Reclaiming Birth, Health, and Community: Midwifery in the Inuit Villages of Nunavik, Canada

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This article describes the Inuulitsivik midwifery service and education program, an internationally recognized approach to returning childbirth to the remote Hudson coast communities of Nunavik, the Inuit region of Quebec, Canada. The service is seen as a model of community-based education of Aboriginal midwives, integrating both traditional and modern approaches to care and education. Developed in response to criticisms of the policy of evacuating women from the region in order to give birth in hospitals in southern Canada, the midwifery service is integrally linked to community development, cultural revival, and healing from the impacts of colonization. The midwifery-led collaborative model of care involves effective teamwork between midwives, physicians, and nurses working in the remote villages and at the regional and tertiary referral centers. Evaluative research has shown improved outcomes for this approach to returning birth to remote communities, and this article reports on recent data. Despite regional recognition and wide acknowledgment of their success in developing and sustaining a model for remote maternity care and aboriginal education for the past 20 years, the Nunavik midwives have not achieved formal recognition of their graduates under the Quebec Midwifery Act. J Midwifery Womens Health 2007;52:384–391 © 2007 by the American College of Nurse-Midwives.

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To bring birth back to the communities is to bring back life . . .

—Puvirnituq Elder, 1988

INTRODUCTION

This article describes the Inuulitsivik midwifery service and education program, an internationally recognized model of care, which has returned childbirth to the remote communities of Nunavik, Quebec, Canada. Nunavik is one of the Inuit regions of the Canadian Arctic (Figure 1), just south of the new Canadian Territory of Nunavut. It is a vast region of more than 500,000 square kilometers of tundra. Traditional Inuit and modern ways of life mix, and many families continue to practice subsistence hunting and fishing. Inuutitut is the region’s primary language, although English and French are also spoken. Nunavik has a very young population; 50% of the inhabitants are under the age of 20. The population is growing, and has a birth rate that is twice the Canadian average. First-time mothers are young, with 25% of births occurring in women under 20. Most women have three or more children.

The Inuulitsivik Health Centre serves seven communities on the Hudson Bay and Hudson Strait coasts (Figure 2), with a population of about 5500. Inuulitsivik encompasses a local health center in each community, often called “the nursing station”; a small, 25-bed general hospital in Puvirnituq; and a mental health center in Inukjuak. All of the communities are remote fly-in villages, with transfer for tertiary care more than 1000 kilometers to the south, in Montreal.

BACKGROUND

Inuit have something to learn from the southern health system. And Inuit culture has much to offer and much more to reclaim.

—Annie Palliser Tulugak, Past Director of Inuulitsivik

Although midwifery was an integral part of traditional Inuit culture, the official “standard” of maternity care that developed in the mid 1970s for many northern Canadian communities was the evacuation of all pregnant women to hospitals to give birth, often in distant southern Canada. Women were flown south at 36 weeks’ gestation or earlier, spending weeks and sometimes months away from home. As stated in a report to the Quebec Ministry of Health, “This intimate, integral part of our life was taken from us and replaced by a medical model that separated our families, stole the power of the birthing experience from our women, and weakened the health, strength, and spirit of our communities.”

In 1986, the first birth center or “maternity” was opened in Puvirnituq to serve the women of the Hudson coast, as a direct result of community organization by Inuit women and activism for Inuit cultural revival and
self-government. The initiative was supported by the community board that governed Inuulitsivik. The board’s commitment to the education of Inuit health workers and an approach to health care rooted in community development formed the philosophy of the birth center. The community had a strong desire to reclaim the birth experience by using midwifery skills and traditional knowledge about birth, integrated with modern approaches to care.

FORMATION OF THE BIRTH CENTER

The formation of the birth center involved consultations with elders, traditional midwives, childbearing women, and young women. Midwifery students were selected by the community, and Quallunaaq (non-Inuit) midwives were hired to support the development of an Inuit midwifery service.1,4 The success of the Puvirnituq Maternity inspired other communities to work to bring birth back to their villages. There are currently about 200 births per year taking place at birth centers in the three largest communities: in Puvirnituq (population approximately 1400); Inukjuak (1400), which opened in 1998; and since 2004, in Salluit (1100). The maternities are located in the local health centers.

Discussion about the consequences of returning childbirth to the villages took place at community meetings with women’s groups, leaders, and elders. This process included dialogue with local health care providers about

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Figure 1. Map of the Nunavik region. Reprinted with permission from Makivik Corporation.
the capacity and limitations of care in these remote settings, the potential for adverse outcomes related to distance from tertiary care, and discussions of the communities’ perspectives about the potential benefits of returning birth to the north.

