



Maternal Child Health Status in Nunavut

Identifying information on the health status of pregnant women and infants in Nunavut is part of planning programs designed to improve their health and well-being. This report provides information from Statistics Canada and the Canadian Institute for Health Information (CIHI) on maternal and infant health outcomes; as well as on rates of breastfeeding and smoking. These indicators are compared:

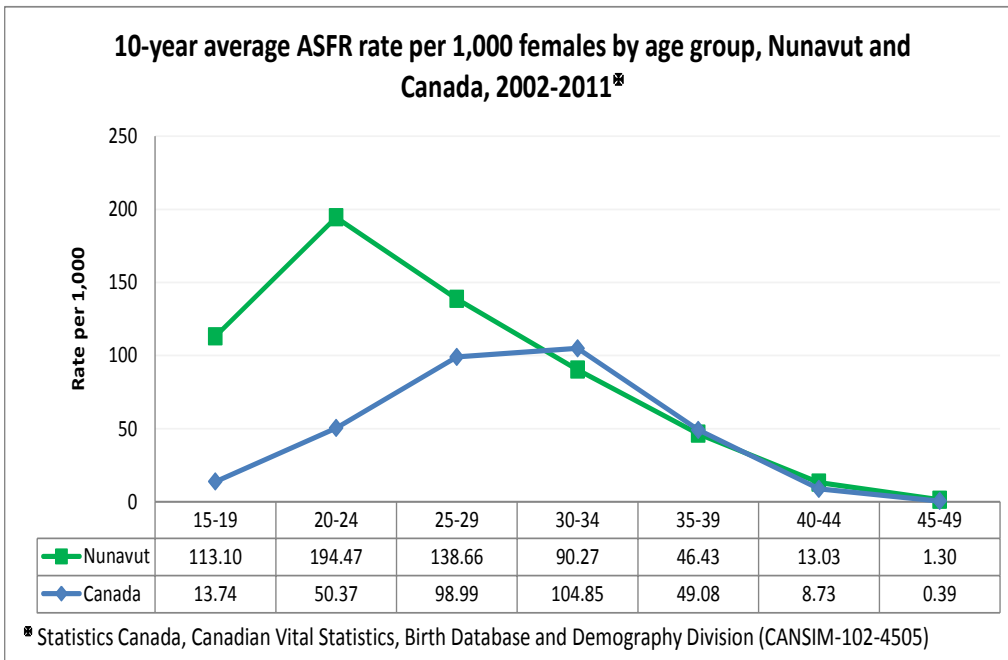
- With the Canadian population¹, to assess where there is room for improvement; and
- Within the same population over time, to determine if health status is getting better or worse.

Maternal Health Outcomes

Maternal Mortality: Between 1996/97 and 2010/11 there were no maternal deaths in Nunavut; the rate in Canada during this same period was 8.8 deaths per 100,000 births².

Maternal Morbidity: The severe maternal morbidity rate is calculated by the Public Health Agency of Canada using a number of databases from CIHI. From 2006/07 to 2010/11 the severe maternal morbidity rate for Nunavut was 22.0 per 1,000 hospital deliveries versus 14.4 for Canada. Causes of severe maternal morbidity in Nunavut included eclampsia (3.6/1,000) and postpartum hemorrhage with blood transfusion (13.4/1,000)³.

Age-Specific Fertility Rate:

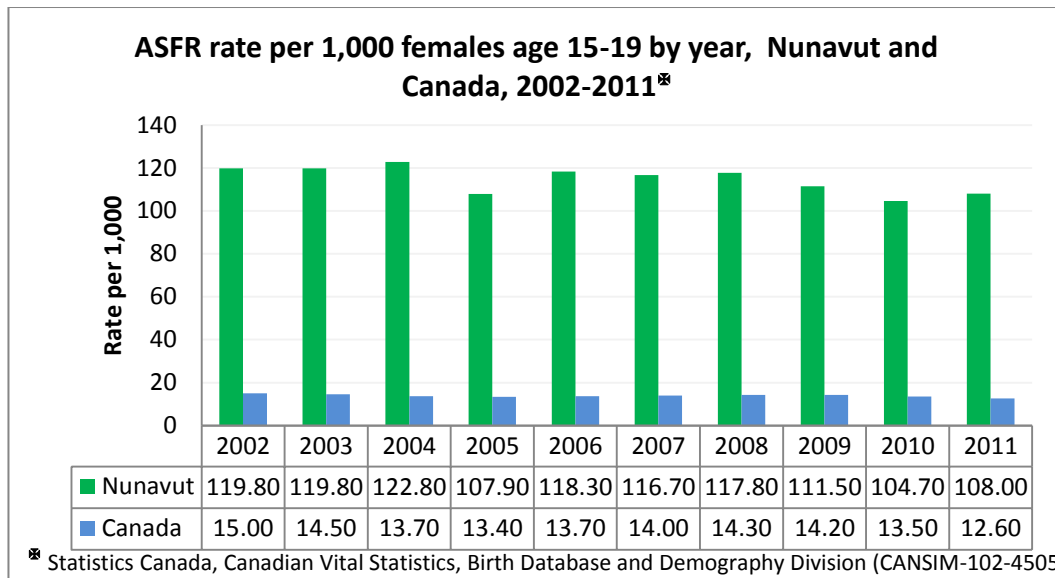


Age-Specific Fertility Rate or ASFR refers to the number of births to females in a particular age category in a particular year compared to the number of females in that age category. ([Statistics Canada](#)).

¹ It could be argued that a more appropriate population for comparison is other Aboriginal populations in the circumpolar regions.

² Canadian Institute for Health Information, Discharge Abstract Database

³ Public Health Agency of Canada (2013), *Nunavut Indicators List*, Unpublished report prepared for the Government of Nunavut



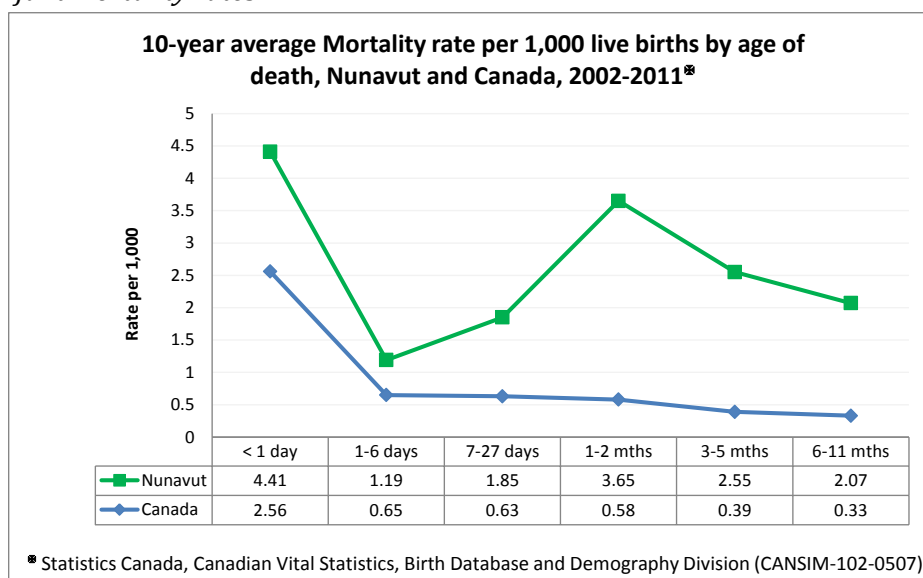
The 10 years of data for Nunavut and Canada in the two tables above reveal:

- The ASFR for both teenagers (15-19) and young women (20-24) in Nunavut are higher than in the rest of Canada.
- The ASFR for teenagers in Nunavut was stable between 2002 and 2011.

