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Denis Walsh, Kerri Schuiling, and Soo Downe

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COMMENTARY
The Necessity and Challenge of International Midwifery Science
Raymond G. De Vries, Marianne Nieuwenhuijze, Rafael van Crimpen,
and the members of the Midwifery Science Workgroup
The launch of a new childbirth journal is a cause for celebration. It provides an opportunity for researchers, service users, clinicians, and maternity service stakeholders to get their messages out quickly and more effectively at a time when maternity provision worldwide is changing rapidly. In this editorial, we flag up what we believe are the more significant influences and challenges that face us all over the coming decade; but first—why a new childbirth journal?

There are currently too few childbirth journals that could be truly described as multidisciplinary, inclusive of the developing world perspective, and holistic in scope regarding all aspects of childbirth. Most journals target a particular audience, demographic or professional group, and this results in "silo" thinking with limited cross fertilization of ideas, dissemination of best practice, or research. For example, midwives may read obstetric journals and obstetricians may rarely read midwifery journals. Sociologists do not often publish in midwifery or obstetric titles, and service users only occasionally submit to professional journals. Therefore, an ongoing dialogue in the literature is absent, and when controversy does "breakout" in major journals, the debate is frequently polarized; look no further than the heated exchanges of home birth research, recently (de Jonge et al., 2009; Wax et al., 2010).

The International Journal of Childbirth will provide an opportunity for all voices and all perspectives to be heard. The journal's mission is to:

- Disseminate original research, theoretical insights, and accounts of practice-based innovations and organization of care
- Provide a forum for exploration, debate, and critique in childbirth research, education, and practice
- Promote multicultural and interdisciplinary perspectives in the examination of childbirth experience and knowledge
- Actively promote research, education, and practice activity in neglected areas such as normal birth, measurement of well-being as opposed to pathology, indigenous childbirth practices and culture, and the public health consequences of childbirth
- Disseminate original case studies of normal, although unusual births, with a significant reflective component

This journal is needed more than ever now, because maternity care continues to undergo radical change across the world in response to several imperatives and influences. The high levels of maternal and perinatal mortality in the developing world are unacceptable, particularly when solutions exist that would reduce the rate substantially. However, even within these known shared solutions, there is tension over whether to address the causes (trade injustice, poverty, and the unequal distribution of resources) or treat the symptoms through technology, drugs, and provision of skilled attendants. Which of these should take priority, and is a twinned approach realistic and achievable?

This debate reflects another worldwide tension around how maternity services should evolve—should a social or biomedical model take the lead? In many parts of the world, the biomedical model dominates and, where it does, escalating intervention rates are observed. The caesarean epidemic is but one example. However, in other parts of the world, home birth and midwifery led care characterizes large sections of provision, with a generally encouraging safety and efficacy record (Hatem, Sandall, Devane, Soltani, & Gates, 2008). Can the two approaches coexist with mutual understanding and respect?

There continues to be a debate concerning childbearing women's autonomy, choice, and agency, which are played out within the biomedical and social model, with voices articulating access to universal elective epidural provision and birth centre/home birth options within these respective models. This debate reverses in sub-Saharan Africa where home birth with traditional birth attendants is blamed for high perinatal mortality, and where hospital provision of epidural services is patchy at best. In recent months, another layer of complexity is revealed in initiatives, to address obstetric violence in Venezuela, where legislation has been enacted to make nonconsensual obstetric procedures illegal (D'Gregorio, 2010), and in the United States, where inhumane treatment of laboring women is once again a news item (Goer, 2010).
The discourse around risk is having a major impact in many western maternity care systems, and results in defensive practice and institutional self-protection. Elaborate policies and mechanisms, in an effort to shift blame to women or individual practitioners and away from system failures, are evident of a system that is in need of change (MacKenzie Bryers & van Teijlingen, 2010). Sociologists have warned health services of the dangers of this discourse driving change, but litigious, adversarial models of compensation dominate, currently (Carter, 2010).

Accompanying the aforementioned tensions and making them worse is the economic argument that is raging over the affordability and equity of provision of care within and between countries. Most national models of maternity care have a mixed economy of public and private provision. Perverse incentives can operate in private models that reward intervention and overtreatment. For example, a recent study has demonstrated the high financial cost of routine intervention in normal childbirth in the U.S. system (Conrad, Mackie, & Mehrrotra, 2010). Rising use of pharmacology and technology for childbirth in publicly funded systems suggests that society is willing to expend resources in this area, even when the public purse is under intense pressure. This raises interesting sociological and organizational questions that can best be explored by cross-disciplinary investigation. Given this milieu, a journal that publishes papers across the spectrum of these challenges and opportunities is welcome. We are honored to be supported by the International Confederation of Midwives, which has global reach with more than 80 member societies.

As editors, we want to encourage the submission of papers related to childbirth from all over the world and from many different stakeholders.

Denis Walsh, Co-Editor-in-Chief
Kerri Schuiling, Co-Editor-in-Chief
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REFERENCES


Competence and Competency: Core Concepts for International Midwifery Practice

Judith T. Fullerton, Afif Ghérissi, Peter G. Johnson, and Joyce B. Thompson

The global health community has implemented several initiatives over the past in the interest of accelerating country-by-country progress toward the Millennium Development Goal of improving maternal health. Skilled attendance at every birth has been recognized as an essential component of approaches for reducing maternal and perinatal morbidity and mortality.

Midwives have been acknowledged as a preferred cadre of skilled birth attendant. The International Confederation of Midwives (ICM) speaks for the global community of fully qualified (professional) midwives. The ICM document entitled Essential Competencies for Basic Midwifery Practice is a core policy statement that defines the domains and scope of practice for those individuals who meet the international definition of midwife. This article explores the meaning of competence and competency as core concepts for the midwifery profession. An understanding of the meaning of these terms can help midwives speaking individually at the clinical practice level and midwifery associations speaking at the policy level to articulate more clearly the distinction of fully qualified midwives within the skilled birth attendant and sexual and reproductive health workforce. Competence and competency are fundamental to the domains of midwifery education, legislation, and regulation, and to the deployment and retention of professional midwives.

KEYWORDS: professional midwifery; competence; essential competencies; skilled attendance

INTRODUCTION

The inauguration of the Safe Motherhood Initiative in the mid-1980s focused the attention of the global health community on the reproductive and human rights of women, infants, and families. The Millennium Development Goals (MDGs) were an ambitious agenda for improvement in global health concerns that were adopted by 192 United Nations (UN) member states and many international organizations in 2000 (UN, 2000). MDGs 4 (reduce child mortality) and 5 (improve maternal health) emerged as an expression of the concerns of world citizens and governments about the tragedy of maternal, newborn, and infant death.

A clear consensus has emerged among those responsible for tracking movement toward established MDG targets, and that is, that providing skilled attendance at every birth is an essential component of approaches for reducing maternal and perinatal morbidity and mortality, and promoting reproductive health. The availability of a health provider with specific midwifery skills and competencies, particularly the lifesaving functions of basic emergency obstetric and neonatal care (i.e., the skilled attendant), working within a supportive and enabling environment (i.e., skilled attendance), is acknowledged to be a key component of any safe motherhood strategy (Bullough et al., 2005; Carlough & McCall, 2005; Hofmeyr et al., 2009; Lee et al., 2009). Increasing the proportion of births attended by skilled personnel is one of the targets established for tracking progress toward achievement of MDG 5.

The global health community has implemented several initiatives over the past decade to bring skilled attendants to the community in the interest of accelerating country-by-country progress toward improving maternal health (MDG 5) and the target of reducing the
maternal mortality ratio by 75% by 2015. Many of these efforts, particularly in lower resource countries, have included the education of new cadres of personnel who are prepared with a very narrow and limited domain of practice, focused primarily on the knowledge and skills surrounding childbirth and the immediate neonatal and postpartum period. The title of "community midwife" is commonly assigned to these birth providers. Lawn et al. (2010) report that there is some limited, but lesser quality evidence that these providers are effective in reducing perinatal and neonatal mortality.

The International Confederation of Midwives (ICM) speaks for the global community of fully qualified (professional) midwives, a preferred cadre of skilled birth attendants. The role of the ICM is to define the concept of professional midwifery and to work collaboratively with other global organizations at country levels to promote and to strengthen the voice of professional midwifery in policy and practice arenas. The ICM has promulgated an international definition of the midwife since 1972, with endorsement by the World Health Organization (WHO) and the International Federation of Obstetricians and Gynecologists. The most recent revision was in 2005 (ICM, 2005). The ICM has set forth additional policy and practice statements in the ensuing decades that can assist ICM member associations to translate the core beliefs set forth in these documents into regulatory and workforce policy at their country level.

The ICM document entitled Essential Competencies for Basic Midwifery Practice (a.k.a. Essential Competencies) (Fullerton, Severino, Brogan, & Thompson, 2003; ICM, 2002) is one of these core policy statements. The Essential Competencies document defines the domains and scope of midwifery practice. The ICM expects that the Essential Competencies document will be adopted or expanded at the country level to promote the development of professional midwifery within the country. The ICM published the first set of Essential Competencies in 2002. A second version, updated to reflect the emerging state of evidence-based practice (Fullerton & Thompson, 2005), was approved by the ICM Board in December, 2010.

The purpose of this article is to review the context within which the concepts of competence and competency emerged, to explore the meaning of competency as a core concept for the midwifery profession, and to place this general discussion within the specific context of professional midwifery practice. An understanding of the meaning of competency can help midwives speaking individually at the clinical practice level and midwifery associations speaking at the policy level to articulate more clearly the distinction of fully qualified midwives within the skilled birth attendant and sexual and reproductive health workforce. Competency is fundamental to the domains of midwifery education, legislation, and regulation, and to the deployment and retention of all providers of reproductive health services.

THE EMERGENCE OF THE CONCEPTS OF COMPETENCE AND COMPETENCY

De Ketel (2000) asserts that the concepts of competence and competency emerged in the late 20th century when economic globalization stimulated increased competitiveness in the international marketplace. He describes a growing consciousness among employers that there was a perceptible association between higher levels of educational attainment of the workforce and the ability to adapt or conform to job performance requirements. De Ketel therefore described the concept of competency as one of several successive milestones and an advanced step on the pathway of knowledge acquisition.

Employers, motivated by the requirements of competitiveness and profitability, and in search of the most efficient ways to mobilize a workforce, began to create their own training units. The aim was to enable newly hired employees to learn the job-related tasks, to perform them with a quality close to "zero defect," and further, to be able to identify solutions to problems that arose during the performance of their job functions. To that end, it was necessary to craft a precise delineation of the activities (tasks) that were associated with any specific job title, and to identify the associated knowledge and skills (the competencies) that would have to be acquired to enable satisfactory task performance.

Training units were attuned to the need for an intervention that began from the bottom up. The employment sector worked cooperatively with the education sector to develop a vocational training system that offered the opportunity for learners to prepare themselves for employment through acquisition of smaller units of skill sets that were both progressive and cumulative. Prerequisite knowledge and skills were defined for entry into a learning unit. The competencies that were to be mastered as evidence of successful completion of the unit and the means by which successful mastery of the skill would be measured were similarly defined.

These initiatives modeled in the vocational and occupational employment arenas were noted by those involved in professional education (including health professions). Professional task competencies were identified.
Crosscutting and general competencies (e.g., communication and decision-making skills) that would be required across all domains of professional performance were also acknowledged. The field of professional competency assessment began to evolve.

THE CORE CONSTRUCTS OF COMPETENCE AND COMPETENCY

An understanding of the meaning of competency first requires that a distinction be made between the terms competence and competency. Both terms are multilayered and distinct. However, simply stated, many theorists define competence in relationship to behavioral tasks, and competency in relationship to the personal characteristics that underpin the performance of those tasks (Woodruffe, 1993).

The literature presents three common approaches to the description and measurement of competence, although none of them is precisely distinct from the other, and none actually crafts a clear distinction between competence and competency. The debate is summarized by McMullan et al. (2003) as follows. The behavioral (performance) approach defines competence through a description of actions that can be demonstrated or observed and assessed. In this approach, successful performance is only possible when the necessary and underlying knowledge and understanding are present. The generic approach defines competence as broad clusters of abilities, such as knowledge or capacity for critical thinking, that act together to promote expert performance. This approach ignores the context, assuming that these abilities will serve as well in various circumstances. The holistic approach combines the general underlying attributes of the practitioner with the context in which they are applied, and allows the incorporation of ethics and values as elements in competent performance. The Dreyfus model of skill acquisition (Dreyfus & Dreyfus, 1980), articulated by Benner (1984) in the context of nursing practice, actually incorporates elements of each of these three approaches in her description of competence, portraying them as a developmental sequence in the progression from novice to expert.

Competency, in its turn, has been variously described as a multidimensional construct that involves a complex interaction of cognitive activities related to the gathering of information, the processing of that information for translation into action, described as know-acting (Lasnier, 2000; Le Boterf, 2000), or problem solving, and followed by enactment. Competency is viewed as an integrative concept because it considers, at the same time, the relevant intellectual content, the activities to be conducted at a specified level of performance, and the situations in which those activities are to be performed (Roegiers & De Ketele, 2000).

COMPETENCE IN THE ACADEMIC AND CLINICAL CONTEXT OF MIDWIFERY EDUCATION AND PRACTICE

The qualitative research methodology of concept analysis has been used to explore the concept of competence as it relates to nursing and midwifery education and clinical practice (Axley, 2008; Chiarella, Thoms, Lau, & McInnes, 2008; Cowan, Norman, & Coopamah, 2007; Scott-Tilley, 2008; Valloze, 2009). These reports confirm, at minimum, a consensus that there is no single, universally accepted definition of competence. In fact, the concept itself continues to evolve in pace with advances in science and technology, which challenge us to keep pace with emerging knowledge and new evidence-based clinical practices.

Therefore, various definitions have been developed for use in a relevant application. The ICM has chosen the holistic definitional approach and has defined competence in the context of midwifery education and practice as the combination of knowledge, psychomotor, communication, and decision-making skills that enable an individual to perform a specific task to a defined level of proficiency (ICM, personal communication, 2010).

MIDWIFERY COMPETENCY

Moving forward in the delineation of these constructs, an important next step is consideration of the situational context of professional practice within which competence is demonstrated (the integrative understanding of the concept). The definition of midwifery competency emerges as a combination of knowledge, professional behavior, and specific skills that are demonstrated at a defined level of proficiency in the context of midwifery education and practice. Definitions of the fundamental components of these definitions of competence and midwifery competency are presented in Figure 1.

The 2002 version of the ICM's Essential Competencies document delineates one crosscutting and five practice-specific domains of midwifery competency. The document details the knowledge, skills, and behaviors that comprise the essence of each domain. (A seventh competency
Ability: The quality of being able to perform; a natural or acquired skill or talent.

Attitude: A person's views (values and beliefs) about a thing, process, or another person that often lead to positive or negative reaction.

Behavior: A person's way of relating or responding to the actions of others or to an environmental stimulus.

Competence: The combination of knowledge, psychomotor, communication, and decision-making skills that enable an individual to perform a specific task to a defined level of proficiency.

Competency (midwifery): A combination of knowledge, professional behavior, and specific skills that are demonstrated at a defined level of proficiency in the context of midwifery education and practice.

Knowledge: A fund of information that enables an individual to have confident understanding of a subject with the ability to use it for a specific purpose.

Skill: Ability learned through education and training or acquired by experience to perform specific actions or tasks to a specified level of measurable performance.

Task: A specific component of a larger body of work.

FIGURE 1 ICM definitions.

domain related to abortion-related care services was added to the Essential Competencies approved by the ICM Board in December, 2010). Figure 2 presents a pictorial depiction of the ICM's integrative definition. Theory from the biological and social sciences underpins the acquisition of knowledge, which then enables acquisition of skills in the psychomotor and affective domains. The crosscutting content of competency domain 1 overarches the scope of clinical practice (competency domains 2 through 6). Professional behavior infuses throughout and is essential to the essence of midwifery competency.

Midwifery education programs use the knowledge and expected professional behavior statements cited in the ICM document as an external reference criterion. Similarly, the ICM Essential Competencies document sets forth the various clinical skills that would be expected of a graduate at the time of entry into practice as a professional midwife. The depth and breadth of the content of an education program's curriculum of midwifery studies can be compared to the expected content as delineated in the ICM document (a curriculum development and review method also known as “curriculum mapping”).

The specific clinical skills and the associated knowledge statements are designated as basic or additional. A basic designation indicates that the knowledge or skill should be considered to be common to all midwives. Any item of knowledge or skill designated to be additional can be included within a curriculum because of relevance to a country's burden of disease, or it can be considered to be optional for midwives who wish or need to acquire it. For example, midwifery education programs located in high-resource countries may consider the skills of colposcopy or ultrasound to be clinical preventive services that all graduates should be prepared to offer. Similarly, education programs located in low-resource settings may find that including certain skills within the basic program of studies (e.g., manual vacuum evacuation following miscarriage) could be lifesaving for the women served by program graduates. Other midwives may wish to acquire certain skills for the sake of increasing women's access to particular services.

Many midwives have acquired these additional skills through continued education and/or in-service programs. As midwives gain experience and develop proficiency across the core competencies that are the core elements of entry-level professional practice, they are ready to take on new expanded practice roles.

COMPETENCY-BASED EDUCATION

Knowledge, skills, and associated professional attitudes and behaviors for the professional practice of midwifery are taught and modeled within a competency-based midwifery education program. A competency-based curriculum of studies forges links between curriculum content and the expected outcomes of a program of study (Farrand, McMullan, Jowett, & Humphreys, 2006). The defining attributes of a competency-based curriculum are the teaching of knowledge and skills in all domains for the practice role, instruction that focuses on specific outcomes or competencies, allowance for increasing levels of competency, accountability of the learner, practice-based learning, self-assessment, and individualized learning experiences (Scott-Tilley, 2008).

Guidance documents developed for midwifery education programs by the ICM and the WHO and
similar global technical assistance agencies often include recommendations concerning the minimum numbers of clinical practice experiences that students should acquire before they are considered eligible for graduation. These minimum numbers have been derived from both anecdotal evidence and formal research that has demonstrated an association between progressive levels of experience and the ability to demonstrate a predetermined level of skill in task performance. However, although it is the case that recommended minimum numbers of experiences are associated with competency development, it is also the case that acquiring specific numbers of experiences does not necessarily mean that competency has been achieved by any individual learner.

ADDITIONAL CONSIDERATIONS

A first essential corollary to competent midwifery performance is the concept of an enabling environment for practice. An overarching framework of political, economic, and sociocultural support for midwives and midwifery practice must exist before such support can be translated at the educational and clinical practice levels into pragmatic and tangible concepts, such as the accessibility of reproductive health guidelines, peer support for the midwife’s day-to-day work performance, and the supplies and equipment that are essential for the performance of the task (Morrissy & Schmidt, 2008). Hussein et al. (2004) have proposed a new methodology for measuring the proportion of skilled attendance at childbirth, which goes beyond designating the attendant by credential, but, instead, creates a composite measure of delivery care that indicates the degree to which the skilled provider had needed supplies, equipment, and transport available to provide good care? This unique approach takes into consideration the fact that a skilled provider may not be
able to save lives if she or he does not have the resources available to allow the delivery of clinically proficient care services—both are needed. Kayongo, Rubardt, Butera, Mboninyibuika, and Madili (2006) demonstrated that placing a focus on maintaining functional health facilities aided the providers in those facilities to increase the proportion of emergency obstetrical and neonatal care services that they were able to offer.

