Health System Stewardship in Arctic Regions

by

Susan Chatwood

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy in Medical Science

Faculty of Medicine
University of Toronto

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Health System Stewardship in Arctic Regions: Shared Priorities and Stewards for Health System Stewardship

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Doctor of Philosophy in Medical Science
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University of Toronto
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Abstract
This thesis responds to health system challenges in Arctic regions where there are complex and interrelated challenges related to climate change and environmental effects impacts, geographic remoteness, indigenous health needs and values, and health equity. Specifically, the United States (US), Canada, Norway and Finland are studied. The need to further understand the health system context has been emphasized in many international and Arctic forums. How health systems situate or optimize performance in the Arctic context has not been studied previously. This thesis explores how health systems respond with a stewardship framework that aspires to adopt ethical and multi-sector approaches to health. To broaden our lens, we developed new methods that recognize both indigenous knowledge and western science. We captured indigenous and national perspectives, and we enveloped notions of common values (humanity, cultural responsiveness, teaching, nourishment, community voice, kinship, respect, holism and empowerment) that provide a basis for health system comparisons in Arctic nations. Policies and strategies within circumpolar nations that respond to shared context and challenges were identified. In particular, we used a case study approach to highlight how circumpolar health systems organize and respond through health system stewardship functions to the shared
circumpolar challenges. Overall, Canada and the United States demonstrated higher levels of self-determination, and Norway and Finland exhibited strengths in strategies and policies influencing work across sectors. While the emphasis on stewardship functions differed, government statements that promoted work across sectors were present in all nations, as were dialogues on the self-determination of indigenous peoples. The findings provide some assurance that there are common values and goals in Arctic regions, and that the concept of stewardship is an effective response within this context. The findings provide a collection of policy resources and a direction for value-based stewardship of health systems in Arctic regions at the regional, national, self-governing and international level of governments. The development of a performance framework and scorecard for this context will enhance the ability to learn from different approaches to stewardship, and guide trusting relationships and health equity in circumpolar nations.
Acknowledgements

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<tr>
<td>AAC</td>
<td>Arctic Athabaskan Council</td>
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<td>AC</td>
<td>Arctic Council</td>
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<td>ACA</td>
<td>Affordable Care Act</td>
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<td>ACIA</td>
<td>Arctic Climate Impact Assessment</td>
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<td>AFN</td>
<td>Assembly of First Nations</td>
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<td>AIA</td>
<td>Aleut International Association</td>
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<td>ANTHC</td>
<td>Alaska Native Tribal Health Consortium</td>
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<tr>
<td>BBA</td>
<td>Balanced Budget Act of 1997</td>
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<td>CAH</td>
<td>Critical Access Hospital</td>
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<td>CDC</td>
<td>Centres for Disease Control</td>
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<td>CSDH</td>
<td>Commission on Social Determinants of Health</td>
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<td>EU</td>
<td>European Union</td>
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<tr>
<td>Flex</td>
<td>Medicare Rural Hospital Flexibility (Flex) Program</td>
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<tr>
<td>GCI</td>
<td>Gwich’in Council International</td>
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<td>ICC</td>
<td>Inuit Circumpolar Council</td>
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<tr>
<td>HCQI</td>
<td>Health Care Quality Indicators</td>
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<td>HDI</td>
<td>Human Development Index</td>
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<td>HIS</td>
<td>Indian Health Service</td>
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ICC  Inuit Circumpolar Council
IHCIA  *Indian Health Care Improvement Act*
ILO  International Labour Organisation
ITK  *Inuit Tapariit Kanatami*
IPHTG  International Public Health Task Group
NICH  National Inuit Committee on Health
OECD  Organisation for Economic Co-operation and Development’s
PHAC  Public Health Agency of Canada
POSKE  *Pohjois-Suomen sosiaalialan osaamiskeskus*
RAIPON  Russian Association of Indigenous Peoples of the North
RCAP  Royal Commission on Aboriginal Peoples
SANKS  Sámi National Centre for Mental Health
SC  Sámi Council
SDOH  Social Determinants of Health
UNDRIP  *United Nations Declaration on the Rights of Indigenous Peoples*
UNESCO  United Nations Educational, Scientific and Cultural Organization
WHNAA  White House Council on Native American Affairs
WHO  World Health Organization
WIPO  World Intellectual Property Organization
WTO  World Trade Organization
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Chapter 1
Introduction and Circumpolar Context

Segments of this chapter has been modified from the following: Chatwood S, Bjerregaard P, and Young K. Global health – A circumpolar perspective. American Journal of Public Health. July 2012, Vol. 102, No. 7 (see Appendix A).
Circumpolar health systems face significant challenges, including North-South health disparities, diverse cultural groups within indigenous populations, capacity issues and the logistical challenges inherent in providing equitable services. Arctic nations feature a multitude of cultures and multiple levels of government, spread out over geographically dispersed regions with a harsh and rapidly changing climate. This complex environment presents special challenges to service delivery and influences approaches to governance and the management of a circumpolar health system.

This thesis explores health system stewardship as a purposeful response to a more holistic and ethical approach to health system oversight in the circumpolar context. This approach is required in contexts were there are increasing pressures on human health from climate change, large health disparities and legacies of the colonization of indigenous peoples. We introduce this approach by first situating the study of circumpolar health in a systems framing, by recognizing the importance of indigenous knowledge and western science in informing an evidence base and in developing new methodological approaches. This approach is used to highlight the role of different value systems in circumpolar regions. Finally, we explore key elements in the consistency of health system stewardship functions in Arctic regions and provide recommendations for further study.

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1 “Circumpolar” and “Arctic” are used interchangeably throughout this thesis. “Circumpolar” often is used to emphasize the collective of Arctic States in the international context (global) and “Arctic” is used to refer to the high north within countries or to an international setting synonymous with circumpolar.

2 “Indigenous” is a term recognized by the United Nations Forum on Indigenous Issues. Its use is based on an understanding of the following issues: self-identification as indigenous peoples at the individual level and acceptance by the community; historical continuity with pre-colonial and/or pre-settler societies; a strong link to territories and surrounding natural resources; distinct social, economic or political systems; distinct language, culture and beliefs; the formation of non-dominant groups of society; a resolve to maintain and reproduce ancestral environments and systems as distinctive peoples and communities (5. United Nations Permanent Forum on Indigenous Issues. Indigenous peoples, indigenous voices. Factsheet. Who are indigenous peoples? : United Nations.; nd.). In Canadian documents, the identifier of “indigenous” is often interchanged with “Aboriginal.” This comes from wording in the Canadian constitution. “Indigenous” is the overarching term used in this thesis; however, when “Aboriginal” is used in a reference document, the identification is used in the thesis text.
1.1 Objectives

- Situate circumpolar health in the context of health system research and performance measurement. (Chapter 2)
- Develop a methodology that supports a systematic and holistic approach to applying indigenous and western knowledge to consensus approaches. (Chapter 3)
- Identify the indigenous value systems that could underlie health system stewardship in circumpolar regions, as well as their implications in relation to current values and stewardship of a circumpolar health system. (Chapter 4)
- Highlight stewardship functions that are responsive to circumpolar factors (climate change and environmental effects impacts, geographic remoteness, indigenous health needs and values and health equity) and their implications for health system stewardship in circumpolar regions. (Chapter 5)

1.2 The Circumpolar Environment

In recent years, the discourse within the shared geopolitical space of circumpolar nations has been enhanced through the northern dimension strategies and policies of the Arctic nations. These policies have become incorporated into national and regional policies that recognize northern regions (6-10). They are instrumental in the construction of a new geopolitical space and a new, more inclusive, circumpolar discourse between nations, northern regions and indigenous peoples. An Arctic presence is also part of the identity and the alignment of priorities of these nations. Many components of this identity are captured within northern strategies of circumpolar nations and, in some cases, tensions may arise between national identity and priorities. The dynamics of national and international priorities play out daily in the circumpolar space and involve a complex web of actors.

Shared experiences across international boundaries include areas such as climate change, resource development, environmental concerns and emergency response. In past decades, a number of international forums such as the Arctic Council and Barents Sea collaborations have emerged to facilitate collaboration and responses to these challenges. International relations in the circumpolar environment also extend past formal collaborations and include numerous

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3 Small passages regarding the circumpolar environment and historical context may be duplicated in introductory chapter sections of this thesis where published and submitted papers are inserted.
activities related to knowledge-sharing, scientific collaborations, education, arts, sports, youth networks, indigenous organizations and families and kinship groups.

The health and well-being of Arctic populations and community health systems are one component within this “web” of actors and impact both responses to community wellness within nations and actions between nations in the international context. There is a clear international commitment to protect these systems and to address broader determinants of health (1). The challenges of health systems within nations has received some attention in relation to health disparities and the costs and challenges of system operations; however, our understanding of the key levers that are active in systems oversight and operations in this setting is limited and the broad policy approaches to improving health systems are largely unimplemented (11). In the international context, we have some understanding of the distribution and determinants of disease within and between nations, but less is known about their systems, shared values and goals, as well as our ability to compare and learn from one another.

We began with a configurative review of the literature to explore the scope of work conducted on health and health systems in circumpolar regions (12). We identified the geographic context, historical context, health outcomes and determinants of health by conducting a review through a keyword search of health and Arctic databases. Below, we synthesize key findings related to the geographic context, historical context and broad determinants of health. The literature on health systems in circumpolar nations was less developed and required an exploratory workshop approach to capture perspectives on health system performance and circumpolar health (11).

1.2.1 Geographic Context

Circumpolar nations are defined by political and geographical boundaries (13, 14). From a political perspective, the circumpolar countries are the eight member states of the Arctic Council: the United States, Canada, Denmark – with its self-governing territories of Greenland and the Faroe Islands – Iceland, Norway, Sweden, Finland and Russia.

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4 For Canada, only the sub-national level of territories were included in the review. It is noted that some sub-provincial jurisdictions of provinces in Canada share circumpolar features. Specifically, Labrador/Nunatsiavut in Newfoundland and Labrador, and Nunavik in Quebec.
Diverse ethnic groups inhabit these circumpolar regions. Many indigenous groups cross international boundaries, such as the Aleut, Inuit, Gwich’in, Athabaskans and Sámi. Indigenous people are a substantial minority in Alaska (20%), Yukon (25%) and Finnmark (30%), and constitute larger proportions in the Northwest Territories (51%), Nunavut (85%) and Greenland (85%). In Russia, indigenous proportions are highest in the autonomous okrugs such as Nenets AO (19%), Taymyr AO (25%), Koryak AO (41%), Evenkia AO (10%) and Chukotka AO (31%), but much less in Yamalo-Nenets AO (7%) and Khanty-Mansi AO (2%) (8). Often, higher proportions of indigenous peoples reside in northern regions of circumpolar nations.

There are twenty-seven political-administrative regions within these nations that are identified by geographic features and share the distinction of being the most northern and remote regions within those nations (15) (see Figure 1.1). The northern territories of Canada represent less than 0.5% of the total population of Canada. Alaska’s population is less than 0.5% of the population of the United States, and Greenland’s population is only 1% of that of Denmark (16). (Tables with detailed data are in Appendix B.)

**Figure 1.1 Map of the circumpolar north and its regions**
Within circumpolar countries, North-South health disparities create strains and contribute to the poor alignment of visions for health and programming. Disparities in health have been described for a number of health outcomes for which data is available, this includes cancers, cardiovascular disease, suicide, tuberculosis and other infectious diseases. (17, 18) The health status of the northern regions in the Arctic nations fall into four distinct clusters, which are consistent regardless of the health indicator used, whether the annual incidence rate of tuberculosis, life expectancy at birth, or infant mortality rate (19). First, the Nordic countries (including Iceland and Faroe Islands) tend to have the best health indicators, and there is little difference between northern and southern regions within these countries, or between the indigenous Sami and the majority population (20). Secondly, Alaska, Yukon, and the Northwest Territories are similar in that their nonindigenous populations have a health status that is comparable to the national population, however, the indigenous populations, accounting for 18%, 25%, and 50% of the total population of these three regions, respectively, tend to fare substantially worse. Third, Greenland and Nunavut, inhabited predominantly by Inuit are similar in having health status that are substantially worse than that of Denmark and Canada (21). Fourth, Russian Arctic regions tend to occur in the low end of the range in most health status indicator. Health disparities are present for both indigenous and non-indigenous populations. (22).

The level of well-being in circumpolar countries is broadly captured by the Human Development Index (HDI) (23). In 2010, most circumpolar countries enjoyed high rankings; Norway, the United States, Canada and Sweden were ranked within the top ten, and Finland, Iceland and Denmark within the top twenty. Russia was ranked sixty-fifth. While the HDI is not broken down for the circumpolar regions within these countries, available health indicators that are components of HDI – such as life expectancy at birth, all-cause mortality and infant mortality – highlight the vulnerabilities and disparities in these areas. In general, these numbers become more strikingly disparate as the proportion of indigenous people increases. For example, the life expectancy at birth is eleven years lower in Nunavut than in all of Canada (16). Table 2 in Appendix B includes the distribution between nations.
1.2.2 Historical Context

Underlying these disparities are the consistent histories of circumpolar nations. Throughout the 1950s and 1960s, policies were enacted whereby indigenous populations were treated as wards of the state, incapable of running their own lives. During this period, paternalistic and assimilationist regimes removed the land rights of indigenous peoples, and suppressed autonomous legal and political institutions (including traditional forms of healing and medicines). Children were removed from their homes, and subjected to abuse and assimilationist forms of education (24). The resulting degradation of indigenous culture, sense of dignity and autonomy had detrimental impacts on indigenous communities.

Since the 1970s, a policy shift has taken place in most circumpolar countries. Indigenous groups have taken on constitutional or legislative affirmations of their distinct status. This shift has been documented through the Multiculturalism Policy Index (MPI). The MPI captures the following:

- the national adoption of policies related to land rights, self-government and the upholding of treaties;
- the recognition of cultural rights and customary law;
- the guarantee of representation in central government;
- the constitutional or legislative affirmation of distinct status; and
- the support or ratification of indigenous rights and affirmative action through international instruments (24).

In 2010, on a scale of nine points based on the above MPI indicators, Canada scored an eight and a half out of nine, the United States scored an eight, Norway a five and Finland a four. Overall, between 1980 and 2010, there has been a steady increase in the average score among circumpolar countries (24). Despite these overall improvements, there is still much policy work ahead, and many more claims to be settled. In addition, the health disparities and social impacts of trauma that are prevalent within families and communities are multi-generational, and will require further generations to heal (25).

The impact of the detrimental period on indigenous interactions with health systems has been twofold. First, the indigenous health system in place during the 1950s were among the traditional institutions and activities that were suppressed and assimilated. Second, government policies (in some cases, health policies) have had devastating impacts on both the physical and mental health
of indigenous people. It is therefore not surprising to see that health system performance is lacking and that the satisfaction with, and cultural relevance of, the health care systems is poor in all circumpolar regions (26-28). In the international context, declarations such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) have recognized the rights of indigenous peoples to maintain and have access to their traditional medicines and health practices, which include the conservation of vital medicinal plants, animals and minerals. The UNDRIP also calls for the right to access, without any discrimination, all social and health services (4). Although circumpolar nations have agreed to the terms of UNDRIP (4, 29), there remains a lack of health system responses, or practical directives within national strategies and policies, in light of UNDRIP.

Descriptive epidemiological studies within circumpolar nations have captured the higher burden of diseases such as tuberculosis (TB) and other respiratory outcomes that raise questions regarding the accessibility of health services in northern regions (21, 30, 31). It has also been noted that health expenditures are generally higher in circumpolar regions. In Canada, regions such as Nunavut have health expenditures 2.3 times the national average. Norway, Alaska, Sweden and Finland’s northern regions spend on average 10–30% more per capita than their respective nations as wholes. Greenland and the Faroe Islands are the only circumpolar regions where spending is less than the “national” (Danish) average (32). Costs related to transportation are often cited as significant cost drivers; however, a more critical appraisal of the economic context is lacking for these regions.

Overall, the health services challenges experienced in circumpolar regions are complex due to unique value systems and a history and pattern of inequities that have arisen because of a complicated set of interactions between policies, environment and history. In the global setting, international organizations such as the World Health Organization (WHO) have approached these issues and framed them around health equity to include notions of fair arrangements that allow equal geographic, economic and cultural access to covered services for all in need of care. Other dimensions of equity include equal possibilities for adequate informal care and equal quality of professional care (33). The Tallinn Declaration promotes shared values of solidarity, equity and participation though health policies, resource allocation and other actions, ensuring due attention is paid to the needs of the poor and other vulnerable groups (34). However, these
international declarations do not acknowledge or address the unique circumpolar context in particular, which is a flashpoint for many health issues of international concern.

Public policy at the national, global and circumpolar levels should change to take into account the evidence related to the social determinants of health (SDOH) in the Arctic, as well as the interventions and policies that will address them.

1.3 Broad Determinants of Health

The right to the highest attainable level of health is enshrined in the charter of WHO and many other international treaties. This right requires governments and others to act – to take steps that increase every individual’s chance of obtaining good health. The realization of this right, however, will not only take access to health care but also action in light of the social determinants of health (SDOH) in the Arctic (35).

The Commission on Social Determinants of Health (CSDH) recognizes three ways in which inequalities in health can be addressed. These include (1) effort to control major diseases through an improved health system, (2) the reduction of poverty and, finally, complimentary to these two approaches, (3) the need to take action in light of the social determinants of health with the broader aim of improving the circumstances in which people live and work (36). The Wilkinson and Marmot Report, for instance, highlights recent gains through scientific attention to the social determinants of health, and outlines new knowledge as it applies to relevant public policy. The Report covers ten key areas, including health determinants in early childhood, poverty, drugs, working conditions, unemployment, social support, good food and transportation policy (37).

Although the overarching determinants of health identified by the different international commissions apply, unique features have been identified within circumpolar regions, with specific attention to addressing health disparities that have been reported for indigenous populations. For Inuit and First Nations in Canada, such determinants include balance, life control, education, material resources, social resources and environmental/cultural connection (38). The national Inuit organization, Inuit Tapariit Kanatami (ITK), recognized the influences of the quality of early childhood development, culture and language, livelihood, income
distribution, housing, personal safety and security, education, food security, availability of health services, mental wellness and the environment.

In Sámi populations, the health disparities are not as evident in broad measures of health outcomes. However, with improvements in ethnic-specific health data, a more detailed analysis is revealing disparities in segments of this population (39). In a community-based analysis using municipal Sámi language designations as a proxy for ethnicity, analysis of socio-economic factors (education, unemployment, disability and poverty) and health outcomes (total mortality, cancer specific mortality and cardiovascular-disease-specific mortality) found no significant difference in the former, and even found that Sámi groups had a longer life expectancy in both men and women (40). Sjolander also found equalities in health outcomes; however, some health problems have been identified among the reindeer-herding Sámi. They were described as originating in marginalization and poor knowledge in the majority population of reindeer husbandry (41). Disparities were also identified in an analysis of population-based data of the SAMINOR study (39). Hansen found self-reported health disparities between Sámi and Norwegian populations for Sámi who had self-reported ethnic discrimination combined with low socio-economic status (42). Driscoll, Dotterrer and Brown assessed the social and physical determinants of circumpolar population health. Their study consisted of a systematic review of recent studies that link determinants of health with the leading causes of mortality and morbidity in Alaska. Key determinants were identified, and they called for further development of the evidence base through research that would validate the findings and enhance our understanding of the relationship between the SDOH and health outcomes in Arctic regions (43).

Table 1.1 provides an overview of published reports and a review of the social determinants of health in circumpolar nations. A WHO report, entitled *The Solid Facts*, captures what has been reliably established by research (37). Driscoll applied Dahlgren and Whitehead’s (1991) socio-ecological model of health determinants to identify determinants via a systematic review of the proximate social and physical determinants of health in the circumpolar north (43). Richmond and Ross utilized a critical population health approach to explore the determinants of health in rural and remote First Nation and Inuit communities (38). Finally, ITK published a revision of a discussion paper that was first submitted to WHO in 2007, outlining the social determinants of health relevant to Inuit populations in Canada today. The revised paper incorporates information
from current data sources and expanded consultations among Inuit regions, primarily through
discussions with subject matter experts within the Inuit Public Health Task Group (IPHTG), a
subcommittee of the National Inuit Committee on Health (44).

The methods of each of these approaches vary considerably and do not provide a solid basis for
direct comparisons. However, some information on common features of social determinants of
health can be gleaned from the table. Overall, certain social determinants of health were
consistently identified; the only exceptional factor was the identification of the environment and
climate change as a determinant in three of the four reports. These three reports specifically
targeted indigenous populations in circumpolar regions.

Table 1.1 Social determinants of health described in circumpolar regions

<table>
<thead>
<tr>
<th>The Solid Facts – WHO (37)</th>
<th>FN/Inuit (38)</th>
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<th>Circumpolar Review (43)</th>
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<td>Material resources</td>
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<td>Work</td>
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<td>Occupational health and safety</td>
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1.3.1 Self-Determination as a Determinant of Health

King et al. point to the colonization of indigenous people and severance of ties to the land as fundamental health determinants (45). They point out that one remedy to colonization is self-determination. According to a study carried out by the Harvard Project on American Indian Economic Development, the important underpinnings of self-determination are genuine self-rule (empowerment), capable governing institutions (the capacity to exercise power effectively, responsibly and reliably) and cultural match (the created institutions’ reflectiveness of the values and culture of the people for whom they were intended) (46). The Report of the Royal Commission on Aboriginal People also called for Aboriginal control of the institutional systems that impact health and health systems by Aboriginal people (47). In order to explore these issues, there is a need for higher levels of engagement with indigenous governments, which may be in varying levels of authority or in transition (48). In the document prepared by ITK on the social determinants of health for Inuit in Canada, a key action identified is increasing levels of self-determination and implementation of Land Claim Agreements in Inuit regions (44). The Assembly of First Nations (AFN) document, First Nations Wholistic Policy and Planning Model, emphasizes the importance of self-government as the foundational framework for Canadian First Nations determinants of health (49).

1.3.2 Climate Change and the Environment

Currently, indigenous peoples’ vulnerability to climate change and the impacts of climate change on health systems are multi-faceted, influencing a broad and intertwined range of socio-economic indicators that are changing at rapid rates in circumpolar regions – and, more recently, on a global scale (50-54). Therein lies the urgency to grasp the mechanisms that define and drive health systems in these unique regions and address the broad ramifications that global climate change stressors play. Environmental dispossession is described as a process with negative implications for health, particularly the social environment (38). First Nations and Inuit have articulated that the role of the physical environment in health is inseparable from that of cultural connections and traditional ways of living (38). Environment as it relates to peoples’ relationship to the land, or lack thereof, is a determinant that is closely intertwined with self-determination and the ability to uphold traditions and cultural practices.
1.3.3 Moving Forward – Health Equity and Access

According to the WHO report on social determinants and the health divide, “social injustice is killing people on a grand scale” (55). Michael Marmott, chair of the Commission on Social Determinants of Health (CSDH), stated that “the CSDH was united by three concerns: a passion for social justice, a respect for evidence and a frustration that there appeared to be far too little action on the social determinants of health” (56). Based on the broad alignment of SDOH in circumpolar regions, and persistent health disparities, these frustrations are echoed in this context.

While the impacts of SDOH in relation to health systems have not been explored specifically in circumpolar regions, there is significant evidence of a disproportionate burden of disease and under-utilization of services in most countries. In addition to the health system itself being a determinant of health, it is tightly interwoven with other determinants. Health sectors often take a leadership role in addressing these determinants, primarily through health promotion and disease prevention (36). To date, much of this work has been limited to the scopes and mandates of health departments. The influences of other sectors on the social determinants of health need greater recognition, together with recognition of the need for a broader understanding of the role of stewardship via effective social and public policy in response to the “health system” goals of equity, health outcomes, responsiveness, social and financial risk protection and improved efficiency. In the review of the literature, we identified SDOH that aligned with global framework elements, such as social gradient, stress, early life development, social exclusion, work, unemployment, social support, addiction, food and transport. We also found determinants that were specific to the Arctic context, including climate change, self-determination, culture and language, early childhood development, personal safety, food security, environmental exposures and access to quality health care. The broad scope of health determinants at play in Arctic regions captures the complexities of the environment and a multitude of factors influencing health that extend beyond the health system.

In the circumpolar context, where social determinants of health play a significant role in health outcomes, it is imperative that a process exist to align all actors who influence health and wellness. As ministries of health move to promote health equity and improve health outcomes, these determinants must be acknowledged as contributing factors by governments, and be acted
on. Responses must be built on trust and acknowledge both the need for self-determination and the impacts of historical colonial relationships. To gain insight on ministry efforts to reduce inequities and promote health in the Arctic context, a broad net must be cast in order to understand government responses and what strategies and policy levers are at play.

1.4 Health System Stewardship

Over the past decade, similar complexities have become evident in the global community. The means by which social and public policy shape the social environment in a way that is more conducive to good health have received extensive attention. Some have proposed a broader lens on systems responding to health and wellness and have proposed “health system stewardship” as a more ethical and inclusive description of the best strategy to approach the multitude of systems that influence health (37). Stewardship is based on shared values and context and accounts for all ministries and governments, their role in health, and how their policies influence health. A stewardship framework, by definition, calls for health improvements through collective responsibility and action across sectors. Figure 1.2 captures the boundaries of health system stewardship functions with a separation of boundaries between (a) health system strategies and policies, (b) health-enhancing factors and (c) broader tertiary factors. Here the role of the health ministry actors is expanded, and opened to the roles of actors outside of health ministries. Our review of health and community wellness in the circumpolar context has identified the complexities of the context and relevance of the social determinants of health. However, we do not have a clear picture of how sectors are collectively working or how future approaches to good stewardship may work in this particular context.
1.4.1 Stewardship Operationalized

Stewardship is defined as the “careful and responsible management of the well-being of the population” and is the “very essence of good government” (58). The term “stewardship” has been interchanged with “governance” and “leadership” (59). While there are similarities between stewardship and the notion of public governance, stewardship is more than governance. It embeds the health system broader societal factors and considers values within wider society, and the political, social and economic context. It is a function of the entire health system, and extends beyond the ministry of health. Stewardship becomes not just about government but also includes role and impacts of the other sectors that influence health, including the private sector and civil society (58).

As envisaged by the World Health Organization (WHO), stewardship is specific to the state’s role in taking responsibility for the health and well-being of the population. At the systems level, stewardship has been highlighted as one of the four main functions of the health system (along with financing, creating and managing resources and service delivery) (60). As a key determinant of economic growth, social advancement and overall development (61), it has been recognized as one of the most complex and critical building blocks of the health system (62). A systematic review of the literature captured six generic stewardship functions: (1) strategy formulation and policy development, (2) intersectional collaboration and action, (3) health system governance and accountability, (4) attention to system design, (5) health system...
regulation and (6) intelligence generation (data and analysis) (57). Another important component of good stewardship relates to the ministries responsibility to promote good performance of the health system. Through good stewardship health ministries support good performance by ensuring a fit between strategy and institutional and organizational structure, and reduction of redundancy and poor alignment of activities within health ministries (57). Thus, stewardship is both an approach to the governance of health systems that can improve health system performance, it is also an approach that provides an environment supportive of policy development and alignment for health system improvement and in which performance management tools like balanced scorecards may be effectively used.