_I can understand that some of you may think that birth in remote areas is dangerous. And we have made it clear what it means for our women to birth in our communities. And you must know that a life without meaning is much more dangerous._

—Jusapie Padlayat, a Salluit elder

**MIDWIFERY-LED INTERDISCIPLINARY MODEL**

In the Inulitsivik model, midwives are lead caregivers for maternity, well women, and newborn care for the population, regardless of risk status. Midwives and students work together to provide care and to facilitate the “on the job” education students receive. Midwives and student midwives are employees of the health center and are the on-call primary care providers for maternity care.

The midwives work as part of a team with nurses, physicians, and social workers in the health centers. Nurses provide on-call, first line primary care for non-maternity care emergencies in all of the villages. Family physicians based in the largest Hudson Bay communities (Puvirnituq, Inukjuak, Salluit, and Kuujjuaraapik) are available for consults on-site, and they also make regular visits by plane to the other villages.

For women living in Inukjuak, Puvirnituq, and Salluit, prenatal care, “low risk” births, and postpartum care occur with midwives in the birth centers. Because these are the larger villages, 75% of the Hudson coast population has access to intrapartum care in their home community. Women from the four smaller villages (population, 300–700) where there are no birth centers, receive prenatal care from nurses in the nursing stations in consultation with the midwives, and travel to one of the birth centers at 37 to 38 weeks’ gestation for delivery. Although this means that 25% of women still have to “leave home” for birth, they receive care in their own region, language, and culture from Inuit midwives. Women who travel for birth often stay with relatives in the larger villages and give birth surrounded by relatives or friends. Air Inuit, the only regional airline, offers reduced airfare for partners to travel with women for childbirth. This is markedly different than the loneliness and disruption of evacuation to southern hospitals.

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*Figure 2. Map of villages in the Nunavik region. Reprinted with permission from Makivik Corporation.*
The hospital staff in Puvirnituq is governed by an interdisciplinary council, which sets policy and protocols. Key to the collaborative approach to care is the Perinatal Committee, an interdisciplinary team led by midwives, which reviews each woman’s case at 32 to 34 weeks’ gestation. This review considers both medical and social factors, and creates a care plan, including place of birth.

Births are usually attended by two midwives. A physician is on-call 24 hours a day in Puvirnituq, and nurses are on-site in the hospital to assist if needed. A second physician is on-call by phone for the other villages during the evenings and weekends, and a nurse can be called to come into the health center when a birth is taking place. The physician on-call is responsible for arranging medical evacuation after consultation with the midwives. Specialist consultation is by phone, electronic communication, or transport. Transport time to Montreal ranges from 4 to 8 hours, weather permitting.

**RISK SCREENING**

Perinatal care and risk screening are guided by an extensive and evolving set of guidelines for practice. Risk screening is a fundamental principle of safe care in this remote setting. The whole concept of risk in birth, however, is conceptualized in a much broader context than protocols or risk scoring systems. Risk screening is seen as a social, cultural, and community process rather than simply a biomedical one.

In Inuit culture, health is regarded as more than the absence of disease, and includes health of the individual’s physical, mental, emotional, and spiritual aspects, in addition to health in the family and the community as a whole.

Evacuation is seen by the health care team to carry its own kind of risks, assessed on the basis of both social and medical status. Even routine evacuation is a risky process, in that it can recreate the trauma and social dislocation of the old residential school policy, which is a trauma felt at both individual and community levels. Evacuation is associated with the loss of autonomy, a poor diet, substance use, family stress, and child neglect. Inuit report that care in the south is often marked by a lack of understandable information; a lack of sensitive, culturally appropriate care; and high rates of intervention. In Nunavik, taking birth out of the community is understood as an act of disrespect, neglect, and a colonialist approach to health care and to indigenous communities.

If a woman’s case involves risk factors that indicate more ready access to services such as laboratory or emergency transport, births are planned for Puvirnituq. Examples include: hypertension that is unresponsive to therapy; history of postpartum hemorrhage or retained placenta; postdates > 42 weeks; first trimester complications; and preterm labor before 36 weeks. If tertiary care is necessary, births are planned for Montreal. Women with twins, breech presentation, those who want to have a vaginal birth after cesarean, severe hypertension, preexisting/other medical conditions, and preterm labor before 35 weeks’ gestation are transferred to Montreal when possible. In Puvirnituq, there is access to lab services, blood transfusion, induction, augmentation, and admission of newborns for care, monitoring, and treatment. There is usually access to ultrasound and intermittent access to providers skilled in uterine evacuation. Planned transfer is by scheduled flight on the regional airline.