Additional corollaries to competent midwifery performance are the allied concepts of confidence or capability. The midwife may have demonstrated the ability to perform a task to a certain expected level of technical accuracy at a given time, but may not yet have attained any degree of internal assurance that she or he could do so if called on to perform that skill, and particularly so in emergency situations, or when other skilled assistance is not immediately available (Farrand et al., 2006; Gardner, Elase, Gardner, Dunn, & Carryen, 2008). Additionally, technical competence attained for any skill and the correlated confidence related to task performance are rarely sustained at the same level, even from day-to-day (Scotland & Bullough, 2004), because the conditions, circumstances, and uncommon situations that affect peak performance change.

Finally, in any clinical situation, competence may differ from performance. Competence itself is only of value as a prerequisite for performance in a real clinical situation. It may well be about recognizing one’s own limits, which, in turn, is related to the concept of professional behaviors that are grounded in the ethics of professional practice. The competent midwifery practitioner would make decisions considering the human and reproductive rights of women and families, and not based on personal attitudes or values (ICM, 2003; Vanaki & Memarian, 2009).

DISCUSSION

A delineation of the competencies that should be expected of the fully qualified midwife at entry into practice of the profession is fundamental to understanding the role of the professional midwife. It also has very pragmatic applications in academic settings and in the workplace.

Professional midwifery education programs are always faced with the challenge (and sometimes pressure) of enrolling sufficient numbers of students to meet country workforce needs. This challenge is counterbalanced by the very real resource limitations that most programs encounter. Such limitations may include faculty/student ratio, classroom, library and skills lab resources, and access to clinical practice experiences. In some countries, these challenges include educational policies that focus on shorter term workforce solutions that include the training of more narrowly qualified birth providers (e.g., the community midwife) who compete for access to clinical experiences and teaching resources. A commitment to competency-based education should play some role in helping policy makers and educational administrators make educational policy decisions in the context of the rights of students to acquire the knowledge, professional behaviors, and skills relevant to the professional role, and in the context of the rights of the clients to expect skilled care from their providers.

Simultaneously, it is useful for employers and employees to have a clear understanding of the scope of work that can be expected of the midwife in the workplace, so that midwifery skills can be fully and appropriately used, and that the scope of practice is neither exploited nor constrained (Homer et al., 2007). The job description for a midwife should be based on linkage between the competency-based education that the midwife has completed, the reproductive health guidelines that are in place in the country, and the midwife’s personal assessment of her or his confidence and competence to practice that role. For example, midwives in Brazil were able to advocate for a more appropriate utilization of midwifery practitioners by documenting the “disconnect” between their competency-based education and the role to which they were assigned in the public health care system (Narchi, 2009). Doctors, midwives, and other health professionals working in a public referral hospital in Palestine identified the fact that the widely held perception that midwives were at the lowest level of the health professional hierarchy made it very difficult for them to be effective advocates for improvements in the quality of care offered to women and infants, including the resources required for quality service (Hassan-Bitar & Narrainen, 2009).

The ICM encourages countries to adapt the core set of basic competencies to reflect the particular needs and circumstances of the country. For example, midwives in Africa collaborated to expand the competencies to reflect the role of midwives in combating malaria and HIV/AIDS in that region (WHO, 2006). In a second example, a Delphi survey of stakeholders in Tunisia, including midwives, health providers, health program managers, women, educators, professional organizations, and decision makers, explored the contributions that midwives could make to meeting health care needs in that country. Findings were operationalized through delineation of core competencies for midwifery practice, thus establishing midwives as a contributing member of the reproductive health workforce (Ghérissi, 2008). The ICM also
urges countries to use the Essential Competencies as complementary to the competency delineation documents produced by and for other cadres who also provide sexual and reproductive health care services (Barry, Alaggante, Lamarre, Auld, & Taub, 2009; WHO, 2011).

The cultural and political appropriateness of each of the core competencies should also be considered (Butler, Fraser, & Murphy, 2008). The ICM has taken great care to craft the statement of core competencies with sensitivity for language and culture. Nonetheless, it is the case that some of the tasks that have been defined as basic knowledge or skill are not yet authorized for midwifery practice by regulatory policy in certain countries.

In many countries, midwives are also educated and credentialed as nurses. These combined programs may require a longer period of study to acquire competencies for both professions (e.g., midwifery studies following completion of nursing studies), and may, therefore, be more expensive for students and for educational institutions. There is an acknowledged advantage to dual preparation. Individuals have personal choice in some countries to practice either or both of those roles, thus generating opportunities for job mobility and autonomy in career choices. In other countries, graduates must complete an obligatory period of public service. Human resource departments have the option of assigning these dual-credentialed nurse-midwives to any setting, based on the priority workforce needs of the health facility. These dual-credentialed practitioners are also more broadly prepared for practice in health facilities where only a few health workers are assigned, for example, in rural health clinics or health posts (Francis, 2009; Hundley et al., 2007; Ireland et al., 2007). On the other hand, there is the risk of de-skilling when practitioners practice one role to the exclusion of the other. Unless human resource personnel and supervisors recognize their added value, the advantage of unique midwifery skills can be lost (Scotland & Bullough, 2004). Similarly, it is sometimes the case that individuals are prepared as midwives but never actually work as midwives. This could be viewed as a waste of precious educational resources.

CONCLUSIONS AND IMPLICATIONS FOR GLOBAL PRACTICE

A clear understanding of the concepts of competence and competency serves an important purpose for individual midwives and for the education and practice communities where they serve. These concepts underpin the global call to action to strengthen midwifery to save lives and promote the health of women and newborns (ICM et al., 2010).

The ICM Essential Competencies provides the individual midwife with an external reference criterion for the knowledge, professional behaviors, and skills that define professional midwifery practice, against which she or he can assess the individual level of need for continued learning. Midwives can also use the concept of competency as a means to analyze new practices as they are asked to consider adding them to their practice. For example, a midwife being asked to assume responsibility for vacuum extraction can use competency as a logical framework for exploring whether she or he has sufficient access to the evidence-based information, skilled experts, anatomic models, clinical equipment, supplies, and patient experiences needed to obtain the knowledge, communication, clinical decision, and psychomotor skills associated with developing and maintaining competence in this new area.

Competencies provide educational administrators with a means of ensuring that curriculum and educational resources are directed toward achieving learning outcomes that are consistent with safe, beginning-level midwifery practice. The ICM recently developed global standards and guidelines for midwifery education that can serve as a framework for strengthening the initial preparation of fully qualified midwives based on the ICM Essential Competencies.

Competencies can be used by national regulators, midwifery councils, and regional health district and local facility managers responsible for maintaining the quality of care. A reproductive health care system that relies on midwives (or any other cadre of birth attendant) who are less than competent to provide care at entry into practice and over the professional practice lifetime is dangerous to women, their families, and communities. Specifically, midwifery competencies can be used to prioritize delivery of continuing education and skills assessment that are most needed to ensure that effective services are delivered by the midwifery workforce. A focus can be placed on clinical services that require the most complex set of skills, that do not require frequent performance, and that have high potential for morbidity, if not performed competently.

The concepts of competence, competency, and competency-based education have received a great deal of attention in recent years. Widespread understanding and application of these essential constructs can lead to transformative educational, clinical, and regulatory improvements in nations struggling to build a quality midwifery workforce aimed at meeting relevant MDGs.
REFERENCES


Ghéri, A. (2008). Pour une meilleure intégration des savoirs dans la formation aux professions de santé [How to better integrate all knowledge in health profession education programmes]. Ecole Supérieure des Sciences et Techniques de la Santé (pp. 12–89), Tunisia: Université Tunis-El Manar.


Competence and Competency: Core Concepts for International Midwifery Practice  

Fullerton et al.


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OBJECTIVE: To investigate important aspects of provision of routine antenatal care from women’s points of view in the Netherlands, Scotland, and Switzerland and to construct a conceptual model of care during pregnancy, informed by women.

DESIGN: Grounded theory using semistructured interviews to explore women’s views. The interviews were undertaken in Dutch, English, and German.

FINDINGS: In the main study, one single cross-national model emerged, which had implications for women beyond the antenatal period. "Mothering the mother" emerged as a core category. There were two subcategories: "creating a bond" and "becoming a mother." The subcategory of "becoming a mother," which incorporated the stages of "expecting," "familiarizing," and "embarking on motherhood," is reported in this article. Women defined becoming a mother as the aim of provision of maternity care in which they described their journeys from creating expectations in early pregnancy to completing the experience approximately a year after childbirth. Mismatches between expectation and experience at the end of these journeys indicated cross-national differences in the provision of maternity care, particularly regarding the woman-care provider relationships.

CONCLUSION: The findings from this study suggest that an essential aim of the maternity services was to support women in the process of becoming a mother, in the context of their own social world. Supportive conditions include woman-care provider partnerships, involvement of women’s individual social worlds in care provision, and continuity of the care providing process. These conditions should be taken into account while designing effective models of maternity care.

KEYWORDS: prenatal care; effectiveness; women’s views; Europe; grounded theory; becoming a mother

INTRODUCTION

Over the last few decades, how best to approach the provision of effective content of routine antenatal care programs has been a topic of discussion in Western European maternity care literature (Hall, Macintyre, & Porter, 1985; Heringa, 1998; World Health Organization [WHO], 1987). The United Kingdom’s (UK) program of antenatal care, in its present format, was introduced in 1929, with the principal aim of reducing high rates of maternal and infant mortality. Other European countries followed the British example, initiating very similar programs (Brezinka, 1997; Heringa, 1998). Although, originally, the emphasis was on educating mothers to take care of themselves and their babies, a shift toward preventative medicine, and the professional supervision of expectant mothers was observed shortly after World War I. The reduction in maternal and perinatal mortality and morbidity during the course of the 20th century was viewed as evidence of value of these programs, without taking into consideration other social factors, which may have affected these figures (Oakley, 1982).

In the early 1970s, however, consumers and health providers in the UK began to call for a systematic evaluation of the effectiveness of maternity care services...
(Cochrane, 1999; Garcia, 1982). Concurrently, advancing European integration led to concerted interdisciplinary concern about the effectiveness of antenatal care. As a result, antenatal care programs and their content were subjected to extensive research and evaluation during the 1980s and 1990s, both within Europe and within internationally (Enkin & Chalmers, 1982; Heringa, 1998; Villar, Carroll, Khan-Neelofur, Piaggio, & Gülmezoglu, 2001). These studies found that the effectiveness of many procedures used in antenatal care was yet to be proved, and that a reduction in the number and content of the antenatal care visits was possible without affecting maternal and perinatal outcomes (Villar et al., 2001). Some of these evaluations, particularly in the UK, involved women's experiences and satisfaction. The principal complaints reported by women were the lack of agreement between the organizational aspects of antenatal care and their personal needs, the information they were receiving, a lack of continuity of care, and the impersonal treatment received at antenatal care clinics (Garcia, 1982; Jacoby & Cartwright, 1990; Reid & Garcia, 1989).

Researchers, therefore, are currently divided about the value of antenatal care programs in Western Europe. Although some studies found that antenatal care led to better pregnancy outcomes (Richardus et al., 1997; Villar et al., 2001), others could not find a causal relationship between the content of a program and its effects (Fink, Yano, & Goya, 1992), or stated that increased medical content negatively affected women's health (Heringa, 1998). It was even suggested that the ritualistic significance of the antenatal care visits was more important than the actual content (Enkin & Chalmers, 1982; Heringa, 1998). Both Graham and Oakley (1981) and Field (1990) highlighted the existence of different perspectives on the aims of antenatal care, which would influence the approach to the evaluation of effectiveness. These researchers remained among the few to criticize the prevailing approach to the evaluation of effectiveness, and to define the aims of antenatal care from women's perspectives.

This study aimed to investigate important aspects of provision of antenatal care from women's points of view in three European countries (the Netherlands, Scotland, and Switzerland) with different health care systems. The objective was to construct a conceptual model of care during pregnancy informed by women.

**METHODOLOGY AND METHODS**

Grounded theory, according to Strauss and Corbin (1998), was chosen to attain the objectives of this study, because it offers an inductive approach through generating theory from data grounded in everyday reality. This constructivist methodology aims to explore analytically the magnitude of the research area in which significant themes and patterns are discovered. During subsequent stages of the study, it allows for increased focus on these themes while developing a conceptual framework that underpins theorizing (Strauss & Corbin, 1998). In this way, the chosen approach took into account the many factors that could influence provision of antenatal care in the three countries involved.

From a grounded theory perspective, the research field had to be addressed as one unit, even though it involved women in three countries with three different languages. Any variable had to earn its place in the theory based on its relevance. This meant that language, for instance, cannot be defined in advance as a mediating or differentiating factor in the theory (Glaser, 1978). However, language has been seen as the consequence of the creation of joint meanings of symbols created through interaction with the social context and, thus, from this perspective, minimal translation should take place (Blumer, 1998; Straus & Corbin 1998). Therefore, based on theoretical sampling in this study, two or more interviews carried out in the same language were treated as a unit of meaning ("language unit"; Glaser & Strauss, 1967; Strauss, 1999). Consistency of meaning was achieved by the construction of similar concepts among women in each language. After constant comparative analysis within each language unit, further comparison was used to integrate concepts from each unit to the whole. This way, comparison of concepts took place at a higher abstraction level (Brislin, Lonner, & Thorndike, 1973; Gales, 2010). Through using language units, theoretical sampling was left intact within and across countries.

Rigor was ensured in this study by the fact that one multilingual researcher managed the collected data in all three languages. The researcher's reflexivity is an integral element of grounded theory both to the process of data collection and analysis, and is guided by memo writing (Strauss & Corbin, 1998). Therefore, the supervisors of the study (VEME, SRK) checked the analysis of the data. To further safeguard and promote reflexivity, the results of this analysis and the established audit trail of memos, field notes, and other relevant information were discussed with these supervisors, as well as two maternity care professionals in each country, on a regular basis. Resulting concepts were validated by checking them with women within and across languages.
SETTING

Women were recruited to the study from three European countries: Scotland, Switzerland, and the Netherlands. The localities involved were west of Scotland, the German-speaking part of Switzerland, and the eastern and western part of the Netherlands.

SAMPLE

The participants were healthy women at different stages of uncomplicated pregnancies. They were initially followed up to 6 months after giving birth. Based on theoretical sampling, this was then extended to a year after giving birth (see Table 1). Routine antenatal care was defined as attending the normal content and frequency of visits, as set by the health system of the country involved.

Women were recruited using convenience and theoretical sampling approaches. The first round of interviews was conducted using a convenience sample and included five women from Scotland, five women from Switzerland, and seven women from the Netherlands. As the theory emerged, it became clear that more data from specific contexts or women were required. Theoretical sampling was, therefore, used to reflect on the different kinds of care providers, as well as to demonstrate the evolving process during pregnancy, childbirth, and postpartum and subsequent pregnancies (see Table 1). This meant, for example, that three women in each country were interviewed a year after having their first child to reflect on the course and completion of the childbirth and postnatal process, whereas others were interviewed in their second or third pregnancy to reflect on the development of this process in subsequent pregnancies. Theoretical sampling concerning different kinds of care providers involved a Swiss woman attending care with a female care gynecologist, and in Scotland, two women with an independent midwife. In addition, in each sample of each country, one of the women from a previous sample was again interviewed up to a period of 5 years after giving birth to verify and discuss the results of the analysis.

ACCESS AND ETHICAL CONSIDERATIONS

Ethical approval was gained from the Ethics Committee of Glasgow Caledonian University and the Lanarkshire Ethics of Research Committee. Access to the participants did not require additional ethical approval in the Netherlands and Switzerland.

Based on the criteria for sampling, recruitment took place in Scotland by both supervisors of the study and the care providers, and in Switzerland and the Netherlands, by the researcher herself and the care providers.

The women were provided with an information sheet about the study, and were asked to contact the researcher if they were interested. No woman approached refused to participate, and none later withdrew their consent.

All women gave written consent to the researcher before the interviews took place. The researcher translated all information and consent forms into the three languages used; English, German, and Dutch. These translations were then checked by persons living in each of the countries involved. A list was created with culturally appropriate first names, and each participant was assigned one of these names for reporting purposes, to aid anonymity.

DATA COLLECTION

The data were collected through one-on-one audio-taped interviews in English, Dutch, or German, as appropriate, by the researcher, at a convenient place for the women. The interviews were semistructured, using an interview guideline as a reference. Interviews lasted from 21 to 126 minutes. No woman refused tape recording of the interview.

The leading interview question was “If you could determine the content of care during pregnancy yourself, based on your needs and expectations, what would be important to you?” Following this question, the women were encouraged to tell their stories, during which some topics, such as access to care, were introduced by the interviewer. In the interviews of the women sampled theoretically, new topics from the emerging categories guided the discussion. Field notes were made to guide data collection. Most women were interviewed once; three women were interviewed twice, and two women were interviewed thrice (see Table 1).

DATA ANALYSIS

Five procedures contributed to data analysis: transcribing, coding, writing memos, classifying and categorizing in one language and, finally, the cross-language comparison and integration. The interviews were transcribed verbatim,
<table>
<thead>
<tr>
<th>COUNTRY/NAME</th>
<th>P/B/M</th>
<th>CARE PROVIDER</th>
<th>NUMBER OF INTERVIEWS</th>
<th>TIME DURING PREGNANCY</th>
<th>TIME DURING POSTPARTUM</th>
<th>REASONS FOR THEORETICAL SAMPLING</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL- Erin</td>
<td>1/1/0</td>
<td>Midwife</td>
<td>2</td>
<td>(2) 30 weeks</td>
<td>(1) 2 months</td>
<td>Differences first-second pregnancy</td>
</tr>
<tr>
<td>NL- Marianne</td>
<td>2/1/0</td>
<td>Midwife</td>
<td>1</td>
<td>16 weeks</td>
<td>(1) 6 weeks</td>
<td>Verify/discuss categories</td>
</tr>
<tr>
<td>NL- Hannah</td>
<td>3/2/1</td>
<td>Midwife</td>
<td>3</td>
<td></td>
<td>(2) 16 months</td>
<td>Verify/discuss theory</td>
</tr>
<tr>
<td>NL- Mireille</td>
<td>1/0/0</td>
<td>Midwife</td>
<td>1</td>
<td>26 weeks</td>
<td>(3) 5 years</td>
<td>Medical care provision</td>
</tr>
<tr>
<td>NL- Saskia</td>
<td>2/0/1</td>
<td>Midwife</td>
<td>1</td>
<td>11 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL- Ariane</td>
<td>2/1/0</td>
<td>Midwife</td>
<td>1</td>
<td>34 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL- Joelle</td>
<td>2/2/0</td>
<td>Midwife</td>
<td>1</td>
<td>2 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL- Kerstin</td>
<td>9/1/4</td>
<td>Midwife, Ref birth</td>
<td>1</td>
<td>8 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL- Laura</td>
<td>3/2/0</td>
<td>Midwife</td>
<td>1</td>
<td>33 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL- Maren</td>
<td>1/1/0</td>
<td>Midwife, Ref birth</td>
<td>1</td>
<td>1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL- Elena</td>
<td>2/2/0</td>
<td>Gyn</td>
<td>1</td>
<td>5 months</td>
<td></td>
<td>Process and medical care</td>
</tr>
<tr>
<td>NL- Nicole</td>
<td>1/0/0</td>
<td>Midwife</td>
<td>1</td>
<td>29 weeks</td>
<td></td>
<td>Variation in control/let go</td>
</tr>
<tr>
<td>SL- Heather</td>
<td>2/1/0</td>
<td>Shared care</td>
<td>1</td>
<td>29 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL- Megan</td>
<td>1/0/0</td>
<td>Shared care</td>
<td>1</td>
<td>30 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL- Nora</td>
<td>3/2/0</td>
<td>Shared care</td>
<td>1</td>
<td>24 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SL- Susan</td>
<td>2/2/0</td>
<td>Shared care</td>
<td>1</td>
<td>5 months</td>
<td></td>
<td>Iterate process in subsequent pregnancies</td>
</tr>
<tr>
<td>SL- Jan</td>
<td>2/2/0</td>
<td>Shared care</td>
<td>3</td>
<td></td>
<td>(1) 2 weeks</td>
<td>Verify/discuss categories</td>
</tr>
<tr>
<td>SL- Lynn</td>
<td>5/3/2</td>
<td>Midwife</td>
<td>1</td>
<td>5 months</td>
<td>(2) 9 months</td>
<td>Verify/discuss theory</td>
</tr>
<tr>
<td>SL- Vanessa</td>
<td>4/2/2</td>
<td>Midwife</td>
<td>1</td>
<td>6 months</td>
<td>(3) 5 years</td>
<td>Different care provider</td>
</tr>
<tr>
<td>SL- Emily</td>
<td>1/0/0</td>
<td>Shared care</td>
<td>1</td>
<td>32 weeks</td>
<td></td>
<td>Process in first pregnancy</td>
</tr>
<tr>
<td>SL- Deborah</td>
<td>2/1/0</td>
<td>Shared care</td>
<td>1</td>
<td>33 weeks</td>
<td></td>
<td>Process until 1 year</td>
</tr>
<tr>
<td>SL- Holly</td>
<td>3/3/0</td>
<td>Shared care</td>
<td>1</td>
<td>8 weeks</td>
<td></td>
<td>Iterate process in subsequent pregnancies</td>
</tr>
<tr>
<td>CH- Paola</td>
<td>2/1/1</td>
<td>Gyn</td>
<td>1</td>
<td>5 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH- Yvonne</td>
<td>3/3/0</td>
<td>Gyn (midwife)</td>
<td>2</td>
<td>(1) 5 months</td>
<td>(2) 16 months</td>
<td>Verify/discuss categories</td>
</tr>
<tr>
<td>CH- Lillian</td>
<td>2/0/1</td>
<td>Gyn/midwife</td>
<td>1</td>
<td>8 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH- Verena</td>
<td>3/2/0</td>
<td>Gyn/midwife</td>
<td>1</td>
<td>2 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH- Barbara</td>
<td>3/2/0</td>
<td>Midwife/birth center</td>
<td>1</td>
<td>30 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH- Sarah</td>
<td>2/2/2</td>
<td>Gyn</td>
<td>1</td>
<td>6 weeks</td>
<td></td>
<td>Female care provider</td>
</tr>
<tr>
<td>CH- Rosemary</td>
<td>1/0/0</td>
<td>Gyn</td>
<td>1</td>
<td>36 weeks</td>
<td></td>
<td>Process in first pregnancy</td>
</tr>
<tr>
<td>CH- Catharina</td>
<td>1/1/0</td>
<td>Gyn</td>
<td>1</td>
<td>1 year</td>
<td></td>
<td>Process in first pregnancy</td>
</tr>
<tr>
<td>CH- Lea</td>
<td>4/2/2</td>
<td>Gyn</td>
<td>2</td>
<td>(1) 8 weeks</td>
<td></td>
<td>Iterate process in subsequent pregnancies</td>
</tr>
<tr>
<td>CH- Sonja</td>
<td>2/1/0</td>
<td>Gyn</td>
<td>22 weeks</td>
<td></td>
<td>(2) 3.5 years</td>
<td>Verify/discuss categories</td>
</tr>
</tbody>
</table>

Notes: Country: NL = the Netherlands; Sl. = Scotland; CH = Switzerland; P/B/M = number of pregnancies, births and miscarriages; Care provider: Midwife = independent midwife; Gyn = gynecologist (in Switzerland: private practice); Ref birth = referred to the hospital during birth; Number of interviews: this number is referred to as (1), (2), (3) under time pregnancy/postpartum.
Becoming a Mother: Women's Journeys From Expectation to Experience in Three European Countries

and identifying data were removed. The researcher herself performed the analysis in each of the languages concerned. Analysis in each of the language units was checked by the supervisors of the study.

Coding techniques, according to Strauss and Corbin (1998), were used, which involved open, axial, and selective coding. Within each of the language units, the transcripts of the interviews were coded in a line-by-line, and sometimes word-by-word, fashion. Codes were collapsed into concepts and were given a name in the original language, fitting the meaning given by the women in the interviews. Subsequently, the concepts that emerged from the three separate language units were compared between units, translated, and integrated in an overall cross-national unit; resulting in concepts at a higher abstraction level (Brislin et al., 1973). As a consequence, these concepts could be closely examined again in a deconstructive way for similarities and differences in each of the languages. The results from this examination provided criteria for following theoretical sampling.

During axial coding, categories were linked to each other, renamed, and then, collapsed or subsumed into larger categories through further comparison. Selective coding completed the construction of the grounded theory through the integration and refinement of the theory, at which point, theoretical saturation was achieved. The final results of this analysis were verified in an interview with one woman in each of the countries.

RESULTS

The total sample comprised 39 interviews with 32 women. Twelve women were interviewed in the Netherlands, 10 in Scotland, and 10 in Switzerland (see Table 1).

The participating women were either expecting or had given birth to their first, second, or third child. Ten women had experienced previous miscarriages. Interviews took place in different stages of pregnancy or up to 5 years after giving birth to their children. The women received care in different models of care by different care providers.

One single cross-national model for women in three European countries emerged (Luyben, 2008), which contained three main categories of "mothering the mother," "creating a bond," and "becoming a mother." This model, with its categories and their relationships, is presented in Figure 1. This highlights a process of care that went beyond pregnancy to include both childbirth and postpartum. On selective analysis, "mothering the mother" appeared to be the core category, containing the content that women needed from

FIGURE 1  The model of content of care during pregnancy, childbirth, and postnatal period that emerged from the study. "Becoming a mother" describes the maternal development process from the beginning of pregnancy until approximately 1 year after birth (� = decrease, ↑ = increase). The mediating factor of "Creating a bond" (with care providers) effectively connects content of care (core category; "Mothering the mother") with this process.
maternity care. This core category subsumed the others, whereas “becoming a mother,” described the maternal development process and “creating a bond,” reflected relationships with care providers and the social environment that women created to be able to receive the content of care they needed to undergo “becoming a mother,” effectively.

This article describes the process of “becoming a mother.” It involved three stages of “expecting,” “familiarizing,” and “embarking on motherhood” (see Figure 2).

BECOMING A MOTHER

The data suggested that for the women in this study, support in the process of “becoming a mother” should be the aim of provision of maternity care. They described becoming mothers as personal developmental journeys from creating expectations in early pregnancy until completing the experience during the postnatal period, approximately a year after childbirth. These journeys were iterative processes, which were repeated in subsequent pregnancies. From these processes, women gained confidence and autonomy to take up family responsibility (see Figure 1). “Becoming a mother” involved three stages and started with the stage of “expecting.”

Expecting

The stage of expecting lasted from early pregnancy until childbirth in which women diagnosed their pregnancy, became increasingly aware of themselves and their pregnant situation, and, consequently, created several expectations of pregnancy, childbirth, and their future with a new family. The women themselves were the first to suspect a pregnancy because of missing a period or perceiving bodily changes, and confirmed this by performing a pregnancy test at home.

I had done that test; well I am pregnant and hip, hip, hooray. Yes, of course, you keep your mouth shut the first 3 months that I’d learned a bit about that, that you shouldn’t say too much the first 3 months.

(Marianne/the Netherlands)

A few women consulted a known health care provider to get an objective confirmation. Feeling sure about being pregnant was an important condition for inducing a process of increased awareness about their new situation to precede the process of becoming a mother. Women in their first pregnancy described how they opened up to things related to pregnancy, which was perceived as a new and exciting area.

Because it was, everything was new to me, it was as if someone saying to me you’re pregnant, as if someone gave to me this big Christmas present, it was wonderful, and I wanted to know all about it.

(Heather/Scotland)

Becoming aware was a requirement for learning and personal development, and the creation of expectations.
It was also a condition for actively taking responsibility. This state of mind was characterized by increased "thinking activities" in which different types of knowledge, such as knowledge about daily and family life, experiences of pregnancy and childbirth, and views and beliefs, were reflected on and compared. While preparing for the future, this dynamic process involved three stages of interaction with the self and with the world: the present, being pregnant, and having a new family. Lilian, in Switzerland, characterized her current scenario, thus,

Because this search for information also created anxieties, some women, like Sonja in Switzerland, chose not to know too much.

All is, from A to Z, everything is really in there. But, it can also drive you crazy. If one reads, everything. The negative. You should not eat this and that. And then this happens, and that, and so on.

(Sonja/Switzerland)

These pictures were then used as a reference and as something to hold on to during pregnancy, as Erin, in the Netherlands, stated,

Thus, you are creating a scenario. Because you hear from people, like it has to go like that and that. Normally. And that, you like to have it like that yourself, of course.

Finally, you can hold on to that. Because you think, well, end of the pregnancy, you have to give birth, a birth will be something like this. And that is a picture. And then the rest will follow, and that will be approximately like this. And that is another picture. Thus, there you are living towards that (picture). That is your, your point to, to hold on to.

(Erin/the Netherlands)

These expectations contained subjects that were important to women; for example, mode of birth, attitude of care provider, being at home with the baby, and their environment. Women in Scotland mentioned a large number of subjects, whereas Swiss women described only few. These cross-national differences seemed to be related to the amount of information that women had available or received from care providers.

Expectation pictures provided women with confidence, described as a feeling of an inner security (Luyben & Fleming, 2005). A complete picture of a particular set of expectations brought women's thinking processes about that issue to a halt and gave them peace of mind. Most women, however, found gaps in the picture (such as missing pieces in a jigsaw puzzle), which led to perceiving uncertainties and continuation of the thinking process. This was termed "worrying" in which different scenarios were considered, but the right "fit" could not be found. As women felt responsible, they aimed for a...
reduction of risk and closing the picture with the best scenario. Vanessa, in Scotland, considered a home birth, but also considered the risks to her own life.

I didn’t want to be in a situation where I was going to put my own life at risk, ’cause that would be worse for Robin, than, than a bit of jealousy about this new baby.

(Vanessa/Scotland)

As to counteract this sense of uncertainty, all women were needing experience that they usually found in a bond with an experienced maternity care provider (see Figure 1). “Expecting,” however, was an iterative process of creating expectations, which started all over again, if new information arose. Women, therefore, searched this new experience through a continuity of the bond with their chosen care provider (see Figure 1). Thus, they aimed to complete the pictures and restore their feelings of confidence and autonomy (Luyben & Fleming, 2005), during familiarizing themselves with the experience of becoming a mother.

Familiarizing

Familiarizing meant that women were getting acquainted with the experience of being pregnant, giving birth, and having a family of one’s own after childbirth. Some Dutch women talked about “feeling the reality.” During the time, women socialized to motherhood, the expectation pictures changed into experience pictures, and they felt “at home” with this experience. Familiarity, thus, provided a feeling of confidence, which was reflected in the Swiss and Dutch expressions of “being familiar.” Expectations were cognitively built, whereas actual experiencing involved all the senses. Although Nicole, in the Netherlands, was well-informed about being pregnant through reading books and the additional information from her midwife, her real experience was quite different.

Of course, you read sometimes that somebody has, an awful pregnancy, yes, though you read that not that often. In booklets, is often like, how great a pregnancy is. Also, if they, if the midwife is like, “o, those nice butterflies in your belly.” But well, at 3 o’clock at night, I do not think like, let’s have a nice play. Yes, that is just annoying. Because that wakes me up. And I knew that all. But now that you are really experiencing that.

(Nicole/the Netherlands)

Through their experiences, women were developing awareness by creating new knowledge, which raised questions and changed the way they thought. This led to the construction of new experience pictures, which they were comparing with the existing expectation picture. Joelle, in the Netherlands, compared the experience of her second child with what she knew from the first one.

Well, for example, he moved an awful lot in my belly. I thought well, is that, is that normal? The first one had been quite quiet, and this one, he just half, kicked my ribs apart.

(Joelle/the Netherlands)

Women tried to make a new experience fit their existing picture through balancing both pictures of expectation and experience to maintain equilibrium and achieve a state of rest. Time to discuss, as well as information and reassurance from care providers, were factors needed to fill in missing knowledge. Paola, in Switzerland, had professional friends who she could always ask.

I was lucky. Because I had my own relationships, I did not feel that unsure. That means I had unsure, always had unsure moments. And those unsure moments, I just directly compensated. That means; I called someone. Someone, that I knew really well, a doctor. And there I got my additional information, or what I lacked. Or I knew a midwife.

(Paola/Switzerland)

New information and experience led to the expectation picture being reconstructed, rejected, or neither, which led to worrying by the women. While Megan, in Scotland, chose not to worry about information from her care provider who thought she was “small” and expected her to have complications during childbirth, Marc’s, in the Netherlands, worries increased after giving birth.

Well, my nature is, I don’t worry about that. I know in other countries, females are much smaller than I am, and they still have had the babies. And 100 years ago, people were much shorter than they are now. So, well I don’t worry.

(Megan/Scotland)
And then suddenly, you have that worry, like oh god, now you also have such a child. What do I do with it? Yes, you have to look after it the whole time. Is she laying down well, yes, you are quite nervous. And like now, it all just goes well. After a few months, then it all is familiar and, yes, I found it quite scary.

(Maren/the Netherlands)

Balancing, resulting in a new developed picture of experience, and subsequently adapting, was a necessary activity to achieve personal growth, which gradually took place. In this study, women having their first child were most affected by this change, whereas women having a subsequent child experienced more stability. Marianne, in the Netherlands (second pregnancy), and Lea, in Switzerland (after having her second child), reflected on their personal changes in becoming a mother.

And if you go for the first, first time, for your first baby, you are just a lay person in that area. The further pregnancy proceeds, the more, the more you come to know, actually. And now you are, well I won’t say an expert, but you just know an awful lot, maybe even a bit too much.

(Marianne/the Netherlands)

You have to develop a new familiarity in yourself, because it is a process, you do not know yourself anymore. You have to learn to know yourself again. Define new. Yes, you have to really open your eyes.

(Lea/Switzerland)

During familiarizing, the bond with more experienced people, particularly care providers, assisted women to complete their pictures of experience to gain confidence, while maintaining their autonomy and sharing responsibility (see Figure 1). The process of familiarizing was repeated, if new experiences happened. Women, however, hardly had time to adapt their pictures during childbirth and the early postnatal period. Therefore, reflection and reconstruction had to take place during the stage of embarking on motherhood.

Embarking on Motherhood

The aim of women’s journeys was “embarking on motherhood” in which they reflected on their experience, reconstructed and closed their pictures, so that they could begin the enterprise of being a mother. Women, therefore, had to leave the journey of “becoming a mother” behind them physically, psychologically, and emotionally. This stage started some time after childbirth, when women had a new life routine, and ended only after completing their picture approximately a year after birth, but sometimes longer. For Lynn, in Scotland, this process involved three pregnancies and was related to meeting her expectations.

I’ve come, I’ve come full circle. I’ve got to the point where I thought I would be embarking on motherhood. I suppose my expectations have now been met. And, it’s happened the way I envisaged. But, it’s taken me quite a long time, a few years, to get to that point. It has been a big journey, but I’m there. I won’t. I don’t think I will have any more.

(Lynn/Scotland)

While Scottish and Dutch women chose the word “embarking,” Lea, in Switzerland, preferred a journey as a metaphor.

Well, I think that is also, that is, those (becoming and being a mother) are two different pair[s] of shoes. And, I believe, the bigger journey is afterwards. If the child is there and, then, you are a mother. Now for me, that with that ship, I would take a country road. Whatever; train, bicycle, car.

(Lea/Switzerland)

In having a routine, women experienced a new normality in their everyday situation. They felt secure in being with and caring for the baby, and experienced an increased stability in their life. After having her third baby, Holly, in Scotland, had more difficulties finding this routine than with her first one.

But I start to get into my routine and everything now, I think, because I had, you know, I had, my oldest son to get to nursery. And, I had a, all of a sudden, I had a new baby, a toddler, and a 4 year-old, having to get him up, ready. And I would say, I, I felt it more this time, that way. Than I did. I mean, the first, your first pregnancy.

(Holly/Scotland)
The time needed to find a new routine differed individually and related to women's own well-being and the behavior of the baby. Once a routine was achieved, there was a resulting sense of peace and harmony. Women had time to reflect, which they did not have during childbirth and the early postnatal period. During this time, they could reconstruct their picture and fill in gaps in their awareness.

Yes, when did I start to do that? I think, that after, yes, really after a month, that all went well a bit again, I think, a month of three, four, that I thought like, gosh, yes, how did it all go actually? And does it all fit with, like what you had in your head a bit, and, also everything after that, really, like, that you are going to work, and how you experience that, and if it is a bit like, how you have thought it would be.

(Erin/the Netherlands)

Some women relied on their shared awareness with the care providers with whom they had a bond to debrief them and help them fill in the missing pieces to complete their own awareness. Thus, the experience could be understood and integrated, like what Maren had aimed to do.

I have missed that. It all went very fast, they (health nurses) came to check me, everything was fine. Goodbye, gone. I had needed more from that. Just, some time to talk with you, how the birth has taken place. You have so many questions coming up at once, and you can not deal with that in the first couple of days, I could not process that.

(Maren/ the Netherlands)

After reconstruction, women were matching their actual experience with the expectation, and judging it.

And then comes the postnatal period. That will be something like that. And if the picture indeed, does not match, then you feel, I think, very disappointed. And, if that picture matches, then you are very happy. And my picture matched coincidentally. But I had everything really perfect. I have had a good birth and a good postnatal period.

(Erin/Netherlands)

While reconciling, women came to aspects of their experience, which had not expectations. This meant that they had some aspects of their expectations that were to them, and deal with the loss of some was a balancing activity as described by Scotland.

I think as well you have to balance your perception of how it is going to the reality of how it did go and kind to an understanding between the two. I know that it causes women after the lot of kind of psychological problems, never had a natural birth and there is intervention, you know.

(Frasthe

Several women experienced a mismatch of expectations and experiences. In the care this was often due to antenatal information they had themselves or from family, friends, and had been used to create pictures in “expecting.” A few women had negative feelings regarding the experience complaining, either orally or in writing, women wrote a letter of complaint, a tonsillar woman had considered this. All related to the attitude of care providers however, women altered their expectations reality. Therefore, although some aspects were “missed,” they generally expressed satisfaction.

Consequently, closing the picture all to leave the experience behind, so that for new experiences of being a mother was reused as a reference for creating new expectations in a subsequent pregnancy. In the Netherlands, closed her picture after talking with her midwife.

But I could still ask that kind of questions then. And that was very important to get the picture complete. To get the question answered. So that I could leave it behind. It did not move about in my mind, if I had done that, or if I had done this.

(Kerstin/the Netherlands)
Several women in the current study, however, could not completely close a previous experience, like Deborah, in Scotland, who reflected on her first experience during her second pregnancy.

Maybe for a closure, what I should have done was, make an attempt to write a letter of complaint about what I felt was wrong with my care. But I am not very good at getting around, sort of these kind of things. So, I just, so I probably have taken it with me. Some part of it is closed, and over with. But some part is still there, you know.

(Deborah/Scotland)

This issue of nonclosure was not explored further in the current study. Through closing, women felt confident to take up family responsibility on their own, and physically and mentally moved on into the new experience of being a mother.

DISCUSSION

The current study resulted in the emergence of one single cross-national conceptual model of “becoming a mother” for all women in three European countries as an aim of provision of maternity care. From the women’s perspective, this highlighted the importance of the development of women’s pictures of family responsibility and offered new perspectives on existing maternity care knowledge and practice. The study showed that the grounded theory approach provides a rigorous framework for cross-national research.

Limitations that were encountered were mainly caused by organizational and linguistic factors. Because of limitations in time and financial resources, the number of women per language unit had to be planned in advance, and not all interviews could be analyzed before the next interview took place in each of the countries. To adhere to the principles of grounded theory, field notes were used to assist data collection. The inclusion of three different languages, on the other hand, required a very detailed analysis within each unit and the use of concepts at a higher abstraction level for cross-national comparison. The intensity of this process influenced the number of women and the amount of time needed to achieve the objectives and, thus, saturation of the categories. Using concepts at a higher abstraction level increased the credibility of qualitative cross-national interpretation, as meanings were validated in each of the language units before being integrated. At the same time, theoretical sampling was richer, as the meanings of these similarities and differences for the women could be explored in more depth and verified in the interviews in each of the countries involved.

The model of “becoming a mother” in the current study described a continuous process of women’s personal development from expectation toward the experience of their own family responsibility, which lasted from the beginning of pregnancy to about a year after birth and was repeated in subsequent pregnancies. This process consisted of three stages of changes in women’s scenarios (or “pictures”) in which they changed physically and emotionally, as did their views on their existing world. This process showed parallels with a socialization or acculturation process (Gudjons, 2003). Previous studies had addressed only fragmented parts of this process, such as the expectation before and experience after childbirth (Ayers & Pickering 2005; Green, Coupland, & Kitzinger, 1990, 1998), becoming a mother in the last trimester of pregnancy and the postnatal period (Martell, 2001; Mercer, 1995; Rogan, Schmied, Barclay, Everitt, & Wylie, 1997), or several tasks since becoming a mother (Mercer, 2004; Nelson, 2003; Rubin, 1984). The continuous process, as described in this study, involved a time from early pregnancy to a year or more after childbirth, included women’s social world, and connected expectation to experience. This also led to a different perspective on the meanings of some of the findings from these previous studies. For instance, Barclay, Everitt, Rogan, Schmied, and Wylie (1997) interpreted “loss” in the early postnatal period in a negative way, but this was a normal phenomenon during reconciliation within the context of women’s transformative processes in the current study. The continuous social character of these processes highlighted the need for continuity of the care providing process and involvement of women’s social environment in the design and provision of care.

The transformation of pictures of expectations into pictures of women’s own experiences of becoming a mother resembled a biographical, experiential learning process (Piaget, 1975; Strauss, 2005). Women first experienced the transition, which generated questions. They, then, sought personal information that assisted them in developing and closing their pictures, while sharing this with their care providers. Closure brought peace of mind, even if it was only temporary, until the next disruptive event or information. Effective provision of information, therefore, had to be experience- and time-related. These
findings are consistent with the effects of provision of information reported in other studies. Several studies showed the limited effects of antenatal education and information in preparing women for being a mother and emphasized the need for increased information in the postnatal period (Ho & Holroyd, 2002; Nolan, 1997; Razurel, Bruchon-Schweitzer, Dupanloup, Irion, & Ipiney, in press), whereas Levy (1999) described how women accepted and rejected information to preserve the balance in their own world. The results of the current study suggest the need for an increase in postnatal education, but even more for individualized, timely care packages that match women's own unique experience and requirements, and that are focused on "becoming mother" and not just on well-being, from a purely clinical perspective. In this way, a close match between expectation and experience could be achieved.

A few researchers have highlighted the importance of women's reconstruction of their pictures in the postnatal period in which filling in the "missing pieces" during the postnatal period facilitated women to reconstruct their childbirth experience (Affonso, 1977; Mercer, 1995). Although the importance of closing the experience to continue living in a new situation has been emphasized (Affonso, 1977), these findings had not been related to a continuous process of opening, sharing, and closing awareness that already started in the beginning of pregnancy, as described in the current study. When maternity care providers assisted women in completing their pictures, closure provided them each time with confidence, and, thus, an inner security, to go a step toward family responsibility.

Whereas security is well-recognized as meaning to reduce anxieties (Melender & Lauri, 2002), most studies emphasized external sources, and little has been described about inner sources of security (Findress, 2002; Melender & Lauri, 2002; Petermann, 1996). Erikson (1966), however, mentioned trust and reliance on oneself as a source of inner security during psychosocial development, which is consistent with the findings in the current study. Because of the closed pictures during the course of the process ("expectations"), women gained confidence and were able to express this particular preference and make decisions in an autonomous way (Luyben & Fleming, 2005). If women stayed uncertain because of conflicting information, risks, or complications, however, they were likely to rely on their care providers and the choices they made. Because this issue was not explored further within the framework of the current study, further research is needed to further investigate information.

Final closure of the picture of becoming took place at the end of the process, whereas could be left behind to embark on of motherhood. Although women had minds during the process, they had a fixed view about their experience after its close of the experience involved comparing th with the expectation. As a result, women expectations to match reality and reconcile. Thus, they were usually satisfied with th (e.g., healthy mother, healthy baby) but also aspects in relationship to their expectations mode of birth), which has been noticed in (Bramadat & Driedger, 1993; Porter & Ma Proctor, 1998). These findings indicate that care during pregnancy and childbirth, first ask for women's satisfaction, but for what and, second, they should take place only of the picture. Concurrently, "becoming provides a basis for development of indication of this process by describing aims, p outcomes from women's points of view.

CONCLUSION

In this article, the subcategory of "becoming arising from an investigation of import provision of routine antenatal care from w of view in three European countries v maternity care systems, is described. One s tual cross-national model for women in th emerged, which represented women's jou family responsibility from creating expect pregnancy to completing the experience one year after birth. This model resembles ential learning process in which women emotionally changed, as did their views on world. The bond with a maternity care pro women to receive the content of care th complete this process and, thus, create bet between expectation and experience.

Provision of maternity care shou include principles of experiential learni women's process of becoming a mother own social world is a central aim. Support include sharing care-providing relationshi of this care during women's processes, and of women's individual social worlds. This should be taken into account while durin
REFERENCES


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General Practitioner Involvement in Remote and Rural Maternity Care: Too Big a Challenge?

Jan Caldow, Vanora Hundley, Edwin van Teijlingen, John Reid, Alice Kiger, Janet Tucker, Jilly Ireland, Fiona Harris, Jane Farmer, and Helen Bryers

BACKGROUND: In the United Kingdom, general practitioner (GP) involvement in maternity care has declined significantly over the past decade. This is particularly so in remote and rural areas where midwives have stepped up and taken over units to ensure that women in these areas continue to have a service. A recent report by the King's Fund argues for a greater role for the GP in maternity care provision; however, this raises questions about whether GPs have the skills and training to provide such care.

AIM: To explore the views of GPs on the skills and training required to deliver safe and appropriate local intrapartum services in remote and rural settings.

METHODS: Mixed-method study consisting of qualitative interviews with a purposive sample of GPs in six remote and rural sites. To triangulate the interview findings and identify features that might have been missed in the interviews, a questionnaire was developed using initial key themes identified.

FINDINGS: Maternity care accounted for less than 10% of most remote and rural GPs' workload, yet interviewees reported that their role required them to be competent in a wide range of procedures. This was seen as a major barrier to recruitment and retention in rural areas. Although self-reported competence and confidence was high, several GPs felt de-skilled and felt that they were fighting a losing battle to maintain skills. GPs regarded isolation, need for comprehensive expertise, limited resources, and transportation difficulties as factors affecting the decline in their contribution to remote and rural maternity care.

CONCLUSION: Although rural GPs and midwives might traditionally have been in competition, providing a woman-centered service in remote areas may be easier to achieve through collaborative working. However, if GPs are to play a greater role, then they will need to be prepared to make a strategic commitment to the maintenance of remote and rural maternity care. This will require innovative methods of training, special consideration of educational needs, and incentives for practitioners to settle in rural areas, but it may already be too late for GPs to have a substantial input into maternity care.

KEYWORDS: general practitioners; multidisciplinary education; midwifery; maternity care; remote and rural setting

INTRODUCTION

Although midwives in the United Kingdom attend more than half of all births and provide most of the maternity care (Health Commission, 2008), particularly where women have uncomplicated pregnancies (National Health Service [NHS] Quality Improvement Scotland, 2007), the role that general practitioners (GPs) play has recently been put back in the spotlight with the publication of a new report by the King's Fund (Smith, Shakespeare, & Dixon, 2010). The report argues for a greater role for GPs in maternity care, one which might see them sharing women's care with midwives, and concludes that changes to medical training are needed.
to ensure that GPs are "adequately skilled to look after women safely" (Smith et al., 2010, p. 19). In this article, we explore GPs' skills and training, and ask the question, "Is GP involvement in remote and rural maternity care too big a challenge?"

BACKGROUND

Smith and Jewell (1999) have reminded us that "complete obstetric care" was very much the role of the GP at the beginning of the 20th century, with more than 85% of women in the United Kingdom birthing under GP care. The push to move maternity care, and birth in particular, into facilities was a major factor for declining GP involvement. By 1995, only 18% of GPs surveyed provided intrapartum care, although 28% wanted to do so (DeVries, Salvesen, Wiegens, & Williams, 2001). A more recent study found that only 7% of GPs had attended a birth within the year (Hewison, 2001). Involvement in routine antenatal and postnatal care continued to be much higher at more than 90% (General Medical Services Committee, 1992), although in more recent years, this too has declined (Smith et al., 2010).

In contrast, in remote and rural Scotland, GPs continued to maintain an intrapartum role for much longer. Maternity care was often provided in GP units within district hospitals, although these units also came under threat in the late 1980s and early 1990s (Murphy-Black, 1992). Early in 1990, there were 65 small GP-led maternity units in England (Smith & Jewell 1991, p. 14) and 28 such units in Scotland with its large rural area but much smaller population than England (Scottish Office Home and Health Department, 1993, pp. 59–61). In Scotland, the number of all maternity units (i.e., from the largest academic hospitals to the smallest cottage hospital) fell from 52 units in 1995 to 36 in 2008, a drop of 26.9%, whereas the overall number of births in Scotland over the same period dropped by only 6.2%, from 60,261 to 56,537 (Information Services Division, 2010).

Although the Royal College of General Practitioners (RCGP) and the British Medical Association (BMA) have both stressed the importance of personal, continuing, and comprehensive care provided by a primary care maternity team, the BMA has reported a general withdrawal of GPs from intrapartum care (BMA, 2007; RCGP Maternity Care Group, 1995). With GP involvement in intrapartum care under threat from falling birth rates and the centralization of maternity care, the 2003 contract for general medical services removed GP payments for maternity care, further reducing the likelihood of GP input (The NHS Confederation, 2003).

At the same time, the Expert Group on Acute Maternity Services (EGAMS) in Scotland developed a list of core skills and competencies that were considered essential for professionals to have "to provide effective and safe care for low-risk women and to manage obstetric emergencies within remote and non-specialist units" (SEHD, 2002, p. 22). These are listed in Box 1. The SEHD commissioned us to conduct a scoping exercise of remote and rural health professionals involved in maternity care in Scotland to explore staff views on the skills and training required to deliver safe and appropriate local intrapartum services in remote and rural settings (Kiger et al., 2003; Tucker et al., 2005). Within that study, interviews were carried out with a large number of health professionals, including GPs. This article situates the GP interviews within the context of the larger body of data and specifically explores key issues raised by GPs working in those settings.

METHODS

This mixed-methods study comprised a qualitative and a quantitative stage incorporating GP participation as follows:

1. Interview stage

A purposive sample of 10 GPs was identified through midwife managers at 10 study sites selected following a telephone census of the 32 rural and remote delivery units in Scotland. Each GP was sent an appointment letter and information about the project. Interviews took place at an appropriate location and lasted from 15 to 60 minutes, the majority taking 30 to 45 minutes.

An interview schedule, informed by literature review and experience within the project team and an advisory group, was designed and reviewed for content validity (see Box 2). Piloting was undertaken (van Teijlingen & Hundleby, 2005) and minor amendments were made in response to feedback.
BOX 1  Core Skills or Competencies Identified by Expert Group on Acute Maternity Services as Necessary for Staff Providing Intrapartum Care (Skills included in the questionnaire are shown in bold italic)

- Management of normal delivery—supporting normal labor and childbirth
- Clinical judgment and decision-making skills
- Maternal history taking
- Counseling and communication skills
- Risk assessment and management skills
- Intravenous (IV) cannulation
- Managing IV fluid replacement
- Management of antepartum hemorrhage
- Management of cord prolapse
- Management of shoulder dystocia
- Management of breech delivery
- Management of postpartum hemorrhage
- Adult resuscitation
- Basic obstetric life support
- Neonatal resuscitation—assess, resuscitate, and stabilize the neonate prior to ongoing management
- Repair of perineal trauma
- Pain management
- Initial and discharge examination of the newborn—inspection and detailed examination of the baby
- Prescription of drugs—such as analgesia in labor, drugs used in resuscitation, and those involved in normal childbirth such as Konakion and anti-D.

Additional competencies required for remote units—should be achieved by at least one team member:

- Ultrasonic scanning
- Undertaking a ventouse lift-out delivery

The semistructured interview method gave scope to develop discussion on the main research questions (van Teijlingen & Ireland, 2003). Interviews, carried out by two experienced qualitative researchers, were tape-recorded with consent and transcribed verbatim. Field notes were recorded to provide further contextual data on each of the 10 case study sites.

The analysis of the interviews was iterative; first, emerging themes were identified as the interviews progressed (Forrest Keenan, van Teijlingen, & Pitchforth, 2005). These informed the design of the questionnaire. Second, a full manual analysis of the transcribed interview data was carried out. Each transcript was read and analyzed by at least two of the authors.

2. Questionnaire stage

Questionnaires were sent to the 10 GPs who had been selected for interview and an additional 8 GPs from matched rural and remote units. Units were matched based on the unit size and model of service (ranging from home delivery to full consultant-led maternity unit with neonatal facilities). Furthermore, selection was aimed to ensure geographic spread from all regions in Scotland and to include island and mainland settings.

To triangulate the interview findings and identify features that might have been missed in the interviews, a questionnaire was developed using initial key themes identified. Demographic questions were included. Most questions were closed and pre-coded. Likert-type rating scales were used to gauge agreement with opinions and attitudes elicited in the interviews. Respondents could make additional comments. The questionnaire was accompanied by an explanatory cover letter and reply-paid envelope. Questionnaires contained identifying numbers to allow reminders to be sent after 3 weeks.

Quantitative data were collated and analyzed using the Statistical Package for the Social Sciences (SPSS) for Windows. Descriptive statistics were produced for all variables.

Ethical Approval

Advice was sought from all relevant research ethics committees, but ethical approval was not required at the time because no patient data were used and the committees, therefore, classed the study as audit.

RESULTS

Response

Of the 10 GPs approached for interview, 2 were unavailable, thus 8 GP interviews (80%) were conducted at six sites. Six GPs had been in post for more than a decade and the other two for 5 years and 18 months respectively. Most had related qualifications in obstetrics and gynecology. All had worked in obstetrics for at least 6 months and were experienced GPs. The number of deliveries in each area varied from occasional to 150 per year. Maternity care provision included midwife-led units and primary
TABLE 1  General Practitioners' Working Practices

<table>
<thead>
<tr>
<th></th>
<th>PARTICIPANTS FROM UNITS SELECTED FOR INTERVIEW PHASE (n = 9)</th>
<th>PARTICIPANTS FROM MATCHED UNITS (n = 4)</th>
<th>TOTAL (n = 13)</th>
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<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
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<tr>
<td><strong>Workplace:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community based</td>
<td>5 (56)</td>
<td>2 (50)</td>
<td>7 (54)</td>
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<tr>
<td>Both facility and community</td>
<td>4 (44)</td>
<td>2 (50)</td>
<td>6 (46)</td>
</tr>
<tr>
<td><strong>Proportion of work that relates to maternity care:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-10%</td>
<td>7 (78)</td>
<td>4 (100)</td>
<td>11 (85)</td>
</tr>
<tr>
<td>11-20%</td>
<td>2 (22)</td>
<td></td>
<td>2 (15)</td>
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<tr>
<td>&gt;20%</td>
<td>0</td>
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<tr>
<td><strong>How long since completed basic training (years):</strong></td>
<td>14.5 (8.5, 27.75)</td>
<td>Median [IQR]</td>
<td>Median [IQR]</td>
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care teams offering GP/midwife or primary care team/consultant shared care.

Of the 18 questionnaires sent to GPs, 14 were returned (78%). One of these was not completed ("Sorry no time available for questionnaires"), giving a response rate of 72% (13/18). Table 1 shows participant GPs' working practices.

Following each of the themes, we have reported the interview findings supported by questionnaire findings as appropriate.

Working in a Rural Community

Interviewees indicated that GPs in rural/remote areas provide a service for relatively few people, yet need a wide knowledge of medical practice. The questionnaire showed that for most GPs, maternity care accounted for less than 10% of their workload (Table 1); only two GPs spent more than 10% of their time on maternity care.

From the interviews, it was clear that rural practitioners perceived themselves to have a high level of responsibility and a need to be competent in a wide range of therapeutic areas and situations. Emergencies do not present every day, yet rural GPs need to be competent in some skills that urban GPs no longer require because of increasing specialization within the medical profession.

It's the time, it's the distance, it's the geography, it's the weather . . . in the wintertime even helicopters don't fly. (GP2)

Distance and geography tended to isolate rural professionals from specialists.

If you run into problems in an urban practice, you know that you could get a flying squad ... probably in a short space of time. If we want a flying squad, it's going to be in a few hours. (GP3)

Skills in neonatal and maternal resuscitation were often mentioned as prerequisites to rural practice. The main concern of GPs was women who develop problems with too little time for transfer. Fear of those rare emergencies caused the greatest anxiety:

The things that terrify me are the emergencies, the crises. . . . I think to have regular updates on crisis issues is useful for me personally.

Anything that's not urgent, you've got time to think about . . . and . . . take advice on. (GP4)

All questionnaire respondents agreed that "Working in a rural area, you have to take on more responsibility

Interviewees indicated remote and rural maternity care incorporated issues about distance and geography, attitudes perceived as emanating from "the center", features of working and living in a small community, and the absence of specialist medical support. One GP offered a succinct description of his situation:

... we get less practice at things, but we still have to be competent in a wide range of procedures. (GP1)
than in an urban area" (Table 2). The majority agreed that dealing with emergencies, whether obstetric or neonatal, was a big issue for their areas. All also agreed that “Working in this area, you have to have the confidence to make difficult decisions and stick with them.”

SKILLS

Associated with the rare emergencies was the occasional need to perform instrumental deliveries. Most of the GPs interviewed were either not involved in intrapartum care or did not use forceps. The need to remain skilled in all phases of maternity care, virtually to the point of specialization, was seen to be unique to remote/rural settings, whereas in urban units, maternity staff members only had to maintain their skills in their specialty area of practice. Several GPs felt de-skilled, believing midwives to be more skilled at neonatal resuscitation than they were, for example:

I have had to do basic resuscitation on infants but nothing more than a skilled midwife could have done . . . I could not see myself finding the time to practice neonatal resuscitation more than once a year, whereas the midwives established their own programme with resuscitation training every 3 months. So there was a recognition that it was going to be impossible to match those standards . . . (GP5)

In rural general practice, maternity and neonatal care is a small part of GPs’ remit, and some felt this insufficient to maintain their obstetric skills. There was some disagreement about whether the small number of deliveries attended by GPs was a factor in maintaining skills.

Well, I suppose the reason why we gave up obstetrics was that we felt we were fighting a losing battle to retain skills and that was to do with the numbers involved . . . attending relatively few deliveries, almost all normal, so having to do a forceps delivery, probably did one a year maybe. (GP5)

Reasons for not wanting to keep maternity skills up-to-date included GPs having to make decisions about attending specialist courses based on available time and the many relevant specialties.

. . . in theory there is so much that I should be doing from an educational point of view that I wouldn’t have time to see patients . . . you have to try . . . each year . . . to identify what you think are your core educational needs. (GP6)

Table 3 shows GPs’ self-rated competence and confidence regarding the competencies identified by EGAMS (SEHD, 2002). With the exception of ultrasound scanning and breech delivery, self-reported competence and confidence were surprisingly high.

Recruitment

Interviewees associated with GP-led maternity units indicated growing recruitment problems caused by
rural practitioners being required to maintain such a wide range of skills. This is exacerbated by the fact that basic medical training no longer provides doctors with sufficient obstetric skills.

Doctors coming through now don’t have the obstetric skills, and even as medical students, they don’t attend or do the number of deliveries as doctors graduating 20 to 30 years ago would have. (GP1)

This was confirmed in the survey, with 11 of the 13 GPs (85%) agreeing, “There is difficulty recruiting suitably qualified staff to work in this locality.” The other 2 GPs responded, “do not know.” In some areas, there is a fragile structure, and if just one doctor were to leave, maternity care would not be sustainable.

... the structure that they’ve got in place ... is working ok at the moment, but ... it would only take a couple of doctors to leave and not be replaced, and the whole system would come tumbling down. (GP6)

In some of our case study sites, when a GP (GP1) in one of our case study sites, when a GP area) moved to another region, this saw a decline in GP involvement because the GP was no longer able to provide the intrapartum care.

Twelve of the 13 survey responders agreed that “Maternity care in this area is difficult because it depends on a few skilled people.” Two GPs who supported the midwife intrapartum care.

In contrast, one GP suggested, even going right back to medical school to think that there should be some funding package for people who want to work in rural practice ... (GP2)

Training

GPs who are keen to preserve their moment usually maintained skills through becoming a trainer. All agreed that this was the best way to sustain even when low numbers of births were seen, although even when low numbers of births were seen, it was the best way to sustain their skills. Frequency of training was viewed as a challenge. A favoured method was hands-on training in Further experience in obstetric practice, with rural-based maternity care providers...
a short placement in a large urban hospital. One GP suggested:

... one problem perhaps is that a lot of medical schools are centered around teaching hospitals, and they're not always the best places for hands-on experience. I think, probably, more use of the smaller hospitals would be useful. (GP4)

More than two thirds of the survey respondents had undertaken some form of continuing medical education (CME) related to maternity care within the previous year (Table 4). Most of these events were concerned with updating emergency skills. Two barriers to CME—"lack of time" and "getting staff cover"—were rated as important by all GPs. "Distance to training" was an important barrier for nearly all GPs.

**Multidisciplinary Education**

Many GPs regarded multidisciplinary education or training as beneficial:

It's (multidisciplinary training) much better because that is how we work. If we have an emergency in the maternity unit, everybody is working together. (GP1)

However, some felt training and education should be targeted at specific professional groups:

I think one of the problems with multidisciplinary training is often that it's difficult to pitch the education at the right level for the whole audience. (GP5)

The differing views on "It's difficult to have joint courses (multidisciplinary) that suit the needs of all professions involved in maternity care" were echoed in the survey: Seven (54%) disagreed with this statement whereas six (46%) agreed. However, all GP respondents agreed that "Multidisciplinary training is useful because it makes you more aware of the role of other professions."

**Videoconferencing**

If videoconferencing was available, it was not generally used or recognized as being very useful, although one GP thought it had potential for training and diagnostic support.

I need to be convinced. I think our big lack in that context is networking and making personal contact, which I don't think you can do by videoconferencing. (...) It has a value in talking to people or showing things, or perhaps talking through a procedure. The real value of IT (information technology) is in the transfer of images, ultrasound images or faces of CTGs (cardiotocography) or, particularly, ultrasound images in maternity that would be a huge benefit. (GP7)

Most GPs had access to videoconferencing facilities (n = 11, 85%). Only 8 (73%) of the 11 GPs with access to these facilities knew how to use them. The facilities tended to be used on average twice a month [IQR: 0.9, 7], usually for clinical purpose (n = 8, 73%) or meetings (n = 8, 73%). Less than half the respondents (n = 5, 45%) reported videoconferencing being used for education or training.

**DISCUSSION**

This study found that maternity care accounts for less than 10% of most remote and rural GPs' workload, yet requires fully skilled, experienced practitioners to recognize and address complications. The fact that the need for care around birth is unpredictable, and often demanding in terms of time and skills required, has resulted in fewer GPs being involved in intrapartum care than a few decades ago. A recent comment by the RCGPs' chairman suggesting that "many GPs are keen to see a return to this work" raises questions about how GPs will attain and maintain these skills (Field, 2010).

Smith et al. (2010) highlight the vital information that GPs have regarding the medical histories of women and their families. Our findings confirm that knowledge of the individual woman and what constitutes normality were regarded as valuable attributes by GPs, facilitating the ability to react quickly in emergency situations. Although self-reported competence and confidence for specific skills was surprisingly high among respondents,
most reported that de-skilling was an issue for them. De-skilling, reported by GPs with previous maternity experience, was often attributed to midwives having taken on new responsibilities, including referring women with complications directly to secondary or tertiary maternity hospitals. Together with the slowly declining number of births in Scotland, as mentioned previously, this reduced the GPs’ opportunity to practice (and maintain) maternity care skills. Isolation, the need for comprehensive expertise, limited resources, and transportation difficulties were considered important factors in the decline of remote and rural maternity activity.

Despite the effect of the changing role of the midwife, the GP participants generally accepted the concept of midwifery-led care, believing that midwives are more skilled in low-risk and normal deliveries and, indeed, in some maternity-based emergencies. There is little evidence to support this assumption. Studies of midwifery-led care have predominantly been concerned with units attached to secondary and tertiary hospitals (Hundley et al., 1994; MacVicar et al., 1993; Turnbull et al., 1996), whereas studies that have looked at stand-alone units have compared GP/midwife care with care in a tertiary unit (Campbell, Macfarlane, Hempsall, & Hatchard, 1999; Klein, Lloyd, Redman, Bull, & Turnbull, 1983a, 1983b; Lowe, House, & Garrett, 1987; Reynolds, Yudkin, & Bull, 1988). We are unaware of any studies comparing GP care with midwife-led care. It is likely that this separation of care is unhelpful, resulting in a move toward midwifery-only care and affecting the team concept of maternity care in the remote and rural setting. Maintaining such interdisciplinary working is often far from easy, although there may be benefits from joint learning (Farquhar, Camilleri-Ferrante, & Todd, 2000). GPs in our study thought that multidisciplinary training might be beneficial, but recognized the challenges in developing such training.

Concern over lack of skills among rural GPs is not unique to Scotland; a survey in Australia found that 33% of female and 16% of male GPs felt inadequately trained for the demands of rural practice (South Australian Health Commission, as cited in Booth & Lawrence, 2001). Although GPs remain as major maternity care providers in some areas of Australia, increasingly, they are opting out of intrapartum care, and some areas are looking toward midwifery models to cover the loss of community GPs (Sutherland et al., 2009). A similar situation exists in Canada, where sustaining acute medical services in small hospitals has become difficult because

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**TABLE 4  Continuing Professional Development**

<table>
<thead>
<tr>
<th>Event (n = 13)</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td><em>Within the last month</em></td>
<td></td>
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<tr>
<td><em>Within the last 6 months</em></td>
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<td>----</td>
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<td><em>Within the last year</em></td>
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<td>----</td>
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<tr>
<td><em>More than 1 year ago</em></td>
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</tr>
<tr>
<td><em>Event (n = 13)</em></td>
<td></td>
<td>----</td>
</tr>
<tr>
<td>Advance Life Support in Obstetrics</td>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>(ALSO)</td>
<td></td>
<td>----</td>
</tr>
<tr>
<td>Other obstetric emergencies update</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Neonatal resuscitation</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>BASICS parts I and II</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>4</td>
<td>31</td>
</tr>
</tbody>
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<table>
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<tr>
<th>GPs who rated these barriers as important or very important:</th>
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</thead>
<tbody>
<tr>
<td>Lack of time (n = 12)</td>
</tr>
<tr>
<td>CPD not being seen as a priority (n = 10)</td>
</tr>
<tr>
<td>Maternity care not being seen as a priority (n = 11)</td>
</tr>
<tr>
<td>Getting funded to attend (n = 11)</td>
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<tr>
<td>Distance to training (n = 12)</td>
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<tr>
<td>Lack of motivation/interest (n = 10)</td>
</tr>
<tr>
<td>Getting staff cover (n = 12)</td>
</tr>
<tr>
<td>Attitude of staff at unit providing the training (n = 10)</td>
</tr>
<tr>
<td>Lack of support from management (n = 10)</td>
</tr>
<tr>
<td>Lack of appropriate training (n = 11)</td>
</tr>
<tr>
<td>Other* (n = 3)</td>
</tr>
</tbody>
</table>

*Other comments from the 2 GPs who rated the barriers as important were: Competing with other staff; maternity care is only one part of the job and childcare. The GP who said that barriers are not important did not give a comment about what that aspect was.
of universal medical workforce regulations compounded with the challenges of staff recruitment and retention in remote and rural areas (Benoit, Carroll, & Millar, 2002).

One respondent in our survey felt that specialist training for rural practice would be beneficial. This is interesting as the evidence points to this as a significant factor in the recruitment and retention of rural GPs (Australian Medical Workforce Advisory Committee, 2005; Laven & Wilkinson, 2003; Mungall, 2004), and argue that specialist medical training may be instrumental in re-establishing obstetric services in rural areas (Caudle et al., 1995). Other studies indicate the importance of early exposure of medical students to rural practice (Rolfe, Pearson, O’Connell, & Dickinson, 2005; Wang, 2002), and that training wholly in consultant units may make them (practitioners) fearful of community-based obstetrics (Baird, Jewell, & Walker, 1995).

GPs in our study thought education is the best way of combating deskillling and suggested that this was best achieved through short training periods working in maternity hospitals to update technique and practice skills. Two thirds of respondents reported they had undertaken some form of maternity care CME within the last year. However, most faced barriers in attending such events (time, staff cover, and distance). Lack of access to CME has been identified as a potential cause of deskillling, with 21% of Australian GPs reporting difficulty accessing CME for obstetrics (Booth & Lawrance, 2001). It has also been found to be a reason for GPs deciding not to remain in rural areas (Brookman, 2004; Gardiner, Sexton, Durbridge, & Garrard, 2005).

Telemedicine is increasingly being used in maternity care (Ireland et al., 2007), and Cronin, Cheang, Hlynka, Adair, and Roberts (2001) in Canada found that videoconferencing enhanced neonatal resuscitation education in areas where experienced instructors are in short supply. It might, therefore, have been expected that these technological advances would have been seen as a means of overcoming some training difficulties, but our study findings did not indicate this. An Australian study, however, suggests face-to-face contact, which remains the preferred method of learning (Booth & Lawrance, 2001). It is possible that this relates to the importance GPs attach to networking and social contact. Some respondents mentioned the isolation associated with rural practice and the responsibility of working alone. Isolation and having fewer colleagues with whom to discuss professional issues have been identified as factors in GPs’ decisions to leave rural practice (Gardiner et al., 2005).

Strengths and Limitations of the Study

The strength of the study was the mixed methodology whereby the questionnaire results triangulated the interviews. This validated the interview findings and showed general agreement with the matched sample. One of the limitations was the small numbers. Although it is acknowledged that this was a small sample of GPs, it was representative of different rural areas within Scotland. The reported study is part of a larger study (Kiger et al., 2003; Tucker et al., 2005), where 72 interviews were conducted with various remote and rural maternity care providers, and the data were enhanced by being situated within the themes generated by the wider study. However, caution must be exercised in generalizing from the study findings given the small number of GPs involved. Furthermore, the interviews were conducted in 2003, and therefore, the data can be viewed as slightly dated. Although GPs views may have changed over time, the fact that maternity care has moved away from GPs’ sphere of practice is only likely to have increased the challenges that GPs face. Despite these limitations, we believe that our research findings will inform the debate about GP involvement in maternity care, particularly in remote and rural areas.

Implications for Clinical Practice

Reinstating the GP’s role in maternity care provision is likely to prove difficult without a significant commitment by GPs to retraining and skill maintenance. Our findings showed that the perceived numbers of practical episodes required for competence varied widely. The frequency of relevant clinical events in hospital units might not permit sufficient experience during attachments, and other health professionals in training might have priority. A further problem is that there exists insufficient evidence to suggest such training will be effective. Although life-support training has been recommended as a means of maintaining competence with regard to obstetric emergencies (National Institute for Clinical Excellence, SEHD, & Department of Health, Social Services and Public Safety, 2001), a systematic review found little evidence of whether such courses improve actual practice, although practitioner confidence can be increased (Black & Brocklehurst, 2003). Some form of tailored return-to-practice course may be valuable, particularly for GPs who intend to provide maternity care in remote and rural areas. However, other considerations include barriers to GPs gaining
practical experience in a hospital environment, because contracts of employment assuring Crown Indemnity are not available in maternity hospitals and because backfilling in the primary care unit is difficult. Clearly, the issue of how to go about retraining GPs will require careful consideration, and the support of other health professionals, particularly midwives, will be vital.

The withdrawal of GPs from maternity service provision also has implications for the U.K. government’s plans to make GPs central to the commissioning of health services. Although the government proposes that the lead role in commissioning maternity services will be taken by the NHS Commissioning Board (Department of Health, 2010, p. 13), GP commissioning will have implications for the wider framework of health care provision in which the maternity services operate. It is essential, therefore, that GPs work in close partnership with midwives to ensure that services remain women-centered.

CONCLUSION

Fewer rural births and problems with recruitment/retention of professionals have made it more difficult to staff rural maternity units. Where such units have remained open, midwives have stepped up and taken over units to ensure that women in these areas continue to have a service. Although rural GPs and midwives might traditionally have been in competition in the area of maternity care, providing a woman-centered service in remote areas may be easier to achieve through collaborative working. However, if GPs are to have a greater role, then they will need to be prepared to make a strategic commitment to the maintenance of remote and rural maternity care. This will require innovative methods of training, special consideration of educational needs, and incentives for practitioners to settle in rural areas, but it may already be too late for GPs to have a substantial input into maternity care.

REFERENCES


planning and reproductive health care. *Journal of Family Planning and Reproductive Health Care, 31*(1), 40–43.


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Expanding Postpartum Hemorrhage Prevention to the Community in Resource-Poor Contexts: Critical Considerations and Next Steps

Sydney A. Spangler, Alissa Koski, Deborah Armbruster, and Cynthia Stanton

Increasing the proportion of pregnant women with medically skilled care at childbirth is widely regarded as the best strategy for reducing maternal mortality and morbidity in resource-poor contexts. For many countries, however, local conditions necessitate continuing discussion concerning the role of targeted, community-based interventions in efforts to tackle this problem. One such intervention gaining momentum is community-based use of uterotonic drugs to prevent postpartum hemorrhage (PPH). But how this intervention fits within the larger maternal health agenda still needs addressing, as do questions regarding whether, where, and how to proceed. This article presents a usable framework for context-based decision making around PPH prevention, evaluating why and under what circumstances it might make sense to implement uterotonic drugs at the community level. Using Demographic and Health Surveys (DHS) data along with current evidence, we identify four critical considerations for policymakers to take into account: (a) where births are happening, (b) which women are delivering in what settings, (c) capacity of health care systems, and (d) criteria for selecting specific uterotonic drugs. Incorporating these considerations, we propose a checklist to aid policymakers in determining what strategy realistically suits the needs of their particular country contexts. Although a large and rigorous body of evidence supports PPH prevention methods, research gaps remain. Even with sufficient evidence, however, a global consensus may not be reached because of the ongoing debates over community- versus facility-based interventions. Despite these issues, it is still possible to arrive at policy decisions on community-based use of uterotonic drugs by taking a careful, context-based approach. In many settings, implementation of this intervention can be pursued in conjunction with improvements to facility-based care. As a complement to skilled attendance, expanding PPH prevention to the community can be part of a national push to target the reduction of PPH as an achievable goal.

KEYWORDS: maternal health policy; postpartum hemorrhage; community-based interventions; uterotonic drugs; maternal mortality

INTRODUCTION

Death and disability from pregnancy-related complications remain a significant challenge in resource-poor contexts. Estimates of maternal mortality worldwide range from 536,000 in 2005 (World Health Organization [WHO], 2007a) to 342,900 in 2008 (Hogan et al., 2010), but agree that the great majority of maternal deaths occur in sub-Saharan Africa and South Asia. The global health community recognizes this issue as a priority problem: reducing the maternal mortality ratio by three-fourths is one of eight UN Millennium Development Goals (MDGs) to be reached by the year 2015. Regardless of which estimate is used, progress toward this goal has been unacceptably slow. Between 1990 and 2005, maternal mortality in most developing countries has decreased at rates well below the 5.5% annual decline needed to achieve MDG-5.
Because life-threatening maternal complications tend to occur near delivery, researchers and advocates largely agree that increasing the proportion of births with medically skilled care is critical for alleviating this crisis (Campbell & Graham, 2006). The WHO, International Confederation of Midwives (ICM), and International Federation of Gynecology and Obstetrics (FIGO) define a skilled birth attendant as an accredited health professional (such as a midwife, doctor, or nurse) trained to proficiency in the skills needed to manage uncomplicated pregnancies and childbirth, as well as to identify, manage, and refer complications in women and newborns (WHO, Department of Reproductive Health and Research [RHR], 2004). But despite its theoretical appeal and inclusion of a broad array of health professionals, local conditions in many countries limit the extent to which this care can be made available. Whether because of problems with maternity care coverage, quality of services, or care-seeking behavior, many women are not reaching skilled care and are not likely to reach it in the near future. This reality necessitates continuing discussion regarding the role of targeted, community-based interventions in efforts to promote safe motherhood, where “community” refers to low-level health facilities (nonsurgical, nonphysician, geographically remote from referral-level care) as well as to homes. However, which interventions to promote, in what particular contexts, and by whom, remains a controversy in research, policy, and program arenas.

