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Speech to the Arctic Parliamentarians on Arctic Human Health  
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Thank you for that generous introduction. It is an honor for me to be invited to address this Conference on the topic of human health in the Arctic Region.

I am AJP, Deputy Director of the CDC's, Arctic Investigations Program, located in Anchorage Alaska. I am also the co coordinator of the Arctic Council's IPY Arctic Human Health Initiative, and International Circumpolar Surveillance Projects

What I would like to do today...

- What is the CDC's AIP?
- Human Health in the Arctic
  - What are the Concerns of Arctic Peoples?
- IPY and the Arctic Human Health Initiative
- Human Health Beyond the IPY
  - The expanding role of the Arctic Council

And make some recommendations that this conference of Arctic Parliamentarians may want to consider for action to improve the health and well being of Arctic residents.

The Arctic Investigations Program is a CDC field station located in Anchorage on the grounds of the Alaska Native Medical Center.

We have a staff of some 35 people, consisting of medical epidemiologists, laboratory staff, information technology and statistics, and administration support. 26 are CDC staff, 8 are ANTHC staff assigned to AIP

Our Mission is:

- To prevent infectious disease morbidity and mortality in people of the Arctic and Subarctic
- Special emphasis on diseases of high incidence and concern among indigenous people

Our priorities include:

- Vaccine-preventable diseases
- Elimination of health disparities
- Emerging infectious diseases
- Preparedness and response
  - Laboratory diagnosis of bioterrorism agents
  - Local, national and International public health threats
- Circumpolar health promotion

While our focus is on the prevention and control of infectious diseases, we operate as a CDC platform that can facilitate cooperation on other human health concerns of Arctic Peoples.

Protecting the public's health is a team sport. So in addressing a particular Arctic Health challenge we will engage other partners such as:

- Alaska Native Tribal Health Organizations
- State of Alaska Division of Health
- University of Alaska
- Private health care providers
- Other US federal partners: IHS, NIH, USGS, CDC
- International organizations
  - Public Health Institutes
  - Universities
  - International Union for Circumpolar Health
  - Arctic Council

The human health of Arctic peoples has improved over the last 50 years. This shows infant mortality (deaths/1000 live births) comparing the Alaska with the General US. Infant mortality has decreased. Much of this increase has been due to a reduction in morbidity and mortality from infectious diseases, such as tuberculosis, and the vaccine preventable diseases of childhood. This trend is paralleled in other Arctic countries as well.

There are several examples of the impact of vaccines in the Alaska Native population. These include the successful use of a vaccine to prevent meningitis caused by a bacterium called *Haemophilus*

*influenzae* type b (Hib), the use of a new childhood vaccine for the prevention of meningitis and pneumonia caused by a bacterium called *Streptococcus pneumoniae*, and the elimination of symptomatic Hepatitis b in Alaska after vaccine introduction in 1983. Hepatitis b also causes liver cancer. The Hepatitis vaccine has also prevented liver cancer in Alaska Natives < 20 years of age.

So consequently life expectancy in many Arctic regions has also greatly increased over the last 50 years not only because of successful vaccine programs, but also because of the introduction of safe water supplies, sewage disposal, development of community based medical providers, and the improved health care and access to care for injuries and illness. Tobacco cessation and education programs have greatly impacted the incidence of certain cancers and other chronic diseases associated with tobacco use.

However significant challenges still remain. For example Life expectancy at birth for Alaska Natives is 64.9 years, compared to 76.7 years for US all races. The Alaska Native age-adjusted unintentional injury mortality rates are 3.3 times the rate for US all races, and the suicide mortality rate is 4.2 times the US all races rate. The Cancer mortality rates is 1.5 times the US all races rate, and infant mortality is 8.7/1000 compared to 7.2/1000 for US infants. There are higher rates of some infectious diseases, such as hospitalization rates of children for RSV, invasive bacterial diseases, and 70% of Alaska Native children acquire Hp infection before the age of 10 years.

