

reported smoking during pregnancy (Egeland et al., 2009)—which reduces fetal access to oxygen and nutrients also contributes to low birth rates and risks for newborns. These conditions create a burden for pre and post-natal health on the Nunavut health care system that requires special attention.

In terms of social determinants of health, Nunavut also has challenges. There are multiple health determinants contributing to the poor status of Inuit early life health, including social factors such as poverty, poor hygiene, inadequate housing, low levels of education and high unemployment (Government of Nunavut, 2008). In 2005, about 46% of the population of Nunavut was receiving Income Support, a number which doubled between the years 2000-2005 (National Council of Welfare, 2006.) Only about 25% of the population completed high school and 53% of Inuit lived in crowded conditions (that is more than 5 individuals per house)(Statistics Canada, 2007).

Targeting single health determinants with program and policy responses has been found to result in fragmented efforts (Richmond & Ross, 2009). In their study of First Nations and Inuit health, Richmond and Ross selected a critical population health approach that deconstructed and then reconstructed the social, economic and political conditions affecting health. Their emphasis is on the environmental and cultural connections that drive First Nations and Inuit health, and the factors of “balance, life control, education, material resources, and social resources which ultimately support wellness” (Richmond & Ross, 2009). From their perspective, recognition of the need for healing from the colonial past and re-establishing the sense of cultural place and belonging are foundational to all health improvements. This recognition of the need for healing is often left out of both program and policy developments. However, there is evidence that a strength-based focus on cultural components

to policy development is being used (Government of Nunavut 2009a). In fact, it is the strength offered by the Inuit holistic view of health that can offer benefits to help address these various areas of maternal, newborn and early child health in the most effective way.

Contexts for Early Life Health

In order to ensure that effective interventions and programs are available to Inuit, it is important to understand the social contexts within which Inuit early life health exists, the cultural underpinnings that have sustained Inuit health in the past, and the key areas where interventions may have the greatest positive impacts.

Inuit families today are facing many health issues for which they have had little experience in the past. Due to the traditional healthy lifestyles of Inuit, before contact there was almost no incidence of tooth decay, heart disease or many cancers, whereas today levels of both lung and colorectal cancers amongst Inuit are now the highest in Canada (Government of Nunavut, 2008). Obesity was also extremely rare. Despite periods of hunger and starvation, pre-contact Inuit populations were multiplying and successfully occupied the vast areas of the Arctic (Multicultural Canada, nd). This healthy harvesting lifestyle included many other protective factors including social supports and sharing networks that enabled Inuit to withstand the challenges of harsh Arctic living. Besides a healthy diet, breastfeeding was the norm and children were breastfed often beyond their toddler years. Breastfeeding was highly regarded by Inuit for the nutritional advantages and natural protection it provided for the infant, as well as for the benefits to the mother in terms of delaying another pregnancy, assisting bonding and being a hygienic practice (Bjerregaard & Young, 1998). Tobacco use was limited and there was no incidence of drug or alcohol use until contact with Europeans.

Families functioned in close, extended groups where harmony was highly promoted and where there was a strong sense of belonging and security, especially for children (Briggs, 1970; Bennett & Rowley, 2005). Where there was any family dysfunction, unhealthy behaviours would have been quickly addressed and monitored by community Elders. A child deemed to be at any risk would be placed with a close relative. Culture and language were very strong, and children had clear expectations for their behaviours and for life goals.