One community-based intervention that deserves careful consideration is prevention of PPH with uterotonic drugs. Use of these drugs in homes and low-level facilities is currently gaining momentum in both research and practice. But the place of this intervention within the global agenda for maternal-newborn health still needs addressing, as do questions on whether, where, and how to proceed. The purpose of this article is to present a context-based framework for decision making on expanding PPH prevention to the community. Secondary objectives are to summarize what is known about PPH and its prevention, identify important gaps in the evidence base, and suggest next steps for future research. Throughout this article, we view community-based PPH prevention as a complement to the broader strategy of skilled attendance—as a means of augmenting health systems in places that are still far from making the ideal care available to every woman.

POSTPARTUM HEMORRHAGE PREVENTION

Obstetric hemorrhage is among the leading causes of maternal death in the developing world, representing 34% and 31% of maternal mortality in Africa and Asia respectively (Khan, Wojdyla, Say, Gomeszoglu, & Vainio, 2006). Although it is difficult to determine who of obstetric hemorrhage is attributable to postpartum complications—and even more difficult to distinguish these complications from each other—it is safe to say PPH is the most common type of obstetric hemorrhage and that uterine atony is a predominant cause of PPH. Worldwide incidence of PPH is estimated at 10.5% of live births annually, which equates to nearly 14 million cases per year (WHO, 2005). Survivors of PPH may face severe or chronic anemia, resulting in reduced capacity to execute daily activities, susceptibility to infection, and poor outcomes in future pregnancies (Tolentino & Friedman, 2007; Walekar & Virud, 2006). Given that PPH is preventable, these figures represent nothing less than a tragedy.

The most effective intervention known for PPH prevention is active management of the third stage of labor by a skilled attendant, shown to reduce the risk of PPH by more than 60% (Prendiville, Elbourne, & McDonald, 2000). This intervention is currently defined as administration of a uterotonic drug within 1 minute of newborn delivery, controlled cord traction with placenta delivery, and uterine massage after placental delivery (ICM & FIGO, 2003). Although the relative contribution of cord traction and uterine massage are unknown, uterotonic drugs can effectively prevent PPH in the absence of these components (Cotter, Ness, & Tolossi, 2001; Dermar et al., 2006). In settings where active management of the third stage cannot be implemented because of a lack of skilled attendants, WHO strongly recommends that a uterotonic drug still be offered by a health worker trained in its use for PPH prevention (WHO, 2007b).

Uterotonic drugs may operate through different mechanisms of action, but all essentially work to increase uterine contractility and inhibit bleeding from the site of placental separation. WHO recommends oxytocin as the most effective uterotonic drug with the fewest adverse side effects (WHO, 2007b). However, a recent review of this drug calls for more evidence to better assess trade-offs and benefits (Cotter et al., 2001). Although also effective, use of misoprostol for PPH prevention may result in maternal fever, shivering, or more cases of severe PPH that require therapeutic uterotonics (Gülmezoglu et al., 2007). Ergometrine and Synthetomin (a combined ergometrine and oxytocin drug) can cause nausea or vomiting and are contraindicated in the presence of heart disease or hypertension. The balance of evidence does not support use of ergot alkaloids alone to prevent PPH (Cotter et al., 2001; Liabsuetrakul, Chooobun, Peeyananjarassri, & Islam, 2007).
Besides effectiveness and side effects, uterotonic drugs also differ with respect to route of administration, storage requirements, and costs. Oxytocin is typically given via intramuscular injection or intravenous drip, and loses potency in temperatures higher than 30°C (Hogerzeil, Walker, & de Goeje, 1993). Ergometrine is also given parenterally, but is less stable than oxytocin in high temperatures and is sensitive to light (Hogerzeil & Walker, 1996). Administration routes for misoprostol include oral, sublingual, buccal, or rectal, but the preferred route remains unclear. This drug is stable with respect to both heat and light. Whereas the acquisition costs of uterotonic drugs vary by context, the administration costs of misoprostol may be lower than for drugs requiring injection. Because misoprostol does not need a cold chain, its storage costs are also likely to be less than those of other uterotonic.

CRITICAL CONSIDERATIONS FOR EXPANDING PPH PREVENTION TO THE COMMUNITY LEVEL

At this point, we return to the question—should PPH prevention methods be expanded to the community level? By taking a context-based approach (i.e., realizing the answer will not be the same in all places and at all times), we can perhaps put forth a more practical inquiry: Where and under what circumstances does it make sense to implement uterotonic at the community level? Which drug should be used in what settings? To address these questions, we identify four critical considerations to take into account when making decisions regarding PPH prevention. Where is Childbirth Happening?

According to nationally representative surveys, the proportion of births attended by an accredited health professional (midwife, doctor, nurse) is about 62% in developing regions. By convention, the global health community refers to these births as taking place with a skilled attendant, although data on the specific skills and training of these providers are lacking. Using this definition, births with a skilled attendant appear to be increasing in all regions except in sub-Saharan Africa and Oceania, where use remains stagnant or has decreased over time (WHO, RHR, 2008). With few exceptions, delivery with a health professional translates into facility-based birth. However, data on births attended by health professionals do not indicate at what kind of facility births are occurring. To explore this issue, we examine DHS data from 15 geographically representative countries in sub-Saharan Africa and South Asia (DHS, 2008a). Given the data source, we acknowledge that some misclassification is possible between public low-level facilities and government hospitals. In addition, facilities labeled “private” can encompass anything from one-room dispensaries to fully functional hospitals.

Figures 1 and 2 give the percent distributions for delivery place. Most notably, a good deal of childbirth occurs at the community level. Among the African countries, Ethiopia has the highest proportion of home births at an estimated 88%, whereas Nigeria is at 66% and Ghana, Tanzania, Uganda, and Zambia hover around the midpoint. Adding public low-level facilities, community births are more than 60% in every country except South Africa. Deliveries in government hospitals vary from 6%
to 69%, but in most countries fall between 10% and 20%. An even greater majority of births take place in the community among South Asian countries, with home births in Bangladesh and Nepal reaching 83% and 81%, respectively. With the exception of Vietnam, deliveries in public low-level facilities are minimal, varying from only 1% to 5%.

Trends in home births for the cited countries with at least three DHS surveys over the past 20 years are shown in Figures 3 and 4 (DHS, 2008b). The picture in sub-Saharan Africa is varied. Ghana shows a decrease of 15 percentage points in home births between 2003 and 2008. From the early 1990s through 2007, the proportions of home births in Zambia and Uganda have remained essentially unchanged. Nigeria and Tanzania exhibit increases, jumping eight percentage points in Nigeria and five percentage points in Tanzania between the early 1990s and the middle of the current decade. In contrast, South Asian countries show steady declines for this period, dropping from 23 percentage points in Indonesia to 10 percentage points in Nepal. Although these trends cannot absolutely predict where births will occur in the future, when put into economic and political context, they may give a sense of what is likely to happen in the short term.
Although place of delivery does not speak to quality of services, it does indicate the type of care women are accessing in particular localities. Provided that the data give a fair depiction, focusing efforts on public low-level facilities may not greatly increase PPH prevention in some countries, but the majority could benefit from home-based intervention. Besides national-level data, policymakers may also want to consider delivery place at the district level or among even more distinct communities within their jurisdiction.

**Which Women are Delivering Where?**

For a given locality, it is necessary to consider which women are receiving what services by economic and sociodemographic characteristics. Analyses of DHS data in up to 56 countries find enormous differences between wealthy and poor groups in proportion of deliveries with health professionals—a gap greater than that of any other maternal, reproductive, or child health service examined (Gwatkin, Bhuiya, & Victora, 2004; Houweling, Ronsmans, Campbell, & Kunst, 2007). Country-specific studies also report significant positive associations between economic status and deliveries with health professionals or in health facilities (Anwar, Killewo, Chowdhury, & Dasgupta, 2005; Mrisho et al., 2007; Say & Raine, 2007; Tann et al., 2007; Thind, Mohani, Banerjee, & Hagigi, 2008; Yanagisawa, Oum, & Wakai, 2006).

Averaged across the 15 countries we have been examining, Figures 5 and 6 give the percent distributions of delivery place by wealth quintiles. Clearly,
home delivery is inversely related to wealth. In the African countries, 56% of women deliver at home, but these births occur among approximately 75% of the poorest group and 19% of the wealthiest. About 67% of births in the South Asian countries take place at home, but these occur among 89% of the poorest and 29% of the wealthiest. In contrast, deliveries in government hospitals and private facilities increase up the wealth spectrum in both regions. Births at public low-level facilities are relatively consistent across wealth quintiles, ranging from 15% to 20% for African countries and 2% to 8% for South Asian countries.

Figures 7 and 8 show percent distributions of delivery place by area of residence averaged across the selected countries, indicating that most urban births take place in government or private facilities, and most rural births occur at home. A number of studies document the effect of rural residence on delivery care (Houweling et al., 2007; Say & Raine, 2007; Stephenson, Baschieri, Clements, Hennink, & Madise, 2006; Third et al., 2008).

Additional sociodemographic factors associated with the use of health facilities or health professionals at birth include education, age, parity, marital status, occupation, women’s autonomy, ethnicity, and religion — where the direction and strength of associations are specific to context (Anwar et al., 2005; Bloom, Wypij, & Das Gupta, 2001; Glei, Goldman, & Rodriguez, 2003; Mekonnen & Mekonnen, 2003; Mpembeni et al., 2007; Mrisho et al., 2007; Paul & Rumsey, 2002; Stekenburg, Kyanamina, Mukelabai, Wolfers, & van Roosmalen, 2004; Stephenson et al., 2006; Tann et al., 2007; Third et al., 2008; Yanagisawa et al., 2006).
FIGURE 8 Percent distributions for place of delivery by area of residence—South Asia.

Thus, even in countries where institutional birth appears on the rise, certain women are not receiving this care. Better-off women receive care in higher level facilities with more highly skilled attendants, whereas disadvantaged women deliver in the community with attendants lacking in formal medical training. Without explicit efforts to reach these groups, implementation of the strategy to increase medically skilled care at birth could be supporting inequitable outcomes (Gwatkin, 2005). However, services that target excluded populations could mitigate this result—such as providing PPH prevention in the community, where most marginalized women are delivering.

Capacity of Local Health Care Systems to Provide Obstetric Services

Coverage of obstetric services in public and private sectors must be assessed. If coverage is low and home births are high, community-based PPH prevention seems a reasonable plan. If coverage is high, the best approach may be to improve access to this care and ensure availability of uterotonic drugs in facilities. Although skilled attendance is the ideal package of services, as an intervention it can be difficult to assess. Competencies of skilled attendants may not match up with evidence-based standards (Harvey et al., 2007), and guidelines for whether an environment is enabling are not available. Emergency obstetric care (EmOC) might offer a more practical means of assessment because its monitoring tools categorize facilities according to nine signal functions. The recommended level for adequate coverage is five EmOC facilities per 500,000 population, at least one of which must qualify as comprehensive EmOC (WHO, United Nations Children's Fund [UNICEF], & Averting Maternal Death and Disability [AMDD], 2009). We caution, however, that such assessment does not speak to quality of care or to the capacity to provide PPH prevention.

Coverage of health professionals and their skills in safe delivery should also be taken into account. In 2008, 47% of women in Africa and 65% of women in Asia were attended by a health professional (WHO, 2008), although the proportion of women receiving PPH prevention is unknown. Making active management of the third stage of labor part of standardized curricula for pre- and in-service training could increase PPH prevention coverage considerably. However, training in physiological management for improving quality and safety should not be neglected, especially in settings that do not or cannot consistently employ active management.

For contexts where skilled health professionals are in short supply, the potential for task shifting PPH prevention to an existing lower skilled (from trained) health worker cadre should be assessed—particularly for injectable drugs but also for administering misoprostol. In addition to health workers, local resources such as women's groups, health advocacy committees, community leaders, and traditional birth attendants (TBAs) should be recognized for their ability to assist with sensitization as well as logistics.

Other important issues that deserve consideration involve processes of drug registration, distribution, and storage. Oxytocin and ergot alkaloids are registered in most countries for PPH prevention and treatment, although not necessarily oxytocin™ in Uniprot. Misoprostol is widely registered for gastric ulcers and unspecified obstetric/gynecological conditions but is registered for PPH in only 11 countries of sub-Saharan Africa and four
countries of South Asia (Venture Strategies Innovations, 2010). Although off-label use is common, Ministries of Health that choose to strategically promote misoprostol for PPH prevention will need to officially register it for this purpose. Distribution pathways from drug manufacturers to recipients must also be assessed, especially transportation and storage mechanisms for drugs that are sensitive to heat or light—including the potential to upgrade the supply chain in this respect.

**Criteria for Selecting Specific Uterotonic Drugs**

At a minimum, criteria for the selection of uterotonic drugs include effectiveness, safety, feasibility, cost-effectiveness, and acceptability. Effectiveness essentially refers to the ability of the intervention to decrease PPH incidence in real-world settings. As noted in the background section, the literature supports oxytocin as the most effective uterotonic drug for PPH prevention. However, misoprostol also exhibits a credible degree of effectiveness and is often recommended for settings where oxytocin is unavailable despite its side effects of fever and shivering (Alfirevic, Blum, Walraven, Weeks, & Winikoff, 2007; Langenbach, 2006; WHO, 2007b). Ergot alkaloids are comparable to oxytocin in effectiveness, but are generally not preferable because of the risks of nausea, vomiting, and elevated blood pressure.

Safety refers to the likelihood of adverse events such as dosage errors, needle sticks, and mistimed administration or inappropriate use of uterotonicsthe latter of which can potentially contribute to fetal asphyxia or uterine rupture. Three observational studies in Tanzania, Nepal, and Afghanistan evaluate the safety of community-based misoprostol with measures of dosage, timing, and side effects (Prata, Mbaruku, Grossman, Holston, Hsieh, 2009; Rajbhandari et al., 2010; Sanghvi et al., 2010); all conclude the intervention is safe, but none specify a safety threshold for the parameters assessed. The WHO’s published statements on use of misoprostol at the community level stress that it has withheld recommending distribution during pregnancy for use after delivery because its potential benefits and harms are unknown (WHO, RHR, 2010). Several studies document misuse of uterotonicsthis labor augmentation (Flandermeier, Stanton, & Armbruster, 2010; Fronczak, Arifeen, Moran, Caulfield, & Baqui, 2007; Iyengar, Iyengar, Martines, Dashora, & Deora, 2008; Jeffery, Das, Dasgupta, & Jeffery, 2007). These studies collectively suggest that intramuscular injection of oxytocin by birth attendants lacking formal medical training is especially common in South Asia. Establishing the risk of this practice for health outcomes at the population level needs further research.

Feasibility refers to the capability of a given context to properly implement uterotonicsthis communities, including storage, distribution, administration, and disposal. To improve feasibility of oxytocin in terms of storage, TI Pharma has initiated a program to develop a heat-stable formulation (Hawe et al., 2009). Meanwhile, oxytocin in Unject (a device designed to ensure correct dosing and minimal needle reuse) is equipped with a time-temperature indicator that increases its utility in the field (PATII, 2008). Injectable oxytocin also requires that someone trained to administer this drug is present at birth, and there is not a standard solution for needle disposal in home settings. The cited studies in Nepal and Afghanistan distributed misoprostol for PPH prevention through low-level health workers or community volunteers; from women’s self-reports, the former study found that uterotonic coverage in the study site increased from about 12% to 24%, whereas the latter found that nearly 70% of women offered with misoprostol, used it (Rajbhandari et al., 2010; Sanghvi et al., 2010).

Although a component of feasibility, cost-effectiveness or efficiency is critical enough to deserve its own mention. Different methods of giving oxytocin, misoprostol, ergometrine, and Syntometrine at facility-based births in developing countries have all been found to be cost-effective, but a comparative study reports oxytocin to be the most efficient—although differences between some methods had little practical significance (Seligman & Liu, 2006). An analysis of misoprostol for PPH prevention at home births in India demonstrated a 38% decrease in maternal deaths, with an incremental cost of $1,401 per life saved, compared to $10,532 per life saved for comprehensive EmOC (Sutherland & Bishai, 2009). Another model based on countries in sub-Saharan Africa confirms the cost-effectiveness of misoprostol at home births (Prata, Sreenivas, et al., 2010). Still needed is a tool for cost-effectiveness evaluation that can be adjusted to suit the changing conditions of specific country contexts.

Finally, even if a particular intervention is shown to be effective, safe, feasible, and efficient, the question remains as to whether it will be acceptable. At the national policy level, some countries may be reluctant to initiate community-based activities when facility-based births are being promoted. Misoprostol may face political barriers over concerns about its abortifacient properties. Recently, two key articles shed light on how political priority for maternal mortality is generated (Shiffman, 2007) and how research is translated into
policy in poor and transitional countries (Woelk, Daniels, et al., 2009). The criterion of acceptability also applies to health workers, childbearing women, and their families. At all levels, in-depth evidence on the acceptability of community-based uterotonic drugs for PPH prevention is limited.

NEXT STEPS

By addressing the earlier considerations, policymakers can begin to identify where and under what circumstances PPH prevention might be expanded to the community. Such contexts might include places with high proportions of deliveries in homes or low-level facilities, poor coverage of obstetric services, and low likelihood of a rapid shift to facility births. Even in contexts where fewer women deliver at home, if these women are systematically disadvantaged, they should not be excluded from PPH prevention intervention. Lastly, local conditions must be favorable for a specific uterotonic drug; that is, a drug considered safe, feasible, and acceptable. As Gwatkin, Wagstaff, and Yazbeck (Gwatkin, Wagstaff, et al., 2005) state in the World Bank Report Reaching the Poor, "The challenge is to find the approach that works best in a particular setting in dealing with a particular issue" (p. 47).

Although a large and rigorous body of evidence supports methods of PPH prevention, research gaps remain. Some research priorities specified by WHO include determining whether oxytocin can be safely administered by unskilled attendants, understanding which components of active management of the third stage of labor are most effective, establishing the best dose/route of administration for misoprostol, and exploring the role of buccal or sublingual oxytocin (World Health Organization, 2007). More information is also needed on the safety of introducing uterotonic drugs to communities, sustainable solutions for feasibility, cost-effectiveness of various options in particular localities, and the acceptability of demand for community-based PPH prevention among policymakers, health workers, and intended recipients of this intervention.

