HEALTH SYSTEMS SERVING INUIT COMMUNITIES ACROSS THE ARCTIC

Prepared by Inuit Circumpolar Council Canada
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For Health Canada (Northern Region)

This paper is intended to be a major contribution to the Circumpolar Comparative Health Systems Review which is a research project approved by the Arctic Council's Sustainable Development Working Group (SDWG) on the recommendation of the group's Arctic Human Health Expert Group (AHHEG). ICC Canada would like to acknowledge the financial support received from Health Canada (Northern Region) in completing this report.

The Inuit Circumpolar Council (ICC), which was formed in 1977, represents the interests of the Inuit of Canada, Alaska (USA), Greenland and Chukotka (Russia) supporting them in addressing challenges of circumpolar and international importance which are impacting on their lives. One of the top priorities for ICC is the health and wellbeing of circumpolar Inuit. Within the ICC network across the four Arctic countries, ICC Canada has been given responsibility for taking the lead on health. As a permanent participant of the Arctic Council, ICC is an active member of the AHHEG and is represented by ICC Canada.

As part of its work program, AHHEG has agreed to undertake a review and analysis of the health care systems in circumpolar countries. The objective of this work is to compile a comparison of circumpolar health systems to highlight the different responses to similar challenges (e.g. low population density, reduced access, cultural and linguistic differences from the majority population in the country, impact of cold climate on morbidity and service delivery), and focus on the effects of differing governance and organization (e.g. autonomy of sub-states, role of sub-states in terms of health funding, administration and delivery, primary care models, and special arrangements for indigenous populations). The final paper will be published by the International Journal of Circumpolar Health.

ICC Canada was asked by the Canada-led project team to research and write a segment of the Review to focus on the health systems relevant to Inuit across the Arctic. An important consideration in developing the Inuit-focused segment of the review is the fact that Inuit live in four countries in the Arctic region – Canada, Greenland, Alaska and Russia. Although many of the health challenges confronted by Inuit across the Arctic are similar, there is also divergence driven in part by the different approaches and capacities of the different country's health systems. This report has described the four very different systems and has undertaken a comparative analysis of those systems.

Introduction

The Inuit[1] are an indigenous people totaling about 160,000 and living in four countries across the Arctic – Canada, Greenland, USA (Alaska) and Russia (Chukotka). Although the health challenges confronting the Inuit are in many cases similar across the Arctic, the responses to these challenges vary in accordance with the types of health systems in place in each of the four countries. This paper provides an overview of those systems with particular relevance to the Inuit populations in each country.

Overview

Although there have been significant improvements in Inuit health and survival over the past 50 years[2], stark differences persist between the key health indicators for Inuit and those of the national populations in the USA, Canada and Russia and between Greenland and Denmark (see Tables 1 and 2). On average, life expectancy in all four countries is lower for Inuit. Infant mortality rates are also markedly different with up to three times more infant deaths than the broader national average. Underlying these statistical differences are a range of health, social, economic and environmental factors which have affected Inuit health outcomes.

This inequity between Inuit and broader national populations is consistent with the poor health status of indigenous peoples globally. It is increasingly recognized that the differentiation is due to a range of factors – physical, psychological and social and reflecting broader contexts including historical, economic and environmental.[3] It is also a reality that "gaps between indigenous and non-indigenous peoples are not only clear in health status, but also in socioeconomic status, education, employment, environmental and social health and most other social determinants of health"[4] .

Country health systems

Improving health outcomes and meeting the health needs in each of the four countries has varied in line with each country's economic and political framework as well as the different health systems.

In Canada, national, government-funded universal health care is administered by territories and provinces with health care funding a mix of largely public and some private. In Alaska, health care is mostly private with personal health insurance an important feature of the funding arrangements. However, within both countries, there are specific government-funded arrangements to support indigenous health.

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[1] For the purposes of this paper, the term "Inuit" will be used when referring to the different Inuit populations in Canada, Greenland, Alaska and Chukotka although locally, they may be described as Inuit, Kalallit (Greenland), Eskimo (Alaska and Chukotka). Iñupiat (Alaska), and Yupik (Alaska and Chukotka).