Implications: Maternal education is an important predictor of their children's health and well-being⁴. Women who have their first child when they are younger are less likely to complete high school and to have fewer resources to care for an infant⁵. It is important to ensure that young women receive the support they need to plan their pregnancies and to care for their infants.

Infant Health Outcomes

Infant mortality rates:



⁴ Brownell M, De Coster C, Penfold R, Derksen S, Au W, Schultz J, & Dahl M. (2008) Manitoba Child Health Atlas Update. Winnipeg, MB: Manitoba Centre for Health Policy.

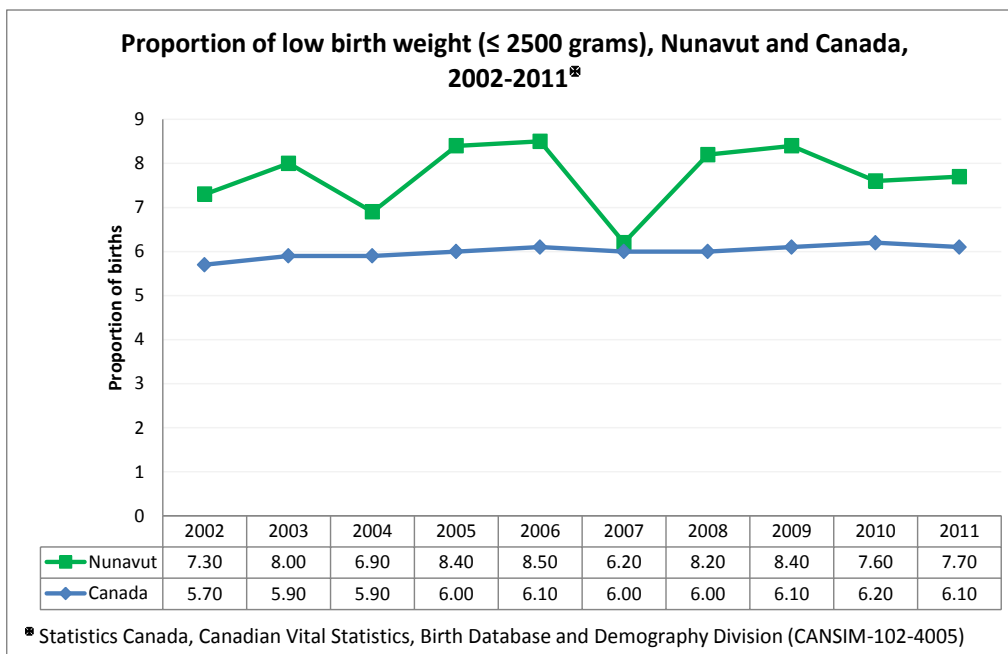
⁵ World Health Organization (2014) Adolescent Pregnancy: Fact Sheet, Downloaded on December 2, 2014 from <http://www.who.int/mediacentre/factsheets/fs364/en/>

These 10 years of data on infant mortality for Nunavut and Canada reveal:

- Nunavut’s infant mortality rate is an average of 4.3 times higher than Canada’s.
- There is a different pattern of mortality between the jurisdictions. In Canada, the mortality rate trends down after the first day whereas in Nunavut, the mortality rate sharply declines after the first day but increases after the first week.

Implications: The data indicate there are factors in the first year of life for infants in Nunavut that effect rates of infant mortality. An analysis of infant deaths in Nunavut from 1999 to 2011 was published in 2012 and indicated nearly half were caused by Sudden Infant Death Syndrome (SIDS) or Sudden Unexplained Infant Death (SUDI).⁶ Two sleep-related risk factors were identified in the report, non-supine sleep position and bed-sharing. Infectious diseases, particularly lower respiratory tract infection, were also a significant cause of infant death. Breastfeeding is known to reduce the risk of SIDS and the rate of lower respiratory infection among infants^{7,8}. Sleep-related risk factors and breastfeeding are important areas to address in reducing infant mortality.