And there are other Challenges to health and wellness of Arctic residents. These include:

The potential Health impacts of Environmental contaminants such as mercury, other heavy metals, PCBs, DDT dioxins and other organochlorines entering the traditional food supply and being consumed by people who depend on subsistence fish, fowl, land and marine mammals for food. Potential human health effects include damage to the neonatal developing brain and endocrine and immune systems. There is concern regarding the health impacts of rapid economic change and modernization, and the move away from a traditional lifestyle to one based on a cash economy. Across the circumpolar north there is increasing activity towards sustainable

development via local resource development and widening involvement in the global economy. But these changes can be associated with an increase in the so called modern diseases such as diabetes hypertension, obesity and cardiovascular diseases. In addition it is well known that child abuse, alcohol abuse, drug abuse, domestic violence, suicide, unintentional injury is also connected to rapid cultural change, loss of cultural identity and self esteem.

We have heard much about the climate change: The changing climate will impact rural communities. The impacts of climate change on the health of arctic residents will vary depending on factors such as age SES, lifestyle, culture, location and capacity of the local health infrastructure systems to adapt. It is likely that the most vulnerable will be those living close to the land in remote communities, those already facing health related changes.

Direct health related impacts include for example, injuries, hypothermia frostbite, related to travel in unpredictable ice and weather conditions, heat stress in summer. Potential indirect impacts on health, shown here, include the potential of moving an entire village threatened by sea erosion because of the lack of sea ice, will undoubtedly increase mental, social stress related to relocation and changes in environment, lifestyle. Other indirect impacts include changes in vector borne diseases (such as West Nile virus), zoonotic infectious diseases, changes in access to quality water supplies, failure of the permafrost and sanitation infrastructure, changes in the traditional food supply, changes in migration patterns affecting availability.

These are clearly circumpolar challenges, and dealing with them will clearly require a higher level of circumpolar commitment cooperation collaboration and resources.

Fortunately Arctic Nations have a long history of international cooperation when it comes to dealing with issues that affect Arctic communities including human health.

The International Union for Circumpolar Health (IUCH) is a NGO comprising of an association of 5 circumpolar health organizations-  
American Society for Circumpolar Health

Canadian Society for Circumpolar Health  
Nordic Society for Arctic Medicine  
Siberian Branch of the Russian Academy of Medical  
Sciences  
Danish/Greenlandic Society for Circumpolar Health

The IUCH promotes circumpolar collaboration and cooperation through the activities of 13 working groups in various fields of health and medicine and provides a source of experts in the area of Arctic Human health. Outreach and communication are provided through the publication of the IJCH, and the hosting of the triennial ICCH, the next to be held in Yellowknife July 12-16, 2009.

Initially established in 2003, the Northern Dimension Partnership in Public Health and Social Wellbeing (NDPHS) has a membership of 13 countries. Canada, Denmark, Estonia Finland, France Germany Iceland, Latvia, Lithuania, Poland Russia Sweden. The Aim if NDPHS is to promote Sustainable Development in the Northern Dimension area through improving human health and social wellbeing through intensified cooperation and enhanced coordination. Priority areas include:

- 1) The reduction of major communicable diseases and prevention of lifestyle non communicable diseases (including HIV/AIDS and tuberculosis, use of illicit drugs, cardiovascular diseases and consequence of socially distressing conditions).
- 2) Promotion of health lifestyle and socially rewarding lifestyles.

Also established in 2003 by the Barents Euro Arctic Council, is the Cooperation program on health and related issues in the Barents Euro Arctic Region. This has both national and regional representation from Norway (Nordland, Tromso, Finmark), Sweden (Vasterbotten, Norrbotten), Finland (Lapland, Oulu, Kainuu) and the Russian Russian Federation (Murmansk, Karelia, Archangelsk, Komi, Nenets). Priorities include: The prevention of communicable diseases, prevention of lifestyle and related health and social problems, and promotion of health lifestyles, development and integration of primary health care services.

The Northern Forum, is a non profit organization of regional or sub-regional governments of northern countries. The Northern Forum

fosters communication and cooperation among northern regions providing avenues for discussion training and cooperative ventures. Health priorities include a focus on promoting healthy lifestyles and using technology such as telemedicine to improve health care. Other projects include mitigating substance abuse, through training of professionals in improved treatment protocols, promoting infectious disease monitoring, and promoting healthy lifestyles in the north.