[2] Bjerregaard P, Young TK, Dewailly E, Ebbesson SOE; *Indigenous Health in the Arctic: an overview of the circumpolar Inuit population,* 2004; p. 391

[3] Lisa Jackson Pulver et al, *Indigenous health: Australia, Canada, Aotearoa, New Zealand and the United States: laying claim to a future that embraces health for all*, World Health Report, 2010 Background paper no 33; http://www.who.int/healthsystems/topics/financing/healthreport/whr_background/en

[4] ibid

Table 1 – Life expectancy for Inuit and national populations[5]

Indicator	USA	Alaska Natives 2000-2004*	Canada	Inuit 2001**	Denmark	Greenland 2008***	Russia 2008****	Chukotka [6] '00-'04*
Life expectancy at birth	M 74.6 F 80.0	M 68.1 F 75.4	M 77.2 F 82.2	M 64.4 F 69.8	M 76.3 F 80.7	M 66.6 F 71.6	M 61.8 F 74.1	M 53.6 F 63.7

*Circumpolar Health Indicators: Sources, Data and Maps; T Kue Young; Circumpolar Health Supplements 2008
**Inuit Statistical Profile, Inuit Tapiriit Kanatami, 2008
***Health Statistics in the Nordic Countries, Nordic Medico-Statistical Committee (Nomesco) 2010
****WHO Country data 2011

Table 2 – Same time comparative health indicators for Inuit and national populations

Indicator (2000-2004)	USA	Alaska natives	Canada	Nunavut	Denmark	Greenland	Russia	Chukotka [7]
Life expectancy at birth	M 74.6 F 80.0	M 68.1 F 75.4	M 77.2 F 82.2	M 66.6 F 70.0	M 74.9 F 79.6	M 63.7 F 70.0	M 58.8 F 72.1	M 53.6 F 63.7
Infant mortality/ 1000 live births	6.9	10.8	5.3	15.3	4.7	12.1	13.3	20.3

Source: Circumpolar Health Indicators: Sources, Data and Maps; T Kue Young; Circumpolar Health Supplements 2008

In Greenland, where the population is predominantly Inuit, there is universal government-funded coverage. The Russian system is working through the challenges of shifting from a government-controlled and funded system to a decentralized insurance-based framework.

Also affecting the effectiveness of the health system response is the isolation of many of the Inuit communities from health and education services which are more accessible to larger urban-based populations. It is important to note the relative smallness of the northern populations include not just Inuit. Remoteness, distance and the smallness of the communities all play their part in shaping the accessibility, availability and quality of the health services for

[5] As noted in various sections in this paper, the availability of Inuit-specific health data is difficult to obtain because of the inadequacy of its collection at source. As a result, attempting an up-to-date comparison across the four Inuit countries is beset by varying availability of the most recent data. However, this comparison still provides an insightful snapshot of the significant gaps between Inuit populations and their national counterparts.

[6] While the indicator gaps between Inuit in Chukotka and the broader Russian population are not as wide as in other country comparisons, it is largely because nationally, Russia is lagging well behind other industrialized countries in health outcomes for its population. Although there have been some improvements in the health outcomes since the comparative figures in Table 2 were captured (as can be seen in Table 1), the latest available indicator for life expectancy in Russia as of 2008 was 61.8 for males and 74.1 for females (WHO Statistics 2011). This is one of the widest national gaps between male and female life expectancy in the world.

[7] See footnote 6.

northern populations including Inuit. For example, Canada's northern population is just over 101,000 including approximately 39,000 Inuit. This constitutes less than 0.5% of Canada's total population[8]. Alaska's Inuit population represents only 7 per cent of the state's total population or half the total Alaskan native population. In Russia, there are 40 different indigenous peoples in the north totaling about 280,000 or 0.2% of the national population; of these, the 1,750 Inuit represent less than 1% of the total indigenous population[9]. Only in Greenland are Inuit the majority representing 87% of the population.

Cost per capita on the other hand appears to reflect the expense of delivering services in remote and sparsely populated regions but not necessarily improved availability and services. For example, Nunavut in Canada has the highest per capita health expenditures in the world at just under 26% of the territory's GDP.

A major ongoing challenge for health delivery to Inuit communities is the recruitment of health and allied professionals able and willing to work in the remote and isolated communities. Aligned to this challenge is the ongoing difficulty in ensuring that staff that are working in the Arctic have the medical skills and cultural knowledge appropriate for the region.

Greenland:

Population: 57,637 (July 2010 estimate) of whom 85% live in urban centres[10]; 87% of the population is of Inuit origin

Geographic and political profile: Greenland is the world's largest island with the vast majority of Greenlanders living along the fjords on the central and south western coast. Many live in urban centres but Greenland is the least densely populated country in the world with the towns and villages isolated from each other and accessed only by air or sea. A colony of Denmark since 1721, the passing of the Act on Greenland Self Government in the Danish parliament in June 2009 has brought Greenland closer to full independence. Under the Act, Greenland receives an annual subsidy (3,439.9million DKK in 2009 or approximately US$630 million) which represents about 60% of the government's annual revenue. The amount is adjusted annually in accordance with general price and wage increases. However, it will also be reduced if the Greenland Government receives revenue from mineral resource activities in Greenland. The official languages of Greenland are Danish and Greenlandic which is closely aligned to the Inuit language spoken in Alaska, Canada and Chukotka, Russia. It is important to note, however, that within the health system, Danish is the dominant language spoken because a large proportion of the medical staff are recruited from Denmark.

