 1000 live births



Breast feeding

This indicator measures the prevalence of breast feeding among all women. Information about breast feeding prevalence was provided by survey data, expressed as a percent. Two measures were reported: i) exclusive breast feeding for at least 4 months and ii) breast feeding (regardless of supplementary feeding) for at least 12 months.

Discussion

The USA provided data on breast feeding prevalence 1 month after delivery, while Canada reported on breast feeding 3 months after delivery. While Finland reported on prevalence for at least 4 months, there findings did not reflect exclusive breast feeding. Given these discrepancies, it is difficult to compare breast feeding prevalence among different countries. However, among those countries reporting exclusive 4 month breast feeding prevalence as defined, values ranged from 37% in Greenland to 90% in Troms, Norway. Among regions, there was no difference in prevalence between Norbotten and Sweden. Among Canadian Indigenous populations, a higher prevalence was reported among Inuit (64%) compared to the Dene (41%).

Conclusions

There were several inconsistencies in the data received from the different countries, making between-country comparisons difficult.

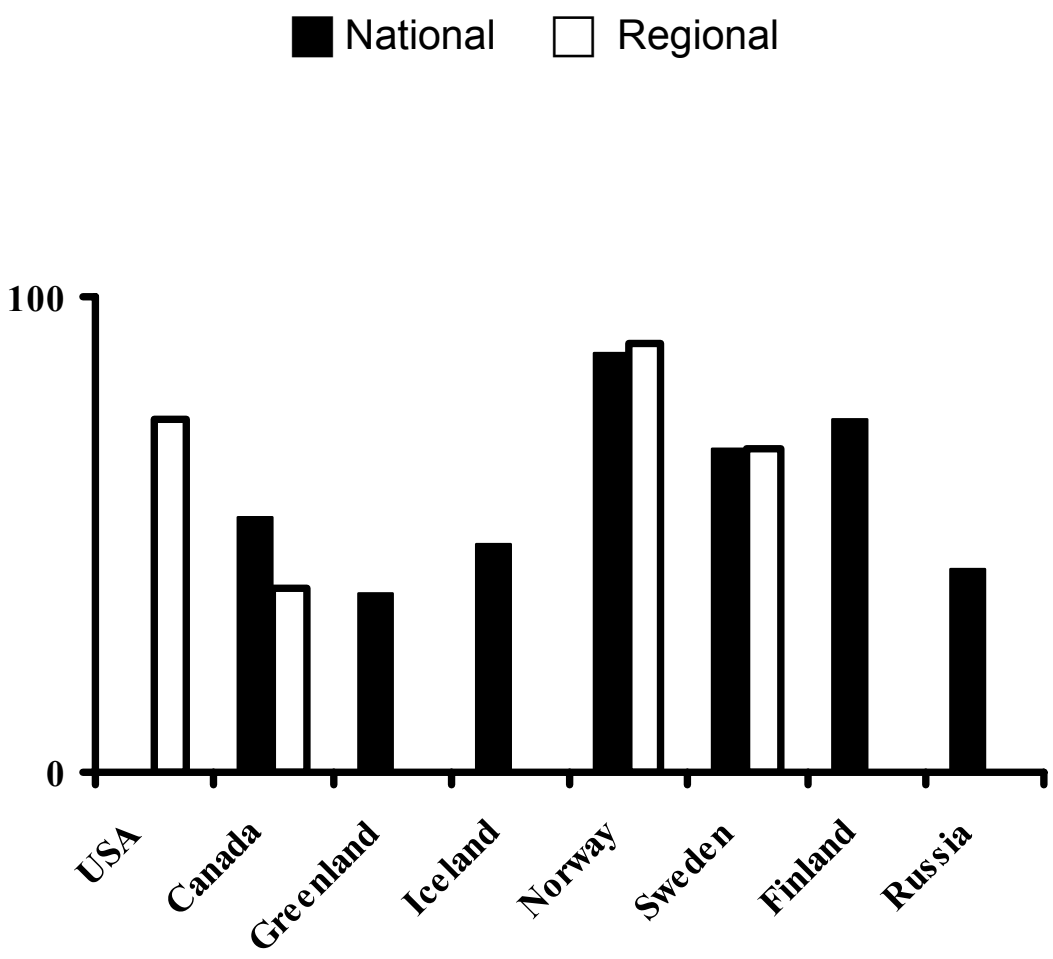
Recommendations

The expert panel argued that this measure provides a very important indicator for child health and recommended moving towards WHO standards when defining the parameters.

They suggested three measures be collected in the interim: i) the percent of women initiating breast feeding and ii) those breast feeding exclusively for 3 months and iii) those breast feeding exclusively for 6 months.

Breast feeding:

% of women breast feeding exclusively for at least 4 months



Infant mortality rate

This indicator provides two measures of infant mortality rate: neonatal mortality and post-neonatal mortality. Neonatal deaths are deaths that occur in infants under 28 days old. Post-neonatal deaths are deaths that occur in infants at 28 days old to one year old. Both are expressed as a mortality rate which is determined by expressing the total number of deaths that occur among these age groups of infants per 1 000 total births.

Discussion:

Data for neonatal mortality was provided for all countries. The lowest rates were reported by Finland, Norway and Sweden. The highest rates were reported among the Indigenous populations, particularly those from Greenland and the Dene and Inuit from NWT and Nunavut.

There was also good reporting for post-neonatal mortality. Low rates were reported by Iceland, Norway and Sweden. The highest rates were reported among the Inuit and Dene populations within NWT/NU, Canada. Neonatal rates can be reduced though health care interventions, while post neonatal rates can be reduced through educational programs.

Sudden Infant Death Syndrome, or SIDS, is a prominent cause of death in the first year of life, in virtually all parts of the world. SIDS is more frequent in certain parts of the Arctic. Since the implementation of intensive public education programs for young parents regarding sleeping positions for infants, the previously high incidence of SIDS in Alaska Natives appears to have begun to decrease. Further data gathering will be required to confirm this, but the trend has been observed in many countries in response to this simple intervention.

Conclusions

The highest rates of neonatal mortality were reported by Indigenous populations in Greenland and Canada. Rates of post-neonatal mortality were also highest among the Indigenous populations of the NWT/NU, Canada, particularly among the Inuit. The lowest rates were consistently reported in Norway and Sweden.

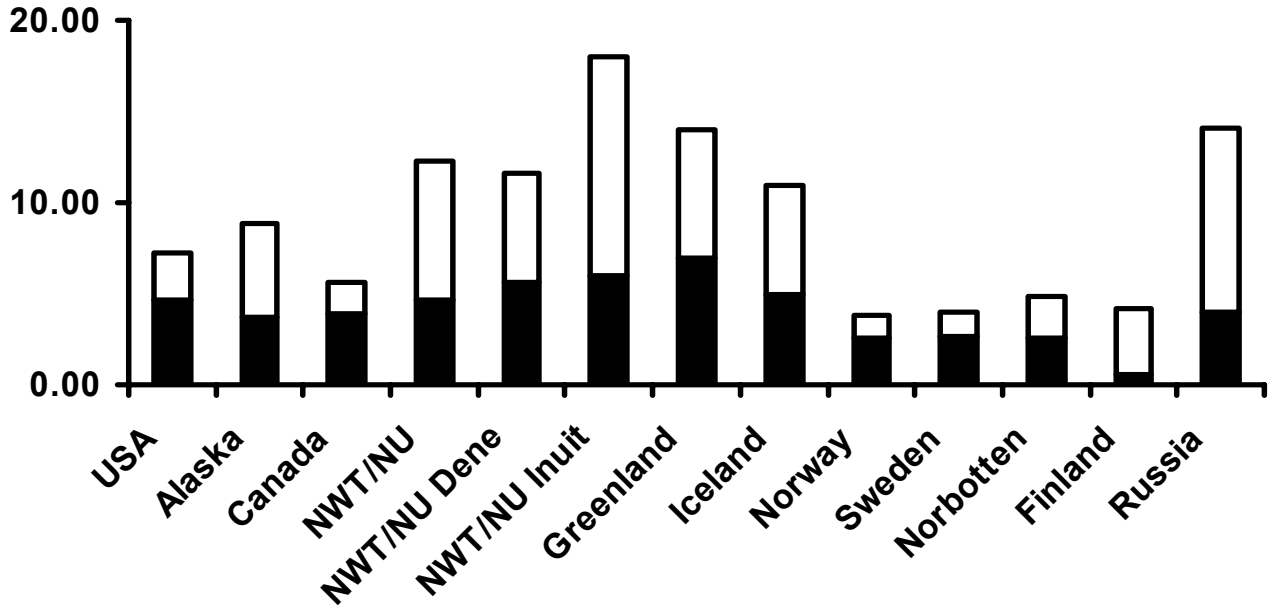
Recommendations

The expert panel recommended continued pre and postnatal education programs to ensure a continued reduction of infant mortality rates, particularly among the Indigenous populations.

