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Introduction

Rates of planned home birth in the United States have remained at less than 1% for several decades, but current public discourse suggests that women are increasingly interested in this option. International investigators have defined "planned home birth" as the care of selected pregnant women by qualified practitioners within a system that provides for hospitalization when necessary. Safety of birth in any setting is of utmost priority and has been the focus of home-birth research and current professional and public debate. Many women and their families are aware that, in national and international settings, home births conducted in environments of multidisciplinary communication and integration of resources are associated with similar perinatal outcomes and fewer obstetric interventions compared with hospital births.[1-10]

Science

In the United States, concerns about planned home birth are frequently the result of accepting findings from flawed studies. These studies fail to use reliable methods to differentiate between planned and unplanned home birth, or between attendance by qualified and unqualified attendants.[11-16] Other often-cited studies were based on retrospective and incomplete birth certificate data that did not provide accurate information about birth attendants and did not clearly define appropriate inclusion criteria to limit the findings to the usual clientele for planned home births: women at low risk.[15-19] Thus, some professional bodies have concluded that the evidence on safety is insufficient to support provision of home-birth services. The American Congress of Obstetricians and Gynecologists (ACOG) published a strong policy statement, supported by the American Association of Pediatrics and the American Medical Association, which questions the safety and advisability of home birth.[20] Their leaders have suggested that only a large North American randomized prospective controlled study can answer the safety question. However, despite attempts to design a randomized controlled study, to date sufficient numbers of women have not consented to be randomly assigned according to birth site.[21,22]

Other North American professional bodies rely instead on evidence derived from investigations that evaluate outcomes from well-controlled observational cohort studies with credible comparison groups of women. The Society of Obstetricians and Gynaecologists of Canada and the Canadian Association of Midwives, the American midwifery professional societies (American College of Nurse-Midwives, Midwives Alliance of North America, and the National Association of Certified Professional Midwives), consumer groups (Lamaze International, Childbirth Connection), and public health bodies (World Health Organization, American Public Health Association, American Association of Birth Centers) have all issued policy statements in support of planned out-of-hospital birth,[23-27] citing reduced interventions, increased maternal satisfaction, safety, and the importance of informed choice for women.

Recent Improvements in Quality of the Evidence

Since 1996, several increasingly credible trials and observational studies have been conducted in European settings where systems for evaluation of maternity care delivery across birth settings are in place. Critics noted that although no apparent differences in morbidity or mortality were found between home and hospital births for well-matched low-risk women, the conclusions from these investigations were made on the basis of small sample sizes or homogenous groups and were influenced by regional differences in available infrastructure. Because of the low rate of adverse events in the developed world, it has been difficult to assess significant differences between birth settings with respect to perinatal mortality and serious complications.

In 2009, 3 new reports, including 2 in North America, have addressed the methodologic flaws of previous trials on home birth.[1-3] De Jonge and colleagues[3] conducted the largest cohort study to date (N = 529,688), which evaluated obstetric outcomes of low-risk women in The Netherlands who were in primary midwife-led care at labor onset.[3] The study compared perinatal mortality and morbidity between planned home births (321,301; 60.7%), planned hospital births (163,261; 30.8%), and unknown place of birth (45,120; 8.5%) using the national perinatal and neonatal registration data from 2000-2006. Groups were matched according to parity, gestational age, maternal age, ethnic background, and socioeconomic status. Inclusion criteria ensured that the women were strictly low-risk. The main outcomes were intrapartum death of the infant, neonatal death within 24 hours or 7 days after birth, and admission to a neonatal intensive-care unit (NICU). No significant differences were found between planned home and planned hospital births for any of the main outcomes. The study authors concluded that planned home birth in a low-risk population is not associated with higher perinatal mortality rates or an increased risk for admission to a NICU compared with planned hospital birth.

Janssen and colleagues[1] recently published results from their prospective 5-year cohort study that compared outcomes among women in a midwife-attended planned home-birth group (n = 2802) with women in a physician-attended hospital-birth group (n = 5985) and midwife-attended planned hospital-birth group (n = 5984). Women in the home-birth group who needed intrapartum transfer to the hospital were retained in their original cohort. This study reported similarly low rates of perinatal death in all 3 cohorts and similar or reduced rates of adverse outcomes in the planned home-birth group with significantly fewer obstetric interventions. Findings indicate that women who planned a home birth had significantly fewer intrapartum interventions, including narcotic or epidural analgesia, augmentation or induction of labor, assisted vaginal births, or cesarean section (c-section). In addition, women in the home-birth group were less likely to have postpartum hemorrhage, pyrexia, and third- or fourth-degree tears. Babies of women who had planned a home birth were less likely to have Apgar scores of < 5 at 1 minute and the babies were less likely to need drugs for resuscitation. These differences were associated with planned place of birth and persisted regardless of actual place of birth. Women in all 3 groups of the study met eligibility criteria for home birth and thus had comparable maternal and fetal risk profiles.