Profile of health system: Fully government-funded, universal health care.

Health challenges[11]: The leading health challenges confronting Greenland are high infant mortality rate; high rates of suicide, child abuse, abortion and accidents; high rates of infectious disease, notably tuberculosis, Hepatitis B, sexually transmitted diseases, Helicobacter pylori

[8] Young TK, Chatwood S, *Health care in the north: what Canada can learn from its circumpolar neighbours*, Canadian Medical Association Journal; published at 222.cmaj.ca; November 2010.

[9] Andrew, Kozlov, Galina Vershubsky, Maria Kozlova; *Indigenous Peoples of Northern Russia: Anthropology and Health;* Circumpolar Health Supplements (2007:1)

[10] World Bank, *World Development Report 2009 – Reshaping Economic Geography*, p335

[11] Although the Act on Self Government for Greenland passed into law in 2009, WHO still does not include Greenland within its online list of country health statistics and there is no reference to Greenland within the statistics concerning Denmark.

and meningitis; increasing rates of diabetes, cardiovascular diseases and cancers; substance abuse; low oral health; and contaminated traditional diet.

Responsible authorities for health services: Health services and funding is a shared responsibility between the Greenland Government and the municipalities. The Ministry of Health is responsible for legislation and overall management. The National Board of Health is responsible for supervision of health services and clinical guidelines. Health authorities are responsible for running the clinical services including primary health, specialized services, distribution of pharmaceuticals, nursing care, home nursing services in some districts, home mental health care, preventive services, rehabilitation and child and school health services.[12]

The municipalities are responsible for home nursing services in some health districts, preventive services and nursing homes. They are also principally responsible for services that support health and wellbeing including social services, basic education, funding for cultural and sporting events and the local environment. Plans are underway to transfer responsibility for the treatment of alcohol and drug abuse and services for the disabled to the municipalities.[13] Also, as part of the health reform process, the municipalities will be united into five health regions from 2011. Dental services are provided free of charge in public dental clinics and there is limited access to private dentists where treatment is paid for by the patient. Greenland's government owns the hospitals and there are no private or specialized hospitals. There is no free choice of hospital in Greenland. Patients are referred by the district hospitals for treatment at the National Hospital and a special committee refers patients for treatment outside Greenland. Medicines are free and dispensed by the health services. [14]

Nuuk has a central hospital for specialized treatment but more intensive care or specialized treatment is conducted in Copenhagen. The district medical centres are autonomous units. Depending on the size of the population, the centres will have between one and five doctors plus nurses, midwives, health care assistants, lab-technicians, translators and administrative staff. The doctors and nurses are likely to be Danish and the rest of the staff, Greenlanders. The advantage of the health care system is the very close contact between the staff and the patients with many of the staff likely to be members of the local communities. Telemedicine is also an increasingly important facility in the health system particularly for the more remote health centres.[15]

Health expenditure[16]: Health care expenditure in Greenland totalled DKK 1066M in 2008 (or approximately US$197m). On a per capita basis of expenditure, Greenland spent the lowest among the Nordic countries in 2008 at approximately 18,880 DKK or US$3530 per person. (At the same time, Denmark spent 28,836DKK or US$5391 on health per capita.[17]) Overall, health care accounts for more than 18% of total government expenditure or 9.1% of Greenland's gross domestic product[18]. A breakdown of the budget shows that about 47% is spent in the health

[12] Health Statistics in the Nordic Countries, Nordic Medico-Statistical Committee (Nomesco), http://nomesco-eng.nom-nos.dk/filer/publikationer/Helsestatistik2010.pdf

[13] Birgit Niclasen, Gert Mulvad; *Health care and health care delivery in Greenland;* International Journal of Circumpolar Health, December 2010

[14] Nomesco 2010

[15] Gert Mulvad, Henning Sloth Petersen, Jørn Olsen; *Arctic Health Problems and Environmental Challenges in Greenland;*

[16] Health care expenditure includes all expenditure, private and public. The figures reflect the OECD's system of health accounts.