Low birth weight rates



Low birth weight is defined as a birth weight less than 2500 grams. It is an indicator of the general health of newborns.
[Statistics Canada](http://www150.statcan.gc.ca/n1/pub/84-625-x/2011001/article/11831-eng.htm)

⁶ Collins, S., Surmala, P., Osborne, G., Greenberg, C., Williamson Bathory, L., Edmunds-Potvin S. & Arbour, L. (2012). Causes and risk factors for infant mortality in Nunavut, Canada 1999–2011, BMC Pediatrics. 12:190 Downloaded on August 29, 2013 from, <http://www.biomedcentral.com/1471-2431/12/190> .

⁷ Hauck, F., Thompson, J., Tanabe, K., Moon R. & Vennemann, M. (2011). Breastfeeding and Reduced Risk of Sudden Infant Death Syndrome: A Meta-analysis. Pediatrics, 128:103. Downloaded on August 29, 2013, <http://pediatrics.aappublications.org/content/128/1/103.full.pdf+html>

⁸ Roth, D., Caulfield, L., Ezzati, M. & Black, R. (2008) *Acute lower respiratory infections in childhood: opportunities for reducing the global burden through nutritional interventions*. Bulletin of the World Health Organization, 86:5. Downloaded on August 29, 2013 from, <http://www.who.int/bulletin/volumes/86/5/07-049114/en/>

These 10 years of data for Canada and Nunavut indicate:

- On average, the proportion of infants with low birth weight in Nunavut is 1.3 times higher than Canada's.
- The proportion of low birth weight infants in both jurisdictions has been stable over time.

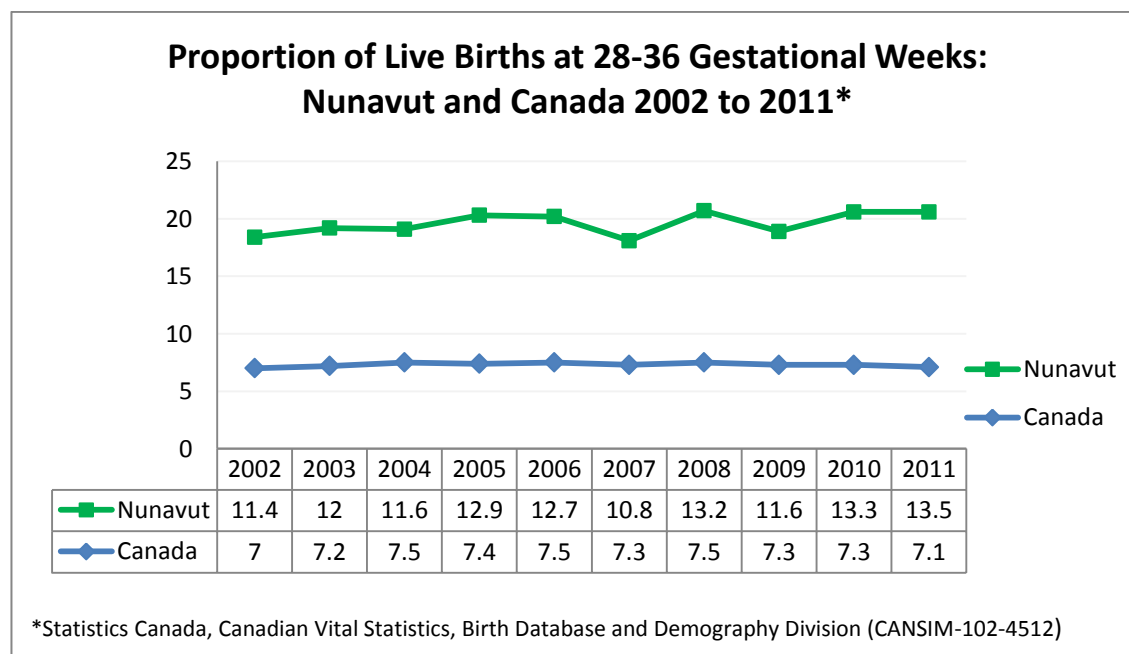
Implications: This data does not indicate whether infants are being born preterm or at term but small for gestational age. Consideration could be given to strengthening interventions to prevent low birth weight across the territory as there is evidence they can be effective⁹.

High birth weight

High birth weight, above 4.5 kg(9lb 14oz), is commonly associated with untreated gestational diabetes mellitus, maternal weight gain during pregnancy and maternal height. It can lead to higher rates of cesarean section as well as brachial plexus injury and fractured clavicle in the infant. Rates are very similar each year from 2002 to 2011 in both jurisdictions; in Nunavut ranging between 1.4 to 2.8% and in Canada between 1.6 to 2.3%¹⁰.

Prematurity – 28 to 36 weeks

Weeks of gestation refers to the interval, in completed weeks, between the first day of the mother's last menstrual period and the day of delivery¹¹.



These 10 years of data for Canada and Nunavut indicate:

- The proportion of live births between 28 to 36 weeks is an average of 1.7 times higher in Nunavut than in the rest of Canada.
- The proportion of infants born between 28 to 36 weeks in Nunavut has slightly trended up while the proportion in Canada remains the same.

⁹ Ohlsson, A. & Shah, P. (2008). *Determinants and prevention of low birth weight: A synopsis of the evidence.* Institute of Health Economics: Alberta. Downloaded on Jan 7, 2015 from:

<http://www.ihe.ca/documents/IHE%20Report%20LowBirthWeight%20final.pdf>

¹⁰ Statistics Canada, Vital Statistics, Births and Demography Division, CANSIM, 102-4509.

¹¹ Statistics Canada, Vital Statistics, Births and Demography Division, CANSIM, 102-4512.

Implications The negative impacts of preterm birth, particularly neurodevelopmental impairment, can last into adulthood despite the care provided in tertiary level nurseries. Given the preterm birth rate in Nunavut, continued attention should be given to efforts to improve maternal nutrition during pregnancy, reduce or eliminate alcohol intake and reduce or quit smoking. In addition, greater attention to teaching women about the signs preterm labour could assist in reducing the prematurity rate¹².