A framework that guides the stewardship approach has been developed by Veillard et al., and aims to assist ministries in the evaluation of the comprehensiveness and consistency of health systems under a stewardship approach (see Figure 1.3) (46). The framework specifies the three main areas of good stewardship: the context and values for health, the health system stewardship functions and the generic health system goals which are adapted to national contexts.

**Figure 1.3 An operational framework for assessing the completeness and consistency of health system stewardship functions of health ministries (Veillard et al.) (46)**
Given that most circumpolar subgroups have poorer health status than the nations to which they belong, together with the recognition of the need for increased levels of self-determination and impacts of determinants of health, it is clear that there is a requirement for a deeper understanding of health system stewardship in circumpolar regions. A value-based approach to oversight and viewing the health system and related sectors that address SDOH is highly relevant in circumpolar nations.

The stewardship lens embraced in this thesis allows for reflection and working within shared values towards a common vision of actions to realize shared health system goals. This applies not only to ministry roles, but also to how those roles are decentralized and how broader sectors, including those influencing the determinants of health, are engaged and work together.

1.4.2 Stewardship in the Circumpolar Context

In circumpolar regions, the mosaic of the wider society, including the actors who influence health, is complex. It is influenced by decentralization and the devolution of powers to regions, indigenous settlements and land claims, and governmental responses to cultural and geographic needs. Many of the community-based sectors have mandates aiming to improve health in the “northern” or circumpolar context. They will no longer accept a passive role and rightly demand a greater say in how health services are run, including how health authorities are held accountable for their work (62). The engagement of community-based sectors is recognized as being of value and is quite prevalent in circumpolar regions. This type of engagement introduces another layer of governance that is not full devolution or decentralization, but rather governance under looser agreements with varying levels of clarity and accountability.

The need for stewardship in the circumpolar context confronts an environment with numerous actors reconciling competing demands for limited resources in challenging environments with poor understandings of their relationship to the vision and goals of the health system. The discharge of stewardship responsibilities requires “an inclusive, thought out policy vision which recognizes all principal players and assigns them roles” (60). In recent years, changes in public policy and administration – particularly decentralization – have created additional demands on local authorities and influenced the role of central ministries both globally (63) and in circumpolar nations (15). As health systems have evolved and become more complex, there has
been an emerging recasting of the role of the state and an emphasis on effective stewardship, rather than a return to earlier “command and control” models (57).

Indigenous peoples’ knowledge and values play a special role and they are grounded in deep understandings of the people and the land. Knowledge is passed on through oral traditions and is measured against more recent experiences. In research that is rooted in the values and traditions of indigenous peoples, traditional settings have been found conducive to knowledge-sharing in approaching and respecting indigenous paradigms (64). Aboriginal and treaty rights are recognized and affirmed in the Canadian Constitution Act, 1982. Aboriginal rights are based in indigenous knowledge, heritage, culture and traditions encompassing all aspects of indigenous societies (49). These systems require their own definition of values for use in stewardship applications (e.g., strategy and policy development) because they are distinct and moving towards self-government.

Governments are currently moving towards more international comparisons for the purpose of increased accountability and strategy development (65). Through these comparisons, improved understandings of the context and values for health system and stewardship functions in Arctic regions can provide insight into many factors that influence social and health policy and, ultimately, health system performance.

1.5 Thesis Outline

This thesis will examine what values and context underlie health systems stewardship in circumpolar nations. We will take an in-depth look at the underlying values for health systems stewardship, and specifically explore indigenous values. Key stewardship functions that respond to the circumpolar context will be described. Four circumpolar nations will be compared to highlight the application of indigenous values in health system stewardship in the circumpolar context. The thesis is a compilation of papers that target peer-reviewed journals and that are meant to be stand-alone pieces. However, they are connected in the overarching objective to explore the context for health system stewardship in circumpolar regions. The thesis begins with a description of stakeholder views on the needs that research should address in circumpolar health system. The need for the inclusion of indigenous knowledge and shared values was
recognized as an important first step in international comparisons on stewardship. We then built on common understandings and compared circumpolar features of health system stewardship.

Chapters 2–5 feature four papers that focus on the study of health system stewardship in circumpolar nations. The process was iterative and required a balancing of existing scholarship in circumpolar health and health system stewardship, recognition of indigenous knowledge and consultation with stakeholders. This approach broadened our understanding of how health system are situated in circumpolar regions, and guided the study in a respectful and responsive manner. Chapter 2 describes a workshop in which the context for health system research in circumpolar regions was explored. This exercise complemented what was found in the literature and provided background for the thesis direction. The workshop was informed by subject area experts, highlighted a shared context and defined a cursory list of priorities and approaches for partnerships. Both the rich historical and cultural context of circumpolar nations was captured and supported international comparisons between Arctic nations with the recognition that underlying values should be acknowledged and openly shared between nations. The importance of indigenous knowledge and respectful partnerships in health system research was emphasized.

In Chapter 3, we respond to the need to include indigenous knowledge in scholarship, and a new research method is described and tested. This recognizes indigenous knowledge as a distinct body of evidence that is complementary to western scientific approaches. The use of a consensus-based mixed method with indigenous knowledge by an experienced group of researchers and indigenous knowledge holders is described. In Chapter 4, mixed methods are applied to a study that clearly outlines the indigenous values and alignment with national values that underlie health system stewardship in the context of circumpolar regions. Chapter 5 describes a case study of four circumpolar nations (the United States, Canada, Norway and Finland) and highlights the key functions of health system stewardship in the circumpolar context. These were (a) features of climate change and environmental effects impacts, (b) geographic remoteness, (c) indigenous health needs and values, and (d) health equity. In Chapter 6, the overall findings are described, along with directions for the advancement of good health system stewardship in circumpolar regions.
1.6 Ethics and Indigenous Protocols

This research has undergone ethics review by the University of Toronto Ethics Review Board. All research in the Northwest Territories and Nunavut requires a research license issued by the Aurora Research Institute and the Nunavut Research Institute under the respective territorial Scientists Acts. The licensures goal is to avoid harm or natural, social and cultural environments of the territories and include a community review to ensure ethical compliance and requirements of reporting back to the community (66). Research progress and completion is shared through summaries in English and Inuktitut which are kept on file at the licensing body and in an online database in the Northwest Territories (Appendix C). The licensing requirements complement the ethical review and meet all the principles of the provisions for First Nations, Inuit, and Métis people outlined in Chapter 9 of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (49).
Chapter 2
Validating the Context and Setting Direction for Health System Research

This chapter has been published as the following: Chatwood S, Bytautas J, Darychuk A, Bjerregaard P, Brown A, Cole D, et al. Approaching a collaborative research agenda for health systems performance in circumpolar regions. International journal of circumpolar health. 2013;72(1). Susan Chatwood is the main author involved in design, data collection, analysis and writing. Other co-authors were participants in the workshops and provided comments on the manuscript.
2.1 Introduction

Health care in Canada’s north and circumpolar regions face considerable challenges with the remote and widely dispersed population, harsh environmental conditions and human resource challenges. Despite per capita expenditures that are among the highest in the world, health outcomes continue to lag behind the rest of Canada, and health disparities between the indigenous and non-indigenous populations within the north persist. While improving the health of northerners requires addressing underlying social determinants, transforming the health care systems holds promise for health improvements in the short and medium term.

The evidence required to inform a northern-focused and relevant transformation of health care systems remains to be generated and applied. This workshop set out to identify priority areas for a research initiative that will address systems challenges and engage decision-makers in these jurisdictions. The overarching objectives of the workshop were to explore the priority areas for health system research in circumpolar regions, to propose how we might best maximize our current resources and to facilitate partnerships for the advancement of a common agenda.

2.2 Process

The workshop highlighted emerging issues through facilitated panels with representatives of sectors engaged in the circumpolar health system, including clinicians, administrators, policy-makers and indigenous groups. Geographic coverage spanned the United States (Alaska), Canada (NWT, Nunavut, Labrador), Norway, Greenland, Denmark and Iceland. The workshop program is provided in Appendix D.

With an eye to summarizing key findings from the day and making recommendations to advance future research activities in the field, a panel of experts was brought together to serve as a “jury” and reflect in committee. While the approach was cursory, the intent was to highlight the main points made throughout the workshop and provide a summary that would guide the development of research collaborations and programs.
2.3 Objectives

The workshop provided an opportunity to network and to advance a shared research agenda that would inform and complement the mandates of policy-makers, systems managers, indigenous leaders and researchers. Seminar questions were formulated to focus the discussion and to highlight priority areas for health system research, data needs and best practices for research partnerships.

Seminar questions:

1. What are the existing health system challenges and resulting priority areas for health system research in circumpolar regions?

2. What do we need from a scholarly perspective to maximize the uptake of data and evidence currently available?

3. What are the best practices for health research partnerships that engage academic partners, community sectors, health authorities and government?

2.4 Findings

Workshop findings under each of the workshop questions are highlighted below, and recommendations for an approach to research collaboration that advances systems improvements in circumpolar regions is highlighted. In general, these recommendations are directed to researchers, funders and decision-makers. We did not have the opportunity to refine the recommendations by target group within the timeframe of the workshop. However, this step is recommended as questions are developed and plans for knowledge translation are made.

Question 1: What are the existing health system challenges and resulting priority areas for health system research in circumpolar regions?

The panel presentations provided an informed perspective and introduced the context of delivering health services in circumpolar regions. Common issues that were raised reflected what
has been described in the literature. Recognized were the challenges inherent in delivering services in remote and scattered populations, in harsh environments and to marginalized indigenous populations, along with a lack of training for management and delivery, and substantial financial resources devoted to health care. As experiences of health system responses to these same challenges were put forth, a strong sense of resiliency emerged through the description of health system reforms in Greenland, responses to economic collapse in Iceland, repatriation of mental health services to Sámi control in Norway, and systems performance frameworks and programs responsive to indigenous populations in Alaska.

The resulting recommendations on priority areas for health system research were specific to systems performance within models familiar to national and international comparisons. As well, many comments arose that raised common issues relating to the context and values underlying health and wellness, specifically in indigenous populations and to broader definitions of health and health systems that recognized the underlying determinants of health. As a result, there was considerable emphasis placed on the need to understand underlying context and values and to take whole-of-government and whole-of-society approaches. In addition to the broader context for health systems, specific research areas were highlighted that related to systems operations in remote regions, mental health, prevalent diseases, aging populations and social determinants of health.
Question 1 Recommendations

**Key recommendations:**

Avoid imposing a narrow paradigm of what “health system” means. Look to multi-disciplinary and cross-sector approaches.

Take into consideration stewardship frameworks to better articulate the scope of activities as they pertain to systems and health status improvements.

Articulate the values and context with respect to health and well-being, especially as it pertains to indigenous and non-indigenous peoples.

Build on indigenous models for health care delivery in circumpolar regions.

Develop models and measures that inform practices that bridge “physical” and “mental” health care systems.

Highlight systems’ responses to providing equal access regardless of residence. Specific examples were related to the use of telemedicine, EMRs, medical evacuations and standards for medical visits (by provider and by patient) where provided.

Respond to increasing demand for health services due to population growth, and aging population, mental health, injury burden and an increase in chronic diseases.

Learn from international comparisons to understand models of care. Create international comparisons between regions with shared values and contexts.

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Question 2: What do we need from a scholarly perspective to maximize the uptake of data and evidence currently available?

In addition to the utilization of current evidence and data held by national and territorial and northern regional authorities, the need for community-specific and timely population health databases was discussed. Specifically, the potential of electronic medical records was raised. The ongoing work within the Government of the Northwest Territories, Labrador Grenfell Health, and Southcentral Foundation was recognized.

The need for participatory action and community-based research methods and data was noted and discussed. These methods were seen to best capture local values and utilize knowledge held in indigenous sectors. They also tend to lead to community capacity development. The need to examine the ways in which traditional healing methods can be integrated with the biomedical model of health service delivery was raised as a specific area where such data could be
informative. Early successes in the development of community-based approaches in Nunavut at the Qaujigiartiit Health Research Centre demonstrated the utility of these methods in identifying and engaging at-risk youth in mental health program development.

Also reviewed was the overarching need to base research design on an integrated performance-oriented framework, with multi-sector partnerships that inform systems improvements and management practice in the north. The time constraints of the workshop did not allow for further discussion on specifics related to the uptake of the data and the evidence currently available. However, the need to create robust research and evaluation programs as new initiatives are implemented was discussed thus ensuring that health sectors and the broader community can learn from implementation of promising practices.

**Question 2 Recommendations**

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<td>Begin with the fundamentals, including need for baseline data and comparable governance practices/policies.</td>
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<td>Recognition of broader interpretations of the system context and diversity of value systems that may require unique approaches to data and indicators.</td>
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<td>Consider health system stewardship functions as data is organized. Be responsive to the needs for data sharing across health systems and community sectors, and to the requirements of data scope and integrity.</td>
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<td>Recognize the potential of community-based partnerships, health authorities and data sources (e.g., traditional knowledge, EMRs, territorial databases).</td>
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<td>Ensure database development notes mechanisms for dissemination of analysis outputs, notes implications for promising practices and provides access to decision-makers for management decisions and system improvements.</td>
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**Question 3: What are the best practices for health research partnerships that engage academic partners, community sectors, health authorities and government?**

The strengths of academic, government and community partnerships were seen to be formative to relevant and applied research that would in turn direct health system improvements. Good partnerships ensure research questions are well designed and responsive to the circumpolar
context, values and community. These partnerships also create the foundation for research programs that are oriented to health system performance and for frameworks that guide researchers, policy-makers and management.

A common theme arose regarding the lack of capacity to sustain partnerships and conduct research across sectors in northern jurisdictions. While many funding programs support collaboration, resource allocations and policies to sustain northern engagement in research are often lacking. It was recognized that partnerships that not only bring in expertise but also build capacity through training and education programs among northerners should be supported through long-term collaborations.

The current memorandum of understanding between the University of Toronto and the Institute for Circumpolar Health Research and the appointment of northern-based faculty provides a sustainable framework and policies to support northern-based graduate students and research. Labrador has similar capacity with faculty on site and agreements between the health authority and Memorial University. Greenland is also building capacity for northern-based activities with partnerships between the government, University of Greenland, University of Southern Denmark and the Centre for Health Research in Greenland. Regions such as Alaska and countries such as Iceland have well-developed academic infrastructures and capacity for health research.

**Question 3 Recommendations**

**Recommendations:**

Expand the research agenda across sectors responsible for health and wellness, and recognize academic and Indigenous knowledge bases.

Northern sectors and academic partners need to work collaboratively, set priorities and focus long-term research agendas.

Priorities need to be set through collaborative mechanisms that engage and recognize the roles and contributions of researchers, decision-makers, managers and clinicians.

Through academic, community and government partnerships, build research capacity in terms of data, networks, scholars and policy-makers trained in the use of evidence.

In circumpolar regions where northern-based academic and community research centres are in early development, recognize the importance of research models that support sustained capacity for northern-based activities and research policy development.
2.5 Conclusions

The workshop set out to address specific questions that would help direct a collaborative research agenda for health system performance in circumpolar regions. While elements of the questions were addressed at a refined level, much of the discussion focused on broader elements regarding the context for health system in circumpolar regions and underlying values for health. Presentations provided narratives of health sectors and individuals experiences as they interacted within health system and adapted to the unique features of the circumpolar context.

There are early indications that shared values and contexts exist between circumpolar regions. These values are rooted in indigenous traditions that are holistic and that value contributions of the broader society. Further study is required to fully understand these values and contexts, and to present these in a framework that will support international comparisons and systems improvements within the circumpolar context.

For many, the concept of health system research as a field that informs decision-making and management was a newer concept. Participants made the distinction as to what a health system as an entity was, as opposed to health outcomes and the understanding of diseases and their distributions (a more familiar field of study). Within the discussions on health systems, performance frameworks were raised as appropriate lenses to further explore the resiliency of health systems in circumpolar environments and apply lessons to systems design and management. These frameworks most readily apply to the circumpolar context and require further study and discussion among partners.

Built-in mechanisms for reciprocal education and capacity building were seen to be a critical component of research partnerships. The imbalance between partners’ knowledge bases in research and management theory, northern health policy and cultural elements can be bridged, and capacity built, through reciprocal educational initiatives. Education is a dynamic tool that can close the capacity gap between partners and facilitate a comprehensive and sustainable research program that improves systems management and operations.

In summary, the workshop highlighted the elements of the shared context, challenges and resulting resiliency in the circumpolar health system. A cursory list of priorities and approaches
for partnerships was developed. Further collaboration is required to formulate mechanisms for partnerships, articulate common values and goals for the health system, and implement frameworks to guide the study and improvements of the circumpolar health system in a circumpolar context.
Chapter 3
Approaching Etuaptmumk: Introducing a Consensus-based Mixed Method for Health Services Research

This chapter has been published as the following: Chatwood S, Paulette F, Baker R, Eriksen A, Hansen KL, Eriksen H, et al. Approaching Etuaptmumk - introducing a consensus-based mixed method for health services research. Int J Circumpolar Health. 2015;74:27438. Susan Chatwood is the main author involved in design, data collection, analysis and writing. Other co-authors were participants in the workshops and provided comments on the manuscript.
3.1 Introduction

The provision of health services in the circumpolar context has proven to be challenging. Common reasons cited for these challenges have included human resource issues, the difficulties of accessing remote areas without roads, the high burden of disease, historical trauma and health services’ lack of cultural responsiveness (67).

The health services’ challenges experienced by indigenous peoples in circumpolar nations are complex and engage a broad and interrelated range of sectors, including health, environment, education, justice and traditional institutions outside government departments. Declarations such as the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) have recognized the rights of indigenous peoples to maintain access to their traditional medicines and health practices, including the conservation of vital medicinal plants, animals and minerals. The UNDRIP also calls for the right to access, without discrimination, all social and health services (4). Circumpolar nations have agreed to the terms of these declarations (4, 29), but have recognized that these rights will require a stewardship model informed not only by currently valued evidence but also by an appreciation of diverse value systems and different sources of evidence. There has been a call to expand the research agenda across sectors responsible for health and well-being and recognize academic and indigenous knowledge bases (11). Such a research approach requires systematic understandings and comparisons in order to gain insight into a health system’s strengths and adaptations applicable in the circumpolar setting (30, 67). This paper describes the current understandings of methodological approaches and presents a novel approach of a mixed-methods methodology to meet this challenge.

3.2 Background

First, the paradigm of indigenous knowledge will be described with relevance to health stewardship research and, second, the rationale for using mixed methods will be explored. Finally, an example of mixed-method consensus technique (a modification of nominal group technique) will be described that enables people with varying worldviews to reach shared understandings and conclusions relevant to indigenous contexts and health system stewardship.
3.2.1 Indigenous Knowledge

The development of indigenous knowledge systems covering all aspects of life, such as management of the natural environment, has been a matter of survival to the peoples who generated these systems. Such knowledge systems are cumulative, representing generations of experience, careful observation and trial-and-error learning. These bodies of knowledge hold significant social, cultural and scientific value (68, 69), embracing both the content of the knowledge as well as traditional forms of expressing it.

While there is not one indigenous body that agrees on a definition of traditional knowledge at the international level, the World Intellectual Property Organization has stated:

*Indigenous knowledge in a general sense embraces the content of knowledge itself as well as traditional cultural expressions and in the narrow sense refers to knowledge resulting from intellectual activity in a traditional context, and includes know-how, practices, skills, and innovations.* (70)

In addition to the international context for indigenous knowledge, there are also definitions specific to nations. For Inuit, the term *Qaujimajatuqangit* captures elements of traditional knowledge. It has been translated into English as “that which tries to capture past, present and future experience, knowledge and values of the Inuit” (71). The Sámi use the concept of *árbediehtu*, a North Sámi term containing two interrelated parts: diehtu “knowledge” and ánbi “heritage/inheritance.” This definition clarifies knowledge as both the information and the process, and emphasizes different ways to gain, achieve or acquire knowledge (72, 73).

*Indigenous Knowledge and Research*

In recent decades, academic study of indigenous knowledge has been primarily conducted by social scientists, and their commentary on the components of indigenous knowledge therefore dominates the literature in this field. However, the academic community only provides a limited view of the depth of this knowledge and is often a translation of traditional knowledge. Porsanger, for example, differentiates between the concepts of “indigenous research” and
“research on, with, and about Indigenous peoples.” Indigenous research here being defined as that which is built on indigenous theorizing and knowledge. Porsanger distinguishes indigenous research from research that is conducted by outside researchers on their own terms and for their own purposes, regardless of the level of collaboration and respect (72). Ande Somby, a Sámi law scholar, explains how approaches to indigenous research are a matter of *re-socializing*, that is, “coming to know our limitations and understand our place in our own society on our own terms, not to show our belonging to others, nor to defend our understandings, but to gain strength and intellectual independence” (72). Overall, indigenous research is not consistently represented in the health literature.

Despite being recognized as a distinct body of knowledge in international forums and across indigenous groups, examples of methods and theories based on indigenous knowledge are not well documented in academic texts or peer-reviewed literature on health systems. As a result, indigenous knowledge and indigenous research methods are often either not accessible or not perceived to be valid sources of evidence in many academic communities (74, 75).

### 3.2.2 Mixed Methods

In the shifting climate of repatriation and reconciliation, there has been a call to “explore, value, and use indigenous knowledge and methods on an equal footing with Western knowledge and methods, and for integrating indigenous and western methods when appropriate” (75). The principles of *Etuaptmunk*/*two-eyed seeing* have been presented as guiding principles for integrative science that builds on indigenous knowledge and methods. The principles have been used to guide studies in environmental sciences, education, social justice and discussions for cultural competency (76, 77). This model serves as a foundation for the business case for the Institute of Aboriginal Peoples’ Health (an institute of the Canadian Institutes of Health Research), the aim being to respond to and resolve the inherent conflicts between indigenous ways of knowing and the scientific inquiry that informs the evidence base in health care.

A mixed-methods approach provides a framework to build on the strengths of the two research paradigms, to honour each of them and to be explicit when each is used. Research questions best suited to mixed methods are those in which one data source may be insufficient or when exploratory findings need to be generalized. In such cases, a second method is needed to enhance
the primary method (78). To date, qualitative and quantitative approaches have been the predominant paradigms in mixed-methods research. With increasing levels of autonomy and repatriation of rights, indigenous knowledge is now entering the academic dialogue and is being recognized as a research/knowledge paradigm distinct from either qualitative or quantitative methods (79).

Both highlighted the benefits of mixing methods to clarify the relationship between western research and indigenous ways of knowing so that more appropriate theories, practices and relations can be developed for their interrelation. The process in itself has been argued to be a vehicle to decolonize – and reconcile – indigenous and western approaches (80). Healey and Simonds also called for attention to indigenous knowledge in mixed-methods research and a focus on the inclusivity of relational paradigms, and how this is achieved in research practice (75, 81). This paper adds to current knowledge by exploring how mixed research methods can be used in a circumpolar setting and by demonstrating how traditional knowledge and consensus methods, familiar to health system research, can be complementary.

3.2.3 Consensus Methods

Consensus methods complement indigenous approaches and styles of decision-making. In the health services research community, the consensus-based approach generally used is a modified nominal group technique that aims to give some structure to the interaction between a group of experts (82, 83). Consensus methods have been used alongside other methods to enhance the robustness of research findings in a variety of health care settings (84, 85). These mixed methods have also been used with consensus methods to enhance the social context of the findings (86). In the case of providing services to indigenous groups, a mixed-methods approach that includes consensus methods combined with indigenous knowledge has demonstrated the usefulness of this approach beyond validating results. It has also ensured that indigenous (Métis) epistemology and axiology were respected and incorporated into particular research projects (74).

This methodological approach recognizes the transformative nature of circumpolar states and the strengths of traditional knowledge. It recognizes the contributions that may be made as a standalone body of knowledge, endorsed and made credible by community protocols. The
methods provide opportunities for the strengths of both knowledge bases to contribute to research that strives to advance social change in culturally complex settings.

In the circumpolar context the mixed-methods research approach has been used to highlight indigenous values that underlie health system stewardship. The application of this novel approach will be described in order to highlight methodological elements and provide an example of the iterative and transformative nature of the methods. As such, it is not a “one size fits all” approach, but is rather a weaving of knowledge bases to answer formative questions.

### 3.3 Research Design

We explored the values underlying health system stewardship through a collaborative consensus-based approach with indigenous scholars and knowledge holders. An embedded, transformative, emergent mixed-methods design was used in this study (78). The research question focused on identifying indigenous values that underlie health system stewardship. In this case, utilization of experts and data sources exclusive to health system research would potentially have limited the scope of the findings. In the question at hand, and in the social political context within the circumpolar regions, the need to include indigenous knowledge rooted in traditional methods was recognized.

The embedded approach allows for a supplemental data set that captures indigenous knowledge within a larger design that is more familiar to management sciences (see Figure 3.1). The transformative approach is change-oriented and recognizes the potential influence of power imbalances within the research process (78). A transformative approach was selected so that the study could be flexible, and also respectful of and empowering to indigenous peoples and their knowledge. Figure 3.1 highlights the context for the knowledge bases and paradigms within the mixed-methods research frame.
The research process was iterative and participants provided input on design, implementation and analysis. The transformative design was emergent to allow investigators to adjust their interactions as required and to allow for the expression of methods more conducive to indigenous knowledge or management science. Although mixed-methods approaches are slowly becoming more common in health services research (87), they are seen by knowledge users and researchers to be valuable when respecting indigenous values and when mixing paradigms of traditional knowledge and health services science.

3.3.1 Participants

This approach requires engaging traditional knowledge holders, clinicians and policy-makers as participants (88). Indigenous knowledge keepers are bound by complex systems and protocols that vary between groups. Thus, the selection criteria for knowledge holders was not prescriptive. The indigenous knowledge embedded in this design was conveyed in films, photographs and stories. These processes are used to share indigenous knowledge, to enable communities to
document their strengths and concerns and thus to promote critical dialogue with policy-makers (89, 90).

### 3.3.2 Facilitation

The nominal group leader met face to face with participants and facilitated the definition of the problem, determining when each step in the nominal group process had been completed and deciding when agreement had been reached. As a participant, the nominal group leader must also have subject-matter expertise (91). In keeping with the spirit of the research methodology, the process was co-facilitated by a holder of traditional knowledge. Facilitating the iterative format requires the ability to move between indigenous knowledge and consensus methods. This approach requires expertise in facilitation techniques and co-leadership between academic and indigenous knowledge holders.

### 3.3.3 Location Setting

Indigenous peoples’ knowledge is grounded in deep understandings of the people and the land. Knowledge is passed on through oral traditions and is measured against more recent experiences. In research rooted in the values and traditions of indigenous peoples, traditional settings have been found conducive to knowledge-sharing in approaching and respecting indigenous paradigms (64). To this end, the workshop was held at a fly-in lodge in a northern region of Canada. The setting aimed to be reflective of indigenous and western paradigms and to allow space for both to be expressed. Participants had the opportunity to move between lecture settings and land-based activities, and to build trust and respect through local ceremony.