[17] Nomesco 2010

[18] Nomesco 2010

districts, the national hospital in Nuuk accounts for 28%; 2% is dedicated to preventive efforts and surveillance and 12% is for treatments outside Greenland; 6% is used to transport patients.[19]

Alaska

Population: Out of a total population of close to 710,000 in Alaska, Inuit account for about 7 per cent (50,000) or about half the number of American Indians and Alaskan natives living in Alaska.[20] This percentage contrasts sharply with the rest of the US where native Americans comprise about 1 per cent of the population. It is also important to note that the Alaskan Native population is dominant in the north and north west of the state. The fact that many live in remote and isolated villages brings with it the challenges and constraints to health delivery familiar in other parts of the Inuit Arctic.

Geographic and political profile: Alaska is the largest state in the USA. However with about half of Alaska's residents living in Anchorage, Alaska is also the least densely populated US state. About one ninth of the state is owned by Alaskan natives as a result of the Alaska Native Claims Settlement Act which led to the creation of 12 regional and a number of local Native corporations. Much of the land mass is only accessible by air.

Inuit territory includes the North Slope Borough consisting of seven villages served by the Arctic Slope Regional Corporation; Northwest Arctic Borough comprising eleven villages and Bering Straits Regional Corporation which includes 16 villages. Barrow, Alaska in the North Slope Borough is the most northern US city.

Profile of health system: The federally-funded Indian Health Service is the principal funder of health care for Alaska Natives including Inuit.

Health challenges: Cancer, heart disease, accidents including drowning, suicide, and substance abuse are the leading causes of death. Issues preventing Alaska natives from receiving quality medical care include cultural barriers, geographic isolation, inadequate water systems and sewage disposal and low income. There is inadequate data on the health and wellbeing of Alaskan natives including Inuit and this has been recognized as a potential problem for the accurate measurement of health inequalities and the accurate application of programs and funds.[21]

> *Inadequate data on the health and wellbeing of American Indians and Alaskan natives poses potential problems for the accurate measurement of health inequalities as well the accurate application of programs and funds towards disparity in health status and care… Unique patterns of disease or behavioral characteristics correlated with disease may not be identified or addressed. Insufficient and inaccurate data prohibit comparisons among tribes, underserved populations, and impair the ability to determine whether a health problem is emerging or simply previously undocumented. In terms of funding, agencies may not support selected programs because health conditions are unrecognized within collected data. Limited data from some American Indian and Alaskan Native populations may be generalized to other or even all American Indian and Alaskan Native communities. This results in*

[19] Birgit Niclasen, Gert Mulvad; *Health care and health care delivery in Greenland;* International Journal of Circumpolar Health, December 2010

[20] US Census Bureau, November 2010

[21] Lisa Jackson Pulver et al; *Indigenous health: Australia, Canada, Aotearoa, New Zealand and the United States: laying claim to a future that embraces health for all*, World Health Report, 2010 Background paper no 33; http://www.who.int/healthsystems/topics/financing/healthreport/whr_background/en

the application of programs, resources, and funding to problems which may or may not exist in all communities.[22]

Responsible authorities for Alaska native health services: The federal government, through the Indian Health Service, is required to provide health care services for Alaskan natives. From 1970 onwards, Alaska natives, including Inuit, developed health care organizations under self-determination legislation and assumed ownership of health services with regional and village corporations providing the services through compacts and contracts negotiated under the Indian Self-Determination and Education Assistance Act of 1975. Self-governance legislation in 1994 provided for perpetual compact agreements between the U.S. Department of Health and Human Service and tribal programs. Since 1998, all Alaska native health care is provided by Alaska native organizations.[23]

The Alaska Tribal Health System is a voluntary affiliation of nearly 40 Alaskan tribes and tribal organizations providing health services. The Alaska Tribal Health Compact is the umbrella agreement that sets out the terms and conditions of government-to-government relations through the Indian Health Service. Twenty-two tribes and tribal organizations belong to the compact which authorizes tribes and native health organizations to operate health and health-related programs. Organizations that belong to the Compact include organizations responsible for providing some of the health services to Inuit. These are the Arctic Slope Native Association, Maniilaq Association, Norton Sound Health Corporation, Seldovia Village Tribe and the Yukon-Kuskokwim Health Corporation. The Alaska Native Health Board (ANHB) is recognized as the statewide advocacy organization on Alaska Native health issues.

Each tribal health organization retains its autonomy with regard to health priorities, services and policies. The entire system serves approximately 130,000 Alaska natives. The medical care services include small community primary care centres, sub-regional mid-level care centres, six regional hospitals including the Samuel Simmonds Memorial Hospital in the North Slope Borough, the Alaska Native Medical Center tertiary care and referrals to private medical providers and other states.