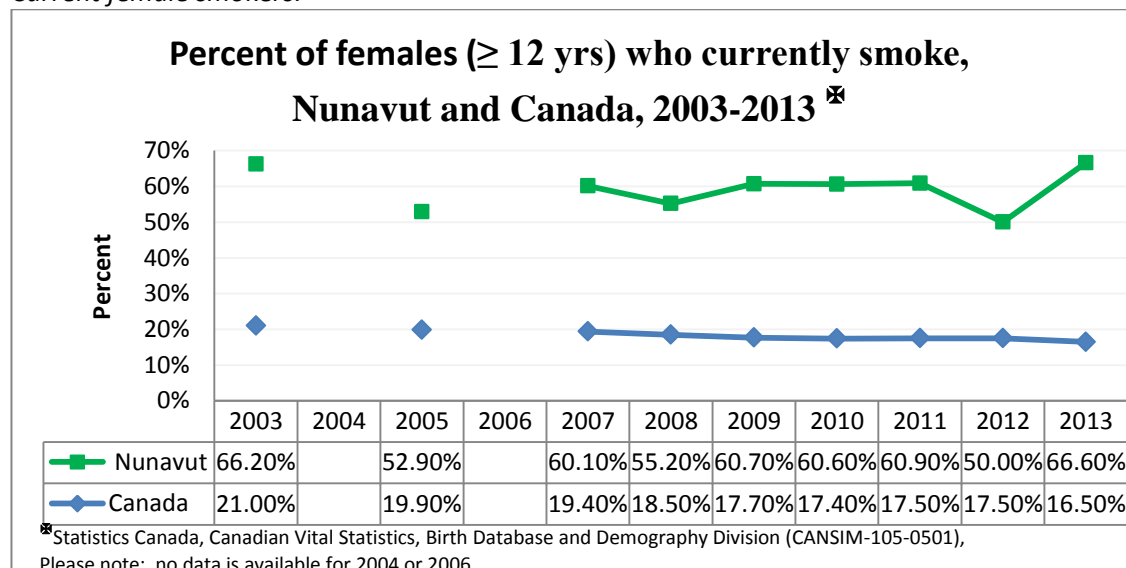
Behaviours

Source of data: In most of Canada, Statistics Canada’s Canadian Community Health Survey (CCHS) draws a representative sample from the population which excludes 3% of the population. In Nunavut, between 2006 and 2012 71% of the population could potentially be included in the sample for the CCHS. In 2013, Statistics Canada changed the sampling frame for Nunavut to include more communities and the sample is now representative of 92% of the population¹³.

While the CCHS has limitations because it is not representative of everyone in the territory, it is the only source of data we have for some health behaviours. Only two indicators are reported here¹⁴:

- Current smokers, female 12 years and older by per cent of women as a proxy for smoking during pregnancy.
- Breastfeeding initiation by women from 15 to 55 who had a baby in the last five years by per cent of women who had a baby. To obtain information on the initiation of breastfeeding the CCHS asks women from 15 to 55 who had a baby in the past five years whether or not they breastfed their newborn.

Current female smokers:



¹² Ohlsson, A. & Shah, P. (2008). *Determinants and prevention of low birth weight: A synopsis of the evidence*. Institute of Health Economics: Alberta. Downloaded on Jan 7, 2015 from:

<http://www.ihe.ca/documents/IHE%20Report%20LowBirthWeight%20final.pdf>

¹³ Statistics Canada, Canadian Community Health Survey, [Data Sources and Methodology](#)

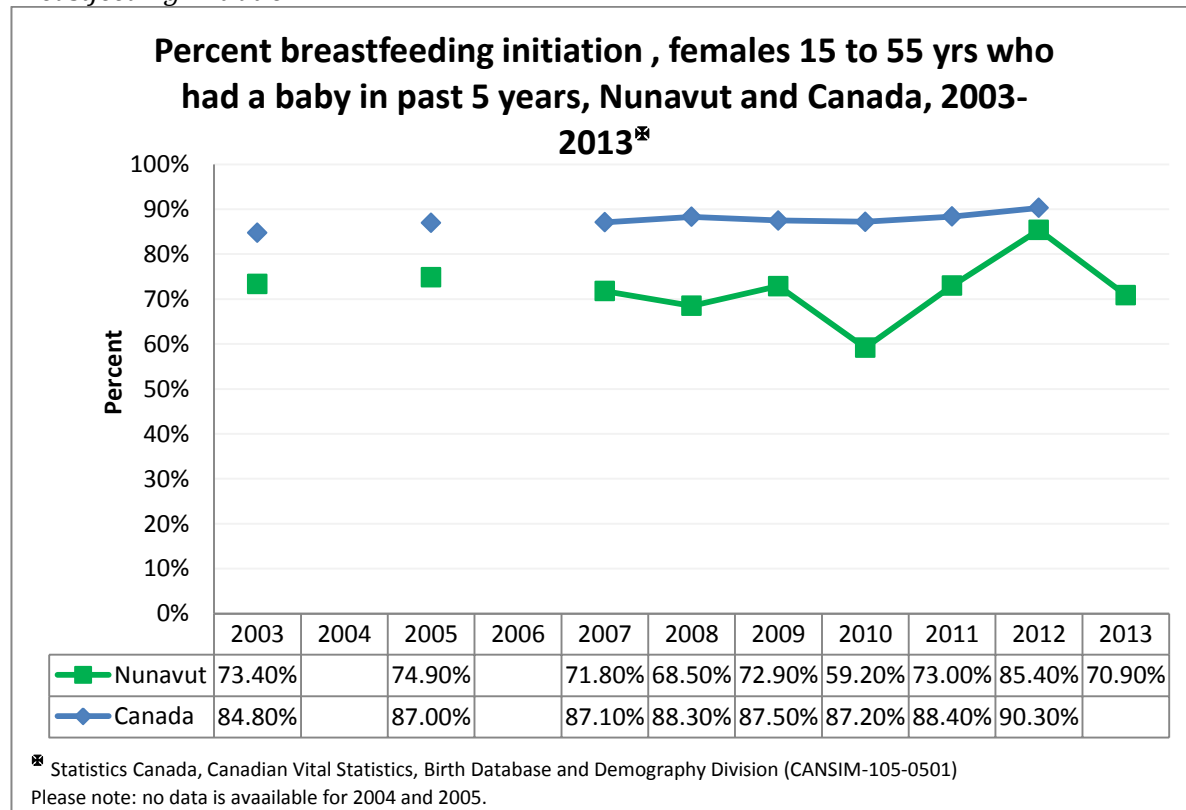
¹⁴ The data on the proportion of women living in Nunavut who drank heavily over the past year was not reliable enough to report. Similarly, data on continued breastfeeding at 6 months of age cannot be reported due to potential for error.