Hutton and colleagues[2] used the Ontario Ministry of Health Midwifery Program database to compare outcomes of all women planning homebirths between 2003 and 2006 (n = 6692) with a matched sample of women planning a hospital birth (n = 6692) (women with contraindications for home birth were excluded). The home-birth group had lower rates of c-section (relative risk [RR], 0.64), maternal morbidity/mortality (RR, 0.77), and neonatal morbidity/mortality (RR, 0.80). Results suggested that Ontario midwives provided adequate screening and safe care for low-risk women planning a home birth and had lower c-section rates compared with hospital births.

Choice

Researchers have described the factors affecting a woman's choice of planned home birth and satisfaction with home birth as the perceived differences in her ability to control the environment and process of care. Specifically, women note that planned home births increase their privacy, comfort, and convenience; reduce the rates of medical interventions; provide greater cultural and spiritual congruency; change the provider-patient power dynamics; and facilitate family involvement and a relaxed, peaceful atmosphere. Women consistently report that these factors increase their sense of safety and allow them the self-determination and empowerment necessary to fully participate in decision-making about aspects of their care.[28-36]

However, a woman can exercise choice of birth site only if she has a range of options and unrestricted access to qualified providers and resources. A qualified provider can assist a woman in assessing her birth-site

options according to her health status and distance to appropriate maternity care resources. Ideally, those providers offer care across all settings and are fully integrated into a network of maternity care services at all levels. Unfortunately, very few regions in the United States integrate home-birth providers into interprofessional care-provider networks. Differences in regional conditions for practice and/or differences in cultural expectations about site of birth also exist.

Many jurisdictions have significant regulatory, logistic, financial, and legislative barriers to provision of home-birth services. Attitudes and beliefs that are particular to the professional culture may be partly responsible for these restrictions. Some health authorities recognize deficiencies in resources and networks of professional healthcare providers that are essential to providing safe home birth. The malpractice environment and regional differences in malpractice legislation also likely contribute significantly to variations in availability of home-birth options.

The current debate on home birth in the United States indicates the need for constructive discussion and consensus-building about how best to serve women and their families who choose home birth. Ultimately, women and families are ill-served by interprofessional conflict and confusion about best practice in healthcare. Consumers and home-birth providers frequently encounter a lack of receptivity, and even hostility, when transfer to acute care is warranted. This condition may delay timely transfer and significantly reduce continuity of care. Models for effective collaboration and communication exist in some local maternity care systems, but no existing national venue is available to consider these problems and replicate solutions. In addition, many consumers and providers are not well informed about existing systems that assure standardization, quality assessment and evaluation of the essential knowledge base, and professional competencies required for home-birth providers.

Qualified Home-Birth Providers

Fortunately for the American public, evaluations that compare professional competencies and practices among maternity provider groups have found more similarities than differences in the basic skills and components of care that are offered to healthy women across birth settings.[37,38] Scopes of practice and educational pathways to certification and licensure differ among certified nurse-midwives (CNM), certified midwives (CM), certified professional midwives (CPM), family physicians, and obstetricians, but similar standardized competency assessment, quality assurance, and professional accountability measures are in place for each credential. All of the credentialing bodies for these US-based maternity health professionals expect candidates to demonstrate acquisition of both theoretical content and specific clinical skills that are appropriate to their scope of practice.

In the United States today, midwives are the main maternity care providers who offer choice of birth place. Much confusion exists among both consumers and health professionals regarding the education, credentialing, and licensing of midwives in the United States. As in many countries worldwide, midwives either pass through nursing programs or enter midwifery directly. Nurses often become CNMs; those entering the profession with other backgrounds may become CMs or CPMs. Each of these credentials is recognized as a basis for licensing in all or some states. Although certification is national, the right to recognize and license any or all of these types of midwives is granted to the states. To date, all states recognize the CNM credential; 3 states recognize the CM credential, and 26 states recognize the CPM credential.

The CNM, CM, and CPM credentials are all evaluated and accredited by the National Commission for Certifying Agencies, the accrediting arm of the National Organization for Competency Assurance. The US Secretary of Education has recognized both of the accrediting bodies for midwifery educational programs, the Midwifery Education Accreditation Council and the Accreditation Commission for Midwifery Education, and candidates for all 3 types of certification must complete national board examinations. Eligibility to take

these examinations is based on the documentation of completion of an accredited midwifery educational program (CNM/CM/CPM), demonstration of licensure from jurisdictions with equivalent requirements and scopes of practice (CPM), and a Portfolio Evaluation Process (CPM). The core content of the education and the required clinical performance of skills are based on core competencies as defined by national and international midwifery professional bodies. CPMs must demonstrate specific competencies in out-of-hospital care, and CNMs and CMs must demonstrate competencies in maternity care that are applicable to all settings. The term "lay midwives" does not apply to midwives holding any of the 3 recognized credentials.

Quality Assurance in Education and Practice, and Professional Accountability

Consumers and health-professional educators are also concerned about the quality of teaching with respect to low-intervention maternity care across practice sites. Students have noted gaps between theory and practice as well as large variations in application of new evidence to practice when they are placed with clinician educators.[38-40] These gaps have been noted primarily in hospital maternity practice. Medical and midwifery programs around the world are still developing methods to consistently assess and support the teaching of evidence-based clinical practices and to evaluate and enhance currency of knowledge among clinician educators.

All US-based credentialed health professionals are required to participate in ongoing quality-assurance programs and demonstrate continuing competency. Typically this is accomplished through formal peer review, attendance at continuing-education programs, regular recertification, and transparent avenues for vetting complaints, grievances, and case review. Accountability for professional practice is provided through mechanisms offered by state licensing boards, healthcare institutional boards, professional associations, and credentialing bodies. These mechanisms are in place for CNMs, CMs, CPMs, and MDs regardless of practice setting.[41-44]

Planned Home Birth and Interprofessional Collaboration

Successful interprofessional collaboration to provide a range of maternity services has been correlated with mutually compatible attitudes and professional preparation.[45] A significant body of research demonstrates that provider attitudes towards, and knowledge of, maternity care options have a significant influence on patient choice. Providers present options that are congruent with their own education, experience, and scope of practice.[35,46-52] Differences in home-birth rates according to type of provider may represent differences in the knowledge base among different types of maternity care providers. Currently, expertise related to birth site is limited by a lack of knowledge exchange across disciplines. Home-birth providers could enhance practice by understanding the context of hospital-based care, and those who only serve families in institutions could improve practice by understanding the context of planned home birth.

Lessons learned from the integration of midwifery in Canada and other international settings include the need to have midwives participate actively in the community of maternity practice. All midwives should be able to access hospital admission privileges appropriate to their scope; participate in quality-assurance committees, clinical and academic teaching, and academic rounds; and attend women across birth settings. Clear protocols, vetted across all disciplines, should be established for communication between professionals when labor and delivery is in progress at home and for transport and hospital triage. Clinical and didactic education should prepare all maternity professionals for their respective roles in supporting safe and compassionate care regardless of planned place of birth.

Finally, when all professional midwives have access to licensure and institutional credentialing, systems for data collection and representative reporting of perinatal outcomes across birth settings can be established. Only when these conditions are met can a large-scale study, comparing planned home birth with planned

hospital birth, be designed and conducted in a credible manner in the United States. Until then, maternity professionals must continue to examine, account for, and collaborate to minimize the impact of regional conditions for practice and healthcare delivery on the health and safety of women and babies. Reflective practice is a component of safety in all healthcare disciplines and settings and is best done in the context of a multidisciplinary approach with mutual goals and respect.

Clinical Pearls

- An increasingly sound body of research has shown no significant differences in maternal and fetal outcomes between planned home birth and planned hospital birth in women who have been identified as low-risk, have qualified birth attendants, and have timely access to specialized care when necessary.
- Research has shown that women believe that planned home births increase privacy, comfort, and convenience; are associated with reduced rates of medical interventions; provide greater cultural and spiritual congruency; enhance their sense of partnership with their care provider; and facilitate family involvement and a relaxed, peaceful atmosphere. These factors increase women's sense of safety and allow them to fully participate in decision-making about aspects of their care.
- Evaluations that compare professional competencies and practices among maternity provider groups have found more similarities than differences in the basic skills and components of care offered to healthy women across birth settings.
- Clear practice guidelines, vetted across all disciplines, for communication between professionals when labor and delivery is in progress at home and for transport and hospital triage are a vital component of quality care.

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