The Alaska Native Tribal Health Consortium, a not-for-profit tribal health organization managed by Alaska native tribal governments and their regional health organizations, was created in 1997 to provide statewide native health services and to support tribal health organizations and communities. It provides tertiary and specialty medical, community health and research, environmental health and engineering, health information technology services and professional recruitment.

Dental facilities are provided through 14 regional hub dental clinics as well as mobile dental services which visit villages.

Health expenditure: As in other parts of the Arctic, the geography and climate contribute to higher medical costs and abiding constraints in ensuring appropriate and adequate staff for health services. Health care expenditures in 2004 were among the highest in the US at US$6,450 per capita compared to the national average of US$5,283.[24] [25]

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[22] Jackson Pulver et al; p 76

[23] *Alaska Tribal Health System Sustainability Issues,* Presentation by Valerie Davidson, Alaska Native Tribal Health Consortium, February 2009

[24] Kathryn J. Anderson, *A review of health care reform in the United States and in Alaska*, International Journal of Circumpolar Health, 69:5 2010

Because the funding provided by IHS is inadequate, the native health care system also relies on Medicare, Medicaid and private insurance payers to supplement the annual budget.[26] The inadequacy of the funding has been identified as an important factor contributing to the lag of the health status of the state's natives behind that of the rest of the state.[27]

Canada

Population: In the most recent Canadian census (2006), 50,485 people reported that they were Inuit. This is 4% of the total Canadian population of 1,172,790 who identified themselves as an Aboriginal person. The median age of the Inuit population in 2006 was 22 years compared with 40 for non-Aboriginal people. Inuit were also younger than First Nations people whose median age was 25 and Métis, whose median age was 30. Large percentages of Inuit are in the youngest age groups. The majority of Inuit in Canada – about 78% – live in one of four regions within Inuit Nunangat (Inuit homeland) which is the region stretching from Labrador in the east to the Northwest Territories: Nunavut (24,635 Inuit according to the 2006 Census); Nunavik (9,565 Inuit); Inuvialuit in the Northwest Territories (3,115 Inuit) and Nunatsiavut (2,160 Inuit). Inuit are the majority of the population in all four regions accounting for 90% of the total population in Nunavik, 89% in Nunatsiavut, 84% in Nunavut and 55% in the Inuvialuit region. [28]

Geographic and political profile: More than three-quarters of Canadian Inuit live in their traditional Arctic homeland. All traditional Inuit lands in Canada are covered by some sort of land claims agreement providing for regional autonomy. The land claims settlement for Quebec Inuit through the James Bay and Northern Quebec Agreement in 1975 which established the region of Nunavik was the first. The Labrador Inuit submitted their land claim in 1977 although it wasn't until 2005 that the land settlement claim was signed leading to the establishment of Nunatsiavut. The Tunngavik Federation of Nunavut (now the Nunavut Tunngavik Inc.) was incorporated in 1982 with the Nunavut Final Agreement approved 10 years later and the Nunavut Land Claims Agreement signed in 1993. Nunavut, as a territorial entity was established in 1999. The western Canadian Inuit, the Inuvialuit, who are in the Northwest Territories are represented by the Inuvialuit Regional Corporation and received a comprehensive land claims settlement in 1984.

Health challenges: Various sources indicate that very little health information is collected on the Canadian Inuit population outside of Non- Insured Health Benefit records although as noted below, even these records do not reveal much information. Some provinces and territories collect health statistics on the Aboriginal population but their methods, including specific health indicators, differ. The inadequacy of Inuit-specific data and systematic research on Inuit health has a significant impact on the ability of health providers and Inuit communities and organizations to monitor the Inuit health care system.[29] Reporting on the health status of

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[25] US data on National Health Expenditures is maintained by the Centers for Medicare and Medicaid Services. Only data up to 2004 has been released.
[26] Kathryn J. Anderson, ibid
[27] Denny DeGross, *op cit*
[28] Statistics Canada, 2006 Census analysis
[29] Lisa Jackson Pulver et al, *Indigenous health: Australia, Canada, Aotearoa, New Zealand and the United States: laying claim to a future that embraces health for all*, World Health Report, 2010 Background paper no 33; http://www.who.int/healthsystems/topics/financing/healthreport/whr_background/en

Canadian Inuit is difficult due to a lack of comprehensive and comparable information and data. This results in an incomplete picture of Inuit health status.[30]

> *Key data issues for Inuit are: the lack of funding and infrastructure to conduct their own population-level survey research; confidentiality and validity in small sample sizes; lack of an Inuit identifier in most provincial and territorial administrative data; lack of Inuit- specific rather than geographically-based socio-economic data and information on health determinants; difficulties accessing university-based research funding and finding support for community-driven applied research; and lack of data on urban Inuit.*[31]

That said, what is known points to a lower health status among Inuit compared to other Canadians. In particular, Inuit are experiencing high rates of suicide at more than 11 times greater than the overall Canadian rate; the incidence of tuberculosis is up to 170 times higher than non-aboriginals and twice the rate estimated in 2004; lung cancer death rates for Canadian Inuit are the highest in the world[32]; mental health and substance abuse are major concerns.