### 3.3.4 Embedded Traditional Knowledge

The indigenous context of a circumpolar health system was highlighted and explored through the use of indigenous knowledge shared by participants. This included the sharing of photographs, films and stories alongside participant-facilitated discussion. The exercise introduced the context and identified value-based emerging themes within and between nations. The linkages between nations built common understandings and trust between participants. The topic area of values and their applications to health system stewardship was introduced. To complement the
theoretical explanation, an example of values applied in the specific setting of indigenous midwifery was shared and discussed (25).

### 3.4 Dissemination

It was recognized that outputs required mechanisms that would be respectful of the mixed-methods approaches. This paper represents the application of findings in an academic paper that explores values within health system stewardship. Recognizing that film-based and narrative approaches are more conducive to capturing traditional knowledge, team members with expertise in transferring traditional knowledge through media prepared a film (92). The mixed-media approach to dissemination enables us to reach a large number of stakeholders. Publishing the proceedings and outcomes in film format allowed expression of the experience of a participatory process. Turning the camera on the process articulated the humanity of the participants and provided a respectful medium to capture the connections to values and histories.

### 3.5 Applications of Methods

#### 3.5.1 On Process

The use of mixed-research methods will allow researchers, stewards and community leaders to consider perspectives that are not well captured by traditional academic approaches, and to disseminate findings to broad audiences in academic and community settings, thereby facilitating better knowledge exchange and greater opportunities for implementation. The mixed methods were seen to be applicable both within communities and across nations as a basis for international study. The initial exercise of context setting for each country and nation using indigenous knowledge was informative and provided foundational knowledge for an international consensus exercise. Opportunities for international collaboration were highlighted based on the findings of the data (common issues between nations) and the respectful nature of the iterative approach.

The consensus-based mixed method was used as the overarching methodology in capturing agreement on the indigenous values that underlie health system stewardship (83). The consensus approach reflects not only well-documented health services methodologies but also a series of social preferences applicable in an indigenous context and that capture knowledge outside the
clinical realm. The collaborative consensus-based approach provides a means of synthesizing information where published information is inadequate or non-existent. The approach was found to be feasible for use in small populations and remote regions where traditional knowledge is required to complement qualitative or quantitative studies and data.

The facilitated transformative and iterative approach provided spaces for expressing indigenous knowledge and academic approaches. This proved to be a rich and moving experience for participants. Many of the workshop participants said that discussing values in a constructive and trusting environment had a positive impact on them.

3.5.2 Applicability

Indigenous traditional knowledge is required for decision-making in many areas that impact health system stewardship. The need for applications of this knowledge in health policy and decision-making and actions has been recognized in government policy in some regions (71, 93).

Globally, the need for international legal instruments for the protection of traditional knowledge has been recognized. This has led organizations such as the World Intellectual Property Organization to address aspects of access to and benefit sharing of knowledge with regard to genetic resources (70). The World Trade Organization has negotiated agreements aimed at protecting “traditional knowledge and folklore” that address issues around consent and benefit sharing (94). Specific to health, the World Health Organization has developed a strategy to address issues of policy, safety, efficacy, quality, access and traditional use of traditional medicine (95).

3.6 Conclusions

This paper introduces a new consensus based method that allows for a more holistic approach to inquiry in Arctic regions. The mixed methods used in this research, which included consensus-based and indigenous knowledge methods, were found to have potential for use in further studies on health systems. The mixed-methods approach respects the recognized need for a reciprocal, mutually respectful, dialogic relationship between philosophical frameworks and methodological decisions (96). Scientific methods used in the study of health services are often based on partnerships between investigators, managers, clinicians and end users. Research methods have
been refined to capture diverse perspectives and contexts. Building on the strengths of such multi-partner research collaborations, the addition of clearly defined contributions of traditional knowledge holders provides an opportunity to advance knowledge and its applications in an indigenous and circumpolar context.

The facilitated participatory approach proved to be a rich and moving experience for participants. The mixed-methods approach, which was embedded in a consensus-based, iterative and transformative process, enabled an empowering and relationship-building experience that showed potential for informing further health system development in circumpolar regions. Subsequent to the development of this manuscript, this methodology has already been applied in a new study around suicide. This methodology could also be used in partnership with other community groups where knowledge and experiences are not described in the literature and require more iterative and transformative approaches to integration of unique knowledge bases into health services research questions such as, but not limited to, indigenous communities.

The approach creates opportunities to address important questions during times of reconciliation and repatriation of indigenous peoples’ rights in circumpolar nations. The ability to integrate methods opens doors to multiple ways of knowing and thus to new ways of improving the health system in circumpolar regions.
Chapter 4
Indigenous Values and Health System Stewardship in Circumpolar Countries

Paper submitted March 2016 and under review: BHSR-D-16-00405  Indigenous values and health systems stewardship in circumpolar countries. Susan Chatwood, BScN, MSc, PhD cand.; Francois Paulette; Ross G. Baker, PhD; Astrid Eriksen, PhD; Kjetil Lenert Hansen, PhD; Heidi Eriksen, MD, PhD; Vanessa Hiratsuka, PhD; Josée Lavoie, PhD; Wendy Lou, PhD; Ian Mauro, PhD; James Orbinski, MD, MA; Nathalie Pabrum, RM; Hanna Retallack, BSc; Adalsteinn D. Brown, PhD. BMC Health Services Research.

Susan Chatwood is the main author involved in design, data collection, analysis and writing. Other co-authors contributed to the development of the protocol and indigenous methods and provided comments on and edits to the manuscript for publication.
4.1 Introduction

Circumpolar regions, and the nations within which they reside, have recently gained international attention because of shared and pressing public policy issues such as climate change, resource development, endangered wildlife and sovereignty disputes (30). In response to these shared challenges and overarching political tensions, circumpolar nations have developed national-level strategies and related policies, which in turn drive objectives for foreign policy (7-10). It has been stated that the interrelated elements of these policies have been instrumental in the construction of a new geopolitical space and a new, more inclusive circumpolar discourse (6). Most prominent in this discourse are the Arctic States. The Arctic Council (a high-level intergovernmental forum) defines the Arctic States as being inclusive of the United States, Canada, Iceland, Norway, Sweden, Finland, the Kingdom of Denmark (with the self-governing territories of Greenland and the Faroe Islands) and the Federation of Russia. The Arctic Council also recognizes special-status indigenous groups, and includes representation of Sámi, Inuit and First Nations through international organizations such as the Arctic Athabaskan Council, the Aleut International Association, the Gwich’in Council International, the Inuit Circumpolar Council, the Russian Association of Indigenous People of the North and the Sámi Council.

This geopolitical space is one of the broader aspects of the global health context (19). Shared health challenges have been discussed through various circumpolar forums for decades (97, 98). In these forums, there has been a significant focus on health disparities of indigenous peoples and the impacts of an intertwined range of health determinants such as food security, climate change and, in recent years, health systems (50-53). In a call for national and circumpolar action on shared areas of concern, the Arctic States health ministers and international indigenous leadership recently met and signed a declaration that identified shared priorities for international cooperation (99). Among the areas for collaboration raised, the declaration highlighted the importance of enhancing intercultural understanding, promoting culturally appropriate health care delivery and strengthening circumpolar collaboration in culturally appropriate health care delivery. Reference to health strategies such as the Kitigaaryuit Declaration, endorsed by the Inuit Circumpolar Council, emphasizes the need for collective approaches to address the health issues that arise across international boundaries in circumpolar regions in a way that reflects and respects indigenous values (100).
It is evident that the web of actors who influence health is complex and is itself further influenced as indigenous peoples transition from the impacts of policies of assimilation to post-colonial phases of governance and resulting redistribution of power, in the form of decentralization and devolution of power to regions, indigenous settlements and land claims. Engagement of local sectors is recognized to be of value and is quite prevalent in circumpolar regions. This type of engagement introduces another layer of governance that is not always equal to full devolution or decentralization; rather, it is governance under a variety of agreements with varying levels of accountability. Despite the organizational complexities, there is a need to identify the common themes, values and sociopolitical context for circumpolar comparisons.

With these needs in mind, the authors have previously described how we might address health system challenges in circumpolar regions, as well as why we need to better understand the shared values and contexts (11). The workshop findings included early indications that shared values and contexts exist between circumpolar regions. These values were seen to be rooted in indigenous traditions that are holistic and value the contributions of broader society. Although the importance of indigenous values is often discussed, such values have not been explicitly documented or explored in a circumpolar context as they may apply to frameworks that capture stewardship functions and performance measures.

This paper responds to the opportunity for further study to fully understand indigenous values and contexts, and presents these as they may apply to a stewardship framework that will support international comparisons and system improvements within circumpolar regions. Specifically, we will explore the value base of indigenous peoples and provide considerations of how these values might interface with national values, health system values and value bases between indigenous nations – particularly in the context of health system policy-making that is inevitably shared between indigenous communities and jurisdictional or federal governments.

4.2 Background

4.2.1 Historical Background

Circumpolar nations share many experiences with the colonization of indigenous peoples and national policies of assimilation. This has had a twofold impact on indigenous peoples. First, the indigenous health system and traditions in place during the era of colonization were among the
traditional institutions and activities that were suppressed and assimilated during this time. Second, these government policies (in some cases, health policies) have had devastating impacts on both the physical and mental health of indigenous people. The Romanow report, *Building on Values: The Future of Canada’s Health Care System*, notes that “the health system must reflect the values, needs and expectations of all Canadians, including Canada’s Aboriginal peoples. The poor health status of Canada’s Aboriginal peoples is a well-known fact and a serious concern not only to Aboriginal peoples but also to all Canadians. Therefore the situation is simply unacceptable and must be addressed” (101). It is not surprising to see that indigenous peoples’ satisfaction with, as well as their culture’s perceived relevance to, national health care systems is poor in all circumpolar regions (27, 28). Since the 1970s, however, a political climate and policy shift has been evident in circumpolar countries, with indigenous groups taking on constitutional or legislative affirmations of their distinct status. This is demonstrated through national adoption of policies related to land rights, self-government, the upholding of treaties, the recognition of cultural rights and customary law, the guarantee of representation in central government, the constitutional or legislative affirmation of distinct status and the support or ratification of indigenous rights and affirmative action through international instruments (24). Recent examples of circumpolar governments’ responsiveness include actions such as the establishment of the White House Council on Native American Affairs, an executive order that recognizes the inherent sovereignty and right to self-determination of indigenous nations (102). A climate of acknowledgement of wrongs previously committed by governments is exhibited through national apologies, such as that of King Harald V of Norway, who expressed regret on behalf of the state for the injustice committed against the Sámi people through the harsh policy of Norwégianization, and that of Canadian prime minister Stephen Harper, who apologized on behalf of the Canadian government for harms caused by residential schools (103, 104).

Specific to health, declarations such as the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) have recognized the rights of indigenous peoples to maintain and have access to their traditional medicines and health practices, including the conservation of their vital medicinal plants, animals and minerals. The UNDRIP also calls for the right to access, without any discrimination, all social and health services (4). However, while circumpolar nations have agreed to the terms of the UNDRIP (4, 29), there remains a lack of progress from a
health system perspectives, including a lack of practical directive and understanding in improving and measuring system performance for indigenous peoples.

As we move forward, the intent – and more specifically, the underlying values – of these agreements should be reflected in how we create health policy. In this climate of reconciliation, processes of governance and policy-making require a more comprehensive inclusion of indigenous values and deeper understandings of how these align with national values, as well as, ultimately, a collective approach that influences good stewardship and related policy.

4.2.2 On Values and Stewardship

Use of the term “value” is widespread; it is not clear, however, what exactly values are and how they influence decision-making and good stewardship. A values-based approach to health system stewardship in a circumpolar context is required so we can better understand the contextual elements in circumpolar nations that influence stewards as they approach good stewardship in circumpolar regions. In general, values have been defined as a set of “relatively stable cultural propositions about what is deemed to be good or bad by a society” (105). Theodore Marmor, Kieke Okma and Stephen Latham describe values as individuals’ subjective views about what is worthy or important. Furthermore, they describe the forms values may take with respect to health policy options. They highlight how, in a political context, statements of value may inspire, unite or even “constitute” a people, such as the case of the Declaration of Independence and the Bill of Rights in the United States. In other instances, “values of the common law or the values of the Catholic church, for example, are used to locate fundamental doctrines that emerge from the writings of, or the beliefs of the elite within, a certain tradition” (106).

There are many ways that values may interact, and one critical one – because of how it shapes the roles and scope of government activity, views of performance and the policy function generally – is stewardship. A systematic review of the literature highlighted the importance of the underlying context and values for health, specifically the political and social context and health and health system prevailing values. The underlying values then inform what scope a government may consider in its approach to, and reforms around, the generic functions of stewardship: strategy formulation and policy development, intersectional collaboration and action, health system governance and accountability, attention to system design, health system
regulation and intelligence (data and analysis) generation (57). At the national level, values serve as an important baseline that is visited and analysed in assessing political climate and national tolerance for health reforms and advancement of innovations in policy frameworks. Values are being tested, for example, in the American discussion on the Affordable Care Act (ACA) (107). These values are often on the forefront of national debates on health care reform as governments aim to set priorities and respond to economic and contextual pressures.

Few frameworks exist that are underpinned by values that encompass comprehensive and respectful approaches that serve both indigenous groups and nations as a whole. In the context of national movements to improve system responses for indigenous people, and the need to repatriate indigenous ownership, a stewardship-based approach provides us with the opportunity to reflect on indigenous values and advance national goals to improve the efficiency and responsiveness of health system.

4.3 Objectives

In this paper, we explore the values of circumpolar nations and indigenous people. First, we identified the values described by circumpolar ministries through a review of national acts and multinational forums representative of four circumpolar nations (United States, Canada, Norway and Finland) and, second, we used a mixed-methods consensus process to identify indigenous values in these nations.

4.4 Nordic and North American Values

In circumpolar nations, the values that underlie health systems as a whole are highlighted to varying extents in ministry documents.

National values, and the debates that surround them, are sometimes reflected in multi-national forums, white papers or national commissions. Table 4.1 lists a number of values as they have been emphasized in the four circumpolar nations examined in this study – Norway, Finland, the United States and Canada. Since our interest was in values, we differentiated between stated values and values that were in fact goals. In order to represent national values underlying health systems, values were identified as they were described most recently in national acts and multi-national and national forums. These forums provide opportunities to reflect on these values and
gauge the potential directions for good stewardship and related measures. Whereas government documents merely state what the current values are, the reflective documents captured in larger forums provide some insight as to what should be an ideal or goal for a nation or a group of nations.

The values underlying health systems have been reaffirmed through ministry forums such as the Economic Union (108), while national values have also been revisited through white papers (109) and national commissions such as the Romanow Commission in Canada (101). Most recently, such activities have included the development of a new European policy for health, Health 2020, which is heavily influenced by the values and actions of the Nordic countries. As such, the document provides a unifying and overarching values-based framework for health development for countries with shared expectations based on shared values (110). Overall, the values captured in ministry documents were in fact goals that represented undefined values. For the purposes of focusing on values, these two aspects are differentiated in Table 4.1.

**Table 4.1 Values described for health care in forums and acts**

<table>
<thead>
<tr>
<th>Values or Goals that Represent Values</th>
<th>Health and Policy Forums</th>
<th>National Health Acts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health 2020 (110) EU</td>
<td>Tallinn Charter WHO Europe (111)</td>
<td>USA (107) Health Covenant (101)</td>
</tr>
<tr>
<td>USA PPACA (112)</td>
<td>Canada Health Act (113)</td>
<td>Norway (National Health Care Services Plan) (114)</td>
</tr>
<tr>
<td>Finland Objectives (Health Care Act) (115)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Values</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justice and fairness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solidarity</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dignity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-discrimination</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Liberty</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Respect</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Goals representing undefined values
<table>
<thead>
<tr>
<th>Category</th>
<th>X</th>
<th>X</th>
<th>X</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universality</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Equity (access and outcomes)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>The right to participate in decision-making or <em>(mutual responsibility and public input)</em></td>
<td>X</td>
<td>X</td>
<td>X*</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Accountability</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Or <em>(democracy and legitimacy)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Access to care <em>(responsiveness)</em>#</td>
<td>X</td>
<td>X#</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Client-orientation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Or <em>(stronger patient role)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Strong cooperation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Or *(cohesion and interaction) or # <em>(expansion of clinical preventative care and community investments)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Portability <em>(proximity and security)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Public Administration</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Promotion of health and welfare <em>(work and health)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Efficiency &amp; Effectiveness <em>(professionalism and quality)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Sustainability <em>(value, quality, and efficiency)</em></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>Comprehensiveness</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Within multi-national forums such as the WHO and the European Union (EU), the identification of shared values not only helps gauge tolerance for reforms but also fosters collaboration and shared approaches. In the Tallinn Charter, for instance, the EU member states resolved to “promote shared values of solidarity, equity and participation through health policies, resource allocation and other actions, ensuring due attention is paid to the needs of the poor and other vulnerable groups” (111). The health ministers of the twenty-five member states of the EU also called on European institutes to protect the values and principles that underpin the health systems of the EU as reconciling individual needs with financial pressures. The main feature of these systems is financial sustainability that safeguards these values into the future. As evidenced in Table 4.1, the overarching values of universality, access to good quality care, equity and solidarity have been widely accepted in the work of many EU institutions (108). There remain significant differences, however, between Norway, Finland, the United States and Canada with respect to national values.

Section 19 of the Finnish Constitution guarantees the right to receive indispensable subsistence and care for all who cannot obtain for themselves the means necessary for a life of dignity. It states that the government must guarantee adequate social and health care services for all. Government responsibilities are also stipulated in the Finnish Local Government Act, the Primary Health Care Act, the Act on Specialized Medical Care and the Act on the Status and Rights of Patients. A number of international conventions, as well as the European Social Charter, also emphasize Finnish society’s responsibilities towards its members (116). While the importance of health care in the event of illness is recognized, much greater significance is
placed on sectors who influence health promotion and disease-prevention. To a very great extent, it is recognized that health is influenced by what goes on outside the health care system (117).

According to the *National Health Plan for Norway (2007–2010)*, the government aims to strengthen and coordinate its focus on a more equal and fair distribution of good health. The principal goal is to prevent illness and harm. It is recognized that this does not involve only the health service but also makes demands of all sectors of society that affect public health. The aim is for services to be of a high quality, and to be available within acceptable wait times and distances, reaching out to everyone regardless of their financial situation, social status, age, gender and ethnic background (114).

In the United States, however, there is greater confidence in market competition and in entrepreneurship. Individual rights and personal responsibility play an important role in the United States’ political values. In recent years, the health care reforms within the *Affordable Care Act (ACA)* have brought debates about American values to the forefront. When fully implemented, the insurance reforms are expected to lead to coverage of 94% of the population (112). Consisting of ten separate legislative titles, the ACA has several major aims that demonstrate a shift in values (seen as an infringement by non-supporters). The first and most central aim is to achieve near-universal coverage and to do so through shared responsibility among government, individuals and employers. A second aim is to improve the fairness, quality and affordability of health insurance coverage. A third aim is to improve health care value, quality and efficiency, while reducing wasteful spending and making the health care system more accountable for a diverse patient population. A fourth aim is to strengthen primary health care access while bringing about long-term changes in the availability of primary and preventive health care. The fifth and final aim is to make strategic investments in the public’s health, through both an expansion of clinical preventive care and community investments (112).

Thomas Murray, in a commentary reflecting on American values inherent in the ACA reforms, highlights the broad range of values that Americans want the health care system to embody and pursue: not just liberty (which underlies the premise of choice for health care) but also justice and fairness, responsibility, medical progress, privacy and physician integrity, among others (107). While the ACA primarily directs activities in such a way that individual liberties are
maximized, there are also system approaches that are not as tightly linked to dominant American value orientations, such as programs established through Medicare, Medicaid, the Veterans Health Administration, the Indian Health Service (IHS) and laws mandating emergency medical care and tax incentives (106).

On the other hand, the Romanow report, Building on Values: The Future of Canada’s Health Care System, emphasized that Canadian values of health care are closely tied to understandings of citizenship, not to privilege, status or wealth (101). The principles for health systems articulated in the Hall Commission report of 1964 (118) and the Canada Health Act of 1984 include public administration, comprehensiveness, universality, portability and accessibility. These five criteria have gained widespread public support in Canada (119). With access to health services seen as a Canadian value in itself, the principles underlying the health system are often, by extension, described to be values for health.

Broader connotations of values for health have been recognized in other forums. In 1997, the Values Working Group of the National Forum on Health explored the connections between Canadians’ core values and the health care system (105). They identified several core themes that the public continues to support, including equity (of health and access), compassion, dignity and respect, efficiency/effectiveness, collective responsibility, personal responsibility, quality, thriftiness, responsible stewardship and accountability. The Canadian Health Services Research Foundation undertook an environmental scan to explore the shared values and principles, goals and key health policy issues across provinces and territories. They found that jurisdictions are striving for health care that is person-centred, accountable, efficient and equitable (120).

In Canada, we see higher levels of governmental control over the health system, while the United States maintains elements of individual choice. Overall, from a governmental perspective, values underlying health systems in Canada and the United States are more operational and oriented to the “health system” in itself, rather than to values for wellness that influence actions in sectors outside health. Values described in Norway and Finland, however, are more oriented to values underlying a broader connotation of health and wellness for individuals and society, resulting in a process that is more oriented to health system stewardship and, as a result, is more encompassing to health policy moving across sectors.
While some forums consider indigenous values that are not being reflected within current health systems, there is little published work that identifies the specific values expressed by indigenous people. The following section describes the consensus mixed-methods process by which we examined/identified the indigenous value base, followed by a more detailed description of the values themselves.

4.5 Exploring Indigenous Values

4.5.1 Objective

The objective of this study was to explore and describe the indigenous values that underlie and direct effective health system stewardship in circumpolar countries including the United States, Canada, Finland and Norway.

4.5.2 Methods

We explored the values underlying health system stewardship through a collaborative consensus-based approach with indigenous scholars and knowledge holders. This workshop was based at a fly-in lodge in northern Canada. The setting was a deliberate selection, as it would allow for the expression of traditional knowledge and accommodate gatherings within the consensus process. An embedded, transformative, emergent mixed-methods design was used in this study (78). An embedded design entails the collection of one type of data (traditional knowledge) within a design framework associated with another type of data ([nominal group process]). As such, this embedded approach allowed for a supplemental data set that captures indigenous knowledge within a larger design that is more familiar to management sciences. A transformative approach ensures that the study is flexible, and also respectful of indigenous peoples and their knowledge (78). The process was iterative and the resulting consensus-based mixed-methods approach included both western and indigenous knowledge, striving to bridge the gap between health systems scholarship and indigenous scholarship and inform representative findings. This methodology is described in detail elsewhere (121).

While the first author of this paper (SC) designed the study, provided overall organization and facilitated the consensus methods, the remaining authors contributed to the design through the iterative process, through contributions in embedding the participatory data and in the analysis of
findings. FP co-facilitated and provided leadership in matters related to indigenous knowledge and facilitated matters related to local protocol and ceremony. Recognizing that film-based and narrative approaches are more conducive to capturing some aspects of indigenous knowledge, team members with expertise in transferring traditional knowledge through media prepared a film on the workshop that captured some elements of the findings and experiences of the participants (92). This mixed approach to dissemination is seen to be of value in reaching a number of stakeholders.

Figure 4.1 Indigenous Health Values Workshop
Source: https://www.youtube.com/watch?v=Kk2MVEM3l_g

Participants

A heterogeneous group of ten experts from the circumpolar regions of the United States, Canada, Norway and Finland were brought together. Participants identified as First Nations, Inuit, Métis, Sámi and non-indigenous. While English was the first language of only four participants, it was the common language of the group and used for the majority of the workshop. Other languages spoken included Chipewyan (Denesuline), Sámi, Norwegian, Finnish and French. Participants had varied and combined backgrounds that included experiences as researchers, health care professionals, informal caregivers, indigenous leaders, elders, health managers and clinicians. The research experiences and knowledge bases of the experts were in the areas of health systems, health status in circumpolar countries and indigenous knowledge, as well as in mixed methods in
an academic and indigenous knowledge context. Criteria for inclusion included experience in health systems operations, lived experience in indigenous and circumpolar contexts and traditional and academic models of research and knowledge. Participants were first selected through circumpolar networks; referrals were then made and participants were gathered until there was adequate representation of indigenous groups and health systems perspectives (research, clinical, policy and indigenous knowledge).

The small number of participants \( n = 10 \) was deliberate and is common in nominal-group methods where the aim is to attain a high level of engagement and dialogue (83). In addition, due to small populations and the nature of this subject specialty, there are generally smaller numbers of subject area experts in circumpolar health research.

**Process**

Figure 4.2 highlights the four phases of the consensus process, followed by a more detailed description of each phase. The details of this process are described by the authors elsewhere (121).

**Figure 4.2 Four phases of the consensus process**

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Independent synthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 participants identified between 8–10 values</td>
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</table>

<table>
<thead>
<tr>
<th>Phase 2</th>
<th>Sharing and grouping themes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Values were posted, then arranged by theme</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 3</th>
<th>Identification of values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small group work summarizing themes</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 4</th>
<th>Description of values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data summarized to value name and description</td>
</tr>
</tbody>
</table>

**Phase 1:** At the beginning of the process, participants were asked to work independently and to write values on cards provided. This component was carried out independently to maintain an anonymous process and to allow each participant to express his or her views without influence.
Phase 2: Each participant put forward six of their selected values and the group’s combined chosen values were placed on a wall for all to view. A facilitated and interactive process with discussion between participants allowed for values to be grouped, and discussion around the themes and allocation of values took place in groups.

During the breaks from the hands-on process, participants shared more indigenous-based knowledge via film, stories and ceremony, which contributed to deeper understandings of values, and created opportunities for sharing within a multicultural group.

Phase 3: The third phase entailed assigning a description to the value groupings. Upon completion of the individual or small group work, information was shared in a large group session where the descriptions were discussed. Consensus was further built through this process. At this point, nine value groupings were identified.

Phase 4: Each value grouping’s description shared in the face-to-face session was recorded on a spreadsheet and put in a shared on-line workspace for all participants to view. These descriptions were then summarized through written feedback and telephone conversations, and, finally, a heading was assigned to each value grouping, creating nine overarching values. This component was carried out collaboratively by email after the face-to-face workshop.

4.6 Findings

Nine Indigenous Values

Through this mixed-methods participatory process of consensus-building, nine values were identified and described: humanity, cultural responsiveness, teaching, nourishment, community voice, kinship, respect, holism and empowerment. The values were left intentionally broad in scope with the understanding that they would overlap and interact with one another.

During the workshop, we heard stories related to specific program applications that were reflective of indigenous values. The examples highlighted below provide some perspective on how system responses may play out on the ground. Again, it should be emphasized that the values are interconnected, and so these examples can be relevant to more than one value. These examples are provided, however, for the purpose of illuminating the value being described in a
health system context. The detailed data can be found in Appendix E.

1. Humanity

The value of humanity emphasizes the fundamentality of relationships between human beings. It also recognizes the many aspects of those relationships, including empathy, sensitivity, respect and care, that sustain a wholesome life, build trust and bridge conflict in cross-cultural settings.

Examples put forth by the group included the people-centred care models that are being developed by indigenous people, such as the Nuka System of Care in Anchorage, Alaska, which is built on healthy relationships. The vision and mission focus “on physical, mental, emotional, and spiritual wellness and working together as a community” (122).

2. Cultural Responsiveness

The value of cultural responsiveness encourages processes and protocols that focus health care on community values and culture, drawing on indigenous/traditional knowledge, languages and styles of communication.

In real-world applications, this could mean the engagement of indigenous knowledge and indigenous peoples in all aspects of care. Instances where this has been applied include the case of reserved seats for Sámi students in medical education in Tromso, Norway (123), the law requiring availability of Sámi interpreters and upholding language rights in Finland, a general law which has specific impacts for health (124).

3. Teaching

This value urges that traditional teachings have a central place in the education and training of caregivers and other people who work in health systems. It also supports cultural sensitivity by promoting a knowledge exchange among health care workers, researchers and communities that incorporates a holistic view of the interconnectedness of traditional spiritual and environmental laws, as well as an understanding of the natural order.

A reference program that exemplifies this value is the midwifery education program in Nunavik at the Inuulisivik Health Centre (125). This internationally recognized program includes the
training of Inuit midwives within the community-based birthing services program and is seen to be integral in fulfilling program goals to improve community health and nurture wellness. Other examples of this value include the affirmative action policy that exists to represent Aboriginal peoples through human resources policies and aims to enhance the competence of services in Canada’s Northwest Territories (71).

4. Nourishment

This value recognizes the importance of water and food as nourishment to achieve balanced health, emphasizes local/traditional food and the sharing of food and recognizes the need to use resources wisely and to ensure equitable access.

Some examples of this value in action include dietary protocols and policies for families to bring in outside food to be prepared at hospitals, and staff training for indigenous nutrition needs in Whitehorse, Canada (126). The ability to access traditional foods while recovering from illness in a hospital setting is integral to healing and establishing balance.

5. Community Voice

Community voice urges that the traditional and contemporary values of the community drive the design, processes and delivery of health care. Community members’ shared histories, experiences, language(s) and economy/trades shape how we conceive of health, experience health care, develop trust in health care systems and interact with western medical systems. Access to quality health care for all members of the community is crucial.

An example of the value of community voice in practice is the Elders’ Council and its mandate to inform hospital/health authority policy and ensure services are more responsive to indigenous families at the Stanton Territorial Health Authority in Yellowknife, Canada. Another example is Inuit Qaujimanituqangit (Inuit traditional knowledge) and the Nunavut Government’s IQ framework in Nunavut, Canada, which provides guidance on how traditional knowledge is included in policy and programs for the territory (71).
6. Kinship

This value prioritizes family as an expanded network of kinship associations. It maintains that family is sacred and gives a sense of place and where you come from, recognizing each person’s unique contribution to family in the context of home and the land.

The value of kinship is evident in the midwifery legislation that aims to recognize teaching and continuing education addressing Inuit culture in Povungnituk, Nunavik (127).

Another example is the Southcentral Foundation facility design strategies of Anchorage, Alaska, which aim to accommodate family and community gathering through open-space designs (128).

7. Respect

This value dictates the manner in which interpersonal and community-to-community interactions should take place – that is, with mutual respect for differences within and between families and communities, respect of traditions, traditional knowledge, and traditional healing methods and respect through active listening, trust, sensitivity, transparency and consensus.

This value is evident in Southcentral Foundation’s inclusion of traditional healers on an accredited medical centre campus in Anchorage, Alaska. Another example is Canada’s Non-Insured Health Benefits transportation policy, which allows patients to access traditional healers (but has jurisdictional limitations). These programs strive for comprehensive services though respect of traditions.

8. Holism

This value involves having a holistic view of a person’s ties to land, home, traditions, values, distinctive roles and responsibilities and boundaries/possibilities. It recognizes one’s place in the continuity of space, time, location and purpose, and emphasizes interconnections between the quality of our mental, physical, emotional and spiritual lives.

A land-based camp for mental health services (meahceterapiija) through Sámi National Centre for Mental Health (SANKS), in Karasjok, Norway, exemplifies this value by recognizing the importance of connections with the land and the relationship this has to family and healing (129).
9. **Empowerment**

This value promotes the sense of worth and empowerment of individuals, families and communities that is derived from understanding one’s place in the natural order and one’s ties to land and tradition. It involves establishing community care based on the needs, ways of thinking and holistic perspectives of indigenous peoples to preserve dignity and support. It stresses that informed decisions promote autonomy and independence.

A sense of holism, relationality and interconnectedness of the values was strong and emphasized many times during the workshop. The lines drawn between the nine values are somewhat arbitrary, and are presented only to demonstrate the multiple levels and constructs represented. As such, the values cannot be separated, but are to be viewed as part of a whole:

> When all that is put together – in my language simply we refer to this as “Dene Ch’anié” … It is descriptive of everything, our history, our spiritual, laws, environmental laws, political laws, economic laws, of how people are to live together, to interact. Protocols of living and families, communities and others. So for me, “Dene Ch’anié” is the best word I can use to describe this.

– *Workshop participant*

The initial findings, then, demonstrate there are some commonalities in indigenous values underlying health system stewardship in circumpolar regions within Sámi, Inuit, First Nations and Métis peoples. Of course, this does not discount variations between and within cultural groups, but rather provides support for commonalities that can refine stewardship functions through benchmarking and enhance collaboration and systems performance across circumpolar countries.

### 4.7 Discussion

*Interfacing Indigenous Values with National Values*

As stated earlier, circumpolar nations have shared histories of national policies of assimilation and suppression of values and beliefs of indigenous people. Ultimately, this period and its resulting policies have had detrimental impacts on both health outcomes and traditional systems
of indigenous peoples. Indigenous perspectives within health debates have been captured within the lens of equity, and as such indigenous needs are often framed as belonging to disadvantaged and marginalized populations, as opposed to more strengths-based systems that define people in nations. However, important shifts are occurring within these nations. Coupled with better understanding of the intent of national treaties and the autonomy of indigenous groups, these shifts create a more comprehensive representation of the national context and a positive environment for good health system stewardship, resulting in policy frameworks that are built on shared and inclusive values. Overall, there is an emerging climate of reconciliation and cohesion that acknowledges indigenous and national values in a more complex, yet inclusive manner. In turn, this national dialogue can drive more respectful value bases that will inform health debates and policy frameworks for all residents of circumpolar nations.

While the indigenous values underlying health systems have not been consistently described in the literature, the Romanow report, *Building on Values: The Future of Canada’s Health Care System*, makes special mention of the indigenous vision of health care, “in which each person is considered as a whole, with health and social problems that cannot be cured in isolation from one another, and with resources for achieving health that come not just from expert services but also from the understanding and strength of family, community, culture and spiritual beliefs. It is a vision quite different from that of mainstream health and social services, which tend to isolate problems and treat them separately” (101). The RCAP also features a quotation by Henry Zoe, Member of the Legislative Assembly in Northwest Territories, Canada, from December 1992, which provides a nice summary:

> For a person to be healthy, [he or she] must be adequately fed, be educated, have access to medical facilities, have access to spiritual comfort, live in a warm and comfortable house with clean water and safe sewage disposal, be secure in their cultural identity, have an opportunity to excel in a meaningful endeavour, and so on. These are not separate needs; they are all aspects of a whole.

The workshop described above allowed us to follow a consensus process and hear stories reflecting indigenous knowledge related to specific program applications that were reflective of indigenous values. We recognize that the values generated by this workshop are neither a final
product nor one that is applicable in all sectors providing health services to populations with indigenous representation. Rather, this is intended as a starting point in recognizing the importance of indigenous values in national and circumpolar contexts for health system stewardship. The examples highlighted provide some perspective on how system responses to indigenous values may play out “on the ground.” The linking of indigenous values with health system stewardship frameworks aims to operationalize at a higher level how we might bring indigenous perspectives to the core of good stewardship and facilitate health directives as a component of national agendas to reform policies that previously repressed and assimilated indigenous peoples. The ultimate aim is to achieve better health outcomes for all.

To this end, further consideration of the relationship between indigenous values and national values is required. The interface of indigenous values with overarching national values and consistency of stewardship is a complex interface of constructs; however, it is worthy of further study in order to guide us to enhanced stewardship in circumpolar nations. As noted earlier, Norway and Finland have value systems that are more holistic in nature, while Canada promotes values oriented to a more narrowly defined system, with the United States promoting values for a health system that is limited to activities within health sectors. In an attempt to elicit some discussion on the alignment of suggested values underlying national health systems on one hand, and indigenous values on the other, a preliminary table was developed outlining their similarities and differences (see Table 4.2).

**Table 4.2 Alignment of national and indigenous values**

<table>
<thead>
<tr>
<th>Values identified in national documents</th>
<th>Indigenous values identified by consensus process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dignity (Health 2020)/Ethics (Romanow report)</td>
<td>Humanity</td>
</tr>
<tr>
<td>Liberty (USA)/Solidarity (Health 2020, Tallinn)</td>
<td>Community voice</td>
</tr>
<tr>
<td>Justice and Fairness (of health care insurance) (USA)</td>
<td>Empowerment</td>
</tr>
<tr>
<td>Respect (Romanow report)</td>
<td>Respect</td>
</tr>
<tr>
<td>Non-discrimination (Health 2020)</td>
<td>Cultural responsiveness</td>
</tr>
<tr>
<td></td>
<td>Teaching</td>
</tr>
</tbody>
</table>
As is evident, many of the national values align well with the indigenous values as described in this exercise. The majority of these values, however, come from broader international documents that aim to encompass health systems in a broader stewardship-based model. One exception to this is the US values around liberty, justice and fairness, which align with the call for community voice and empowerment. The values that capture aspects of relationships via teaching, families (kinship) or ties to the land (nourishment) fell outside of the values described in national reports. However, given the interrelated aspects of the values, it cannot be said that these lie outside the scope of other national values.

The definition of values at the national level, as well as their relationship to elements of stewardship including systems reforms, policy development and performance measurement, is a complex and often debated topic (106, 109, 130). Reaching a deeper acknowledgement of indigenous values within existing systems is an ongoing process for these nations. The reaffirmation of indigenous values informs a proactive values-based approach that is inherent in good stewardship and nationhood during these times of reconciliation. A well-articulated and mapped process can provide a mechanism to uphold stewardship functions that are values-based, responsive, engaging across sectors and empowering to indigenous populations. The specific mechanism by which we may incorporate values into a health system stewardship framework merits further study.

It is worth emphasizing, again, that stewardship goes beyond government command and control models of governance, but is more holistic and inclusive across sectors. As indigenous values are captured in the conceptions of good stewardship and phases of implementation are advanced, key sectors to guide this process are those in which indigenous groups have high levels of autonomy and the ability to control and design systems according to values and need. Common
understandings of values can enhance communication between stewards, be they health departments in government, indigenous governments or community-recognized elders.

The ability to articulate indigenous values as a foundation of good stewardship provides guidance for responsive and equitable strategies that enhance the ability of stewards to fulfill the following six generic stewardship functions: (1) strategy formulation and policy development, (2) intersectional collaboration and action, (3) health system governance and accountability, (4) attention to system design, (5) health system regulation and (6) intelligence generation (data and analysis) (57). While the workshop participants provided some examples of systems practices that are responsive to indigenous values, there is a need for a more systematic study of indigenous values and how they align with specific stewardship functions within nations.

4.8 Conclusion

In this paper, we have presented national values and nine indigenous values that underlie health system stewardship in circumpolar nations. While nations represented in this study were limited to four of eight Arctic States (the United States, Canada, Norway and Finland), there was a comprehensive representation of groups within circumpolar nations, including Inuit, First Nations, Métis, Sámi and non-indigenous. The findings of this initiative articulate a previously suppressed value perspective within the national health system due to a political climate that formed policies of assimilation for indigenous peoples. The findings of this study introduce a process and baseline that may inform the political dialogue, broaden the articulation of national values, and provide a basis for further study and applications for good stewardship and international comparisons.

Overall, the identification of indigenous values in informing ethical stewardship of a health system was seen in this study to be a positive, proactive and empowering approach that was built on trust and the strengths of indigenous nations. The commonality in values between countries highlights the potential for international collaborations and comparisons between countries, as nations move towards reconciliation, health system improvements and improvements to the livelihood of indigenous peoples. While program elements in relation to values were described, there is an ongoing need to understand how indigenous values align with national values and stewardship functions, with an aim to improve health system responsiveness and performance in
an indigenous context, and advance national goals of improving efficiencies, population health and system responsiveness for all.
Chapter 5
Shared Priorities and Levers for Health System Stewardship in Arctic Regions

Susan Chatwood is the sole researcher responsible for the design, data collection, analysis and writing of this chapter.
5.1 Introduction

Circumpolar regions draw attention in the health sectors because of the need for health systems\(^5\) to accommodate and respond to an environment with significant health disparities and inequities, diverse cultural groups, capacity challenges and the logistical challenges inherent in providing equitable services in geographically dispersed regions with a harsh and rapidly changing climate. Circumpolar nations feature multiple levels of government, including many indigenous governments that are in transition. This complex environment influences how health systems are governed, as well as which approaches to governance and management are adopted. If governments are to be accountable for the wellness of the population, not just the operating of a “health system” they become accountable for, then they need to be accountable for the “system that impacts health.” Imagine the common scenario of an Inuit woman who is pregnant and suffering from anemia. The solution to her health status is not primarily responded to by a visit to the local nurse in a health center (who might provide supplements) but perhaps through addressing other challenges related to climate change and dwindling caribou herd stocks, food accessibility at the local store, her family’s access to housing, or her community’s ability to design prenatal programs to meet her family’s needs. The role of health ministries in facilitating ethical responsibilities to ensure the wellness of populations are complex and require systematic approaches to oversight.

Stewardship approaches have been promoted as responsive to governance in this context and expand our lens to the systems influencing health and wellness. Stewardship is defined as the “careful and responsible management of the well-being of the population” and is the “very essence of good government” (63). As envisaged by the World Health Organization (WHO), stewardship is more specific to the overarching state’s role in taking responsibility for the health and well-being of the population (131). Stewardship embeds the health system in wider society, and is not just about government, but also about all the actors who influence health, including the

\(^5\) Organizational charts for health systems in the United States, Canada, Norway and Finland can be found in Appendix F.
private sector and civil society (132). In the circumpolar context, where social determinants of health play a significant role in health outcomes, it is imperative that a process exists to align the values and priorities of all actors who influence health and wellness. While the notion of health system stewardship, as well as broader connotations of wellness, has a sense of familiarity in circumpolar regions, the concept of stewardship with an eye as to how health systems are steered has not been explored or evaluated in terms of the appropriateness of using such a model to define the scope of health systems and ultimately inform performance measurement in circumpolar regions.

The objective of this study is to highlight the key features of health system stewardship and to identify the key strategies and policies that are currently applied in the circumpolar context. The aim is to provide insights in relation to stewardship functions in circumpolar regions and to shed light on the applicability of a stewardship framework for comparisons in this context. We will determine key strategies and policies that are of relevance to shared forces within circumpolar contexts and health (i.e., remoteness, health equity, indigenous cultures and climate). This will provide some understanding of common themes related to health system stewardship, and ultimately illuminate how stewardship functions respond to and define priorities within a circumpolar context. Our hope is that this information will assist governments in their aim to be responsive in northern and circumpolar jurisdictions and guide the international community as it explores areas for collaboration. The international dialogues between health systems within this context provide a forum to respond to challenges that may cross borders. Furthermore, exploring stewardship responses to the shared challenges of circumpolar contexts provides opportunities to share promising practices and achieve shared health system goals within circumpolar nations.

5.2 Background

The Circumpolar Environment

Circumpolar nations have unique attributes that make them worthy of international comparisons. In most circumpolar nations, these northern or Arctic regions have a unique context within nations. Arctic regions are known for their remoteness and geographic challenges, and they are primarily defined by political and geographical boundaries (13, 14). From a political perspective, the circumpolar countries can be defined as the eight member states of the Arctic Council: the
United States, Canada, Denmark – with its self-governing territories of Greenland and the Faroe Islands – Iceland, Norway, Sweden, Finland and Russia. There are twenty-seven political-administrative regions within those nations, which are identified by geographic features and which share the distinction of being the most northern and remote regions within those nations (15).

In order to contextualize the circumpolar environment in relation to elements for international comparisons, we reviewed the literature and identified key themes related to circumpolar health systems: geographic remoteness; health equity; indigenous health needs and values; and climate change and environmental health impacts. These themes as they apply in the circumpolar context are highlighted below.

Geographic Remoteness

Certain national-to-regional relationships and factors exert influence on health systems performance among circumpolar nations. National-to-regional relationships play out in North–South relations within circumpolar nations and are strained when northern jurisdictions feel underrepresented and underserviced within the national context (14) (133) (134). It has been suggested by some that the extent to which northern regional issues occupy the attention of national governments is likely influenced by the proportion of the country’s population residing in the north. The northern territories of Canada, for instance, constitute less than 0.5% of the total population of Canada. Similarly, Alaska’s population is less than 0.5% of that of the United States, and Greenland’s population is only 1% of that of Denmark’s (16).

Health Equity

Overall, circumpolar regions face challenges that are complex and interrelated. International organizations such as WHO have approached these issues and framed them around health equity to include notions of fair arrangements that allow equal geographic, economic and cultural access to available services for all in need of care. Other dimensions of equity include equal possibilities for adequate informal care and equal quality of professional care (33). Equity-related disparities within many circumpolar countries create strains and contribute to the poor alignment of visions of health and programming within these nations. Consider, for example, the
level of well-being in circumpolar countries as broadly captured through HDI (23). In 2010, most circumpolar countries enjoyed high rankings, with Norway, the United States, Canada and Sweden ranking within the top ten, and Finland, Iceland and Denmark within the top twenty, while Russia ranked sixty-fifth. While HDI information is not available for Arctic regions within these nations, broad health indicators such as life expectancy at birth, as well as statistics related to all-cause mortality and infant mortality, highlight the vulnerabilities and disparities in these areas. In general, these values worsen as the proportion of Indigenous people increases; for instance, the life expectancy at birth is eleven years lower in Nunavut than in all of Canada (16).

*Indigenous Health Needs and Values*

The circumpolar regions discussed here are inhabited by diverse ethnic groups. These include many indigenous groups, several of which cross international boundaries, such as the Aleut, Inuit, Gwich’in, Athabaskans and Sámi. Indigenous people are a substantial minority in Alaska (20%), Yukon (25%) and Finnmark (30%), and constitute larger proportions in the Northwest Territories (51%), Nunavut (85%) and Greenland (85%). In Russia, indigenous proportions are highest in the autonomous okrugs – for example, in Nenets AO (19%), Taymyr AO (25%), Koryak AO (41%), Evenkia AO (10%) and Chukotka AO (31%), but much less in Yamalo-Nenets AO (7%) and Khanty-Mansi AO (2%) (15).

Satisfaction with, and the cultural relevance of, the health care system with respect to indigenous populations is a challenge that emerges in all circumpolar regions (26, 135). The *United Nations Declaration on the Rights of Indigenous Peoples* states that indigenous peoples have the right to practise their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals. Indigenous individuals also have the right to access, without any discrimination, all social and health services (4).

There is a general shared perspective of values held by indigenous peoples in all circumpolar nations. These values include humanity, cultural responsiveness, teaching, nourishment, community voice, kinship, respect, holism and empowerment. We have provided an overview in Chapter 4 of the implications these shared values have within and between circumpolar nations, as well as their implications for the assessment of health system stewardship.
Climate Change and Environmental and Health Impacts

Currently, the climate change–related vulnerabilities of indigenous peoples and the impacts of climate change on health systems are multi-faceted, influencing a broad and intertwined range of socio-economic indicators that are changing at rapid rates in circumpolar regions – and, more recently, on a global scale. These vulnerabilities include changes in vectors of disease, emerging epidemics, food security, increases in land-based injury and mental health (50-54). Therein lies the urgency to understand the mechanisms that currently drive health systems performance in these regions, and to properly address the broad interaction of stressors at play.

While each circumpolar nation shares features related to climate change and environmental effects impacts, geographic remoteness, indigenous health needs and values and health equity each have unique systems responses. International comparisons that are based on shared values and contexts for health provide a forum to compare systems responses, learn from one another and inform best practices to respond through good stewardship to the shared experience of circumpolar nations.

Circumpolar Comparisons: Towards Applying a Stewardship Framework

The circumpolar nations discussed here are all democratic states. The alignment of certain democratic values, such as equity for health and health outcomes, and indigenous values, has been previously described by the authors. These commonalities provide a forum for comparisons and collaborations between circumpolar states, as shared challenges and contexts are addressed.

Overall, the circumpolar elements of geographic remoteness, health equity, indigenous health needs and values and climate change are intertwined; these labels are not meant to create exclusive divisions. However, these rough categories do provide us with a baseline from which to explore the common features found in circumpolar nations and gain understanding of health system stewardship in the unique context of these regions. With the aid of a health system stewardship framework, this study focuses on aspects related to vision, priority-setting and major levers, including strategies and policies, within circumpolar health systems.
5.3 Objectives

1. Identify key national health system stewards in circumpolar health, including national health departments, self-determining indigenous governments, regional authorities and the international community.

2. Describe the key health system stewardship functions that respond to the circumpolar context.

5.4 Methods

This study uses a comparative case study approach (136-138), which is particularly useful in understanding and monitoring health system stewardship (58). This study utilizes a multiple case study approach that includes four circumpolar nations (the United States, Canada, Norway and Finland), and will encompass an iterative process (137). Selected circumpolar countries support a case study analysis of the constructs and resulting factors identified in the literature review. While not encompassing all eight Arctic States, this selection of States was seen to be representative, and captures key features that influence health system stewardship in circumpolar regions. We selected two countries from North America, the United States and Canada, and two Nordic countries, Norway and Finland.

This case study work is conceptually guided by existing theories about health system stewardship, and specifically the operational framework developed by Veillard et al. (57). This framework (Figure 5.1) recognizes that stewardship includes not only stewardship of the health system functions but also stewardship of the determinants of health, or health-enhancing factors, as well as wider social and economic factors influencing health. This framework was selected because of its value base, broad reach and ability to capture health influences outside the health sector that are common in circumpolar regions where health determinants have significant impacts. This particular framework provides the guidance and structure necessary to better highlight the relationships between the operational elements that arise in the circumpolar context as a result of common values, strategies and policies.

Based on the identification of key stewards of health systems and applicable sectors, through a document review, interviews and direct observation we will highlight key strategies, priorities
and frameworks that have been applied to the abovementioned forces working on circumpolar settings (i.e., remoteness, equity, indigenous peoples and climate change).

Figure 5.1 An operational framework for assessing the completeness and consistency of health system stewardship function of health ministries

Data Collection Procedures

The websites of state governments (the United States, Canada, Norway and Finland) and health agencies were searched for published and unpublished documents relevant to health system stewardship (a list of these sites is available at http://circhob.circumpolarhealth.org/sources/). Documents that were pulled highlight the visions, objectives and strategies for the health system stewardship functions and forces in circumpolar countries and regions.

The data collection entailed a systematic process that included the use of multiple data sources, including ministry documents, archives, the European Observatory on Health Systems and Policies (139-143), and strategies and policies published on government websites between 2005 and 2014. Key informants were also an important source of data, participating in interviews and validating and informing study conclusions through informal opportunities to interact on subject matter that arose from the gathered documents. The data collected through the European Observatory on Health Systems and Policies, ministry documents and interviews was guided by the questioning around health system stewardship introduced by Veillard et al., Smith et al. and
Siddiqi et al., and informed data collection within the categories of health system stewardship functions and health system performance (Appendix G) (57, 59, 61).

The informants and interview participants were representative of national and Ministry of Health policy-makers, northern/regional viewpoints and indigenous perspectives. On occasion, however, they may have referred questions to other sectors or experts within their nation or particular circumpolar context. There were a number of informal opportunities to gather information from ministry departments and other stakeholders within circumpolar health networks. When applicable, indigenous protocols and permissions for research and dissemination were followed. This included research licenses with community consultation in the Northwest Territories and Nunavut (Appendix D). As circumstances arose, informal dialogue informed aspects of the study. A rapport was established with informants that provided opportunities to revisit the data and findings and validate them as required. Selected experts and knowledge holders also served as an advisory body on components of the study. This included input through a review of the preliminary findings. As a privileged participant and active member of the circumpolar community as a past clinician, community member and researcher, the researcher acknowledges any past experiences, biases, prejudices and orientations that may impact the orientation of and approach to the study.

5.5 Analysis

This analysis utilized a qualitative coding strategy based on the selected circumpolar nations and their level of governance and stewardship functions. We tabulated data using a computer-aided qualitative data analysis software system, Dedoose, and through the coding of documents in Endnote reference management software (144, 145). The coding framework is highlighted in Appendix H. There was also hand tabulation of large documents that could not be managed by the software. In order to provide opportunities to validate the data and ensure consistency, we extracted information from multiple sources, including documents and interviews, revisiting and revalidating the data as required. The process of triangulation was used to validate the data.
5.6 Findings

The objectives of this study guided us as we first explored who the key stewards were in circumpolar health and, second, as we highlighted the key health system stewardship functions in this context.

5.6.1 Findings Objective 1

We first gathered information about the general governance structure and political governance structures within the selected circumpolar nations. This objective was critical to understanding where the levers for stewardship, decision-making and accountability lie in these circumpolar nations, and how the distribution of these levers between levels of governments impacts nation-to-nation comparisons. This step also helped to clarify the functions within governments, improving our comparison of governments’ responses to shared forces in circumpolar nations.

Objective 1: Differing Governance Structures in Circumpolar Nations

The key functions of national-to-regional governance are outlined in Table 5.1. We differentiate “governance” and “political governance” as separate issues; according to Saltman, this is a distinction between de-concentration – the transfer of responsibility to a lower administrative level – and devolution – the transfer of responsibility to a lower political level (146). Following Table 5.1, we provide a breakdown of how these nations approach national to decentralized approaches for stewardship. Each region has unique approaches to funding and organization (Appendix H).
Table 5.1 Structural aspects of health systems and dimensions of devolution and de-concentration in circumpolar nations

<table>
<thead>
<tr>
<th>Status and name of northern regions</th>
<th>United States</th>
<th>Canada</th>
<th>Norway</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>Territory: Yukon</td>
<td>Fylke: Norland</td>
<td>Liäni: Oulu</td>
<td></td>
</tr>
<tr>
<td>Alaska</td>
<td>Northwest Territories Nunavut</td>
<td>Troms Finnmark</td>
<td>Lappi</td>
<td></td>
</tr>
<tr>
<td><strong>Region population</strong></td>
<td>698,473</td>
<td>109,561</td>
<td>465,000</td>
<td>657,399</td>
</tr>
<tr>
<td><strong>Objectives of the health system</strong> (European Observatory on Health Systems and Policies)(139)</td>
<td>Surgeon General sets national voluntary objectives in the Healthy People Initiative. It has four overall goals relating to higher quality and longer life, health equity, improving social and physical environments, and promoting health behavior (U.S. Department of Health and Human Services 2011)</td>
<td>The Canada Health Act, advances financial protection, equitable and universal access to medically necessary services.</td>
<td>Embedded in the national legislation and strategy documents. Goal: “Equal access to health care of good quality” (1999 Patient’s Rights Act). Access to services according to health needs, with equal access for equal needs, regardless of gender, social and economic background and geographic location (Ministry of Health, 1999)</td>
<td>Basis of the health system in the national constitution: Everyone shall be guaranteed by and Act the right to basic subsistence in the event of unemployment, illness, and disability and during old age, as well as at the birth of a child or the loss of a provider. The public authorities shall guarantee for everyone, as provided in more detail by the Act, adequate social, health and medical services and promote the health of the populations. (Constitution of Finland (section 19)) Health policy seeks to incorporate health into all policies and aspects of public decision making. Aims to reduce premature deaths, extend people’s active and healthy lives, ensure the best quality of life for all and reduce inequalities in health. (Health for All by the year 2000 strategy (MASH 1987)))</td>
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<td><strong>National Organization</strong> (Young &amp; Marchildon 2012)</td>
<td>The federal and state governments have executive, legislative and judicial branches. Under the executive branch of the federal government, the Department of Health and Human Services (HHS) plays the largest administrative role in the US health care system.</td>
<td>Canada Health Act 1984 – the federal government has jurisdiction for prescription drug regulation and safety, finance and admin of some of the health services for Aboriginal peoples, public health insurance for Canadian armed forces, veterans, inmates and eligible refugee claimants.</td>
<td>The Ministry of Health and Care Services (In Norwegian: Helse-og omsorgsdireksjonen) sets national health policy, prepares major reforms and proposals for legislation, monitors their implementation and assists the government in decision-making.</td>
<td>The Ministry of Social Affairs and Health (MSAH) (In Finnish: Sosiaali- ja terveydenhuolloministeriö STM) directs and guides social and health services at the national level. It defines general social and health policy, prepares major reforms and proposals for legislation, monitors their implementation and assists the government in decision-making.</td>
</tr>
<tr>
<td><strong>Decentralization</strong></td>
<td>Northern state has full administrative</td>
<td>Decentralized system.</td>
<td>Health care in northern region</td>
<td>Health care in northern region governed and administered</td>
</tr>
<tr>
<td>Administrative vs Political (Young &amp; Marchildon 2012)</td>
<td>control over Medicaid</td>
<td>Northern territories administer own single payer primary care and hospital services. Some services and administration for indigenous people fragmented between national level, territory and indigenous self-government.</td>
<td>governed and administered as part of more integrated national systems. Basic laws, financing systems, benefit packages and reforms are, for the most part, determined by national laws made in national legislatures. However, there is considerable administrative delegation at the local level for the administration of health services.</td>
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</tr>
<tr>
<td></td>
<td>Otherwise highly fragmented with administrative decision making divided among federal, state and Alaska Native authorities – and private insurers</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous autonomous/self-governing regions</td>
<td>Indian health law and policy include treaties, federal trust responsibility, tribal sovereignty, and the government-to-government relationship. Alaska Tribal Health Consortium formed by indigenous leadership to oversee tribal services.</td>
<td>First Nations Inuit Health Branch transfers funding to either territorial government or land claim organization for suite of services such as addictions, child health, chronic diseases, community health, nutrition and capacity development A suite of non-insured health services are provided.</td>
<td>None. Note: Norwegian government acknowledged Sámi needs for adapted services through “annual letter of instruction” to the regional health authorities. (Norway – Summary of Sámi Policy) (147)</td>
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<td></td>
<td></td>
<td></td>
<td>None: Note: The Sámi parliament receives a small annual grant from the central government for an approved package of services. The current focus is on the elderly.</td>
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<td>Northern/ Rural Subsidy</td>
<td>The Alaska Health Care Commission was established in state statute with the passage of to serve as the state health planning and coordinating body, responsible for providing recommendations to the governor and the legislature on a comprehensive state-wide health care policy and on strategies for improving the health of Alaskans. Senate Bill 172 (148).</td>
<td>In Canada, health transfers are increased to northern territories as they strive to improve access to care in remote areas.</td>
<td>State subsidy for sparsely populated regions. (less than 2 inhabitants per km2 and in the designated Sámi region)</td>
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<td></td>
<td></td>
<td>Special challenges in relation to remoteness and climate are recognized through three special accommodations; “prehospital,” “specialist” and “climate and altitude” care indexes. Adjustments are made for regional cost index, which on each factor allow for higher transfers to RHAs.</td>
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</table>
In circumpolar nations, payers to the systems have some influence on the control and alignment of sectors. In the United States and Finland, we see systems with multiple payers, where Canada and Norway are primarily driven by tax-based systems. In some instances, payments come with “strings attached” and predetermine how the system is organized and who has control (Canada and Norway); in other instances, however, payments from a variety of sources call for national-level coordination through overarching acts and accountability measures (United States and Finland).

All nations have national government ministries who oversee health acts and broad high-level steering mechanisms. In the case of Finland and the United States, there are a variety of payment schemes (insurance, tax-based, private) that can fragment the system at the regional level. However, this creates some choices for individual clients, while in other cases it is a matter of who the provider is billing for the same care.

Canada and Norway offer primary tax-based systems with large envelopes of funding distributed to the regional level. Decisions on how funding is utilized are left to regions, although there are some restrictions related to the framing of acts and legislation directed from the federal level within steering mechanisms of national acts. Services for groups such as military personnel, police and inmates are also coordinated by federal agencies.

Overall, these nations share some elements of being quasi-decentralized, in that they possess national frameworks for health legislation but also pass authority to regional levels. The mechanisms at play at the regional level are highlighted in Table 5.1 The impact this has across northern regions in circumpolar states is that there is some variation in the level of authority and the regional ability to drive the direction in response to unique features within their environment. As stated earlier, in the case of high-north/Arctic regions, these unique features include remoteness, health equity, indigenous peoples and climate change.

Canada and the United States feature overlapping relations between national authorities and indigenous governments with varying degrees of self-determination within nations. Nordic countries, however, do not have the same level of self-determination in indigenous groups; thus,
In these countries, stewardship functions are influenced through the same levers we see for other municipal levels of governance.

In addition to levels of regionalization, all nations have a number of subordinate agencies of the federal departments of health who play a role in the provision of health services (Appendix I). These include agencies supporting health research, drug development and knowledge centres. For most of these agencies, the administrative centre is based in the national centre, or in some cases in Canada, when regional centres are present, northern responsibilities are placed with an adjacent provincial office, which is directly south of the northern territory geographically.

Within these subordinate agencies, Canada and the United States have branches specifically for indigenous health services, which in turn fund services for indigenous peoples. In the northern regions with majority indigenous populations, this represents a significant proportion of services. In some instances, this creates parallel health services at the regional level within nations. The United States system is discretionary (and is often criticized for lower allocations), and within Canada, the First Nations Inuit health branch provides services to “on-reserve” populations and administers insurance plans for indigenous people. This program creates some controversy in terms of rationale for the program and ties with the treaty obligations of federal governments. In Canada these direct transfers have been criticized by the Auditor General for falling outside the obligations and the reporting obligations to parliament (149). Overall, the context and policy framework for delivery of health services to indigenous peoples in Canada and the United States is complex.

Within the various levels of de-concentration of the health system, the degree of self-determination within autonomous and self-governing regions is another dynamic component of systems governance found in Arctic regions. The level of self-determination in circumpolar nations varies and impacts how indigenous governments interact with or accept the authority of the health system. Self-determination is thus a prominent and dynamic governance construct in circumpolar nations. Throughout this study, the subject of the historical and political context and current levels of indigenous control of health systems arose on numerous occasions, and self-determination was described whenever responsiveness issues were raised. Thus, a more in-depth
review was done of the historical and legal context of health services for indigenous peoples in the nations studied.

Figure 5.2 builds on Brett Lee Shelton’s work in the United States on the legal and historical background for the Indian Health Service (150). He captures the major legislative and historical events in health care for indigenous people and outlines the pendulum-like shifts between the United States’ policy preferences for the assimilation or self-determination of Indian people. We followed a similar process and gathered information on the events in Canada, Norway and Finland. This figure helps capture the complexities of the historical context, resulting tensions and dynamic nature of the stewardship of health systems, especially in circumpolar regions where there are high proportions of indigenous peoples who have been adversely affected by the traumatic impacts of assimilation through government and health policies. The commonalities in timelines from conquest, treaty-making, assimilation, reorganization, termination and self-determination for circumpolar nations are likewise highlighted in this figure.
Figure 5.2 Timeline of major legislative and historical events in health care for indigenous peoples in the United States, Canada, Norway and Finland
The timeline in Figure 5.2 demonstrates the shared history between circumpolar nations from the eras of conquest by settlers, treaty-making, policies and acts that promoted assimilation and reorganization, termination and the current era of self-determination, which began in the mid-1970s. The figure captures commonalities across circumpolar nations and reinforces what has already been noted in the United States – namely, that indigenous health policy has a complex history, and “is a collection of sometime conflicting federal Indian law, health policy and inter-governmental relationships” (151). The suffering that results from the breach of trust responsibilities of the government is a matter of social justice and civil rights (151). In the framing of health system stewardship, the basic foundation of which is ethical and trusting relationships, it is necessary to keep in the forefront an understanding of both the dominating policies, the legal doctrine “threads” that remain from each period and political interpretations of legislation (150).

Despite the overall political movements towards self-determination and reconciliation, there still remains a legacy of assimilation policies in the countries studied. For example, a review by the UN Human Rights Committee noted that Canada was not meeting its obligations under the binding International Covenant on Civil and Political Rights. To this end, over a dozen recommendations were made for fundamental changes in Canadian law and policy with respect to the treatment of indigenous peoples (152). The instability of indigenous rights was also stressed when Finland shelved the indigenous rights agreement ratification of the International Labour Organisation’s Convention No. 169 (ILO 169) for the next sitting government. ILO 169 is a legally binding treaty adopted in 1989 and built on the principles of consultation and participation as a means to enable indigenous peoples to play a leading role in shaping their development and future while maintaining their cultures and livelihoods (153). Overall, the rights of indigenous peoples are far from being fully implemented in circumpolar nations, and this is a significant consideration for circumpolar regions. This legacy also has impacts on health system stewardship, a formative and underlying doctrine of which is ethical and trusting relationships between the government and the people.

5.6.2 Findings Objective 2

*Objective 2: Identify the Key Health System Stewardship Functions in the Circumpolar Context*
In this section, we identify key strategies and policies in dealing with circumpolar forces of remoteness, health equity, indigenous peoples and climate change. We also identify implications for health system stewardship in circumpolar regions through an analysis of these strategies through a stewardship framework, identifying relevant stewardship functions in circumpolar regions.

The first finding that demonstrates the different forms of decentralization and the influence on Arctic nations health systems organization demonstrates the tensions inherent in health system stewardship, taking into consideration the degree of de-concentration and self-determination of health systems and the levers of control between central and decentralized (northern) regions. This provides some context as we explore how health system stewards may respond, or aspire to respond, to these unique circumpolar forces. In Table 5.2 we highlight some such key strategies and policies.

**Table 5.2 Key strategies and policies in circumpolar nations for dealing with circumpolar “forces”**

<table>
<thead>
<tr>
<th>Country</th>
<th>Force</th>
<th>Remoteeness</th>
<th>Health Equity</th>
<th>Indigenous health needs</th>
<th>Climate Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>The Balanced Budget Act of 1997 (Public law 105-33) established the Medicare Rural Hospital Flexibility Program (section 4201). Led to creation of Rural Health Plan (154) and designation of small rural hospitals to Critical Access Hospital status.</td>
<td>State of Alaska, Department of Health and Social Services. 2014 Priorities. Integrate and coordinate services (155).</td>
<td>The Indian Health Care Improvement Act (IHCIA), the cornerstone legal authority for the provision of health care to American Indians and Alaska Natives, part of ACA (156). The Alaska Native Tribal Health Consortium. Combines payers and provides comprehensive services to Alaskan natives (157).</td>
<td>Administrative Order No. 28 to establish the Alaska Climate Change Sub-Cabinet (158).</td>
<td></td>
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<tr>
<td>Canada</td>
<td>Health Canada applies Territorial Formula Financing. Federal transfer to the three territorial governments. Allows for services comparable to other areas of Canada (159). Northern Territories have been further subsidized by the Territorial Health System Sustainability Initiative.</td>
<td>Tampa Building our future together the Government of Nunavut’s action plan (160). Integrated service delivery model for the NWT health and social services system (161).</td>
<td>Multiple First Nations Inuit Health Branch and Public Health Agency program coverage for Aboriginal populations in Canada (101). Northern territories primarily administer these programs. Some indigenous governments manage their own. Nunavut Public Health Strategy commitment to work with communities</td>
<td>Pan-Territory Adaptation Strategy. Moving forward on climate change adaptation in Canada’s north (164).</td>
<td></td>
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<tr>
<td>Norway</td>
<td>Report No. 16 (2010–2011) National Health and Care Plan 2011–2015 (114). Recognition of proximity of care and local knowledge in providing good access and relevant care.</td>
<td>National strategy to reduce social inequalities in health. (166)</td>
<td>Annual letter of instruction from National level to regional health authority directs that the rights and needs of Sámi patients must be in planning studies and decision-making (147).</td>
<td>Climate northern strategy (multi-sector), High north vision and strategy. (7)</td>
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<td></td>
<td>The National Health Plan for Norway emphasizes that all staff in the health service should be aware of the patients’ need for integrated care in and outside the organization (114).</td>
<td>The Centre for Northern Finland (in Finnish: Pohjois-Suomen sosiaalialan osaamiskeskus, POSKE) is centre of expertise responsible for developing health and social welfare services for northern Finland. It includes a unit for Sámi affairs (170).</td>
<td>The Social Affairs and Health Committee at the regional level manages, and is in charge of, the necessary tasks that are required for acknowledging the service needs of the Sámi (175).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>Municipalities receive extra state subsidy if less than 2 inhabitants per km² (169). The Centre for Northern Finland (in Finnish: Pohjois-Suomen sosiaalialan osaamiskeskus, POSKE) is centre of expertise responsible for developing health and social welfare services for northern Finland. It includes a unit for Sámi affairs (170).</td>
<td>Socially sustainable Finland 2020. Strategy for social and health policy (171). TEROKA (Reducing Socioeconomic Health Inequalities in Finland) is a joint pilot project for reducing socioeconomic differences in health (172). National action plan to reduce health inequalities 2008–2011 (172).</td>
<td>Sámi issues address in Department of Minority Affairs. The Social Affairs and Health Committee at the regional level manages, and is in charge of, the necessary tasks that are required for acknowledging the service needs of the Sámi (175).</td>
<td>Socially sustainable Finland 2020. Strategy for social and health policy (171). A healthy and safe living environment.</td>
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</tr>
</tbody>
</table>
As we reviewed key strategies and policies in circumpolar nations, it was evident that these nations had a variety of approaches in responding to circumpolar forces of remoteness, equity, indigenous peoples and climate change.

Geographical Remoteness

The nations studied all recognize the additional challenges of providing health services in geographically remote regions. In an effort to uphold national principles that promote equal access to health services, all nations provide some form of accommodation to ensure remote residents have comparable quality and access to health services. In many instances, there are national-level programs that allow for additional funding resources in remote regions. In Norway, for example, the “LEON principle” highlights the importance of treatment being organized according to the lowest, effective level of care principle. In line with this is the effective organization of municipal-level services (114).

In the United States, the Medicare Rural Hospital Flexibility (Flex) Program was authorized by section 4201 of the Balanced Budget Act of 1997 (BBA). The Flex Program provides funding to states for the designation of critical access hospitals (CAHs) in rural communities. CAH designation allows the hospital to be reimbursed on a reasonable cost basis for inpatient and outpatient services (including lab and qualifying ambulance services) provided to Medicare patients. The core areas of the programs include support for quality improvement, operational and financial improvement, health system development and community engagement. Additional activities within the Flex Program include facilitating the conversion of hospitals to CAH status (allowing access to the funding program), supporting network development and supporting for workforce issues (154). In response to the requirements of the program statute and regulations, the State of Alaska published a Rural Health Plan in 1998 to guide implementation of the Medicare Rural Hospital Flexibility Program. This plan provides for the creation of rural health networks, supports the stabilization of small, rural hospitals, promotes accessibility and quality of health care services for rural residents, strengthens rural emergency medical services and establishes the process for designating rural not-for-profit and public hospitals as CAHs (154).

In Finland, the national strategy has recognized that basic health care does not function well enough in all municipalities, and that there are considerable regional differences in the quality
and availability of services. Multi-channel funding for services distorts procedures, creates unnecessary costs and misdirects services. The restructuring of local government and services is therefore aiming to improve efficiencies in organization of health services at the municipal level (171).

In Canada, up until 2014, the territorial health system sustainability initiative provided additional funding to the northern territories with the overarching goals of reducing reliance on the health care system, strengthening community-level services and building a self-reliant capacity to provide services in-territory (174).

**Health Equity**

All governments included in the study recognize the need to address the determinants of health in some form. The degree to which this is operationalized, and where actions occur, varies between nations. Finland has gained acclaim internationally and within the EU for its leadership in developing strategies for health in all policies. The introduction of Finland to the EU and its requirements for collaboration challenged some advancements in health policy; the Finnish chairmanship of the EU focused on health in all policies and challenged some existing EU policies, resulting in EU strategies E2020 and WHO leadership within European offices.

While Norway is not a member of the EU, the social welfare roots of policy formulation found in Finland are shared in Norway. As a result, the goal of health for all and collaboration across sectors are present in national-level strategies, such as the national strategy to reduce social inequalities in health, the coordination reform and the “one patient-one record” strategy. In particular, the national strategy to reduce social inequalities in health is organized within four priority areas: first, to reduce social inequalities that contribute to inequalities in health; second, to reduce social inequalities in health-related behaviour and the use of the health services; third, to support targeted initiatives to promote social inclusion; and finally, to develop knowledge and cross-sectoral tools. In this strategy, the government takes a systematic view on equity and highlights policy levers that promote equity (166).

In Canada and the United States – where federal governments primarily focus on health equity in the framing of system access and reducing disease as functions steering health systems through
national health acts and steering regions in this area – little coordination is occurring in areas of affiliated services. Subordinate agencies such as the Public Health Agency of Canada (PHAC) and the Centres for Disease Control (CDC) have programs and services that address determinants of health outside the health sector. When determinants of health equity are highlighted in Arctic regions, there are no strategic linkages with policies or frameworks in related sectors that influence health outcomes.

*Indigenous Health Needs and Values*

For strategic purposes relating to indigenous contexts, governments approach indigenous needs first from a perspective of self-determination in relation to health systems oversight, and second through promoting health system responsiveness to the cultural appropriateness of care. Self-determination is related to the repatriation of authorities to indigenous groups as nations enter into eras of reconciliation. Although self-determination is not exclusive to health, there are specific implications that relate to functions of health system stewardship. The indigenous context is also captured in policies that aim to enhance the cultural relevancy of services and supports. These policies provide direction for the use of traditional knowledge and language through initiatives such as training indigenous health workers either as physicians or in supporting local community health workers.

The United States and Canada hold federal authorities for Indian health services through national acts, some which remain rooted in a legacy of assimilation policies; it is therefore not surprising that health policy for indigenous peoples in this context is closely intertwined with self-determination, where some health authorities are included in transfers. We see this demonstrated in Obama’s nation-to-nation agreements and in the recent renewal of the *Indian Health Care Improvement Act* within ACA reforms. In Canada, there continues to be conflicting views about constitutional responsibilities for health care, resulting in a confusing mix of federal-, territorial- and indigenous-controlled services (101). As a result, the northern territories have a mix of services that reflects the national state with some oversight and strategies emerging from community governments, others from territorial governments and some from national subordinate agencies, such as the Public Health Agency of Canada and First Nations Inuit Health Branch.
In the United States, there is a similar context with many sectors involved in directing services for indigenous populations. Alaska’s response to this was to develop the Alaska Native Tribal Health Consortium (ANTHC) to coordinate more responsive indigenous health services (175). ANTHC is a non-profit tribal health organization, the largest, most comprehensive tribal health organization in the United States. Working with local, state and federal partners, ANTHC continues making progress towards achieving its vision of Alaska’s Native people being the healthiest people in the world. To reach that vision, ANTHC offers state-wide services in tertiary and specialty medical care, water and sanitation, community health and research, information technology and professional recruitment for tribal health partners (176).

In Norway, the annual letter of instruction from the national level to the regional health authority directs that the rights and needs of Sámi patients must be in planning studies and decision-making (147). The Finnmark Act provides procedures for consultation between the state authority and Sámi parliament and acknowledges the health sector, where there is a risk of wrong treatment owing to a lack of language proficiency on the part of medical staff (147). The Association of Local and Regional Authorities and the Sámi parliament often collaborate on the municipalities’ work on Sámi issues (147). Through the directive, it is emphasized that the equivalent provision of health and social services must be available to the whole population. The government will achieve this for the Sámi population by means of an improved knowledge base for employees of municipal services and through owner control of specialist health services. The Ministry of Health and Care Services will make it clear in the annual letter of instructions to the regional health authorities that the rights and needs of Sámi patients for adapted services must be investigated and clarified in planning, in studies and in the decision-making phase. The ministry will also strengthen the guidance provided to municipal and county services (147). In Sámi regions, language preservation is supported by national policies, and is identified as a prerequisite for providing satisfactory and equivalent public services, including health services, to the Sámi population (147).

In Finland, the Social Affairs and Health Committee manages, and is in charge of, the necessary tasks that are required for acknowledging the service needs of the Sámi. These tasks are the responsibility of the Social Affairs Learning Centre of Northern Finland. The committee prepares social- and health-related political presentations, bills, statements and comments for the
Sámi parliament. The purpose of the committee is to advance the rights and position of the Sámi in the social affairs and health care system of Finland. The committee decides on the usage of the government subsidy, which is stated in the national budget for guaranteeing social and health services in the Sámi language (173). Unlike Norway, in Finland, Sámi populations are not a majority in any single municipality – therefore issues are not dealt with directly through the municipal-level agencies. Pohjois-Suomen sosiaalialan osaamiskeskus (POSKE north) has some prioritization for the Sámi people, and there are efforts to conduct a Sámi-specific health survey. A health committee collects annual allocations for program development and falls under the Ministry for Minority Affairs. Overall, the control of health system decision-making is very centralized, coupled with national levers for decentralization to a non-Sámi majority.

With a majority indigenous population in many circumpolar regions and significant health disparities in these populations, responsiveness of health systems to community needs and values is often highlighted as a priority for health systems. While the health system stewards’ role within the dynamics of self-determination in decision-making is one element of stewardship at play in addressing responsiveness to the indigenous context, various levels of ministry also enhance the responsiveness of the health system to indigenous populations through the training and education of indigenous people in northern regions. The rationale is that an indigenous health care workforce will in turn provide services that are more responsive to indigenous populations. In Canada, these initiatives are led by territorial governments that promote first the reduction of poverty and, second, access to high school education as a key capacity element of the Nunavut Public Health Strategies’ commitment to work with communities and build local capacity to address health and wellness issues (162, 163). The northern colleges in the Northwest Territories and Nunavut hold partnerships with southern universities that offer programs in nursing and social work. Efforts to support a responsive indigenous workforce, however, are less consistent in Canada. There are some territorial-level strategies to enhance the health care workforce. However, governments do not identify any targets related to the education of indigenous personnel.

In Norway, the education of Sámi physicians was a strategy implemented in the 1960s with the development of a northern medical school in Tromsø. This has resulted in some improvements in access to care and, as a result, health outcomes (e.g., TB and infant mortality) since the 1960s in
Sámi populations over the past forty years (123). In Norway, Sámi matters are dealt with through the municipalities where the Sámi are the majority. This, coupled with the policy for Sámi education, has created a prominent Sámi workforce and Sámi-specific programs.

*Climate Change and Environmental Effects Impacts*

Strategies that align the impacts of climate change and health and well-being are present in all nations in this study. With impacts of climate change well underway in Arctic regions, it is not surprising to see the focus of health strategies being on adaptation to, as opposed to mitigation of, climate change.

In the United States, an administrative order was signed to establish the Alaska Climate Change Sub-Cabinet. The role of this sub-cabinet is to advise the Office of the Governor on the preparation and implementation of an Alaska Climate Change Strategy. The order calls for the strategy to build the state’s knowledge of the actual and foreseeable effects of climate warming, to develop appropriate measures and policies to prepare communities in Alaska for climate change and to provide guidance regarding Alaska’s participation in regional and national efforts addressing the causes and effects of climate change (158). Within this order there is recognition of the number of sectors that are impacted by climate change and how this impacts the economy of subsistence communities. Sectors identified as being impacted include public infrastructure (buildings, transportation, shoreline protection, water and sanitation systems and defence facilities), health and culture (health impacts from vector, water and food-borne diseases that are beginning to cause stress, erosion, changes in permafrost, as well as sanitation infrastructure, weather-related injuries and detrimental effects on mental health) and natural systems (impacts on marine, terrestrial and freshwater ecosystems). At the regional level the Alaska Native Tribal Consortium has established a centre for climate and health to help communities better understand the impacts of climate change and adapt in healthy ways.

In Canada, the Pan-Territorial Adaptation Strategy – *Moving Forward on Climate Change Adaptation in Canada’s North* – was built from the shared concerns across territories and the need to reduce the risks posed by climate change to northern infrastructure, economies, human health and safety, ecosystems and traditional cultures. While called a “strategy,” the document does not specifically outline any particular policy action, but instead identifies shared principles,
including the need to build on science and traditional knowledge, to design initiatives suited for the north, and to work together and build on existing initiatives across the north. Through this document, the territories commit to working closely with local, territorial, national, Aboriginal and international partners to share climate change adaptation knowledge and practices in order to develop collaborative activities (164). At the national level the First Nations Inuit Health Branch has funded community-based research projects that increased the understanding of health outcomes related to climate change and need for local adaptation strategies (177).

In Finland, the focus on climate change falls within the strategy for social and health policy – Socially Sustainable Finland 2020. There is recognition that the health and welfare of citizens are affected by the state of their living environment and that climate change and ecosystem decline will curb the potential for well-being. It is acknowledged that environmental challenges and declining natural resources may cause a wide range of health threats such as pandemics and epidemics. The strategy recognizes the need for multiple sectors and municipalities to work together and to be prepared to respond to health threats (171).

Norway’s High North Policy is a white paper that provides a comprehensive overview of visions, objectives and policy instruments in the north. This review has a set of objectives, one of which is to strengthen the basis for employment, value creation and welfare throughout the country by means of a regional and national effort in cooperation with partners from other countries and relevant indigenous groups (7).

To date, many of the immediate impacts of climate change have been economic and environmental and the strategies of governments are reflective of this context. We have seen responses to climate change played out in circumpolar forums for international collaboration such as the Arctic Council where much attention on human impacts has been focused on contaminants and biomagnification in traditional food sources (178). The Arctic Climate Impact Assessment (ACIA) report and subsequent workshops by the United Nations Educational, Scientific and Cultural Organization (UNESCO) have called for enhanced community-based monitoring systems and emergency preparedness initiatives to address the impact of climate change and human health (179, 180). Many international initiatives within the Arctic Council
focus on human impacts in relation to changes to the environment, contaminants and the sustainability of traditional lifestyles.

The strategies and initiatives are summarized in Figure 5.3. Overall, there is a recognition of the need for international collaborations, intersectoral approaches, the inclusion of community-based monitoring and an acknowledgement of the need to include indigenous knowledge.