Then we have the Arctic Council (AC), established in 1996 is a ministerial intergovernmental forum which promotes cooperation coordination and interaction between among 8 Arctic States including indigenous communities and other Arctic Residents on issues relating to sustainable development and environmental protection. The 1996 Ottawa Declaration established the AC with a mandate to undertake a broad program to include cooperation on all dimensions of Sustainable Development including human health.

Human health Activities of the AC reside in Arctic Monitoring and Assessment Program's Human Health Assessment Group. This group responsible for assessments of relationship between environmental population and human health, and the SDWG, which has the goal to advance SD in the Arctic including opportunities to protect and enhance the health of indigenous communities and other inhabitants of the Arctic.

Since 1998 the SDWG has undertaken several activities intended to improve the health of Arctic Residents.

The Survey of Living Conditions in the Arctic (SLiCA) is an ongoing project founded in 1998 lead by researchers in Greenland and Denmark and is an interdisciplinary and international project designed to develop a new research design for the measurement of living conditions and individual well being among the Inuit and Saami peoples of the Arctic.

In 1998 the Ministers endorsed the Canadian led "Future of Children and Youth in the Arctic Initiative". The goals of this project were to improve the health and well being of children and youth in the Arctic and to better prepare them for a future by increasing knowledge and understanding of SD in the Arctic.

The Telemedicine project, lead by the US was designed to share information among the AC members about programmatic successes and lessons learned from national and international experiences in remote health care delivery, training and education.

The International Circumpolar Surveillance (ICS) system for emerging infectious diseases established a network of hospital and public health laboratories throughout the Arctic. This network allows the sharing of standardized laboratory information and epidemiologic data between Arctic countries to facilitate tracking of infectious diseases of concern, the emerging problems of antimicrobial resistance, and the formulation and implementation of prevention and control strategies.

The Arctic Human Health Initiative is an AC US led IPY coordinating project, that facilitates the linkage of researchers with potential international collaborators and to serve as a focal point for human health research, education, outreach and communication activities during the IPY. The overall aim of AHHI is to: *“Increase awareness and visibility of human health concerns of arctic peoples, foster human health research, and promote health strategies that will improve health and well being of all Arctic residents”*.

The overall objectives of the AHHI, are to:

- Expand or create health networks
- Promote international collaboration on health research and health promotion in areas of:
  - Health disparities
  - Health effects of:
    - Environmental pollution
    - Rapid social & economic change
    - Climate Change
- Promote outreach education communication
- Promote synergy and strategic direction of Arctic human health research and health promotion, beyond the IPY

To date More than 30 active projects under the AHHI umbrella..

Projects include:

Expanding Research Networks that will enhance surveillance and monitoring of health concerns of Arctic peoples, and increase collaboration and coordination of human health research.

Examples are:

- The International Circumpolar Surveillance (US- ICS)

The purpose of the International Circumpolar Surveillance (ICS) system for infectious diseases is to establish a network of hospital and public health laboratories throughout the Arctic. The network would allow collection and sharing of uniform laboratory and epidemiologic data between Arctic countries that will describe the prevalence of infectious diseases of concern to Arctic residents and assist in the formulation of prevention and control strategies.

Currently the system monitors invasive bacterial diseases and tuberculosis in the US Arctic (Alaska), northern Canada, Greenland, Iceland Norway, Finland, northern Sweden. While currently focused on prevention and control of infectious disease the system could be adapted to monitor other human health issues of concern in Arctic countries, and serves as a model for a Sustainable Arctic Observing Network for human health. Use IPY to expand to include northern regions of the Russian Federation.

Other Networks include:

- The International Network of Circumpolar Health Researchers (Canada)
- The Arctic Monitoring and Assessment Program-Human Health Assessment Group (Denmark)

IPY Human Health Research projects that focus on the Changing Arctic Environment include:

- Inuit Health in Transition (Canada/Denmark)
- Investigating Obesity and Chronic Diseases and Related Risk Factors in Alaska Natives (US-CANHR-UAF)
- Negotiating Pathways to Adulthood: Social Change and Indigenous Culture in Circumpolar Communities (US-UAF)

- Genetics and Environmental Risk Factors for Complex Diseases: A Study of the Saami population (Sweden)
- Novel approaches for assessing and managing cumulative risks and impacts of global climate: An epidemiological study of the cumulative health effects of persistent organic pollutants and mercury in subsistence dependant rural Alaska Natives (US-ANTHC)
- Arctic Community-Based Environmental Monitoring, Observation and Information Stations Phase I: Bering Sea Sub-Network (US-AIA)
- Exposure to Persistent Organic Pollutants and Breast Cancer (Denmark)