Infant mortality: rate per 1000 live births

■ Neonatal mortality (under 28 days)

□ Postneonatal mortality (28 days to one year old)



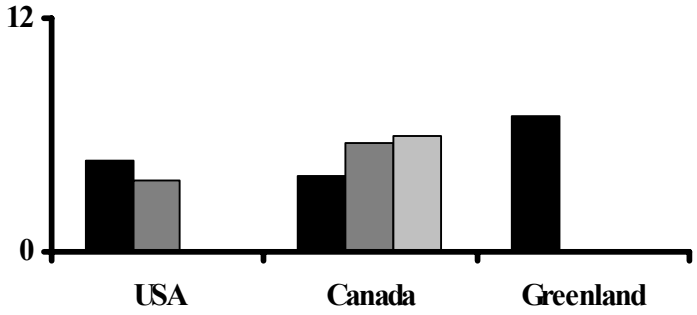
Infant mortality:

incidence of infant deaths per 1000 live births

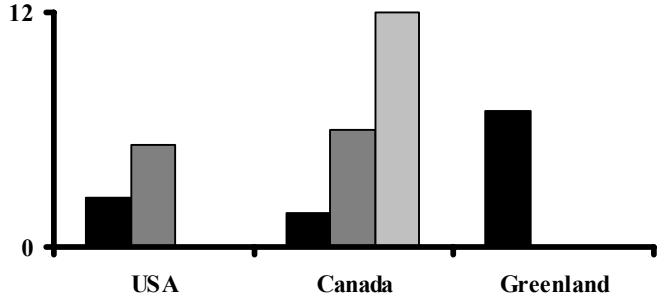
National data Alaskan Native

NWT/NU Dene NWT/NU Inuit

Neonatal Mortality



Post-neonatal mortality



Cause Specifc Incidence

This indicator measures the incidence (per 100,000) of major diseases, including cancer and diabetes, by gender and age.

Discussion

Disease incidence data provides an overview of the health of the population. It is useful when planning health services and programs, determining the priority of health problems, setting objectives and assessing achievement.

Only a few countries provided age-stratified data on the incidence of childhood cancer. Cancer rates were highest among children from Greenland and lowest among Canadian children living in the NWT and Nunavut. It is important to note that cancer incidence among children is relatively rare, even though the rates suggest otherwise. For instance, there were only a total of 6 cases among 0 to 19 year olds in Greenland from 1995 to 2000. In spite of low rates and weak reporting, the expert group recommended continued monitoring of cancer incidence due to significant local and political concerns.

Type 2 diabetes (also known as adult onset diabetes) is thought to be increasing rapidly among Indigenous and non-Indigenous populations, and symptoms are appearing at a much earlier age. Symptoms of Type 2 diabetes are usually not evident until adulthood. Given the serious health problems associated with diabetes, the expert group felt that some other health endpoint be used as an indicator of a predisposition to diabetes. The expert group recommended that Body Mass Index (BMI) be considered in the circumpolar comparisons as it was considered to be one of the best predictors of type 2 diabetes.

Conclusions

The lack of comparable circumpolar data did not permit any meaningful comparisons.

Recommendations

Due to significant local and political concerns about cancer rates it was recommended by the expert group that this disease endpoint be included in the any future monitoring.

The expert group recommended that Body Mass Index (BMI) be considered in the circumpolar comparisons as it was considered to be one of the best predictors of type 2 diabetes.

Cause specific incidence: Cancer
Number of new cases per 100 000 children

Country	Incidence per 100 000
Canada	**16.03 (age 0-19)**
Greenland	**33.04 (age 0-24)**
Norway	**15.50 (age 0-14)**
USA, Iceland, Sweden, Finland, Russia	*no data provided*

Cause specific incidence: Diabetes
Number of new cases per 100 000 children

Country	Incidence per 100 000		
Age	**10-14**	**15-19**	**20-24**
Norway	0	0.25	1.10
Alaskan Natives	**ages 0-24:**		0.37
Canada, Greenland Iceland, Sweden, Finland, Russia	*no data provided*		

Major notifiable diseases

This indicator measures the incidence (per 100 000) of diseases that are most likely to cause epidemics. The major notifiable diseases that were monitored were Tuberculosis (TB), Chlamydia and HIV/AIDS.

Discussion

Monitoring the incidence of major notifiable diseases, such as TB and sexually transmitted diseases permits the identification of risk groups, assists in the detection of outbreaks and can identify the need to implement important community health interventions.

The incidence of TB among children was highest in Greenland and northern regions of the US and Canada. In comparison, the national incidence of TB among the US and Canada, as well as Iceland, Sweden and Finland was very low.

A similar pattern was reported for chlamydia. Among individuals in the 15-19 age group, the incidence of Chlamydia was highest in Greenland and NWT/NU in Canada. A considerably lower incidence was reported in Canada, Sweden and Finland.

Only four countries provided information on the incidence of HIV/AIDS. Among children less than 13 years of age, there were over 8000 cases reported in the US and 5 cases reported in Alaska. The incidence in Sweden and Finland was very low among individuals less than 25 years of age, ranging from a high of 2.7 per 100 000 in Sweden to a low of 0.36 per 100 000 in Finland. It is difficult to accurately compare the rates among these different countries, given the different reporting parameters. Overall, the incidence of HIV/AIDS was quite low.

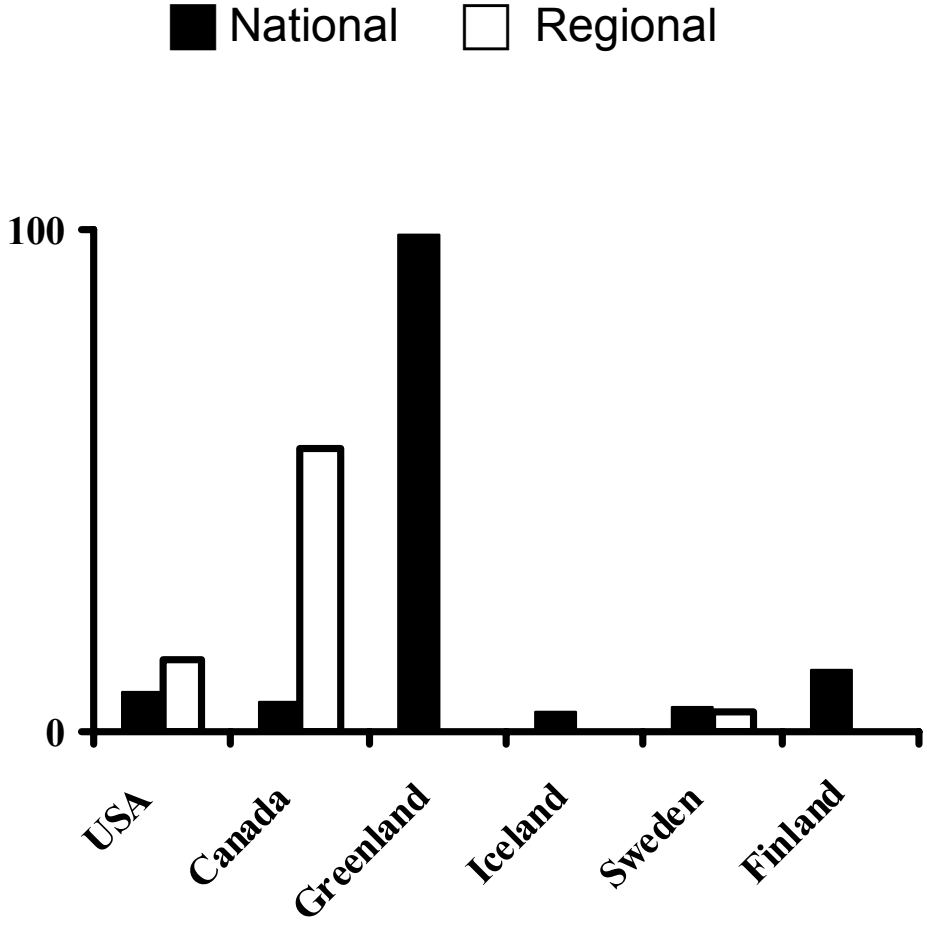
Conclusions

There was a higher incidence of TB and chlamydia among the children and youth of Greenland and northern regions of Canada and the US relative to the other countries. The incidence of HIV/AIDS was quite low. However, incomplete reporting and variation in the parameters measured made meaningful comparisons difficult.

Recommendations

Due to significant local and political concerns about the incidence of notifiable diseases, it was recommended by the expert group that monitoring of these diseases continue.