Profile of health system: The national health system is universal coverage with health expenditure largely funded by the government although there is some limited private funding through insurance or out-of-pocket payments.

Responsibility for Inuit health services is divided between the federal and provincial/territory governments. The federal government's role includes setting and administering national principles for the system under the *Canada Health Act*; financial support to the provinces and territories; and several other functions, including the direct delivery of primary and supplementary services to certain groups of people; public health programs; health protection; and funding for health research and health information activities. The federal government provides cash and tax transfers to the provinces and territories in support of health through the Canada Health Transfer.

The provinces and territories administer and deliver most of Canada's health care services. The provincial and territorial governments fund these services with assistance from federal cash and tax transfers. The role of the provincial and territorial governments in health care includes administering their health insurance plans; planning, paying for and evaluating hospital care, physician care, allied health care, prescription drug care in hospitals and public health; and negotiating fee schedules for health professionals.[33]

Most federal health care programs for Inuit are funded through the First Nations and Inuit Health Branch (FNIHB) of Health Canada. From FNIHB Inuit receive Non Insured Health Benefits (dental, drug, vision, crisis mental health services, medical equipment and supplies and medical transportation benefits not available through provincial or territorial systems); and targeted community-based public health and health promotion programs.

The Non-Insured Health Benefits (NIHB) program, one of the biggest federal expenditures, is administered in some regions by or for Health Canada which does not separate Inuit expenditures. It is therefore difficult to analyze the effectiveness of this funding for Inuit.

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[30] Inuit Tuttarvingat,www.naho.ca/inuit accessed March 2011; and Health Council of Canada, *The Health Status of Canada's First Nations, Métis and Inuit Peoples,* January

[31] Lisa Jackson Pulver et al; p 48

[32] Inuit Statistical Profile, Inuit Tapiriit Kanatami, 2008

[33] Health Canada website accessed February 2011; http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/2005-hcs-sss/biblio-eng.php

Other federal departments provide funding to support Inuit health, such as Aboriginal Head Start and Childcare Initiatives.[34]

Provincial and Territorial Delivery Systems relevant to Canadian Inuit: In 1988 the Government of the Northwest Territories (GNWT) and in 1999, the Government of Nunavut (GN) made Transfer Agreements with the federal government, accepting responsibility for health care services to all residents, including most programs targeted to Inuit and First Nations. Inuvialuit receive health care services through regional boards established by the GNWT. Inuit in Nunavut receive health care services through a centralized system that serves all residents. Inuit in Nunavik receive health care services through the Nunavik Regional Board of Health and Social Services. The Board, which is governed by Inuit, was established under the James Bay and Northern Québec Agreement. Health care funds, provincial and some federal, flow from the Québec government to the Board. Other federal funding goes directly to the Board through contribution agreements. [35] The Nunatsiavut Government's Department of Health and Social Development is responsible for the promotion of health and social needs of the beneficiaries of the Labrador Inuit land claim. The delivery model is complex with Primary Care and the Management of Communicable Disease Control, the responsibility of Labrador Grenfell Health, one of four provincial health authorities.

In the case of all the Inuit territories, travel outside an individual's community or region is required for many health care services and treatments. With none of the northern Inuit communities having year-round road access, patients need to be flown out for medical consultations or treatment. Weather conditions can delay departures.[36]

Health expenditure: The most recent available figures show that total health expenditure in Canada in 2007 was CAD$161 billion and estimated expenditures in 2008 and 2009 to be CAD$173.6 billion and $183.1 billion respectively. Health expenditure per capita was $4889 in 2007 with forecasts of $5211 and $5452 for 2008 and 2009 respectively.[37]

Within the publicly funded health care system, health expenditures vary across the provinces and territories. This is, in part, due to demographics, including population density and location as well as geography. Health expenditure per capita is highest in the territories because of their large geographical areas and low population densities. In 2009, for the territories, the health expenditure–to–territorial GDP ratio is 25.8% for Nunavut, 13.8% for the Yukon and 8.3% for the Northwest Territories.[38]

[34] ITK 2004 Backgrounder on Health op cit
[35] ITK Backgrounder on Health, op cit
[36] Aboriginal Peoples Survey, 2006: Inuit Health and Social Conditions, Heather Tait, Statistics Canada, December 2008
[37] National Health Expenditure Trends, Canadian Institute for Health Information, Ottawa, Canada; 2009
[38] ibid

Chukotka (Russia)

Population: According to the 2002 Russian Federation census, there were 1,750 Inuit out of a total of 279,794 people from 40 different indigenous peoples in the north[39]. Proportionally, indigenous peoples of the north represent 0.2% of Russia's total population of 143,221,000.