IPY Infectious disease research projects include:

- Burden of Infectious Diseases in Greenland (Denmark)
- Hepatitis B in Aboriginal Populations in the Arctic (Canada)
- Evaluation of impact of pneumococcal vaccine in Nunavik (Canada)
- Prevalence of Human papilloma virus and cervical dysplasia in Northwest Territories (Canada)
- Engaging communities in the monitoring of zoonoses, Country food safety and wildlife health (Canada)
- Sexually transmitted diseases in northern frontier populations (Canada)

IPY Human Health Behavioral Health projects include:

- A dialog among allies: Good practice in suicide prevention (Canada/Denmark)
- Cognitive Behavior Therapy (US-NF)
- Advancing Alcohol and Drug Abuse Treatment in the Circumpolar North (US-NF)
- Survey of living conditions in the Arctic (Denmark-SLICA)
- Integration of Health-Saami Inuit (Sweden)

Several Human Health symposia and conferences are planned:

- International Workshop on Human Health Impacts of Climate Change in the Arctic February 2008 (US)
- 14th International Congress on Circumpolar Health Yellowknife, Canada (July 2009)
  - AHHI “Legacy”
- AMAP HHAG Research Program Workshop 2009 (Canada/Denmark)
- Pressures and Impacts and well-being of indigenous people of the Arctic: Invitational International Symposium and Symposium Publication 2010 (Canada)
- IPY Oslo Science Conference June 8-12, 2010 (Norway)
  - AHHI Symposium

Several Research and Graduate Studies are being initiated by the University of Oulu, Finland, during the IPY. These include:

- Research program for Circumpolar Health and Wellbeing
- Graduate School of Circumpolar Wellbeing Health and Adaptation
- International Joint Master’s Program in Circumpolar Health and Wellbeing

In addition there are a now an increasing number of human health publications available that including journal supplements, special editions, and meeting proceedings that are dedicated to IPY events and activities.

### **So Where are we going from here?**

While human health is a priority for all AC member states, and permanent participants, it has in the past suffered from a lack of visibility within the AC, and consequently to politicians, and other decision makers.

This lack of visibility has limited the AC ability to coordinate human health activities, such as planning, and priority setting for short and long term strategies and the translation of research findings into meaningful actions at the community level.

By adopting a more coordinated and strategic approach to human health issues the AC and its working groups can help bring greater visibility to human health concerns of Arctic peoples, and greater action to address those concerns.

These concerns have stimulated a number of intense discussions negotiations, and meetings of the last two years and has resulted in a decision to form a HHEG within AC SDWG.

This effort has been lead by:

Karen Perdue, who is Associate Vice President for Health here at UA, and is the Head of the US Delegation, to the AC SDWG

Harald Finkler, from Indian and Northern Affairs, Canada, and Stein Rosenberg, who is chair of the SDWG and Senior Advisor, Norwegian Ministry of Foreign Affairs.

The mandate of the HHEG is to:

Support and advance knowledge gained through ecosystem and community based research, to develop practical responses to human health impacts

Promotes greater collaboration and synergies between AC WG's, indigenous communities and organizations, academic institutions and other circumpolar organizations in addressing human health concerns

The role of the HHEG is to:

Develop the SDWG human health agenda, determine priorities, and assess proposals for actions that will contribute to improved health of Arctic peoples,

Serve as a focal, and entry point on matters pertaining to health within the SDWG,

Act as a resource to the AC Senior Arctic Officials (SAO's), and working groups, on health issues and research of relevance to the circumpolar community,

Provides guidance on how to coordinate information exchange on research results to communities, and other stakeholders

So how can this conference of Arctic Parliamentarians assist in this process?

The Arctic Parliamentarians can:

- Support the development of a strategic plan for human health activities within the Arctic Council
- Identify human health priorities that require action, and make recommendations to the AC
- Provide country support for arctic networks that enhance collaboration on health concerns of Arctic peoples
- Promote forums to exchange information on best practices.

Thank you for your attention: