DNP Portfolio Executive Summary

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5/24/2011

I have been a practicing nurse midwife for nearly 25 years. My population has always been women, women throughout the lifespan. I have focused on encouraging strength and empowering women through health and self-care. I entered the DNP program because of a need to explore practice in a way that I have never done before. At times, after practicing for years, we begin to do things out of habit, and accept practices because it's the way it's always been done. Entering the DNP has allowed me to really examine not only the way I practice, but the way health care is provided, to look at systems and models of care, and strive to understand health care for women in a larger context.

Through the residency and case studies I have explored models of maternity care. Initially I examined international models of care that offer different choices for women than what is "traditionally" offered in the US. I travelled to Europe and met with midwives in The Netherlands and England and examined models of care that are not only National Health Care models, but midwifery based models; examining models that assume wellness and the normalcy of the birthing process, rather than an interventive, medical focus. I then explored national models of maternity care including centering pregnancy, an alternative to routine prenatal care encouraging self-care and support of women for each other, and water birth, and birthing center models of care. In the final stretch of my residency, I have worked with community leaders and activists in my own community of practice to explore and develop a model of care which is based on the Dutch model, but individualized for my community.

Many of the concepts I have explored through the residency, are demonstrated in the case studies in this portfolio. The concept paper in this portfolio is the process of developing a concept of care including midwifery care, a group prenatal care model, home and birthing center options, and improved supportive post partum care. This concept was developed through studying international models of maternity care and exploring international, national and local maternity health outcomes. There is also a case study of a home birth in the Netherlands, again focusing on this model of care in which women have birthing options and which has exceptional outcomes. Other case studies are reflective of issues of significance in the practice of midwifery and women's health, such as elective cesarean section, shoulder dystocia, and a case regarding contraceptive and reproductive decision making for a woman with a significant genetic disorder. All of these case studies allowed me to explore issues in the practice of nurse midwifery that I had not had the opportunity to investigate, prior to entering the doctorate program.

Through the process of this doctoral program, my clinical practice has changed in many ways. I find I question practice routines, I advocate for the women I serve with greater passion, and I have become a community activist and an agent of change. The clinical inquiry study that I developed launched from my exploration of international models of care and grew out of a strong appreciation for the fact that most health care providers did not understand why women would be unsatisfied with the care offered to them. Many practicing maternity health care make statements like, the end result of a healthy mom and baby is what matters, not understanding that the process itself is significant for many women. By asking women, directly, why they would choose to have an unmedicated birth, it allowed women to delve in and discuss their feelings about birth and birthing choices, and allows those who hear their words to understand with a greater depth, why birth experiences matter. I have always been a birthing options advocate, but it is through hearing women's words, that my practice has changed the most. It helped me to be more aware of the impact of birthing experience, and to understand that these experiences affect women profoundly. Through this process of education and research, I am now a change agent in my community. I am now the chair of a birth center planning group and involved in creating a real change for the women in my community.

Why Women Choose Physiologic Birth

And What they Believe Supports the Choice

Clinical Inquiry Proposal

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Description and Significance of Clinical Problem

Childbearing is a major life event for 4.3 million mothers each year in the United States (US). In the State of Oregon, nearly 49,000 births occurred in 2008 (CDC, 2009). Throughout the US health care system, childbirth is the leading reason for hospitalization and approximately 23% of persons discharged from a hospital are women giving birth. Hospital charges for birthing women and newborns far exceed hospital charges for any other condition. These high costs are due to the current procedure-intensive style of maternity care in the US. Six of the 15 most commonly performed hospital procedures are associated with childbirth. Cesarean section is the most common operating room procedure in this country (Sakala & Corry, 2008). While cesarean births play an important role in any safe maternity service, there is evidence of risks for the mother, especially in subsequent pregnancies (Villar et. al., 2007; Deneux-Tharaux, et. al., 2006; Gray et. al., 2007). The challenge is to ensure that every woman has care during her pregnancy and birth that provides the best chance of having a safe vaginal birth and that every cesarean section performed benefits the mother and baby.

The maternity care system includes the spectrum of perinatal care from prenatal care, intrapartum or labor and delivery care, and through the postpartum period. It also can include care of the newborn. Pregnancy and child birth are major life events. Care of the woman during prenatal care is not only part of the pregnancy continuum that culminates in delivery, the postpartum period, and parenthood, but should also be considered in the context of women's health throughout the life span (Johnson, Gregory, and Niebly, 2007). This paper focuses on prenatal and intrapartum care.

Risk assessment and prevention of complications are key factors identified in the need for prenatal care. Johnson et al. (2007) state that the rationale for prenatal care is to prevent complications when possible, to identify complications if they occur, and to manage identified

complications so as to minimize their adverse effects. The routine schedule for providing prenatal care is antiquated and has not been demonstrated to have significant benefit or positive health outcomes for mothers or babies. There are no prospective controlled trials demonstrating efficacy of traditional, routine prenatal care overall (Johnson, et al., 2007). Labor and birthing practices are strongly focused on intervention and have resulted in rising cesarean section rates without improvement of outcomes. In the United States 99 % of births occur in hospitals. Use of continuous fetal monitoring, induction, epidural use, and cesarean section rates continue to rise. From 1990 to 2009, the cesarean section rate rose 50% to an all time high of 32%, while induction rates rose from 9.5% to 22.3 %, and preterm birth and low birth weight babies increased (CDC, 2009). Little attention, in general, has been given to promoting healthy, non-interventive pregnancy and childbearing options (Sakala & Corry, 2008). Prenatal care is focused on anticipating problems, rather than promoting health and supporting women's belief in their bodies or their ability to give birth. This focus is continued into labor and delivery, when interventions are offered as a matter of routine, rather than necessity, and options that could lead to less intervention are often not explored. The National Institute of Health has called for research devoted to strategies to increase the likelihood of vaginal birth, especially in first births (NIH, 2006). While an unmedicated birth has evidence-based value, it is not understood clearly what factors influence a woman to make this choice.

Local Knowledge of the Problem

The setting.

The practice setting is a mid-sized, multiprovider practice. Women are seen on a fixed schedule, beginning with a long history and physical appointment ,and then continuing with short prenatal visits of 10-15 minutes that are primarily problem focused with very little

educational or support components. Women see multiple providers, including four Certified Nurse Midwives (CNMs), four physician Obstetrician-Gynecologists (OB/GYN's) and one Women's Health Nurse Practitioner (NP). Due to the large number of practitioners, women rarely see any individual provider more than 2 times and often report not knowing the individual who attends them in labor. Prenatal care offers women little opportunity to explore birthing options and discuss their needs or desires. Birth occurs at a 188 bed level two hospital, with five birthing rooms. The practice attends approximately 600 births per year. There is one other obstetrical practice in the community also attending births at this hospital. This practice is a four obstetrician/gynecologist practice and does not employ any CNMs. Birthing practices at the hospital can frequently involve inductions and augmentations, general use of continuous electronic fetal monitoring, and frequent use of epidurals. In 2009 the hospital's induction rate was 26%, and epidural rates were 70%. All women have at least a 20-30 minute use of electronic fetal monitoring and most have continuous or near continuous electronic fetal monitoring thereafter. Women who express an interest in natural childbirth during prenatal care may still have unplanned, unexpected, and unwanted interventions and epidurals. Labor nurses frequently remark that "the longer the birth plan, the longer the labor".

There are evidence based factors that provide support for and encourage non-interventive, natural childbirth. Women participating in midwife-led care, who are supported and encouraged through pregnancy and childbirth with a small number of midwives, establish a trusting relationship with their midwives. These women report a sense of calm and confidence that resulted in a positive impact on their experience of pregnancy, childbirth, and breastfeeding (Leap et al. 2010, Huber & Sandall, 2006, Huber & Sandall, 2009, Hatem et al., 2008). Women often come to this practice specifically seeking midwives, expressing a desire for a different type

of care, and hoping to establish a more intimate relationship with the midwives in the group. Many women choose this practice because they are seeking "alternative" care, wanting non-interventive childbirth, and stress that this is why they have selected the practice. While the four CNMs attend most of the births, they often do not know the women they are attending well, as women have visits with all 9 providers in the practice and may have only met them once or twice. Additionally, the hospital environment does not offer many alternative modalities, such as water birth or deep tubs for labor. Continuous electronic fetal monitoring is the norm, mobility is limited, and epidurals are readily available and encouraged by many of the staff.

The only other birthing option for women in the community is home birth. There are three licensed direct entry midwives (LDMs) practicing in the community and attending women at home. They transfer women in to the hospital as needed but do not have any direct relationship with either of the hospital based obstetrical practices in the community. If a woman needs to be transferred to hospital care she is referred to the practice that is "on-call" for walk-ins and no care women. This on-call system is based on even or odd calendar days with one practice on-call on even days, the other practice on odd days.

Importance to Practice

Enkin et al. (2000) identified two guiding ethical principles for providing care during pregnancy and childbirth. First, any practice that restricts a woman's autonomy, limits her choices, and decreases her access to her baby can only be justified by clear evidence that these practices do more good than harm. Second, any interference with the natural process of pregnancy and birth must show more good than harm.

Optimal maternity care has been defined by Sakala and Corry (2008) as care that avoids possible interventions and supports physiologic childbirth and the innate ability of the woman's

body to give birth. While there is no consensus in the definition of normal birth, the term physiologic birthing is defined as labor and birth that begins and ends on its own, without significant intervention or the use of pain medication, including the establishment of breastfeeding and the development of maternal and infant attachments (Sakala & Corry, 2008, Kennedy, 2010). This implies that women are supported in their natural progression through pregnancy and birth. The American College of Nurse Midwives (ACNM) describes the role of midwifery as "watchful waiting and non-intervention in normal processes".

From a midwifery perspective, prenatal care needs to instill in women a sense of strength and trust in their own bodies to care for their unborn child and to give birth, not merely to be problem focused anticipating complications. Birth experiences and environments can promote confidence and strength in women. Women need to be offered environments that support the normal process. "Birth territory consists of a physical terrain of the birth space over which jurisdiction or power is claimed for the woman" (Fahey, Foureur & Hastie, 2008, p.18). With appropriate support and protection from interference, most healthy pregnant women can experience physiologic childbirth if they desire. It is the role of the nurse midwife to create these territories where women can feel safe and can give birth in an environment that fosters normal labor and physiologic birth. It is the role of nurse midwifery leaders to gain a greater understanding of the specific needs of women during pregnancy and childbirth that promote health and wellness, empower women, demonstrate outcomes, and enhance the process of normal physiologic birth. In addition, nurse midwifery leaders must gain a greater understanding of the role of prenatal care and birth environment on birth outcomes and women's satisfaction and empowerment. It is these gaps between lessons learned from best evidence and actual

practice that offer tremendous opportunities to improve the process and structure of maternity care for women and their babies and to improve the value for investments in maternity care.

Purpose

Traditional prenatal care and labor and delivery services have not resulted in increased safety or positive outcomes, including maternal satisfaction. Prenatal care and birthing care often do not encourage a sense of strength or empowerment in women. Current birthing environments may inhibit women's sense of confidence in their ability to birth, turning them into "patients", dependent on the hospital and interventions (Sakala & Corry, 2008). The purpose of this practice improvement project is twofold: (a) to explore women's perspectives of why physiologic birth is important, and (b) what they perceive the role of pregnancy, and labor and birthing care are in physiologic birthing. The goal is to ask women who are known to value physiologic birthing why they chose unmedicated birth what they believe is needed during pregnancy and birth to empower them to give birth with minimal intervention. Why is physiologic birthing important to women and what do women need prenatally and during labor and birth to decrease interventions, and enhance their opportunities toward physiologic birthing?

Introduction

The current routine for providing prenatal care in the US is a model established by the American College of Obstetricians and Gynecologist that was developed decades ago and has changed little. This system of an extensive history and physical followed by 12 to 15 short visits of 10 to 15 minutes is the common routine throughout pregnancy. Each brief visit includes blood pressure, weight, and abdominal examination to assess the growth and position of the fetus and document fetal heart rate. The use of this system of prenatal care, though not evidenced based, is widespread, although its ability to improve outcomes has never been demonstrated

(Walker, McCully & Vest, 2001). The stated objective is risk assessment and reduction. In practice, clinicians generally focus on biomedical issues, and women are generally referred out of the practice system to childbirth classes and nutritional services (Novick, 2009). This stated objective embodies a philosophy that also extends into childbirth practices. Intrapartum care based on an objective of risk assessment and reduction results in high rates of intervention, even with low risk women, without demonstration of excellent outcomes (Sakala & Corry, 2008).

Synthesis of literature

Prenatal Care and Models of Care.

There have been a number of authors who have evaluated alternative methods of prenatal care and examined outcomes. Some researchers focused on the content and timing of prenatal care visits while others have looked at what women perceived as necessary to help them during the prenatal period of their lives. Lastly researchers have examined alternative models for promoting education and support. Two models of prenatal care are reviewed in comparison to what is described above as the current routine for prenatal care: (a) a schedule of decreased visits, and (b) group prenatal care. Also reviewed is literature regarding women's needs during prenatal care.

In 1989 an expert panel convened by the US Department of Health and Human Services (USDHHS) public health panel reviewed the content of prenatal care. The resulting document entitled, "Caring for our future: The content of prenatal care", was published (NIH, 1989). This panel recommended a change in the number of prenatal visits for low risk women and a transformation from a traditional problem focused system of care to an enhanced model including risk assessment, a more extensive psychosocial component, and greater education. While advocating less frequent visits, the focus was on quality rather than quantity. Multiple

studies after the release of this document provided evidence that this decreased frequency of visits has no detrimental effects on outcome of pregnancy (Sikorski, Wilson, Clement & Smeeton, 1995; McDuffie, Beck, Bishoff, Cross, & Orleans, 1996; Walker & Doniak-Griffin, 1997). This recommendation was made in 1989, yet little has changed in most prenatal care systems. One reason suggested for this is that the proposed model of care involving reduced visits was also correlated with a decrease in satisfaction with care (Jewell et al., 2000; Walker et al, 2001; Villar et al., 2001). If a decreased number of visits occur, without increase quality and substance of the visits, then nothing is gained. There have been many models of care proposed, but still the predominant care model of high frequency care remains.

Centering pregnancy or a group prenatal care model is one model that offers women extended time for education and support, and time with their provider and other women in a group setting. Participation in Centering Pregnancy results in desired outcomes of decreasing preterm birth and may have an impact on post partum depression by enhancing a woman's self-confidence and sense of support. There is evidence that women involved in group prenatal care use less medication in labor, have reduced use of epidurals, and have lower c-section rates. Empowerment and self-care are critical features of the Centering Pregnancy model and have even been demonstrated to enhance self-esteem in vulnerable populations such as teens, women in the military, and low income women (Falk-Rafael, 2002; Grady & Bloom, 2004; Handler, 1996; Ickovics, et al, 2007; Kennedy, et al., 2009; Leap, et al., 2010; Rising, 1998; Rising, Kennedy, & Klima, 2004). It is important to note, however, that not all study results regarding Centering Pregnancy are completely favorable however. Shakespear & Gast (2010) did not demonstrate improvement in the adaptation of healthy behaviors in pregnancy of women receiving Centering Pregnancy care compared to traditional care. Robertson, Aycok & Darnell

(2009) found a high degree of satisfaction with the method, yet lower levels of post partum self-esteem with women in the centering pregnancy participants compared to women receiving traditional, routine, prenatal care with frequent short visits.

Examining women's experiences with prenatal care, researchers have found that women value continuity of caregiver, education, support and involvement in decision making. Women in several studies reported they wanted to learn about and discuss physiologic and emotional changes in pregnancy, common discomforts, labor, birth and infant care; and receive support from other women who are pregnant or have recently had children (Novick, 2009; Leap et al., 2010). Much of this is frequently absent from traditional prenatal care with short regular visits.

Researchers have suggested that prenatal care needs to engage women to be partners in their own care and affirm their role as leader in their health care and encourage strength and a sense of self-respect. Education and care during pregnancy needs to empower women, emphasizing a sense of confidence in themselves, their bodies, and their ability to birth (Leap, et al, 2010). Downe, Mc Cormick, & Beech (2001), and Mead (2004) found that a lack of confidence exists for women, especially for first time mothers, in their ability to birth without routine intervention. Prenatal care can affect a woman's experience of labor and birth. It is during the prenatal period that a pregnant woman can become confident in her innate wisdom to give birth, and the childbearing family and midwife are able to develop a relationship of trust and mutual respect (Neumann and Kennedy, 2010). It has been demonstrated that when women are supported during pregnancy and presented with the sense of trust and belief in their body's ability to do the work of labor, they have lower epidural rates, are better able to cope with labor, and have increased sense of pride and empowerment (Foster, 2005, Leap et. al, 2010).

Intrapartum care.

A review of the literature regarding intrapartum care is presented. Specific issues reviewed include: (a) electronic fetal monitoring, (b) decrease interventions, (c) midwifery care, (e) practitioners knowledge regarding physiologic birth, and (f) birth environment.

In the United States 99% of women give birth in the hospital with outcomes that are increasingly concerning. In a report of women laboring in US hospitals in 2005, researchers found that 94% of women had electronic fetal monitoring. Of these, 93% were monitored continuously or for most of the time during labor. Only 3% were monitored using a handheld device alone (Declercq, Menacker, & MacDorman, 2006). While electronic fetal monitoring is the standard of care for most women laboring in hospitals, more than one study has demonstrated no improvement in outcome (Alfirevic, Devane, and Gyte 2006; Blix et al. 2005). A recent review by Gourounti and Sandall (2007) supported the findings of Clark & Hawkins (2003) demonstrating that not only was there no benefit for newborns, there was an increased likelihood of cesarean section and assisted vaginal delivery among low risk women experiencing electronic fetal monitoring.

Research indicates that mothers, babies, insurers, and providers of health care would benefit from giving priority to effective, safer care paths, and using interventions only when there is indication. Many alternative care methods have been suggested, including midwifery care with a known midwife, the use of tubs in labor and birth, providing continuous labor support, and other nonpharmacologic pain relief measures, that would not only decrease the cost of maternity care and reduce use of epidurals and the potential risk of intervention, but also may enhance the experience of child birth for many women. Also advocated are alternative birthing positions and early and prolonged skin to skin contact (Carter et al., 2010; Fahy, 2008; Hatem et al., 2008; Hodnett, 2002). Factors that are most consistently associated with women's sense of

satisfaction with the experience of childbirth have been found to be; the amount of support from those providing care, involvement in decisions, quality of the mother-caregiver relationship, and either having high expectations for childbirth or experiences that exceeded the childbirth expectations (Hodnett , 2002).

Support and involvement in decisions are hallmark in midwifery care. Midwifery care is well documented to promote maternal satisfaction and improved outcomes. A resent Cochrane Review (Hatem et al., 2008) definitively established the value and effectiveness of midwifery models of care in providing excellent perinatal outcomes. They included 11 trials (12,276 women) from multiple countries, using licensed midwives only and all with hospital births. Their conclusion is that midwife-led care has significant benefits, no adverse outcomes, and is recommended for women. The authors of this review continue and made recommendations to policy makers, health care systems, and providers to be aware of the benefits of midwife-led care, and encourage policy makers to consider midwife-led care in an effort to improve, normalize and humanize birth (Hatem et al., 2008).

When considering why physiologic birth is not promoted more by maternity systems, Walsh (2007) suggests that many practitioners such as physicians, midwives, and nurses, have never been exposed to another way of birthing without intervention, and are not comfortable without using intervention such as fetal monitors or supporting women without pain medication. There is evidence suggesting that when practitioners do not value the process of less intervention, changes do not occur (Kirkham, 1989; Kirkham, 2004; Mead, 2004; Davis 2010; Leap, Sandall, Gran, Bastos & Amstrong, 2009). When exploring the essential components necessary to create change in birthing habits and cultures, Sandall et al (2010) demonstrated that educating staff about physiologic birth and its importance is an essential component to creating

change in birthing. Without providers valuing the change, change rarely occurs (Leap et. al, 2009; Sandall, Leap, Armstrong, Bewley, Edwards, & Warick, 2010).

The role of the birth environment on the likelihood of promoting physiologic childbirth has been well documented. Researchers studying out of hospital birth centers have demonstrated excellent outcomes, reduction in interventions, significantly lower c-section rates and increased levels of satisfaction with care (Rooks, Weatherby & Ernst, 1992; Jackson et al., 2003, Walsh & Downe, 2004). Researchers have described in detail aspects of a positive birthing environment. Ingredients which have been presented to promote physiologic birthing are low lights, music, calm speaking, colors in the environment, water and tubs, the presence of a trusted midwife, and the value of support (Fahey, Foureur & Hastie, 2004; Fahey & Parratt, 2006; Walsh, 2006; Page, 2006). Lepori, Foureur & Hastie (2008) discuss that while birth environment has been demonstrated to be important, there have been very few studies which have actually asked women what specific physical attributes of a birth space women truly valued.

If as Fahey et al (2004) suggest, the birth environment matters and birth territory is the place in which women have control and power, then midwives have the role and function of being guardians of birth. It is this author's belief that as certified nurse midwives our involvement in empowering women and protecting and fostering physiologic birth is imperative, and our gaining an understanding of women's needs from women themselves is essential.

Why start this project?

There is significant research supporting the fact that the current traditional routines of providing prenatal care are problem focused rather than supportive and health promoting. Labor and birth services are based on high use of technology even with low risk women, without an improvement in outcomes. During labor and the birthing process women often stripped of their

clothes, placed in gowns, strapped with monitor belts on their bellies, and turned into patients when they are not ill; they are made passive and requiring of intervention, promoting dependence rather than strength (Johnston, 2004; Leap et. al, 2010). Women continue to give birth in environments that make them passive participants in their birthing processes. All of this is done in the name of safety, without outcomes which warrant this level of intervention for most healthy women.

Despite good research supporting the value and outcomes, emotionally and economically, of promoting less interventive birth, change does not come readily. There are models of care available that could promote physiologic care with minimal intervention however these are frequently underutilized. There are many reasons for this lack of utilization. Systems are set up with a given routine and changing routines is difficult and many practitioners do not support changes. Wagner (2001) describes what she calls, "fish can't see water"; referring to blindness which is generated by constant exposure to one way of doing birth, making that way normative in the practitioners experience and unable to see or appreciate any alternative. Because an interventive model has been normalized, physicians, midwives, and nurses have no exposure or understanding of the value of less interventive birth practices. Without this understanding or experience, many practitioners are not able or willing to make changes in practice.

If change is to occur, the first step is to obtain the information from women. The second step is to share that information with women and practitioners in a way that helps women feel supported in the option and helps providers to see the value of physiologic birth. The third step is to educate staff in all settings about physiologic birth. Unless the process of less intervention is valued and internalized, changes do not occur (Kirkham, 1989; Kirkham, 2004; Mead, 2004; Davis 2010; Leap et al, 2009).

Clinical inquiry design

A qualitative research design is used to learn about women's perceptions of why physiologic birth is important and what women say they need during the prenatal and intrapartum periods to support them in their birthing process. This study used a focus group method of data collection. Focus groups are group interviews; they are a way of listening to people and learning from them. They rely on the dynamic of group interactions to provide the researcher with detailed, rich perspectives that could not be obtained through other methodological strategies (Côté -Arsenault & Morrison-Beedy, 1999, Côté -Arsenault & Morrison-Beedy, 2005; Morrison-Beedy, Côté-Arsenault, & Feinstein, 2001, Morgan, 1993; Morgan 1998; Morgan, 2010; Morgan & Bottorff, 2010). Focus groups provide access to forms of data that are not obtained easily with other qualitative methods. It allows the researcher to observe a large amount of interaction on a topic in a limited period of time based on the researcher's ability to assemble and direct the focus group sessions. Other advantages of focus groups include saving time, money and effort, gaining immediate validation of information by others in the group, and to probe deeper for information from participants as well as participants obtaining support from each other. The process of sharing and comparing involved in focus groups assists participants to investigate the ways they are similar and different from each other (Morgan, 1998; Morgan & Bottorff, 2010).

Focus groups were chosen over individual interviews, which generally provide more in-depth individual responses, because they excel at uncovering not just what participants think, but why they think as they do (Morgan, 1998). When the goal is to learn as much as possible about each individual in the group, individual interviews have the advantage, but when each individual is not as essential as bigger concepts and richer understanding, focus groups provide more data.

It has been pointed out that though the interaction of the focus group produces the data, it is not the interaction itself that is the data (Morgan, 2010).

A disadvantage of focus groups is that they are not easy. Detailed planning and focused open ended questions must be designed. There are two concerns associated with focus groups. The first concern is that the researcher/facilitator influences the groups' interactions. The second is that the flow of discussion can move away from the original intent of the group and therefore lose the data sought (Morgan & Bottorff, 2010).

The simplest test of whether focus groups are appropriate for a research project is to ask how actively and easily the participants would discuss the topic of interest (Morgan, 2010). Groups of pregnant women or women who have recently given birth or are involved in birthing are generally very interested in the topic. Though they may have time restraints, women generally enjoy and are readily willing to share their views and experiences.

Setting

The ideal setting for a focus group is one that has a pleasant atmosphere, is easily located by the participants, and presents an opportunity for the participants to see and hear each other with minimum distractions (Morgan, 1998). The setting of this qualitative research project was a conference room at Good Samaritan Regional Medical Center. This setting was selected because the hospital was a known location for the women in the study, and the rooms were comfortable and readily available. Chairs were arranged in a circle with a round table, and the door closed to assure privacy and no interruptions during the groups. The conference room had a small kitchen and healthy snacks and beverages were provided. The four focus groups were offered at different times during the day allowing for women to select a convenient time and day; one at

lunch, two in the late afternoon, and one in the early evening. There was a bus line that stopped directly at the front door of the hospital.

Sample

Participants in focus groups are selected because they have certain characteristics in common that relate to the topic of the focus group and are similar to each other in a way that is important to the researcher. Several groups with similar types of participants were utilized so the researcher could identify trends and patterns in perceptions. The goal was to find the range of opinions of people across several groups; comparing and contrasting data from across groups, using at least three groups (Morgan, 2010, Morgan 1998, Cote-Arsenault & Morrison-Beedy, 1999). This study included four focus groups.

The literature on focus group size did not provide consistent guidance and there were wide ranges of group sizes recommended. Morgan (2010) states that focus groups each have 5 to 10 individuals, but could have as few as 4 and as many as 12. There was general agreement that groups intended to gain access to experiences and feelings need to be smaller. Participants in this study included four groups of 4 to 9 members (n=27). These four groups were women from the community who have given birth within the last two years.

Inclusion/exclusion criteria

All women participating in the focus groups understood that the purpose of the group was to explore feelings about physiologic birth and it's important to them, as well as exploring how they believe they could best be supported prenatally and during birth. All participants voiced an interest in discussing physiologic birthing and alternative models of care. Specific criteria of inclusion:

- Women who had given birth in the last two years.

- Women who were interested in discussing unmedicated labor and birth
- Women who were interested in discussing prenatal and birthing practices that support unmedicated labor
- 18 years of age or older
- English speaking
- Willing to be audio-taped

Recruitment

Women were recruited who lived in the community and were interest in discussing physiologic birth and in exploring models of care and alternatives. Recruitment fliers were sent to childbirth classes, doulas, direct entry midwives in the community, and the two obstetrical practices in the community. In addition, fliers advertising the research project were posted at locations in town such as the library, coffee shops, and la leche and parent group locations (appendix A, recruitment flier).

A list of women who voiced an interest in discussing physiologic childbirth was compiled from contacts that have made. The researcher personally called each woman to determine if she was interested in participating and explained the focus groups in greater detail. (A script is provided in Appendix B). Four dates and times were selected for the focus groups and there was no difficulty recruiting participants for a specific time. Once they expressed continued interest and met the criteria for participation, the researcher asked if they wanted to participate and offered the available dates and times for the focus groups. The researcher place women into the groups they requested. A consent letter was sent to each participant, all by e-mail, further discussing the focus group, its purpose and their role, confirming the expectation that they would attend on the given date (Appendix C). Women consented to being audio-

recorded. The consent form was available for signature at the focus group for those participants who did not bring the signed consent with them. All participants were asked if they would prefer a phone call or e-mail the day prior to the group as a reminder, and they received the reminder. Samaritan Obstetrics and Gynecology agreed to provide refreshments and light snacks during each focus group. Each focus group lasted 2 hours, with initial time for introductions and review of the purpose.

Description of focus group interviews

The moderator of the group was the researcher. A second nurse midwife from the practice was present to help take notes. All discussions were audio recorded using two recorders to assure that no data is lost. A verbatim transcript was made after each focus group from the recordings, following Krueger's recommendation that first time researchers self-transcribe as it will improve their moderating skills in future focus groups (Krueger, 1998).

Initially a description of the concept of physiologic labor and birth was presented and introductions made. During introductions women give information about the number of children they had, where they had given birth, and many offered some idea of why they chose to participate. Specific questions were then presented to the group (appendix D). Questions focused on three main themes: Why physiologic birth was important to the individuals in the group, what was helpful during pregnancy to prepare for an unmedicated birth, and what was helpful during labor and birth to support birth without medication. While additional leading questions were designed to stimulate conversation as necessary (appendix D), they were not needed, and only the three basic questions were asked in all four focus groups. Using large tablets/flip charts, the researcher posted themes and ideas during each group as they presented themselves. Participant verification was obtained by including an opportunity for all participants

to summarize their thoughts and feelings near the end of the focus group. The facilitator summarized the key points and asked participants to respond to the summary while still in the focus group; a technique known as member checking.

Analytical methods

Qualitative research was used to gain insight into women's attitudes and values regarding unmedicated birth and their views on how it is best supported during pregnancy and the birth experience. The interviews were audio-taped, transcribed, and made anonymous. Data analysis examined the participants' views of the key interview areas presented in three focus group questions. NVivo analysis was used to help sort and arrange the information so that themes and meaningful conclusions were identified. NVivo is a qualitative date analysis computer software package used to sort and organize text rich information.

Data collected included field notes and transcriptions of recordings taken during the focus group. The field notes included the note taker's written notes taken during the focus groups and the written notes on the flip charts from the review at the end of the focus groups. The researcher transcribed a verbatim script after each focus group prior to the next group meeting. Once the transcript was completed, beginning coding occurred and notable quotes were highlighted according to each of the three questions. Data within a group and between groups was compared as additional focus groups occurred, again collecting and combining information between the groups based on each of the three questions.

Using a thematic analysis approach described by Braun and Clarke (2006), the researcher analyzed the focus group data. Thematic analysis is a flexible data analysis approach that is easily described, less prone to data analytic error than some of the other approaches to qualitative analysis such as grounded theory, and does not require intensive training in the method to be

valid. Thematic analysis relies on identifying, analyzing and reporting on patterns and themes in data.

The researcher followed six basic steps in doing the thematic analysis. The first step was familiarization with the data, accomplished during the process of preparing and reviewing data transcripts. The second step was to develop beginning codes, also known as open coding. The third step was to look for themes by collapsing some of the open codes into categories. A preliminary definition of these broader categories was developed to facilitate the fourth step of the analysis, which is to review the themes that were generated. In this stage, quotes from the interviews were selected to illustrate these themes and included in the memos that describe the themes. In the fifth step, the memos with the definitions of the themes and associated quotes were refined after re reading all memos and data excerpts. The final sixth step involved summarizing the themes across all interviews in the form of a report of the findings. The following narrative describes in detail how the analysis was conducted.