Another gap involves the potential implications of community-based PPH prevention for other maternal health interventions. Rajbhandari et al.'s (2010) observational study examining the distribution of misoprostol in Nepal reported an increase of four percentage points in institutional delivery over the course of the implementation period (Rajbhandari, Hodgins, et al., 2010). Aside from this example, evidence for the effect of community-based interventions on facility-based care is scarce—an implication that should be better understood, even if it can't be well predicted. As uterotonic drugs can be employed for multiple purposes, the potential for misuse should also be seriously considered. If uterotonic drugs are widely available, how often might they be used unsafely for labor induction or augmentation? Might an education or other kind of intervention effectively prevent such misuse? Lastly, there are implications for active management of the third stage of labor and PPH treatment. If a uterotonic is routinely being given by someone trained to administer it, could this person also be trained to perform uterine massage? When, where, and how should treatment be initiated when prevention is being implemented? These questions still need to be addressed.

More research is needed before global recommendations can be issued (i.e., implementing community-based PPH prevention where more than 50% of births occur at home, or where more than 75% of the poorest women deliver at home). But even with sufficient evidence to support PPH prevention, it is possible that a global consensus will not be reached because of the ongoing debate over community- versus facility-based interventions. In the meantime, stakeholders in resource-poor countries continue to shape maternal health policies. We propose Figure 9 as a checklist to aid in assessing critical considerations for community-based PPH prevention. Not all countries will be able to complete the checklist in full, but by using what data is available, this tool can assist policymakers in determining what realistically suits their needs. In particular, it can help answer the questions of where and among which populations a specific intervention will likely produce the greatest benefit. We stress that these considerations should be applied to district or community levels as well as to the national level because varying contexts within a country may warrant different approaches to PPH prevention.

CONCLUSION

Community-based PPH prevention can act as a complement or a supplement to skilled attendance. This intervention is not a replacement for, a move away from, or a reinterpretation of more comprehensive strategies. Rather, it is a targeted action for augmenting health systems that can be adapted to changing conditions; if facility births increase in a given population, it can be scaled back accordingly. PPH
### Place of Birth
Proportion of births occurring at home
Proportion of births occurring in health facilities
- Public facilities
  - Hospitals
  - Health centers
  - Health posts or dispensaries
- Private facilities
  - Hospitals
  - Health centers
  - Health posts or dispensaries

### Place of Birth by Sociodemographic Characteristics
Proportion of births occurring at home by wealth quintiles
Proportion of births occurring at home by other characteristics that may be salient for a particular context
- Age
- Parity
- Ethnicity
- Education
- Indicators of women's autonomy

### Obstetric Services Distribution
Coverage of EmOC facilities per 500,000 population
- Comprehensive EmOC facilities
- Basic EmOC facilities

### Uterotonic Drug Registration for PPH Prevention and Other Uses
- Oxytocin
- Misoprostol
- Other uterotonic drug (specify)

### Supply Chain
Reliable distribution of drugs to points of service
- Availability of uterotonic drugs in rural areas
Cold chain for general drug distribution and storage
- Extensive to remote rural areas?
- Inclusive of oxytocin?

### Health Workers
Skilled attendants: doctors, nurse-midwives, nurses, and other professional health workers trained in safe delivery skills
- Coverage per population
- Currently trained in PPH prevention/AMTSL?
Community-level health workers: existing cadre trained to provide PPH prevention (or cadre that could be trained in this skill)
- Coverage per population
- Legally allowed to give injections?

### Specific Uterotonic Drugs for Low-Level Facilities and Home Settings (oxytocin, misoprostol, other drugs)
Safe implementation
Feasible for service delivery
Cost-effective
Acceptable among policymakers, health workers, and population

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**Notes.** AMTSL, active management of the third stage of labor; EmOC, emergency obstetric care; PPH, postpartum hemorrhage.

**FIGURE 9** Critical considerations for community-based PPH prevention.
Multiple options exist even within PPH prevention, but it is capable of reducing the incidence of the problem, and its use in communities can be implemented in conjunction with improving access to and quality of referral-level care. After all, community-level interventions and facility-focused services are not either-or propositions. With increasing evidence to suggest that investing resources in community interventions can reduce maternal mortality (Kidney, Winter, et al., 2009; Pagel, Lewycka, et al., 2009), the two strategies should be pursued alongside each other as dictated by the needs of a given context.

Multiple options exist even within PPH prevention—there is no one solution for all countries and individual countries need not adopt a singular approach. Buekens and Althabe (Buekens & Althabe, 2010) argue that although oxytocin is the drug of choice, at this point in time, both oxytocin and misoprostol have a place in preventing PPH. Fundamentally, the goal is to expand a medical advance that improves maternal health and survival to women who are not receiving skilled care—in whatever ways this goal can be effectively accomplished. Despite a lack of clear guidelines, we advocate for a careful, context-based approach to determining where and how such expansion might be carried out. Community-based PPH prevention can be part of a national push to target reduction of PPH as an achievable goal. Decisions with respect to this intervention need not be postponed awaiting a global consensus that may never be achieved.

REFERENCES


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Struggling to Get Into the Pool Room? A Critical Discourse Analysis of Labor Ward Midwives' Experiences of Water Birth

Kim Russell

RESEARCH AIM: The aim of this article is to share the findings from an ongoing action research study aimed at identifying inequalities in the availability of water birth on one hospital labor ward. Efforts to encourage labor ward midwives to take action and influence the delivery of normal birth care in the maternity concerned are addressed in the larger study.

METHODS: Unit midwives who regularly worked on labor wards were invited to take part in focus groups and face-to-face interviews over an 8-month period. Critical discourse analysis was used to identify actual midwifery practices, the social ordering of the water birth discourse, obstacles to water birth, dominant group interests, and solutions to the identified obstacles (Fairclough, 2001).

RESULTS: The author conducted a total of five unstructured interviews (35–60 minutes) with labor ward matrons, a consultant midwife, labor ward manager and clinical practice facilitator, and three focus groups (40–60 minutes; 11 midwives) with clinical midwives. Institutional practices focused on the delivery of standardized midwifery care for low-risk women and, therefore, did not promote or encourage water birth practice. The small number of requests and the low water birth rate were used as evidence by some midwives that childbearing women no longer wanted this type of care. The key obstacles to water birth in this setting were coordinators' priorities, midwives' negative attitudes, high workloads, and lack of institutional support for this type of care.

CONCLUSIONS: Findings suggest that hospital water birth practice is dependent not only on the availability of equipment and midwifery knowledge, but also on the philosophy of care adopted by the organization (Stark & Miller, 2009). Interventions to improve the practice and availability of water birth are more likely to succeed if supported by midwifery managers, championed by coordinators, and led by labor ward practitioners.

INTRODUCTION

Labor ward culture "is built on a contradiction. It allows individuals, in isolation, to practice midwifery skills of care and support but cannot acknowledge the empowering potential of those skills for midwives" and mothers. Thus, the voice of midwifery is muted, and midwives "experience a professional state of learned helplessness and guilt" (Kirkham, 1999, p. 738).

This statement captures some of the key political issue surrounding the delivery of midwifery care in the United Kingdom today. It implies that midwives' knowledge and skills are undervalued within UK midwifery services (Downe, 2005). Use of the terms "muted" and "helplessness" portray midwives as an oppressed group (Stapleton, Kirkham, and Thomas, 2002) and Kirkham (1999) argue that some midwives are in the unenviable position of trying to work from a woman-centered perspective and empower women from a disempowered position. They describe a National Health Servic
(NHS) punctuated by “service” and “sacrifice” in which midwives are denied the rights and choices they are expected to offer to women in their care. It appears that the NHS midwife has become the “piggy in the middle”, caught between maternity policies, employers, colleagues, and women's diverse needs (Murphy-Lawless, 1998; O’Connell & Downe, 2009). Research has shown that midwifery care can support the development of therapeutic and meaningful relationships (Mander, 2001; Siddiqui, 1999), reduce the need for pharmacological analgesia (Eberhard, Stein, & Geissbuehler, 2005; Law & Lamb, 1999), improve vaginal birth rates (McCourt, Page, Hewison, & Vail, 1998; Rooks, 1997), and decrease the length of labor and need for medical intervention (Hodnett et al., 2002). However, the rise in the medicalization of childbirth and the impact of technology on hospital midwives’ role has led many to challenge the notion of midwives as autonomous practitioners of normal birth (Green, 2005; Hollins Martin, & Bull, 2008; O’Connell & Downe, 2009). Normal birth is defined as “birth without induction, without the use of instruments, not caesarean section, and without general, spinal, or epidural anesthesia before or during delivery” (Maternity Care Working Group, 2007, p. 1). However, the boundaries between normal and abnormal birth have become blurred, resulting in obstetricians and midwives caring for high- and low-risk women (Arney, 1982; Witz, 1992), and birth being redefined as potentially pathological (Oakley, 1984). In recent decades, normal birth rates in the United Kingdom have fallen from 60% in 1990 to 48% in 2006 (BirthChoiceUK, 2009).

The aim of this article is to share the findings from an ongoing action research study to the provision and availability of water birth on one UK labor ward. Efforts to encourage labor ward midwives to take action and influence the delivery of normal birth care are addressed in the larger study.

**METHODS**

Clinical midwives were invited to take part in focus groups, whereas labor ward coordinators (experienced midwives who were in charge of the day-to-day running of the ward area) and managers (usually nonclinical midwives who were responsible for monitoring and implementing unit policies) were invited to take part in face-to-face interviews. These methods were chosen because they support reflection and social interaction within groups (Green, 2005; Hollins Martin, & Bull, 2008; O’Connell & Downe, 2009). Normal birth is defined as “birth without induction, without the use of instruments, not caesarean section, and without general, spinal, or epidural anesthesia before or during delivery” (Maternity Care Working Group, 2007, p. 1). However, the boundaries between normal and abnormal birth have become blurred, resulting in obstetricians and midwives caring for high- and low-risk women (Arney, 1982; Witz, 1992), and birth being redefined as potentially pathological (Oakley, 1984). In recent decades, normal birth rates in the United Kingdom have fallen from 60% in 1990 to 48% in 2006 (BirthChoiceUK, 2009).

The aim of this article is to share the findings from an ongoing action research study to the provision and availability of water birth on one UK labor ward. Efforts to encourage labor ward midwives to take action and influence the delivery of normal birth care are addressed in the larger study.

**ETHICAL CONSIDERATIONS**

Bartunek and Louis (1996) recommend that action researchers identify how preexisting relationships or interests may affect the research process (Herr & Anderson, 2005). I have been a midwifery lecturer at the local university since the year 2000. Although I was known to the midwives in the unit, I had not worked closely with them as an educator or midwife because I was a link tutor for community midwifery teams. To ensure that midwives participation was completely voluntary, I posted and
e-mailed invitation letters along with a participants’ information sheet, consent form, reply slip, and a stamped addressed envelope to all unit midwives. Written consent was sought individually prior to interviews/focus groups, and participants were informed that they could withdraw this consent at any time. Anonymity was insured by removing any identifying characteristics during transcription and by storing all of the data on a secured, password-protected computer. Ethical approval was granted by the regional NHS Ethics Committee and the Hospital Trusts’ Research and Development Unit prior to commencement of the study. Following the interviews and focus groups, transcripts were sent to the participants for validation and comment.

DATA ANALYSIS

Critical discourse analysis (CDA) differs from other types of discourse analysis in that it is concerned with the identification of discursive practices and ideological assumptions hidden in written or spoken speech (Fairclough, 1989). It is important to note that in CDA, the term discourse is used to describe the language and actions (practice) of a particular social group (Fairclough, 1989). Data analysis of text takes place in two separate stages:

- Structural analysis aims to specify the social structuring or order of a particular group through the identification of common sense assumptions about everyday activities.
- Interactional analysis allows for a social analysis of interaction by focusing on the identification of cultural norms, values, and social identities (Fairclough, 2001).

These stages of analysis lead to actual practices, the social ordering of the discourse, and obstacles to different types of practice being identified. The analyst is then asked to critically reflect on these preliminary findings in relation to dominant group interests and to find ways past the obstacles (Fairclough, 2001).

RESULTS

The author conducted a total of five unstructured interviews (35–60 minutes) with labor ward matrons, a consultant midwife, labor ward manager and clinical practice facilitator, together with three focus groups (40–60 minutes; 11 midwives) with clinical midwives over an 8-month period. Despite sending individual letters and e-mails to all midwives concerned and advertising the study via unit meetings and posters, only a small number of participants volunteered to take part. This may have been caused by the lack of interest in the research topic or difficulties accessing the focus groups during work time. However, the quality of the data generated during the focus groups and interviews meant that data saturation was achieved.

ACTUAL TYPES OF MIDWIFERY PRACTICE

Medical intervention and high-risk care took priority on the day-to-day running of the labor ward. This meant that the care of women in normal labor was marginalized.

Senior Midwife: You have four inductions of labor every day... You have three rooms occupied purely with inductions, high-risk women normally... So you’ve got a heck of a lot before you even begin any low risk... You have left-over inductions from the night before who’ll be on syntocinon and have an epidural—they need one-to-one care without a doubt... so your ability to give care to women coming in spontaneously is already set... (Interview)

High workloads made it difficult for practitioners to provide one-to-one care for women in labor and offer alternatives to standardized midwifery care. Water birth was viewed as more labor intensive and, therefore, more likely to interfere with the smooth running of the labor ward.

Midwife 3: I think when you’ve got somebody in the pool, you’ve got the luxury of staying in the room with them, which you wouldn’t necessarily... you know, if they’re on the monitor, you have to stay in the room... if they weren’t in the pool, you’d be doing other things as well, but generally, when you’ve got somebody in the pool, you stay in ther[e].

Interviewer: Is that a problem?

Midwife 3: Staying in there? No. It’s not a problem for the midwife, but it might be for the ward. (Focus Group)

Labor ward coordinators played a central role in controlling midwifery-led care. All participants described
how some coordinators would "block" the use of the pool room by saying "no" to requests from midwives and women, putting high-risk women in the pool room and, in one extreme case, writing a "bogus name" on the labor progress board.

**Midwife 4:** The one thing that used to be very frustrating was, because of the situation of the pool room, if you run out of side rooms, they would use the pool room as the next one for an induction of labor or somebody coming in, APH, PPH.

**Interviewer:** So that would block the room?

**Midwife 4:** Yes, and that was used on the premise that, well, it's nearest the desk if we're needed, so that used to be very, very, very frustrating, and then somebody would be in the room, so if somebody had wanted to use it, that was taken away from them...

**Midwife 6:** There are a few senior midwives on here that—you know—you say water birth and they take a deep breath and say, "No!" I think they (women) are often persuaded for various reasons not to use the pool or a bogus person gets written up on the pool room on the board so you can't use the room . . . *(Focus group)*

**Midwife 10:** You sort of end up like kneeling on the floor, so you end up having to put a pillow down because your knees hurt and your sort of reaching over—you know—you've got to try and listen in to auscultate with a water-proof sonic aid. It's all a little bit awkward; you end up getting wet . . . because your arms are in the water and you get really wet. So, that might put midwives off actually.

**Midwife 8:** And if they've got a bad back—it's that leaning over into the pool on this unit . . . *(Focus group)*

**Senior Midwife:** I have worked with pools that have been much, much better for the woman, and much better for us to use than this one . . . if there is a problem, I think it would be hard to attend to an emergency in the pool . . . it can be very traumatic for the woman and for the midwives who have been looking after her; so, you know, PPH’s [postpartum hemorrhages], collapses, I've seen stillbirths, I've seen all of the sorts of horrendous things in the water. *(Interview)*

**THE ORDER OF THE WATER BIRTH DISCOURSE**

To identify how hospital midwifery care was organized and prioritized within the maternity unit, data analysis focused on the identification of the rules, governed midwifery practice, social interactions, and midwives’ social identities.

**THE "RULES" OF HOSPITAL MIDWIFERY CARE**

Data analysis led to the identification of socially constructed "rules," which governed the types of hospital midwifery practice. The "labor ward rules" not only restricted midwives' water birth practice, but also encouraged them to offer standardized care (see Table 1).

**Social Interactions**

*Interactions With Women During Childbirth*

In general, clinical midwives did not discuss the use of water as one of the birth options and, yet, believed that all women had the right to make choices about the care.
TABLE 1  Rules of Hospital Water Birth Care

<table>
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<th>Rule</th>
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<tr>
<td>Must care for more than one laboring woman at a time and</td>
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<td>be actively engaged in care.</td>
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<td>Coordinators can overrule requests (from women and midwives) to</td>
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<tr>
<td>use the birthing pools.</td>
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<tr>
<td>Must put team working and the needs of most women first.</td>
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<tr>
<td>Cannot leave laboring women alone in a birthing pool, but</td>
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<tr>
<td>can leave women receiving other types of care unattended.</td>
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<tr>
<td>Are allowed to “opt out” of water birth provision, but must</td>
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<tr>
<td>be skilled in all other aspects of standard care.</td>
</tr>
<tr>
<td>Must be able to care for high- and low-risk women.</td>
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</table>

they received. The small number of requests and the low water-birth rate were used as evidence by some midwives that childbearing women no longer wanted this type of care. Therefore, women who requested water birth were more likely to be supported in their choice than those who did not request this type of care.

Midwife 1: It’s like a lot of things, I think, it (water birth) goes in phases . . .

Midwife 3: You don’t get many people asking for them, I don’t think . . . It (water birth) only happens if the midwife suggests it . . . or they’ve had a previous water birth.

Midwife 1: Yes. Not many people come in and say, “Is the pool free?” like they used to . . . in the past they used to ring up and say, “I’m coming in, is the pool free?” I don’t think they do that anymore . . . it’s not the same.

Midwife 4: But then it’s a different generation, perhaps, coming through now. (Focus Group)

Clinical Midwives Interactions With Coordinators/Managers

Most of the participants agreed that the coordinators were responsible for managing the workload. It was generally accepted that the coordinators had the authority to over-ride midwives’ and women’s requests for water birth if the unit was busy. Midwives didn’t challenge these decisions, even if they didn’t agree with the coordinator, because of concerns about making their jobs more stressful.

Midwife 4: If you’ve got somebody that wants to go in the pool, sometimes you might get a little bit of negative input from the G grade (coordinator) because they aren’t that—you know keen—delivery (labor ward) is sometimes really busy and there’s [a] lot of people expected to come in—quite often they (coordinator) say, “No, no.” (Focus Group)

Midwife 2: But it’s not always the staff that, the quantity of staff, either is it, it’s sometimes the staff in charge that can, not saying you can’t do it even if you want to . . .

Midwife 3: They (coordinator) can swing it, can’t they . . .

Midwife 2: Yes, because you get the vibes, don’t you? And you know the person probably wouldn’t be keen. (Focus Group)

Midwives’ Social Identity

Social identities are comprised of self-value and trust in one’s own abilities and knowledge at a personal and group (institutional) level (Holllins Martin & Bull, 2005, 2006). The characteristics associated with hospital midwives’ social identity are summarized as follows:

A busy, hard-working individual who runs from room to room, actively involved in the doing, and completing tasks.

Midwife 1: Because if you’re in a unit that has a lot of augmentation and things, and a busy unit, that you’re hands on the majority of the time, to actually sit there with your hands behind your back . . . it’s a different situation, isn’t it? A lot of the midwives do, sort of, think of themselves as obstetric nurses, rather than midwives. (Focus Group)

Senior Midwife: But we just haven’t got the time to offer water birth to everyone—I mean, they’re running around like headless chickens half the time . . . (Interview)

A team player who is loyal to the team leader (coordinator) and the needs of the institution.

Midwife 7: If the ward’s busy, they know that if that midwife goes in that room, (pool room) they’ve lost her . . . She doesn’t come out again, so that’s taken a member of staff away, whereas if we’ve got somebody on a bed with an epidural and a CTG (fetal monitor), you can come out occasionally and admit somebody else. (Focus Group)
Struggling to Get into the Pool Room: A Critical Discourse Analysis of Labor Ward Midwives' Experiences of Water Birth

Midwife 3: I think, when I was a student, I just thought about me and the woman; now, as a qualified midwife, I think about my colleagues, and I think about the safety of other women on the unit, so if there are . . . if there's only one midwife for three women, I will spread myself between the three women and try and keep everyone on the unit safe that way, and support my colleagues. (Focus Group)

A caring person who wants to do the best for women in her care, and who believed in normal childbirth and choice.

Midwife 10: It's always quite disappointing for me, because a lot of the time, when women ask to use the pool, I have to say "no," and I think that's such a shame. There's so much pressure on resources, and there'll be somebody in the room who isn't in the pool, perhaps.

Midwife 11: When I worked in DAU (Day Assessment Unit) 6 weeks ago, I had a lady come in, and she said, "I'd like to have a water birth, how do I book it?" And I said, "I'm terribly sorry, you can't book a water birth, its pot-luck . . . I felt awful . . . (Focus Group)

Team working was central to midwives' social identity, because working as a unit was viewed as a more productive way of getting through the work and caring for the needs of most laboring women. Words like "busy," "hardworking," and "running" were found frequently in the data. This suggests that hospital midwives' social identities were consistent with task-orientated care, rather than women-centered midwifery practice.

OBSTACLES TO HOSPITAL WATER BIRTH

Obstacles to the provision and availability of water birth on the unit were identified from the network of practices evident in the transcribed texts. The obstacles to water birth practice were arranged at organizational, individual, and consumer level to highlight the hierarchical nature of the barriers to this type of practice and to assist in the identification of solutions (see Table 2).

DISCUSSION

The labor ward discourse portrayed the provision of water birth as an alternative to mainstream midwifery practice. Participants believed in principle that the midwives' role was concerned with promoting normal birth and supporting women's birth choices, but in reality, midwives' everyday practice focused on "getting through the work" as efficiently as possible (Hunt & Symonds, 1995). Consequently, hospital midwives' social identities were consistent with task-orientated practitioners rather than autonomous midwifery practice. Fear of what might go wrong when women labored or gave birth in water was common among participants. They were particularly anxious about being unable to help women out of the birthing pool if she collapsed or if a fetus is compromised. All of which led to a belief that women who used the birthing pool could not be left unattended. Irrational beliefs emanate from practitioners' previous experiences of labor and birth (Greipp, 1992). Stark and Miller (2009) found that practitioners who had limited experience of water birth practice were more likely to create belief systems around the dangers of water birth. Chuett, Nikodem, McCandlish, and Burns (2009) also found institutional settings prevented access to water on safety grounds despite conclusive evidence to the contrary being available. Recognizable belief systems place limits on people's ideas and behaviors because they help define what is right and what is wrong, what is normal and what is not (deviant); and, by doing so, make alternative opinions or actions to those previously defined absurd (Foucault, 1977). For example, it was acceptable to offer an "ad hoc" water birth service, but epidurals had to be available 24 hours a day.

TABLE 2 Summary of the Obstacles to Hospital Water Birth Practice

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<tr>
<th>ORGANIZATIONAL LEVEL</th>
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<tr>
<td>Midwives' negative attitudes to water birth</td>
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<tr>
<td>Fears around coping with emergencies in the pool</td>
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<tr>
<td>Water birth not offered as a choice/lack of awareness</td>
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<tr>
<td>Cannot offer one-on-one care</td>
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<tr>
<td>Lack of skills and experience of water birth</td>
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<tr>
<th>INDIVIDUAL LEVEL</th>
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<tr>
<td>Lack of encouragement and support from the coordinators</td>
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<tr>
<td>Unavailability of the pool room</td>
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<tr>
<td>No incentive to offer water birth as a real choice to women</td>
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<tr>
<td>Water birth &quot;has gone out of fashion&quot;—women no longer want this type of care</td>
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<th>CONSUMER LEVEL</th>
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<tr>
<td>Women do not ask for a water birth</td>
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<tr>
<td>Women do not want water birth</td>
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The social ordering of hospital midwifery practice meant that water births were not promoted or encouraged as a part of everyday midwife-led care. This led to the accepted midwifery view that water births are an unpopular, unnecessary, difficult, time-consuming, and potentially dangerous type of care. Midwives' everyday practices were dominated by the needs of high-risk care, and, therefore, a medical view of birth was accepted as central to hospital midwives' role (Davis-Floyd, 1992). Most midwives were unfamiliar with the skills of "watching and waiting" to facilitate physiological birth, leading some practitioners to be fearful of undertaking water births. Hospital midwifery care served the interests of the status quo where self-preservation, collective decision making, the promotion of bed birth, pharmacological analgesia, and anesthesia were considered part of normal midwifery practice. Midwives' sphere of autonomous practice was dependent on the amount of power given by the coordinators and the degree to which individuals followed the labor ward rules.

The coordinators were viewed as authority figures, responsible for controlling the day-to-day running of labor ward and the allocation of work. Green (2005) found that coordinators ensured adherence to expected norms, such as four hourly vaginal examinations, by seeking out and challenging midwives who didn't conform to expected medical protocols. Midwives accepted that coordinators could prevent them using the birthing pool. Acceptance of this type of behavior legitimizes the actions of authority figures (Miligram, 1974), giving them a mandate to control the actions of the less powerful (Fairclough, 1989). This form of power is known as hegemony (Gramsci, 1971). Hegemony is a form of power, which operates through consent by a social group of a particular ideology. This type of power also includes notions of "moral and philosophical leadership" (Bocock, 1986, p. 11), achieved through the manufacture of consent by authority figures (Fairclough, 1989). The presence of "powerful situational forces" (Holllins Martin, & Bull, 2005, 2006) ensures that behaviors, which adversely affect the smooth running of the ward, were controlled (e.g., going against the coordinators' decision to use the birthing pool may lead to confrontation and an increase in workload for other members of the team). Deviant acts like these introduce uncertainty to the relationship between the midwife and coordinator (Holllins Martin, & Bull, 2008), and may leave individuals in fear of social exclusion (Kirkham, 1999).

Institutional practices, such as "blocking" the pool and not promoting water birth with women on admission, restricted access to the birthing pool. Redwood (1999) argues that institutional control of water birth is used by authority figures "to allow for the expression of a measure of unrest without disturbing the present unequal power relationships." However, hospital midwives valued choice for childbearing women and believed in their role as practitioners of normal birth. It is also clear that clinical midwives and managers recognized that the low rate of water birth on the unit was a problem and wanted to take steps to improve current provision. Participants suggested the following ways past the obstacles to water birth practice within the unit:

- Organize water birth workshops for all midwives with the aim of improving midwives' knowledge, skills, and confidence.
- Appoint a water birth midwife coordinator to support individual midwives, disseminate good practice, and raise awareness of the benefits of this type of care.
- Improve pregnant women's knowledge of this type of care by providing information (DVD) at booking appointments.

CONCLUSION

Water birth enhances the physiology of childbirth and promotes midwifery practice in normality. Yet it is known to be underused in UK hospital-based maternity units (Royal College of Obstetricians and Gynaecologists [RCOG]/Royal College of Midwives [RCM], 2006). The key obstacles to water birth in the setting were coordinators' priorities, midwives' negative attitudes, high workloads, and lack of institutional support for this type of care. This suggests that promotion of hospital water birth is dependent not only on availability of equipment and midwifery knowledge, but also on the philosophy of care adopted by the organization (Stark & Miller, 2009). Cluett, Pickering, Getlic and Saunders (2004, p. 6) agree, stating that water birth is a "package, which includes not only the actual water but also the environment in which it is offered, and the interactions of the women and the caregiver." Therefore, ways of addressing the obstacles to the practice of water birth in the unit are only likely to succeed if innovations are supported by midwifery managers championed by coordinators, and led by labor ward practitioners.
REFERENCES


Struggling to Get into the Pool Room? A Critical Discourse Analysis of Labor Ward Midwives' Experiences of Water Birth

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The Necessity and Challenge of International Midwifery Science

Raymond G. De Vries, Marianne Nieuwenhuijze, Rafael van Crimpen, and the members of the Midwifery Science Workgroup*

What is the best way to provide care during the reproductive process? What have we learned from centuries of experience and from the application of the tools of science to the practice of maternity care? Those who consult the history and science of maternity care will discover that the answers to these straightforward questions are anything but straightforward. Reading the history of maternity care can be quite confusing. There are histories that celebrate medical progress in reducing maternal and infant mortality (O'Dowd & Philipp, 2000), and there are histories that describe benighted doctors unwilling to wash their germ-laden hands before attending women in birth (Nuland, 2004). There are histories that document how professional societies of obstetricians improved care for women (Peel, 1976), and histories that show how those same societies limited care to women by oppressing midwives (De Brouwere, 2007). The reader of these histories will be awed by the knowledge and skill that improved care for women and babies in distress but baffled by the many interventions intended to make birth "easier"—"prophylactic forceps," "twilight sleep," routine use of episiotomy—that were introduced, widely used, and then discarded when found unsafe and unhelpful (Wertz & Wertz, 1989).

Reading the scientific literature on maternity care is even more disorienting. Not only will the reader discover that there are great differences in the way maternity care is done—in different countries and in different regions of the same country—but also will be puzzled by apparent contradictions in conclusions about the safety and efficacy of those practices. Within the past year, for example, the peer-reviewed literature has shown that planned home birth is as safe as planned hospital birth (de Jonge et al., 2009; Janssen et al., 2009), and that planned home birth, when compared to hospital birth, "is associated with a tripling of the neonatal mortality rate" (Wax et al., 2010).

Of course, experienced readers of history and science are aware that variations and contradictions in the literature are not uncommon. Histories vary according to who is doing the writing: Conquerors and the conquered tell very different stories about the same war. In science, progress is made by the process of assertion and refutation: Today's findings are tomorrow's discarded theories. But there is something peculiar about the science of birth. Obstetrics is the only discipline in medicine where something happens by itself, and in most cases, with no intervention, everything ends well. This allows maternity care to become a canvas onto which midwives, obstetricians, general practitioners, researchers, and pregnant women can paint their own versions of the "best care." Thus, in the United States, one-third of all births are done surgically and fewer than 1% of births happen at home, whereas in the Netherlands, more than 25% of women birth their babies at home and 14% of births are accomplished surgically (Centraal Bureau voor de Statistiek, 2007; Menacker & Hamilton, 2010). The late Dutch obstetrician Gerritt-Jan Kloosterman, reacting to the strong resistance to his efforts to champion midwifery and home birth, suggested that a science of maternity care may be impossible.

Obstetrics is wider and broader than pure medicine. It has to do with the whole of life, the way you look at life, making objective discussion difficult. You are almost unable to split the problem off into pure science; always your outlook on life is involved. (De Vries, 2005, p. 180)

Kloosterman calls attention to the way our cultural beliefs about birth and the perspective we acquire as professional caregivers and researchers create a bias that distorts scientific studies of maternity care. This fact makes it very difficult to identify best practices for birth.

* Marlein Ausems, Luc Bude, Darie Daemers, Marijke Hendrix, Irene Korstjens, Evelien van Limbeek, Hennie Wijnen, and Bert Zeegers

How should we caregivers and researchers respond to the peculiarity of birth care with its conflicting histories, contrary findings, and built-in bias? We could give up—it seems an objective science of maternity care is impossible, so why bother? We could become partisans—choose a point of view on what is the best birth and set out to prove we are right. Or we could build a new science of maternity care—midwifery science—that capitalizes on the history of midwifery and the variations in maternity care to develop a research agenda that promotes optimal care for women and babies, care that takes into account their physical condition and their cultural and social situations.

WHY MIDWIFERY SCIENCE?

Why is midwifery science the best response to the peculiar problems that beset research on maternity care practices? Some researchers will argue that a better, more expansive obstetric science should take on this task. The preference for midwifery over obstetric science lies in the difference between the two approaches to maternity care.

Histories of maternity care—as varied as they are—teach us two things: (1) Much progress has been made in responding to the complications of birth; and (2) interventions that alter uncomplicated birth to improve the process have been largely unsuccessful. Members of the obstetric specialty—dedicated to finding ways to reduce the morbidity and mortality associated with childbirth—have rightly focused on pathology. Midwifery begins with a focus on "physiology," the biological and social features of undisturbed and uncomplicated reproduction, birth, and postpartum.

The division of labor in maternity care should reflect the fact that most births proceed without complication. The governing science of maternity care should focus on the factors that promote (and hinder) physiological birth and on the early recognition of the indicators of pathology that require specialist care. These are precisely the features of midwifery science. The goal of midwifery science is to discover and develop basic and applied knowledge about the dynamics of reproduction and childbirth. Basic research—the creation and testing of theories that promote greater understanding of the physiological reproductive process—provides the basis for the development of innovations in practice. Applied research examines current and innovative practices, allowing quality improvement and ensuring proper care for mother, child, and family. Research in midwifery science examines:

- The physiological reproductive process;
- Factors—biological, psychological, and social—that promote the physiological process;
- Factors that promote health in the short and long term;
- Methods for equipping the transition process to parenthood;
- The organization of obstetric care; and
- The social production of both scientific and lay knowledge about maternity care, including aspects of medical and popular culture that encourage and discourage physiological birth.

Those who do midwifery science use theories and methods developed in various disciplines, including midwifery, public health, obstetrics, gynecology, neonatology, genetics, embryology, anatomy, (patho)physiology, medicine, ethics, psychology, sexology, sociology, information science, and organizational science.

Notice two important differences between midwifery science and obstetric science: (1) Because of its focus on physiological birth, midwifery science is concerned with enriching our understanding of the process of pregnancy and birth experienced by the majority of women; and (2) the interdisciplinary approach of midwifery science extends its work beyond the body of the birthing woman to the birthing woman herself. The interest of midwifery science in the contexts in which birth occurs leads to an appreciation of the situated nature of knowledge about reproduction and birth. The expectations of clients and their interpretations of reality—and not just the signs measured by the technologies of medicine—are taken seriously in research.

Progress in maternity care requires research in both pathological and physiological birth, but the "first science" of maternity care should be midwifery science. Promotion of the best care for all must begin with a science that considers the social and psychological situation of women and families and examines how culture and societal structures influence reproduction, the delivery of care and, last but not least, the production and use of data on maternity care. There is an interesting historical irony here. Care at birth was once the sole domain of midwives. But because of denied access to advances in obstetric science and the new technologies of birth, midwives concerned themselves with physiological birth. Obstetricians gradually took over the management of pathological birth, whereas midwives gained expertise on uncomplicated birth, expertise that is desperately needed to improve care where medical resources are scarce, and to limit unnecessary interventions where medical resources are overused (Betrán et al., 2007).

WHY INTERNATIONAL?

Our description of midwifery science hints at the necessity of an international midwifery science. Care practices for birth vary widely around the globe. This fact offers us
a laboratory for studying the sources and consequences of diversity in maternity care and provides a unique position for informed critique of birthcare. The science of obstetrics has made significant progress by studying and treating the pathologies of birth without regard for the social and cultural context of the birthing woman. This strategy has been successful in developing therapies to intervene in problem births, but it does not promote critical reflection on “progress” in maternity care (which often means the extension of therapies for pathology and invasive preventive surveillance to healthy women).

Midwifery science explores the connections between culture, birth practices, and outcomes of birth, generating data that can reveal problems with the medical “improvement” of birth. An international focus and respect for varied approaches to attending birth creates opportunities for maternity caregivers to learn from each other and to learn with each other. This ensures that midwifery research and its results are accessible to others and, hence, can be used to stimulate reflection on midwifery models, the organization of care, and the pros and cons of obstetric intervention.

The international orientation of midwifery science allows a rich understanding of how physiological birth is shaped by the many ways societies organize care for birthing women. Efforts to promote optimal care at birth must proceed with a clear sense of how organizational systems and cultural ideas are implicated in birthcare. For example, the varied divisions of labor in maternity care—including differing scopes of caregiver practice and different ratios of midwives to gynecologists and obstetricians—are associated with the kind of care offered to birthing women. And cultural notions about birth shape the desires and choices of women in birthcare and the content and results of scientific studies of birth (De Vries, Kane Low, & Bogdan-Lovis, 2008).

A second challenge is the organizational and cultural dominance of obstetric science. Obstetric science has gained power and prestige by virtue of its claim to objective science and its embrace of technological solutions to the problems of birth. In modern societies, the empirical knowledge of midwives, often gleaned from experience, is not highly valued. To gain respect in contemporary society, midwifery knowledge must be validated by science. Efforts to create midwifery science, coming later to the disciplines of medical science, often seem to be “obstetrics light,” a pale imitation of the hard science of obstetricians, beholden to the quantitative, positivist methods of medicine (Black, 1996). This makes the receipt of funding and public respect more difficult.

The increasing use of technology in all aspects of our lives presents a third challenge to midwifery science. Technology surrounds us and promises to make our lives easier—we have come to depend on computers, the Internet, “smart” phones, and global positioning devices. The presence and friendliness of these technologies make it more difficult to convince women, the public, and funders of research that less technological approaches to birth may be preferable. Furthermore, public appreciation of technology leads to public acceptance of interventions, instead of watchful, medicine. It is no longer enough for caregivers to wait until a symptom emerges before responding. In today’s world, we expect preemptive intervention: We want the problem to be discovered before it is a problem. And although this approach to health care can be harmful—most recently, we learned of the health dangers of early screening for breast cancer—it is the current model of medicine and stands as a challenge to the more watchful approach of midwifery and midwifery science.

**THE CHALLENGE(S) OF MIDWIFERY SCIENCE**

There is something seductive about an obstetric science that looks solely on the bodily mechanics of birth. After all, a human uterus in Marrakesh is identical to a human uterus in Manhattan. It is much more complicated to build a science around the recognition that a uterus is part of a thinking, feeling woman’s body that lives together with others in communities that shape the experience and meaning of reproduction and the type and quality of care during pregnancy and birth. This is the first among the several challenges of midwifery science: Understanding the many birth practices around the world, situating them in their cultural and organizational environment, and assessing the quality and transferability of those practices.

**CONCLUSION**

The problems of maternity care in today’s world—too much unnecessary intervention in birth in many high resource countries and too little needed intervention in the countries of the global south—require a science that does more than study pathology. Midwifery science with its historical, social, cultural, and clinical focus offers a way forward for the improvement of birthing care for women in all societies. This will necessarily involve more informed midwifery practices, an improved division of labor between those who provide maternity care (in terms of numbers and responsibilities), and better cooperation between midwives and obstetrician/gynecologists.
REFERENCES


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The following presentation style should be observed when submitting manuscripts:

- **Clinical and Basic Science Research** articles should include an Abstract, Introduction, Material and Methods, Case History (if applicable), Results, Discussion, Conclusion, and References.
- **Review** articles should provide a comprehensive synthesis of the available information on their chosen topic. They must include headings and reference citations.
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