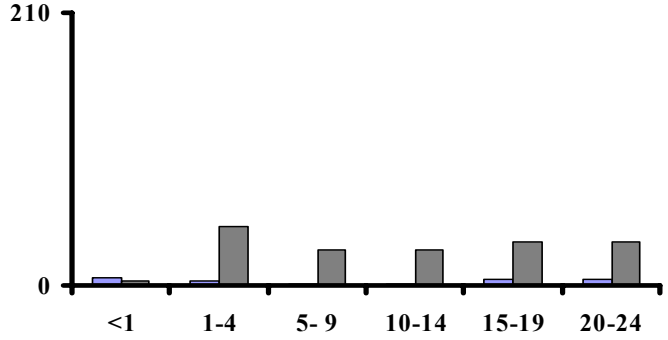
Major notifiable diseases
Tuberculosis: incidence per 100 000



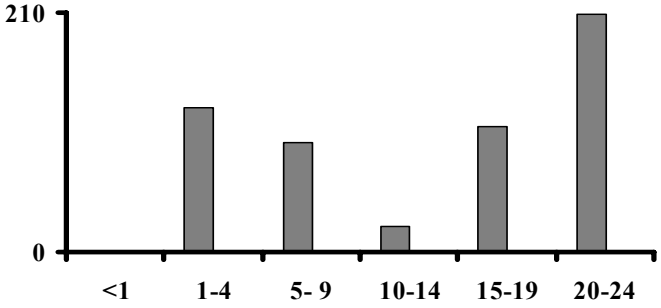
Major notifiable diseases
Tuberculosis:

Incidence per 100 000 among Indigenous populations by age group

CANADA

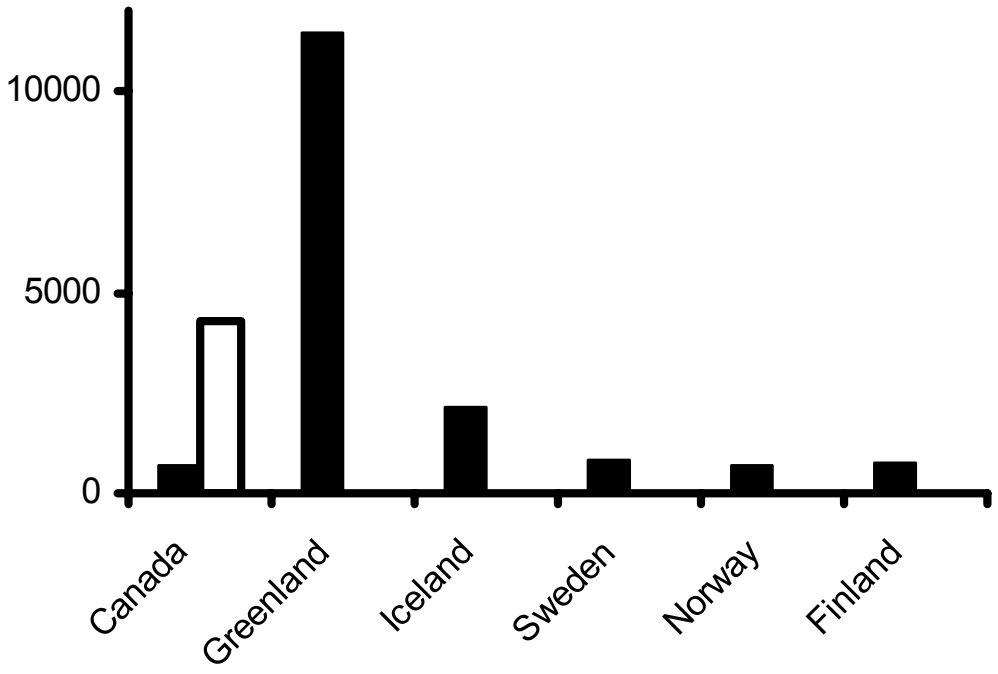


GREENLAND



Major notifiable diseases: Chlamydia:

incidence per 100 000 among 15-19 year olds



Tobacco Use

This parameter examined the use of tobacco among children and youth. It was assessed through youth surveys. The information from these surveys were used to determine the percentage of children/youth that were smoking cigarettes regularly.

Discussion

Information about tobacco use was provided by survey data expressed as the percent of youth smoking regularly, by age class. There were several problems associated with this data set. The age categories reported differed between countries. For instance, USA reported tobacco use among high school students with no specified age while Greenland provided data on two groups: 13-14 and 15-17 year olds. In Canada, the data reports on individuals 19 years of age and younger. The panel suggested retaining the WHO defined age groups (10-14; 15-19).

Another inconsistency concerned the quantification of tobacco use. "Regular use" is a subjective measure that needs to be standardized to ensure comparability between the countries.
For instance, one survey asked if an individual smoked regularly, while another asked if an individual smoked daily. Some of the indicators that were suggested included age at which smoking begins and the proportion for the population under the age of 16 that smokes.

Even though this is a sensitive issue in Indigenous populations, the health effects are well documented and health officials must give advice on this issue

Conclusions

There was a higher percent of tobacco use reported among the older age groups and among Indigenous populations in Canada and Greenland. Given the differences between countries in terms of how they reported their data, it is difficult to make precise comparisons between countries.

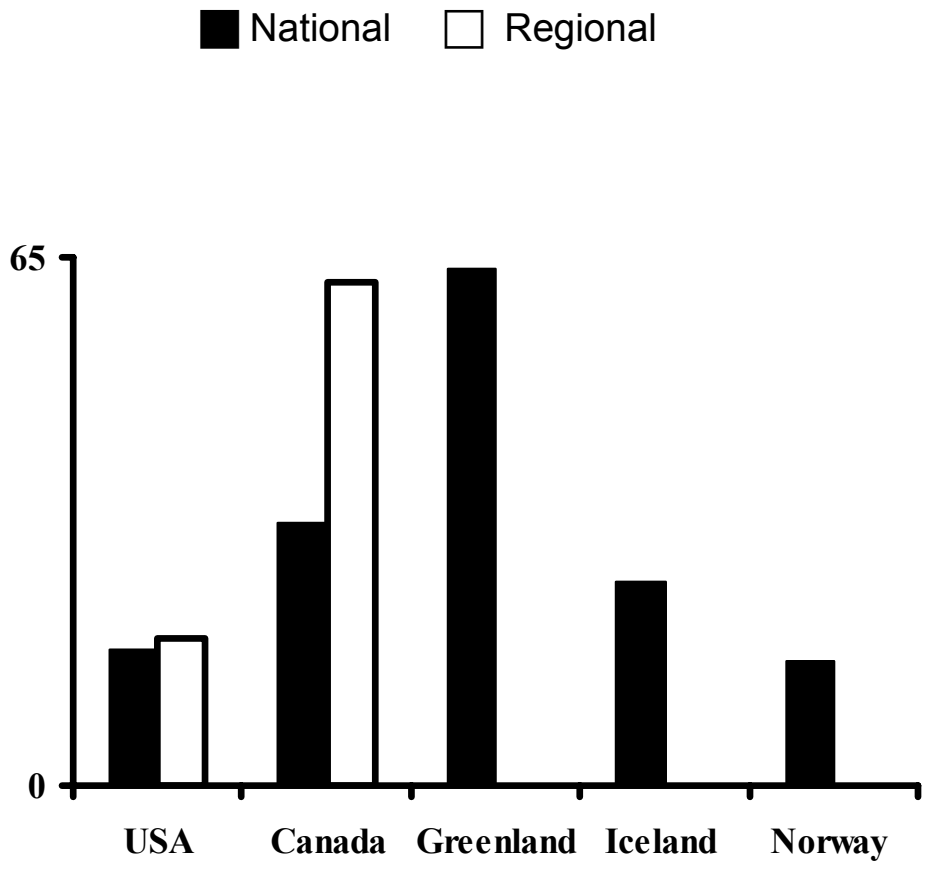
Recommendations

The panel recommended using an established measure that reflected tobacco use among children and youth and adhering to the WHO defined age groups when reporting.

In keeping with the concerns associated with prenatal care, the panel also suggested adding a measure about the use of tobacco during pregnancy to gain an assessment of prenatal exposure. Since this is a sensitive issue, communication is an important consideration.

Tobacco use

Percent of youth aged 15-19 smoking cigarettes regularly



Alcohol/solvent/drug abuse

Information about the prevalence of alcohol/solvent/drug abuse was provided by survey data, expressed as a percent, of alcohol/solvent/drug use among children and youth.

Discussion

No distinction was made as to the type of alcohol used. Solvent use included sniffing of gasoline, glue and aerosol propellants. Drug use referred to smoking of cannabis. Alcohol consumption and solvent abuse have direct effects on the developing nervous system of young children. Both can lead to accidental mortality and lower levels of academic performance. Illicit drug use can lead to addiction and criminal behaviour to support the drug habit.

Alcohol/solvent/drug use (hereafter referred to as substance abuse) was reported primarily for 15 to 19 year olds, although there was some information on 10 to14 year olds. The highest prevalence of alcohol use was reported in the NWT/NU and Norway. Solvent use was highest in the US, while the prevalence of illicit drug use was highest in Greenland. However, comparisons between countries must be made cautiously because of several problems associated with this data set. For instance, the USA survey provided data for middle and high school students, with no ages specified. In Greenland, the age categories differed depending upon the type of substance examined. Data on alcohol consumption and drug use was reported for 15 to 17 year olds while solvent use was reported for 12 to 17 year olds. Iceland provided data for two groups: age 15 and 18-24 year olds; Norway reported on age 15 to 20, while Finland, youth > 15 years of age.

Another issue concerned the quantification of substance abuse. For example, questions about alcohol use ranged from "Have you ever tried alcohol" to "Have you used alcohol more than once " to "How many times have you been drunk". This three questions measure different aspects of substance abuse and consequently would provide different assessments of substance abuse. There were similar discrepancies in the questions quantifying solvent and illicit drug use.

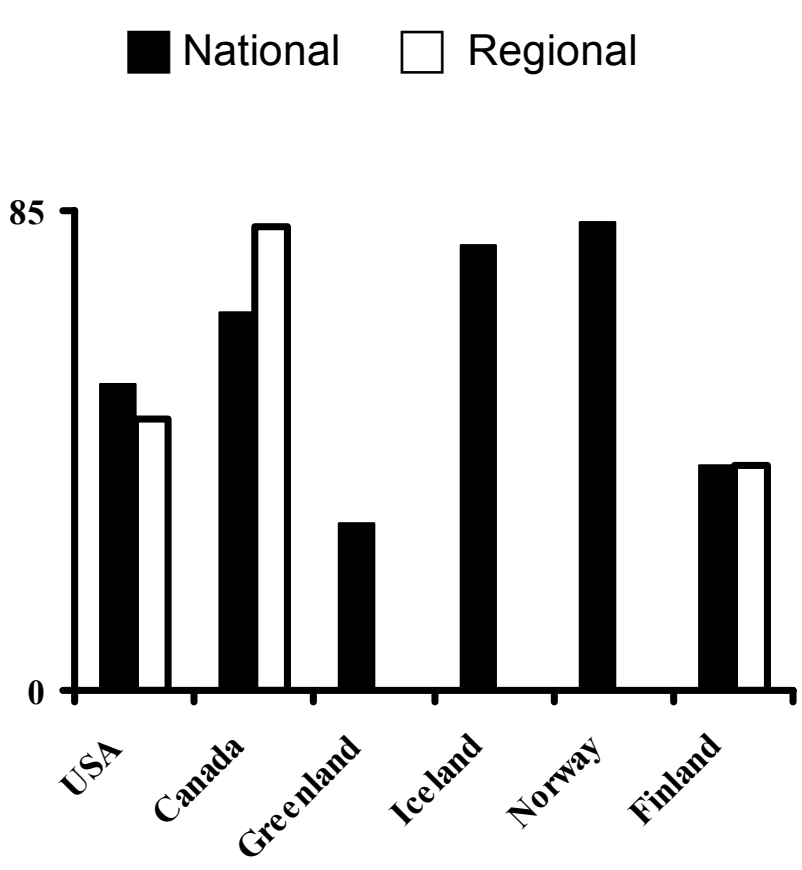
Conclusions

Among countries reporting substance abuse among the two different age classes, there was always a higher percent of substance abuse reported among the older age groups. There was also a higher percent of substance abuse among the Indigenous populations of Canada and Greenland. However, there were several problems with the data set. The age categories differed considerably between countries and did not adhere to the WHO age classes. Quantification of substance abuse also varied considerably between countries. Greater consistency is needed in order for the comparisons to be more meaningful.

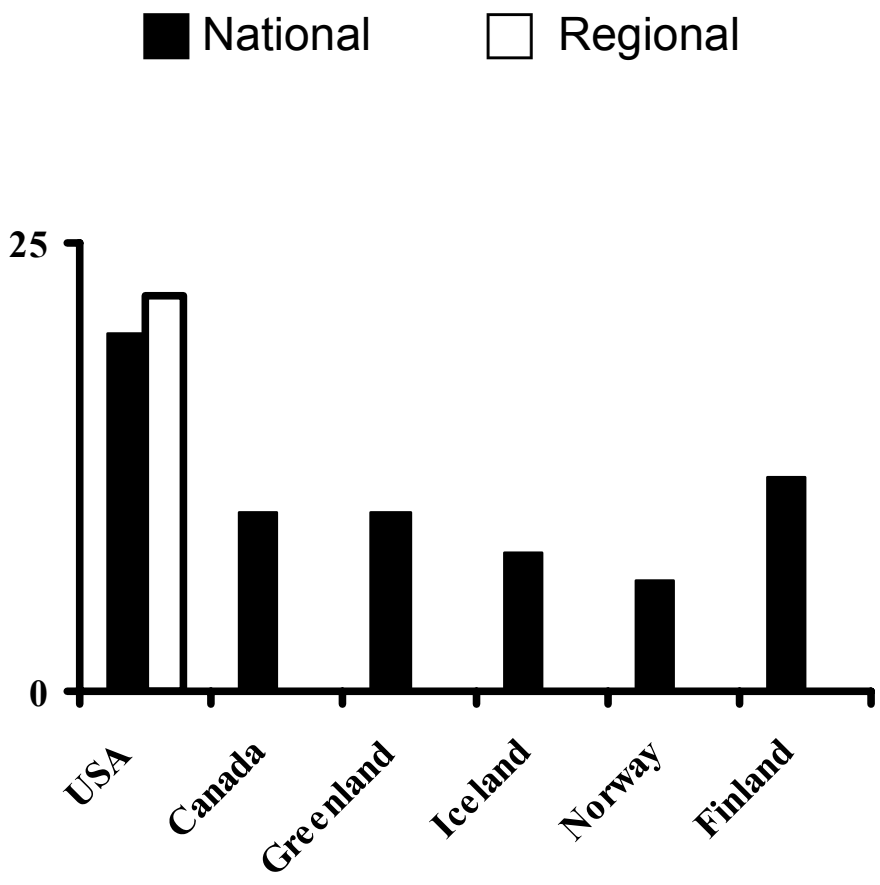
Recommendations

The panel recommended using an established measure that reflected substance abuse among children and youth. It also suggested that since substance abuse during pregnancy can lead to problems such as fetal alcohol syndrome, it would be useful to assess prenatal exposure in the future.

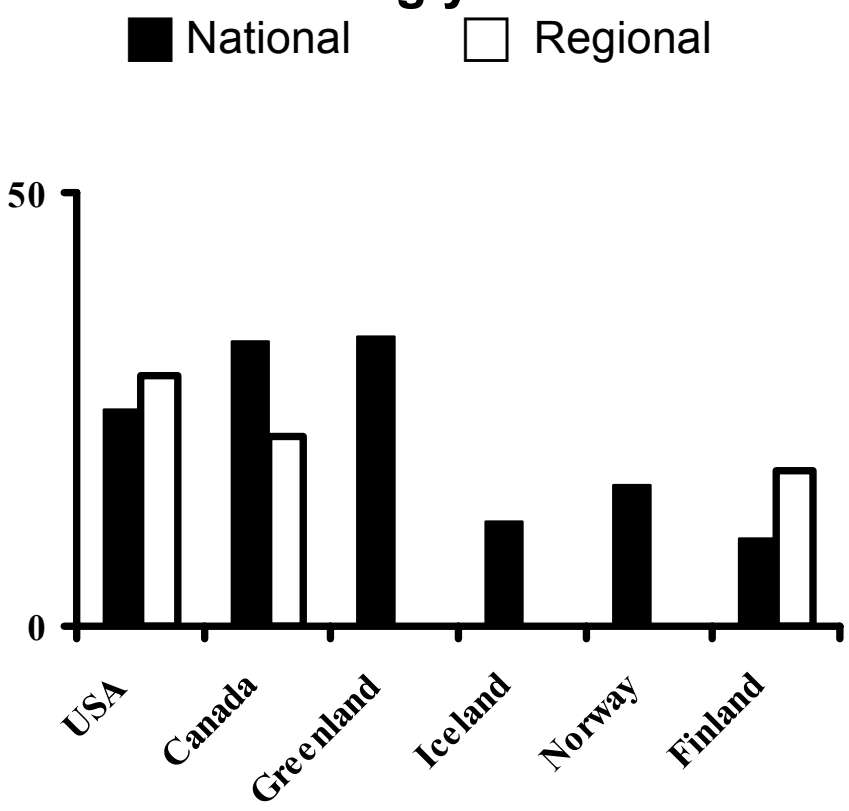
Alcohol consumption
Prevalence (%) of alcohol use among youth