**Figure 5.3 Climate change and health – common elements in strategies and initiatives**

None of the climate change strategies reviewed here specifically mention health system engagement or address how health systems may respond with strategies or policy development. This is despite the pandemic and epidemic spread of disease being imminent and increased numbers of land-based emergencies. With calls for international collaborations across sector alignment, and the application of traditional knowledge, the health sector in circumpolar nations faces a complex challenge that will require a stewardship approach with broad and innovative strategies and approaches to health policy that will guide health system responses to climate change. A health sector approach to climate change can be based on common values and goals, and can be built on the current policy levers within nations. The Alaska Native Tribal Health Consortium has established the One Health Group within its Centre for Climate and Health. The
One Health Group is an Arctic network of diverse stakeholders and transdisciplinary specialists from circumpolar nations and indigenous groups that are exploring best approaches to address complex climate-driven health risks and to inform community-based strategies (181). This initiative is still in the scoping and exploratory phase, but shows promise as the goals of the network encompass international relations, across sector alignment and engagement of community-based and traditional knowledge. There is an opportunity for engaging health system sectors in these scoping exercises and exploring the impacts of climate change in this context.

5.7 Discussion

As defined earlier, stewardship entails the “careful and responsible management of the well-being of the population” and is the “very essence of good government” (63). In addition, stewardship is a function of the entire health system and involves more than just an assessment of the Ministry of Health. Stewardship frameworks highlight key aspects of operationalizing stewardship and include the political, economic and social context and values, health system stewardship functions and the generic goals to be adapted to a national context. An analysis of the key features (remoteness, equity, indigenous populations and climate change) in circumpolar health systems, as well as the strategies and policies that respond to this context, provides a deeper understanding of the organization and the levers that drive health system stewardship in the circumpolar context. These findings, when viewed through Veillard et al.’s health system stewardship framework (Figure 1.2), aid in informing the key stewardship components and levers that respond to the circumpolar context and optimize good stewardship.

Although the nations analysed here each implement elements of good stewardship, none overtly take on this approach or apply its practice to activities identified through a framework at the national or regional level. This evaluation of key strategies and policies that are present in the circumpolar context illustrates the consistency of stewardship functions in the circumpolar context. Some stewardship functions were more prominent and will be discussed while highlighting the differences between countries.
Health System Stewardship Functions in the Arctic context

Health system stewardship functions include the following: defining a vision for health, strategy and policies to achieve better health; exerting influence across all sectors and advocating for better health; good governance, supporting the achievement of goals; the alignment of system design with goals; and making use of legal, regulatory and policy instruments to steer health system performance. When the policies and strategies that are responsive to the circumpolar context are viewed though a stewardship framework, it is clear to see where areas of stewardship functions are operationalized. The discussion will focus on the areas identified.

Influence across Sectors

Overall, a trend of systems organization with collaboration across sectors (one that is responsive to climate change, health equity and capacity-building), which allows for the inclusion of indigenous values through self-determination, is an approach to stewardship that builds on the strengths of existing strategies and policies in circumpolar countries. This includes Finland’s strategies for health in all policies and inter-sectoral work promoting health and wellness for all, and the United States’ high levels of self-determination and control of health care–building responsive systems in Alaska.

The ability of governments to exert influence across sectors is a key feature that responds to the forces of the circumpolar context. This includes strategies that promote work across sectors to promote equity, adaptation to climate change and capacity-building. Work across sectors pertaining to strategies and policies that strive to promote health equity is prominent and operationalized in Nordic countries. Equity promotion is a phenomenon that is approached through the recognition of the determinants of health, multi-sectoral collaboration and the need to address underlying causes of health disparities. With respect to Canada and the United States, while there were some strategies that recognized and acknowledged the importance of the broader determinants of health, they were not operationalized through strategies or policies that promoted work across sectors. Within these nations, national goals focusing on health systems and activities within the parameters of the health system, do not allow for a strategy and policy focus on sectors outside of health. The ability to address the broader determinants of health is
held by sectors and authorities outside the health system, for which linkages are weaker and strategies are lacking.

In addition to health equity, climate change strategies also recognize the importance of working across sectors. Circumpolar countries recognize climate change as an emerging threat to human health and identify the need for multi-sectoral collaboration between environmental and health sectors. However, health departments have not developed specific strategies to link across sectors and build emergency responses related to climate change impacts such as epidemics, environmental emergencies (e.g., landslides, flooding and food availability) and mental health challenges. This is, therefore, an area that requires further consideration by health departments in circumpolar regions, with Nordic regions in particular needing to build on the scope of health in all policy approaches, and North American regions needing to enhance both stewardship functions and scope.

*Other Key Areas Noted Outside the Health Sector – Education, Culture and Language*

All circumpolar regions have challenges with retaining a consistent workforce and providing responsive health care services. The need to build capacity in workforce training and in specialization to be responsive to cultural aspects of northern populations is recognized by all governments at the national and regional level. This has included the development of culture and language programs, as well as improved access to education in the north for physicians, nurses and allied health care providers. While aspects of the need for training and building a responsive workforce are captured in some strategies and policies, however, with the exception of Norway, circumpolar nations offer few strategies within health sectors that build partnerships within education sectors and target northern needs related to education. Better articulation of needs by health system stewards ensures consistency with the needs of the health system.

The importance of indigenous language in health care services was recognized in some strategies as being an important component of providing safe care and ensuring patient comprehension, and language was emphasized for cultural responsiveness (147). However, there are no structural elements such as national or regional strategies that provide direction in the health sector. This gap emphasizes the need for health system stewards to work across sectors to fulfill language needs through partnerships with education sectors and indigenous groups.
**Ensuring Good Governance**

In Arctic regions with majority indigenous populations, the governance issues related to self-determination and the influence of assimilation policies on the health of indigenous peoples has brought issues related to good governance to the forefront in all nations. How levels of self-determination for health systems governance are achieved varies between nations and impacts the consistency of good stewardship. The ability to govern and control health systems is linked with national initiatives that advance self-determination; these initiatives are strong in the United States and Canada and have varying degrees of impact on the self-determination of health governance. Governance is also influenced by the degree of regionalization of the health care system and the indigenous majority who then work within the parameters of the system.

Governance through regionalization was demonstrated in Norway through the elements of local control, education and training of the indigenous workforce in Norway. In the United States, national policies promoting self-determination – along with the formation of a health consortium of indigenous groups, with pooling of funding and the authority to set goals – creates an environment of proactive health strategies and policies. In Canada, there are three territories represented at the regional level. While there is some authority at this regional level, there are different degrees of self-determination of indigenous governance, and within these, different levels of self-determination for health. In general, the territorial governments direct most of the health system stewardship functions, which are shaped, in turn, by national principles for health care.

The political and historical context of circumpolar nations with systematic implementation of policies of assimilation has significant effects on the moral underpinnings of stewardship – namely, trust and ethical conduct of governments. Therein lies an obligation for governments to acknowledge the historical wrongdoings and ensure that the health systems goals are fulfilled through respectful partnerships and government-to-government relations with indigenous sectors that hold authority in relation to health system stewardship. These responses are likely to be whole-of-government approaches and involve actions such as national apologies to indigenous peoples, and responses such as the call to action of the Truth and Reconciliation Commission in Canada (182). In relation to health, there is a call to recognize the health impacts of Canadian government policies, including residential schools, and to implement indigenous rights as
identified in international law. In addition there is a call to work with indigenous people and establish measureable goals and promote health equity, improve health services as well as the cultural competencies of health care providers (182). Because there has not been attention to historical wrongdoings, the moral fabric of stewardship is flawed and creates challenges for implementation.

Approaching health system stewardship in the circumpolar context requires attention to the pull of governance structures between national and regional control, the distribution of indigenous populations and the inherent tensions in achieving self-determination within nation-states. We saw that self-determination and the control of health services were closely linked to the perceived responsiveness of the health systems in northern regions where the majority of Indigenous populations live.

*Other Stewardship Functions*

Additional stewardship functions include the following: defining the vision for health strategy and policies to achieve better health; ensuring the alignment of system design with health system goals; making use of legal, regulatory and policy instruments to steer health system performance; and compiling, disseminating and using appropriate health information and research evidence. These functions are all seen to be paramount to good stewardship and exist in all nations; however, specific strategies and policies, when viewed through the lens of circumpolar forces, did not arise. This is possibly because these functions are more related to the architecture of good stewardship and more generalizable features of good governance of health systems, whereas the features highlighted in the circumpolar context are related to areas that are responsive to complex environments.

5.8 Conclusions

In this study, we have viewed through a stewardship lens and case study analysis how four circumpolar nations are responding to a shared context of remoteness, health equity issues, indigenous health needs and values and climate change. The findings of the study highlight areas where policy levers and strategies may be most responsive to health system stewardship and the context of the circumpolar environment. In the case of circumpolar nations, the most influential
fields of the Veillard et al. framework were functions related to stewards’ abilities to uphold values that are responsive to the circumpolar context and that define the vision to achieve better health accordingly. Stewardship functions that influence across sectors and advocate for better health, and that ensure good governance and support the achievement of health systems goals are key stewardship functions for the circumpolar context. We found that the circumpolar forces (remoteness, health equity, indigenous health needs and values and climate change) have significant overlap with determinants of health in Arctic regions. This context, in part, explains the alignment with the stewardship functions highlighted.

The activities most prominent in stewardship functions are having influence across sectors and advocating for better health, and ensuring good governance and supporting the achievement of health systems goals. In working across sectors, we found policy levers related to climate change, health equity, education and language. The stewardship function of ensuring good governance and supporting achievement of health systems goals was primarily related to indigenous self-determination and the control of health systems in northern regions. Climate change was not linked to stewardship functions explicitly and requires further attention within the health sector.

Although the circumpolar context is shared, the consistency of good stewardship in circumpolar nations varies between nations, as a result of the scope of strategies and approaches to good stewardship in the circumpolar context. Overall, Canada and the United States demonstrated higher levels of self-determination, and Norway and Finland exhibited strengths in strategies and policies influencing work across sectors. While stewardship functions differed, government statements that promoted work across sectors were present in all nations, as were dialogues on self-determination of indigenous peoples. This provides some assurance that there are common goals to uphold good stewardship in the circumpolar countries studied.

These findings could help national, regional and indigenous governments that wish to target their strategic and policy activities and respond to the context of Arctic environments. The development of a performance framework and scorecard for this context would enhance the ability to learn from different approaches to stewardship and, more specifically, would allow for the promotion of trusting relationships and health equity in circumpolar nations. A performance
framework will also enable governments to measure the impact of these stewardship functions on the health systems goals of improved health (in terms of level and equity), responsiveness, social and financial risk protection and efficiency.

Although it could be stated that stewardship is not yet fully implemented in circumpolar nations, this analysis demonstrates that it is nonetheless a common goal of circumpolar nations and a worthy framework for comparisons – as well as a basis for the development of performance frameworks that are responsive to circumpolar contexts and shared goals for comprehensive stewardship. It must still be emphasized, however, that both the organization of the health systems and the level of self-determination impact the underlying principles of trust and the implementation of stewardship in circumpolar nations.
Chapter 6
Conclusions
This thesis sets the groundwork for how health system stewardship functions are situated in the circumpolar context. The findings inform a broader and more ethical framing of the health systems and highlight how the values and political context relate to the government functions in health sectors, and beyond, to influence community wellness in Arctic communities. The key contextual themes (climate change and environmental effects impacts, geographic remoteness, indigenous health needs and values, and health equity) present in circumpolar nations guided the study, and the scope and impact of health determinants (education, material resources, housing, mental wellness, early childhood development, social exclusion, personal safety, culture and language, food security, global climate change and environmental exposures, and self-determination) emphasized the need to utilize a stewardship framework that was value based and that encompassed secondary and tertiary government functions. Stewardship approaches were identified as being responsive to the circumpolar context, and it was emphasized that there should be a base of shared values between nations before initiating international comparisons. The context-setting process underlined the impacts of colonial health policy, transitioning governments and the need to engage indigenous communities and include indigenous knowledge and methods in research.

The research was addressed through the four following objectives:

- Situate circumpolar health in the context for health system research and performance measurement. (Chapter 2)
- Develop a methodology that supports a systematic and holistic approach to applying indigenous and western knowledge to consensus approaches. (Chapter 3)
- Identify the indigenous value systems underlying health system stewardship in circumpolar regions and their implications in relation to current values and stewardship of circumpolar health systems. (Chapter 4)
- Highlight stewardship functions that are responsive to circumpolar factors (climate change and environmental effects impacts, geographic remoteness, indigenous health needs and values, and health equity) and highlight implications for health system stewardship in circumpolar regions. (Chapter 5)
In this final chapter, the main findings are summarized, and the methodological implications are discussed. The key messages and implications for policy environment and systems performance in Arctic regions are reviewed, and implications for research with a proposed research agenda are discussed.

6.1 Main Findings

Objective 1: Situate circumpolar health in the context for health systems research and performance measurement.

In Chapter 2, we presented a paper that captured the activities and findings of an exploratory workshop held in Toronto, Ontario, Canada. The objectives of the workshop were broad and cast a wide net to explore the relationship between health system performance research and circumpolar health, both of which are highly developed disciplines but with little development in the area of research and best practices for health system performance. A workshop approach was used to bring together an esteemed group of experts in the respective fields. The recommendations from the workshop captured the perspectives of clinicians, policy-makers, indigenous knowledge holders and researchers and provided guidance for ongoing research and achievement of shared goals. Specific to the direction of this thesis, this workshop highlighted two essential elements: first, the importance of including indigenous knowledge in scientific approaches, and second, the need to ensure there is some form of connection of shared values across international boundaries.

Objective 2: Develop a methodology that supports a systematic and holistic approach to applying indigenous and western knowledge to consensus approaches.

In Chapter 3, we followed through on recognizing the need for health systems’ improvements in the circumpolar and indigenous context, as there has been a call to expand the research agenda across all sectors influencing wellness and to recognizing academic and indigenous knowledge through the research process. Despite being recognized as a distinct body of knowledge in international forums and across indigenous groups, examples of methods and theories based on indigenous knowledge are not well documented in academic texts or peer-reviewed literature on health systems. This chapter describes the use of a consensus-based mixed method with
Objective 3: Identify the indigenous value systems underlying health system stewardship in circumpolar regions and their implications in relation to current values and stewardship of circumpolar health systems.

In Chapter 4, we responded to the political and social context in circumpolar nations and current activities that focus on reconciliation with indigenous peoples. The goal of the study was to fully understand indigenous values and contexts, and present these as they may apply to a framework that will support international comparisons and systems improvements within circumpolar regions.

The first phase of the study explored values underlying health systems in circumpolar regions. Ministry documents and national and international strategic documents were reviewed to capture value systems underlying national health systems. It was primarily in health and policy forums, such as the EU and WHO, where values were identified. These values included justice and fairness, solidarity, dignity, non-discrimination, liberty and respect. However, there was not a transfer of values to national health acts or to systems at the jurisdictional level. Instead, these systems highlighted goals representing undefined values. Where indigenous values had been intentionally suppressed and traditional health practices assimilated, we recognized the need to explicitly explore values held by indigenous people in circumpolar regions. Indigenous knowledge holders and scholars discussed how we might best approach the study of indigenous
values. A mixed-methods approach with a consensus and indigenous knowledge methodology was developed. Nine shared values were identified – humanity, community voice, empowerment, respect, cultural responsiveness, teaching, nourishment, kinship and holism. It was acknowledged that there is need to reaffirm these values in circumpolar nations, and that emphasis needs to be placed on the trust and ethics that underlie good stewardship.

Objective 4: Identify key national health system stewards and describe the key health system stewardship functions that are responsive to circumpolar factors (climate change and environmental and mental effects impacts, geographic remoteness, indigenous health needs and values, and health equity).

In Chapter 5, we conducted a review of ministry documents and published reviews of the European Observatory on Health Systems and Policies identified key national health system stewards and illustrated the organization of health systems in circumpolar nations and the implications for stewardship in Arctic regions. Numerous stewards in health systems were identified, which devolve and de-concentrate from national to regional levels, self-determining indigenous governments and the international community. We then identified key strategies and policies that are of relevance to shared forces within circumpolar contexts and health (i.e., remoteness, equity, indigenous cultures and climate). This provided some understanding of common themes related to health system stewardship, and ultimately illuminated how stewardship functions respond to and define priorities within a circumpolar context.

The consistency of good stewardship in the circumpolar context varies between nations. Overall, Canada and the United States demonstrated higher levels of self-determination in indigenous groups, and Norway and Finland exhibited strengths in strategies and policies influencing work across sectors. While stewardship functions differed in Arctic regions, government statements that promoted work across sectors were present in all nations, as were dialogues on self-determination and the rights of indigenous peoples.

6.2 Methodological Considerations

This thesis presents opportunities to consider new methods and approaches to understanding underlying values and context for health system stewardship in circumpolar regions, and how
stewardship is approached and operationalized. In this section we will discuss the validity and generalizability of the findings. The overarching methodology was a case study approach that explored the experiences of four circumpolar countries within the boundaries of a health system stewardship framework. In addition, we introduced a new mixed-methods approach that built on consensus methods and included indigenous knowledge. When we embarked on this study, we began research in an emerging field of knowledge that builds on a shared political and social context and values. The findings introduce an inclusive platform for comparison of health systems, or systems that promote health, in circumpolar nations.

In the case of the exploratory case study research conducted, two types of validity apply: external validity and construct validity. External validity is the extent to which the study findings can be generalized, and construct validity is the extent to which the correct operational measures are used (137). The methodological approaches (framework, data triangulation and collection procedures) that support construct validity have been described in Chapter 5. The external validity of this thesis relates to the domains to which the study findings may be generalized. In this thesis the experiences of four Arctic nations within a health system stewardship framework have been described. The external forces by which the cases were analysed were based on the experiences of circumpolar nations, on the findings of a literature review (Chapter 1) and on expert opinion (Chapter 2). The shared experiences included geographic remoteness, health equity, indigenous needs and values, and climate change and environmental effects impacts. It is expected that the learnings within this thesis could be applied to the remaining four Arctic States – Iceland, Greenland, Sweden and Russia, which share a similar context. However, it is noted that an important part of context is the social and political fabric of a nation that can be dynamic and transitionary, and ultimately impact the readiness to take on inclusive forms of health system stewardship.

The importance of political context and values was emphasized throughout the thesis in relation to good stewardship and the ability to make international comparisons. We have introduced a new framing for understanding the historical impacts of national policies of assimilation of indigenous people through a stewardship framework. Reconciliatory policy has not been explicitly studied in circumpolar nations, and this work breaks new ground in this area. Further study is required to validate indigenous values and relationship to actions in stewardship of
health and health-related sectors. We have demonstrated some consistency of values, and we have developed a new method to express indigenous values. Replication of this work would be valuable both as a process that is reconciliatory and as an outcome that informs further insight into indigenous values in circumpolar nations. We demonstrated the process of exploring values that has previously been suppressed by nations. This was valuable as an exercise to reaffirm shared values within and between circumpolar nations. The outcomes will provide directions as key stakeholders develop and implement new approaches to health policy and health systems management.

Indigenous knowledge was acknowledged as a unique research paradigm and knowledge base throughout the thesis. It has been stated that the quality and validity of scientific research has to be judged by its own paradigm’s terms (183). The criteria for assessing western notions of scientific quality are the focus in this thesis. However, it is acknowledged that indigenous protocols were followed as per the direction of Elders in instances where indigenous knowledge was shared. In the indigenous concept of “validity,” the concept itself is rooted in protocols around information sharing. Kovach describes how the use of tobacco as a gift signifies that each person speaks the truth as they know it. Some use the term relational validity for such interactions, which is based on a mutual understanding that speaking the truth is necessary to maintain relational balance (184). In the case of the mixed methods consensus research, each paradigm of research (traditional knowledge and consensus methods) upheld its own approaches to validity and research relationships. As such, the concept of validity is rooted in the paradigms and is expressed through the protocols of the respective disciplines. The mixed-methods approach allowed for the framing of the paradigms and intersections of knowledge. With increasing calls for inclusion of indigenous knowledge in Arctic science, there are opportunities to replicate this methodological approach that recognizes multiple forms of validity and to further develop an understanding of knowledge paradigms in Arctic science.

6.3 Interpretation of Results

This thesis explored applications of health system stewardship in a selection of Arctic States, we also expanded the health systems lens and highlighted how the systems relate to the secondary and tertiary factors (social determinants of health) that influence health in the Arctic. Finally, we
described how values and the political and social context relate to health systems in the Arctic States. The intersection of national and regional health systems, determinants of health and the social and political context capture key features of health system stewardship in Arctic nations. Figure 6.1 illustrates how these aspects interface and come together as a whole to create the boundaries and foundation for good stewardship in Arctic States. The intersection of health systems, secondary and tertiary systems and the political and social context are captured in the main findings of this thesis.

**Figure 6.1 Combined factors for health system stewardship in Arctic nations**

It is evident that the role of health system stewardship goes beyond the boundaries of the health systems and not only engages sectors outside health but also is heavily influenced by values and the political and social context within Arctic nations and the international community. The findings of this research helped us identify how these elements intersect in the circumpolar context. We gained insight into the importance of values and political context in the Arctic, and we explored indigenous values and how these are expressed through Arctic strategies and declarations that recognize the impacts of global stressors such as climate change and a call for circumpolar dialogue and indigenous knowledge as issues are addressed across sectors. We demonstrated how the regional and national health systems have been influenced by the Arctic context and by colonial legacies in Arctic States. Finally, the secondary and tertiary systems play
an important role in health system stewardship and nations have addressed needs through multi-sector initiatives and engagement of indigenous governments. Overall, health system stewardship is imbedded in the social and political Arctic context, and while health systems and related secondary and tertiary systems have functions that may be generalized within nations, there are unique features that require attention within the circumpolar context. Examples are shown in the intersections of the circles in Figure 6.1, and include stewardship actions such as responses to national Arctic policies, indigenous values and reconciliation, and government responses to health equity.

**Insights Gained – Alignment of Thesis Findings with Veillard’s Health System Stewardship Framework**

The experiences of Arctic nations analysed through Veilliard’s framework provide guidance in relation to how good stewardship can be operationalized in the Arctic context and promote value based and ethically sound health system stewardship. The thesis findings identify elements of good stewardship and the suitability of this framing in circumpolar nations.

Figure 6.2 illustrates the thesis findings as they build on Veillard’s framework and expand our understanding of health system stewardship in Arctic regions. This includes the context for health systems research in circumpolar regions (Chapter 2); applications of mixed methods, including consensus approaches and indigenous knowledge (Chapter 3); underlying values in circumpolar nations studied – humanity, cultural responsiveness, teaching, nourishment, community voice, kinship, respect, holism and empowerment (Chapter 4); the stewardship functions related to work across sectors – self-determining/decolonizing strategies, multi-sector and international alignment of goals, co-managed performance frameworks for community wellness – and health equity (Chapter 5).

Viewing the thesis findings collectively through a stewardship framework enables us to see how the values and political context present in Arctic States shape approaches to good stewardship of health systems. Values are holistic, and significant pressures are placed on the political context to build reconciliation and enhance self-determination, holistic models of wellness and recognition of traditional knowledge in research as approaches to good stewardship. How stewardship is operationalized in this context provides lessons that can be further researched and shared.
between nations in the Arctic context. Through further consultation and research, there is an opportunity to identify common health system goals related to self-determination, culture and language, climate change adaptation, training and education and sustainable communities.

**Figure 6.2 Expansion of Veillard’s framework into the circumpolar context**

The top half of Figure 6.2 depicts the stewardship framework and operational elements of health system stewardship that guided the study (see also Figure 1.3) (57). The mirrored components of the framework in the bottom half of the figure identify the main findings of the thesis as they inform our understanding of how stewardship might be operationalized within this framework. This lens provides some insight on the policy levers and sectors that can support the development and implementation of aspects of health system oversight that uphold good stewardship. In the introduction and first paper, we described the contextual factors for health system stewardship and approaches to health system research in circumpolar nations. Secondly, the national legacies and policies of forced assimilation of indigenous people in circumpolar nations required that we engage indigenous scholars and knowledge holders and use a consensus approach to identify value systems as they would present in a de-colonized form. In the second paper of the thesis, we describe this new methodology that introduced how we might include indigenous knowledge as a source of information in stewardship studies. In the third paper,
shared perspectives on the underlying indigenous values and national values in circumpolar nations were described. These values were linked to political contexts and initiatives such as international declarations on indigenous people and actions related to reconciliation. The fourth paper in this thesis explored stewardship functions in Arctic nations and identified key levers such as alignment of health goals across sectors outside health and self-determination and engagement of indigenous people. These findings then help us expand the generic health system goals being measured, and specify outcomes related to improving health equity through a determinants of health lens. The determinants identified include self-determination, culture and language, climate change adaptation, training and education and sustainable communities.

Overall, the framework applications identified through the papers in the thesis expands our thinking on health system stewardship and introduces a systems approach to stewardship for equity and community wellness in Arctic communities. In more succinct terms, we could say the health system stewardship framing expands the health system to a “system for health” perspective and provides a way of incorporating values more explicitly – and hopefully more effectively – into the previous stewardship framework. This approach is more than a conceptualization of good traditional healthcare system stewardship, but is seen to provide key pillars that will be useful to policy makers as they implement stewardship in Arctic regions. This more broad conceptualization of stewardship may be useful to policy makers in a wide range of jurisdictions such as those where significant health threats such as climate change require action across a much wider range of policy areas than just the health sector or where the intersection of historical issues such as colonialism with health require a stronger incorporation of indigenous peoples’ values.

6.4 Conclusion

Based on the four research objectives, we established that health system stewardship is a challenging yet worthy goal for circumpolar nations. An expanded stewardship framework that emphasizes the political context and shared values in Arctic regions has enhanced our understanding of system outcomes that respond to the shared context of Arctic nations. This provides a cohesive baseline to explore frameworks for health system performance management.
Based on the research objectives explored throughout the thesis, some general conclusions on approaches to health system stewardship in circumpolar regions can be drawn, and are outlined in the text box below.

- Approaches to health system stewardship need to consider unique aspects of circumpolar environments, including climate change and environmental health impacts, geographic remoteness, indigenous health needs and values, and health equity.
- Context and values have unique attributes in Arctic regions and require consideration when exploring how international comparisons are made and health system stewardship is operationalized.
- The use of mixed methods through traditional knowledge in consensus-based approaches creates opportunities to address important questions during times of reconciliation and repatriation of indigenous peoples’ rights in circumpolar nations.
- There is some consistency of indigenous values underlying health system stewardship in the circumpolar nations studied.
- Social determinants of health play a significant role in health and wellness in Arctic communities. Determinants unique to Arctic regions include climate change, the environment and self-determination.
- The stewardship function of “good governance and supporting achievement of health systems goals” includes understanding the historical context of indigenous people and actions towards self-determination and control of health systems.
- The legacy of assimilation policies and political context in circumpolar nations influences the degree to which indigenous nations are able to participate in health system stewardship in meaningful ways.
- Key aspects of health system stewardship operations in Arctic regions include the ability to “exert influence across all sectors and advocate for better health,” this includes advancing multi-sectoral approaches addressing climate change and health equity.
- Climate change strategies need to include health systems engagement, and to address both needs for international collaborations, across sector alignment, and application of traditional knowledge.
Chapter 7
Future Directions
7.1 Policy Implications

In this thesis we have documented the circumpolar context and values in which health system stewardship functions are implemented. In addition, we identified areas where stewardship is not yet fully implemented in Arctic nations and requires further development. These findings have policy implications within health and health-related sectors at the international and national levels. Where implementation of a health system stewardship approach requires and expanded view of the role and sectors involved in health and wellness, there are also implications in relation to research agendas and a need to invest in frameworks that support research and performance measurement of systems that support good stewardship.

