Giving birth in Greenland: secular change in acceptance of hospital deliveries

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ABSTRACT

Objectives. Until recently, deliveries usually took place at local hospitals. In 2001–2003, new guidelines were introduced to streamline the criteria for referral to the obstetrical department in Nuuk. This led to an increase in the proportion of deliveries in Nuuk but met with some public criticism. The purpose of this article is to describe the policies for delivery in a historical context and to analyse the response of the general population to the question of what is the preferred place of delivery.

Study design. Cross-sectional countrywide health interview surveys conducted in 1993–1994 and 2005–2008.

Methods. In 1993–1994 and 2005–2008, 1,219 and 2,154 adult survey participants lived outside Nuuk and answered questions about their preferred place for deliveries in cases of normal and at-risk pregnancies. Answers were analysed according to age, gender, ethnic group, social position and place of residence.

Results. The percentage of women from other towns who gave birth at the central hospital in Nuuk almost doubled from 2001 to 2005, increasing from 10.1% to 19.8%. In 1993–1994, 74.2% of survey participants preferred to have normal deliveries at the local hospital compared with 85.3% in 2005–2008. In 1993–1994, 21.3% preferred having at-risk deliveries at the obstetrical department in Nuuk compared with 45.7% in 2005–2008.

Conclusions. The general population has increasingly accepted the professional point of view that deliveries should take place in hospital and in a specialized department if needed. Whether this is due to the increased focus of the health care professionals on referrals since 2001 or to general societal changes is not known.

Keywords: delivery, hospital, Greenland, preference
INTRODUCTION

In 1820, locally trained midwives (juummut) began to be employed by the Danish authorities. Their tasks included not only assisting women who were giving birth but also to carry out general nursing duties and sometimes even the work of the doctors. The quality of the local training varied according to the resident physician’s ability and interest in teaching, but in 1839 the duty to teach became institutionalized and midwives educated in Denmark taught theory and practice in addition to receiving hands-on teaching by the physicians (1).

In the 1850s teaching began at the hospitals in Ilulissat and Nuuk. In 1903, a total of 34 midwives were employed in addition to traditional birth attendants. There were 4 classes of “midwives” whose salaries were graded according to their training. The best trained had followed a full theoretical and practical education in Denmark and were fully licensed; the second class had received the practical part of the education in Denmark; the third class had been trained in Greenland; the fourth and lowest ranking class received training as traditional birth attendants, who were paid for each birth of a living child (2).

In 1936, a total of 112 “midwives” served a population of approximately 18,000 living in 205 communities. With only about 500 births annually, the midwives gained little experience. Only 14 of the midwives had studied at a regular school of midwifery in Denmark while 98 were locally trained (3,4). The first Greenlander to become a fully trained midwife in Denmark was in 1837, and by 1920, a total of 39 Greenlandic women had finished their training as midwives in Denmark.

In 1958, a school for birth attendants for the whole country was established in Aasiaat. This school developed into the school for nursing assistants (sundhedsmedhjælpere) (5) and then became today’s Institute for Nursing Studies at the University of Greenland (Peqqissaanermik Ilisimatusarfik). Although the aim was to professionalize the midwives, by 1980, 3 classes of juumut (sing. juumoq) remained: those trained in Denmark (licensed midwives), those locally trained (sundhedsmedhjælpere) and those trained as traditional birth attendants (fødselshjælpersker) (Bjerregaard, personal observation, 1980).

Since 2000, further reforms to health education have aimed at fulfilling the needs of the health care sector. Nurses and health assistants (sundhedsassistenter) are trained at Peqqissaanermik Ilisimatusarfik, but their education does not include birth attendance. An experimental supplementary course in birth attendance has been discontinued.

The traditional birth attendants have been phased out. Currently, 10 communities are staffed by a total of 17 Danish trained midwives; only 5 communities are served by midwives in permanent positions (Perinatal Health Committee, personal communication to Olesen, 2010). The remaining 7 health districts are served by sundhedsmedhjælpere and sundhedssistenter, who are all stationed in the towns at the local hospitals. No trained birth attendants are available in the 60 villages with populations ranging from less than 50 to around 500. Most health care, including prenatal care and deliveries, is paid for by the government and is free for all citizens of Greenland.

