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# Chapter 11

## The Health Transition: A Challenge to Indigenous Peoples in the Arctic

Peter Sköld

**Abstract** Good health and well-being is one of the most important sustainability goals of today. Unfortunately the goal faces many challenges that show an uneven distribution of health improvements, and of life-expectancy. This is a global problem, but also a specific threat to vast parts of the Arctic. Furthermore there is a strong correlation between climate change and health risks. On top of these challenges are disfavoured indigenous peoples, globally and in the Arctic. This chapter deals with health encounters in the North, with a focus on the Swedish health care organization, Sami health and research efforts.

### 11.1 National Health Care Systems and Scientific Collaboration

Research plays an important role for the promotion of good health and well-being in the Arctic. Before any research comes naturally the development of a health care system. Historically this was of mere national concern for the respective Arctic countries, often the initiatives were not specifically targeted to the regions of the North. When Sweden established an organization with district physicians in the 1770s there was only a total of 32, and one single physician was responsible for the two northernmost counties, a huge area of responsibility that was impossible to cover properly. Over the nineteenth century the health care system slowly developed and reached out to remote areas too.

The emergence of the Swedish welfare state and its health system has been widely discussed in historical as well as sociological studies (Baldwin 1999; Porter 1999). On one hand Sweden was part of a European context, where scientific cooperation eliminated previously existing hindrances. Swedish physicians had opportunities to study and work at foreign universities. This “correspondence” also meant that medical discoveries such as Jenner’s smallpox vaccine quickly reached Sweden.

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The public health strategies in most European countries developed a combination of public health focusing on both environmental and individual health policies. Preventive measures and public health propaganda (the hygienic movement) became key features, and gave Sweden a comparatively low health care expenditure, and there was a strong ambition to create a welfare state (Sundin and Willner 2007; Rehnberg 1990). As it happened the first national health and living conditions survey took place in northernmost Sweden 1929–1931. The so-called Investigation of the North involved 4400 physicians and dentists and 17,400 northerners, and concluded that the diet had to be improved with more vegetables, housing must improve, gardening be developed, and school medicine be established. It also noted that cardo-vascular diseases and alcoholism were relatively rare. One might argue that the efforts to create the Investigation of the North were important for the development of research at the hospitals generally, and to the establishment of Umeå University 35 years later.

The development of health care systems varied to a great extent over the Arctic. But all systems had to take on similar challenges dominated by large regions with long distances between people, a cold and often harsh climate, limited resources, and difficulties to recruit health professionals. International research collaboration was intensified and in 1967 the first Circumpolar Health Symposium was arranged in Fairbanks. When the scientific conferences were evaluated 35 years later, the conclusion was that three fields of research had dominated the conferences: epidemiology of indigenous peoples, health care delivery and effect of physical factors on human physiology and health (Bjerregaard et al. 2003). Arctic health conferences during the past decade reveal that the field has added strong initiatives on new technologies, digitization and e-health, living conditions, occupational health, climate, the spread of infectious diseases, indigenous health and mental health, and suicide problems to their activities.

Collaboration has also been a key strategy for the international Arctic research community. The three science organizations with observer status to the Arctic Council have all health on the agenda. The International Arctic Social Science Association (IASSA) has 20 health session at the ICASS IX conference in June 2017 and the International Arctic Science Committee has a working group (SHWG) that includes health issues and has supported initiatives on health statistics in the Arctic. University of the Arctic has a thematic network on health and well-being. And a great manifestation of Arctic health research is the International Congress on Circumpolar Health that has sixteen conferences behind them, last time arranged in Oulu, Finland 2015. IASSA, IASC and UArctic have signed a Letter of Agreement which increases the opportunities to work towards health sustainability, and research driven by solutions and social impact.

Sustainability, solutions, and social impact are important goals for health care in the Arctic. National and regional health care organization, and scientific collaboration have proved to be important for the implementation of the goals. Nevertheless, there are considerable challenges for good and equal health in the Arctic that remain. These are general challenges, even if there are great disparities in the region. This chapter deals with the health situation for the Indigenous peoples in the Arctic, highlighting the Sami.