Geographic and political profile: In the post World War II period, intensive migration from central Russia into Chuktoka had a significant impact on the situation for Chukotkan Inuit. They increasingly became a minority as the population almost doubled thanks to the influx. However, with the breakup of the USSR in the 1990s, there was a reversal of the inward flow as people from other parts of former USSR returned to their places of origin to become citizens of the newly independent states. As a result, the population of Chukotka fell from 164,000 in 1989 to 74,000 at the time of the 2002 Census.[40]

Health challenges: Mortality rates from accidents, homicide and suicide are very high in the northern parts of Russia and especially among the indigenous population. Violent deaths and alcohol abuse are the main causes of the shortened life expectancy in the north (indigenous and non-indigenous). Life expectancy for the numerically small indigenous peoples of the north was estimated in 2004 at 45 years for males and 55 years for females compared to the all-Russia rate of 61 years for males and 74 years for females. [41] It should be noted however that the health status of the Russian population in general declined after the establishment of the Russian Federation in 1991. Rates of tuberculosis (prevalence at 69 per 100,000 population[42]), cancer and heart disease are the highest of all industrialized countries. It also has a significant HIV/AIDS epidemic with a prevalence rate of 11 infections for every 1000 adults. However, there has been a significant growth in public health spending over the past decade and a large-scale healthcare reform program was announced in early 2011.

Profile of health system: The Constitution of the Russian Federation guarantees free medical care for every Russian citizen. However, the funding of healthcare is through a variety of formal and informal systems: tax based medical insurance; employer contributions to the Medical Insurance Fund; voluntary health insurance payments; out of pocket expenses; and "under the counter" payments to doctors and institutions. .

Responsible authorities for health services: The health care system in the Russian Federation is a decentralized administrative structure divided into federal, regional (oblast-level) and municipal (rayon-level) administrative levels. A third of the population receives primary care through work related clinics and hospitals. As regional budgets fund the bulk of healthcare costs, there is wide disparity between standards and health indicators across the country.

The delivery of health services in Russia is a federal, regional and municipal responsibility, carried out in accordance with federal and regional regulations and funded through multiple sources (for example, the federal budget and transfers, regional budgets, and health insurance).

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[39] Andrew, Kozlov, Galina Vershubsky, Maria Kozlova; *Indigenous Peoples of Northern Russia: Anthropology and Health;* Circumpolar Health Supplements (2007:1)

[40] Ibid p. 27

[41] Ibid p. 29

[42] World Health Organization; Russian Federation Health Profile; http://www.who.int/gho/countries/rus.pdf accessed March 2011

However, with the majority of taxes used to fund the health service paid direct to the regions, the poorer regions have less for healthcare. As a result, the quality of and accessibility to health services is influenced by where you live. The reform of regional health systems is a major challenge for the country.

The healthcare facilities vary but the principle ones are rural health posts which offer basic health checks and facilities serving smaller communities; health centres which serve larger rural populations and offer primary care services as well as minor surgery; urban polyclinics which provide a range of general and specialist services; and special focus polyclinics for children.

Health expenditure: While the current status of Russia's National Health Accounts was not available, 2008 figures show that the total expenditure on health per capita was US$866. Total expenditure on health in 2008 as a percentage of GDP was 5.2% [43]

Comparing the systems

The table below provides a snapshot of the differences between each of the four Inuit countries in terms of the variations between health systems in place and health expenditure per capita on an annual basis. In the fourth column, the most recent life expectancy indicator is listed. As can be seen, it is not possible to draw linkages between the different characteristics of the respective health systems, the corresponding financial investment and the system's effectiveness in adequately serving Inuit health needs. There are a number of reasons for this inconclusiveness. Firstly, as noted in several earlier sections, the collection of Inuit specific health data in Alaska, Russia and Canada, is less than adequate in a number of ways making it difficult to identify those issues which are particularly relevant to drivers and determinants affecting Inuit health. Secondly, the data that is available does not necessarily provide a feasible point of comparison in terms of methodology and timing of the data collection.