Solvent abuse
Prevalence (%) of solvent use among youth

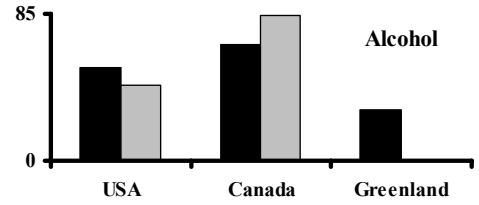


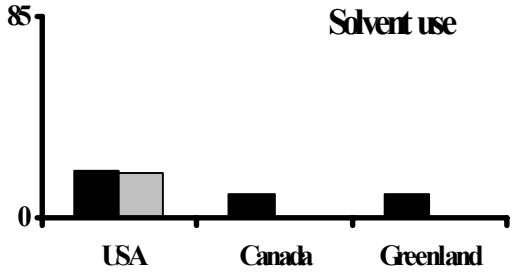
Illicit drug use
Prevalence (%) of illicit drug use among youth

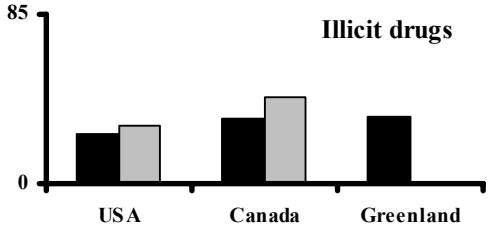


Prevalence (%) of substance abuse among youth

National Indigenous







Education

This indicator measured the proportion of 18-25 year olds in the population with less than the country's compulsory years of schooling.

Discussion

Only three countries provided data for this indicator. In Greenland and Iceland, children are required to attend school for 9 years. Almost all students in Greenland and Iceland were reported to have completed the prescribed compulsory schooling. In Canada, as there is no predefined compulsory schooling, the data reports on proportion of students finishing grade 9. Within the NWT/NU region in Canada, 92% of the Indigenous population and 98 % of the non-Indigenous population completed grade 9.

Conclusions

In Greenland, Iceland, Sweden and Finland almost all 18-25 year olds were reported to have completed the compulsory years of schooling. In the NWT Canada, a large proportion of the Indigenous and non-Indigenous population completed 9 years of schooling.

Since the amount of compulsory schooling varies between countries, a more comparable statistics is required in order to permit meaningful comparisons. However this would be in conflict with some of other health indicators where a common standard is required.

Recommendations

To ensure comparability between countries, this indicator could be modified to include the mean number of years/grades completed in school or the percent of students going on to post secondary education.

Education:

percent of population aged 18-25 with less than their country's compulsory education

Country	% of 18-25 year olds with less than compulsory schooling
Canada	
NWT,N	
Indigenous	8.2
Non-indigenous	1.6
Greenland	0
Iceland	<1
Sweden	1.2
Finland	0
USA, Norway	*no data provided*
Russia	

Child Abuse/Neglect

This indicator measured the prevalence of child abuse/neglect cases confirmed by child protection agencies. The prevalence was expressed as a rate per 1000 children.

Discussion

Data was provided by four countries. Greenland reported rates of child abuse/neglect that were twice as high as rates reported from Canada, Iceland and Finland. However, the standards of child abuse vary between jurisdictions and thus this indicator needs to be more clearly defined before meaningful comparisons between countries are to be made.

Conclusions

There are too few countries reporting data and the child abuse/neglect standards between jurisdictions are too variable and thus comparisons are difficult to make

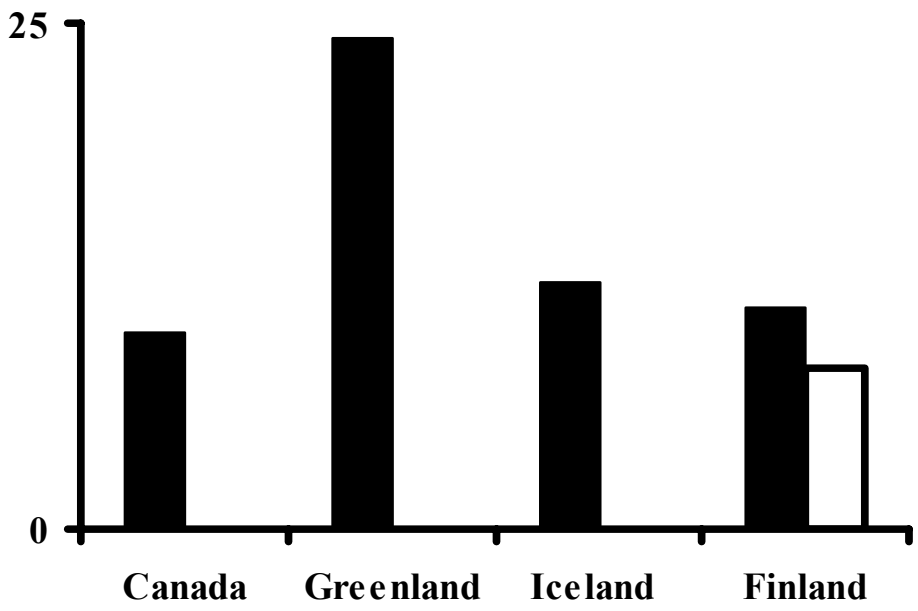
In spite of these reporting problems, this type of information needs to be presented to indicate where there are child abuse/neglect issues that need to be addressed and support provided for families involved.

Recommendations

The expert panel recommended that this indicator needed to be more clearly defined and the definition must reflect the variation in standards between jurisdictions.

Prevalence of child abuse/neglect as confirmed by child protection agencies:

Rates per 1 000 children under age 18



Intentional Injuries: Suicides

This indicator measured the overall and gender-specific suicide rates per 100 000 among individuals under age 25.

Discussion

There was variation in the age classes presented. Canada and Sweden provided information for three age groups: 10-14, 15-19 and 20-24. The first two age groupings were the same for Norway, while the third group covered ages 20-29. Greenland and Finland provided data for all individuals under age 25. The Iceland data could not be included since they only provided a total number of male suicides (n = 30) from 1992 to 2000.

Years and methods of reporting also differed. Canada, Norway and Finland provided data for a single year (1998), while Sweden and Greenland provided total rates for the years 1992 to 1997.

When comparing national suicide figures, the highest rates were reported among males aged 20-24. Rates among females were less than half that reported for males. Suicide rates for Canadian Indigenous populations from the NWT/NU were considerably higher than those reported among non-Indigenous populations from the same region. Among the NWT/NU Indigenous populations, rates were three or more times higher among the Inuit males compared to the Dene males. Among females, national rates were similar across the 5 countries. However, much higher rates were reported for NWT/NU Canada Inuit. There were no reports of suicide among Dene NWT/NU females.