Protection of Human Subjects

This proposal was reviewed by the IRB and approved in December, 2010. No identifying information was recorded from any of the tapes, notes, or transcripts obtained from participants. All raw project materials, for example write-ups and transcripts, were stored and saved on a CD that only the researcher has access to. All tapes were permanently erased once transcribed. The CD with all transcripts and information will be held for 3 years and then destroyed.

Why Women Choose Physiologic Birth

And What they Believe Supports the Choice

Clinical Inquiry Report

Susan Wegelt Heinz

Oregon Health & Science University

Clinical Inquiry Report

Results

Sample

Four focus groups were conducted. The first group had five women participants. The second group had nine participants, the third had nine participants and the fourth group had six scheduled but only four came and participated. Group 4 was the only group where individuals were scheduled to attend but did not show; both women who did not attend contacted the researcher asking to attend another group as they had an unexpected conflict; however this was the last group so this was not possible. Total number of women participating in the four focus groups was 27 (See table 1). All participants met the inclusion criteria.

Of the 27 women participating in the study, eight had at least one home birth. One woman in group 3 had her first child by cesarean in a hospital in another community, and then had her second child at home, a vaginal birth after cesarean (VBAC). In three of the groups there was one woman who had desired an unmedicated birth but had a cesarean birth after laboring. This occurred randomly and the group in which they participated was not planned. In addition, one of the three women who had a cesarean birth had planned a home birth and transferred to the hospital. In group 2, one participant had planned a home birth with her first child and was transferred in to the hospital for prolonged second stage and gave birth in the hospital as soon as she arrived; her second child was born at home. One woman gave birth outside the community as she travelled in order to birth in an out-of-hospital birth center. One study subject had her first child in a hospital in the United Kingdom with a midwife and her second in the local community hospital.

In the third group, eight of the nine women brought their child with them to the group. Only one woman from each of the other three groups attended with a child. A discussion of bringing children or not bringing children did not occur in the recruitment conversation.

Cost

There was no budget for this study. The cost was minimal but was the responsibility of the researcher. Good Samaritan Regional Medical Center provided a conference room without charge and Samaritan OB/GYN provided some beverages and cups. The researcher supplied additional beverages and light nutritious snacks such as nuts, crackers and cheese, and fruit. In addition all fliers were printed on the researcher's printer and the large post-it flip chart and markers were purchased by the researcher. Total cost for supplies and snacks for all four focus groups was approximately $50.

Findings

Three questions were asked to all four focus groups. The findings are considered based on these three questions.

1. Why did you choose to have an unmedicated birth?
2. What do you think supports the choice during pregnancy?
3. What do you think supports the choice during labor and birth?

Initially there was a brief explanation of the project objective to discuss physiologic or unmedicated birth. Then introductions were made and each participant identified themselves and shared whatever they wanted about themselves, their birth experience(s) and some stated why they were there. Then each of the questions was simply stated. In each group there was little need for prompting or encouragement. While additional prompting questions were designed in the proposal, they were not necessary. A simple question led to extensive conversation and

exchange of information, and ideas were free flowing. Each group had its own flavor and uniqueness. After review of the transcripts from all four focus groups, the results were grouped by the three questions. Open coding occurred and the codes were collapsed into themes. There are themes for each question. After each indentified theme, the words of the women themselves that best demonstrated these themes are presented.

Question 1: Why did you choose to have an unmedicated birth?

Many concepts were verbalized and discussed in the focus groups regarding why these women chose to have an unmedicated birth. All four groups were very willing to share their thoughts about unmedicated birth and why it is important to them. These ideas were open coded and collapsed into three major themes (figure 1):

- Empowerment;
- Believing it is the best way;
- Fear and distrust of interventions, hospitals and medicine.

Empowerment

Women defined empowerment in many ways. They viewed birth as a rite of passage, connection between themselves, their babies, communities, culture, and the world at large. They consider experiencing birth without medication as a choice that has value for the women themselves, reinforcing and supporting their positive self image as mother, protector of their unborn child, and strong woman. They acknowledged the power of the process of birth, their own need to be truly present and verbalize the amazement and ecstasy of the experience itself. Explaining empowerment and birth as a rite of passage, one woman stated:

> *As the birth was coming closer, it really started to feel like this was a rite of passage for me in a culture where our rite of passages are getting a driver's license, drinking, having sex – maybe voting. But this was truly a really powerful initiation onto womanhood.*

Another commented: "*This was my rite of passage and I needed to be really present for that"*. Another woman noted that not controlling the labor process would negate the rite of passage she thought she should be experiencing:

> *I was coming into my womanhood and coming into myself. I think that if birth is controlled by someone other than the mother, it seems like it wouldn't be a rite of passage thing anymore, my power would have been removed.*

Women further described their feeling about how this empowerment and rite of passage of birth was multigenerational and connected them to other women and the world:

> *When I grew up, my mom never talked about birth as being this awful, painful, scary thing, it was just something that she did, and it was always talked about as a joyous thing, like, like, a rite of passage, and so for me it seemed like --such an intense rite of passage--to be able to do. It's something that you go through and it makes you stronger, and I didn't want to miss it. I believe that my body could do it, so why do I need to do anything different.*

For some, it was about a connection with other women and the experience in of giving birth in general.

> *The reason I wanted to do it is just because I could, you know, and just kind of connection to the fact we've been doing this for, you know, six billion people on the planet, and it seems like, if all these women can do it, I can do it as well. That was a big part of it for me.*

Power and strength of experiencing birth was described throughout all groups. This is how some women put it into words:

> *Partly because of my reading and talking to other people who had natural births, then I came to realize that birth can be so powerful and I wanted to experience that, you know if at all possible. I also felt like it was the right start to give my baby, if at all possible.*

Some spoke about the feeling of power that came from the experience of being fully aware:

> *I just felt really powerful to be able to just (pause) - my body can do this and be present. To be really present through the whole thing. And I still have memories of that final push and I think about it -- how it felt.*

Others said:

> *The feeling was like, wow, amazing. I guess for me, the feeling of your child moving down the birth canal, like wow, why would you want to mask that?!*

> *I didn't want to be kinda drugged, or to not have any feeling somewhere that would somehow take away from that intensity of those moments when the baby was just first there -- and I wouldn't have wanted to have missed that feeling of the baby passing through my body (sigh).*

> *It was about me being totally clear and being able to feel everything and, you know, just being really aware of what was going on after he was born, and also how aware he was when he was born, but like the minute he was born and just that whole feeling, it's like, I wouldn't want to cloud that at all (pause) - the magic. [Another woman] yah, it is magic.*

Some spoke not just of the immediate experience of power that came from being fully aware during birth, but a sense that going through the experience had a lasting impact on their sense of power:

> *I think once, if you're able to have an un-medicated birth and then you have that euphoria once the baby is born, that, you know, it makes you that much stronger, as a woman, it's your power space. That power stays with you. It gives you that power and that sense of power and trust (pause) - trusting yourself.*

This theme of empowerment was verbalized by the women of this study in many different ways and with many different voices. Empowerment through the rite of passage of birth itself, empowerment by gaining a sense of strength and accomplishment, and empowerment by connecting to women of other generations and to womanhood in general were all expressed.

Believing it is the best way

Women expressed a belief that their bodies were designed to give birth without needing medication. They presented a conviction that the pain had a purpose, that it was different from other pain and had value, and that this was the best and safest way for themselves, their babies, and their early parenting and recovery.

Describing their belief that their bodies were designed to give birth, here are the words of one woman:

> *Reading about, like that actual process that your body goes through when you do natural, it just like, when I read it, it just like made my heart come alive, and I just thought that's what we were intended for -- like that's what our bodies are made to do, and even just down to the natural pitocin that your body releases to give you amnesia. You don't*

actually remember like how bad it hurts. I just thought, this is the way it's supposed to be, you know.

Others said this about having belief that this was the natural way we were intended to give birth:

I chose unmedicated birth because I believe that if you're a woman, you have all the parts and all the stuff that should work you know, and why, why throw into your body some stuff that could potentially mess up the natural way of doing things?

It seems to me that nature has done a very good job of perpetuating all of these different species, and I have a lot of trust in nature and that our bodies can, are designed for this, and can, have the capacity to handle it.

Some commented on how they believed feeling that the pain itself had a purpose and benefit:

I felt like pain in the process was productive. It helped me to --and it may be related to freedom of movement, but I felt like pain would help instruct me to seek out positions that were more productive for the process, or more helpful to the process.

I feel like I'm a bit of a wimp when it comes to pain, but this is -- it's not like any other pain you feel. Its pain with a purpose you know, it's like you're feeling this pain for a reason. You're going through something and trying to accomplish something and it -It's not like getting hurt, you know. It's not the same kind of pain at all. It's actually beautiful!

Women described their concerns about using medications during labor and birth and the effects on themselves, their babies and their early parenting. They voiced an incongruity between avoiding substances such as coffee, alcohol and drugs in pregnancy, yet readily utilizing medications in labor and birth:

I wanted to do everything right, even during the pregnancy. You know, I didn't drink at all. No coffee, no alcohol, nothing. I was very conscious about everything that I put into but my body so to me, at the end, then medicate?! After all those months of not drinking beer and wine, it seemed totally against what all that had been before.

The consequences and the baby, I was worried it would affect the baby and it interferes with the natural processes. It kind of would affect your contractions, and the baby, and would lead to more baby monitoring. I was very freaked out about the baby having this monitoring device put into its head, and all this stuff, and I just felt that --you could just kind of diminish the stress on the baby as much as possible is important.

Others talked about how the drugs during labor could affect the baby:

I just didn't wanna give my daughter any, any drugs, because I learned that anything I will take will go to her, and I also read that it could possibly affect my bonding with my baby for awhile and after birth could affect her behaviors.

I had also read about how when you deliver a baby, if you had medication, that sometimes the baby comes out sort of lethargic and it's harder to start nursing and that there can be more difficulties with the child and the mother-child bond, and the child's awareness and alertness.

Women also talked about the longer term effects on bonding with the child, breastfeeding, and parenting:

I believed after having my first baby how important having an un-medicated birth was to the recovery, postpartum, and to the breast feeding relationship, and how much easier of a transition that was.

If you can get through that [unmedicated birth], that you can probably work through any other steps of parenting that follow, because this is a tough one (pause) I think.

A very strong focus and concern was the well-being of the child. *"Whatever will be easiest for the baby to enter the world – to make that transition to being a human."*

This theme of believing that unmedicated birth is the best way was presented during all focus groups. Women expressed a belief that it is not only the best for themselves and their babies, but that their bodies were designed to give birth.

Fear and Distrust of Interventions, Hospitals and Medicine

Women expressed significant fear about interventions such as epidurals, continuous fetal monitoring, pitocin, and cesarean section. This fear was stronger than their fear of childbirth itself. They reported feelings of general distrust of interventions and hospitals as a main reason for desiring an unmedicated birth, often seeking alternative birth locations. Women frequently cited that the belief that one intervention leads to another, that medicating in labor was the first step in the path to intervention, and that the medical system was designed for intervention.

This fear of intervention being preceded by medication for pain was vividly described by many women in the focus groups. One woman described her fear of medication causing a cascade of interventions:

I think the first of a number of reasons why I wanted an unmedicated birth related to a fear of -- if I were to have medication that it would stimulate its cascade of things I really

> *didn't want to happen. Somewhere in my mind I knew I really wanted to avoid a cesarean if at all possible.*

Other women presented their belief about the importance of remaining active and unmedicated to support the outcome of giving birth without intervention and their fear of not being able to be active:

> *In another [laughs] of my many layers of reasons, I like to be active. The more I read, I had the sense that if I was going to have success giving birth naturally, I needed to be not just in my body, unable to move. So the idea of an epidural and not being able to walk was like, terrifying to me. I actually came to be more afraid of having the epidural than of the pain.*

> *I think at some point my brain just shifted to, you're going to do this, and the way you're going to do this is by being able to move. So the idea of not being able to hop out of bed if I wanted to was just kind of horrifying.*

Another made this statement about medications: *"I think medication; it is a way of, another form of, containment, as does the bed, as do other aspects of the hospital birth."*

Some women were afraid of the actual epidural procedure itself:

> *Probably the driving force for me was the fear of actually having a needle stuck in my back -- with an epidural, like I'm just terrified of needles, so I had the fear of -- the actual fear of child birth itself seemed completely easy instead of the fear of the epidural.*

The perception of cascading interventions and concerns about the hospital environment and lack of support for unmedicated birth was further described by participants.

> *The fact that once you go down that path [medication and intervention], that there could be less choice on your part. Things can happen. Your body is no longer in control and the medicine is. So your body it might get interrupted in its own process, which can lead to C-section.*

> *So I had a real loss with my first birth [gets choked up and tearful]. I had a lot of anger about that still. So when I got pregnant a second time, I've never been a homebirth person, but when I got myself into the office and I went through the hospital here, and I just kept having these anxieties about the hospital. I couldn't go back.*

One woman commented, "*Had the hospital been a kinder, gentler place to be in as a candidate for VBAC, I wouldn't have run scared."* Another said that she wanted to trust doctors and nurses, however,

> *I like to listen to doctors and nurses. I trust them. So it was really hard for me to be going the other way [home birth] -- like, "I know better?" No, I don't know better, you know. I just didn't want to be stuck in that situation where my due date went past and I had to make that decision to say, 'No, I don't want to be intervened'. I didn't feel really comfortable with that because I did want to trust the doctors and the nurses – but yet, I felt uncomfortable because of the stress that I was getting.*

Some women talked about the lack of support from their provider for alternatives and how this lack of support made them worry that they were making the right decision:

> *I find it really interesting, -- when you talk about the desire for an unmedicated birth -- when I did with some people, including some family members and friends, and some people in the medical establishment, there's a sense of like, selfishness, or why would you*

do this to yourself, or why are you being so, you know foolish. Would you get a tooth pulled out without Novocain is something I heard many times.

I was very afraid that I was being selfish [by choosing home birth]. I thought, God, I want to give birth naturally so badly that maybe, maybe I'm putting my baby's life in danger [chokes up/tearful].

I think it's interesting that the words pride and stubborn came up. I think that I, too, had used the word selfish. That's a problem as far as I'm concerned. I don't agree we should be made to feel like it's being stubborn or proud or selfish that we do not want to have drugs pumped into us.

There were many fears and concerns voiced about medication and intervention, as well as lack of support from the medical community for birthing without medication. Multiple participants in all groups talked about the concept of a cascade of intervention beginning with using medication. For many, the fears of epidurals and interventions took precedence over any fears of the pain of childbirth.

Question 2: What do you think supports the choice during pregnancy?

The question, what do you think during pregnancy supports the choice of having an unmedicated birth, was asked and women responded with thoughts, ideas and suggestions. These ideas were open coded and collapsed into themes. The general concepts were about culture, and can be categorized by what works and what needs to change. The resulting themes developed (Figure 2):

- The value of learning from women and importance of community;

- The need to change culture and support options;
- Concerns and needs regarding prenatal care and care providers.

Value of learning from women and importance of community

Women expressed a need to learn from other women about birth. They discussed the value of seeing women give birth without medication and hearing birth stories. They conveyed the importance of community, sharing with other women who want to birth without medication and those who have already given birth, and verbalized the value of education and support during pregnancy from other women.

Women talked about learning from other women who had given birth without medication, seeing births, and hearing birth stories:

> *The biggest factor for me was being at a friend's birth, a home birth, and I think that if we, as a culture of women, invite young women to our births -- that's, you know, it's a tremendous gift.*

> *I think it can be really helpful for people to have seen an unmedicated birth. I mean its super cool if you can actually go to one, if you have the option somehow, but if it has to be videos – and I mean realistic videos. And maybe if there was a book or a collection of stories about having a natural birth in a hospital, or a website. Put it on the website. I would put my story on there. Seriously.*

Others talked about the benefits of talking about the birth experience with others, either when they were anticipating their birth, or being able to share the experience:

> *I thought that it was really helpful to have other people that were all first-time parents and everyone planning an unmedicated birth, not all of them planning home birth but, it was really nice to just be comrades together.*

I actually had a really hard time. Every woman that I knew who had a child, I would ask them about their births, and it was very difficult for me to find anybody who had had a natural birth, so -- a class or group with women planning unmedicated birth would have been wonderful!

They also validated the need to hear positive stories and avoid the negative ones:

Enough! I don't want to hear anymore. If someone starts to tell you a bad birth story just say thank you very much and walk away. But I think that having positive birth stories are beneficial, but unfortunately, it's like a war zone. 'Let me tell you every horrible thing that happened to me during my birth'. Enough!

I got some good advice from a friend of mine early on. She said when someone starts to tell you, 'oh my goodness let me tell you about this horrible thing, or my 48-hour labor, or this baby that was born without a brain' -- I'm not kidding, she told me this -- she said, you just tell them, thank you, that sounds really interesting experience. An experience you can tell me about after I've given birth. Because she said it all has to be bunnies and rainbows until then. [Laughter].

The women stressed the value of community and of establishing a sense community where they were able.

It takes a community to raise a child, but it also takes a community to have a child. So for me, my yoga class provided opportunities to discuss childbirth. We talked about mentally getting ready and physically getting ready, and we had the support through birth. My

husband is a wonderful birth partner, but then we also had a doula which provided that extra support. So it takes a community to have a baby, and raise a child.

To be able to share with others who had unmedicated birth or were planning to do so was a clear benefit.

And so I think of, a big part of the prenatal experience for me was getting into a culture of normal birth, and meeting other women who had done it, and gone through it, and having somebody to talk to, and like I said before, talk about fears and expectations, and, and being in an area like this where so many women have done it.

Birthing groups as well. It's kind of like a support group during your pregnancy and everyone talks about, you know, what they want for their birth, or what they hope, or even expect, don't have those [expectations], but, I think that you know it's just feeling kind of connected with - especially with your first - with a group of women that you feel like can support you and your choices, and … it gives you an opportunity to connect with, with people that you might have something in common with whether it's an un-medicated birth choice, or home birth, or, whatever that might be, you might not have met those people in another circumstance.

Women discussed a strong need for support of other women when they are pregnant. Across all groups, participants voiced the value of viewing natural births or hearing positive birthing stories. They discussed the value of being part of a birthing community and sharing with women who have similar beliefs about unmedicated birth.

The Need to Change Culture and Support Options

Establishing a birthing culture in which women surround themselves with others who believe in and pursue options in birthing, and understand what options are available is another important concept. Women expressed the need to change the birthing culture from acceptance of intervention, to understanding, supporting, and accepting birth without medication. They offered specific ideas about what would help to change the birthing culture and facilitate birthing options, including the use of midwives and birthing centers.

One woman shared an observation that in our culture, not many women have experienced unmedicated birth, so that limits one's ability to get support for making that choice.

> *I don't think a lot of people in this generation of people having babies have any point of reference for how to have a baby unmedicated - like they haven't seen it. They haven't seen it! None of their friends do it, their parents were, (pause) we're at an age now where their parents didn't have un-medicated births, you know, epidurals were totally the thing twenty years ago, they've been around, and so I think that, for most people who have that idea that they want to have an un-medicated birth, they don't really know what it is, and they don't have a real strong sense of being able to do it, because they, -- its just kind of like 'well I think I'd like to try', and that's as far as they get so then they get in the hospital and it get real painful, and that's out the window.*

Some women discussed that our culture does not support experiencing pain if it can be avoided, and that the pain of labor is so intense we should want to circumvent it. These women expressed a need to create a change in culture to accept that the pain of childbirth is unique and to support those who want to experience birth without medication:

> *We have this culture that shows that birth is the most intense painful thing that you just want to escape. And I feel like, you know, major cultural shifts just on a person-to-person*

> *level can happen if more of those stories were out there. You know, here's my births, this is my birth experience, and it was intense, led by so many ways that it can go, here's my story. I feel like that would be really an opening for people who want to have an unmedicated birth and who haven't yet had a birth.*

> *We need to create a culture where it's ok. It's ok to go without medication, it's ok to ask questions and want something different, and the way to do that is to show, show the young people.*

> *I was tired of always feeling like I was an idiot for choosing differently, or for even asking for a different option.*

They offered specific advice and recommendations for changing culture. One of the key ways to change the culture offered was the use of midwives.

> *When midwives became part of the practice it almost added like that medical stamp of approval. You know we made birth into this medical procedure that's not a natural one, seems to be that, very culturally what we see, where I think a lot of the fear about the pain and the birth … and having midwives part of the office staff, I think it gives a sense that un-medicated births or natural births are not bizarre or odd, you know, it's an established part of the practice, that this is another way to have your child, and for other women who may not be exposed to other options, I think that's really helpful having them there.*

I know one of the OBs in practice locally and I remember her saying to me that she very much appreciated having the midwives as part of the practice now because she said some of the medical OB perspective - and this is her perspective - she said you were schooled in everything that goes wrong, and that medical training is all about everything that goes wrong, and she was keyed into all of that and so, and you want to try to fix things and try to - and she said the midwives perspective comes from more a greater place of trust, and she said that's been really helpful for her to see how that different sort of perspective about, nature as opposed to all of the potential crises, and all of the extreme events that come in and which may cloud judgments and interference more in the natural process. And so I thought that was an interesting perspective to get from her, from, like the medical school route and, why, you know, why, she can say, intervene more in births than a midwife might under similar circumstances.

I think having caregivers who are trained in normal birth makes things different. And I think that's why the midwives have such an impact. Whether they're CNM's or direct entry midwives, they really know all the different shades of birth. But I think the woman is much more supported in that kind of environment.

Some suggested that a birth center would also be a way to change the current culture:

I think if we had a birth center here, as opposed to just the maternity ward, you know if there, you know something that was slightly different, slightly separate that had a different focus but still within the surrounding area of the hospital, it adds that sense of acceptance for an alternate way, or that it isn't, it isn't just for hippies, you know …it's still a main stream option, this is a natural option that, that's really helpful.

I wish we had a birth center. I think that having a birth center would kind of official like say, yes its okay to have a midwife. Yes here's an official building where you can have a midwife. And where it's safe.

Women discussed the need to change the culture of birth from acceptance of medication and interventions as the norm, to acceptance of unmedicated physiologic childbirth as the norm. They verbalized the importance of need for support for options and discussed the importance of midwives and birth centers as facilitators of physiologic childbirth.

Concerns and Needs regarding Prenatal Care and Care Providers

Women discussed their experience of prenatal care and what they wanted from their prenatal providers to facilitate an unmedicated birth. They expressed the need to have support from their providers for options, to feel trusted and that their providers believed in the value and experience of unmedicated birth. They conveyed their feelings about the importance of relationship, the need to be empowered during visits, and need for support for the emotional journey, not just the physical experience of pregnancy. This is why many women stated they sought care outside of traditional medical practices and sought home birth midwives or small group practices.

There are a variety of factors that make it difficult for women to feel supported and educated regarding their decision to have an unmedicated birth during their prenatal care. Some factors are practitioner driven, such as care providers being "alarmists" and focused on anticipating problems rather than supporting the normal process, some are system driven, such as short prenatal visits and too many practitioners. Women state that frequently options are tolerated but not truly supported.

Women discussed wanting support from their care providers for the decision of having an unmedicated birth. Women wanted to feel their providers valued unmedicated birth was presented. As one woman said:

> *It was so important, supporting my decision in unmedicated birth and not judging me and not just thinking - wait till she figures out how bad this is going to be - you know what I mean? Providers need to understand why making this choice is important. If they can support it as a choice, that in itself would be pretty great.*

Another woman wanted more information from providers on what unmedicated or physiologic childbirth would look like:

One thing I never got from the midwives or OBs – and I don't know if I ever asked for it – was, prenatally, any discussion about the actual birth process as a natural process. So positions, or relaxation, or things that you guys have seen – you guys have seen more unmedicated births than any one – so that might be helpful.

Women also identified care planning that acknowledged natural childbirth was possible as something helpful that providers could offer. *"I just wanted to feel like they believed I could give birth naturally. Not that it was an unrealistic goal."* This was mentioned as a strategy that should be used routinely: "*It would be really helpful if when the conversation turns to like coping or pain relief when you're having a prenatal visit, if natural methods could be discussed first."*

Women stated that unmedicated birth should be a strategy presented as an equally good alternative.

> *We should have access to an alternative that's presented as a long side of the mainstream, because it's not presented equal, it's like there's only one option, and if you don't go for it than you are risking the life of your baby, and you're just (pause) weird.*

One woman described her vivid idea about how to support and encourage woman to be empowered in birth:

> *And birthing is physical and psychological. So is basketball. So hanging out instead of looking at birth as this medical thing, how about midwives and doctors serve as coaches. 'All right! You're going to do this! This is exciting! We are going to get out there! Then go shoot a bunch of hoops!' That's what coaches do. They're not sitting there telling you about every injury you can get. Birth is something physical. Why don't they do that with women? Alright, your body is going to go through this, yet it's going to hurt but it's going to be good.*

Others commented on the need for sensitivity from providers:

> *I want to acknowledge that when you are pregnant, you are in a heightened state of sensitivity to comments like "You're old" or "It's going to take longer to lose the weight. ...I think, you need to remember that you are dealing with sensitive women, handle gently because those things do stick. They do stick and they are hard to dislodge.*

Women voice concerns about care providers being alarmists and focusing on problems even when nothing was wrong. As one said: *"During prenatal care, I received fear and trying to instill fear, and fear of alternatives"*. Several said they felt pressured to not have a natural birth.

> *Talking with my practitioner it became kind of clear that, you would be pressured into not doing a natural birth because like, if you, if you wanted something that had no intervention, you couldn't really go through the hospital or something because - it just wasn't what they were going for.*

Some said that they were made to feel that they were putting their child at risk.

> *Whereas with the provider you really feel that, their perspective on what you should do is the best option ever and if you choose something else, then you're endangering your baby and you really shouldn't be doing that.*

A lot of times, being presented possible risks seemed like pressure to accept intervention as inevitable.

> *The midwife was being very alarmist with us, which didn't make sense as I had had another child already and it was a completely normal birth, and they were like this can happen and this can happen, and I even said at one point, yeah I know but let's move on. And it was like they were trying almost to make me feel like I was going to have to have intervention, so that was irritating.*

Others felt like they were constantly defending their choices:

> *Something about the word defensive really resonated with me so I kind of felt like, through just the prenatal process and even up until getting to the hospital with my birth plan and my doula and everything like, felt - yah, I guess I kind of felt defensive. Like I had to defend why, why I wanted to this and why didn't I want to have a, you know, any type of an IV start put in or anything like that, and other than just a few appointments I felt like, that was like, accepted but not really. So 'yah ok' but it wasn't supported. I would say accepted but not supported.*

And others definitely felt as though it was being made clear to them that their choices were not in sync with what providers thought was right: "*If you have to do it like that we'll accept it, but we don't really want you to or encourage it."*

Some of the concerns were driven by the system. Concerns about prenatal visits were voiced; feeling that visits are too short and there are too many providers included in their care. As one woman said:

> *It didn't seem like a lot of help in preparing when it came to the OB and the midwife appointments, it was just kind of in and out, and even though, like you can come in with your questions, but it just seemed real kind of short.*

Participants expressed future concern about the short duration of appointments and inconsistency of providers:

> *The appointments are, you know fairly limited. With the midwives it seemed to be, they spent more time, the doctors were kind of, pretty quick with you, and so I guess not, I guess I probably wouldn't choose to go that route again. I would probably rather have more of a relationship with one person.*

> *And as I started getting closer to realizing I was going to have a birth and this was going to be a scary, new, powerful - many-things experience, I realized that, for me to be the most successful, I felt like I really needed a relationship with one person. And it was making me absolutely crazy that I was meeting a different person every time. I didn't know what their angle was and here was another person, too, with the list of questions.*

Women voiced a strong desire to feel supported in their choice to have unmedicated birth. To feel supported, they wanted to experience acceptance and acknowledgment from their providers that they were capable of having physiologic birth, that it was a good option with some benefit for mother and baby, and that their providers valued the choice. Many women presented that instead of trust, they felt judged and needed to constantly defend the choice. They also

voiced concerns about the way prenatal care was offered, including short visits and many providers.

Question 3: What do you think supports the choice during labor and birth?

The women of all four groups shared many thoughts about what supports the choice of unmedicated birth while in labor and experiencing birth. After open coding of the transcripts, two themes arose (Figure 3):

- Wanting support for birthing options; and
- Strategies for getting support of choices.

Wanting support for birthing options

Women wanted to feel supported for giving birth without medication from all involved; their partners, the hospital or other birthing staff, their midwife or physician, their doula, friends and other family members. They expressed the notion that those who attend them remember that all women are unique and that their labors and birthing experiences will be individual and unique as well.

The importance of support from staff was discussed. As one woman said:

Having staff trained to understand and support the natural childbirth approach. And the ability to be with them and provide them with that. Because without the doula there might've been very different for me.

Constant and enthusiastic encouragement was important:

I think one of my favorite things that my midwife kept saying was 'perfect, perfect'. That was the word, and I was like, really? Really, this is right? [Laughter] She kept saying perfect and like I was in chaos and felt like everything is crazy and she just kept saying perfect. What you just did was perfect. I started thinking like, I'm good at this. I'm really

good at this! [Laughter] I've never done it before but I'm doing it perfectly the first time! [Laughter]. You know sometimes it's just hearing the word repeated, a word that's not subtle. Perfect is not subtle. Perfect is the top. It's as good as you get. And I was just like, okay, I'm doing this. Awesome! [nervous laugh].

The constancy of encouragement from those involved in their birth was also mentioned as important criteria for the kind of support needed.

I think it was really helpful for me was being gently guided into different positions by the nurse and midwife. I mean, they might have asked me do I want to try this or go there, but I didn't hear it. I was just like guided to the shower, and then guided to a yoga ball, and then guided to the bathroom. Then somebody would be pressing on my back or pressing in my body in different ways. It was just somebody always there.

Partner encouragement, not just provider, was also important.

For me at least, my husband was the person I wanted to be able to remind me of certain things, so it was almost an education for him as well as for me that helped. Because if you have a partner who is really important to you and they don't know what's going on and you're in transition and he starts freaking out, that really doesn't help.

Being able to read and interpret what the woman in labor was experiencing was also crucial.

I think it's so important to realize that women are all so different when they go into labor. Just really having someone there that's aware. Being able to read the women in labor. Knowing we are all different.

The importance of support in labor was viewed as critical for the women in this study. They wanted support from everyone involved in their birth; their providers, nurses, doulas,

family and partners. They wanted the attention and focus to be on them as individuals, reading them, anticipating their needs, offering support.

Strategies for Getting Support of Choices

During this question, women offered very specific advice and suggested many strategies for getting support of choices when in labor. These strategies are categorized in three ways: (a) specific strategies they need for accomplishing unmedicated birth; (b) specific supportive activities during labor that they believe impact their ability to give birth without medication; (c) specifics in the environment that they believe support unmedicated birth.

Specific Strategies

When discussing specific strategies women need to have in place for accomplishing physiologic birth, they pointed to the importance of, once again, hearing other women's birth stories and seeing births. They discussed the value of doulas or a support person who is experience and not emotionally involved, and discussed the importance of trusting your instincts.

Women again discussed the importance of learning from other women's birth stories. One woman discussed videos she had viewed and how it had helped her:

> *The videos that we saw were so helpful. Like one was just 30 minutes of all these women in the most active phase of labor and we are taking notes on how women were coping and how they weren't, and how their partners were supportive, and how they weren't. Who is supportive and how were they supportive. Was the midwife supportive? And that was really helpful to see this huge range of how people cope with things.*

Many women identified a doula as a helpful strategy to prepare for an unmedicated birth. Women verbalized the importance of doulas as a support person known to the woman and her partner during pregnancy. They discussed that they could review with the doula what they

wanted before going into labor and that she was there just to support them without having the emotional involvement that family members often have. Here is what one woman said about doulas:

> *We didn't have one [a doula] the first time, and after having birthed once, I realized my husband and my strengths and weaknesses as a team and where I would need additional support of a person in order to make it through again and have the birth I wanted. So it's additional support.*

Another strategy discussed was learning to trust one's instincts. Many women verbalized that it was important to learn to trust yourself and follow what felt right in labor. *"It's really good to trust your own instincts when you're in labor."*

Women discussed specific strategies they needed to have before labor to support them during labor to have an unmedicated birth. Among these were the experience of hearing birth stories that supported that women could accomplish unmedicated birth, and learning to trust themselves and trust their instincts.

Specific Supportive Activities During Labor

There are many specific activities during labor that women believe impacted their ability to give birth unmedicated. These activities included reminders and visualizations that the baby is coming, that the pain of labor and birth has a purpose, and that pain medication was not what was wanted. Women discuss the importance of hearing these reminders specifically from their provider. Women also included the importance of not rushing or feeling pressured to "progress" and keeping hands off.

The importance of reminders and visualizations, as well as that pain medication was not originally desired was brought up in all four groups. One woman discussed the importance of reminders and visualizations that the baby is coming:

> *Lots of reminders that what you're feeling has the purpose. I like hearing visualizations of what is happening. I think, you know, it's like reminding us that it's, it's not you know like stub your toe pain. It's like bringing you a baby pain.*

Women also discussed the importance of hearing these reminders specifically from their providers.

> *Reminding a woman that it [pain medication] wasn't what she wanted. But what really makes a huge difference and totally would change her attitude would be having her doctor say, you didn't want this. You didn't want this because it's going to affect your baby. And then you'd be like oh yeah. It was like the voice of reason.*

> *It's like the voice of God or something when the caregiver says it. It's different than the spouse. It's even different than the doula. It's different than the nurse.*

The importance of not being rushed or feeling pressured to "progress" and keeping hands off were identified as very helpful. Women voiced that often there were so many cervix checks, and exams, and voiced that they felt like their provider was always ready to prove things were not progressing, or they were not meeting some established standard. " *It was the hands-off for me. It facilitated the natural. I didn't feel rushed. I didn't feel like - I didn't feel claustrophobic, and it was just, just was so hands-off."*

Environmental Strategies

The final strategies women spoke about were specifics about the actual birth environment and setting. Women discussed qualities and factors in the environment that they believed supported unmedicated birth. These specifics included not being treated like a patient, maintaining peacefulness, minimizing monitoring, and use of water and creating space. Many discussed how difficult these strategies are in a hospital environment, though some felt it was possible with awareness, that it wasn't the place but the attitude that mattered. Environmental options such as home birth and birth center births were present in conversation from all four groups.

When discussing the birth environment, one woman highlighted how it was important to not be treated as a medical patient.

> *One thing about my birth, was that I didn't want to be treated as a sick patient, I just wanted to be treated as a human being, a woman who was about to give birth … and its everything, from when you walk in the door and take off your clothes and put on a gown.*

Maintaining peacefulness and quiet was important.

> *Then there was quiet. I think it's safe to assume that a laboring woman wants quiet. I don't think, I don't know, we could take a poll but, there's probably nobody who's going to say, I wish people had been more chatty.*

Distractions should be minimized.

> *Minimizing distractions, like, I just needed to be able to go into my cave, you know, to like close my eyes and be right present, be right with my body and what was going on, and I - that's why I feel like it would be sooo difficult to have a baby in the hospital and do it the way that I wanted because you can't just close your eyes and sink into yourself*

for an hour at a time, because someone's gotta come in and take your blood pressure, and, you know listen to the baby and look at the strip.

Darkness and the use of water were identified as helpful strategies too. As one woman said, "i*f you're at the hospital you have to be able to make your own cave… a small dark room with a tub."* Another said, "*Water, being able to get in water helped me out. Small dark rooms with water in them -- small dark rooms. (Laughing and agreeing from group) Small dark rooms with water."* Water was mentioned repetitively as a beneficial ingredient. One woman relayed this lovely moment of giving birth in the tub: "*That thing of being in the water and relaxing, like letting go of my jaw like letting go of my hands, and I looked at my husband, and I said I love you, and my daughter was born."*

Many discussed how difficult these strategies were in a hospital environment, though some felt it was possible with awareness. Minimizing monitoring was critical. The reasons women stated monitoring needed to be decreased were twofold; (a) the monitors and belts were interference, and (b) the language associated with monitoring was invasive and threatening.

Describing the interference of the monitoring process itself, women stated:

They were trying to put the monitoring unit on me and I couldn't get a heartbeat to read well so they kept making it tighter and tighter and tighter and tighter and pushing and moving and I was way too quiet, and I finally realized to my husband went, 'get your damn hands off of her'. It was just horrible. And they were making it tighter and tighter and I was like to know that actually hurts down here.

And I knew a position I needed to be in and I wanted to be in that position and in addition to monitoring me when I first got there they wanted to monitor me again with the straps on and everything, and I was like, I just want to push on the bed and kneel down so I can

push please. So it's just like it definitely feels like it [the monitor] can interrupt the flow of what I needed to be doing.

I had asked for intermittent monitoring with the doppler and every time I got anywhere near the bed, they wanted to put the belts on me and it was (pause) frustrating, very distracting, and it made me want to not even go anywhere near the bed.

Women described how the language around fetal monitoring seems invasive and threatening during labor, and ways monitoring could be performed that would be less interfering.

I think when, when they come in and everyone gets, you get all hooked up to all these things, I think that it, it really sends little messages that you can't, you can't really trust your own self in what's going on you have to…you're kind of like guilty until proven innocent rather than innocent until proven guilty, you know?

It kind of sets you up to be afraid when you come in and you have to have all of these, you know, things strapped to you. And it kind of sets up the fear already, like 'gosh they're gonna check if sometimes wrong' and then you hear the heartbeat and you see these scary faces and then it's like '(gasp) oh my gosh, we've gotta do this' we've got to act now, and then it's like, you kind of get into that place, maybe of fear or panic.

I think that the language that they use when they come into monitor also makes a big difference. I mean if they come in and say well time to get hooked up again and get back on the machine, it's very much like okay let's get medical again, versus if she just kind of comes in quietly and say 'let's just listen to the baby for a minute with the Doppler', it's really different.

Many pointed out that it wasn't the place but the attitude that mattered. Options such as home birth and birth center births were presented in conversation from all four groups.

> *I think that one way we could move toward making a more comfortable environment for women in hospitals and, and this isn't possible at every community, but to have a birth center, instead of just going to, to a wing within a hospital, you really probably set up a very different vibe.*

One woman, who was both a labor and delivery nurse and a new mom, had a very interesting view as both an insider in the system and a woman who had recently given birth.

> *All the little things that me, as a well-intentioned nurse with, who really wants to support people [giving birth], the little things that I take away from them, you know - the baby going to the warmer versus to the mother. All the little things that we do because we have tasks that have to be completed, that don't just honor that moment.*

Another woman described why she chose home birth.

> *It's always crisis oriented [the hospital], you know, people going back and forth. I mean it's just, it's so that was a big part of why we chose to do it at home is to have that calmness so you can concentrate on just birthing. I don't think the hospital offers that anymore because they are so afraid of being sued all the time, or I don't know if - it might even go beyond that, maybe just that shift changes and people, you know all of that stuff, they come in and out, and they are concerned about vitals taking and all this stuff and being interrupted all the time. I think it's very, to me during my birth I felt, I felt very privileged to be able to just think about the birth and not be distracted by other people or, like the only people that were there were thinking about that with me and, and encouraging me through their words. It was very calm, there was no back and forth and*

> *it was just right there in our bed and I just didn't have to worry about making anybody happy or keeping tracking of who is that new person that's coming in and out or whatever. That was a big factor of why we picked home in the end. Just to have the knowing of who will be there and not be distracted.*

Finally, a suggestion from another woman:

> *Wouldn't it be nice, since not everyone has good support system within their family or friends if there was a support system of doulas, labor coaches, or midwives, that when you start your labor your doula comes to your home, and its someone your trust that you've met prenatally during your pregnancy so that they can support you being at home and they can help, especially a first time mom, help you to know when you might need to go to the birth center or hospital.*

The importance of the environment where women give birth was actively discussed in all four focus groups. They verbalized the importance of not being treated like a patient, of having some control over the environment, of needing to decrease distractions, and the necessity of being on a monitor as an interference. Women saw the use of water in labor and birth was seen as a positive strategy for giving birth without medication. Many women raised concerns that the hospital environment was not conducive to giving birth physiologically, but many voiced that it was not the specific location but the attitude that mattered. Alternative birth sites were discussed.

Situation Analysis

Through the conduct of four focus groups, women's perceptions and histories of childbirth were ascertained. The focus group interview questions prompted rich discussion among the participants. Women reported a general sense of lack of support for physiologic birth and voiced some dissatisfaction about available birthing options. While over a third of the

women in the study had given birth, or attempted birth, outside the hospital, four of these women had previously had a hospital birth and were dissatisfied with their prenatal or birthing experience and decided to change the location of their birth with a subsequent pregnancy. One woman travelled outside of the community to have the out-of-hospital birth center experience she desired. Of the women who had received care through the local hospital, many voiced appreciation of the fact that nurse midwives were attending births in the hospital, no one verbalized this as a negative factor, but there were still many concerns about lack of support of options from providers both prenatally and during labor, along with hospital routines.

The researcher is a DNP candidate and is listed as the co-investigator with the IRB, facilitated all four focus groups, transcribed all recordings from the focus groups, and analyzed all data with the assistance and support of the CIP committee members. The researcher is also one of the CNMs practicing at the local hospital and was known by 16 of the 27 women in the study.

Outcomes

To assess the outcomes of this CIP, the purpose and goals of the project are evaluated. The purpose of this practice improvement project was to explore women's perspectives in three areas: (a) why physiologic birth is important; (b) the role of pregnancy and prenatal care in physiologic birth; and (c) the role of labor and birthing care in physiologic birthing. The goal was to ask women who are known to value physiologic birthing why they chose unmedicated birth, and what they believe was needed during pregnancy and birth to help them to give birth with minimal intervention. Women were very forthright and willing to discuss why unmedicated birth was important to each of them as individuals, and to offer feedback and discuss what they believe assisted them during pregnancy as well as during labor and birth to have an unmedicated

birth, as well as offer discussion of what the strengths and shortcomings of the maternity care system available in the community were.

There were four focus groups and all four groups were presented with the same three questions. The themes that developed for each of the questions were consistent among all four groups, thought the specific responses were different, often with different emphasis depending on the group dynamics and interaction. All four groups addressed similar issues, and some presented unique suggestions, but the general feeling and concerns were similar among all four groups.

Women offered many reasons for why they chose unmedicated birth but all groups expressed strong belief in the safety and importance of physiologic birth. They expressed a belief in the power of birth, the importance of allowing the process to occur without intervention whenever possible, and the value of birthing without medication for the woman, her child, and her strength as a mother and woman.

The value of women supporting women, developing community, and hearing other women's birth stories and learning from other women was discussed in detail. Women expressed a belief that there are not enough positive stories of birthing without medication available for women. They offer suggestions for how this can be accomplished through birthing groups, yoga classes, and written word. While group prenatal care was never identified specifically as a model of care the women advocated for, many of the concepts of group care were discussed in the context of developing community and women supporting women.

Women reported that they want to be supported in their choice to have unmedicated birth. They wanted to believe that the choice is valued and respected. The support and acceptance of the providers who care for them was very important to these women. They wanted the

healthcare community not to be so focused on risk and danger that they forget that they are experiencing something wondrous – the developing and birth of a new life. They also want to be viewed as an individual, and have their individual needs considered. They want providers to recognize the emotional needs of pregnancy, not just the physical assessment. As one woman put it, "*it's such a tender time. It's one of the most tender times in a woman's life."*

The questions used were brief and very open ended. The women wanted to talk, so prompting was never necessary. In designing the study, the concept of environment was one that is presented in the literature as being important and initially a specific question about environment was planned; what aspects of the environment of birth are important for having an unmedicated birth? In an effort to determine if this was indeed a specific factor for women, the researcher decided not to ask specifically about environment, but to see if that came up when asked how unmedicated birth could be supported in labor. The bulk of the conversation in the third question was about environment – the idea of calm and minimizing distractions, about fetal monitoring as a hindrance, about creating a *"warm dark cave to give birth in"*. Women readily offered suggestions about what would work or what needed to change. While some believed having CNMs in the hospital was an excellent way of officially supporting *"the normal*", many believed that the hospital system could never really be adapted enough to allow them to *"create a dark cave"*, or not interfere when they needed quiet and minimal distractions. The supportive and positive role of the doula and one-to-one midwifery care was consistently presented in all four groups. They spoke enthusiastically about alternative birthing centers as a way to promote the natural while offering safety and connection to the hospital if needed, as well as value and desire to have home birth supported as an option.

The most powerful part of the conversation in all four groups was the opening conversation about why women chose unmedicated birth. Women wanted to be heard. They wanted to be understood. They wanted acceptance from the healthcare community and wanted those who provide care to understand that they simply want to embrace an experience that they perceive as natural as the dawn of time. They wanted to be respected for the choice, supported for the choice, and believed in. They wanted providers to understand that this is not a choice they made lightly, that they believed it was the best way for themselves and their babies. Over and over in a variety of ways, many women stated that they felt providers believed they were selfish, or naive, or demanding; and just waiting for them to fail.

> *It was so important, supporting my decision in unmedicated birth and not judging me and not just thinking -- wait till she figures out how bad this is going to be -- you know what I mean. Providers need to understand why making this choice is important. If they can support it as a choice, that in itself would be pretty great.*

Discussion

Context

While the common thread that united the women in all focus groups was a desire to talk about physiologic birth, they came for different reasons. Some had births experiences they had to work through and process, some just loved to talk about birth, some considered themselves birth activists, and some wanted to help create change. They were students, stay at home moms, struggling working moms, teachers, professors, engineers, nurses, environmental activists. The women interviewed were all good informants for the topic under study.

These women were generally well read – they had "done the reading and research". They wanted those who cared for them during their childbearing experience to know they were not just

"hippies" going against the establishment, but had thought through their values and beliefs. They were passionate about the experience of pregnancy and birth and wanted to be supported by the healthcare community and the system. They didn't want to be treated as if, because they wanted something different, they were endangering their lives or the lives of their babies. Many believed strongly that the very opposite was true; that unmedicated birth with few interventions was safer and better for themselves and their babies. Women were frustrated by the lack of options to support unmedicated birth and multiple participants expressed the notion that unmedicated birth was tolerated but not truly valued or encouraged.

There was great emotion expressed, ranging from joy and laughter over experiences, to sadness over feeling a lack of control. There were tears, a few times from anger and regret about how they had been treated, or experiences they had. Mostly, however, the tears reflected tenderness, joyous memories, a sense of the miraculous, and love.

Interpretation

The discussion of interpretation includes four areas. These are: (a) the format, (b) comparison to the existing literature, (c) creating change, and (d) implications for practice.

The format.

The format of the project, focus groups, greatly facilitated obtaining the objectives of understanding why women choose unmedicated birth. The focus groups allowed for open and comfortable discussion, and offered these women a sense of belonging and camaraderie. The women quickly became comfortable and were willing to share. The interaction of the group allowed for women to feel supported and the comments of one encouraged the comments of another. There was interaction and exchange of ideas that kept the conversation active and insightful. The free-flowing exchange of ideas, the willingness to share and participate, was

readily demonstrated by the fact that three simple open ended questions were asked, the moderator never needed to steer or direct, and only needed to move the groups on to stay in the two hour time frame. Over 130 pages of transcripts (single spaced) were obtained, all very rich with information, confirming what the literature has shown, that focus groups are an excellent methodology to identify bigger concepts and produce a richer understanding of a subject area (Morgan, 2010).

There are two concerns generally associated with focus groups. One is that the flow of discussion can move away from the original intent of the group and therefore lose the data sought. This did not occur. Women were eager and interested in the topic and did not digress from the topic. Though birth story-telling was frequent, especially in group 2, stories all directly related to the question asked and served as example and led to greater discussion.

The second concern is that the researcher/facilitator influences the groups' interactions. As facilitator, the researcher spoke very little and only served to introduce the question and on a rare occasion encouraged someone to speak if it appeared they had something to say but were having difficulty getting into the conversation. Prompting or additional questions were never needed.

Another risk of qualitative research is that the research sees and identifies information presented from the group that supports their pre-conceived ideas and beliefs. To attempt to limit this, at the end of each focus group the concepts written on the flip chart were reviewed with a group and ideas summarized. The facilitator then asked the group if these were the ideas they viewed as important and any additional ideas that were not on the chart that individuals felt were important, were added. This is a form of member validation or member checking (Sandelowski,

1993; Tuckett, 2005). In future evaluation of this study, sending each participant in the study a list of the main codes and themes to verify if they agree with the themes may add to the validity.

Comparison to the existing literature.

This study supports the findings of Novick (2009) and Leap et al. (2010) who found that women value continuity of caregiver, education, support, and involvement in decision making. They reported that women wanted to learn about and discuss physiologic and emotional changes in pregnancy, common discomforts, labor, birth and infant care; and receive support from other women who are pregnant or have recently had children. The women represented in this study extensively discussed the value of continuity of caregiver and role of involvement in decision making. The desire for support from other women and importance of community was also a theme in this study.

Researchers have described in detail aspects of a positive birthing environment (Fahey, Foureur & Hastie, 2004; Fahey & Parratt, 2006; Walsh, 2006; Page, 2006). Lepori, Foureur & Hastie (2008) acknowledge that while birth environment has been demonstrated to be important, there have been very few studies that have actually asked women what specific physical attributes of a birth space women truly valued. The findings presented here, through the words of the participants themselves, confirm the importance of birth environment. Additionally, women offered specific ideas regarding environment that they believe to be important. Reproducing this study in another location or with other groups of women would be valuable in adding to this body of knowledge.

In reviewing the literature, practitioner blindness in maternity care is discussed. Researchers suggest that by constant exposure to one way of doing birth, that way becomes the norm and practitioners are unable to see or appreciate any alternative. The interventive model of

maternity care has been normalized. As a result, physicians, midwives, and nurses have minimal or no exposure to less interventive birth practices. Without this familiarity of experience, many practitioners appear unable or willing to make changes in practice, even in the face of evidence based practices that show positive outcomes. The women of this study felt unsupported in their choices. They said that the desire to birth without intervention was not understood or valued by most providers. The consistency of the women's responses regarding the desire to have their choices supported by their healthcare practitioners was somewhat unexpected by the researcher. These women did not like to be perceived as weird or selfish. They wanted the support and understanding of their practitioners for their choices and they often verbalized sadness over the lack of support.

The researcher did not find the reasons women cited for choosing physiologic childbirth unexpected and many are discussed in the literature. The concepts of rite of passage and empowerment that have previously been identified were demonstrated in this study. The consistency, however, among the four focus groups for the value they placed in the choice and the importance of this choice for these women was dramatic and had a significant impact on the researcher.

Creating Change.

The researcher began this project as a way to define potential areas for change, design a process and outline steps to create change that would uphold physiologic birth. The first step was to obtain the information from women. This was clearly done in this project. The second step is to share that information with women and practitioners in a way that helps women feel supported in the option and helps providers to see the value of physiologic birth. The third step is to educate staff in all settings about physiologic birth. Unless the process of less intervention

is valued and internalized, changes do not occur. Many of the women stated that their reason for participating was in hopes of helping practitioners to understand why physiologic birth is valuable and help create change. *"I thought it would be important, the study would be important, for people who come across it, to learn whatever it is they want to from it."* Another woman put it this way, *"I'm very interested in making sure that this voice is documented."*

Implications for Clinical Practice

This study has implications for clinical practice. The suggestions and ideas the women of this study offered can be translated into practice. Support for women from other women, sharing these findings with other clinicians, birth focus groups or community forums as an intervention, and the development of birthing centers and supportive environments for birth are clinical applications derived from this study.

The development of an avenue for women to share stories with each other can be established. This could be a website for women to post their stories, or encouraging groups for women in the community. Facilitating group prenatal care can also assist in offering support and empowerment for women during pregnancy as well as being a way for women to hear birth stories by having women come to a group visit with pictures or stories about their births.

It is essential to share the information from this study with obstetrical providers and hospital staff. It is important that those working in the community of this study understand and appreciate the feelings of these women to whom they provide care. Hearing their words, becoming aware of their concerns and their needs, is a vital step to changing practice.

The researcher recognized that facilitating the birth focus groups during this study, and hearing the words of the participating women, has resulted in subtle changes in her own practice. Without implementing major policy or environmental changes, some of these subtle changes

include, being more aware and engaged in conversation with women about birth plans and what they hope for in their birth experiences, offering greater support and encouragement for women who express an interest in unmedicated birth, encouraging women to utilize doulas if they desire an unmedicated birth, and supporting the development of calm in the birthing environment. The words of these women surface periodically when having conversation with staff and colleagues about why women desire physiologic birth.

A birth focus group supports women and creates change for those who hear the participants' words directly. One clinical intervention, holding birth focus groups or community forums not as a research tool, but as a means of promoting dialogue, can offer candid exposure to the needs of women within a community. There is value for practitioners as well as participants in having birth community forums. Bringing women and healthcare providers from a given community together to discuss the needs of childbearing women can be a way to demonstrate support to women, explore unmet needs, and help practitioners understand the wishes of women in their specific community by directly hearing the voices of the women they serve.

Finally, development of out-of-hospital birthing centers and improving services within the hospital are essential components of practice improvement that is well supported by this study. Bringing water birth as an option to this community is an important ingredient for promoting unmedicated birth that the women of this study value; working to develop birth environments that support calm and minimize distractions. The women in this study suggested many changes that would help to support physiologic birth. These suggestions should be used in program development and creating changes in the current system, supporting the ideas and values women expressed during this study.

Limitations

This is a preliminary study and as such, has limitations. There are limitations imposed by the methodology of focus groups. There is an inability to generalize from these women in this specific community exposed to certain birth culture practices to a larger group of women outside the community, nationally or even internationally. Also the presence of the researcher with her own perceptions, and known to the participants, could have influenced the findings.

This study is limited by the specific nature of the conversation, especially about pregnancy and labor and birth practices as they relate to the specific community's practice standards and option availability. Comparing the practice standards of this community to the larger US national practice standards is difficult, though by examining national statistics, there are some consistencies. A comparison of rates of epidural use and continuous EFM in the community of this study demonstrates similarity to national averages, though again, communities vary. The community these women live in does have a CNM practice existing in the hospital and attending over half of the births occurring in the hospital, which is a difference from many other communities.

Applying the opinions and concerns of these women to women in very different types of communities is also difficult. The subjects in the study were very homogeneous; all white, and all at least high school graduates, many college graduates. Applying this information to other communities and women with other ethnic and economic backgrounds is a significant limitation. Many of the women in this study were strong activists of birthing options. The women themselves discussed how much harder it is to advocate for yourself in a system where you might already feel powerless, as can happen in many underserved areas. Cost can also come into play when many of the women in this study hired a doula or home birth midwife, resulting in direct out-of-pocket costs that women of less economic means would be unable to do.

The researcher and moderator for the focus groups is a known practitioner, CNM, in the community. Many of the women in the focus groups had received care from the obstetrical practice the researcher works in, which may have affected the women's responses. Conducting focus groups with a researcher unknown to the groups may have revealed different results, however the women did not appear to hold back or refrain from being critical or offering suggestions. There was only one time when a woman apologized for being critical, despite the researcher's reassurance that she was seeking honest responses.

An additional single group limitation warrants mentioning. In group 3, eight of the nine women brought children to the focus group, ranging in age from four to 11 months. Bringing children to the group changed the dynamics of that group. The noise level was different, and often women were interpreted by the needs of the children. The recording from this group was much more difficult to transcribe due to increased background noise. As two recorders were used at different locations, all conversation was audible and transcription was completed. This was a technical limitation, as the group process did not seem to vary. In a future study, the researcher would limit the number of children brought to each group.

Conclusions

After analyzing the results of this study, it is clear that there was demonstrated interest and concern on the part of women who desired unmedicated birth to have their voices heard, to be understood, and to be respected. The value they placed on physiologic birth was readily demonstrated. These women were clear in their desire to have support for what some healthcare providers viewed as alternative birthing practices. These women wanted recognition and acceptance, not just toleration, of their choices. In addition, the women represented by this study wanted to obtain the respect and understanding of those who offer care to them during their

pregnancy. They sought acceptance and collaboration for exploring their options, and wanted to feel that practitioners believed and valued their ability to birth unmedicated. They did not want to be viewed as unreasonable, foolish, or risking their health or the health of their unborn child.

The women of this study offered many suggestions and discussed the importance of developing community and support from other women with similar ideologies. They discussed the value of hearing birth stories and sharing stories with other women. They desired the encouragement of a birthing culture that offers options and supports women's choices.

There is little data to date about why women choose unmedicated physiologic birth when given the option of a painless labor through the use of pharmacology, including epidurals. In the community hospital of this study, the epidural rate is 70%, matching national data. Even from a purely economic perspective, decreasing utilization of pharmacologic intervention and use of technology during labor in low risk women, has value. The evidence suggests that what the participants of this study desired, unmedicated birth with less intervention, decreases cesarean section rates and positively impacts maternal satisfaction. When considering the evidence regarding the value of less intervention, understanding why women choose physiologic birth, the significance they place on that choice, and how to support them to accomplish less intervention, demonstrates a valuable contribution of this study.

This study is preliminary work and each individual question can be explored and developed. Publishing the findings of each of these questions will help to accomplish the stated goals of changing practice by increasing awareness and understanding. The road to changing the culture of birthing practices to one that focuses on promoting minimal intervention when intervention is not required begins with awareness and understanding. Assisting women to support and encourage each other, and helping practitioners to understand the value of

physiologic birth from the woman's perspective, are important steps in changing practice. Offering safe evidenced based practices that support women's choices, decreases intervention, and improves satisfaction can only occur when there is truly a belief in their value.

Susan J. Wegelt Heinz, CNM
Doctor of Nursing Practice Candidate
OHSU School of Nursing

Executive Summary

My clinical inquiry project examined, through qualitative research using four focus groups, the beliefs and feelings of 27 women regarding physiologic, unmedicated birth. There were three simple, open ended questions presented to each of the focus groups. These questions were: (a) why did you choose unmedicated birth; (b) what supports the choice during pregnancy; (c) what supports the choice during labor and birth. These three questions led each focus group to 2 hours of open discussion, expression of feeling and concepts, and many suggestions of changes that needed to occur, and things they believed worked.

The strengths of this study were the women's willingness to share ideas, explain their feelings, and easily offer suggestions. The information they shared was very important to them, and they wanted their voices to be heard. The women themselves benefited from the exchange of thoughts and ideas with other women who also supported unmedicated birth, as did the researcher. There was value for me as a DNP student and researcher, in facilitating these groups. Hearing their words had an impact on me and on my practice of nurse midwifery. I believe sharing their words with other practitioners will have an impact on them as well. These women wanted to be understood. They wanted their beliefs to be valued and recognized as important. They wanted those who care for them to support them in their desire for unmedicated birth, and to believe in them. The wanted to be supported not just tolerated.

This study and the words of these women can have a real impact on those who offer care to women. Hearing their words, sharing their ideas, can have an impact on practice. Physiologic birth has evidenced-based value of decreasing cesarean section rates, decreasing cost, improving outcomes including maternal satisfaction, it is not understood what factors influence a woman to make this choice and how it can best be supported. This is a preliminary study examining, directly from women, why they make the choice and the how to best support it.

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OHSU

Clinical Inquiry Project: Physiologic Birth

Understanding why women choose physiologic birth and what they believe supports the choice.

Presented by: Susan J. Wegelt Heinz, CNM

Date: May 26, 2011

Why ???

- Midlife crisis - amidlifemidwifesjourney.blogspot.com
- Desire to explore practice
- Wanting to change practice
- Seeking greater understanding
- Always wanted to travel

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International Statistics

- Infant mortality

  The infant mortality rate (IMR) is the number of deaths of infants under one year old per 1,000 live births. This rate is often used as an indicator of the level of health in a country.

  WHO: The Netherlands ranked 19 4.7/1000 births
  United Kingdom ranked 22 4.8/1000 births
  United States ranked 33 6.3/1000 births

- C Section rates

  OECD (Organization for economic co-operation and development) Ranked from highest to lowest; 16 industrialized nations

  United States #3 (32%)
  United Kingdom # 10 (24%)
  The Netherlands #16 (12.9)

- Cost per capita (in US dollars)

  UK $2,560
  Netherlands $3,093
  US $6,096

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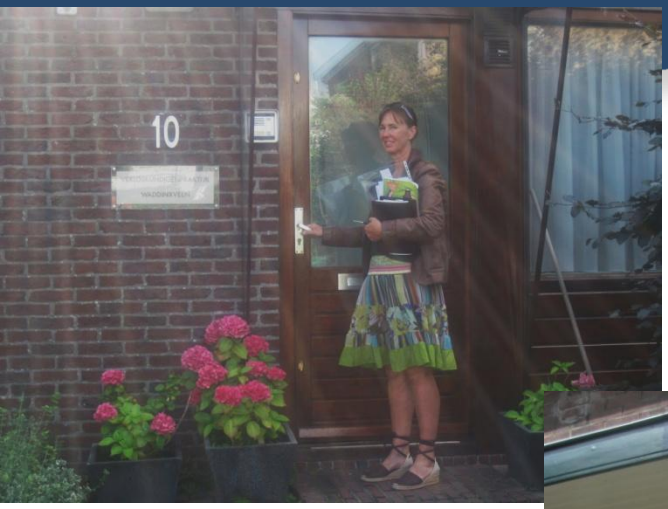
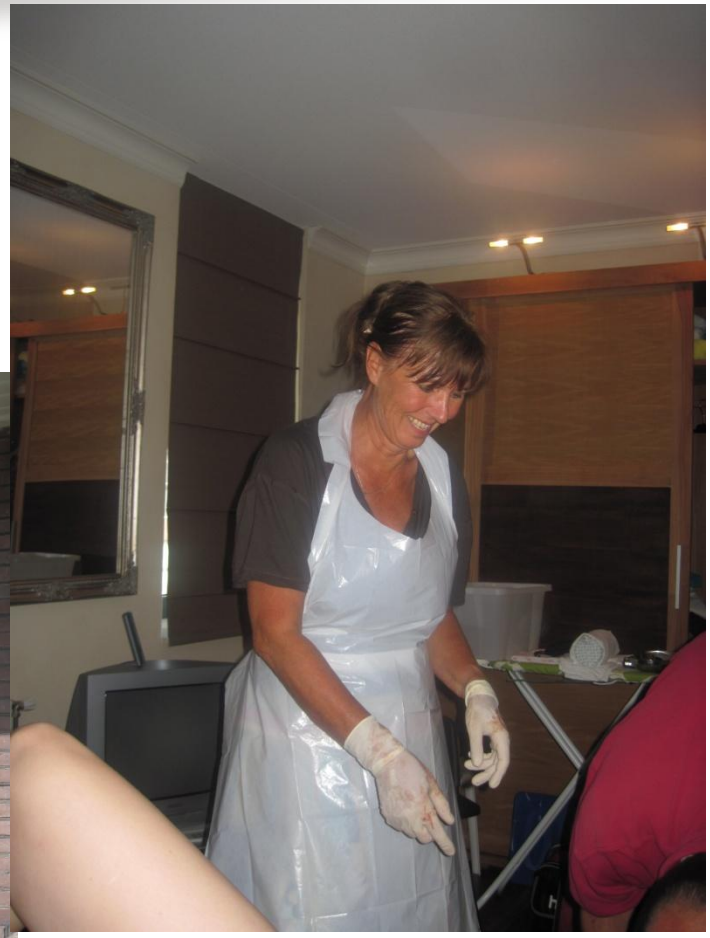
Midwives – Verloskundige





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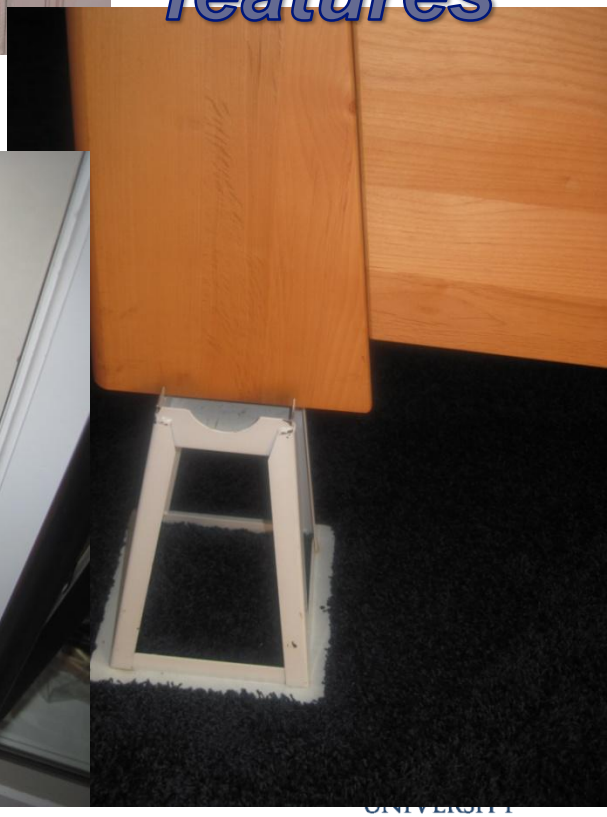
Some of the more uniquely Dutch birth features



From Europe to Home

- Models of prenatal care – centering pregnancy
- Water birth
- Birth Centers and home birth
- High rates of epidurals and high technology birth …

Why would anyone choose to have pain during birth???????

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Summary of Significance

- Childbirth is a major life event for 4.3 million women each year in the US; 49,000 in Oregon
- 99% of all births in the US occur in a hospital
- Childbirth is a leading reason for hospitalization – 23% of hospital discharges are women giving birth
- Hospital charges for birthing women and newborns exceed hospital charges for any other condition
  - 6 of the 15 most common hospital procedures are associated with childbirth
  - Cesarean section is the most common operating room procedure in the US
  - High cost of care due to technology intensive practices

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- Labor and birthing practices are strongly focused on intervention, even in low risk women
- Resulting C-Section rate (32%) and high induction and epidural rates have not improved outcomes for mothers and babies
- Preterm and low birth rates continue to increase
- Continuous electronic fetal monitoring, used even with low risk women, has not demonstrated improved newborn outcomes
- Evidence suggests that for normal healthy women the current model of prenatal care does not promote health or improve outcomes
- Increasing rates of interventions in labor and birth have not resulted in improved outcomes
- **While physiologic birth has evidenced-based value, it is not understood what factors influence a woman to make this choice and how it can best be supported**

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Why is this understanding important?

Certified Nurse Midwife leaders

use this information to:

- Understand the needs of women
- Develop and design programs and care models which meet the needs of women and minimize risk
- Improve outcomes
- Help staff and other providers to understand the value of physiologic birth and why women make the choice
- Change systems

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The question:

Why women choose physiologic birth

And what they believe supports the choice

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Definition of Physiologic Birth

- Labor and birth that begin and end without artificial stimulation
- proceeds without the use of medication for pain,
- and ends in a spontaneous vaginal birth.

Other words that are frequently used are “natural childbirth”, normal birth, or unmedicated, non-interventive birth.

Study Method – Focus Groups

- A qualitative research design is used to learn about women's perceptions of why physiologic birth is important and what women say they need during the prenatal and intrapartum periods to support them in their birthing process.
- This study used a focus group method of research and data collection

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Why focus groups?

- Focus groups are group interviews; they are a way of listening to people and learning from them.
- They rely on the dynamic of group interactions
  - Offer rich perspectives
  - Provide access to data not easily obtained with other qualitative methods
  - They excel at uncovering not just what participants think, but why they think as they do
  - The interaction of the group produces the data

Specifics of physiologic birth focus groups

- Four focus groups of 4-10 women
- Each focus group lasted 2 hours
- Groups consisted of women from the community (Corvallis area) who have given birth and meet the inclusion criteria:
  - Women who have given birth in the last two years
  - Women who are interested in discussing unmedicated labor and birth
  - Women who are interested in discussing prenatal and birthing practices that support unmedicated labor
  - 18 years of age or older
  - English speaking
  - Willing to be audio taped

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Recruitment of participants

- Women were recruited from fliers distributed to childbirth classes, doulas, direct entry midwives in the community, obstetrical practices, pediatrician offices, and displayed at local gathering places in the community (library, coffee shops, Laundromats).
- Women contacted researcher and using a phone script, researcher determined eligibility and discussed study. If woman desired to participate and met inclusion criteria, date/time for group was given and consent sent to participant.

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Conducting the focus groups

- Moderator of group was the researcher
- Another CNM was present to take notes (field notes)
- All discussion was audio recorded using 2 recorders

- Began with a definition of physiologic birth:

  - labor and birth that begin and end without artificial stimulation, proceed without the use of medication for pain, and end in a spontaneous vaginal birth.

- Explained purpose, time allotment, and general guidelines
- Introductions

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Focus Group Questions

Three simple questions were asked:

- Why did you choose to have an unmedicated birth?
- What do you think supports the choice during pregnancy?
- What do you think supports the choice during labor and birth?

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- Using large tablets/flip charts, themes and ideas posted as they present themselves
- Participant verification obtained by including an opportunity for all participants to summarize their thoughts and feelings near end of group
- Facilitator reviewed key points and participants asked to respond to moderators summary of key points

The Focus Groups

Group #	# of subjects (# Scheduled)	Total # births	# C-Sections	# subjects planned home birth	# subjects who had at least one home birth	# of birth center births	# of children at groups (all < 12 months)
1	5(5)	8	1	2	2	0	1
2	9(9)	17	2	4	3(1VBAC)	0	1
3	9(9)	12	1	2	2	1	8
4	4(6)	6	0	1	1	0	1
totals	27(29)	43	4	9	8	1	11

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Analytical Methods

Analysis includes:

- Oral summary of key points during the end of focus group
- Debriefing with the facilitator and note taker immediately following each group
  - Notable quotes written
  - Review of field notes
- Review of recordings by researcher and verbatim transcription
- Thematic analysis - relies on identifying, analyzing and reporting on patterns and themes in data.

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6 Steps to Thematic Analysis

1. Familiarization with the data
   - Preparing and reviewing transcripts and field notes
2. Develop beginning codes (open coding)
3. Identifying themes by collapsing open codes into categories
4. Preliminary definition of broader categories to review themes generated
   - Quotes refined
5. Memos with definitions of themes and associated quotes refined after re reading and review
6. Summarizing themes across all groups and report findings

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The Results – General Thoughts

- 4 focus groups were conducted and 130 pages of single spaced transcript obtained.
- The content was rich, and descriptive
- All groups were very free flowing with thoughts and suggestions
- No prodding or encouraging was needed; women were very willing to talk
- Each group had its own flavor, but the themes were similar between groups

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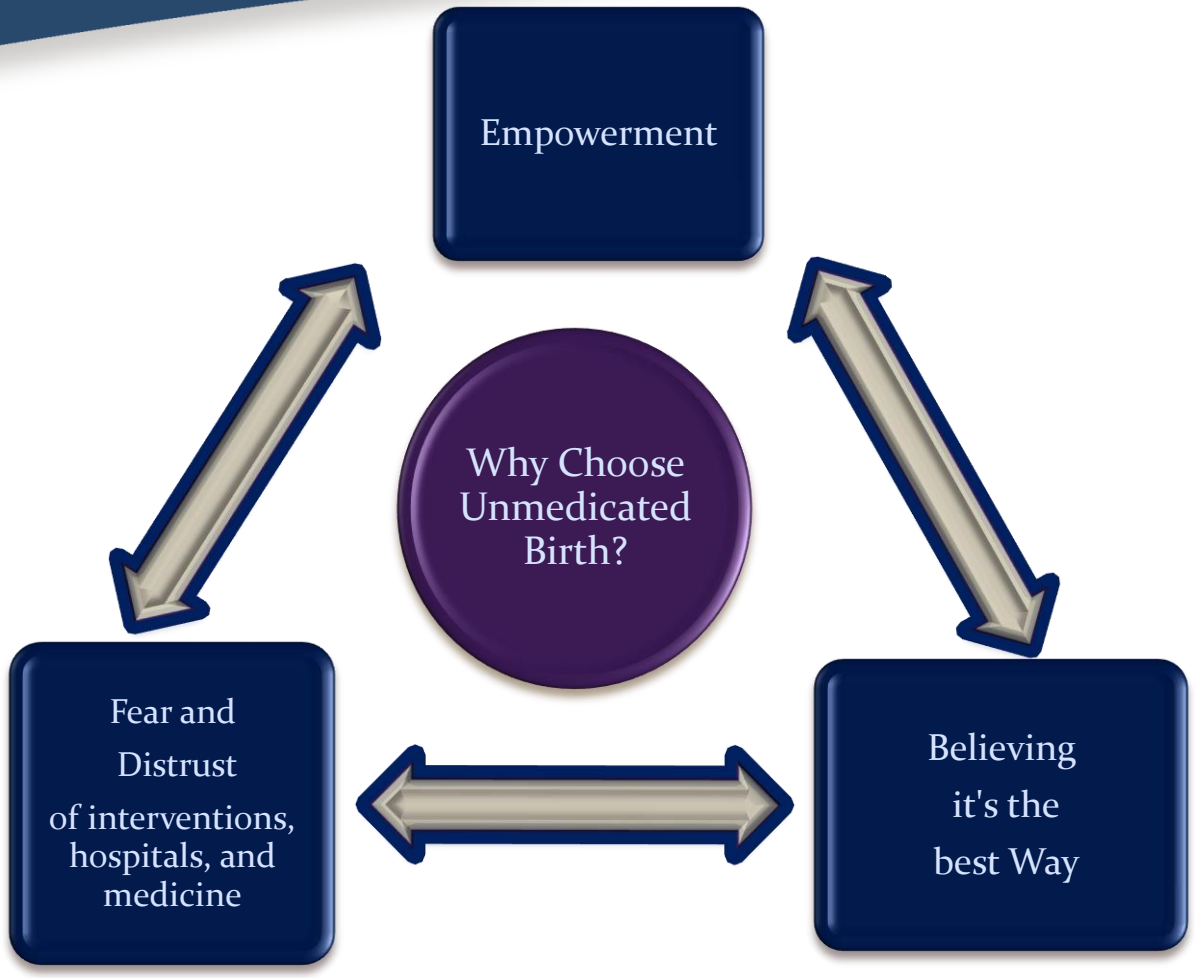
Question 1



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Empowerment

- Birth as a Rite of Passage
- Connection between themselves, their babies, communities, culture and the world at large
- Birth without medication is a choice that has value
- Supports positive self image
  - as mother
  - as protector of unborn child
  - as strong women
- Power of the process of birth
- Their own need to be truly present
- Amazement and ecstasy of the experience itself

Empowerment

- *As the birth was coming closer, it really started to feel like this was a rite of passage for me in a culture where our rite of passages are getting a driver's license, drinking, having sex – maybe voting. But this was truly a really powerful initiation onto womanhood.*
- *I didn't want to be drugged, or to not have any feeling somewhere that would somehow take away from that intensity of those moments when the baby was just first there -- and I wouldn't have wanted to have missed that feeling of the baby passing through my body (sigh).*
- *I think once, if you're able to have an un-medicated birth and then you have that euphoria once the baby is born, that it makes you that much stronger, as a woman, it's your power space. That power stays with you. It gives you that power and that sense of power and trust (pause) - trusting yourself.*

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Believing it's the Best Way

- Belief their bodies designed to give birth
- Conviction that pain had a purpose
- Unmedicated was the best and safest way
  - For themselves
  - For their babies

Believing it's the Best Way

- *Reading about, like that actual process that your body goes through when you do it natural, when I read it, it just like **made my heart come alive**, and I just thought, that's what we were intended* for.
- *I feel like I'm a bit of a wimp when it comes to pain, but this is -- it's not like any other pain you feel. Its pain with a purpose you know, it's like you're feeling this pain for a reason. You're going through something and trying to accomplish something and it - It's not like getting hurt, you know. It's not the same kind of pain at all. It's actually beautiful!*
- *I wanted to do everything right, even during the pregnancy. You know, I didn't drink at all. No coffee, no alcohol, nothing. I was very conscious about everything that I put into but my body so to me, at the end, then medicate?! After all those months of not drinking beer and wine, it seemed totally against what all that had been before.*

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Fear and Distrust

of Hospitals, intervention and Medicine

- Fear about interventions
  - Epidurals
  - Continuous fetal monitoring
  - Pitocin
  - Cesarean Section
- Fear of intervention stronger than fear of pain
- Belief that one intervention lead to another
- Medication in labor 1st step toward intervention
- The medical system designed for intervention

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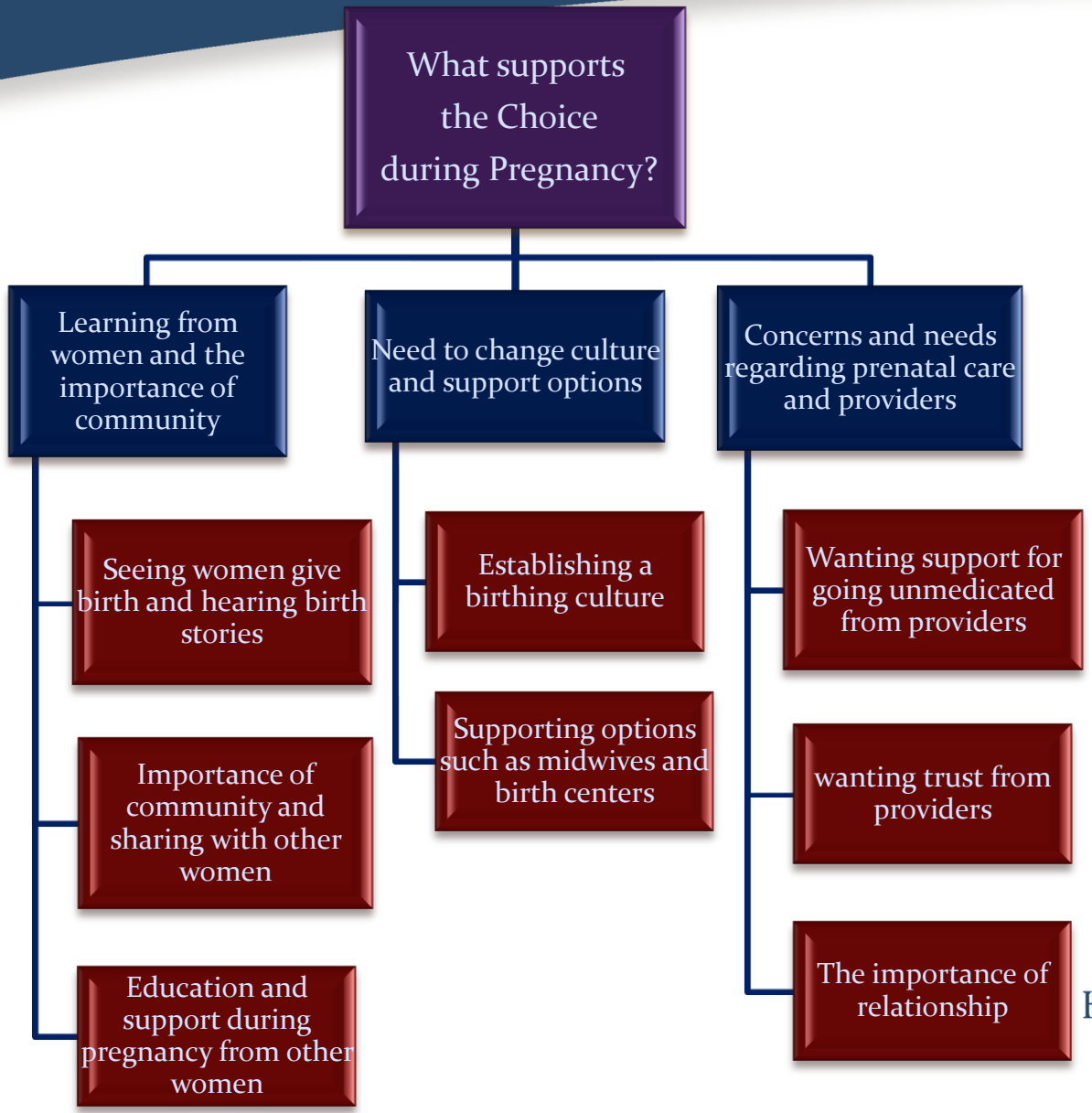
Fear and Distrust

- *I think the first of a number of reasons why I wanted an unmedicated birth related to a fear of -- if I were to have medication that it would stimulate its cascade of things I really didn't want to happen. Somewhere in my mind I knew I really wanted to avoid a cesarean if at all possible.*
- *I think at some point my brain just shifted to, you're going to do this, and the way you're going to do this is by being able to move. So the idea of not being able to hop out of bed if I wanted to was just kind of horrifying.*
- *I think medication; it is a way of, another form of, containment, as is the bed, as are other aspects of the hospital birth.*

Question 2:



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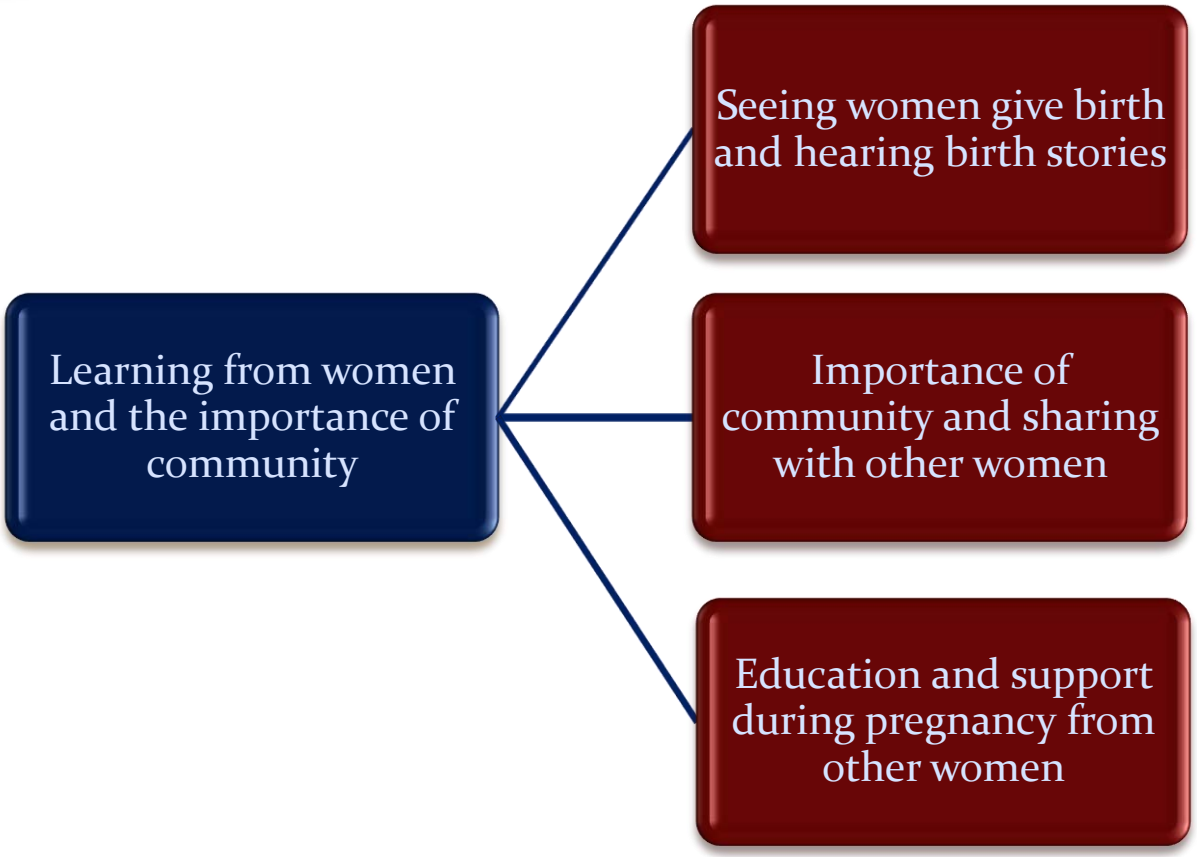
What supports the Choice during Pregnancy



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Learning from Women and the Importance of Community

- *I actually had a really hard time. Every woman that I knew who had a child, I would ask them about their births, and it was very difficult for me to find anybody who had had a natural birth, so -- a class or group with women planning unmedicated birth would have been wonderful!*
- *And so I think of, a big part of the prenatal experience for me was getting into a culture of normal birth, and meeting other women who had done it, and gone through it, and having somebody to talk to, ... to talk about fears and expectations, and, and being in an area like this where so many women have done it.*

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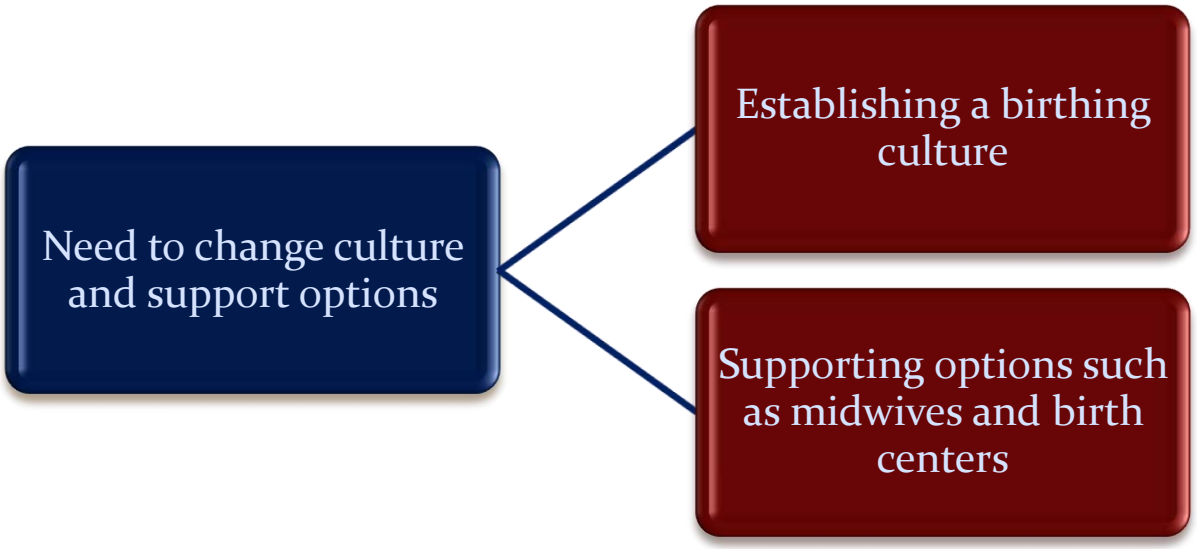
What supports the Choice during Pregnancy



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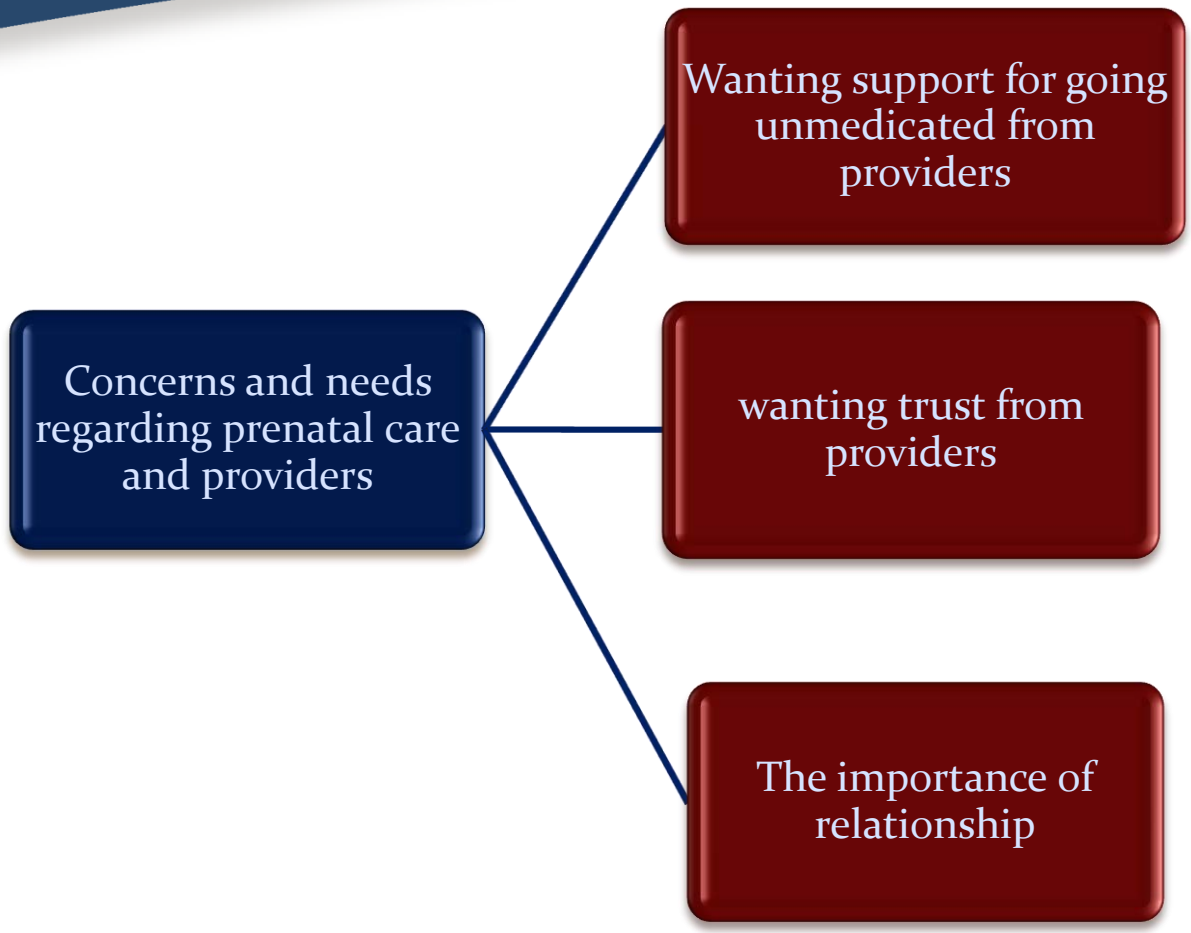
Need to Change Culture and Support Options

- *We have this culture that shows that birth is the most intense painful thing that you just want to escape. And I feel like, you know, major cultural shifts just on a person-to-person level can happen if more of those stories were out there. You know, here's my births, this is my birth experience, and it was intense, led by so many ways that it can go, here's my story. I feel like that would be really an opening for people who want to have an unmedicated birth and who haven't yet had a birth.*
- *I think having caregivers who are trained in normal birth makes things different. And I think that's why the midwives have such an impact. They really know all the different shades of birth. But I think the woman is much more supported in that kind of environment.*

What supports the Choice during Pregnancy



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Concerns and Needs
Regarding Prenatal Care and Providers

- *It was so important, supporting my decision in unmedicated birth and not judging me and not just thinking - wait till she figures out how bad this is going to be - you know what I mean? Providers need to understand why making this choice is important. If they can support it as a choice, that in itself would be pretty great.*
- *I just wanted to feel like they believed I could give birth naturally. Not that it was an unrealistic goal.*
- *If you have to do it like that we'll accept it, but we don't really want you to or encourage it.*
- *During prenatal care, I received fear and trying to instill fear, and fear of alternatives*

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One woman described her vivid idea about how to support and encourage woman to be empowered in birth:

And birthing is physical and psychological. So is basketball. So hanging out instead of looking at birth as this medical thing, how about midwives and doctors serve as coaches. 'All right! You're going to do this! This is exciting! We are going to get out there! Then go shoot a bunch of hoops!' That's what coaches do. They're not sitting there telling you about every injury you can get. Birth is something physical. Why don't they do that with women? Alright, your body is going to go through this, yet it's going to hurt but it's going to be good.

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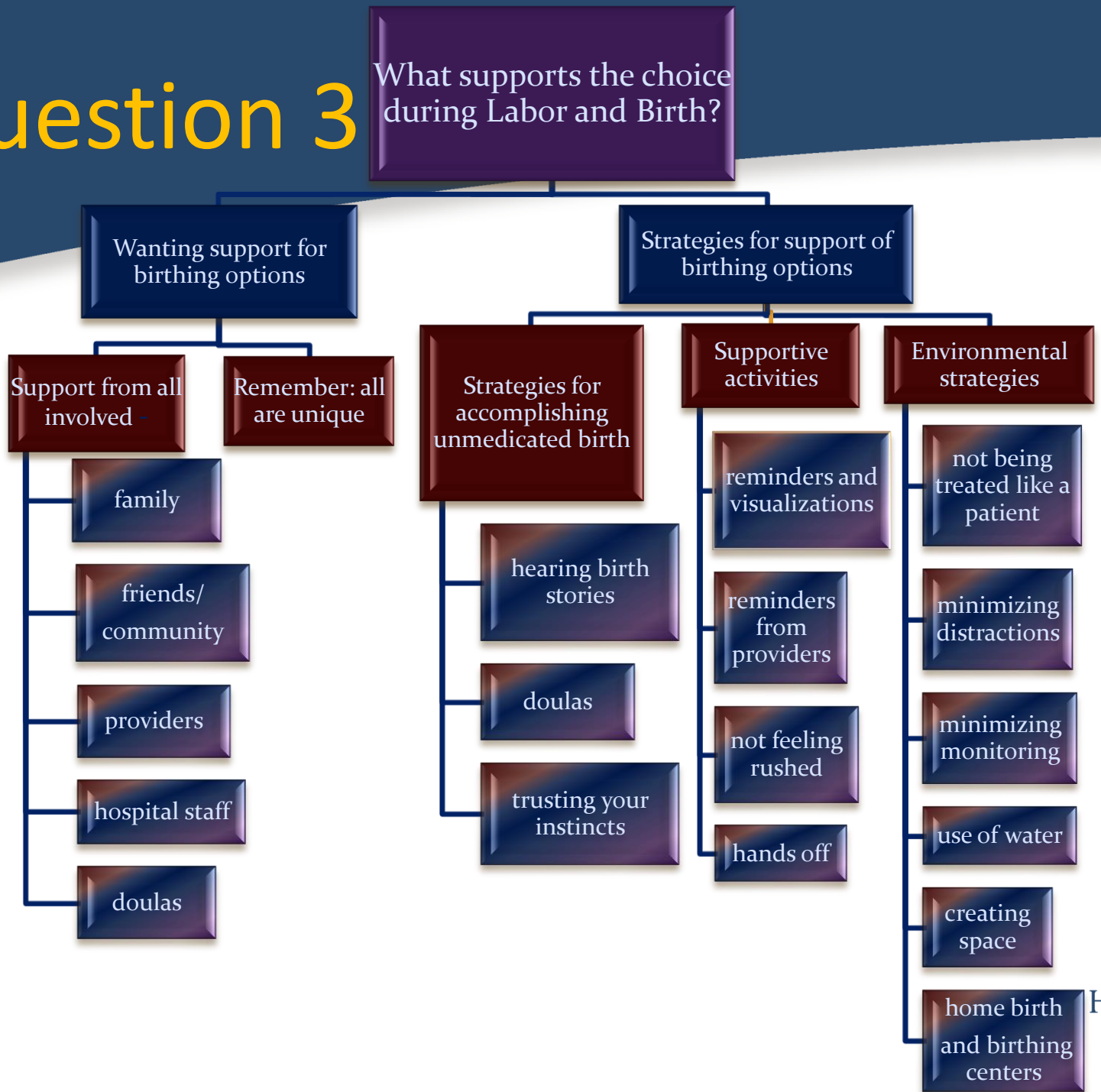
Question 3



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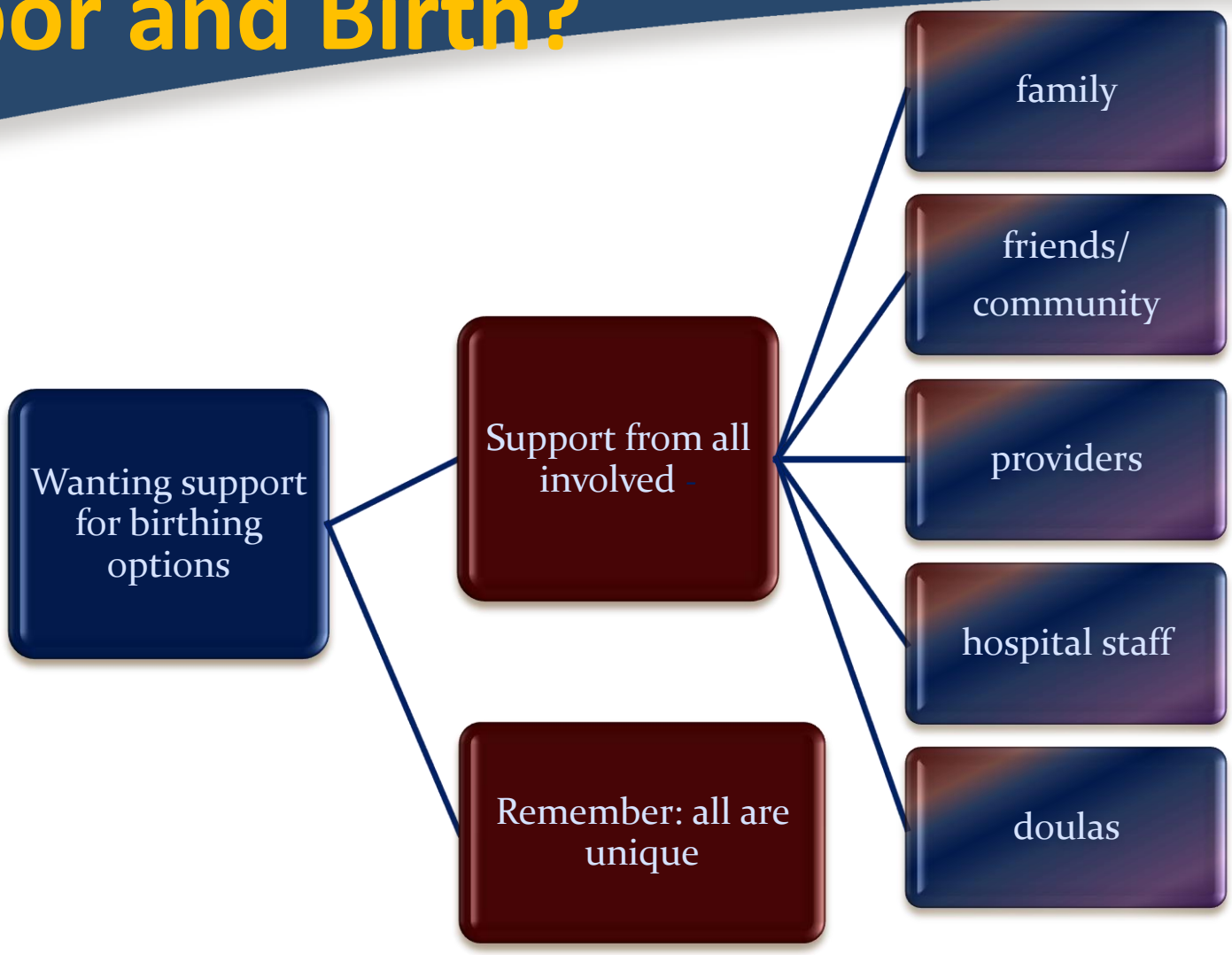
What Supports the Choice during Labor and Birth?



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Wanting Support for Birthing Options

- *I think one of my favorite things that my midwife kept saying was 'perfect, perfect'. That was the word, and I was like, really? Really, this is right? [Laughter] She kept saying perfect and like I was in chaos and felt like everything is crazy and she just kept saying perfect. What you just did was perfect. I started thinking like, I'm good at this. I'm really good at this! [Laughter] I've never done it before but I'm doing it perfectly the first time! [Laughter]... Perfect is not subtle. Perfect is the top. It's as good as you get. And I was just like, okay, I'm doing this. Awesome!*
- *Having staff trained to understand and support the natural childbirth approach. And the ability to be with them and provide them with that. Because without the doula there might've been very different for me.*

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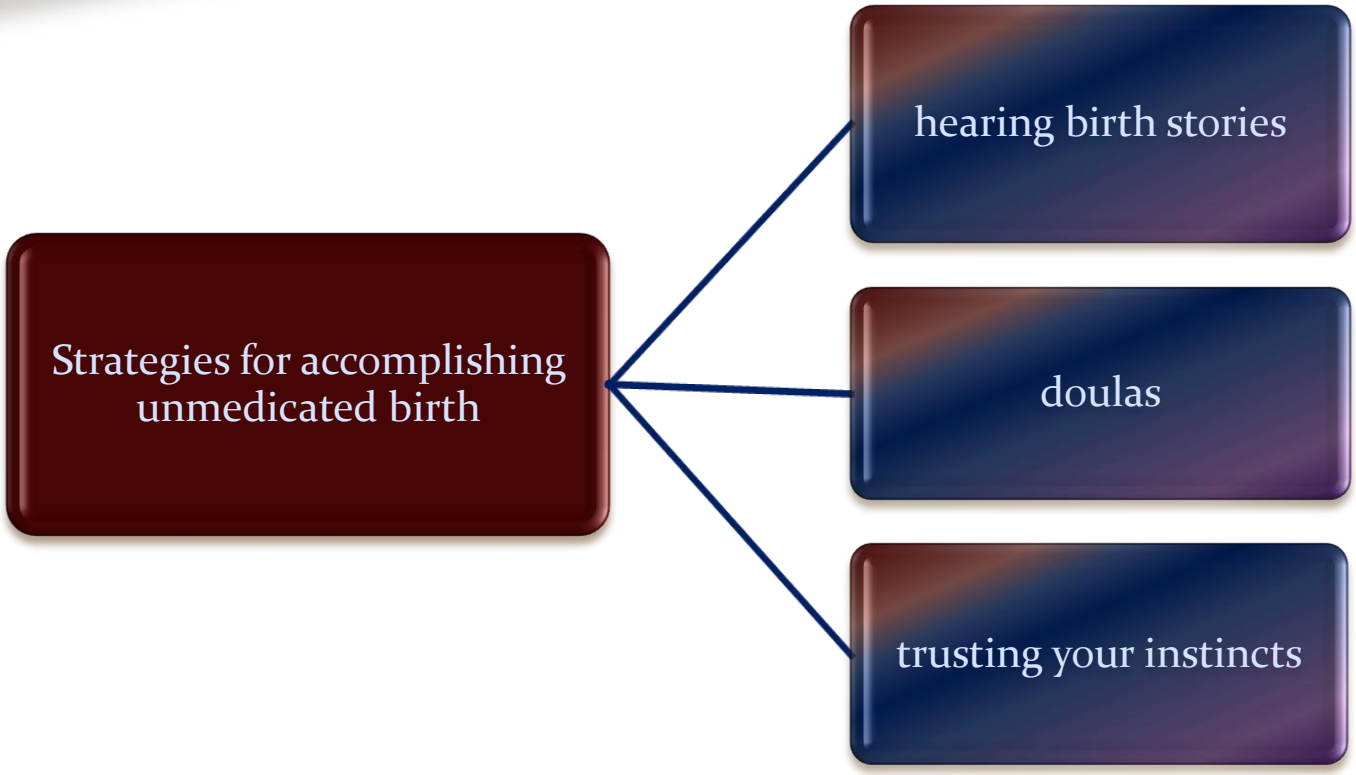
What Supports the Choice during Labor and Birth?



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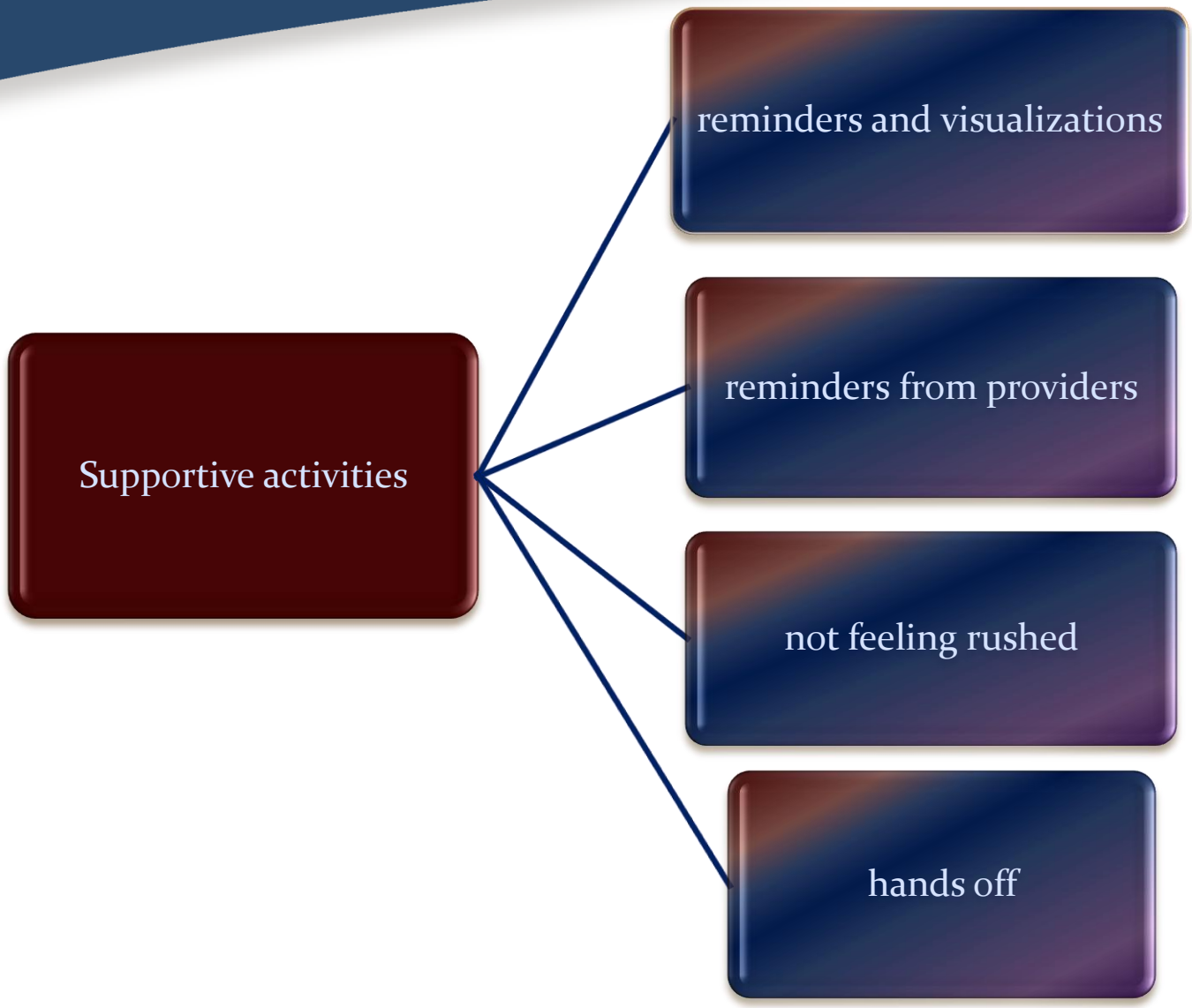
Specific Strategies

The videos that we saw were so helpful. Like one was just 30 minutes of all these women in the most active phase of labor and we are taking notes on how women were coping and how they weren't, and how their partners were supportive, and how they weren't. Who is supportive and how were they supportive. Was the midwife supportive? And that was really helpful to see this huge range of how people cope with things

It's really good to trust your own instincts when you're in labor.

What Supports the Choice during Labor and Birth?



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Specific Supportive Activities in Labor

- *Lots of reminders that what you're feeling has the purpose. I like hearing visualizations of what is happening. I think, you know, it's like reminding us that it's, it's not you know like stub your toe pain. It's like bringing you a baby pain.*
- *Reminding a woman that it [pain medication] wasn't what she wanted. But what really makes a huge difference and totally would change her attitude would be having her doctor say, you didn't want this. You didn't want this because it's going to affect your baby. And then you'd be like oh yeah. It was like the voice of reason.*
- *It's like the voice of God or something when the caregiver says it. It's different than the spouse. It's even different than the doula. It's different than the nurse.*

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What Supports the Choice during Labor and Birth?

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Environmental Strategies

- *One thing about my birth, was that I didn't want to be treated as a sick patient, I just wanted to be treated as a human being, a woman who was about to give birth … and its everything, from when you walk in the door and take off your clothes and put on a gown.*
- *Then there was quiet. I think it's safe to assume that a laboring woman wants quiet. I don't think, I don't know, we could take a poll but, there's probably nobody who's going to say, I wish people had been more chatty.*
- *if you're at the hospital you have to be able to make your own cave… a small dark room with a tub.*

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Environmental concerns

- *And I knew a position I needed to be in and I wanted to be in that position and in addition to monitoring me when I first got there they wanted to monitor me again with the straps on and everything, and I was like, I just want to push on the bed and kneel down so I can push please. So it's just like it definitely feels like it [the monitor] can interrupt the flow of what I needed to be doing*

- One woman, who was both a labor and delivery nurse and a new mom, had a very interesting view as both an insider in the system and a woman who had recently given birth.

  All the little things that me, as a well-intentioned nurse with, who really wants to support people [giving birth], the little things that I take away from them, you know - the baby going to the warmer versus to the mother. All the little things that we do because we have tasks that have to be completed, that don't just honor that moment.

- *Wouldn't it be nice, since not everyone has good support system within their family or friends if there was a support system of doulas, labor coaches, or midwives, that when you start your labor your doula comes to your home, and its someone your trust that you've met prenatally during your pregnancy so that they can support you being at home and they can help, especially a first time mom, help you to know when you might need to go to the birth center or hospital.*

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Limitations of this Study

- Limitations of the methodology of focus groups
- Inability to generalize from this group of women to women outside the community, nationally or internationally
- The researchers own perceptions
- Researcher known to many of the participants

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Implications for Clinical Practice

- Support for women from other women
  - Group prenatal care
  - Birth groups or support groups
  - Yoga – encouraging established support systems
- Sharing findings with other clinicians
  - Staff In-service
  - Informal conversation
- Focus Groups or Community Forums
- Enhancing supportive environments
  - Minimizing distractions
  - Creating calm
  - Use of water
- Developing Birth Centers

Conclusions

- Demonstrated interest and concern from women who desired unmedicated birth
- Wanted to have their voices heard, be understood, be respected
- The value they place on physiologic birth was readily demonstrated
- Desired to have support from their healthcare providers
- Wanted recognition and acceptance, not just toleration
- Did not want to viewed as unreasonable, foolish or risking their health or the health of their unborn child
- Gave specific recommendations to help support and encourage physiologic birth.

Significance of this Study

While physiologic birth has evidenced-based value of decreasing cesarean section rates, decreasing cost, improving outcomes including maternal satisfaction, it is not understood what factors influence a woman to make this choice and how it can best be supported.

This is a preliminary study examining, directly from women, why they make the choice and the how to best support it.

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Where do I go from here???

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Thank you to my team

My committee:

- Maggie Shaw
- Deb Messecar

My mentors:

- The midwives in England and the Netherlands (special to Nel who not only mentored but fed and housed us)
- Michelle Peters Carr
- Missy Cheyney

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Thanks for all the love and support

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Appendix A

Researcher looking for women who planned an unmedicated birth

Are you interested in discussing unmedicated birth?

I am working on a research study to find out why women choose to have unmedicated births. I want to know what things help a woman during her pregnancy, her labor, and her delivery to have an unmedicated birth.

I am looking for women to participate in focus groups. These women should be interested in discussing unmedicated birth and how to support the choice. There will be 4 separate groups of 6-10 women. Each woman will participate in just one group. Each group will meet for two hours.

Participants must be:

- Women who have given birth in the last 2 years
- Women who are interested in discussing unmedicated labor and birth
- Women who are interested in discussing prenatal and birthing practices that support unmedicated labor
- 18 years of age or older
- English speaking
- Willing to participate and be audio-recorded

This is a research project. No one will try to sell you anything. The purpose of this research project is to hear from women about unmedicated birth. All information obtained will be confidential. If you participate in a focus group, your name will not appear anywhere in the end report.

Would you be interested in hearing more about this focus group research? If so please contact Susan Heinz by email at: wegelthe@ohsu.edu or calling (888) 788-6845 and asking for Susan or leaving a message. This phone number has been set up just for this project and no one else will listen to any message you leave.

Thank you for considering participating.

Susan

Susan Wegelt Heinz, CNM (certified nurse midwife)
Oregon Health & Sciences University, Doctoral Student
Study Principal Investigator, Margaret Shaw, Ph.D.
eIRB # 6904

Appendix B

Physiologic Birth Focus Groups

IRB # 00006904

TELEPHONE SCREENING SCRIPT

1. CONTACTING THE POTENTIAL PARTICIPANT:

   Hello, may I please speak to [name]?

   IF THE PERSON IS NOT AT HOME:

   When would be a good time to reach her?

   _____-_____-_____ IF THE PERSON HAS MOVED, ASK FOR A NEW TELEPHONE NUMBER.

2. Explaining the project:

   My name is Susan Heinz; I am a midwife here in Corvallis and also a doctoral student at Oregon Health & Science University.

   I am working on a project to find out why women choose to have unmedicated births. I also want to know what can be done during prenatal care, labor and birth to assist women to have an unmedicated birth. I am calling your because you voiced an interest in discussing issues around birth, birthing support, and options.

   I am going to be bringing together about 6 to 8 women like you who have voiced an interest in discussing unmedicated birth and how to support the choice. If you are

interested, I need to ask you some questions to see if you are eligible to participate: (CIRCLE CORRECT ANSWER)

YES NO Have you given birth in the last 2 years?

YES NO Are you interested in discussing unmedicated labor and birth?

YES NO Are you interested in discussing prenatal and birthing practices that support unmedicated labor?

YES NO Are you 18 years of age or greater?

YES NO Are you comfortable speaking English?

YES NO Are you willing to participate in a 2-hour focus group and be audio-recorded?

IF ANY ANSWERS ARE NO:
Thank you for your time. For you to be participate in the study (EXPLAIN WHY SHE CAN NOT BE INCLUDED)_____.

IF ALL ANSWERS ARE YES:
YES NO You are eligible to participate in this study. Would you like to participate?
IF NO, THEN THANK HER FOR HER TIME AND HANG UP
IF YES:
Each group will come together only once and it will last for 2 hours. Refreshments and a light snack will be served. The group meets at Good Samaritan Hospital in Corvallis. No one will try to sell you anything, and you will not be asked to sign you up for anything else. All information obtained will be confidential and your name will not appear anywhere in the end report.
The group itself will consist of six to ten women, who like yourself, have given birth to at least one child and are interested in discussing natural childbirth.

We will be audio taping the session so that I have a good sense of what people say. We will keep those tapes, and anything you say, completely confidential. All names will be removed after the taped session is transcribed and then the tape erased. I don't expect anybody to be saying anything that is too difficult to talk about, but even so, my first priority is to protect your privacy.

Also, I want to emphasize that once you come to this session, anything you do there will be completely voluntary, and you'll be free to leave at any time for any reason.

3. Scheduling the session
   YES NO Can I schedule you for a session? (CIRCLE CORRECT ANSWER)

IF NO: Does this mean you are not interested or do I need to contact you at another time to schedule? IF SHE DOES NOT WANT TO SCHEDULE, THANK HER FOR A TIME AND HANG UP.
IF YES:
The groups meet at Good Samaritan Hospital in Corvallis. You have the option of one of these two dates and times to participate. Will either of these dates and times work for you?
The date you have chosen will be [date _____]. We will start at [time _____] and end by [time _____]. If I do put your name down, it's very important that we have everyone show up. Do you think you can come?

It's also very important that you be there by [start time_____]; will you have a problem getting there on time?

I'd like to mail you a letter confirming your participation in this focus group, along with a map and a reminder of the date and time. I will also send a consent form for you to sign and bring along to the group. What is the best address to send that to?

Again, I want to stress that we will be starting right on time at [time _____] on [date _____]. If you get to the session after the discussion has started, we may not be able to include you so, it is very important that you try to get there 5 to 10 minutes early as we will start right at [time].

Someone will call you the day before the group to remind you about it.
_____-_____-_____ What is the best phone number to use to reach you or leave a message? What is the best time of day to call the day before? (CIRCLE CORRECT ANSWER)
YES NO If I can't reach you, is it okay to leave a reminder voice mail on your phone?

Thank you so much for agreeing to participate. I am looking forward to seeing you on [date _____] at time _____.
If you have any questions between then and now, please do not hesitate to call me. I have set up a phone number that is completely confidential and I am the only person who will listen to the messages. Please, call me if you have any questions or will not be able to make you date. I will get back to you as quickly as possible. That number is 888-788-6845. Please do not hesitate to call if you have questions before the focus group.

Oregon Health & Science University
Consent Form

IRB#: IRB00006904

Protocol Approval Date: _____

OREGON HEALTH & SCIENCE UNIVERSITY

Consent & Authorization Form

TITLE: Physiologic Birth Focus Group

PRINCIPAL INVESTIGATOR: Maggie Shaw, CNM, PhD
Oregon Health & Sciences University
Faculty, School of Nursing
(503)560-5563

CO-INVESTIGATOR: Susan Wegelt Heinz, CNM, MSN
Oregon Health and Sciences University
DNP Student
(888)788-6845

CONSENT FORM: To be used with women who participate in

Physiologic Birth focus group

STUDY PURPOSE:

The purpose of this study is to learn why women choose physiologic (unmedicated, non-interventive) childbirth options and how their choice can best be supported during pregnancy and birth. You have been invited to be in this research study because you planned an unmedicated birth when you were pregnant and you have expressed an interest in discussing this choice.

PROCEDURE:

This study uses four focus groups, each group with 6 to 10 women. You will be asked to participate in one focus group that will last no more than 2 hours. The complete focus group will be audio taped. The co-investigator will ask the group questions about physiologic birth, its importance to you, and how you think physiologic birth can be supported. There are no right or wrong answers or opinions. I am seeking to understand women's feelings regarding this issue. You may participate as little or as much as you are comfortable and interested in participating. There are no additional requirements for participating in the study.

RISKS AND DISCOMFORTS:

Some parts of the discussion may touch on experiences that can be emotional to you. You are free to decline to discuss any topics that feel uncomfortable to you. Some people become uncomfortable and nervous when they answer questions about their thoughts and feelings. You may choose to stop your participation in the group at any time. You are encouraged to participate in this study only if this is an area of interest for you. If you become upset during the group, the co-investigator will stay with you after the focus group until you are no longer upset. If you would like counseling to discuss the problems or feelings raised during the interview, the co-investigator will help you arrange this. In addition, there may be unintended violations of your privacy due the nature of the group discussion process. To prevent these violations of your own or other's privacy, you will be asked not to discuss any names of your focus group members or their specific information outside of the focus group itself.

BENEFITS:

Participating in this study may not provide direct benefits for you other than knowing you are helping professionals involved in birth to understand the needs of women. However, many women enjoy

talking about birth and sharing your experiences and insight may help you and others to learn and grow. Your participation may contribute new information that will offer midwives, nurses, and physicians new understanding, as well as encouraging the development of programs and processes that support physiologic birth.

ALTERNATIVES:

You may choose not to be in this study.

CONFIDENTIALITY:

We will not use your name or your identity for publication or publicity purposes. During the focus group, all women will be asked to use first names only and no specific identifying information will be given. The focus groups will be tape recorded and written notes will be kept. The tapes will be transcribed without the use of any names and all personal identifying information deleted in the transcription process. The audiotapes will be erased after transcribed. Personal identifying information will be deleted from the written notes. Only the investigator, co-investigator, and co-facilitator will have access to your responses. Any publications will take necessary precautions to protect your identity. These include deletion of any names or personally identifying information.

COSTS:

There are no direct costs to you. You will be contributing your time as a result of agreeing to participate in a focus group.

LIABILITY:

The Oregon Health Sciences University, as a public institution is subject to the Oregon Tort Claims Act, and is self-insured for liability claims. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of the University, its officers or employees.

YOUR RIGHTS AS A PARTICIPANT:

If you have any questions regarding your rights as a research subject, you may contact the OHSU Research Integrity Office at (503) 494-7887. Participation in this research project is completely voluntary and you may refuse to participate and may withdraw from this study at any time without

affecting the care you receive at Samaritan OB/GYN, Good Samaritan Regional Medical Center, or Oregon Health Sciences University. Your health care provider may be the co-investigator of this research study, and as an investigator is interested in both your clinical welfare and in the conduct of this study. You do not have to be in any research study offered by your nurse midwife.

You may be removed from the study if the investigator stops the study or you do not come to the focus group you were scheduled to attend.

We will give you a copy of this form.

If you have any additional questions about this research you can contact the co-investigator, Susan Heinz, toll free at (888)788-6845. If you have further questions regarding your rights as a research subject, you may contact the OHSU Research Integrity Office at (503) 494-7887.

Your signature below indicates that you have read this entire form and that you agree to be in this study.

_____ _____

Participant's signature Date

_____ _____

Witness' signature Date

_____

Witness' name (print)

Appendix D

Physiologic Birth Focus Group

IRB #00006904

Focus Group Definition and Questions

Definition

We are here to discuss physiologic birth. What is meant by this, for purposes of our discussion, is labor and birth that begin and end without artificial stimulation, proceed without the use of medication for pain, and end in a spontaneous vaginal birth. Other words that are frequently used are "natural childbirth", normal birth or unmedicated, non-interventive birth.

This group is part of my doctoral study. The purpose of this group is to gain an understanding of why women, such as you, would choose to have a physiologic birth and what the roles of prenatal care and labor care and environment are in this process. We have a total of two hours for this discussion. It is important that everyone has an opportunity to speak who wants to and that we stay on track so that the information we need is gathered within the time allotted. It is also important if you do not want to answer any particular question or share any particular information that you know that you do not need to. If at any point you want to leave and no longer participate, you may do so. Does everyone understand why we are here and what the general guidelines are?

Let's begin with introductions. My name is Susan Heinz and I am the researcher on this project and the facilitator of today's [tonight's] group. I am a midwife and have 2 children who are now teenagers.

Please introduce yourself and give a brief statement about why you choose to participate.

Focus Group Questions:

I. Tell me about your thoughts and feelings about physiologic birth?
From your perspective what are the advantages of an unmedicated birth?
What lead you to consider his type of birth?

II. Tell me what you think would be helpful during pregnancy to prepare for this kind of birth?
Do you think there are important things that could be done during your prenatal care that could help you prepare?
What would you give you confidence in your body's ability to birth during your while you are pregnant?
Other thoughts about prenatal care?

III. Tell me what you think would be helpful during your labor and birth to support birth without drugs or other interventions?

Any other thoughts you would like to share about support in labor for physiologic birth?
Any other thought you would like to share about birthing environment or support in labor for physiologic birth?

Let's sum up what has been discussed.

If you were going to state the most important thing said today for you, what would it be?

I'll summarize what was said. .... How well does that capture what was said?