That said, the contrasting variations between health expenditure per capita and life expectancy outcomes warrants more detailed investigation to determine why the funds invested are not resulting in comparably similar health outcomes. This is particularly noticeable in Nunavut, Canada where the expenditure is the highest across all Inuit regions yet the life expectancy outcome is less than Greenland where the least amount (with the exception of Russia) is spent on an annual basis. There will be a number of factors influencing this variation not least being the location of population and health centres, the costs involved in transporting patients to southern health centres, the isolation of communities, prevailing economic conditions, and opportunities for economic activity, all of which affect the effectiveness of the formal health system.

Table 3: Health system comparisons and outcomes

Country	Health system	Health expenditure per capita per annum (USD)	Life expectancy
Greenland	Universal health care	$3530 (2008)	68 years (2008/WHO)
Alaska	Federal Indian Health Service complemented by public and private insurance	$6450 (2004)* National $4671	69.4 years (Alaskan Natives/ 2000 Census)

[43] World Health Organization; country statistics as of February 2011

Canada	Universal health care complemented by limited private funding	Northwest Territories $8923 (CAD –2005-2009) Nunavut $11801 (CAD – 2005-2009) National $4915 (CAD - 2005-2009)	Inuvialuit: 70.3 years** Nunavut: 68.2 years** All Inuit regions: 66.9 years** National: 79.5 years**
Russia	Free medical care funded through insurance, OOP and personal payments	National $866 (2008)	National: 61 years (2008) Inuit: 58.6 (00-04)

*This is state-wide expenditure and not divided into the per capita amount spent by IHS
** Life expectancy for Inuit and non-Inuit living in Canadian Inuit communities, 2001; ITK Inuit Statistical Profile, 2008; http://www.itk.ca/sites/default/files/InuitStatisticalProfile2008_0.pdf

Overall, despite the variations in the degree of accessibility, universality and expenditure, none of the health systems is adequately meeting the health challenges if health indicators are benchmarks for judging success. However, it is important to remember when assessing the quality or otherwise of individual health systems that physical and mental health is not simply the product of good, inadequate or underfunded health systems. Good health and wellbeing for Inuit across the Arctic is driven by a number of factors including social determinants such as cultural vibrancy, application of traditional knowledge, employment and education opportunities. Physical and geographical constraints such as isolation and distance to health and education facilities also play a major role in affecting Inuit health as do other factors such as housing, environmental contamination, unsafe drinking water, inadequate sewerage and the effects of climate change.

The cost of delivering health across the Arctic is also significant although the outcomes often do not reflect the significant size of the investment, again because of the overarching cost of doing any business in the Arctic. The remoteness also affects the availability of appropriately trained health workers who are also prepared to stay. As seen in Greenland, one of the positives of the Greenlandic health care system is the fact the many of the people working in the system are also a part of the local community and so understand who they are working with.

While health is much more than statistics and indicators, the situation in Canada, where there is inadequate Inuit-specific data, determining existing and future health system needs and priorities for investment will be constrained and distorted by this absence of data.

Box 5: Comparison of health budgets on a per capita basis

A precise comparison of health budgets relevant to Inuit in the four countries is difficult because of the lack of comparable information. But the following gives an indication of the differences particularly with regard to the comparison between the cost of health care in the Arctic regions compared to services provided in the non-Arctic regions of the respective countries and in the case of Greenland, the comparison with Denmark.

Greenland: Health care expenditure in 2008 totalled DKK 1066M (or approximately US$197m). On a per capita basis, Greenland spent the lowest among the Nordic countries at approximately 18,880 DKK or US$3530 per person. At the same time, Denmark spent 28,836DKK or US$5391 on health per capita.

Alaska: Health care expenditures in 2004 were among the highest in the US at US$6,450 per capita compared to the national average of US$5,283

Canada: Health expenditure per capita was $4889 in 2007 with forecasts of $5211 and $5452 for 2008 and 2009 respectively. In 2009, for the territories, the health expenditure–to–territorial GDP ratio is 25.8% for Nunavut, 13.8% for the Yukon and 8.3% for the Northwest Territories.

Russia: Health expenditure per capita in 2008 was US$866 or 5.2% of the GDP. Various autonomous okrugs, such as Chukotka, reportedly have health budgets which are up to 8 times that of the national per capita figure.

Conclusion:

Despite the variations in the health systems as well as national political and economic approaches, none is adequately addressing Inuit health needs. All Inuit populations still have significant gaps between their health status and those of broader national populations. Health expenditure, with the exception of Russia, is high compared to the national average but this does not correlate with improved health outcomes. Overall, however, meaningful measurement and evaluation of the effectiveness of the respective health systems is severely hindered by the lack of relevant and Inuit specific health data.