Conclusions

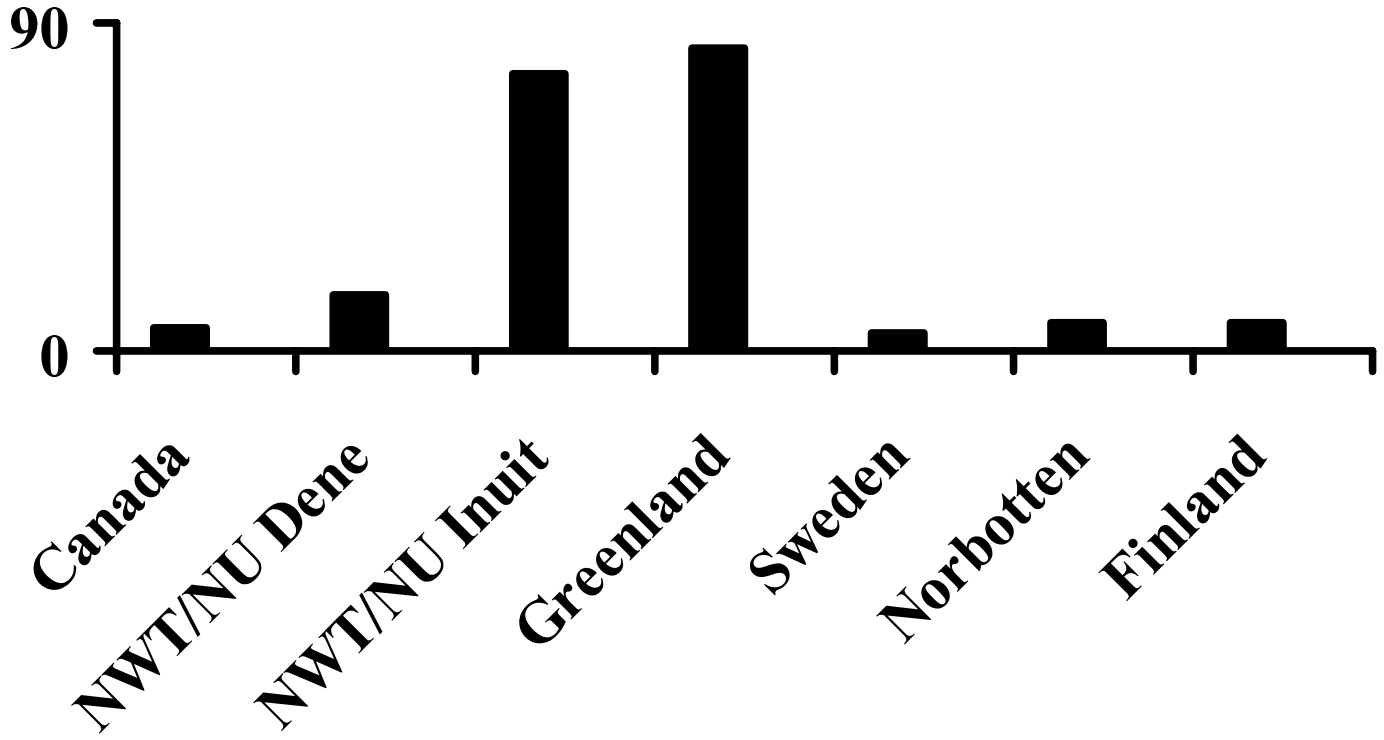
Among the five countries reporting rates, there was a higher incidence of suicide among males than females in all age groups. The highest overall rates were recorded in Greenland and among Inuit in NWT/NU in Canada.

Recommendations

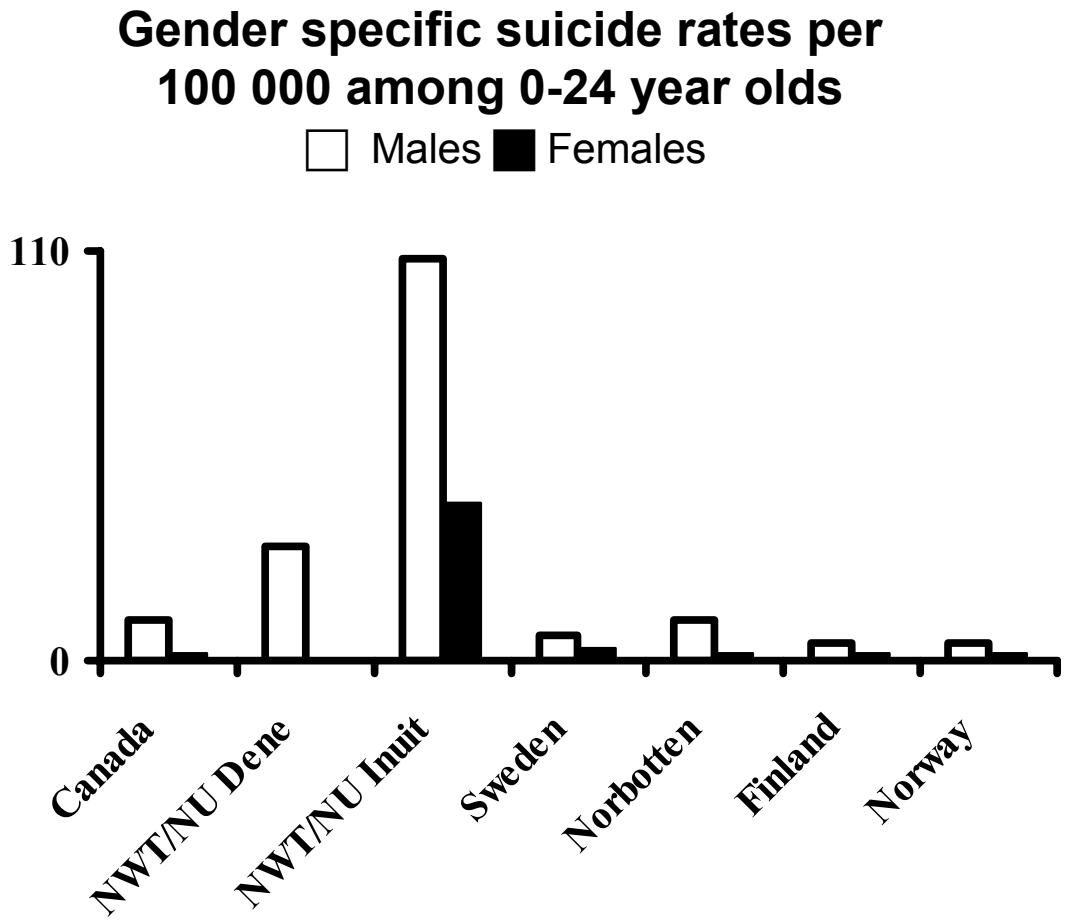
The conventional age group for reporting suicide statistics is 15-24 years. It is important to maintain consistent reporting standards so meaningful comparisons between populations can be made.

The number of suicides cases should also be reported along with the rates, as rates tend to be exaggerated among small populations.

Overall suicide rates per 100 000 among 0-24 year olds



Gender specific suicide rates per 100 000 among 0-24 year olds



Unintentional injuries

This indicator measured the age and gender specific injury fatality rates per 100 000. There were two classifications of unintentional injuries reported: those from motor vehicle accidents (snowmobiles, all terrain vehicles, cars, trucks) and an overall rate which included fatalities due to motor vehicles, drownings and fire.

Discussion

Among the three countries reporting data (Canada, Greenland and Finland), fatality rates reported for males were consistently higher than females. Among the different age classes, the highest rates were reported among 20-24 year olds in NWT/NU, Canada and Greenland and among 15 to19 year olds in Finland. Overall, the highest fatality rates from unintentional injuries were reported among Indigenous males from the NWT/NU Canada. Their rates were almost twice that reported for Greenland males and almost 10 times the rate reported for males in Finland. It is important to note that there was variation in the reporting periods for each of the countries (Canada 1992-1997; Greenland 1994-1999; Finland 1998).

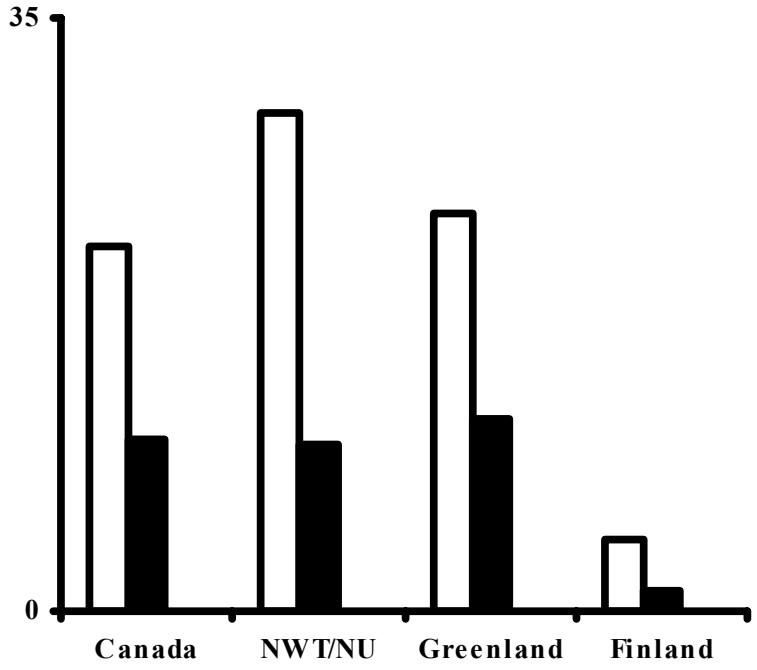
Conclusions

Males had a higher rate of fatalities resulting from unintentional injuries than females. The highest overall rate of unintentional injuries among the 0 -24 age group was reported among Indigenous males from the NWT/NU, Canada.