Table 1

Subjects of Study by focus group

Group #	# of subjects (# scheduled)	Total # births represented	# C-Sections	# subjects who planned home births	# subjects who had at least one home birth	# birth center births	# children brought to group (all < 1y/o)
1	5 (5)	8	1	2	2	0	1
2	9 (9)	17	2	4	3 (1 VBAC)	0	1
3	9 (9)	12	1	2	2	1	8
4	4 (6)	6	0	1	1	0	1
Totals	27 (29)	43	4	9	8	1	11

Figure 1

Question 1 - Themes

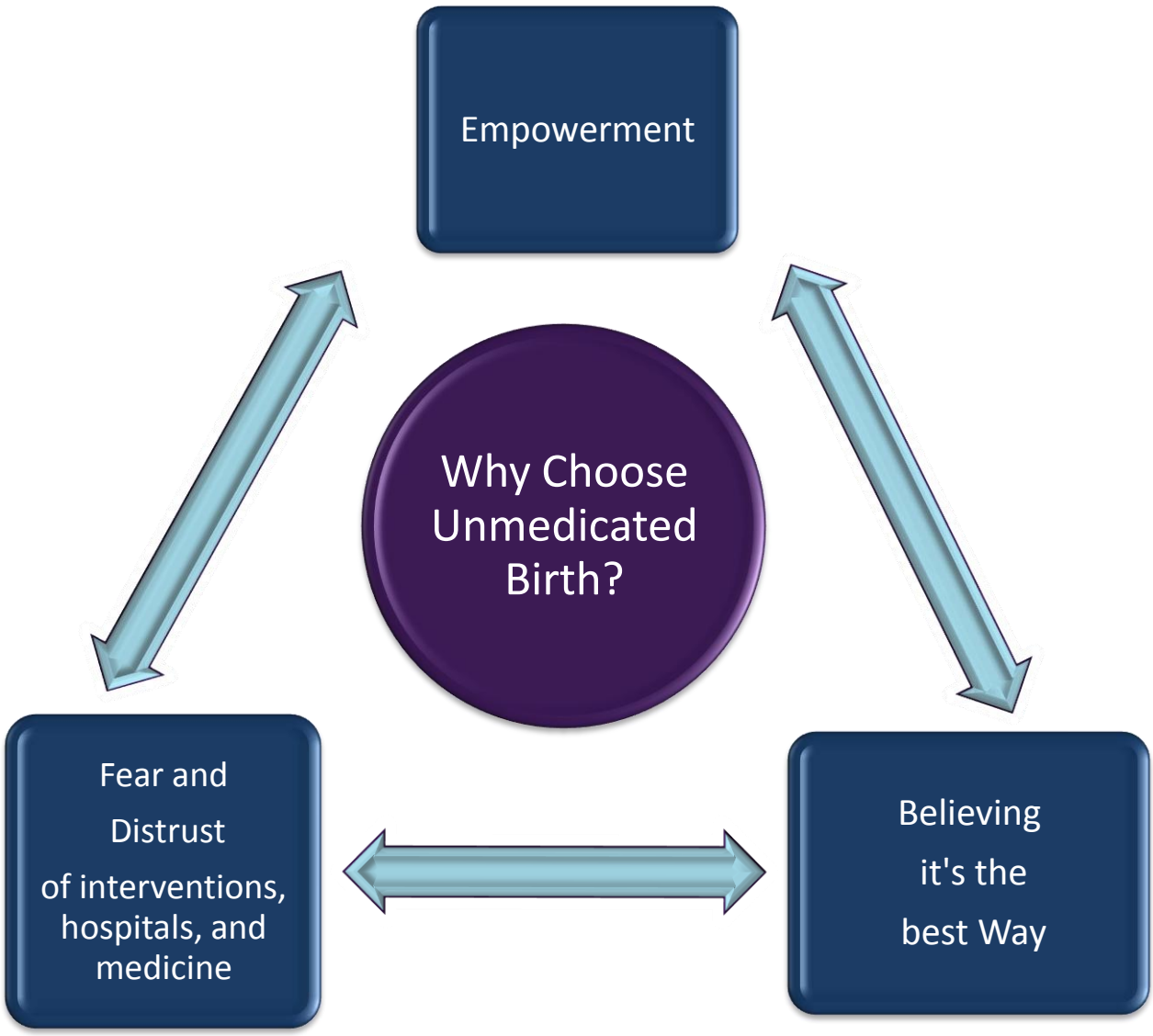


Figure 2

Question 2 - Themes

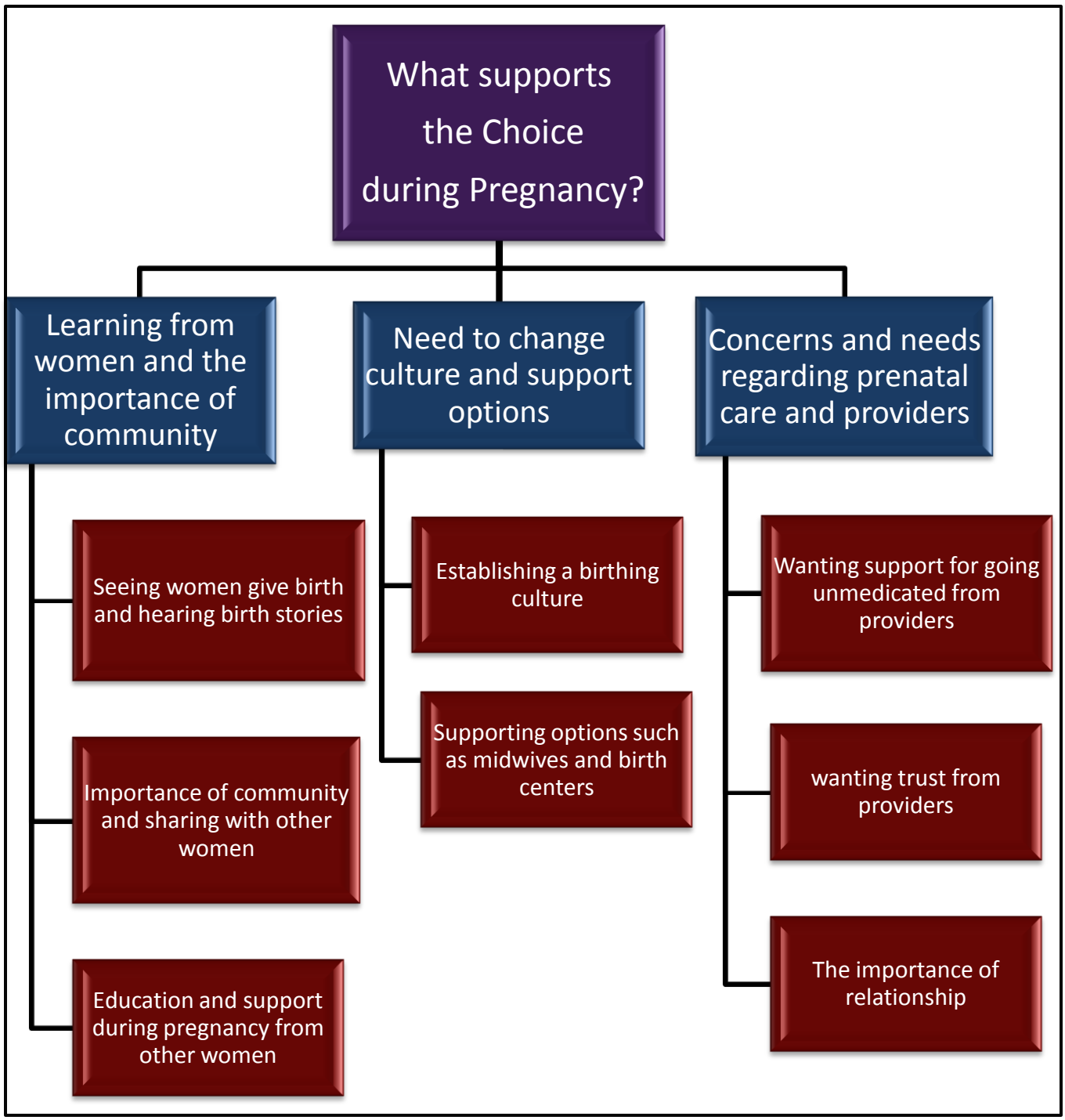
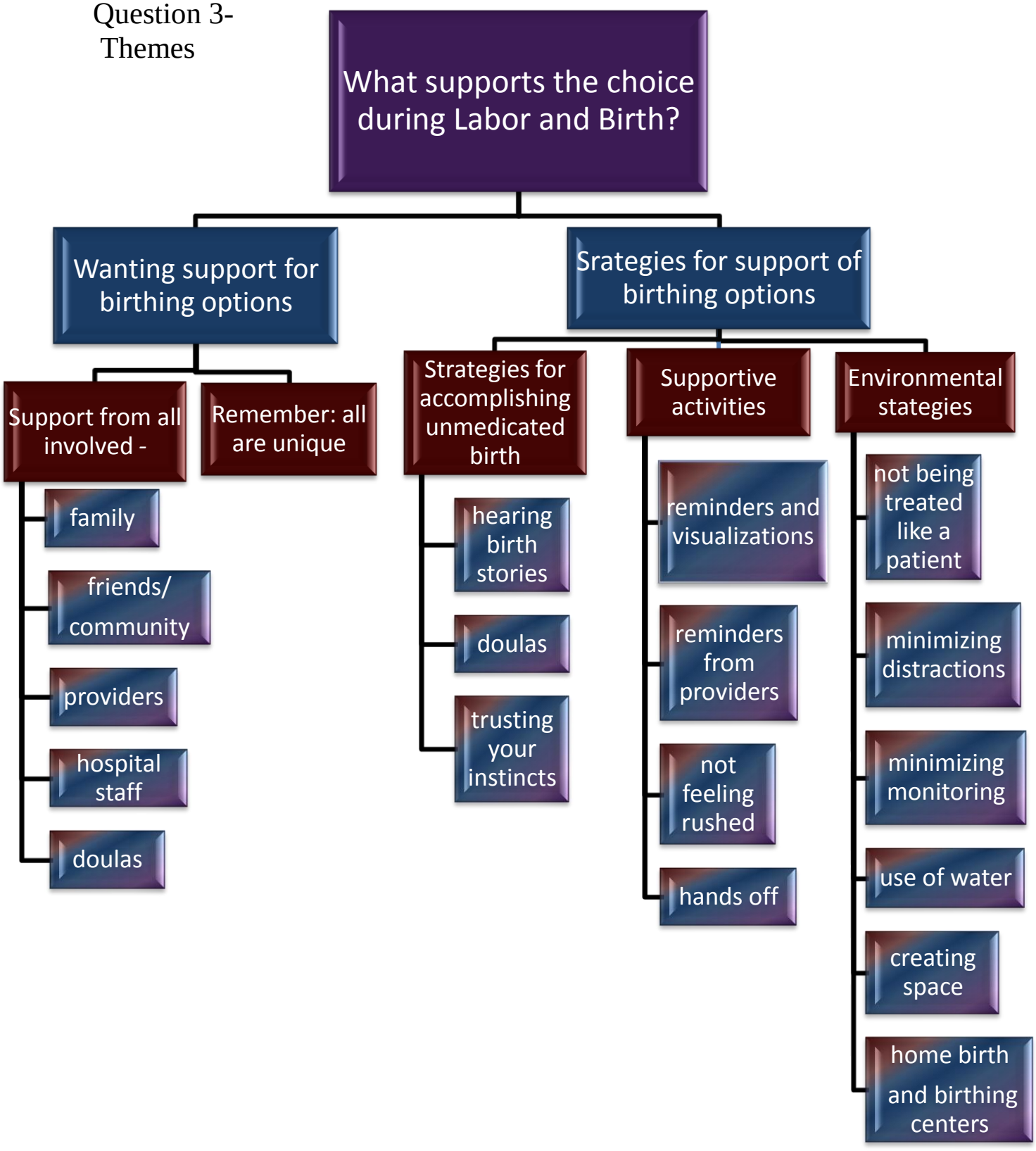


Figure 3

Question 3- Themes



Out of Hospital Model of Care:

A Concept Paper

Susan Wegelt Heinz

Oregon Health & Science University

Introduction

In the United States cesarean section rates and induction rates have reached an all time high at 32% and 22.5% respectively. New models of care that decrease intervention have value both economically and in terms of outcome. This paper proposes a model of maternity care that has four areas of focus. 1.) Professional midwifery care of low risk women. 2.) Enhanced prenatal care utilizing a self care and an education based model of group prenatal care. 3.) Improved access and availability of birthing options including home birth, out-of-hospital birth center, hospital birth, and coordination of related services. 4.) Improved post partum support and care. An international model of care used in the Netherlands is discussed as an example of a model of care similar to the one proposed. This paper is the development of a model of care designed for a specific community, Linn and Benton Counties in Oregon; however it is a model of care that could be adapted to other communities adjusting for their specific needs.

Identification of Problem

Childbirth is a major life event for 4.3 million mothers each year in the United States (US). In the State of Oregon, there were almost 48,000 births in 2009 (Center for Health statistics, 2010.). There were 1,134 births in Benton County and 931 births in Linn County in 2009 as recorded by the Center for Health Statistics (2010). Childbirth is the leading reason for hospitalization in the US. Hospital charges for women giving birth are far greater than hospital charges for anything else. These high costs are due in part to the current style of caring for women giving birth in the US. Six of the fifteen most commonly performed hospital procedures are associated with childbirth. Cesarean section is the most common operating room procedure in this country (Sakala & Corry, 2008). Labor and birth practices are strongly focused on intervention, even for healthy women experiencing a healthy pregnancy.

The cesarean section rate in the United States has reached an all time high at 32% according to the Centers for Disease Control and Preventions' national vital statistics report for 2006. Induction rates also reached a high of 22.5% (CDC, 2009). In the United States 99 % of births occur in hospitals. In a report of women laboring in US hospitals in 2005, researchers found that 94% of women had electronic fetal monitoring. Of these, 93% were monitored continuously or for most of the time during labor (Declercq, Menacker, & MacDorman, 2006). While electronic fetal monitoring is the standard of care for most women laboring in hospitals, more than one study has demonstrated no improvement in outcome (Alfirevic, Devane, and Gyte 2006; Blix et al. 2005). While initially considered a technology to reduce cerebral palsy, longitudinal evaluation of rates of cerebral palsy in both developed and underdeveloped countries have failed to demonstrate any significant reduction in prevalence of cerebral palsy over the past three decades, despite a 5-fold increase in the rate of cesarean section, that in part is due to the electronically derived diagnosis of fetal distress (Clark & Hankins, 2003). A recent review by Gourounti and Sandall (2007) supported the findings of Clark & Hawkins (2003) demonstrating that not only was there no benefit for newborns, there was an increased likelihood of cesarean section and assisted vaginal delivery among low risk women experiencing electronic fetal monitoring.

While cesarean section rates and use of technology increase, birth outcome data continues to worsen, with the preterm birth rate rising to 12.8% and low birth weight to 8.3% (CDC, 2009). The use of increasing technology has not been demonstrated to improve outcomes. The most appropriate range for frequency of cesarean section remains an issue of debate but should be defined through an outcome based approach and associated with the lowest attainable maternal and perinatal morbidity and mortality. Althabe & Belizan (2006) point out

that cesarean section is a surgical intervention to prevent or treat life-threatening maternal or perinatal complications. It has been estimated by looking at international data that cesarean section rates higher than 15% are not associated with reductions in maternal and neonatal mortality and morbidity, and in fact, an increased rate of intervention was associated with an increase mortality and morbidity in mothers and newborns. The World Health Organization has recommended a maximum 15% cesarean section rate, reflecting this data of no documented benefit and increased risk (Althabe & Belizan, 2006).

Models of care that promote minimal intervention during labor and birth, as well as safety, are essential. The challenge for those providing care to pregnant women is a) to provide care to every woman during her pregnancy and birth that maximizes a woman's chance of having a safe vaginal birth, and b) to insure that every cesarean section performed benefits the mother and baby. The National Institute of Health has called for research into ways to increase vaginal birth, especially in first births (NIH, 2006).

In hospital labor and delivery care, interventions are frequently offered as a matter of routine, rather than necessity, and options that could lead to less intervention are often not explored. There is evidence-based value in unmedicated birth, yet few medical systems support less intervention. Little attention, in general, in the medical community has been given to promoting healthy, non-interventive pregnancy and childbearing options (Sakala & Corry, 2008).

Models of Care

Midwives have long been heralded as the guardians of normal birth, and international models of care can offer a framework for policy change that could decrease the cesarean section rate, decrease interventions, and promote satisfaction in childbirth for healthy women. When exploring international cesarean section rates The Organization for Economic Co-operation and

Development (OECD, 2009) ranked the cesarean section rates of 16 industrialized nations from highest to lowest. With Italy ranking the highest, the US is rated third highest, with the United Kingdom (UK) rated number 10 and The Netherlands the lowest at number 13. Both the UK and The Netherlands utilize a national health care model with midwives as the primary providers of maternity care. The Netherlands also have a home birth rate of 30% or greater. (See Appendix A)

Midwifery

The role of continuous support for women during labor by a doula or midwife and reducing cesarean section rates and improving satisfaction has been investigated. Support and patient involvement in decisions are hallmarks in midwifery care. Midwifery care is well documented to promote maternal satisfaction and improved outcomes. A recent Cochrane Review (Hatem et al., 2008) definitively established the value and effectiveness of midwifery models of care in providing excellent perinatal outcomes. They included 11 trials (12,276 women) from multiple countries, using licensed midwives only and all births occurring in the hospital. Their conclusion is that midwife-led care has significant benefits and no adverse outcomes. Several researchers have demonstrated that support in labor by a midwife can not only promote satisfaction, but can decrease cesarean section rates and decrease the duration of active labor (Kashanian, Javadi, & Haghighi, 2010; Hodnett , Gates, Hofmeyr, & Sakala, 2007; Khresheh, 2009).

Women participating in midwife-led care, who are supported and encouraged through pregnancy and childbirth with a small number of midwives, establish a trusting relationship with their midwives. These women report a sense of calm and confidence that resulted in a positive

impact on their experience of pregnancy, childbirth, and breastfeeding (Leap et al. 2010; Huber & Sandall, 2006; Huber & Sandall, 2009; Hatem et al., 2008).

Home Birth

In the last several decades, childbearing patterns in the US have changed considerably. Historically, the percentage of out of hospital births made a sharp decline from 44% in 1940 to 1% in 1969. After a gradual continuing decline from 1990 to 2004, the current trends demonstrate an increase in out of hospital birth. Total out of hospital births increased by 3% from 0.87% in 2004 to 0.9% in 2005 and 2006. Numbers of home births only, excluding out of hospital birth centers, have risen by 5% to 0.59% in 2005 and 2006 (MacDorman & Menacker, 2010).

In the US, slightly less than 1% of births occurred out of the hospital in 2006. Of those 64.7% were in a home and 28% were in a freestanding birthing center. Midwives attended 60.9%; the 2006 rates represent a 27% increase in midwife-attended home births and a 43% decrease in physician-attended home births over the past decade. Most midwives attending births in the US are certified nurse midwives (CNMs). CNM attended births account for 94.3% of all births attended by midwife in the US, and 93% of midwife attended births are in hospitals (CDC, 2009). In a home setting the numbers are very different. Twenty-seven percent of midwife attended home births were by CNMs, and nearly three-fourths (73%) were attended by other midwives (MacDorman & Menacker, 2010). Locally, in Linn and Benton Counties the home birth rate significantly exceeds the national rate. All reported out-of-hospital births are home births as there is no out-of-hospital birth center in Linn or Benton Counties (Appendix A).

In two studies, the researchers explored why women choose to give at home, even though it is often going against the cultural norm (Boucher, Bennett, McFarlin, & Freeze, 2009;

Cheyney, 2008). One central reason for the decision was a general mistrust of hospitals. Reporters believed that while hospitals were attempting to create more home-like environments, they did not mask the underlying lack of personal choice and freedom. In these studies, women believed the hospital environment promoted interventions. Finally, the women expressed a need to believe in their body's ability to give birth and felt this was best supported at home.

The opinion that hospital birth is the safest and best option for all women is increasingly being challenged. Since 1993 the official policy of the UK, entitled Maternity Matters (DH, 2007) advocates providing more choice to women regarding their place of birth. The limited evidence on the safety of planned homebirth undermines the choice. In a nationwide study conducted in The Netherlands (de Jonge, et al, 2009), 529,688 low-risk women who started their care in midwife-led primary care were compared for perinatal mortality and severe perinatal morbidity between planned home births and planned hospital births. Of these women, 60.7% intended to give birth at home, 30.8% planned hospital birth, and for 8.5% the intended place of birth was unknown. The authors found that those women planning a home birth did not have an increase risk of perinatal mortality and severe perinatal morbidity, provided the maternity care system, such as that which occurs in the Netherlands, facilitates this choice through the availability of well trained midwives and through a good transportation and referral system. It is important to note that this is a maternity health care system with independent midwifery practice, encouragement of home birth and out-of-hospital birth practices, and a national C-Section rate of 12.9% compared to the 32% US rate. Also, the infant mortality rate in the Netherlands is 4.7/1000 compared to the 6.3/1000 in the US. To date, this is the largest study of home birth safety in a system utilizing careful screening and selecting of low risk women.

Out-of-Hospital Birth Center

Studies regarding out-of-hospital birth centers have demonstrated excellent outcomes, reduction in interventions, significantly lower cesarean section rates and increased levels of satisfaction with care (Rooks, Weatherby, & Ernst, 1992; Jackson et al., 2003, Walsh & Downe, 2004). A birth center decreases cost by eliminating the need for maintenance of costly diagnostic and treatment technology that is highly utilized in hospital based obstetric care. A birth center reduces the potential of overuse of technologies such as epidurals and continuous electronic fetal monitoring on low risk women that is commonplace in hospitals (Declercq, Menacker, & MacDorman, 2006).

The role of the birth environment in promoting physiologic childbirth has been well documented. The National Birth Center Study included nearly twelve thousand women and the authors found excellent outcomes, reduced interventions, significantly lower cesarean section rates, and increased levels of satisfaction with care (Rooks et al., 1992). The San Diego birth center study authors (Jackson et al., 2003) further supported these findings demonstrating safe outcomes and decreased intervention rates. Fahey, Foureur and Hastie (2008) suggest that birth environment matters as birth territory is the place where women have control and power claimed, making involvement in empowering women and protecting and fostering physiologic birth imperative. Birth centers serve as safe alternatives to hospital based birth.

Birth centers not only improve satisfaction and outcomes, they have documented economic value. Appendix B, entitled birth center savings, points to the rising costs of hospital care for birth and compares birth charges in hospital with birth center. Considering the current cesarean section rate of 32% with standard hospital care and the documented birth center cesarean section rate from the National Birth Center study (Jackson et al., 2003) of 4.4%, the economic impact is obvious. Looking at local data, with a local C-section rate of 25-27% in

Benton and Linn Counties respectively, any significant reduction in cesarean section rate, not only decreases morbidity but also has a significant impact on cost savings.

The Dutch Model

Maternity care in The Netherlands is based on the principle that pregnancy, birth and post partum are fundamentally normal physiologic processes. In the Dutch model the role division in maternity care between primary care by licensed, independently practicing midwives who care for women during normal pregnancy and childbirth, and secondary care by an obstetrician who care for pathologic pregnancy and childbirth, is clearly established. In the Netherlands, pregnant women are seen first by a midwife and then, based on risk criteria, will continue on with the midwife only, or be seen by a physician, either for referral or to assume care. If the perinatal course remains uncomplicated the woman remains under the care of her primary midwife, and she can make the choice of home, a short-stay hospital, or in an out of hospital birth center birth under the supervision of her midwife. If she chooses to go to the hospital, risk must be identified or there is an out-of-pocket fee for her birth there. Women are encouraged to consider both opinions – home and birth center - but do not need to make up their minds as to where they will give birth until they are in labor, and all women are visited and assessed by the midwife at home when labor begins. If at any point in the pregnancy, birth, or post partum course, complications occur or are threatened to occur, she will be referred to an obstetrician and remain in the care of the obstetrician as long as deemed necessary. Women with a high risk profile from the beginning are cared for by an obstetrician and are not offered a home or out-of-hospital birth. They will have post partum support and follow-up from a midwife. In 2006, 77.3% of all women started care with a midwife. The home birth rate in The Netherlands of 30% remains one of the highest among the industrialized nations, and their infant mortality rate is significantly

lower than the US (Amelin-Verburg, &Buitendijk, 2010; Wiegers, 2009). While women in The Netherlands have the option of where they will give birth, Wiegers (2009) found women had increased satisfaction with the birth experience when it occurred at home and with their primary midwife. Maassen et al. (2008) found a two times greater operative vaginal delivery rate and a four times greater cesarean delivery rate in low risk women who choose to give birth in the hospital in secondary care from those who remained in primary care at home or short stay birth center with a midwife; thus presenting some evidence that location of birth and provider has an effect on satisfaction, intervention and cesarean section rates.

Utilizing a model of care similar to the Netherlands, Leap et al. (2010), in England, report a low cesarean section rate. In their study, taking place in a socio-economically deprived area of London, the authors utilized a community based midwifery practice implementing a model similar to the Netherlands midwifery model in that women were "encouraged to keep an open mind about the place of birth and to make the final decision either to have an in-hospital birth or to stay at home in labor if it is clear that their labor is progressing well without complications (Leap et al., 2010, p. 235)". Leap et al. (2010) report a 15.5% C-section rate with a 40-50% home birth rate over 12 years of practice. This is particularly noteworthy considering that the population served is low socio-economic and that all risk levels are able to access the practice.

Centering Pregnancy: A model of prenatal care

The current routine for providing prenatal care in the US is a model established by the American College of Obstetricians and Gynecologist that was developed decades ago and has changed little. The stated objective is risk assessment and reduction. In practice, clinicians generally focus on biomedical issues and women are generally referred out of the practice system to childbirth classes and nutritional services (Novick, 2009). This system of an extensive history

and physical followed by 12 to 15 short visits of 10 to 15 minutes is the common routine throughout pregnancy. Each brief visit includes blood pressure, weight, and abdominal examination to assess the growth and position or the fetus and document fetal heart rate. The use of this system of prenatal care, though not evidenced based, is widespread, and its ability to improved outcomes has never been demonstrated (Walker, McCully & Vest, 2001).

Centering pregnancy or a group prenatal care model is one model that offers women extended time for education and support, and time with their provider and other women in a group setting. Participation in Centering Pregnancy results in desired outcomes of decreasing preterm birth and may have an impact on post partum depression by enhancing a woman's self-confidence and sense of support. There is evidence that women involved in group prenatal care use less medication in labor, have reduced use of epidurals, and have lower c-section rates. Empowerment and self-care are critical features of the Centering Pregnancy model and have even been demonstrated to enhance self-esteem in vulnerable populations such as teens, women in the military, and low income women (Falk-Rafael, 2002; Grady & Bloom, 2004; Handler, 1996; Ickovics et al., 2007; Kennedy et al., 2009; Leap et al., 2010; Rising, 1998; Rising, Kennedy, & Klima, 2004).

Prenatal care can affect a woman's experience of labor and birth. It is during the prenatal period that a pregnant woman can become confident in her innate wisdom to give birth, and the childbearing family and midwife are able to develop a relationship of trust and mutual respect (Neumann and Kennedy, 2010). It has been demonstrated that when women are supported during pregnancy and presented with the sense of trust and belief in their body's ability to do the work of labor, they have lower epidural rates, are better able to cope with labor, and have increased sense of pride and empowerment (Foster, 2005; Leap et al., 2010).

Health Care Reform

The US ranks the highest in cost per capita for health care. This high cost system has not demonstrated value when considering outcomes for women and infants. Maternity care needs to continue to focus on evidenced based practices, provide support and education for the well being of mothers and children, and offer systems which can decrease interventions as well as cost, and improve outcomes (Sakala & Corry, 2008). We live in an era of health care reform and the time is ripe to explore alternate models of care delivery which can have an impact outcome and cost. One such model of care, known as the Medical Home Concept, is gaining increasing attention in health care reform arenas. This concept, originally coined by the American Academy of Pediatrics as a centralized system for providing care for children and families, it is now being used by policy makers to describe, not only a centralized place, but a form of high quality health care involving partnership with individuals and families to provide care that is accessible, coordinated, comprehensive, continuous, compassionate, and culturally effective (Sia, Tonniges, Osterhus & Taba, 2004; American Academy of Pediatrics, 2011). A model of care, offering partnership with women for prenatal care and birthing services, as well as post-partum support and advocacy for women and infant's health care is consistent within a Medical Home concept of care.

When exploring health care reform, there are two existing components of Obama's health care bill HR 3590 that specifically address issues of maternity care and reform. Section 3114 of HR 3590, "Improved Access for Certified Nurse-Midwife Services" specifically names CNMs as health care providers who the public has a right to access and changes reimbursement rates for CNMs from the 65% previously reimbursed, to 100% of what is reimbursed to physicians. This helps to facilitate the independent practice of CNMs in many centers and systems, especially in

sites such as birth centers where they are not employed with physicians. In addition, HR 3590 specifically addressed birth centers as reimbursable services. This encourages the establishment of birth centers, the utilization of Midwives, and encourages insurance carriers to seek out and specifically insure birth centers and midwifery care (ACNM, 2010).

Two currently proposed pieces of legislation are also receiving increasing support:

1. "The Birth Center & Women's Health Act" would create a federally-funded Birth and Women's Health Center program. This program will make funding available to public and nonprofit entities for developing Birth and Women's Health Centers, including construction grants, and grants to support models of care that focus on reducing infant mortality and disparities, instituting "centering pregnancy" model of care, and have centers that expand dental health or mental health services for pregnant or postpartum women or pediatric services for infants and children.
2. MOMS for the 21st Century Act (HR 5807) is a bill that places national focus on evidence-based maternity care practices to help achieve the best possible maternity outcomes for mothers and babies. It clearly identifies that there are important evidenced-based practices that result in a healthy mother and baby by reducing complications and unnecessary interventions. The evidenced based practices of midwifery care and minimal intervention childbirth not only reduce complications, but are cost effective as well.

The proposal

In the State of Oregon, and specifically in the communities of Linn and Benton country, there is reported home birth rate significantly above the national average, 4.6% and 2.6%

respectively. This demonstrates a significant interest within these communities for home birth. This rate exists with only home birth as an option as there is no free standing birth center in Linn and Benton counties (Appendix A).

To verify interest and support for out-of-hospital birthing options, including home and free-standing birth center, a survey will be conducted of women living in Benton and Linn Counties about these options. (Appendix C). Results from this survey will be analyzed to demonstrate if there is interest in supporting a model of care including a free standing birth center available to women in surrounding Linn and Benton county area.

The proposal is to utilize a model of care, with specific risk criteria, for woman to be offered home or out-of-hospital birth center birthing options. The birth center would be a free standing birth center, seeking accreditation from the American Association of Birth Centers, utilizing a model of care similar to the Dutch model where low risk women are assessed while in labor at home and either continue their labor and birth at home, proceed to the birth center, or establish care at the hospital. All care will be under of the partnership, care, and supervision of a CNM or LDM working within specific risk assessment criteria and practicing independently according to their licensure. The model of care includes six important components: 1.) A seamless system for consultation as needed with a local OB/GYN practice. 2.) Easily facilitated system for transfer of care for women who develop risk during labor, birth, or postpartum. 3.) A system of transfer for women who desire pain management or any other need identified by the midwife or the woman herself. 4.) A group prenatal care model developed specifically for the women of this practice with a focus on supporting minimal intervention, promoting self-care and responsibility, and focusing on optimal health during pregnancy.

The fifth component of this model of care is the expectation that the birth center is not just a place to give birth. It is envisioned as a community center for pregnant women and their young children to receive and access services. Similar to the Medical Home model of care, this center and its services will be a gathering place for all women, regardless of whether they are having their children through the birth center or not. It will be identified as a model of health and empowerment through self care and community. There will be a community room for classes such as childbirth classes, prenatal yoga, mommy and baby yoga, infant massage, diet and nutrition education, and breastfeeding support. There will be time for mothers to gather with their infants to be able to weigh their babies and talk with each other or speak to one of the midwives or a lactation consultant, and better support breastfeeding relationships. All of these actions support prevention of childhood obesity by promoting maternal nutrition and breastfeeding. Particular focus and emphasis on access to care and support for the Latina population, a population in Linn and Benton counties that are particularly vulnerable to social isolation, will be an essential component. Access to other health services such as dental, mental health, and support services will be a key component. Although the initial focus is on the childbearing woman, the long term goal will be expansion and provision of pediatric services such as well-child check-ups and immunizations. The underlying philosophy of this proposed model is that it is developed **by** the community **for** the community.

The sixth component of this project is its design as a living laboratory to gather outcome data about this type of care. The project will be part of a research design and will be a model project that could serve as a templar for other communities establishing birthing models of care. This project is not only about gathering data, it is about causing a change in culture. It is about accepting that the system that we have in place fosters dependence and intervention, rather than

promoting health, wellness, and supporting individuals' rights and responsibilities to care for themselves, their yet unborn child, and their community.

The Dutch Midwifery Council (KNOV) has a general philosophy that they follow. While in the US there is great debate about what is "normal" birth and when birth falls out of the realm of normal, in the Netherlands midwives talk about "optimal birth". Their description of optimal birth is birth with as few interventions as possible, with a healthy mother and baby as a result, and a satisfied feeling when looking back on it. Clearly this is a standard we can all value.

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Appendix A

International Statistics

Infant Mortality

According to the WHO:

The Netherlands	ranked 19	4.7/1000 births
United Kingdom	ranked 22	4.8/1000 births
United States	ranked 33	6.3/1000 births

Cesarean Section rates

The OECD (Organization for economic co-operation and development) ranked the C-Section rates from highest to lowest of 16 industrialized nations:

United States #3 (32%)
United Kingdom # 10 (24%)
The Netherlands #16 (12.9%)

Cost per capita (in US dollars)

UK $2,560
Netherlands $3,093
US $6,096

These two international health care models utilize midwifery care and encourage alternatives to hospital based maternity care for low risk women.

Local Statistics

C-section rates

2010 (first 3 quarters) rate:

Benton County:

Good Samaritan Regional Medical Center 24.8%

Linn County:

Samaritan Albany General 30%
Samaritan Lebanon Community Hospital 20.3%
All Linn County Hospitals 27.1%

Out of Hospital birth rate (including home or free standing birth center - FSBC)

	2009	**2010 (first 3 quarters)**
Oregon	1251 – 2.6%	
Benton Country	30 - 2.6% (home birth only – no FSBC)	30 births - 4.5%
Linn Country	41- 4.4% (home birth only – no FSBC)	41 births - 4.1%

Induction rates 2010 till September –

GSRMC 27.7%

Epidural rates

GSRMC 70% (2009)

Low Birth Weight (2007)

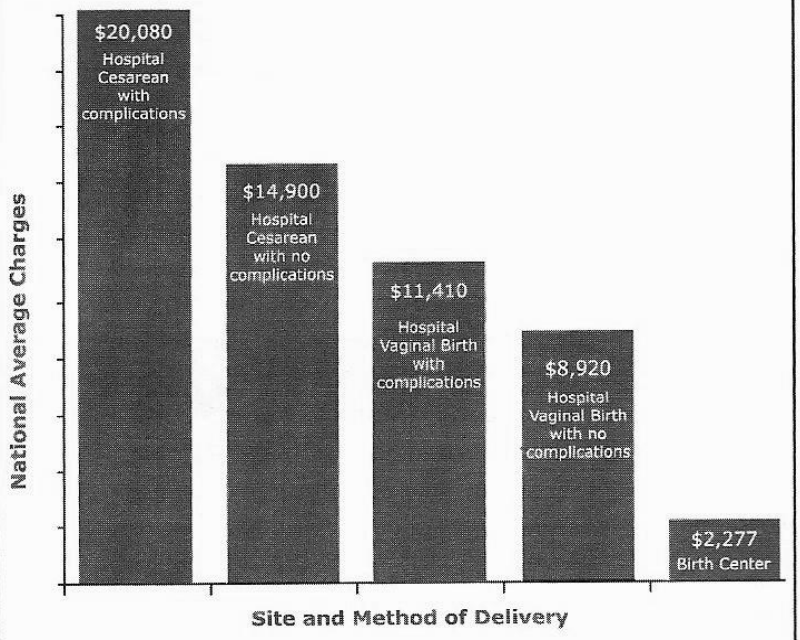
Benton 6.4%
Linn 6.8%

Appendix B:

Birth Center Savings

For the past 30 years, Birth Centers have consistently shown dramatic savings when compared with hospital birth. Birth Centers provide quality midwifery care that is both safe and cost-effective.

If even 10 percent (400,000) of the 4 million women who give birth in the U.S. each year delivered their babies in Birth Centers, the savings in facility fee payments alone would be at least $2.6 billion.



NOTES

- Data for birth centers is from 2010. Data for hospitals is from 2008.
- Chart shows facility charges only. Provider fees additional.
- Charges for hospital births do not include newborn care .

Sources:
American Association of Birth Centers. Uniform Data Set. 2010 Data
U.S. Agency for Healthcare Research and Quality, HCUPnet. Healthcare Cost and Utilization Project. 2008 Data

Appendix C: Survey

You are being invited to participate in a survey for a research project that looks at birthing options that women and families in our communities would like to have available. The Friends of the Valley Birth and Beyond (website) and researchers at Oregon State University in the Department of Anthropology are jointly conducting this survey. In particular, we want to know what you think about the possibility of having a birth center in Corvallis. **This survey is for all adults aged 18 and over, whether you've had children or not.**

Participation in this survey is anonymous because it does not ask for your name or any contact information. It should take you somewhere between 5 and 20 minutes to complete and is completely voluntary. There are no known risks or benefits to participating in this survey. However, if you do choose to participate and you find that any part of the survey is stressful for you, we have provided a list of pregnancy and postpartum support resources on the last page of this survey. In addition, you are always free to skip any questions you do not feel comfortable answering. Your completion of this survey indicates your consent to be a research participant.

The lead researcher on this project is Melissa Cheyney, PhD of the OSU Department of Anthropology. She can be reached at (541) 737-3896 or at melissa.cheyney@oregonstate.edu if you have any questions about this study. You may also contact Susan Heinz at valleybirthandbeyond@gmail.com or student study team member Jenney Lee at leejenney@hotmail.com. If you have questions about your rights or welfare as a participant, please contact the Oregon State University Institutional Review Board (IRB) Office, at 541-737-8008 or by email at IRB@oregonstate.edu.

You can complete this survey online at (survey URL) or on paper. Completed paper surveys can be returned at one of the drop box locations listed on the last page of this survey. Thank you for taking the time to complete this survey.

1. What do you know about birth centers?
   (Check one)

   ____ Nothing
   ____ I have heard of birth centers but don't know anyone who has used one
   ____ I know someone who went to a birth center for care
   ____ I have received care at a birth center before
   ____ Other:_____

2. How far are you willing to travel for maternity care?
   (Check all that apply)

   ____ Less than 15 minutes
   ____ 15-30 minutes
   ____ 30-45 minutes
   ____ 45-60 minutes
   ____ More than 60 minutes

3. Resources during the **prenatal (pregnancy) period** – For each option or resource in the list below, please indicate how you would rank the level of importance by circling the appropriate number. If you aren't sure or don't know, please place an X in the Don't Know column.

Prenatal Options and Resources	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important	Don't Know
Childbirth classes	1	2	3	4	5	____
Breastfeeding classes	1	2	3	4	5	____
Parenting classes	1	2	3	4	5	____
Group prenatal care	1	2	3	4	5	____
Nutrition counseling	1	2	3	4	5	____
Help to stop smoking	1	2	3	4	5	____
Self-care instruction	1	2	3	4	5	____
Baby care instruction	1	2	3	4	5	____
A library of books and videos	1	2	3	4	5	____
More time to talk with my midwife or doctor during prenatal visits	1	2	3	4	5	____

Exercise guidance during pregnancy	1	2	3	4	5	____
Prenatal yoga classes	1	2	3	4	5	____
Expectant mother/father/parent support group	1	2	3	4	5	____
Other: _____	1	2	3	4	5	____

4. Resources during **childbirth** – For each option or resource in the list below, please indicate how you would rank the level of importance by circling the appropriate number. If you aren't sure or don't know, please place an X in the Don't Know column.

Childbirth Options and Resources	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important	Don't Know
Support people (family/friends) of my own choosing	1	2	3	4	5	____
Freedom to move around in labor	1	2	3	4	5	____
Freedom to eat and drink in labor	1	2	3	4	5	____
Use of massage or acupuncture/acupressure	1	2	3	4	5	____
Support for non-medication pain relief options (e.g., visualization, breathing techniques, relaxation)	1	2	3	4	5	____
Availability of pharmaceutical pain relief (e.g., epidural)	1	2	3	4	5	____
Keeping my baby with me after the birth	1	2	3	4	5	____
Water birth	1	2	3	4	5	____
Availability of midwives	1	2	3	4	5	____
Availability of a doula (non-medical labor assistant)	1	2	3	4	5	____
A midwife, doula, or nurse with me	1	2	3	4	5	____

during most of my labor						
Having all three options of where to give birth – hospital, birth center, or home	1	2	3	4	5	____
Ability to choose **during labor** where I will give birth – hospital, birth center, or home	1	2	3	4	5	____
Having coordination of care between hospital, birth center, and home	1	2	3	4	5	____
Other:_____	1	2	3	4	5	____

5. Resources during **the postpartum period** – For each option or resource in the list below, please indicate how you would rank the level of importance by circling the appropriate number. If you aren't sure or don't know, please place an X in the Don't Know column.

Postpartum Options and Resources	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important	Don't Know
Help at home for a few hours/day for a few days (childcare, shopping, meal preparation, etc.)	1	2	3	4	5	____
A home visit the first or second day after the birth	1	2	3	4	5	____
An office visit one week after birth	1	2	3	4	5	____
Support/counseling for breastfeeding	1	2	3	4	5	____
Parent support group during the first year	1	2	3	4	5	____
Other:_____	1	2	3	4	5	____

6. Are you or your partner currently pregnant or expecting a baby?

____ Yes ____ No – Skip to Question #9

If yes, how many babies are you expecting? ____ Single
____ Twins
____ Triplets or more

7. What type of care provider or provider group are you or your partner currently seeing for your pregnancy and upcoming birth?
(Check one)

____ Midwife only
____ Midwife/Obstetrician team
____ Obstetrician only
____ Family doctor only
____ Other: _____

8. Where are you or your partner planning to give birth?
(Check one)

____ Birth room in a hospital
____ Out-of-hospital birth center with the hospital available if needed
____ Our home with a hospital available if needed

9. If you or your partner were to have a baby in the future, what type of care provider or provider group would you want to see for your pregnancy and birth?
(Check one)

____ Midwife only
____ Midwife/Obstetrician team
____ Obstetrician only
____ Family doctor only
____ Other: _____

10. If you or your partner were to have a baby in the future, where would you like to give birth?
(Check one)

____ Birth room in a hospital
____ Out-of-hospital birth center with the hospital available if needed
____ My home with a hospital available if needed

11. If you or your partner are pregnant now or were to have a baby in the future, what would influence your choice of care provider type and location of birth?

(Check all that apply)

____ Style of maternity care
____ Ability to receive pharmaceutical pain relief (e.g., epidural)
____ Insurance coverage
____ Concern about cleaning up "the mess"
____ Availability of pediatricians on-site
____ Desire to have the baby away from home
____ Desire to have the baby at home
____ Desire to "waited on" for a couple of days after the birth
____ Lack of care available for older children
____ Desire to be away from older children during and immediately after the birth

12. We'd like to understand your general opinion of having an **out-of-hospital** birth center in our community. Please indicate how much you agree with the following statements by circling the appropriate number. If you aren't sure or don't know, please place an X in the Don't Know column.

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't Know
An **out-of-hospital** birth center is a good idea for my community.	1	2	3	4	5	____
In other countries, a midwife comes to the home while a woman is in labor. She providers labor support and assessment and they decide together where the mother will give birth (home, birth center, or hospital). This is a good idea for my community.	1	2	3	4	5	____

Questions in this final section help us better understand peoples' opinions. Because we do not ask for your name or address, information in this survey cannot be tied to you or your family.

13. Have you given birth before?

____ No – Answer Question #14 and then skip to Question #35
____ Yes – Please answer the questions below for each birth, and then skip to Question #35 when you have answered about your most recent birth.

14. Do you have adopted, step, or foster children in your home?

____ No
____ Yes

FIRST BIRTH

15. For the first birth, how satisfied were you with your or your partner's…
(Circle one number for each stage of care)

Stage of Care	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Don't Know
Prenatal care	1	2	3	4	5	____
Care during labor and birth	1	2	3	4	5	____
Postpartum care (up to 6 weeks)	1	2	3	4	5	____
Extended postpartum care (6-52 weeks)	1	2	3	4	5	____

16. For the first birth, what type of care provider did you/your partner see and where did you/your partner receive this care? *(Circle one number for care provider type and one letter for location for each stage of care)*

Stage of Care	Care Provider Type				Location of Care		
	Midwife	Midwife/OB team	OB	Family Doctor	Hospital/Hospital clinic	Out-of-hospital birth center	Home/Home office
Prenatal care	1	2	3	4	A	B	C
Care during labor and birth	1	2	3	4	A	B	C
Postpartum care (up to 6 weeks)	1	2	3	4	A	B	C
Extended postpartum care (6-52 weeks)	1	2	3	4	A	B	C

17. For the first birth, how many babies were born?

____ Single
____ Twins
____ Triplets or more

SECOND BIRTH

18. For the second birth, how satisfied were you with your or your partner's…
(Circle one number for each stage of care)

Stage of Care	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Don't Know
Prenatal care	1	2	3	4	5	____
Care during labor and birth	1	2	3	4	5	____
Postpartum care (up to 6 weeks)	1	2	3	4	5	____

Extended postpartum care (6-52 weeks)	1	2	3	4	5	____

19. For the second birth, what type of care provider did you/your partner see and where did you/your partner receive this care? *(Circle one number for care provider type and one letter for location for each stage of care)*

Stage of Care	Care Provider Type				Location of Care		
	Midwife	Midwife/OB team	OB	Family Doctor	Hospital/Hospital clinic	Out-of-hospital birth center	Home/Home office
Prenatal care	1	2	3	4	A	B	C
Care during labor and birth	1	2	3	4	A	B	C
Postpartum care (up to 6 weeks)	1	2	3	4	A	B	C
Extended postpartum care (6-52 weeks)	1	2	3	4	A	B	C

20. For the second birth, how many babies were born?

____ Single
____ Twins
____ Triplets or more

THIRD BIRTH

21. For the third birth, how satisfied were you with your or your partner's…
(Circle one number for each stage of care)

Stage of Care	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Don't Know
Prenatal care	1	2	3	4	5	____

Care during labor and birth	1	2	3	4	5	____
Postpartum care (up to 6 weeks)	1	2	3	4	5	____
Extended postpartum care (6-52 weeks)	1	2	3	4	5	____

22. For the third birth, what type of care provider did you/your partner see and where did you/your partner receive this care? *(Circle one number for care provider type and one letter for location for each stage of care)*

Stage of Care	Care Provider Type				Location of Care		
	Midwife	Midwife/OB team	OB	Family Doctor	Hospital/Hospital clinic	Out-of-hospital birth center	Home/Home office
Prenatal care	1	2	3	4	A	B	C
Care during labor and birth	1	2	3	4	A	B	C
Postpartum care (up to 6 weeks)	1	2	3	4	A	B	C
Extended postpartum care (6-52 weeks)	1	2	3	4	A	B	C

23. For the third birth, how many babies were born?

____ Single
____ Twins
____ Triplets or more

FOURTH BIRTH

24. For the fourth birth, how satisfied were you with your or your partner's…
(Circle one number for each stage of care)

Stage of Care	Very	Dissatisfied	Neutral	Satisfied	Very	Don't

	Dissatisfied				Satisfied	Know
Prenatal care	1	2	3	4	5	____
Care during labor and birth	1	2	3	4	5	____
Postpartum care (up to 6 weeks)	1	2	3	4	5	____
Extended postpartum care (6-52 weeks)	1	2	3	4	5	____

25. For the fourth birth, what type of care provider did you/your partner see and where did you/your partner receive this care? *(Circle one number for care provider type and one letter for location for each stage of care)*

Stage of Care	Care Provider Type				Location of Care		
	Midwife	Midwife/OB team	OB	Family Doctor	Hospital/Hospital clinic	Out-of-hospital birth center	Home/Home office
Prenatal care	1	2	3	4	A	B	C
Care during labor and birth	1	2	3	4	A	B	C
Postpartum care (up to 6 weeks)	1	2	3	4	A	B	C
Extended postpartum care (6-52 weeks)	1	2	3	4	A	B	C

26. For the fourth birth, how many babies were born?

____ Single
____ Twins
____ Triplets or more

FIFTH BIRTH

27. For the fifth birth, how satisfied were you with your or your partner's…

(Circle one number for each stage of care)

Stage of Care	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Don't Know
Prenatal care	1	2	3	4	5	____
Care during labor and birth	1	2	3	4	5	____
Postpartum care (up to 6 weeks)	1	2	3	4	5	____
Extended postpartum care (6-52 weeks)	1	2	3	4	5	____

28. For the fifth birth, what type of care provider did you/your partner see and where did you/your partner receive this care? *(Circle one number for care provider type and one letter for location for each stage of care)*

Stage of Care	Care Provider Type				Location of Care		
	Midwife	Midwife/OB team	OB	Family Doctor	Hospital/Hospital clinic	Out-of-hospital birth center	Home/Home office
Prenatal care	1	2	3	4	A	B	C
Care during labor and birth	1	2	3	4	A	B	C
Postpartum care (up to 6 weeks)	1	2	3	4	A	B	C
Extended postpartum care (6-52 weeks)	1	2	3	4	A	B	C

29. For the fifth birth, how many babies were born?

____ Single
____ Twins
____ Triplets or more

SIXTH BIRTH

30. For the sixth birth, how satisfied were you with your or your partner's…
(Circle one number for each stage of care)

Stage of Care	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Don't Know
Prenatal care	1	2	3	4	5	____
Care during labor and birth	1	2	3	4	5	____
Postpartum care (up to 6 weeks)	1	2	3	4	5	____
Extended postpartum care (6-52 weeks)	1	2	3	4	5	____

31. For the sixth birth, what type of care provider did you/your partner see and where did you/your partner receive this care? *(Circle one number for care provider type and one letter for location for each stage of care)*

Stage of Care	Care Provider Type				Location of Care		
	Midwife	Midwife/OB team	OB	Family Doctor	Hospital/Hospital clinic	Out-of-hospital birth center	Home/Home office
Prenatal care	1	2	3	4	A	B	C
Care during labor and birth	1	2	3	4	A	B	C
Postpartum care (up to 6 weeks)	1	2	3	4	A	B	C
Extended postpartum care (6-52 weeks)	1	2	3	4	A	B	C

32. For the sixth birth, how many babies were born?

____ Single
____ Twins

____ Triplets or more

If you/your partner have had more than six births, please use space available at the end of this survey to tell us about them, including the type of information that we asked about for your earlier births.

33. Please use the space below to tell us what was particularly satisfying or not satisfying about any of your or your partner's prior births. Be sure to indicate which birth you are referring to in your comments.

34. If you could change one thing about you or your partner's prior birth experience(s), what would it be?

35. How old are you? *(Fill in # of years)*

_____ years

36. Do you identify as male or female?

____ Female ____ Male

37. What is your highest level of formal education completed? *(Check one)*

____ Some high school
____ High school graduate
____ Some college
____ Bachelor's degree
____ Some graduate school
____ Completed graduate degree

38. With which ethnicity and racial group categories do you identify? *(Check all that apply)*

<u>Ethnicity</u>
____ Hispanic or Latino
____ Not Hispanic or Latino
____ Self-identify: _____

<u>Race</u>
____ American Indian/Alaska Native
____ Asian
____ Black

_____

____ Native Hawaiian/Pacific Islander
____ White
____ Self-identify: _____
_____

39. What is your total annual household income? *(Check one)*

____ Less than $20,000
____ $20,000 to $40,000
____ $40,000 to $60,000
____ $60,000 to $80,000
____ $80,000 to $100,000
____ More than $100,000

40. What is your zip code? _____ *(Fill in the blank)*

41. Additional comments?:

Thank you for completing this survey. We know that your time is valuable, and this makes us appreciate your responses even more. Please return this survey to one of the collection boxes listed below, or if you prefer, you can mail it to:

Melissa Cheyney
212 Waldo Hall
Oregon State University
Corvallis, OR 97331

If you know other adults that may be interested in taking this survey, please share the web link or a paper copy of the survey with them. There are paper survey collection boxes and stacks of blank surveys at the following locations in Corvallis:

For those interested, pregnancy and postpartum support resources include:

Severe Shoulder Dystocia;

A Case Study

Susan J. Wegelt Heinz

Oregon Health & Science University

Purpose

Shoulder dystocia is an uncommon but serious obstetric emergency. Failure of the shoulders to deliver spontaneously places both the woman and the fetus at significant risk for injury. The purpose of this case study is to demonstrate a clinical example of a birth complicated by severe shoulder dystocia. A review of the complications from shoulder dystocia for both the mother and baby, and utilizing this case study, a discussion of the clinical management, anticipation, and implications for practice are presented.

Introduction

Shoulder dystocia is an uncommon and often unpredictable event, but it is one of the gravest obstetric emergencies because of its potential impact on maternal and fetal morbidity and mortality, as well as costly litigation. The definition of shoulder dystocia varies but it is generally considered a delivery that requires additional obstetric maneuvers to release the shoulders after gentle downward traction has failed. There is wide variation in the reported incidence of shoulder dystocia with ranges from 0.2% to 4.0% of all vaginal deliveries. This wide range is attributed to the inherent subjectivity of practitioner's definition of shoulder dystocia, the degree of reporting, and differences in study populations (Gherman et al, 2006; Baxley & Gobbo, 2004; Athukorala, Middleton, & Crowther, 2006). Researchers have attempted to identify risk factors for shoulder dystocia in the hopes of managing the risk, thereby preventing dystocia. The classic maternal risk factors for shoulder dystocia include obesity, diabetes, high parity, and a prior birth complicated by shoulder dystocia. Labor risk factors include prolonged first or second stage of labor and instrumental delivery. The fetal risk factor is macrosomia (Jevitt, 2005). Even though some risk factors for shoulder dystocia such as obesity, gestational diabetes and macrosomia are recognized, in the majority of cases shoulder dystocia

occurs unexpectedly, leading to episodes that can be very traumatic not only for the mother and infant, but also for the health-care professionals involved. Maternal complications may include perineal lacerations, uterine rupture and postpartum hemorrhage, while the consequences for the newborn may vary from different levels of asphyxia to transient or permanent brachial plexus injuries (Gherman, et. al, 2006; AlkGurewitseh & Allen, 2007; Melo, 2010). Several maneuvers have been developed and are advocated for releasing impacted shoulders, but the urgency of this event makes prospective studies impractical for comparing their effectiveness.

Case Study

DG is a 23 year old primigravida who presented for care at 9 weeks LMP (last menstrual period). She described this as a planned pregnancy and stated it took 3 months to achieve pregnancy. At her initial obstetrical visit, history and physical, she had a sure LMP and her dates were confirmed by an ultrasound. Her initial exam was normal other than having a BMI of 42. Vital signs were BP 126/70, P 82. Bilateral breath sounds were clear, heart regular rate and rhythm without murmurs noted. She was alert and oriented and an excellent historian.

Medical history: chronic back pain since late teens. Obesity has been an issue "all her life". She denied any recent weight gain or loss. Surgical history: tonsillectomy at age 5.

Allergies: Cephalosporins

Sexual/reproductive history: DG has been sexually active for the last 4 years. She is married and they have been together for over 3 years. She has had 2 sexual partners in her life. DG stopped using oral contraceptives 3 months prior to conception.

Menstrual history: Onset of menarche 14 years old. She reported that her menses had always been irregular except for the year she used oral contraceptives. She had 3 menses since stopping oral contraceptives and prior to conceiving.

Habits: DG was a smoker and quit approximately six months prior to pregnancy. She denied the use of drugs, and was a rare social drinker prior to attempting pregnancy and stated she stopped all alcohol intake once she began attempting pregnancy. She does not exercise regularly but stated she has been more aware of her diet and has made "significant improvements" in her diet over the last year.

Social history: DG is married. Her husband has twin sons, age 7. DG worked as a RN at a state hospital in the first half of her pregnancy and took a position as an ICU nurse midway through her pregnancy on a casual basis.

Family History: Father: ulcers, GERD; Mother: adult onset diabetes and obesity, hypertension, depression and anxiety, PCOS. Siblings: one brother and no sisters. Brother: depression.

Genetic history: Benign for both DG and her husband.

Environmental exposures: She was immunized for Hepatitis B three years ago, no concerning work exposures, x-rays, chemical, medication, drug, or alcohol exposure since her LMP.

ROS: DG reported having mild nausea, no vomiting. She complained of fatigue but was able to work and function well. Other pregnancy symptoms included breast tenderness and urinary frequency. She denied any bleeding or cramping.

Labs: Due to her BMI, the clinic obesity protocol was followed and labs ordered including HgA1C, 1 hour glucose screen, and metabolic panel in addition to routine lab work.

Results: A+, Antibody screen negative, rubella immune, RPR non-reactive, HBsAG negative, HIV non reactive, Hematocrit 35.1 hemoglobin 11.9, HgA1C 5.0. BUN 9, creatinine 0.4, uric acid 3.4, SGOT 11, SGPT 17; all normal laboratory results.

After her initial history and physical, DG received regular routine prenatal care and labs. She had another 1 hour glucose screen at 28 weeks that was also normal, hematocrit 41.1 and

hemoglobin 13.6. DG had a 20 week ultrasound for dates and anatomy, which was appropriate for size and normal anatomy, and a 32 week growth scan which placed her baby at the 73rd percentile, EFW 1889 grams plus or minus 276 grams (4 pounds 3 ounces). Her total weight gain in pregnancy was 44 pounds. DG tested positive for group B strep at 36 weeks, understood the implications, and agreed to antibiotic treatment in labor.

Beliefs and expectations: DG chose care through this clinic because it was staffed by CNMs and her goal was to have an unmedicated birth. She wanted things to "proceed as natural as possible". She understood that her obesity placed her at some risk but she verbalized a belief that she is healthy. She verbalized strong feelings about wanting to do "everything in her power not to have a cesarean section."

Labor and Delivery

At 40weeks and 3 days, DG had prelabor rupture of membranes at approximately 0130 and was admitted to the hospital for antibiotic treatment because of her positive GBS status. The amniotic fluid was clear. DG was started on vancomycin after she developed a rash following her first dose of IV penicillin and her history of allergy to cephalosporins. She was observed for a period of time and did not enter spontaneous labor. The estimated fetal weight was assessed prior to initiating pitocin and considered to be 9 ½ to 10 pounds. The estimated fetal weight was discussed with DG and her husband. She was started on Pitocin by the admitting physician given her GBS positive status and no labor at approximately 0900. An intrauterine pressure catheter (IUPC) was inserted. She had very slow progress during the day and her Montevideo units were not adequate. At 1530 hours she was approximately 3 cm dilated and she decided to have an epidural due to the anticipation that it would be many hours before she gave birth. At 1900 hours that evening she was 4 cm dilated, 90% effaced, and -3 station with minimal change,

her pitocin was at 14 milliunits and being increased as her Montevideo units were still inadequate. The next time she was checked was approximately 0300 hours the following morning. She was 7 cm dilated, complete, and -2 station. The fetal heart rate tracing was reassuring throughout. A discussion was held with DG and her husband regarding her dysfunctional pattern of her labor and slow progress, and they opted to continue with Pitocin at that time. At approximately 0700 she had an anterior lip and she attempted several pushes at that time. She moved the baby down to complete and zero station from -2 station and continued to push. There was a change of practitioners at this time and the oncoming CNM on call assumed her care. The CNM contacted the Obstetrician consultant after DG had been pushing for approximately two hours. DG had an epidural and only recently began having a significant feeling of pressure but was pushing adequately with direction and coaching. The MD evaluated fetal position and confirmed that she was complete/complete, +2 and right occiput anterior with a large amount of caput. Fetal heart rate tracing was category 2 with positive scalp stimulation. A discussion was held with DG and her husband reviewing that given the concern for macrosomia, with an estimated fetal weight of 9-1/2 to 10 pounds, that an assisted operative vaginal delivery would not be recommended. The possibility of shoulder dystocia was reviewed and positioning and possible maneuvers discussed. DG and her husband verbalized understanding and desired to continue pushing. They stated they wanted to avoid cesarean delivery. The CNM continued to work with DG while pushing and over the course of the next hour, DG continued to make slow but steady progress to the perineum. The CNM assembled the team as birth was imminent in anticipation of macrosomia and potential shoulder dystocia. The consulting OB, anesthesia, respiratory therapy, and pediatrician were called and present for delivery.

At 1052 the bed was broken down for delivery. Fetal heart rate tracing showed baseline in the 160s to 170s. There was some mild fetal tachycardia. Variable decelerations were intermittently occurring and the variability was moderate. DG now had a low-grade fever. BP remained stable throughout. The fetal head was delivered at 1100. There was a loose nuchal cord times 2 that was reduced over the fetal head. Initially the head of DG's bed was dropped and prophylactic McRoberts position was instituted. The CNM attempted to deliver the anterior shoulder, but it was very tight at that point and clear that there was going to be a shoulder dystocia. The MD stepped in and suprapubic pressure was applied by the RN. The MD then attempted to rotate the baby to the oblique. The baby's right shoulder was anterior at this time. The physician attempted a second, also unsuccessful technique, the Woods corkscrew maneuver. Next the MD reached for the posterior arm, the baby's left arm, also unsuccessful. Again, they tried to deliver the baby in the supine position, still unsuccessful, and repositioned the patient on hands and knees at 1102 hours and 30 seconds. An episiotomy was cut. At that point, there were 2-3 more attempts by both the CNM and MD to deliver the posterior arm. With the final attempt by the CNM the humerus of the left fetal arm gave way and was delivered. There was still some difficulty with delivery, but a large male infant was finally delivered at 11:05 after delivery of the posterior arm; total time from birth of head to total body 5 minutes and 15 seconds. The baby's birth weight was 9 pounds, 15 ounces (4500 grams) and the baby had Apgar scores of zero at one minute, 4 at five minutes, 6 at ten minutes, and 7 at fifteen minutes. The gases are as follows: The arterial pH was 7.11, PCO2 86, PO2 14, bicarb 29.9, and base excess was -5.3. The venous pH was 7.26, PCO2 52, O2 32, bicarb 24.9, and base excess -4.6. The full team was there for the resuscitation.

After delivery of the fetus and cord blood and gases were collected, DG was returned to a supine position and the placenta delivered spontaneously and intact with some trailing

membranes. DG had uterine atony that resulted in a blood loss of approximately 1200 ml but was controlled with IV fluids with pitocin, IM Methergine, Hemabate and Cytotec rectally. Inspection revealed a partial 3rd degree laceration and no other lacerations. The CNM repaired the laceration after MD assistance with reinforcing the rectal sphincter. A rectal exam confirmed no mucosal tears in the rectum and good reapproximation of the rectal sphincter without disruption. The patient was then in stable condition. She planned on breast feeding. Because of the low grade fever at delivery, she received vancomycin and gentamicin until she was afebrile 48 hours. DG's baby went to the nursery for initial care.

Ultimately the baby was transferred out of the delivering hospital to a referring center NICU for assisted care as there were some concerns initially of seizure activity. Later testing with an EEG did not demonstrate seizure activity. The left humerus was fractured and baby has a brachial plexus injury of the right arm. He spent nine days in the NICU and is now at home with his mother and father receiving therapy for his brachial plexus palsy.