For Inuit today, many of these social supports have changed, and health outcomes are negatively influenced by the incidence of chronic conditions, stressful home life conditions, poverty, and communicable diseases recently introduced to Nunavut communities. In a more recent study done for the International Polar Year, the Nunavut Inuit Child Health Survey for 2007-2008 (Egeland et al., 2009) investigated health specifically amongst children in the 3-5 year old range, including some data on social determinants. The survey found areas for concern including:

- 53% of homes are overcrowded and 35% require major repairs
- in homes of the children surveyed, there is an average of 6 people per home while the national average is 2.5 people per household
- 34% of homes experience food insecurity, with 24% experiencing severe child food insecurity, marked by either skipping meals or eating reduced amounts in the month prior to the survey
- intake of fiber is extremely low¹
- 35% of total food energy comes from high sugar, high fat foods
- 78% of children consume sweet drinks (about 30 sugar cubes daily)
- 55% of the dietary content is carbohydrates
- only about one third of children have a healthy body weight
- 72% have decayed, extracted or filled

- baby teeth
- 20% have low hemoglobin and are mildly anemic
- only 21% of children surveyed have optimal levels of vitamin D with 13% having insufficient levels
- 37% of children have experienced an ear infection in the year prior to the study²
- 45% have been exposed to *Helicobacter Pylori*³
- 42% have a respiratory illness, with 32% having a serious lung infection and 50% of those requiring hospitalization
- 83% of pregnant women have smoked during pregnancy and 24% consumed alcohol

The situation is exacerbated by the chronic lack of access to health services that Nunavut families experience, which further contributes to the poorer health outcomes for Inuit as compared to the rest of Canada. Statistics Canada's 2001 Census report on the health of Inuit children highlighted this lack of access well, indicating that:

- 33% of children are diagnosed with a chronic condition; the most prevalent ones being ear infections, asthma, and allergies
- only 16% have seen a doctor in the past year
- only one fifth of Inuit communities have

- regular scheduled visits by a doctor
- 58% of children in Nunavut have not received dental treatment in the previous year (Statistics Canada, 2007)

There are some positives stemming largely from cultural protective factors for Inuit health that can be built upon. These were also identified in the Egeland et al. (2009) study and include the following:

- 93% of families have restrictions about smoking in the home
- 80% of children speak Inuktitut (excluding 2 Inuinnaqtun speaking communities)
- 84% of children spend time with extended family
- 72% of families have access to country foods when available
- 99% have normal vision
- 90% were injury-free

A critical priority for improving these early life health outcomes is in improving the health of pregnant women and those of childbearing ages. Use of tobacco and alcohol, and poor maternal nutrition during pregnancy are obvious areas immediately requiring intervention. In children, the high incidence of respiratory infection and poor immune response, attributed to the low levels of vitamin D (Egeland et al, 2009), traces its roots

to some of these issues in the health of women of childbearing ages. Maternal health nutritional deficits are also related to the much wider incidence of child and family food insecurity. There has been little research carried out on the actual nutritional levels of families in Nunavut. Some data has recently been forthcoming from the Healthy Foods North Program being delivered in two Nunavut communities and supported through the American Diabetes Association and the Nunavut Public Health Strategy. Early results indicate that the population generally has critically low levels of fiber in their diet and that levels of vitamin and calcium consumption are also very low

Today, we Inuit face many problems. Our population is growing rapidly. We have high levels of unemployment. Too many of our young people have low levels of education. With our high birthrate, the number of young people coming of school age is taxing our education system. Our health system is inadequate. There is a severe shortage of adequate housing across Nunavut, particularly for people with low income. Our economy is growing, but it is not growing sufficiently enough to provide employment for our young people. Alcoholism and suicide are endemic. (Nunavut Tunngavik Incorporated, 2000)



¹ Although the Egeland study does not define "low", the Sharma study found fiber intake in adults was 8-9 g, while the recommended intake is 25-38 g.

² The World Health Organization (WHO, 1996) reported that Inuit populations have the highest rates of chronic middle ear disease at rates of up to 46% while rates for Caucasian populations are generally less than 1%.

³ *Helicobacter pylori* is "a spiral shaped bacterium that lives in the stomach and duodenum (section of intestine just below stomach)" (The Helicobacter Foundation, http://www.helico.com/h_general.html).