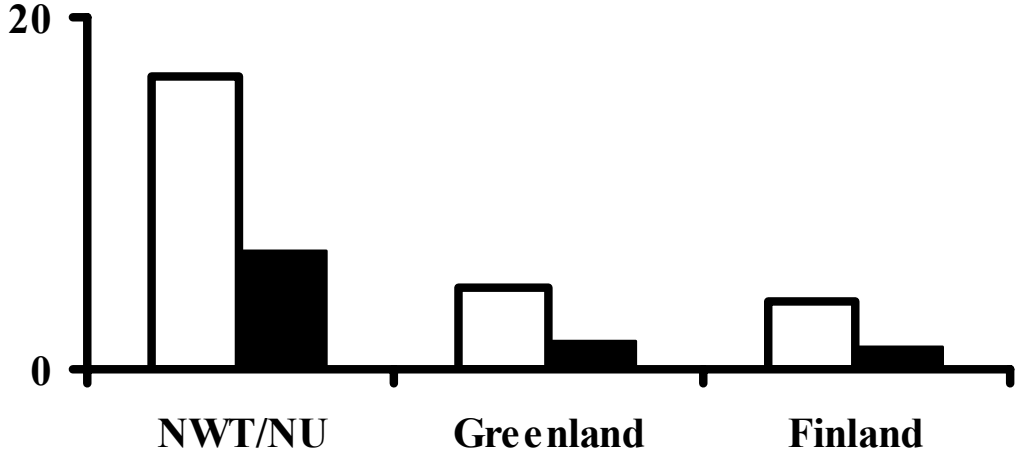
Recommendations

The expert panel recommended consistent reporting (in terms of time span and age groups) for the overall fatality rate due to unintentional injuries and individually for the top 2 or 3 causes of unintentional injuries. They also suggested reporting this as a qualitative measure. Hospital discharge data may be a useful source of information for this indicator.

Unintentional injuries:
Overall fatality rates per 100 000
among children/youth under age 25
□ Males ■ Females



Unintentional injuries:
Motor vehicle fatality rates per 100 000
among children/youth under age 25
□ Males ■ Females



APPENDIX 2

List of Invitees/Attendees - Health Programme
The Biennial Planning Meeting of the Arctic Council Initiative on
The Future of Children and Youth of the Arctic
Copenhagen, May 2002

Arctic Council Country	Invited	Attended
United States of America	Dr. James. Berner	Yes
Canada	Dr. Bryce Larke	Yes
	Dr. Andre Corriveau	Andrew Langford
	Dr. Ann Roberts	No
	Judith Stanway	Yes
	Dr. Andrew Gilman	Yes
	Dr. Lynn Brodsky	Yes
Denmark/Greenland	Ann Birkekjaer Kjeldsen	No
	Dr. Henning Sloth-Pederson	Yes
	Dr. Jens Hansen	Yes
Iceland	Dr. Geir Gunnlaugsson	Yes
Norway	Jorgen Kauren	No
	Elisabet Helsing	No
	Dr. Jon Oejvind Odland	No
	Nina Johansen	Yes
	Cecilia Vold	Yes
Sweden	Dr. Goran Carlsson	No
	Kerstin Odman	Yes
	Dr. Lars Smedman	Yes
Finland	Dr. Eiri Sohlman	Yes
	Dr. Leena Soininen	No
Russian Federation	Mikhail Kazarinov	No

Permanent Participants

Aleut International Association	Michael Zacharof	No
Arctic Athabaskan Council	Ed Schultz	No
Gwich'in Council International	Allen Firth	No
Inuit Circumpolar Conference	Aqqaluk Lynge	No
Russian Association of Indigenous People of the North	Dr. Larissa Abruytina	Yes
Saami Council	Leif Halonen	No

Arctic Council Observers/Others

Northern Forum	Anastassia Bozhedonova	Yes
World Health Organization	Dr. Valery Tchernjavskii	Yes
	Dr. Assia Brandrup-Lukanow	Yes
Indigenous Peoples Secretariat	John Crump	Yes
International Union for Circumpolar Health	Dr. Peter Bjerregaard	No
	Dr. Gary Pekeles	Yes

APPENDIX 3

Best Practice/Innovative Approaches

The Biennial Planning Meeting of the Arctic Council Initiative on
The Future of Children and Youth of the Arctic
Copenhagen, May 2002

USA (Alaska) models

Dena A Coy -	a voluntary residential substance abuse and mental health treatment program for Aboriginal women and girls of childbearing age.
Tundra Swan Inhalant Treatment Program -	a residential inhalant abuse treatment program for Alaskan Aboriginal and non-Aboriginal youth ages 13-17.
Raven's Way -	a substance abuse treatment program for Alaskan Aboriginal and non-Aboriginal youth with a strong wilderness component.
Pathway House -	a residential facility for severely emotionally disturbed Alaska Native adolescents.
Nutaqsiivik -	provides nursing home visits to high social risk families with infants less than 1 year old.
Dental Health Aid Program -	trains dental health aids to provide oral health promotion and emergency treatment under the supervision of a dentist to address dental care disparity in Alaska.
Community Health Aide Program -	trains auxiliary health workers to provide primary prevention and health promotion at the community level, in collaboration with other health providers.

Canada models

Canada Prenatal Nutrition Program -	provides pre and postnatal education and support to at risk populations of child-bearing age and infants up to 1 year of age to modify unhealthy and high-risk behaviours and promote improved birth outcomes.
Canadian Dental Therapy Program -	provides oral health services to approximately 250 Aboriginal communities to increase the amount of, and the effectiveness of dental health care through oral health promotion and primary treatment.
Child Development Initiative -	this two stream program encourages early investment in children with emphasis on prevention, education and intervention activities: 1. Community Action Program for Children- supports isolated, rural and other high risk communities to deliver services that address the developmental needs of at risk children 2. Brighter Futures - supports First Nation and Inuit communities to provide education and intervention in child development, parenting skills and injury prevention
Nobody's Perfect -	an educational program delivered by trained facilitators to parents of children aged 0-5 to increase parental knowledge and parenting skills.
Aboriginal Head Start -	a national early intervention program for at risk Aboriginal children aged 0-6 and their families designed to better prepare children for school entry.
National Native Role Model Program -	a national program targeted to promotion of healthy lifestyles through identification of role models who can inspire youth to adopt healthier lifestyle practices.

Finland models

School Social Worker of Vaaranlampi -	provides preventive social work through teamwork at the local school level to support families, provide early identification of children at risk of marginalization and support pupils through the continuum of schooling.
Preventive Child Welfare "Dennis - the Pointer" -	provides a range of approaches to support families with children to cope with challenges related to balancing work and home life, marginalized or excluded children.
Clinic for Intoxicant and Drug Abuse for the Youth of Lapland -	a non-institutional intoxicant abuse treatment and prevention program in collaboration with education, municipal health and child protection authorities for Lappish youth under age 25 years.
Research and Development Project of PsychoSocial Well-being of Children and Youth in the Arctic -	this research project targets school aged children and aims to strengthen cooperation and international dialogue, and to produce best practices information about the health and wellbeing of children and youth.

APPENDIX 4

Arctic Council Internship Programme

1. Goal of the Internship Component

To enhance awareness of sustainable development issues affecting the North among young future northern leaders and help them to acquire the knowledge, skills and attitude needed to address sustainable development issues in their community.

Objectives:

To provide northern youth with opportunities to gain practical work experience abroad in areas related to sustainable development in the circumpolar North.

To provide northern youth with the tools to play a leadership role in their community with respect to addressing sustainable development issues.

To provide youth with self-confidence, leadership and communication skills, and broaden their understanding of global issues.

To strengthen linkages among Arctic Council countries.

2. Background

Key to achieving sustainable development in the circumpolar North, among others, are: 1) the promotion and accessibility in the North of sustainable development knowledge and information, including both traditional knowledge and western science; 2) awareness among people outside the North of the impact of development and other activities on the North; and 3) the capacity of the next generation of leaders to address sustainable development issues in their communities in order to make them more sustainable.

Hence, an initiative that engages and empowers youth will contribute to sustainable development now and in the future. The proposed International Circumpolar Internship Programme addresses these issues by providing practical international work experiences to northern youth which will expose them to new ideas and different cultures, and allow them to develop the knowledge, skills and attitude that will help them to play an effective role in fostering sustainable development in their communities.

While numerous international opportunities are available to young people in general (e.g. work exchanges, internships, university exchanges such as AIESEC which runs an international Programme for student work exchanges and the American Field Service Intercultural

Programme), few of the existing programmes target the specific needs and capacity building of northern youth and few concentrate on sustainable development or on youth who are out of school and/or unemployed. For example, the Northern Forum internships focus on international relations and are restricted to graduate students. Moreover, the funding structures of most internship programmes tend to favour people living in larger, more populous centres. The advantage of the proposed Programme is its focus on the specific needs of northern youth and the account taken of the realities faced by these youth.