The most recently available information (2007) was the following: 52% of deliveries happened in local hospitals, which covered 73% of the population; 20% were referrals to
the obstetrical department in Nuuk from other health districts, 27% were deliveries at the obstetrical department by residents of Nuuk, and 1% happened outside hospital (6).

Perinatal mortality has decreased substantially. Prior to 1987, the registration of stillbirths was not reliable but infant mortality had decreased markedly since registration started in 1950, from 120 to 25 per 1,000 live births. In 1987–1991, perinatal mortality (stillborn + deaths during the first 7 days of life divided by total number of stillbirths + live births) amounted to 22.8 per 1,000 births. Approximately 40% of these deaths were regarded as avoidable, indicating the preventive potential (7). In 2005–2007, perinatal mortality had decreased to 15.4 per 1,000 births (own calculations from most recent information in the Greenland register of causes of death). Maternal mortality is low in Greenland and managed only at the case level. The last case happened in 1997; during the 1990s a total of 3 cases were registered, during the 1980s, there were 2 cases, and there weren’t any during the 1970s.

The purpose of this article is to analyse the changes in the preferred places of delivery by women in Greenland between 1993 and 2008.

MATERIAL AND METHODS

Data were collected as part of 2 countrywide cross-sectional health surveys in Greenland during 1993–1994 and 2005–2008. The total population of Greenland is 57,000, of whom 90% are ethnic Greenlanders (Inuit). Genetically, Greenlanders are Inuit (Eskimos) with a mixture of European, mainly Danish genes. They are closely related to the Inuit/Iñupiat in Canada and Alaska and, somewhat more distantly, to the Yupiit of Alaska and Siberia. Questionnaires were developed in the Danish language, translated into Greenlandic, back translated and revised. Interviews and a self-administered questionnaire gave information about sociodemographic factors, self-rated health and disease, and lifestyle, including diet, physical activity, smoking and alcohol use. For certain items the questionnaires were not identical, in particular diet and physical activity. Interviews were conducted in the language of choice of the participant, most often in Greenlandic, by native-Greenlandic speaking interviewers who had been trained in the study procedures.

In 1993–1994, a total of 1,728 adult inhabitants (aged 18+) were interviewed (1,580 Inuit and 148 Danes). A random population sample from all 17 towns and 21 villages was drawn from the population register. Inuit were defined as participants with at least one Greenlandic parent or with self-reported Inuit identity. The participation rate was 71% (8).

In 2005–2008 a total of 2,729 adult inhabitants (aged 18+) were interviewed (2,600 Inuit and 129 Danes). Eight towns (population 1,150 to 14,700) and 10 villages (population 100 to 425) in Greenland (25% of all communities) were selected as study areas to represent different community sizes and geographical locations. From these 18 communities, a random population sample was drawn from the central population register. Pregnant women, persons not born in Greenland or Denmark, and persons who had moved out of the study area were excluded from the sample. Individual ethnicity as Greenlander or Dane was determined at enrolment in agreement by the interviewer and the participant. The participation rate was 68% for Inuit and 39% for Danes. In addition to the interview,
clinical testing and sampling of biological media were conducted. A full description of the study methods is available elsewhere (9).

Formal education was determined from questions about highest school education attained and further vocational or academic education and recoded into basic school/high school only, short vocational education (less than 3 years) and longer vocational/academic education.

A total of 1,219 and 2,154 participants, respectively, in the 2 studies, lived outside Nuuk and answered questions about the preferred place for deliveries in case of normal and at-risk pregnancies. Answers were analysed according to age, gender, ethnic group, education and place of residence. Statistical analyses were performed in SPSS version 17.0.

The studies were approved by the ethical review committee for Greenland. Participants gave their oral (1993–1994) or written (2005–2008) consent after being informed about the study orally and in writing.

RESULTS

Before the 20th century, all births took place at home; the first delivery in hospital happened in 1894 (1). There is little information about the location of births from the following years, but in the beginning of the 1950s about one-third of deliveries took place in hospital (10). From 1965 to 1985 the proportion increased from 73% to 88%, and since 2000, more than 98% of all deliveries have taken place in hospital, including virtually all deliveries that were not unexpectedly preterm (10).

In 1993–1994, 90% of the participants gave their preference for a place to give birth in case of an anticipated normal delivery while 81% did so for a potentially complicated delivery. This increased to 94% and 92%, respectively, in 2005–2008 (Table I). There was also a shift towards favouring deliveries in institutions. For normal deliveries, the preference for home or nursing station deliveries decreased from 15% to 6% while the majority (85% in 2005–2008) regarded the local hospital as a suitable place for a normal delivery. For potentially complicated deliveries, the proportion preferring the local hospital decreased significantly while the proportion preferring the obstetrical department at Queen Ingrid’s Hospital in Nuuk almost doubled.

There was no difference between Greenlanders and Danes in the sample. Men more often than women did not know, but otherwise there were no differences between the preferred places for delivery. There was a statistically significant tendency for older people to prefer less institutionalized deliveries, and, interestingly enough, those better educated more often than others preferred normal deliveries to take place at home. Finally, while there were statisti-
cally significant differences among the communities, the picture was not uniform with regard to community size or geography (remoteness).

DISCUSSION

The increased institutionalization of deliveries in Greenland has been pronounced during the last 100 years, increasing from almost 0% in 1900 to approximately 100% in 2000. Today, there are no planned deliveries outside hospital. This process has largely been driven by the health professionals and the voices of the women, and their families have been heard infrequently. We have seen an increased acceptance by the community members of institutionalized deliveries from 1993 to 2008, but whether this is due to choice or to the acceptance of inevitable circumstances is not known. The central maternal health coordinator in Nuuk manages the situation from the obstetrical point of view but has so far not conducted research or surveys on the situation. The pregnant women are in principle free to choose where to give birth, but in reality their choices are limited. All midwives and birth attendants are employed by the government and attached to a hospital. Planned home births may take place at the discretion of the midwife but are discouraged. All pregnant women are screened prenatally at the hospital clinics by midwives and physicians and advised with regard to place of delivery, advice which is difficult to disregard. In 2001–2003, new uniform guidelines for referral to delivery in special care units were introduced. This has resulted in an increased proportion of referrals and inevitably to some unintended incidences, which have made their way as anecdotes into popular criticism of the guidelines. For instance, the story about the Inuit mother of 5 who had to leave her husband and children behind for 4 weeks to give birth in the department of obstetrics because she – as her mother and grandmother had done – fell just 1 cm short of the guideline limit of 150 cm for increased risk due to short stature.

There might be a number of reasons for pregnant women to choose to give birth in Nuuk, including the perception of more skilled staff, the absence of pediatricians outside Nuuk and even better shopping possibilities. The woman would, however, have to be referred and to convince the local staff about her reasons. Reasons for the local staff to encourage referral to Nuuk include scarcity of trained midwives and the fact that many district medical officers – young and old – have limited obstetrical skills. This is obviously a vicious circle. The fewer deliveries that take place at local hospitals, the greater the chance that the familiarity with deliveries will be lost.

In the Canadian North, births in nursing stations ceased around 1982 for a number of reasons. A research project later concluded that, with experienced midwives, community births could be considered safe and that a minimum of 25 births per year were required to make community deliveries cost effective (11). The structure of health care is, however, quite different in the Canadian North compared with Greenland, the former having a wide net of nursing stations and very few communities staffed by physicians, while Greenland has physicians more evenly spread. The Greenland model for deliveries in local hospitals somewhat resembles the Canadian project with community births but with the added security of having resident physicians on staff, who may or more often may not be trained in obstetrics and be able to perform a Caesarean section.
Studies from Greenland (12) and Canada (13) underline the stressful situation of women who are transferred from their community to a birthing centre and who must stay there without the support of their family and partner for several weeks during this crucial life event. However, the acceptance of transferral was experienced as a tool for protecting the unborn child (12). The health care professionals must strike a balance between an optimal physical birth outcome and the emotional situation of the delivering women and their families. The pregnant women should be seen not as “incubators for the future generations but [as] mothers, wives, daughters, and single parents who have a position within the community that is not entirely centered on their unborn child” (12, p. 44).

During the period studied, the perinatal mortality has decreased by 32%. Whether this can be attributed, in part, to a centralization of deliveries is not known. A reanalysis of the data from the perinatal studies in 1987–1991 (7) and 1992–1999 (14) and a medical audit of more recent perinatal mortality is underway.

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