## 11.2 The Sami People

The Sami is a native people living in an area covering parts of northern Norway, Sweden, Finland and Russia, in the Sami language known as Sápmi. Different opinions have been expressed in the efforts of creating the best circumstances for the Sami to develop their societies in the north. It is very important to stress that the Sami the challenge is not limited to preservation. The Sami societies are dynamic, and parts of perpetual change. The Sami yoik (traditional song) is today expressed in blues, jazz, hip hop and heavy metal contexts. Reindeer herding is very technical, which is necessary in times of economic rationalization and improved work conditions (Sköld 2015).

During the nineteenth century the idea that the Sami ought to be culturally incorporated to the Swedish nation and change their nomadic lifestyle was replaced by an ideology stating that the only way for them to survive was to remain isolated and unchanged. This political strategy was replaced by an assimilation policy, resulting in cultural stigmatization, defeat of Sami languages, and weakened ethnic identity. The last decades have, however, witnessed a cultural revitalization process paired with a better acceptance of a multi-cultural society in the north.

The concept of vulnerability is, to say the least, complex in a variety of meanings and contexts. Nevertheless, vulnerability is a relevant issue for the Sami. Not least indigenous people's vulnerability has been a hallmark throughout history. Hundreds, even thousands, of indigenous peoples have experienced vulnerability to such an extent that they today no longer exist. From the eighteenth century and onwards it has been said that the Sami people lives under the threat of extortion. Different opinions have been expressed in the efforts of creating the best circumstances for the Sami to exist as an Indigenous group in the area. A discussion of Sami vulnerability necessarily includes relatively large generalizations. It is not just the vulnerability, but also the meaning of concepts such as culture, indigenous people and the Sami. Relevant for the Sami is the complexity that always has characterized their culture. Frequently used terms such as "the Sami want" and "the Sami believe" reveal the stereotype conceptions that have been present. We should remember that Sápmi crosses by a number of borders, cultural and national. There are nine Sami languages, which are divided into three main groups, and between these language groups there is a very limited linguistic understanding. There are South and North Sami. There are reindeer-herding Sami, forest Sami and Sea Sami. There are different groups in the four different countries including Sápmi. There are Sami in all counties and districts in Sweden. At the first elections to the Sami Parliament in Sweden, there were 17 different political parties represented. The Sami people do not like, and have never liked, the same thing. This cultural diversity within the Sami society has often been hidden to the general public.

### 11.3 Sami Health Challenges

Assuming that the complex Sami society is given account it can be argued that the Sami, in comparison with most indigenous peoples around the world, has a relatively good situation. The Sami in Sweden have experienced a unique and positive health development over the past centuries that has taken them from a very high mortality and low life expectancy to levels quite on par with the general average age in Sweden (Axelsson and Sköld 2006). In a recent article published in *The Lancet* (Anderson et al. 2016) poorer outcomes for Indigenous populations for life expectancy, infant mortality, maternal mortality, high birthweight, child malnutrition, child and adult obesity, educational attainment, and economic status are documented. The differences between regions and countries are great, but the Sami has a relative advantage to other Indigenous peoples.

Nevertheless, we should remember that reindeer herding is one of the most dangerous occupations with major accident hazards and that there are very worrying trends in high suicide rates among young reindeer herders. The Sami have increased their political influence. Since the early 1900s a relatively successful political mobilization, including the establishment of Sami Parliaments in Norway, Sweden and Finland, has occurred in the Sami society. Despite the advance in many areas the Sami are still dependent on decisions by the State and the majority society on most issues.

And there is still vulnerability in the Sami society. Reindeer herding, which is an important part of the Sami culture, are working under difficult economic and legal conditions. The Sami languages are fighting for its survival. We know that language and identity are closely linked. A stereotyped image of the Sami is still prevalent today and a general ignorance has been due to inadequate teaching and learning materials ignoring. This is an essential part of the Sami issues of today. Traditional knowledge and values threatens to be lost in a shrinking cultural space, while the Sami complexity and modernization has meant that more and more lose their Sami identity. And a crucial question is how much we really know about the Sami health situation.