In 1999-2000, a pilot internship project was successfully undertaken by the International Institute of Sustainable Development (IISD), a non-governmental organization that advances policy recommendations to achieve sustainable development. IISD in co-operation with the secretariat for the "Future of Children and Youth of the Arctic", conducted the project with four youth from northern Canada. The project was funded by Canada and provided graduates between the ages of 21 and 30 from diverse backgrounds with international work experience and training. The Programme began with a two-week training session at IISD in Winnipeg, Canada. The session focused on global sustainable development issues and policies, leadership building, cross cultural issues, Internet tools, communication skills and country specific briefings. Following the training, participants were placed with host organizations in both the North and the South (Stockholm Environment Institute, the World Wildlife Fund in Norway and the International Red Cross in Zimbabwe and Swaziland) for six-month work terms. The Programme concluded with a one-week debriefing session at IISD. The debriefing allowed participants to reflect upon their experiences and work together to identify and develop means of transferring new ideas and knowledge towards their future work in this field.

The interns made a strong contribution to their host organizations. At the same time, participants gained or enhanced the following skills:

- Awareness of global issues and exposure to new cultures, values and attitudes were increased;
- Leadership, problem solving, communication and teamwork skills;
- Organizational, time management and logistical skills were enhanced, including the development and execution of work plans and reports;
- Internet skills were strengthened through the development of web products;
- Understanding of ways in which communities become involved in sustainable development issues was expanded;
- Language skills were improved;
- Adaptability and flexibility were improved.

These new skills are being applied in their home communities. These former interns are now employed by the Northwest Territories Community Mobilization Partnership and Job Development Strategy, the Nunavut Legislative Assembly and the Northern Manufacturers' Association.

Based on the successful results of the pilot programme, the Programme proposed for the future has an expanded scope that includes young people from other Member Countries and Permanent Participants in an Arctic Council Internship Programme.

3. Expected Results

- Core of young people able to contribute to sustainable development in their own communities;
- Increased knowledge of global environmental and development issues and exposure to new cultures, values and attitudes, thus enabling them to work more effectively at the local, regional or national level;
- Strengthened leadership, decision-making, problem-solving, organizational, project management and communication skills;
- Personal development through living and working abroad and an enhanced understanding of different cultures, languages and circumstances;
- Application of what has been learned to future professional activities;
- Host organizations that are exposed to new ideas and approaches provided by young dynamic northerners;
- Host organizations that benefit from the services of a qualified inexpensive human resource;
- Greater capacity in the North to participate in the new political and economic structures;
- Directory of Programmes and opportunities available in Arctic Council countries to Northern youth for the purpose of international internships, exchanges, and research projects related to the field of sustainable development (e.g. via the Internet).

4. Programme Description

- 6 to 12 month placements in a country other than the participant's country of origin (all or a portion of the internship must be spent abroad);
- Internships can take place in any type of organization (e.g. private sector, NGO, international organization, educational institution, band council, etc.) that deals with issues pertaining to sustainable development;

- The annual target is a minimum of one participant per Arctic Council member country and Permanent Participant - 14 participants annually.

5. Eligibility Criteria

- Participants will be citizens or permanent residents of Arctic Council member countries (in the case of Canada, Russia, and the USA, interns must be from the region defined by the country as the North);
- Participants will normally be 30 years of age and under. (Exceptions to this guideline may be authorized by a member country);
- Educational level required will depend upon the work assignment and will take into account differing national and regional member country circumstances. (In the pilot project the minimum level was a university degree or college diploma.)

6. Programme Partners

The following Arctic Council member countries and Permanent Participants will have the opportunity to be involved in the project: Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden, United States of America, and the Permanent Participants which are currently the International Aleut Association, the Inuit Circumpolar Conference, the Saami Council, the Russian Association of Indigenous Peoples of the North, the Arctic Athabaskan Council and the Gwich'in Council International.

Host organizations can be non-governmental organizations, private sector companies, business associations, indigenous organizations, educational institutions, research organizations, public health institutions, national governments, or international organizations. They are required to work in areas that contribute to sustainable development.

A co-ordinator will administer the Internship Programme.

Linkages
Linkages of the Programme with other organizations has already been proven. Following are some potential links in the future:

a) The Health and the Networking Programmes of the "Future of Children and Youth of the Arctic" have identified the Internship Programme as an important aspect of their work.

b) It is expected that other Arctic Council Working Groups will identify potential internship opportunities in their projects.

c) Possible partnership arrangements or possible internships in other organizations (e.g. Barents Euro-Arctic Council, Nordic Council of Ministers) are foreseen.

d) Internationally, the World Health Organization (WHO) has already offered a placement for an intern. The plan is to extend this kind of cooperation to UN agencies and international organizations such as the World Conservation Union (IUCN), World Wildlife Fund, etc.

Proposed Associate Programmes
Agencies and organizations that already have internship programmes will be invited to be associated with the Arctic Council Internship Programme. Criteria for associate membership will include having a northern focus and relevance to sustainable development Potential candidates are the following existing Programmes:

Finnish Career Development Programme
Youth International - Human Resources Development Canada
Youth International Internship Programme - Foreign Affairs and International Trade Canada
Nunavut Youth Abroad Programme (Canada)
AIESEC

Association with other organizations will enhance awareness of related activities and approaches, and provide an opportunity to complement other Programmes.

7. Programme Management Structure

The Chair and Co-ordinator will be initially in Canada. An international Co-ordinating Committee will be formed with representation from the Arctic Council member countries and Permanent Participants.

Each participating country will be responsible for funding its participation in the Co-ordinating Committee and its own internship participants

Permanent Participants will endeavour to access relevant funding Programmes in the countries where their members reside.

Responsibilities of the Co-ordinator
- Coordinate overall activities of the Programme;
- Organize international committee meetings and events;
- Act as primary contact for Arctic Council member and Permanent Participant representatives;
- Gather and disseminate information on Internship Programme progress and activities;
- Report to chairman of the initiative on the "Future of Children and Youth of the Arctic" in readiness for reports to the Sustainable Development Working Group;

- Maintain a directory of Programmes and opportunities available to northern youth;
- Collect information on potential host organizations and distribute to Co-ordinating Committee members;
- Enrol associate Programmes and serve as a clearinghouse for information through website containing internship information; and
- Conduct an evaluation of the Programme every two years.

Responsibilities of Sponsoring Organizations

- Find host organizations interested in participating in the project and submit their names to the Co-ordinator;
- Submit names of domestic potential host organizations to the Secretariat;
- Recruit interns according to eligibility criteria established for the Programme;
- Ensure interns' visas, accommodation and personal support needs are met;
- Develop agreements with interns to ensure funds are used appropriately and that employers hosting interns obtain the expected results from the internship;
- Provide interns with adequate pre-departure briefing and orientation;
- Ensure internships involve full-time work for a minimum of 6 months and a maximum of 12 months;
- Coordinate activities with host organizations;
- Ensure objectives of the Programme are met;
- Take reasonable precautions to ensure interns have a safe and secure workplace free form harassment;
- Provide in-kind contributions of office space, administrative support, etc;
- Provide the Secretariat with contact information for intern and host organization, along with a description of the work plan, as well as a final report upon completion of the internship; and
- Ensure appropriate follow up upon completion of project, as deemed advisable by the funder.

Responsibilities of Host Organizations

- Participate in the selection of the intern;
- Provide full-time work experience for 6-12 months;
- Provide the necessary office space and equipment (e.g. telephone, computer);
- Provide cash and/or in-kind contribution toward the internship;
- Assist intern in locating appropriate, low-cost accommodation;
- Develop a work plan in conjunction with the sponsoring organization and/or the intern;
- Help the sponsoring organization obtain a visa for the intern, if needed;
- Orientate the participant on organizational policies, administration, programmes and the scope of the work placement including assignments, responsibilities and schedules;
- Provide opportunities for the intern to attend staff and/or community meetings or workshops to promote their personal and professional development;
- Ensure the intern is provided with adequate supervision and guidance throughout the internship; and

- Submit progress reports during and after the internship, and respond to surveys, if applicable.

Host organizations will fill in an application form before they are accepted. The review of applications will be based on the terms of reference, support for the intern in their placement, and the stability of the host organization.

Responsibilities of Interns

- Contribute towards the cost of the internship; the Sponsoring Organizations will determine the extent to which the interns may need to raise funds for their participation in the project;
- Participate in a pre-departure briefing;
- Carry out the tasks outlined for their internship;
- Respect the duration of the internship;
- Fulfil the terms of their internship agreement; and
- Submit progress reports during and after the internship to the Sponsoring Organization.

8. Evaluation

- A strong emphasis will be placed on monitoring and evaluation in order to ensure that difficulties can be addressed in a timely way and that all parties involved in the Programme are satisfied with the outcome. The evaluation process will include an annual review to determine what improvements or changes are needed for the following year. In addition to the attention that must be paid to costs, evaluations will include:
  - Personal assessments of new or enhanced skills / knowledge gained through the experience
  - Assessment from the host organizations of the benefits derived from the internship
  - Surveys of former participants concerning their post-internship volunteer and professional activities related to sustainable development