The need for education and knowledge is widespread and can take a variety of forms. The most obvious is the need to provide training and counselling for Inuit who are pregnant or who have a newborn. There is a desire that women within the communities should share their experiences; women who have already given birth should help younger inexperienced women through their pregnancies and help prepare for childbirth. Education and training, however, can extend to the women's partner and to the entire community. Healthy lifestyle needs to be promoted in order to address some of the root causes behind high teenage pregnancies and higher rates of infant mortality, etc. Young women need support. (National Aboriginal Health Organization (NAHO), 2006)

(findings consistent with the Egeland et al., 2009 findings for 3-5 year olds). The lowest results for dietary sources of iron were found in women of childbearing age, 21-34 (Sharma et al. 2009). Although the Healthy Foods North program did not gather nutritional profile data on anyone under the age of 21, it might be assumed that the data for a younger age group would be similar.

Given these circumstances, it is not surprising that supporting early life health programs was identified in a workshop on the social determinants of health in Nunavut in 2005 as the intervention with the most potential for significant changes in outcomes (Government of Nunavut, 2005). Participants recommended a focus on building parental awareness, developing confidence and skills, and providing direct support through home visiting programs as key components of such an intervention. As yet, there are no current or clear Government of Nunavut programs that meet these criteria and no data to indicate an improvement in early life outcomes. However, in recognition

of the very negative statistics presently being reported for maternal and infant health, the Government of Nunavut has recently released a Nunavut Maternal and Newborn Health Care Strategy 2009-2014 (Government of Nunavut, 2009b). It states that "All *Nunavummiut*⁴ will have the best possible start in life, with strong family support and access to excellent and culturally appropriate maternal and newborn health care so they are able to enjoy healthy living" (Government of Nunavut, 2009b). The strategy is directed at promoting a healthier start for newborns in Nunavut by offering enhanced care services to pregnant women. It is hoped that the strategy will ensure more directed services to pre-natal and neo-natal health, but also provide supports for improving some of the social determinants of health which significantly influence the quality of early life health. For a health system struggling to provide even the most basic services such as access to a doctor or dentist, this may be a commitment that is difficult to achieve.

Promoting Early Life Health Using Inutsiaqpagutit Wellness Messages

For Inuit, health and wellness is a holistic concept encompassing every area of life. The concept is grounded in expectations to contribute, share, care, belong, live well, be respectful and celebrate life. Inuit conceptions of happiness are ascribed to living a good life and having strong social affiliations (Pauktuutit, 2006). Briggs describes the role of happiness in Inuit society as "a moral good" (1970) whereby a person is both accepted as safe and socially acceptable.

Before contact with Europeans, Inuit had an entirely oral culture. Like many oral Indigenous cultures, Inuit relied on transmitting culture and important information through stories, songs and sayings that were easily memorized and remembered. There were many purposes for these oral messages, but all were directed at helping Inuit lead a good life. *Inutsiaqpagutit* is the term that refers to teachings that will lead one to living a good life. Still today, leading a good life focuses

⁴ Literally translates as people of Nunavut.

on personal and collective obedience to following the teachings that are foundational to Inuit worldview or *Inuit Qaujimajatuqangit (IQ)*.⁵ Although each of these teachings is defined separately, they are followed holistically and are viewed as interconnected and inseparable. So, if you are experiencing difficulty in one area of your life, that likely will affect both you and those around you in other areas as well. For this reason, and 'in order to live untroubled,' adherence to the teachings is a priority.

Inuit believe that when a person's life is troubled, s/he needs to refocus on the central values and beliefs in order to regain balance and come back into harmony with the world. Being in a state of imbalance will lead to ill health. To prevent this, there are many teachings passed on in the forms of sayings that guide the individual to healthy living. Today, we might view these as public health messages. A few well-known examples of *inutsiaqpagutit* include:

Teachings to promote good nutrition:

- always eat all parts of food that are harvested
- never waste food
- reserve special foods for pregnant or lactating women
- do not eat or drink too much
- store and prepare foods carefully
- share and don't hoard food

Teachings to promote active living:

- rise with the day, check the weather and go outside quickly after rising
- respond immediately, never be slow to move
- don't sit around too much
- continually prepare for the future
- carry heavy things to build up your strength
- continually harvest/hunt so that others won't go hungry
- don't be lazy

Teachings to support mental wellness:

- spend time with family, especially

grandparents and elders

- always communicate openly
- don't try to hide your problems
- avoid arguments/conflict
- do not respond with anger as this shows immaturity
- observe others closely and help those in need
- never grieve or mourn in private
- do not seek revenge
- never gossip or tell lies about someone

Ill health stems from a fundamental breakdown in the conditions that support health, either physical, socio-cultural, economic or mental. In the case of post-colonial trauma, all of these conditions became broken for Inuit populations. If the disruption of essential relationships and teachings has contributed to ill health, then conversely it might be assumed that through restoring intergenerational communication and relationships, health outcomes would improve. Some of the most significant child health concerns stem from unhealthy conditions in prenatal and maternal health, homes and hygiene, exposure to communicable diseases, and from food insecurity. Historically, Inuit used *inutsiaqpagutit* teachings to address all of these issues. These teachings were shared with children very early in and throughout life. In adolescence, young Inuit men and women were specifically prepared for establishing a healthy home and for childrearing. As teachings, *inutsiaqpagutit* were repeated often, and became practices clearly visible throughout the community. Their messages became trusted and internalized across the generations. Returning to the teachings may seem a very simplistic approach, but it is also a cost effective, holistic approach to begin addressing healthier outcomes for Inuit. Recognizing that the contexts for health amongst Inuit have changed—alcohol and drug use, for example—there is value in using the vehicle of *inutsiaqpagutit* to convey new messages that target current concerns in health.

The effectiveness of key messaging can be seen in Inuit communities in areas such as smoking reduction within homes (Egeland et al., 2009) and reduction in the sale of pop during the annual Drop the Pop program (Government of Nunavut, personal communication). When health appropriate information is provided, changes in behaviours can result. Successful messaging is generally considered to be pervasive across the community, consistent, targeted and delivered by trusted message bearers (Maibach & Parrott, 1995). By rebuilding the role for Elders as *inutsiaqpagutit* message bearers, community child health outcomes might be better addressed, using the strengths of *IQ* to rebuild strengths in healthy living.

The vehicle of *inutsiaqpagutit* to deliver needed public health key messages is an area that should be considered for all Inuit jurisdictions. Sharing production of key message resources could prove cost effective and efficient in terms of reinforcing messages across the country. As well, Inuit themselves have requested a focus on building parental awareness, developing confidence and skills, and providing direct support through home visiting programs (Government of Nunavut, 2005). These approaches can be well supported and reinforced through key messaging. Most people would agree that parents want to be good parents and have healthy children. If this is indeed the case, messaging to support that should be well received and uptake should be positive.

If Inuit jurisdictions support messaging with programs designed from an *IQ* perspective of holism, healing, building on strengths and sustainability, early life health care should emerge. When supported by policies such as the Maternal and Newborn Health Strategy, establishing a continuum of early life services, this may provide a model that most closely resembles *Inuit Qaujimajatuqangit* and the healthier outcomes Inuit knew in the past.

⁵ *Inuit Qaujimajatuqangit* cultural knowledge reflected in this report has been documented by Inuit Elders from across Nunavut. The cultural knowledge and terminology of other Inuit cultural areas may vary, but at present there is no similar process of documentation available.

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NATIONAL COLLABORATING CENTRE
FOR ABORIGINAL HEALTH
CENTRE DE COLLABORATION NATIONALE
DE LA SANTÉ AUTOCHTONE

FOR MORE INFORMATION:
UNIVERSITY OF NORTHERN BRITISH COLUMBIA
3333 UNIVERSITY WAY, PRINCE GEORGE, BC V2N 4Z9

1 250 960 5250
NCCA@UNBC.CA
WWW.NCCA.H.CA