*International Policy Implications*

Circumpolar and international health forums and declarations have called for improvements in health and wellness of Arctic residents, specifically indigenous peoples. In addition to health, these international agents work to address interrelated factors and determinants influencing health, such as climate change and self-determination. These international actors do not have direct command and control roles over health and the related sectors as one would see within governments. Instead, these agents work within the structures of global governance, a form of oversight that recognizes the formal and informal institutions, practices and initiatives that are active in Arctic regions (185). Major global actors include the Arctic Council, World Health Organization, United Nations, and international Indigenous organizations. These actors play a role in advancing shared goals in an international forum and play an important role in articulating the shared context and values on a circumpolar and global scale. The underlying values and shared goals are reinforced by circumpolar nations Arctic strategies, and collectively through international declarations that have been signed by circumpolar nations, such as the *UN Declaration on the Rights of Indigenous Peoples*, the *Arctic Council Health Declaration* and the *Tallinn Charter*.

Despite this alignment of goals related to health systems stewardship, there is no international forum where systems associated with good stewardship and approaches to health and wellness in
the Arctic are explored critically or developed. International comparisons of health system performance management measures have been proposed as a valuable tool for better strategic planning to meet desired outcomes, the need to be accountable to the public and the benefits of benchmarking for system redesign (65). Performance management of health systems is defined as a set of managerial instruments designed to secure optimal performance of the health care system over time in line with policy objectives (186). There is a need to develop and critically review the performance management frameworks and requirements of benchmarking systems that would support an analysis of the shared experiences of Arctic regions and operationalize a process to develop a system that is responsive to the shared goals of good stewardship.

Circumpolar nations currently participate in international comparisons related to health system performance as part of the Organisation for Economic Co-operation and Development’s (OECD) Health Care Quality Indicators (HCQI) project and some data on health systems is comparable at the national level. There would be added value in the ability to compare regional level experience within Arctic regions. This would require human and financial resources to address methodological barriers related to data availability and quality in remote regions.

International organizations could consider supporting existing national initiatives that explore performance of health system stewardship and comparisons between nations as an opportunity to share best practices and benchmark performance in Arctic regions. International forums can build on existing metrics and performance frameworks to identify gaps and develop additional data sources that might capture elements relevant to the circumpolar context. There is also a need for nations to provide ongoing support for existing data systems that support performance measurement and management within Arctic nations, and to ensure data is suitable for comparisons within and between nations. Some international data is already compiled within OECD and national health information bodies that feed into this forum.

In addition to monitoring performance, monitoring policy change also supports international comparisons and systems improvements. Circumpolar nations would benefit from a dialogue on policy innovation and responses to the shared experiences of Arctic regions within nations. Ongoing policy comparisons could be supported by ongoing engagement in forums such as the Health Systems and Policy Monitor of the European Observatory on Health Systems and Policies.
This platform provides a detailed description of health systems and provides information on reforms and changes that are policy relevant. There would be a possibility of expanding to include system responses to special features of the Arctic. In addition to comparing health policy in Arctic nations, there is a need to expand and understand the policy implications of sectors outside health and how good health policy in areas related to the determinants of health alleviates pressures on the health system.

In this thesis we have also identified the need to include indigenous traditional knowledge in decision making around health system stewardship. Specifically, components related to self-determination, culture and language. We have demonstrated the contributions of mixed methods that build on consensus methods and indigenous knowledge as we explored aspects of health system stewardship in Arctic regions. This inclusive approach could be further developed to explore measures for the development of frameworks and the analysis of health systems performance in Arctic regions. International indigenous organizations\(^6\) would play an important role in setting the agenda for this work and would require support for training, development of traditional knowledge bases and participation through dedicated roles in forums that advance the frameworks, indicators and data that would be used to compliment performance management frameworks.

More specifically, contributions of indigenous organizations could also come from knowledge captured in the existing networks of community-based monitoring initiatives currently under development in circumpolar regions. There are a number of activities that focus on the use of indigenous knowledge in monitoring changes in the Arctic. The *Atlas of Community-based Monitoring and Indigenous Knowledge* describes best practices, makes recommendations for monitoring, and strives to network existing community-based initiatives that address the changing Arctic environment (187). There is a need to explore how community-based data

\(^6\) International indigenous organizations recognized as permanent participants within the Arctic Council. Aleut International Association (AIA), Arctic Athabaskan Council (AAC), Gwich’in Council International (GCI), Inuit Circumpolar Council (ICC), Russian Association of Indigenous Peoples of the North (RAIPON) and Sámi Council (SC).
informs understanding of contextual societal factors and how these influence system performances within a stewardship framework.

**National Policy Recommendations**

How the perspective of health system stewardship plays out in Arctic nations is a function of the policy levers and the relationship between national and state, territorial, regional and indigenous government actors. As highlighted in Chapter 5, circumpolar nations all have some degree of decentralization or devolution within the health system. At this regional, state or territory level we have described some aspects of systems design that are responsive to the context in Arctic regions. Some of the main features that require national attention include self-determination, climate change, health determinants, a strategic approach to the underlying values and goals of health system stewardship, and national support for health system performance management and engagement in international forums.

Circumpolar nations each have unique relations and processes underway that recognize the national obligations and relationship with indigenous peoples. Various forms of negotiations for self-determination are underway and fall to sectors outside health. In Canada and the United States, government-to-government relations and self-determination are negotiated at the federal level. In Norway and Finland, the negotiations occur within the Sámi parliaments. While these processes in themselves address an important determinant of health, there is also a need to develop a national agenda that works within the processes supporting self-determination and advances indigenous leadership and oversight of health systems, and the development of a performance framework for indigenous peoples. Partnership agreements between health system stewards and indigenous leadership and governments could serve as a forum to establish shared goals, expected outcomes and approaches for measurement.

Climate change is a global challenge that requires attention of nations through the development of health systems responses to increased transmissions in infectious diseases, emergency responses to natural disasters, health impacts of food insecurity due to disruptions in substance lifestyles, and mental health impacts related to cultural impacts of changes in the environment. Nations have made clear commitments to address climate change through mitigation and adaptive strategies (188). Health sectors need to ensure that performance frameworks measure
the areas impacted by climate change, and that health policies are responsive to determinants impacted and health system sectors influenced by these rapid changes in the Arctic. Nations play an important role in supporting the dialogue on priorities for health system responses to climate change that is informed by an evidence base grounded in western science and indigenous knowledge. Currently, the United States is leading an international collaboration called the One Health strategy. This strategy acknowledges the intersectoral impacts of climate change and promotes work across sectors, facilitates international relations and applies indigenous knowledge (181). This network brings together a diverse group of stakeholders and transdisciplinary representatives from circumpolar nations and indigenous groups with a focus on climate change. These forums provide an important resource of knowledge and evidence and can inform nations as they explore measurement frameworks and policy approaches to address climate change.

In addition to self-determination and climate change, overall social determinants of health are a prominent feature in health system stewardship. There is a need to explore what policy levers such as action plans and strategies might influence the ability of health departments to work with actors across sectors to promote multisector collaboration. In Canada and the United States national health departments could realign prevention programs and public health departments to have better alignment to achieve shared health system stewardship goals. In Nordic countries the policy levers supporting health in all policies are well established, however there is a need for governments to support initiatives that support measurements of the impact of these policies and strategies in Arctic regions.

7.2 Ongoing Research

There is a need for research to build on the enhanced health system stewardship framework and explore the measurement health systems through the development of performance management frameworks in circumpolar nations. This task calls for teams with expertise in performance management of health systems and multidisciplinary science to support knowledge development in both health sectors and sectors that influence health and wellness in the Arctic. This could include expertise in environmental science, engineering, architecture, education, Arctic policy, social sciences and traditional knowledge.
The Organisation for Economic Co-operation and Development’s (OECD) Health Care Quality Indicators (HCQI) is an international forum that is committed to building common ground for performance measurement (189). Further study is required to understand the coverage this framework provides in Arctic regions and to explore areas where the framework could be enhanced so measures could be applied at the regional levels (Arctic) within nations, and comparisons made between circumpolar nations.

We have identified specific outcomes related to self-determination, culture and language, climate change, and training and education. Further research is required to define metrics for these outcomes as they relate to health and wellness in Arctic communities. In addition to support for multidisciplinary teams, targeted resources are required to support traditional knowledge holders and applications of indigenous knowledge. The development of research frameworks that support interdisciplinary research can provide more insight on health policy across sectors, and enable more detailed analysis of policy impacts on the determinants of health and health system stewardship outcomes in circumpolar nations.

Data initiatives at the regional level in northern jurisdictions face capacity and resource challenges. There is a need for national support for database development in remote regions. This would include initiatives that support data quality, timeliness, accessibility and ethnic identifiers for indigenous peoples.
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Appendices
Appendix A: Global Health – A Circumpolar Perspective

Global Health—A Circumpolar Perspective

Global health should encompass circumpolar health if it is to transcend the traditional approach of the “rich North” assisting the “poor South.” Although the eight Arctic states are among the world’s most highly developed countries, considerable health disparities exist among regions across the Arctic, as well as between northern and southern regions and between indigenous and nonindigenous populations within some of these states.

While sharing commonalities such as a sparse population, geographical remoteness, harsh physical environment, and underdeveloped human resources, circumpolar regions in the northern hemisphere have developed different health systems, strategies, and practices, some of which are relevant to middle and lower income countries.

As the Arctic gains prominence as a sentinel of global issues such as climate change, the health of circumpolar populations should be part of the global health discourse and policy development. (Am J Public Health 2012;102:1246-1248, doi:10.2105/ AJPH.2011.300584)

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Global Health—A Circumpolar Perspective

IN RECENT YEARS THE term “global health” has largely replaced “international health” and attempts have been made to promote a standardized definition. However, despite its intention to move beyond the mindset of international development assistance implicit in “international health,” global health is still very much preoccupied with how the “rich North” can contribute to improving the health of low- and middle-income countries in the “poor South.” Thus, most grants on global health offered by governmental and non governmental agencies are usually restricted to interventions in low- and middle-income countries.

In this Commentary we argue that an important perspective—the circumpolar one—has been missing in the global health discourse and that the circumpolar perspective has much to contribute and gain by being part of global health research, practice, and policy development. The usual “north-south” orientation in exchanges and dialogue is given a new twist in that the northern regions within the rich North can be considered part of the low income “South” in some respects. Global health concerns do not stop at high latitudes.

DEFINING CIRCUMPOLAR

The lack of awareness of the circumpolar world is exemplified in a map accompanying an article on global trends in infant and child mortality published by a prestigious medical journal. The world’s largest island—Greenland—has completely disappeared, and is replaced by ocean. It is all the more ironic that in this is no lack of health indicator data from Greenland, where a high quality national statistical system exists and extensive health research has been undertaken for decades. The eight countries that are members of the Arctic Council (Canada, Denmark with its self-governing territories of Greenland and Færø Islands, Finland, Iceland, Norway, Russia, Sweden, and the United States) constitute some of the world’s most industrialized and developed nations. With the exception of Russia, these Arctic States occupy the highest ranks in most health indicators. For example, in 2010, Norway, the United States, Canada, and Sweden ranked within the top 10, and Finland, Iceland, and Denmark ranked within the top 20 on the Human Development Index, while Russia ranked sixty-fifth.

Yet substantial health disparities exist across the northern regions in different countries, and between the northern and southern regions within countries. Global health maps often gloss over the large health gaps that exist in some northern regions such as Nunavut in Canada by assigning it the same color code as the rest of the country. Nation-based comparisons thus dilute and hide important regional challenges within countries.

What constitutes the circumpolar world? We have identified 27 regions (Figure 1) that constitute the northernmost administrative units of the Arctic states (Alaska, the three northern territories of Canada, the northern counties of Norway, Sweden, and Finland; and various northern republics, oblasts, and autonomous regions of the Russian Federation) and several island-states in the North Atlantic (Greenland, Iceland, and Færø Islands). All these regions are either wholly or have part of
their territories located above 60°N. Together they encompass 17 million square kilometers, slightly more than 10% of the planet's total land area, with a total population of just under 10 million. Note that in this article we use the term "circumpolar" to refer to the northern hemisphere only, thus excluding from consideration the Antarctic with its small transient population.

The population of the circumpolar regions is noted for its ethnic diversity, especially in the presence of many indigenous peoples, some of whom cross international boundaries (such as the Inuit, Athapaskan, and Sami). Indigenous peoples are the overwhelming majority in some regions such as Nunavut and Greenland, where they account for more than 85% of the total population. However, across the Arctic as a whole they are a small minority, yet they carry a disproportionate burden of disease as a result of rapid social and economic transitions.

HEALTH DISPARITIES

The health status of the 27 regions fall into four distinct patterns, which are remarkably consistent regardless of the health indicator used, whether the annual incidence rate of tuberculosis (Figure 1), life expectancy at birth, or infant mortality rate. The Nordic countries (including Iceland and Faroe Islands) tend to have the best health indicators, and there is little difference between northern and southern regions within these countries, or between the indigenous Sami and the majority population. Alaska, Yukon, and the Northwest Territories are similar in that their nonindigenous populations have a health status that is comparable (or even better) than the national population; however, their indigenous populations, accounting for 18% in Alaska, 23% in Greenland, and 50% of the total population of these regions, respectively, tend to fare substantially worse. Greenland and Nunavut, inhabited predominantly by Inuit on opposite sides of Davis Strait, are remarkably similar in having health status that are substantially worse than that of Denmark and Canada—life expectancy about 10 years shorter, and infant mortality about three times higher.

Russia as a whole is experiencing a health crisis and its northern regions have some of the worst health indicators among the 27 Arctic regions. As an example of interregional health disparities, the infant mortality rate during the period 2005 through 2009 in the worst region (Koryakia in Russia, 26/1000 live births) is 14 times that of the best region (Sololand, 2/1000 live births). The social determinants of health are as important in circumpolar regions as elsewhere. The relationship between health status and measures of economic well-being such as per capita gross domestic product (GDP), however, is in the shape of an inverted U (Figure 2). In the Arctic, the observation that "more wealth = better health" is distorted by the fact that large scale natural resource development (oil, gas, diamond mining) in several regions has resulted in their very high GDP, while the overall health of the population lags behind that of other regions without such developments. Globally, parallel situations can be found in certain oil and mineral-rich countries in the Middle East and Africa compared with their less well-endowed neighbors. GDP also masks the fact that wealth generated within the
Arctic tends to leave the region, and that it is also not equitably distributed within the regions. Again, ample examples exist globally.

Different health care systems have evolved in the 27 Arctic regions. While generally reflective of the larger national health systems (such as health care financing), these regional systems also attempt to adapt to the widely dispersed and sparse population, harsh physical environment, and underdeveloped human resources. These regional health care systems differ in their governance and organization, integration of primary care with public health, information coordination, reliance on nonphysician personnel in extended roles, and consideration for culturally appropriate care to indigenous people, human resources management, and the use of innovative information technology. On a per capita basis and relative to national norms, health care is generally more expensive in Alaska, northern Canada, and northern Russia, whereas in the other regions, they are not significantly different from the rest of the country. Greenland is unique in having a per capita expenditure that is only 60% that of Denmark.10 Few internationally comparable health system indicators beyond per capita expenditures are consistently available across the circumpolar North.

LESSONS FOR OTHERS

Circumpolar countries and regions have much to learn from one another.11 Collectively they also have valuable lessons to offer other countries, especially lower-middle-income countries. Marginalized populations exist in many of these countries, with perhaps even wider health disparities. The geography of scattered, far-flung communities with health care challenges is certainly not unique to the Arctic. Temperate and tropical countries have islands, coasts, outposts, etc., that can benefit from the solutions of circumpolar regions, especially in the use of telecommunication and transportation, and the training and deployment of locally recruited health workforce. Despite their being in some of the world’s richest countries, circumpolar regions also lack capacity in advanced higher education and health research, and thus can benefit from innovations in these areas developed in resource-poor countries.

Circumpolar regions are overlooked by the World Health Organization, which has mostly been engaged in programs that are targeted at low- and middle-income countries. When it was announced that Canadian Prime Minister Stephen Harper would cochair the UN Commission on Women and Children’s Health, leaders of northern indigenous peoples such as the Inuit applauded its goals but stressed the equally pressing needs of northern indigenous women and children, who are excluded from this “global” initiative.13

GLOBAL LINKAGES

Circumpolar health practitioners, researchers, and policymakers have developed their own mechanisms for international collaboration such as the triennial congresses, national societies, and networks of researchers, with increased activities over the recent International Polar Year (2007–2008).14,15 The intergovernmental Arctic Council created in 1996, which also includes indigenous people’s organizations as “permanent participants,” has been primarily focused on political and environmental issues, and human health has been of peripheral interest and submerged under sustainable development and environmental monitoring. The creation of the Arctic Human Health Expert Group in 2009 reflects the Council’s recognition of the need for health perspectives. In February 2011, the health ministers of Arctic States met in Greenland and jointly issued the Nuuk Declaration, outlining areas of common concerns and priorities for action.16 It remains to be seen how national and regional governments respond and translate this declaration into concrete health policies.

The Arctic has gained global prominence in recent years. It is now seen as a sentinel of the consequences of global climate change.17 It has also gained strategic importance because of its untapped natural resources and increased commercial and military potential. Inuit organizations have drawn international attention to the devastating impact of climate change on their way of life.18
Northern indigenous people have joined forces with "small island developing states" in programs such as Many Strong Voices to address adaptation to global climate change.

In conclusion, we propose that for global health to be truly global, it needs to include the circumpolar perspective. Circumpolar health is global health.

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Contributors
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Human Participant Protection
No human participants were used and institutional review board approval was not needed.

References
Appendix B: Population Density and Per Capita Total Health Expenditures

Table B-1 Population density, people/km²

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<th>Land Area</th>
<th>Total Population</th>
<th>Population Density</th>
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Circumpolar Health Observatory, accessed December 2013

Table B-2 Per capita total health expenditures, in USD-PPP

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<td>4066</td>
<td>6043</td>
<td>48.62</td>
</tr>
<tr>
<td>Finnmork</td>
<td>4179</td>
<td>6190</td>
<td>48.12</td>
</tr>
<tr>
<td>Northern Norway</td>
<td>4087</td>
<td>6085</td>
<td>48.89</td>
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<tr>
<td>Finland</td>
<td>2136</td>
<td>2931</td>
<td>37.21</td>
</tr>
<tr>
<td>Oulu</td>
<td>2150</td>
<td>2922</td>
<td>35.91</td>
</tr>
<tr>
<td>Lappi</td>
<td>2286</td>
<td>3192</td>
<td>39.63</td>
</tr>
<tr>
<td>Northern Finland</td>
<td>2186</td>
<td>2994</td>
<td>36.96</td>
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</table>

Circumpolar health observatory, accessed December 2013
Appendix C: Circumpolar Health Indicators

### Table B-3 Infant mortality rates, per 1000 live births

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>6.9</td>
<td>6.7</td>
</tr>
<tr>
<td>Alaska</td>
<td>6.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Canada</td>
<td>5.3</td>
<td>5.2</td>
</tr>
<tr>
<td>Yukon</td>
<td>7.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>6.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Nunavut</td>
<td>15.3</td>
<td>13.8</td>
</tr>
<tr>
<td>Northern Canada</td>
<td>10.2</td>
<td>9.6</td>
</tr>
<tr>
<td>Norway</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Nordland</td>
<td>4.1</td>
<td>4.8</td>
</tr>
<tr>
<td>Troms</td>
<td>4.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Finnmark</td>
<td>4.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Northern Norway</td>
<td>4.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Finland</td>
<td>3.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Oulu</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Lappi</td>
<td>4.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Northern Finland</td>
<td>3.0</td>
<td>2.6</td>
</tr>
</tbody>
</table>

*Circumpolar Health Observatory, Accessed December 2013*

### Table B-4 Life expectancy at birth, years

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<thead>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>United States</td>
<td>74.4</td>
<td>79.5</td>
</tr>
<tr>
<td>Alaska</td>
<td>74.8</td>
<td>80.1</td>
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<tr>
<td>Canada</td>
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<td>82.2</td>
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<tr>
<td>Yukon</td>
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<td>80.1</td>
</tr>
<tr>
<td>Northwest Territories</td>
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<td>78.8</td>
</tr>
<tr>
<td>Nunavut</td>
<td>66.6</td>
<td>70.9</td>
</tr>
<tr>
<td>Norway</td>
<td>76.6</td>
<td>81.7</td>
</tr>
<tr>
<td>Nordland</td>
<td>76.4</td>
<td>81.9</td>
</tr>
<tr>
<td>Troms</td>
<td>76.2</td>
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<tr>
<td>Finnmark</td>
<td>74.2</td>
<td>80.3</td>
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<tr>
<td>Finland</td>
<td>74.8</td>
<td>81.6</td>
</tr>
<tr>
<td>Region</td>
<td>Value 1</td>
<td>Value 2</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Pohjois-Suomi</td>
<td>74.3</td>
<td>81.6</td>
</tr>
<tr>
<td>Lappi</td>
<td>73.3</td>
<td>81.3</td>
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</tbody>
</table>

*Circumpolar health observatory, Accessed December 2013*
Appendix D: Ethics and Territorial Research Licenses

PROTOCOL REFERENCE # 28508

February 5, 2013

Dr. Adalsteinn Brown  
DEPT OF HEALTH POLICY, MANAGEMENT & EVALUATION  
FACULTY OF MEDICINE

Ms. Susan Chatwood  
DEPT OF HEALTH POLICY, MANAGEMENT & EVALUATION  
FACULTY OF MEDICINE

Dear Dr. Brown and Ms. Susan Chatwood,

Re: Your research protocol entitled, “Health systems performance in circumpolar regions: Can regional comparisons support policy and stimulate improvement?”

ETHICS APPROVAL  
Original Approval Date: February 5, 2013  
Expiry Date: February 4, 2014  
Continuing Review Level: 1

We are writing to advise you that the Health Sciences Research Ethics Board (REB) has granted approval to the above-named research protocol under the REB’s delegated review process. Your protocol has been approved for a period of one year and ongoing research under this protocol must be renewed prior to the expiry date.

Any changes to the approved protocol or consent materials must be reviewed and approved through the amendment process prior to its implementation. Any adverse or unanticipated events in the research should be reported to the Office of Research Ethics as soon as possible.

Please ensure that you submit an Annual Renewal Form or a Study Completion Report 15 to 30 days prior to the expiry date of your current ethics approval. Note that annual renewals for studies cannot be accepted more than 30 days prior to the date of expiry.

If your research is funded by a third party, please contact the assigned Research Funding Officer in Research Services to ensure that your funds are released.

Best wishes for the successful completion of your research.

Yours sincerely,

Judith Friedland, Ph.D.  
REB Chair

Daniel Gyewu  
REB Manager

OFFICE OF RESEARCH ETHICS
McMurrich Building, 12 Queen's Park Crescent West, 2nd Floor, Toronto, ON M5S 1S8 Canada  
Tel: +1 416 946-3273 ● Fax: +1 416 946-3763 ● ethics.review@utoronto.ca ● http://www.research.utoronto.ca/researchers-administrators/ethics/
SCIENTIFIC RESEARCH LICENSE

LICENSE # 01 016 13N-A

ISSUED TO: Susan Chatwood
Department of Health Policy
University of Toronto
PO Box 11050
Yellowknife, NWT
X1A 2T9 Canada

TEAM MEMBERS: S. Chatwood, A. Brown

AFFILIATION: University of Toronto

TITLE: Health Systems Performance in Circumpolar Regions: Can regional comparisons support policy and stimulate improvement?

OBJECTIVES OF RESEARCH:
This study will evaluate how health systems stewardship (governance) in circumpolar countries and their northern regions works. We will learn about the countries values for health, and the functions they have that enable them to deliver health services to northern residents. We will aim to learn about how the current health system works and how we can make it better and improve health for northern residents.

TERMS & CONDITIONS:

DATA COLLECTION IN NU:
DATES: March 20, 2013-December 31, 2013
LOCATION: Iqaluit

Scientific Research License 01 016 13N-A expires on December 31, 2013
Issued at Iqaluit, NU on March 21, 2013

Mary Ellen Thomas
Science Advisor
Research Summary 2013
Research License No. 01 016 13N-A

Project Title
Health Systems Performance in Circumpolar Regions: Can Regional Comparisons Support Policy and Stimulate Improvement?

Researcher's Name and Affiliation
Susan Chatwood, PhD student, Institute of Medical Science. University of Toronto
Supervisor: Adalsteinn Davidson Brown, Director Institute of Health Policy, Management and Evaluation, University of Toronto www.ihpm.utoronto.ca

Project Location
Institute for Circumpolar Health Research. www.ichr.ca Yellowknife, Northwest Territories. Interviews will be conducted by telephone or in person.

Summary:
The data collection for case studies from government sources and the literature was initiated. A review of the literature related to health systems stewardship and performance was conducted. There were gaps found in the literature in the area of Indigenous perspectives and values underlying health systems stewardship. It was also recognized that many experiences with participatory research initiatives in Indigenous communities were not published in peer review or grey literature. To supplement the literature review a face to face workshop was held with Indigenous scholars who had conducted participatory research, from Alaska, Canada, Norway and Finland. The aim of the workshop was to highlight Indigenous values underlying health systems stewardship. The workshop utilized a mixed methods approach with consensus methods and shared participatory findings from scholars and knowledge holders. Through the process participants identified 9 Indigenous values that underlie health systems stewardship (humanity, cultural responsiveness, teaching, nourishment, community voice, kinship, respect, holism, and empowerment). This work is now informing the case study analysis and circumpolar values underlying health systems stewardship and performance in circumpolar regions. Data synthesis and collection for case studies is ongoing.
1. የ.fold እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።
2. የ.fold እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።
3. የ.fold እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።

DECLARES

.exec.flush

Printf: DECLARES እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።

DECLARES እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።

DECLARES እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።

DECLARES እወች በተመሠረተ ውወቅ ይሆናል። እወካች ከአካሱ ይገባል።
2013
Northwest Territories Scientific Research Licence

Issued by: Aurora Research Institute – Aurora College
Inuvik, Northwest Territories

Issued to: Ma. Susan Chatwood
Institute for Circumpolar Health Research
PO Box 11050
Yellowknife, NT
X1A 3X7 Canada
Phone: (867) 445-2122
Fax: (867) 873-5338
Email: susan.chatwood@utoronto.ca

Affiliation: Institute for Circumpolar Health Research
Funding: Scholarship
Team Members:

Title: Health Systems Performance in Circumpolar Regions: Can Regional Comparisons Support Policy and Stimulate Improvement?

Objectives: To inform how circumpolar ministries might best fulfil their obligations to steer their health systems and compile, disseminate, and use appropriate evidence with an aim to understand and improve health systems performance in their northern regions.

Location: Data will be collected in Yellowknife Northwest Territories.