In an emergency air transfer, Puvirnituq is the first step in the evacuation process from the other villages to tertiary care in Montreal, as there is a landing strip for an emergency medical services jet that comes from Montreal. Emergency transfer from the smaller villages to Puvirnituq is via smaller planes contracted through the regional airline. This process may take as many as 6 to 8 hours, weather permitting.

**RESULTS OF EVALUATION STUDIES**

Uniform data have been collected at each birth since the beginning of the midwifery service. These data have the strengths and limitations inherent to audits of clinical records. A summary of the external evaluations and a report on more recent data gathered internally follows. Some evaluations used historical comparisons looking at data from 1983 before the Puvirnituq Maternity opened; evaluations were then performed during the following years: 1987 to 1988, 1990 to 1991, and 1995 to 1996.

When the Puvirnituq Maternity opened, it served the Hudson coast, and women on the neighboring Ungava coast continued to be cared for by physicians at Tualatavik Hospital in Kuujjuak. Studies using regional cohorts have reported the obstetric outcomes of this “natural experiment,” by comparing groups of women who were very similar demographically, but who were cared for by different services. The research shows improved outcomes and lower rates of intervention, both historically and in comparisons between regions (Table 1). A report of the outcomes for the first 5 years of the Inukjuak Maternity is consistent with the previous research.

**Outcome Statistics for the Birth Centers**

Ongoing internal evaluation of outcomes report more than 2200 births in Puvirnituq, 200 births in Inukjuak, and 40 births in Salluit, with approximately 3000 women cared for in total since the Puvirnituq birth centre opened in 1986. Between 1986 and March of 2005, 80% of women from the Hudson coast communities gave birth in Nunavik.

An internal audit of medical evacuations between 2002 and 2005 showed that of the 374 births planned for
of the Inuulitsivik birth centers, 92% took place in Nunavik, 9.3% involved maternal transfer (antepartum, intrapartum, or postpartum), and 1% involved neonatal transfer. Of the maternal transfers, 7.8% were transferred to Montreal, and 1.6% transfers were to Puvirnituq.

The most common reason for transfer was preterm labor (14/42; 33%). However, 64% (n = 9) of the women who were transferred for preterm labor without ruptured membranes delivered at term, often after returning to the north. The health center is currently exploring the use of fetal fibronectin as a test that might aid management and decrease unnecessary transfers of women at preterm gestations. The other reasons for transfer were hypertension (n = 5, 11%), neonatal problems (n = 4, 9.5%), and evaluation after an unplanned home birth in a village with no midwifery care (n = 3, 3.7%). The reasons for the remaining 16 medical evacuations were: preterm prelabor rupture of membranes (n = 2); twins (n = 2); placental abruption (n = 2); labor dystocia (n = 2); and 1 case each of placenta previa, third degree perineal tear, breech presentation, prelabor rupture of membranes at term, postpartum hemorrhage, maternal choice, incomplete miscarriage, and intrauterine growth restriction. Further research is needed to identify the most common indications for and outcomes of births planned in Montreal.

There have been 2253 births planned for or occurring in Nunavik between 1986 and 2004. In total, there were 21 perinatal deaths, including 12 antepartum or intrapartum deaths, and nine neonatal deaths, which resulted in a perinatal mortality rate of nine per 1000 (0.9%). Of the antenatal and intrapartum deaths, seven were intrauterine fetal demise; two were placental abruptions; one was cord prolapse/compound presentation; one baby had multiple congenital anomalies; and one cause of death was unexplained. Seven neonatal deaths were caused by extreme prematurity, and two were term infants with intrauterine growth restriction (n = 1) or congenital anomalies (n = 1).

Although direct comparisons are not valid, these perinatal outcomes are consistent with previous research in the Western Arctic and Canada as a whole, which has a perinatal mortality rate of 8 to 10 per 1000 (0.8%–1%). In addition, the outcomes from Nunavik are lower than the combined rates of fetal and neonatal mortality in comparable populations of the Northwest Territories (19/1000; 1.9%) and Nunavut Territory (11/1000; 1.1%), as reported in the 2003 Canadian Perinatal Health Report.

It is important to note that despite risk screening, this is not a uniformly low risk population, and transfer out is not always possible. The midwives care for many women with significant health risks, and much of the population faces considerable socioeconomic challenges. Genetic screening and termination of pregnancy are almost universally declined in this population, which has an impact on reporting and comparing perinatal mortality. Access to ultrasound is also limited. In this community, perinatal mortality and loss are understood as an aspect of the life cycle, and in the context of the limits of remote health care for many other aspects of life. This means that some of the underlying assumptions and cultural norms dominant in urban perinatal care in southern Canada, such as the quest for perfect outcomes, immediate access to interventions, and a culture of blame and liability, are very different in this region.