These nine years of data for Canada and Nunavut indicate¹⁵:

- Women in Nunavut are on average 3.2 times more likely to smoke than Canadian women.
- The proportion of females 12 years and older who smoke has been stable over time in both jurisdictions.

Implications It can be assumed that if women in Nunavut are smoking at a higher rate than women in the rest of Canada that more of them are smoking early in pregnancy. What is not known is how many women in Nunavut quit or reduce the number of cigarettes they smoke while they are pregnant. Given the persistently high smoking rate in the territory, efforts to support a smoke-free lifestyle should continue and include both prevention of smoking initiation as well as supporting quit attempts. At the same time, a more focused intervention to support quitting or reducing consumption of cigarettes during pregnancy could be considered.

Breastfeeding initiation



These 9 years of data for Canada and Nunavut indicate¹⁶:

- Canadian women are 1.2 times more likely to initiate breastfeeding.
- The percent of breastfeeding initiation is stable over time in both jurisdictions.

Implications: While Inuit traditionally breastfed their infants, there is evidence that the number of women breastfeeding in the territory has fallen over the past few decades¹⁷. A survey which included questions on breastfeeding has indicated that although initiation rates in Nunavut are lower than

¹⁵ Note, no data is available for 2004 or 2006.

¹⁶ Note, no data is available for 2004 or 2006.

¹⁷ Avinashi, V. (2010). *Breastfeeding in Nunavut: Where do we go from here?* Government of Nunavut

elsewhere in the country, women who do breastfeed tend to carry on for longer¹⁸. Breastfeeding is particularly important in Nunavut to support a traditional way of life, reduce the risk of SIDS, improve food security, prevent lower respiratory tract infections and improve oral health status. The Department of Health is working with other members of the *Breastfeeding Friendly Nunavut Committee* to increase breastfeeding initiation rates in the territory.

Conclusions

While we may not have all of the information on the health status of Nunavummiut required to support planning effective programs, there is some data available. Information is missing on key indicators such as alcohol use during pregnancy, among others, as well as a sense of regional variation as each region in the territory is quite different. There is also little data available on indicators of health at the community level. Without this more detailed information it is difficult to evaluate the impact of particular programs. Nonetheless, the information we have does provide some guidance on prioritizing programs to improve the health status of mothers and infants in Nunavut.

¹⁸ Asuri, S., Ryan, A., & Arbour, L. (2011). Early Inuit Child Health in Canada: Report 2: Breastfeeding among Inuit in Canada