Licence No. 15219 expires on December 31, 2013
Issued in the Town of Inuvik on March 13, 2013

* original signed *

Jeff O'Keefe,
Director, Aurora Research Institute
Notification of Research

I would like to inform you that Scientific Research Licence No. 15219 has been issued to:

Ms. Susan Chatwood  
Institute for Circumpolar Health Research  
PO Box 11050  
Yellowknife, NT  
X1A 3X7 Canada  
Phone: (867) 445-2122  
Fax: (867) 873-9385  
Email: susan.chatwood@utoronto.ca

to conduct the following study:

Health Systems Performance in Circumpolar Regions: Can Regional Comparisons Support Policy and Stimulate Improvement? (Application No. 2305)

Please contact the researcher if you would like more information.

SUMMARY OF RESEARCH

This licence has been issued for the scientific research application No. 2305.

This thesis aims to explore the mechanisms that influence health system performance through a stewardship lens that provides insight as to how ministries, affiliated health sectors and regions not only carry out performance measures, but also hold accountability and make improvements.

Understandings around the performance of health systems in circumpolar regions will be addressed through a case study approach using country comparisons to study health systems stewardship and performance. Insights will be gained on the capacity for good health systems stewardship and the operation of existing performance mechanisms as they currently exist in the circumpolar nations and regions. Findings will inform strategic directions for the oversight and improvement of health systems performance in circumpolar regions.

Overall, this body of research will aim to inform how circumpolar ministries might best fulfill their obligations to steer their health systems and compile, disseminate, and use appropriate evidence with an aim to understand and improve health systems performance in their northern regions. National, subnational (circumpolar), and indigenous groups/governments obligations and capacity will be highlighted. In addition to circumpolar regions, findings will have applications in other jurisdictions where health systems performance may be impacted by extreme geographic settings, health disparities, and vulnerabilities due to climate changes, and due to human rights and equity issues experienced by Indigenous peoples.

Methods will entail a multiple case study approach that will allow for the study of health systems stewardship and performance through multiple bounded systems (nation states). The approach for case study research is built on the theory and processes for case study research presented by Eisenhardt and Yin. The work will be conceptually guided by existing theory and Veilard’s frameworks on health systems performance and stewardship. The case study approach will involve detailed data collection from a variety of sources, including key informant interviews, literature review, quantitative analysis of data and community based participatory methods.

The procedures for collecting each type of data will be expanded and standardized. It is not expected that all sources will elicit the same data within a case. However, multiple sources of data will be used within and across case studies and, when possible, multiple data points will be utilized to validate findings. The data compilation will create a rich case study database that will support data triangulation and cross case analysis. The process of data collection will be iterative and responsive to emerging themes and questions.
Key informants will play an important role in this study. Both as a source of data as interview subjects, and through additional input where they will validate and inform study conclusions. The validation and informing study conclusions will occur concurrently during data collection and through a face to face meeting of selected key informants and community based participants. Key informant roles and responsibilities will be highlighted through the consent process.

This study will involve a literature review and interviews that explore the scope of health systems stewardship. Community based organizations and leaders involved in health services and government staff may be contacted.

Study findings will be shared in the peer review literature in open access journals. Findings will be presented to territorial ministry leaders and to indigenous leadership.

The fieldwork for this study will be conducted from March 13, 2013 to December 31, 2013.

Sincerely,

Jonathon Michel,
Manager, Scientific Services

DISTRIBUTION
Akatcho Territory Government
City of Yellowknife
Department of Health & Social Services - GNWT
North Slave Métis Alliance
Northwest Territory Métis Nation
Yellowknives Dene First Nation - Lands & Environment
### Appendix E: Health System Seminar Agenda

**March 26, 2013**  
**Campbell Conference Centre**  
**Toronto, Canada**

**Hosted by:**  
- Institute for Health Policy Management and Evaluation  
- Dalla Lana School of Public Health  
- Institute for Circumpolar Health Research

Approaching a collaborative research agenda for systems performance.  
[www.eventbrite.ca/event/5465210724](http://www.eventbrite.ca/event/5465210724)

---

**Circumpolar Health**

- [Image of Circumpolar Health](image-url)
This seminar will engage researchers, health systems leaders, government and northern sectors involved in advancing health systems improvements in circumpolar regions.

Leaders in respective fields will be engaged and present their perspectives as they have approached and considered health systems challenges in their fields.

An audience of academics, health systems leaders and students will participate in discussions with the respective panels.

A jury of experts will be engaged so they may apply their knowledge and consider the seminar proceedings. The jury will summarize the day with a list of recommendations in response to the conference questions.

Conference questions:
1. What are the existing health systems challenges and resulting priority areas for health systems research in circumpolar regions?
2. What do we need from a scholarly perspective to maximize uptake of data and evidence currently available?
3. What are the best practices for health research partnerships that engage academic partners, community sectors, health authorities and governments?

Reflective jury:
Dr. Peter Bjerringaard, Professor of Arctic Health, Centre for Health Research in Greenland
Ms. Natalie Chafe-Yuan, Director Policy, Planning and Evaluation, Department of Health and Social Services, Government of Nunavut.
Dr. Malcolm King, Director Institute for Aboriginal Peoples Health, Canadian Institutes of Health Research
Dr. Micheal Jong, Vice President Medical Services, Labrador-Grenfell Health
Dr. Jeremy Veillard, Vice President Research and Analysis, Canadian Institute for Health Information
Primary program

8:30 - 8:45 Welcome: Dr. Howard Hu, Director and Professor, Dalla Lana School of Public Health, University of Toronto, Toronto, Canada

8:45 - 9:00 Introduction: Dr. Kue Young, Professor, Dalla Lana School of Public Health

9:00 - 10:30 Panel on Circumpolar Health Systems: Challenges and Responses

- Introduction and closing remarks: Dr. Adalberto Brown, Director, Institute for Health Policy Management and Evaluation, Toronto, Canada
- Panelists:
  - Ms. Moira O'Connor, Assistant Deputy Minister of Operations, Government of Nunavut, Iqaluit, Canada
  - Ms. Ann Birkekar Kjeldsen, Deputy Minister, Ministry of Health, Government of Greenland, Nuuk, Greenland (by video)
  - Ms. Helga H Bjarnadottir, Director, Department of Economics, The National University Hospital of Iceland, Reykjavik, Iceland
  - Ms. Lisa Cardinal, Director, Corporate Planning, Reporting and Evaluation, Department of Health and Social Services, Government of the Northwest Territories, Yellowknife, Canada

10:30 - 11:00 Coffee

11:00 - 12:30 Panel on Indigenous Adaptations in Circumpolar Regions

- Introduction and closing remarks: Ms. Susan Chatwood, Director, Institute for Circumpolar Health Research, Yellowknife, Canada
- Panelists:
  - Elder Francois Paullette, Chair of Sawtooth Territorial Health Authority Elders Council, Ft. Smith, Canada
  - Dr. Siliv Kvenmo, Professor of Child and Adolescent Psychiatry, Department of Clinical Medicine, University of Tromsø, Tromsø, Norway
  - Dr. Donna Gasbreath, Medical Director of Quality Assurance, Southcentral Foundation, Anchorage, Alaska, United States
  - Ms. Cindy Gliday, Emergency Programs and Resilience Program Lead, Institute for Circumpolar Health Research and Walter Duncan Gordon Foundation, Yellowknife, Canada

12:30 - 1:30 Lunch

1:30 - 2:30 Jury findings and discussion

- Dr. Peter Bjergaard, Professor of Arctic Health, Copenhagen, Denmark

2:30 Closing remarks: Dr. Donald Cole, Director, Institute for Global Health Equity and Innovation, Dalla Lana School of Public Health, Toronto, Canada

THANK YOU!

Institute for Health Policy, Management and Evaluation, Dalla Lana School of Public Health and Institute for Circumpolar Health Research

Rapporteurs: Jessica Bytautas, IHPME and Anthea Darychuk, DLSPH
Appendix F: Indigenous Values Data
### Appendix F - Data from consensus process

<table>
<thead>
<tr>
<th>Values</th>
<th>6</th>
<th>Kinship</th>
<th>7</th>
<th>Empowerment</th>
<th>8</th>
<th>Nourishment</th>
<th>9</th>
<th>Humanity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holism</td>
<td>Circle (family)</td>
<td>Family</td>
<td>Short distance to hospital/health care</td>
<td>Co-ordinate for the patient not the system</td>
<td>Food/sharing</td>
<td>Care</td>
<td>Acceptance</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Kinship</td>
<td>Holistic perspectives</td>
<td>Know who you come from</td>
<td>patient in context</td>
<td>water</td>
<td>Sympathy/empathy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Empowerment</td>
<td>“ Balanced response” process that respects culture/spirit</td>
<td>Home, love and respect to land</td>
<td>Home, love and respect to land</td>
<td>Housing</td>
<td>Love</td>
<td>Solve care others caring responsibility carefully respect share what you have sensitivity care</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Nourishment</td>
<td>Traditional medicines</td>
<td>Community driven health care</td>
<td>“Community driven health care”</td>
<td>Structural and systematic influences on health and wellbeing with focus of control varying due to sociopolitical climate</td>
<td>Sustainability, wise use of resources, equity in distribution and access to those resources</td>
<td>Humanitarian way of doing things, this value is foundational to many of the other ways</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Humanity</td>
<td>Accept life as it occurs</td>
<td>Self-regulation conscious of bards (mindset, spiritually)</td>
<td>Conducive to or complementary to a wholesome/full life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Phase 3

#### Values from Independent synthesis

<table>
<thead>
<tr>
<th>Group work summarizing themes</th>
<th>1</th>
<th>Teachings</th>
<th>2</th>
<th>Cultural responsiveness</th>
<th>3</th>
<th>Respect</th>
<th>4</th>
<th>Community voice</th>
<th>5</th>
<th>Holism</th>
<th>6</th>
<th>Kinship</th>
<th>7</th>
<th>Empowerment</th>
<th>8</th>
<th>Nourishment</th>
<th>9</th>
<th>Humanity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td>Collaboration through indigenous knowledge transmission and knowledge receipt to achieve continuity in health and/or shared outcomes</td>
<td></td>
<td>Processes that must be reconceived to conduct community values centered health care</td>
<td></td>
<td>Manner in which interpersonal and community to community interactions should take place</td>
<td></td>
<td>Historical/legal/ influence community conception of health, power relationships in health systems, and recognize/engage indigenous knowledge and the significance of forbearance in indigenous culture(s)</td>
<td></td>
<td>Recognition of place in the continuity of the context, including space, time, place and purpose includes concept of distinctive roles, responsibilities, and restrictions/potential</td>
<td></td>
<td>Community members’ shared histories, experiences, languages), economy/trades which shape how we conceive health, experience health care, develop trust in healthcare systems, and interact with western medical systems</td>
<td></td>
<td>Structural and systematic influences on health and wellbeing with focus of control varying due to sociopolitical climate</td>
<td></td>
<td>Sustainability, wise use of resources, equity in distribution and access to those resources</td>
<td></td>
<td>Humanitarian way of doing things, this value is foundational to many of the other ways</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td>High quality culture sensitive health care services in own language</td>
<td></td>
<td>Respect of traditions, traditional knowledge and traditional healing methods</td>
<td></td>
<td>Established (by indigenous peoples) community care based on the needs, way of living, holistic, perspective, of the indigenous peoples (instead of “translating” the systems of majority to an indigenous language)</td>
<td></td>
<td>“Circle” biopsychosocial</td>
<td></td>
<td>“Community driven health care”</td>
<td></td>
<td>Services must be available, all must have access to hospitals and health centers. People in communities must have say in what services are provided at the community level</td>
<td></td>
<td>Water is essential to the health of people, whether living on water or land. Nourishment, food security, sharing of food; also must have their place in hospitals and health authorities for people to access in order to maintain balanced health</td>
<td></td>
<td>Humans struggle to strive for peace; conflict has always been a problem. Often in cross-cultural situations need time to build trust – for well being of both parties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3</td>
<td></td>
<td>Shared research, self-reflection for person doing the work, collaboration, cooperativeness</td>
<td></td>
<td>Protocols and clear communication need to be addressed, whether the protocols come from traditional knowledge or from language</td>
<td></td>
<td>Mutual respect (“Behavior in street”)</td>
<td></td>
<td>Human, respect for the land. Family must know who you are related to, sense of extended family, must know where they came from and their place in the family. Everyone has a gift that they contribute to their family (unleash contribution). The whole family must know their identity important to see family as sacred, law sacredness of families as an entity. Worldwide must be reflect and respect differences within a family, between families, within and between communities</td>
<td></td>
<td>Home, respect for the land. Family must know who you are related to, sense of extended family, must know where they came from and their place in the family. Everyone has a gift that they contribute to their family (unique contribution). The whole family must know their identity important to see family as sacred, law sacredness of families as an entity. Worldwide must be reflect and respect differences within a family, between families, within and between communities</td>
<td></td>
<td>Sustainable, wise use of resources, equity in distribution and access to those resources</td>
<td></td>
<td>Humanitarian way of doing things, this value is foundational to many of the other ways</td>
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<tr>
<td>Group 4</td>
<td></td>
<td>Traditional teachings have a central place in education and training of caregivers and health authorities; must look at spiritual and environment Laws → natural order</td>
<td></td>
<td>Protocols and clear communication need to be addressed, whether the protocols come from traditional knowledge or from language</td>
<td></td>
<td>Mutual respect (“Two-way street”)</td>
<td></td>
<td>Holism</td>
<td></td>
<td>Holism</td>
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<td>Holism</td>
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<td>Cultural responsiveness</td>
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<td>Respect</td>
<td></td>
<td>Community voice</td>
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<td>Holism</td>
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<td>Kinship</td>
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<td>Empowerment</td>
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<td>Phase 3</td>
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<td>Teachings</td>
<td></td>
<td>Cultural responsiveness</td>
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<td>Respect</td>
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<td>Empowerment</td>
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<td></td>
<td>Values from Independent synthesis</td>
<td></td>
<td>Teachings</td>
<td></td>
<td>Cultural responsiveness</td>
<td></td>
<td>Respect</td>
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<td>Kinship</td>
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### Phase 1 & 2

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<th>Empowerment</th>
<th>8</th>
<th>Nourishment</th>
<th>9</th>
<th>Humanity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn and do what you love = teach</td>
<td></td>
<td>Language and communication</td>
<td></td>
<td>Understanding respect for different world views</td>
<td></td>
<td>Boundary</td>
<td></td>
<td>“Circle”</td>
<td></td>
<td>Holistic family</td>
<td></td>
<td>short distance to hospital/health care</td>
<td></td>
<td>co-ordinate for the patient not the system</td>
<td></td>
<td>Food/sharing</td>
</tr>
<tr>
<td>Education and training</td>
<td></td>
<td>Indigenous knowledge/understanding</td>
<td></td>
<td>Respect</td>
<td></td>
<td>Resurgence of traditional values + way</td>
<td></td>
<td>Holistic perspectives</td>
<td></td>
<td>family</td>
<td></td>
<td>patient in context</td>
<td></td>
<td>care</td>
<td></td>
<td>nourishment</td>
</tr>
<tr>
<td>Indigenous context in the education system</td>
<td></td>
<td>Knowledge</td>
<td></td>
<td>Reciprocity</td>
<td></td>
<td>“Balanced response” process that respects culture/spirit</td>
<td></td>
<td>know who you come from</td>
<td></td>
<td>water</td>
<td></td>
<td>sympathy/empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity building</td>
<td></td>
<td>All things are connected</td>
<td></td>
<td>Sovereignty</td>
<td></td>
<td>Diversity</td>
<td></td>
<td>Home, love and respect to land</td>
<td></td>
<td>housing</td>
<td></td>
<td>love</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditions</td>
<td></td>
<td>Language</td>
<td></td>
<td>Interconnections</td>
<td></td>
<td>Diversity</td>
<td></td>
<td>Blurr perspective</td>
<td></td>
<td>community driven</td>
<td></td>
<td>Traditional medicines</td>
<td></td>
<td>Health life</td>
<td></td>
<td>environment connection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protocols</td>
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<td></td>
<td></td>
<td></td>
<td>“Circle” biopsychosocial</td>
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<td>ASSIST</td>
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<td></td>
<td></td>
<td>Traditional Knowledge</td>
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### Phase 3

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<th>Community voice</th>
<th>5</th>
<th>Holism</th>
<th>6</th>
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<th>7</th>
<th>Empowerment</th>
<th>8</th>
<th>Nourishment</th>
<th>9</th>
<th>Humanity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration through indigenous knowledge transmission and knowledge receipt to achieve continuity in health and/or shared outcomes</td>
<td></td>
<td>Language and communication</td>
<td></td>
<td>Understanding respect for different world views</td>
<td></td>
<td>Boundary</td>
<td></td>
<td>“Circle”</td>
<td></td>
<td>Holistic family</td>
<td></td>
<td>short distance to hospital/health care</td>
<td></td>
<td>co-ordinate for the patient not the system</td>
<td></td>
<td>Food/sharing</td>
</tr>
<tr>
<td>Processes that must be reconceived to conduct community values centered health care</td>
<td></td>
<td>Indigenous knowledge/understanding</td>
<td></td>
<td>Respect</td>
<td></td>
<td>Resurgence of traditional values + way</td>
<td></td>
<td>Holistic perspectives</td>
<td></td>
<td>family</td>
<td></td>
<td>patient in context</td>
<td></td>
<td>care</td>
<td></td>
<td>nourishment</td>
</tr>
<tr>
<td>Manner in which interpersonal and community to community interactions should take place in</td>
<td></td>
<td>Knowledge</td>
<td></td>
<td>Reciprocity</td>
<td></td>
<td>“Balanced response” process that respects culture/spirit</td>
<td></td>
<td>know who you come from</td>
<td></td>
<td>water</td>
<td></td>
<td>sympathy/empathy</td>
<td></td>
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</tr>
<tr>
<td>Historical/legal/ influence community conception of health, power relationships in health systems, and recognize/engage indigenous knowledge and the significance of forbearance in indigenous culture(s)</td>
<td></td>
<td>All things are connected</td>
<td></td>
<td>Sovereignty</td>
<td></td>
<td>Diversity</td>
<td></td>
<td>Home, love and respect to land</td>
<td></td>
<td>housing</td>
<td></td>
<td>love</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Recognition of place in the continuity of the context, including space, time, place and purpose includes concept of distinctive roles, responsibilities, and restrictions/potential</td>
<td></td>
<td>Traditions</td>
<td></td>
<td>Interconnections</td>
<td></td>
<td>Diversity</td>
<td></td>
<td>Blurr perspective</td>
<td></td>
<td>community driven</td>
<td></td>
<td>Traditional medicines</td>
<td></td>
<td>Health life</td>
<td></td>
<td>environment connection</td>
</tr>
<tr>
<td>Community members’ shared histories, experiences, languages), economy/trades which shape how we conceive health, experience health care, develop trust in healthcare systems, and interact with western medical systems</td>
<td></td>
<td>Traditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“Circle” biopsychosocial</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>ASSIST</td>
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<tr>
<td>“Community driven health care”</td>
<td></td>
<td>Traditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>“Circle” biopsychosocial</td>
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### Phase 4

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<th>3</th>
<th>Respect</th>
<th>4</th>
<th>Community voice</th>
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<tr>
<td>Learn and do what you love = teach</td>
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<td>Capacity building</td>
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<td>All things are connected</td>
<td></td>
<td>Sovereignty</td>
<td></td>
<td>Diversity</td>
<td></td>
<td>Home, love and respect to land</td>
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<td>housing</td>
<td></td>
<td>love</td>
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<tr>
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<td></td>
<td>Language</td>
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<td>Interconnections</td>
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<td>Protocols</td>
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<td>“Circle” biopsychosocial</td>
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<td>ASSIST</td>
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<td>Traditional Knowledge</td>
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</table>
When everything is said and done, it’s all about diverse communities and their interdependence.

Values from Independent synthesis

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<th>Description of values</th>
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<td>2</td>
<td>Cultural responsiveness</td>
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<td>3</td>
<td>Respect</td>
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<td>4</td>
<td>Community voice</td>
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<tr>
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<td>Humanity</td>
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Appendix G: Health System Organization in the United States, Canada, Norway and Finland

From the Health System and Policy Monitor website, accessed March 2015

http://www.hspm.org/mainpage.aspx (139)

Figure G-1 United States health system organization chart
Figure G-2 Canada health system organization chart
Figure F-3 Norway health system organization chart
Figure F-4 Finland health system organization chart
Appendix H: Guide for Interview and Data Extraction of Health Ministry Documents

Define vision for health and strategy and policies to achieve better health

• The overarching vision for health in your country related to universalism, broad participation and equality to high standards
• Do you feel this vision is representative and does it ultimately inform policies

Exert influence across all sectors and advocate for better health

• Is there a strategy in place to collaborate and build coalitions across all sectors in government, and with actors outside government, to attain health system goals?

Ensure good governance supporting achievement of health system goals

• To what extent was the formulation process for the vision for health and health system strengthening strategy inclusive of main stakeholders for national consensus and ownership?
• Are there strategies in place to engage and involve patients and citizens in shared decision-making and priority setting? Strategies to engage the north.

Ensure alignment of system design with health system goals

• Is there a fit between strategy and health system institutional and organizational design and are there efforts in place to reduce duplication and fragmentation?
• Is the health system able to adapt its strategy and policies to take account of changing priorities and health needs?
• Are there processes in place to manage health system performance?

Make use of legal, regulatory and policy instruments to steer health system performance

• How is accountability for performance ensured? How are the accountability mechanisms in place linked to the health system’s broader governance structures? Are the mechanisms effective?

Compile, disseminate and apply appropriate health information and research evidence

• Does the health ministry (national and/or regional) ensure that strategy-based information, research evidence and other important data is generated, analysed and used for decision-making by policy makers, clinicians, other health system actors and the public?
• Are research evidence and strategy-based performance information (including health system performance assessment) built into ministry policy development and decision-
making processes?

**The role of arm’s length performance agencies**

- Please describe the use of an arm’s length agency (or agencies) to improve health system governance.

- Which of the three elements of leadership and governance do these agencies mainly reflect (priority setting, performance monitoring or accountability)?

**Participation and consensus orientation**

- Are the private sector, civil society, line departments and other stakeholders consulted in decision-making? How/What are the mechanisms?
- Are other state ministries involved in by the MoH in policies and programs to tackle health determinants?
Figure H-1 Dedoose/data collection coding tree – Stewardship functions and circumpolar forces
Appendix I: Fundraising for Health Care and National Players in the Health Care System

Table I-1 Fundraising for health care in circumpolar countries

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>Canada</th>
<th>Norway</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising Funds</td>
<td>Tax-based, federal, state and local</td>
<td>Tax-based, earmarked from central</td>
<td>Specialist care funded from central</td>
<td>Tax base, mix of municipal raised and</td>
</tr>
<tr>
<td></td>
<td>governments</td>
<td>ministry</td>
<td>ministry</td>
<td>matching central grants</td>
</tr>
<tr>
<td></td>
<td>Private insurance</td>
<td>Public health insurance (employer</td>
<td>Tax-based, general (not earmarked)</td>
<td>Taxation, general or earmarked</td>
</tr>
<tr>
<td></td>
<td>Employers insurance</td>
<td>insurance)</td>
<td>Primary care from tax base, mix of</td>
<td>Social insurance (employer)</td>
</tr>
<tr>
<td></td>
<td>Out of pocket</td>
<td>Minimal out of pocket payments</td>
<td>municipal raised and matching central</td>
<td>Minor supplementary, out of pocket</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>grants</td>
<td>Private insurance is modest, primarily in</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>urban areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Motor accident insurance provided by</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>private insurance company</td>
</tr>
</tbody>
</table>

Table I-2 National players in the health care system

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>Canada</th>
<th>Norway</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>The federal and state governments have</td>
<td>Canada Health Act 1984 – the federal</td>
<td>The Ministry of Health and Care</td>
<td>The Ministry of Social Affairs and Health</td>
</tr>
<tr>
<td></td>
<td>executive, legislative and</td>
<td>government has jurisdiction for</td>
<td>Services (In Norwegian: Helse-og</td>
<td>(In Finnish: Sosiaali- ja terveyministeriö</td>
</tr>
<tr>
<td></td>
<td>judicial branches. Under the</td>
<td>prescription drug regulation and</td>
<td>omsorgsdepartementet) sets national</td>
<td>STM) directs and guides social and health</td>
</tr>
<tr>
<td></td>
<td>executive branch of the federal</td>
<td>safety, finance and admin or health</td>
<td>health policy, prepares major reforms</td>
<td>services at the national level. It defines</td>
</tr>
<tr>
<td></td>
<td>government, the Department of Health and</td>
<td>services for Aboriginal peoples,</td>
<td>and proposals for legislation,</td>
<td>general social and health policy, prepares</td>
</tr>
<tr>
<td></td>
<td>Human Services (HHS) plays the largest</td>
<td>public health insurance for</td>
<td>monitors their implementation and</td>
<td>major reforms and proposals for</td>
</tr>
<tr>
<td></td>
<td>administrative role in the US health</td>
<td>Canadian armed forces, veterans,</td>
<td>assists the government in decision-</td>
<td>legislation, monitors their</td>
</tr>
<tr>
<td></td>
<td>care system.</td>
<td>inmates and eligible refugee</td>
<td>making.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicare and Medicaid coverage eligibility defined by federal government but administered by state.</td>
<td>Medicaid extension (under rules of ACA) made by governor of Alaska being challenged by Republican legislature. Example of conflict at state level between political and administrative control.</td>
<td></td>
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<tr>
<td>---</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control of military system for veterans.</td>
<td>In Alaska veterans services are provided by Alaskan Native Tribal Council through purchaser agreement.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian Health Services for Indigenous communities</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix J: Subordinate Agencies

Table J-1 Subordinate agencies of federal departments

<table>
<thead>
<tr>
<th>U.S.</th>
<th>Canada</th>
<th>Norway</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centres for Medicare and Medicaid services (CMS)</td>
<td>First Nations Inuit Health Branch (FNIHB)</td>
<td>Directorate of Health</td>
<td>The Finnish Institute of Occupational Health</td>
</tr>
<tr>
<td>Children’s Health Insurance Program (CHIP)</td>
<td>Public Health Agency of Canada (PHAC)</td>
<td>Norwegian Health Economic Administration (HELFO)</td>
<td>The National Authority for Medico-legal Affairs</td>
</tr>
<tr>
<td>Agency for Healthcare Research and Quality (AHRQ)</td>
<td>Canadian Institutes of Health Research (CIHR)</td>
<td>Norwegian Knowledge Centre for Health Services (NOKC)</td>
<td>The National Agency for Medicines</td>
</tr>
<tr>
<td>Centres for Disease Control (CDC)</td>
<td>Canadian Institute for Health Information (CIHI)</td>
<td>Health and Social Services Ombudsman (POBO)</td>
<td>The National Public Health Institute</td>
</tr>
<tr>
<td>Food and Drug Administration (FDA)</td>
<td></td>
<td>Norwegian Registration Authority for Health Personnel</td>
<td>The National Research and Development</td>
</tr>
<tr>
<td>National Institutes of Health (NIH)</td>
<td></td>
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<td>Centre for Welfare and Health</td>
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<td>Institute of Public Health</td>
<td>The Centre for Pharmacotherapy Development</td>
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