### 11.4 Sami Health Data

It is uttermost important to have accurate information related to the health development in the Arctic. Generally, official registers present information about the inhabitants of the Arctic regions that is of equal quality compared to the non-Arctic parts of a respective country. There are, however, two major deficiencies; parameters that are compatible between the Arctic countries and data that has the capacity to illustrate the indigenous peoples separately.

Health is of course not equivalent to life-expectancy or mortality. Overall there is sufficient data for the Arctic regions to analyse the transition. But when it comes to methods and terminology aimed to cover life-quality, marginalization, discrimination, mental health, and living-conditions it is much more difficult to compare across nations. The Arctic countries also differ substantially in their efforts to include

ethnicity. It is, however, often very difficult to trace ethnicity in both the historical records and in the present-day population statistics. Official and self-determined definitions have varied extensively over time, and between countries (ASI 2010).

The insufficient inclusion and categorization of ethnicity in registers creates difficulties to estimate not only population size and composition, but also specific features such as languages, education, occupation, and health status (Axelsson and Sköld 2011). The UN Special Rapporteur Paul Hunt has pointed out that it is practically impossible to improve the situation of indigenous peoples if they are not visible through enumeration (Hunt 2007). Ethnicity is not included in population registers in Sweden, Norway and Finland making population estimates difficult (AMAP 2009). Norway, Sweden and Finland have developed systems of population registers that can be linked to social and health data that help to produce accurate, timely demographic data on most vital statistics. However, these registrars are not open for ethnic self-identification which render indigenous people invisible in official statistics. This omission of data is particularly problematic since studies show that the Sami people represent one of few examples of a successful health transition. However, in Norway substantial governmental resources have been assigned to research the health condition of the Sami population and the second wave of SAMINOR studies is currently being evaluated (Eriksen 2015). In Sweden the existing information on Sami health and mortality, that has been exclusively available for research, has not been updated since 2002, and there seems to be disagreement on how to proceed.

It is ironic that Sweden has the most excellent historical sources to perform demographic research in historical contexts. The result is unique population data bases that offers the opportunity to follow each individual in the digitized regions every year from birth to death. This goes from around 1750 to 1900. After that the ethnicity becomes much more difficult to detect, and after 1950 it is even abandoned in Swedish official registers of any kind. Officially there are 20,000 Sami in Sweden, but genealogical data shows that there is more than 50,000 persons with strong Sami kinship.

There is a great need of improving and merging quantitative ethnic information at the individual level in official registers and statistics. This is a prerequisite for the understanding of the present situation, and for a sustainable development of indigenous cultures. The Lancet study concludes that we particularly need to develop Indigenous health data systems in close collaboration with Indigenous peoples, improved Indigenous data identifiers, meaningful Indigenous engagement, strong global networks, further international studies, and development by national governments of targeted policies for Indigenous and tribal health.

## 11.5 Melting Permafrost and the Release of Infectious Diseases

The last section of this chapter deal with three infectious diseases that were all common in the past, and that are considered as minor threats today. Nevertheless, they all bear a potential risk for the future related to changes in the Arctic. Two hundred years ago infectious diseases dominated the high mortality in the Arctic countries. In Sweden smallpox killed more than 300,000 people between 1750 and 1800, in a country with only 2 million inhabitants. After the introduction of vaccine in the early 1800s smallpox mortality decreased rapidly, and in 1976 the World Health Organization declared the disease as totally eradicated from Earth. This was the first infectious disease that human health prevention actively got rid of (Sköld 1996). 1918–1920 an influenza pandemic swept over the world, killing between 50 and 100 million people. The Arctic, and especially the Indigenous peoples, were heavily struck. In local communities in Alaska the disease killed up to 90% of the entire population (Mamelund et al. 2013). Anthrax is an infection by bacteria that was already mentioned in the bible as a disease of herbivores, it remained a major cause of death for animals all over the planet until the end of the nineteenth century, with occasional, sometimes extensive, contamination of human beings. Untreated the disease has a fatality rate higher than 90% (Schwartz 2009).