Table 1. Rate of Interventions by Region both Before (1983) and After (1987) the Establishment of the Inuulitsivik Midwifery Service on the Hudson Coast

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Hudson Coast (%)</th>
<th>Ungava Coast (%)</th>
<th>Quebec (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cesarean section</td>
<td>4.1</td>
<td>2.6</td>
<td>—</td>
</tr>
<tr>
<td>Induction</td>
<td>10.0</td>
<td>10.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>25.2</td>
<td>7.2</td>
<td>4.9</td>
</tr>
<tr>
<td>Transfer south</td>
<td>91.0</td>
<td>17.2</td>
<td>8.3</td>
</tr>
<tr>
<td>Transfer of</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>adolescents</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

NA = not applicable.

Adapted with permission from Crosbie C, Stonier J.1

The Inuulitsivik Midwifery Education Program provides academic and clinical education for Inuit women in their own communities. The program uses a modular competency-based curriculum consistent with the clinical content of midwifery education programs in southern Canada, which has been adapted for northern realities, and an expanded scope of practice. Inuit pedagogy, such as observation, “being shown rather than told,” storytelling, and other oral methods of teaching are the foundation of learning. Role modeling, simulations, and regular case review are integrated into this apprenticeship style of learning. Evaluation occurs through ongoing monitoring and inventory of the acquisition of clinical skills and both written and oral exams. In this way, the traditional methods of knowledge transfer are preserved, while Inuit and non-Inuit midwifery knowledge and approaches blend.
Student midwives are selected from the community, and have often worked as postpartum or community health workers (known as anniasitapiit) before becoming midwifery students. The gradual acquisition of knowledge is part of the observational and hands-on learning process, which in many aboriginal cultures, moves from seeing to assisting to doing. The meaningful involvement of local women in several levels of care also assists the sustainability of midwifery care in the north. Student midwives have an important role as cultural and language interpreters when working with Quallunaaq midwifery teachers.

In keeping with a philosophy of integrating both traditional and modern approaches to health care, Inuulitsivik hired midwives from the south and involved the elders to teach the young women who were the first group of midwifery students. Many of the graduates are now experienced teachers themselves, but the program continues to involve both Inuit and non-Inuit midwifery teachers, as well as other health professionals in the education process. In keeping with the link between reclaiming both midwifery and Inuit culture and self-determination, the emphasis was on finding teachers from southern Canada and internationally, who, according to Inuit midwife and leader Mina Tulugak, recognized that “their role is to teach but not to lead.” Inuit midwifery teachers pass on the traditional knowledge of how to promote a healthy pregnancy, how to benefit from a healthy diet of “country foods,” and Inuit approaches to labor, birth and baby care. They also teach the “high tech” skills needed in a remote setting to handle emergencies. In practice, students and midwives will respect traditional practices (e.g., avoiding knots in clothing during pregnancy or folding a finger to help control postpartum hemorrhage) while also using pharmaceuticals. The midwives and students recently organized a regional gathering of elders to pass on and document knowledge about traditional life, midwifery, and childbirth to the midwives and community.

Academic learning covers the core competencies for midwifery in Quebec, utilizing clinical situations, very much like the case-based or problem-based learning methods used in southern midwifery and medical schools. This approach is complemented with prepared learning modules, simulated clinical situations, and case review. The curriculum has a particular emphasis on the midwives’ community health role, especially in the areas of sexual health and sexually transmitted infections, well woman, and well baby care, because the northern midwives’ role in these areas is more extensive than comparable midwifery roles in most of southern Canada.

Inuulitsivik has created a Nunavik Emergency Skills course, which is an adaptation and expansion of the Canadian Association of Midwives Midwifery Emergency Skills course, and is consistent with content from interdisciplinary maternity care skills courses adapted to remote practice. It focuses on when to transfer and management before transfer, and includes skills such as use of vacuum, manual removal of the placenta, intubation, and umbilical vein catheterization of the newborn.

To meet the Inuulitsivik requirements for graduation, student midwives complete a minimum of 1240 supervised clinical hours, and provide continuity of care to at least 60 women, including leading the care team during labor and birth. At the time of graduation, most student midwives will have participated in the care of about 200 women at some point during pregnancy, birth, or postpartum.

RECOGNIZING NUNAVIK MIDWIVES

Inuulitsivik midwifery predates the legal recognition of midwifery in Quebec by more than a decade. In 1991, before undertaking midwifery legislation, the government of Quebec authorized the evaluation of midwifery care through a pilot project establishing eight birth centers. Although well established, Puvirnituq agreed to participate in the evaluation process. Quebec passed the Midwives Act to recognize midwifery in June, 1999. This act recognized and registered the currently practicing Nunavik midwives, but did not provide for continuing recognition of graduates. The Midwives Act recognizes only the university program at the University of Quebec at Trois Rivières. There is agreement in the Nunavik communities that a model of education and care which is successful and culturally relevant cannot be replaced with one that has not proven successful in the north. Sending students to southern Canada for midwifery education could jeopardize the sustainability of maternity care in the north. Research points to the importance of education in the Canadian north and the recruitment and retention of health care workers from and in northern communities.

To date, there have been nine graduate midwives in Nunavik; however, only five have been recognized under Quebec law, and there are currently seven student midwives in training. The Midwives Act included a clause that was intended to allow arrangements for Aboriginal communities to be negotiated, and although discussions have taken place, the issue of how to recognize Nunavik midwives remains unresolved. Despite this, midwives in Nunavik continue to practice and teach new students, reminding Quebec of their presence before the enacted legislation, their excellent outcomes, and their recognition globally and within the communities they serve. There is ongoing work to resolve this situation at the regional, provincial, and federal level.

It is ironic that this struggle for recognition has been so difficult. Inuulitsivik midwifery has been used as an example across Canada, the entire circumpolar region, and globally. Inuulitsivik midwifery is used as a model in the recommendations made by the Canadian Royal Commission on Aboriginal Peoples and by the Society of Obstetricians and Gynecologists of Canada. The World Health Organization, in a letter to the government of Quebec, called Inuulitsivik midwifery “a very important innovative
goals for safe motherhood. At the international conference of midwives 27th triennial congress in Brisbane, Australia, Inuulitsivik midwifery was featured as the opening keynote presentation. Delegates from the World Health Organization, the World Bank, and the International Federation of Obstetricians and Gynecologists who spoke later in the conference recognized Nunavik midwifery as an exemplary model, which could help meet millennium development goals for safe motherhood.

**Bringing Birth Back: Social and Cultural Contexts**

With all the changes and women going south, the common knowledge—the things everyone knew about childbirth and health—began to disappear... People became very dependent on health care services... We knew birth had to come back to the north. Our aim was to revitalize that common knowledge and community involvement around the birth process—to put the responsibility back in the hands of the Inuit.

—Akinisie Qumaluk, Inuulitsivik midwife

The establishment of the birth centers has been fundamental for community healing, and marks a turning point for many families who suffered from family violence in Nunavik. Male elders told the men that if they witnessed their partner giving birth, they would see that she has been through enough and respect and care for her.

Birth in the community is seen as part of healing, restoring skills and pride, and of capacity building in the community. Participating in birth builds family and community relationships and intergenerational support and learning, through promoting respect for traditional knowledge, and through teaching transcultural skills both within the local community and with nonlocal health care providers. The Inuit midwives are vital in promoting healthy behavior and in health education, and can be effective in this role in ways that non-Inuit health care workers could not hope to be.

After each birth, the midwives take a footprint of the newborn baby to put up in the hallway that connects the birth center to the rest of the health center. (See Back Page).

**Conclusion**

The implications of the Nunavik experience for midwifery practice and education are profound and often run counter to dominant beliefs and practices in the health care system. Inuulitsivik midwifery shows that birth in remote communities far from tertiary care can not only be safe, but also improve outcomes when compared with a policy of evacuation. It models sustainable and culturally-based local education in remote communities. Midwifery can contribute to maintaining meaning in cultures that are attempting to recover from the impacts of colonization and rapid change. The lesson that midwives have an important role to play in promoting health and well-being and in cultural revival in Canadian aboriginal communities has the potential to inform other settings. Strong community support and collaboration between midwives from very different backgrounds has been critical to the success of Inuulitsivik midwifery.

The midwives have become a voice for our families and our ways of life.

—Nellie Tukalak, Inuulitsivik midwife

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**References**


Midwives practice in a wide variety of settings and the work done by midwives internationally is diverse, yet there is a common denominator: midwives reach out to women wherever they live. This was the theme that the International Confederation of Midwives (ICM) chose for the 2007 celebration of the International Day of the Midwife on May 5th, 2007. ‘Reaching out’ is an important part of a midwife’s job, not just to provide care for women who live a long way from a health facility, but to overcome other barriers to access. These barriers may be rooted in cultural or linguistic differences, or may be related to the timing, style or affordability of services. It is ‘woman-centered’ care that brings healthy outcomes for mother and baby and that means positive action from midwives to ensure that what they offer is what women want.

Kathy Herschderfer
Secretary General, International Confederations of Midwives