What then do these three terrible diseases have in common for the future mortality risks in the Arctic? The answer is the consequences of melting permafrost. Smallpox, influenza and anthrax are relatively resistant to external factors and can survive for long, also in ice. When reports of an anthrax outbreak in Siberia came in 2016, it was stated that the bacteria originated from dead reindeer in 1941 (Nechepurenko 2016; Revitch et al. 2012). Severe epidemics with these diseases would have terrible results, not least since immunity status of the present-day populations is very low, in the case of smallpox non-existing. This is a somewhat neglected consequence of climate change that needs to be highlighted.

## References

- AMAP (2009) AMAP assessment 2009: human health in the Arctic. Arctic Monitoring and Assessment Programme (AMAP), Oslo
- Anderson I et al (2016) ‘Indigenous and tribal peoples’ health (The Lancet – Lowitja Institute Global Collaboration): a population study’. The Lancet 20 April 2016. doi: [http://dx.doi.org/10.1016/S0140-6736\(16\)00345-7](http://dx.doi.org/10.1016/S0140-6736(16)00345-7), pp 1–27
- Arctic Social Indicators* [ASI](2010) (eds) Joan Nymand Larsen, Peter Schweitzer and Andrey Petrov. Nordic Council of Ministers: Nordic Council of Ministers Publishers
- Axelsson P, Sköld P (2006) Indigenous populations and vulnerability. Characterizing vulnerability in a Sami context. *Annales de Demographie Historique* 111(1):115–132
- Axelsson P, Sköld P (2011) Introduction. In: Axelsson P, Sköld P (eds) *Indigenous peoples and demography. The complex relation between identity and statistics*. Berghahn Books, New York, pp 1–14

- Baldwin P (1999) *Contagion and the state in Europe 1830–1930*. Cambridge University Press, Cambridge
- Bjerregaard P, Young TK, Curtis T (2003) 35 years of ICCH: evolution or stagnation of circumpolar health research? In: Proceedings of the 12th international congress on circumpolar health, September 10–14, 2003, Nuuk, Greenland. *Int J Circumpolar Health* 63, suppl. 2; 23–29
- Eriksen AMA (2015) Emotional, physical and sexual violence among Sami and non-Sami populations in Norway: the SAMINOR 2 questionnaire study. *Scand J Public Health* 43:588–596
- Hunt P (2007) ‘Mission to Sweden: report of the special rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health’, *Report No. A/HRC/4/28/Add.2*, United Nations general assembly, human rights Council. New York: United Nations
- Mamelund S-E, Sattenspiel L, Dimcka J (2013) Influenza-associated mortality during the 1918–1919 influenza pandemic in Alaska and Labrador: a comparison. *Soc Sci Hist* 37(2):177–229
- Nechepurenko I (2016) ‘Anthrax outbreak in Russia kills boy, 12, and hospitalizes others’. *The New York Times*, 2 August 2016
- Porter D (1999) *Health, civilization and the state: a history of public health from ancient to modern times*. Routledge, London
- Rehnberg C (1990) *The Organization of Public Health Care. An Economic Analysis of the Swedish Health Care System*. Linköping University, Linköping
- Revitch B, Tokarevich N, Parkinson AJ (2012) ‘Climate change and zoonotic infections in the Russian Arctic’. *Int J Circumpolar Health* 71: 18792. <http://dx.doi.org/10.3402/ijch.v71i0.18792>
- Schwartz M (2009) Dr. Jekyll and Mr. Hyde: a short history of anthrax. *Mol Asp Med* 30(6):347–355
- Sköld P (1996) From inoculation to vaccination: smallpox in Sweden in the eighteenth and nineteenth centuries. *Popul Stud* 50(3):247–262
- Sköld P (2015) Perpetual adaption? Challenges for the Sami and reindeer husbandry in Sweden. In: Birgitta E, Larsen JN, Pasche Ø (eds) *The new Arctic*. Springer International, London, pp 39–55
- Sundin J, Willner S (2007) *Social change and health in Sweden – 250 years of politics and practice*. Swedish National Institute of Public Health, Stockholm

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