Significance of the Problem

Every year, 4.3 million women give birth each year in the United States (US). With the cesarean section rate around 33%, nearly three million women in the United States give birth vaginally. Given a 0.6%-4% births incidence of shoulder dystocia (Gherman et al, 2005), this means 6,000-40,000 women will require a safe and effective treatment to resolve the problem. The potentially profound adverse effects of shoulder dystocia require all obstetrical care providers to be quick to diagnose and respond to this condition. The cord pH decreases 0.04u/minute after the fetal head is delivered. This allows approximately five minutes to lapse from birth of the head to birth of the shoulders before severe acidosis, fetal injury, and death may occur (Basket, 2002; Leung, Stuart, Sahota, Suen, Lau, & Lao (2011). This uncommon

obstetrical emergency requires the obstetrical care provider to be skilled in rapid identification and mental preparedness on specific interventions to remediate this situation and to know when to notify the obstetrical team which includes midwives, physicians, nurses, pediatricians and anesthesiologists, for immediate action.

Literature Review

A literature search was conducted using PubMed and Medline and searching shoulder dystocia incidence, shoulder dystocia and maternal complications, and shoulder dystocia and fetal complications. The following review of the literature will include four areas related to shoulder dystocia: (a) definition and prevalence; (b) maternal and fetal risk factors; (c) maternal complications; and (d) fetal complications.

Definition and prevalence

There is an inconsistency regarding the definition of shoulder dystocia in the literature. This has resulted in conflicting and most likely inaccurate reporting of the prevalence and outcomes of shoulder dystocia.

The most common definition of shoulder dystocia is when delivery requires additional obstetric maneuvers following gentle downward traction to release the fetal shoulders (RCOG, 2005; ACOG, 2002, Gupta, Hockley, Quigley, Yeh, & Impey, 2010; Jevitt, 2005). This definition has been criticized for allowing for subjective analysis on the part of the birth attendant and affecting the reported incidence as resolution with a good fetal outcome may not be recorded as shoulder dystocia (Jevitt, 2005; ACOG, 2002; Leung, Stuart, Sahota, Suen, Lau, & Lao, 2011; Gherman et al, 2006; Spong, Beall, Rodrigues, & Ross, 1995). Spong et al (1995) hypothesized that birth of a nontraumatized infant was seen as a good outcome and, therefore, less likely to be recorded by the birth attendant as shoulder dystocia. They further argued that

when there was a good outcome, the delivering provider might not have registered the diagnosis of shoulder dystocia which skews the reported incidence of shoulder dystocia toward poor outcomes and artificially elevating the associated morbidity. Spong et al (1995) prospectively timed intervals from delivery of the fetal head to complete delivery of the body and recommended a more objective definition of shoulder dystocia as "prolonged head-to-body delivery time (eg, more than 60 seconds) and/or the need for ancillary obstetric maneuvers (p.436)".

There was a wide range in the rates of occurrence of shoulder dystocia. Researchers for population studies in North America and the UK, the Royal College of Obstetricians and Gynecologist found a 0.6% incidence (RCOG, 2005). Other authors sited an incidence ranging from 0.2% to 4.0% of all vaginal deliveries. This wide range is attributed to issues regarding the definition of shoulder dystocia, the degree of reporting, and differences in study populations (Gherman et al, 2005; Baxley & Gobbo, 2004; Athukorala, Middleton, & Crowther, 2006).

The definition of mild, moderate and severe shoulder dystocia also was reviewed. A retrospective classification proposed by the American College of Obstetrics and Gynecology was based on the complexity of the maneuvers needed to overcome the dystocia (Olgubile & Mascarenhas, 2000). Degrees of severity were often defined by the maneuvers used to expedite delivery. With mild shoulder dystocia, delivery could be affected by anyone or all of the following measures: suprapubic pressure, McRobert's, Wood's and Rubin maneuver. Moderate shoulder dystocia included the former maneuvers along with posterior arm extraction and Hibbard's technique. Severe shoulder dystocia required many of the previous techniques with Zavenelli maneuver, symphysiotomy, or abdominal rescue (Olgubile & Mascarenhas, 2000). Cohen et al. (1999) classified shoulder dystocia as mild or severe: mild shoulder dystocia require

only McRobert's maneuver and/or suprapubic pressure to effect birth of the shoulders, while severe shoulder dystocia require the use of Wood's screw maneuver or extraction of the posterior arm. As time interval between delivery of fetal head and body had a significant impact on fetal outcome, Leung, Stuart, Sahota, Suen, Lau, & Lao (2011) suggested that severe shoulder dystocia occurred, regardless of maneuvers utilized, when 5 minutes occurs between delivery of head and delivery of body.

Maternal and Fetal Risk Factors

Management of shoulder dystocia relies on treatment rather than prevention. In order to prevent shoulder dystocia, identification of maternal and fetal risk factors have been identified and reviewed. The classic maternal risk factors for shoulder dystocia include obesity, diabetes, excessive weight gain in pregnancy, high parity, and a prior birth complicated by shoulder dystocia. Labor risk factors include prolonged first or second stage of labor, epidural anesthesia, and operative vaginal delivery. The only fetal risk factor is macrosomia (Jevitt, 2005; Gherman et al, 2006).

Researchers have attempted to identify what risk factors for shoulder dystocia are significant in preventing the occurrence. Nearly all of the retrospective shoulder dystocia series have included some risk factors such as maternal diabetes, obesity, abnormal labor patterns, use of epidural anesthesia, operative vaginal delivery, and macrosomia. When evaluated either individually or in combination, maternal risk factors had a low positive predictive value for the occurrence of shoulder dystocia (Gherman et al. 2006; Gupta et al, 2010; Lewis et al, 1998). Lewis et al (1998) reviewed 747 shoulder dystocia cases and found that only 25% had at least one significant maternal risk factor. Geary, McParland, Johnson, & Stronge (1995) found the positive predictive value of antepartum factors for shoulder dystocia was less than 2% when one

risk factor was identified. When two or more factors were combined, it remained less than 3%. Christoffersson, Kannisto, Rydhstroem, Stale, & Walles (2003) in a case controlled study matched 107 infants with shoulder dystocia with 198 controls. For each case, two control infants with similar birth weight, born the same year, in the same institution, were matched. The authors attempted to eliminate fetal weight, a clearly identified risk factor with shoulder dystocia, in order to identify other significant variables. Three of the risk factors, induction of labor, epidural analgesia, and instrumental delivery, reached statistical significance. Other researchers have not found these correlations. Ouzounian and Gherman (2005), in a study of 1686 shoulder dystocia cases found no statistically significant difference in the incidences of maternal diabetes, postdatism or epidural use among those woman experiencing shoulder dystocia and those who do not.

Maternal obesity has been identified as a risk factor for shoulder dystocia (Jevitt, 2005; ACOG, 2002; Doumouchtsis & Arulkumaran, 2010). Maternal obesity has severe obstetrical implications including evidence based relationship between obesity and adverse perinatal outcomes and between maternal obesity and fetal macrosomia. Robinson et al (2003) examined the association between maternal obesity and shoulder dystocia to determine if the association was maintained after controlled for variables coexisting with obesity. They found that maternal obesity was not a significant independent risk factor for shoulder dystocia when the other confounding variables were adjusted for. Fetal macrosomia was the single most powerful predictor. They concluded that for obese non-diabetic women with fetuses whose weights were estimated to be within normal limits, there is no increased risk of shoulder dystocia.

Fetal macrosomia has been the single greatest risk factor for shoulder dystocia and brachial plexus palsy (Doumouchtsis & Arulkumaran, 2010; Doumouchtsis & Arulkumaran,

2009, Gherman et al. 2006; Gupta et al, 2010, Baxley & Gobbo, 2004). While the definition of fetal macrosomia varies, most authors agreed that fetal macrosomia is suspected when the estimated fetal weight (EFW) was greater than 5000 grams and was diagnosed with an actual birth weight of greater than 4500 grams. Baxley and Gobbo (2004) reported the incidence of shoulder dystocia varies between 0.6% and 1.4% for infants of birth weight between 2500 grams and 4000 grams and between 5% and 9% for infant weighing between 4000 grams and 4500 grams. Gherman et al (2006) pointed out that while the risk of shoulder dystocia appears to rise with increasing birth weights, approximately 40% - 60% of all shoulder dystocias occur in infants with a birth weight of less than 4000grams, and that 70% - 90% of all macrosomic infants, even those greater than 5000grams delivered without any significant event. Finally, the difficulty and accuracy of determining EFW is cited by many authors and researchers (RCOG, 2005, ACOG, 2002, Gherman et al, 2006, Gupta et al, 2010; Robinson et al, 2003; Ouzounian & Gherman, 2005).

Maternal and Fetal Complications

Maternal and fetal complications are much clearer and more understood than risk factors and identification prior to birth. The complications of shoulder dystocia to mother and infant can be devastating and long lasting. While shoulder dystocia can result in maternal complications and injury, it is fetal injuries, including fractured clavicle, obstetrical brachial plexus palsy (OBPP), and hypoxia that cause the greatest morbidity and mortality when considering shoulder dystocia, and therefore have inspired the greatest research.

Maternal complications

When considering maternal complications of shoulder dystocia, there is limited data. Most research regarding shoulder dystocia focuses on risk factors and neonatal outcomes. The

discussion of maternal morbidity relative to shoulder dystocia was primarily limited to postpartum hemorrhage secondary to uterine atony and fourth degree lacerations (Piper & McDonald, 1994, ACOG, 2002, RCOG, 2005, Gherman, Goodwin, Souter et al, 1997). Baxley and Gobbo, (2004) listed rectovaginal fistulas and uterine rupture as other possible maternal complications though no data regarding incidence was cited. The Royal College of Obstetricians and Gynaecologists (RCOG, 2005) in their guideline regarding shoulder dystocia stated that, even when managed appropriately, shoulder dystocia was associated with increased maternal morbidity, "particularly postpartum hemorrhage (11%) and fourth-degree perineal tears (3.8%), and their incidence remains unchanged by the maneuvers required to effect delivery". While these numbers are used frequently, the reference citing these numbers gives different rates of occurrence and the researchers' findings reflect that the maneuvers used to during the shoulder dystocia actually impact maternal outcomes. Gherman, Goodwin, Souter et al (1997) reported rates of post-partum hemorrhage as 2% and fourth degree laceration as 6.1% when only McRobert's maneuver was used, with a significant increase when additional maneuvers were utilized to 5.1% and 14.5%. This is the resource referenced most frequently during discussion of maternal outcomes, and is referenced in both RCOG and ACOG's practice bulletins.

Stotland, Caughey, Breed, and Escobar (2004) when reporting on outcomes related to macrosomia discussed maternal outcomes. These researchers associated macrosomia with increased rates of cesarean birth, chorioamnionitis, shoulder dystocia, fourth degree lacerations, postpartum hemorrhage, and prolonged hospital stay even with vaginal delivery. While O'Leary (1993) cited third and fourth degree lacerations as a complication of shoulder dystocia, but stressed that fourth degree lacerations can occur without significant long term complications if repaired correctly. Piper & McDonald (1994) stated that they believe "the majority of nurse

midwives and women would disagree with O'Leary's qualitative assessment" regarding the impact of fourth degree lacerations on women. Piper & McDonald (1994) and Athukorala, Middleton, & Crowther (2006) called attention to the added maternal anxiety, post partum depression, and grief in response to neonatal sequela of shoulder dystocia and believed these needed to be added to the maternal complications of shoulder dystocia. They added that birth experiences may be significantly altered by management of anticipated or actual shoulder dystocia.

> Loss of desired "natural" experience, technical procedures, altered place of birth for suspected macrosomia, and extensive episiotomies are rarely considered and difficult to quantify, but would seem to constitute significant maternal shoulder dystocia management-related outcomes (Piper & McDonald, 1994, p. 94S)

Fetal Complications

Shoulder dystocia can have significant and permanent complications for the fetus, now newborn. When accompanied by permanent fetal injury, shoulder dystocia is a leading cause of obstetric malpractice claims. For the fetus, the issues surrounding shoulder dystocia are separated into major categories: neonatal mortality and neonatal morbidity. Fortunately, neonatal death and hypoxic-ischemic encephalopathy related to intractable shoulder dystocia are rare events. Most shoulder dystocias are resolved within a few minutes. Delay in delivery of the shoulder may cause fetal hypoxic-ischemic brain injury, which can, in turn, result in permanent brain damage and mortality. The fetal hypoxic-ischemic brain injury leading to metabolic acidosis and subsequent fetal death can occur with a shoulder dystocia of 5 minutes (Leung, Stuart, Suen, Sahota, Lau, & Lao, 2011; Hope et al, 1998)

Neonatal morbidity following a shoulder dystocia can involve multiple systems of the neonate, resulting in bruising, fractured clavicle, fractures of the humerus, transient or permanent brachial plexus injury, hypoxic-ischemic encephalopathy and even death (Athukorala, Middleton, & Crowther, 2006; Leung, Stuart, Suen, Sahota, Lau, & Lao, 2011, Baxley & Gobbo, 2004). Morbidity is categorized by temporary effects versus permanent results. Minor effects include bruising or transient brachial plexus injury.

More serious, but not necessarily permanent damage exists in the form of fractures. Researchers have suggested that the incidence of fracture of the clavicle is 9.5 % and fracture of the humerus. 4.2 % (Leung, Stuart, Suen, Sahota, Lau, & Lao, 2011; Gherman et al, 2006). Fractures generally heal without long term sequela.

Permanent obstetric brachial plexus palsy (OBPP) is a serious complication often associated with shoulder dystocia, and the source of most shoulder dystocia related liability claims. OBPP injuries appear to be unrelated to birth attendant's experience (Leung, Stuart, Suen, Sahota, Lau, & Lao, 2011; Gherman et al, 2006; Doumouchtsis & Arulkumaran, 2009; Doumouchtsis & Arulkumaran, 2010). The reported incidence of OBPP not associated with shoulder dystocia ranges from 0.4 to 1.5 per 1000 births. The reported incidence of OBPP varies widely from 4% to 40% in the presence of shoulder dystocias (Doumouchtsis & Arulkumaran, 2010).

Although there is evidence to point to the clinical implications of shoulder dystocia and suggest that a provider should tread carefully when facing a potential dystocia, there is also confusion. OBPP can result from other factors, including in utero positioning of the fetus, a precipitous second stage of labor, and maternal forces (Sandmire & DeMott, 2000; Gherman et al, 2006; Gherman, Goodwin, Ouzounian et al, 1997; Leung, Stuart, Suen, Sahota, Lau, & Lao,

2011; Baxley & Gobbo, 2004). Palsy-type injuries, such as Erb's palsy, are associated with shoulder dystocia but 50% occur without association to shoulder dystocia, with 4% occurring during cesarean delivery (Gherman, Ouzounian, Miller, Kwok, & Goodwin, 1998; Gherman, Goodwin, Ouzounian et al, 1997). In cases of Erb's palsy, the rate of persistence is significantly higher at one year when it occurs without identified shoulder dystocia (Gherman et al, 1998; Dunham, 2003; Sandmire & DeMott, 2000; Gherman et al, 2006; Gherman, Goodwin, Ouzounian et al, 1997; Leung, Stuart, Suen, Sahota, Lau, & Lao, 2011; Baxley & Gobbo, 2004). It is estimated that less than 10% of OBPP's resulting after a documented shoulder dystocia result in permanent brachial plexus dysfunction, most resolving within one year (Gherman et al, 1998, Doumouchtsis & Arulkumaran, 2009). For the provider attending the delivery, specifically with Erb's palsy, it is important to determine whether the affected extremity was anterior or posterior at the time of delivery, as damage to the plexus of the posterior should is not due to the actions of the birth attendant (Gherman, Ouzounian & Goodwin, 1999; Stirrat &Taylor, 2002).

Practice Guidelines and Interventions

The three critical components of shoulder dystocia management include antepartum and intrapartum recognition and management of risk factors, preparation of the birth team, and use of shoulder dystocia-resolving maneuvers (Jevitt, 2005). Review of practice guidelines established by the American College of Nurse-Midwives (ACNM, 2003), the American College of Obstetricians and Gynecologist (ACOG, 2002), and the Royal College of Obstetricians and Gynaecologists (RCOG, 2005) support these three critical components as the management of shoulder dystocia. All three practice guidelines point to the value of assessing risk and recognition of antepartum and intrapartum risk factors. All support the literature that risk factors

will not predict most shoulder dystocia though clearly have value when considering issues of obtaining patient consent and anticipation of shoulder dystocia. ACNM (2003) guidelines stress the importance of consultation, involvement of the team for resuscitative actions when anticipated, and discuss the role of informed consent with the woman and her family as well as the importance of documentation in greater detail than the other two practice documents. All discuss the importance of shoulder dystocia maneuvers. The importance of annual skill drills on shoulder dystocia maneuvers are specifically recommended jointly by both the RCOG and the Royal College of Midwives (RCOG, 2005). The US Joint Commission on Accreditation of Healthcare Organizations recommends that labor and delivery units conduct drills of obstetric emergencies such as shoulder dystocia (JCAHO, 2004). One difference between the recommendations from ACOG and RCOG is the inclusion of a suggestion by the ACOG to consider planned cesarean delivery when estimated fetal weight exceeds 5000 grams in women without diabetes and 4,500 grams in women with diabetes. The RCOG does not support elective cesarean section with suspected macrosomia in women without diabetes, but does support consideration with diabetic women and suspected macrosomia (ACOG, 2002; RCOG, 2005).

Discussion of Research

The case presented demonstrated several significant issues regarding clinical practice. After completing a detailed research search regarding risk factors of shoulder dystocia, this case vividly points to the role of risk factors, as the patient from this case had several risk factors: (a) obesity with a BMI of 42 starting pregnancy and a weight gain of 44 pounds during pregnancy, (b) a dysfunctional labor pattern culminating in a prolonged second stage, and (c) estimated fetal weight (EFW) of 10 pounds (or 4500 grams). While anticipated and prepared for, the shoulder dystocia that occurred was not preventable, as the evidence suggested. The practitioners

involved adhered to all practice guidelines. The patient was offered a cesarean section when progress was slow with consideration of the EFW. The CNM managing the case was judicious in her preparation and anticipation by requesting the attendance of her consulting obstetrician and assembling a team for resuscitation if required. After review of the literature this birth statistically could still have been uneventful and the assembled team present for the delvery and dismissed after the birth if not needed as risk factors do not predict shoulder dystocia with great accuracy. In addition, while the EFW was documented at 10 pounds, ACOG does not recommend consideration of cesarean section without labor until EFW exceeds 5000 grams (or 11 pounds) allowing her to labor was within all practice guidelines as an appropriate choice.

The resulting birth, that of a 4500 gram male infant after a five minute 15 second HBDT was a difficult delivery. Both birth attendants, CNM and MD, performed the appropriate maneuvers in a timely fashion. The evidence concurs with the consequences of this shoulder dystocia case as possible complications from shoulder dystocia. The result was a significantly depressed infant requiring resuscitation, a humerus fracture, OBBP, maternal hemorrhage, a third degree laceration, and maternal infection. Whether the infant's brachial plexus injury is long term is unknown at this time.

Recommendations and Lessons Learned

After reviewing the literature and presenting this case, one gains a greater appreciation of the role of anticipation when risk factors are present, and for the fact that even when anticipated, shoulder dystocia is unpreventable. These practitioners demonstrated preparation, anticipation, and assembled the team for resuscitation, prior to the birth. It is not possible in retrospect to predict if the providers' preparation and anticipation improved the outcome for this infant and mother, but all of the providers needed to deal with the obstetrical emergency were present and

there was no delay in the ability to provide emergency care the moment it was identified as needed. Because of the identified risk factors for shoulder dystocia, the providers present reviewed the maneuvers for reduction of an impacted shoulder. Anticipation, review of maneuvers to be used, presence of all need professionals and skill on the part of the birth attendants allowed ultimately for the passage of this infant into the world without significant hypoxic-ischemic encephalopathy and management of this mothers postpartum hemorrhage.

For the practicing clinician, the value of documentation was a common thread running throughout the case. At all stages in the labor the woman and her partner were offered options and their preferences documented. Thorough informed consent is a key factor when anticipating shoulder dystocia while remaining sensitive to the needs of the woman and her partner. In addition, the documentation of the shoulder dystocia event, maneuvers utilized, the clinical parameters of fetal position, which arm was anterior or posterior, and results of these maneuvers are key to the process of shoulder dystocia.

In considering the events of a shoulder dystocia, there is extensive detail in the literature regarding anticipation and risk factors, effects on mother and infant, and the role of shoulder dystocia relieving maneuvers. What is clearly lacking is any discussion of the effects of attending the birth of women experiencing a shoulder dystocia on the other person involved, the birth attendant herself. For those who care for a woman and her fetus during the event of a shoulder dystocia, whether nurse, midwife, or physician, it seems obvious they can be profoundly affected by the event. While the literature makes general statements about the "stressful nature" of the event, there is little specific research about the implications for the practitioner(s) involved. In reviewing the literature regarding shoulder dystocia, a search for specific literature about practitioner stress after a shoulder dystocia, or any difficult obstetrical

outcome, resulted in no literature that addressed these specific concerns. When the author's search found no significant research, the author sought the assistance of two medical librarians at two different medical institutions. The result was still a significant lack of research. There is some research about PTSD in nursing and medicine, generally related to emergency department personnel, and some about burnout from being a care provider, yet the research is very limited. As those who attend births know, births are beautiful and wondrous when all goes well. When all does not proceed without complication, the stress can be overwhelming. Many providers are leaving obstetrics because of involvement in liability cases, or just exhaustion over the level of responsibility. This area, exploring the aftermath of a traumatic birth experience on the responsible practitioners is an area of research that needs to be explored and a valuable topic for nursing research. Understanding the impact of a difficult outcome for the practitioner is the first step in understanding how best to help the practitioner to cope after a difficult outcome.

Summary and Conclusion

Shoulder dystocia is an uncommon, primarily unpredictable, and unpreventable occurrence. While risk factors are identified, the majority of shoulder dystocias occur in women without risk factors, and the majority of women with risk factors do not experience shoulder dystocia. The potential complications are serious and potentially life threatening for mother and infant. The key to management of shoulder dystocia is that of risk assessment, anticipation, and management of the shoulder dystocia itself. McRobert's is the maneuver that appears to have the least risk to both mother and fetus, and is generally the first maneuver attempted. The infrequent and unpredictable nature of shoulder dystocia suggests a need for frequent practice drills for all birth attendants, as management of shoulder dystocia relies on maneuvers to resolve the impacted shoulder.

Accurate documentation of patient consent, communication with the woman and her family, and documentation of the shoulder dystocia itself and techniques used to resolve it, as well as time between birth of head and birth of body, are essential when experiencing shoulder dystocia. Careful and accurate documentation is paramount as shoulder dystocia accompanied by permanent fetal injury is a leading cause of obstetric malpractice claims. There is limited information regarding practitioner outcome after a shoulder dystocia. This is an area for future study and exploration. Finally, it is important to remember that shoulder dystocia is a stressful and difficult experience for mother, infant, family and all involved, including the birth attendants. Offering support and caring is essential for all those involved.

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A Case Study on Neurofibromatosis type 1;

Consideration Regarding Pregnancy and Hormonal Contraception

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Purpose

The purpose of this case study is to explore the impact of Neurofibromatosis type 1 (NF1) on reproductive health choices of women. It will review the known evidenced-based research regarding NF1 and pregnancy as well as use of hormonal contraception in this population of women. The role of the advanced practice nurse in counseling women with NF1 regarding the issues surrounding pregnancy and contraceptive options will be explored.

Background Information

The National Institutes of Health (NIH) diagnostic criteria for NF1 were established in 1988 and are still in use (Lu-Emerson & Plotkin, 2009; Lee & Stephenson, 2007). This criteria requires that an individual have two of the following features; six or more café-au-lait spots, two or more neurofibromas or 1 plexiform neurofibroma, axillary or inguinal freckling, an optic glioma, two or more lisch nodules, distinctive osseous lesions of long bones, and/or a first-degree relative with NF1. NF1 is an autosomal dominate trait that occurs in approximately 1:3500 persons without predilection for race or gender, making it more common than cystic fibrosis or muscular dystrophy. NF1 has 100% penetrance and is a highly variable condition with great phenotypic variation both between individuals and within families. As it is such a common genetic disorder, most clinicians will care for someone with NF1, and Certified Nurse Midwives and other clinicians who care for women will want to be aware of the possible implications related to women's health including contraception, pregnancy, and childbearing to assist these women in their reproductive health choices.

Understanding NF1

The NF1 gene is located on chromosome 17q11.2 and encodes for the protein neurofibromin. The NF1 gene is encoded by 60 exons and mutations can occur anywhere on the

NF1 gene and range from single nucleotide substitution (SNPs) to large genomic rearrangements. "The mutation rate for the NF1 gene (~1:10,000) is among the highest known for any gene in humans. The cause of the unusually high mutation rate is unknown (Friedman, 2009)". The majority of the mutations involve only 5% total loss of the gene. NF1 is a variable condition with progression throughout the life span and is associated with significant morbidity and mortality. The average lifespan of an individual with NF1 is decreased by 15-20 years.

NF1 is characterized by cutaneous and plexiform neurofibromas, cafe-au-lait spots, Lisch nodules, freckling in axillary and inguinal regions, optic gliomas and an increased risk of malignancy. NF1 can be phenotypically mild, only manifesting café-au-lait spots, and few benign neurofibromas, or can be severe with central nervous system tumors, either benign or malignant, severe scoliosis and skeletal deformities, and/or severe learning disabilities. Neurocognitive deficits are the most frequently reported complication of NF1, occurring in 50-75% of children with NF1. Seizures occur in 4-6% of persons with NF1.

Neurofibromas are the hallmark tumor in NF1 and are a benign tumor derived from the nerve sheath and consisting primarily of Schwann cells, with the addition of fibroblasts, mast cells, perineurial cells and vascular endothelial cells. While neurofibromas are a benign hallmark of the disease, they can be painful, disfiguring, debilitating and grow large enough to encompass an entire body region, and once removed, neurofibromas have a tendency to re-grow (Goldberg, Dibbern, Klein, Riccardi, & Graham, 1996; Lee & Stephenson, 2007; Lu-Emerson & Plotkin, 2009; Terzi et al., 2009; Williams et al., 2009). Neurofibromas, rarely seen at birth, are present in 48% of ten year olds, 84% of 20 year olds and essentially all persons with NF1 over the age of 40. It is still unclear whether neurofibromas occur simply as a result of the mutation in the NF1 gene, preventing it from producing adequate levels of neurofibromin, or whether there is a

genomic relationship between other mutations in the NF1 gene, perhaps combined with environmental factors, that trigger formation. One possible triggering event is the rise in hormones seen during puberty and pregnancy, developmental stages when increased neurofibromas are common (Roth, Petty, & Barald, 2008).

Plexiform neurofibromas are neurofibromas that arise from multiple nerve bundles and tend to grow along the entire length of a nerve. They occur in approximately 30% of persons with NF1. Typically, malignant peripheral nerve sheath tumors (MPNST) arise from plexiform neurofibromas, though as high as 36% of individuals in a large study of patients with MPNST did not have pre-existing plexiform neurofibromas (Williams et al., 2009). Malignant Peripheral Nerve Sheath Tumors (MPNST) are highly aggressive sarcomas and a major cause of death for younger patients with NF. According to Williams et al., (2009), the lifetime risk of developing MPNST is approximately a 10% for individuals with NF1.

Cardiovascular effects of NF1 include congenital heart disease, vascular pathology and hypertension. "Coronary heart disease occurs at a higher-than-expected frequency compared with that in the general population, with pulmonary artery stenosis representing 25% of these malformations (Williams et al., 2009, p.128)". "Malignancy, especially malignant peripheral nerve sheath tumors, and vasculopathy are the most important causes of early death in individuals with NF1 (Friedman, 2009p.127)." Cardiovascular pathology is the second major cause of death in persons is NF1.

Case Study

Mary is a 20 year old caucasian female who has Neurofibromatosis type 1 (NF1). Mary is in a relationship that she states is becoming increasingly sexual and comes to the office asking

about the use of oral contraceptives, their effects on her neurofibromatosis, the future possibility of pregnancy, and how pregnancy may affect her NF1.

Mary is an excellent historian and is very aware of her complex medical history. Mary was diagnosed with NF1 at 11 months of age when she had a seizure and it was noted that she had the presence of café- au- lait spots and axillary freckling; meeting two of the criteria stated by the NIH for diagnosis of NF1. Hearing a heart murmur, her pediatrician referred her for evaluation and she was also diagnosed her with pulmonary stenosis at this time. Mary had seizures and was on Tegretol (carbamazepine) to control her seizures until she was 5 years old. Mary has had many complications from NF including two optic gliomas, two astrocytomas, scoliosis and mild learning disabilities. She underwent chemotherapy at the age of 5 and again at age 10 for a rapidly growing optic glioma that returned 3 years after her first round of chemotherapy was completed, and has had 3 craniotomies for 2 different astrocytomas and radiation. She has several superficial neurofibromas that she considers to be an annoyance more than a problem. Mary has a good understanding of the general issues regarding NF. She has been in several NF and cancer support groups throughout her childhood and adolescent years. Mary considers herself to currently be in good health. She receives regular follow-up exams from her oncologist every six months and has an MRI of her brain at six month intervals as well. She sees a neuro-opthamologist, dermatologist, and orthopedist annually. Mary has received neuropsychological testing and has an above average IQ but has some significant processing deficits and has had accommodations throughout her academic career. Neurocognitive deficits are very common with NF1, occurring in 50-75% of individuals with the disorder. She will be graduating from college this academic year and plans to continue on to graduate school.

Over the course of two visits, an extensive history was obtained, including social, family, and personal medical history. Again Mary is an excellent historian and is very comfortable talking about her health and the impact NF has had on her life. Mary states that she never really thought she would live a long life, but she has surprised everyone, including herself, and has survived many significant complications from her NF, not the least of that were 4 brain tumors, 2 malignant and 2 benign. Mary is very matter of fact about her disease and does not seem to fear the future.

Mary states she is not religious and believes "you are given one life and need to make the most of it". She states she has always had an excellent support system, especially from her family and speaks very fondly of her sister and parents, and feels her parents always encouraged her to make decisions regarding her health care. She believes she has always had outstanding medical care and has tried to "give back" as best as she is able. Mary is currently applying to medical school, and "if her health continues" she hopes to be a pediatric oncologist. She states academics have always been a priority for her, though somewhat challenging, as it takes her "longer than most people to read or process things", but she knows she is intelligent and understands that she "just thinks differently". Due to her medical history and neuropsychological testing she has had accommodations in her education and academic testing (such as the SAT and MCAT).

When exploring Mary's history, it becomes obvious that NF has had a significant impact on her health, her life, and her view of the future. Mary is very excited about the relationship she is currently in, stating it is the first real intimate relationship she has ever been in. She states she has always been "different", and while she has had friends, she is not extremely social. She makes the comparison with her sister, who is very social and has always had large circles of

friends. Mary states she has always had a few, close friends. She has never been involved in sports, and prefers reading, card games, and academics, to many other activities. She states her new partner is "another nerd" and they both have been "sort of social misfits".

Physical Exam

This is an alert, apparently healthy 20 year old female who is short in stature. Height 4'10" weight 94 pounds. She has mild scoliosis with an approximately 25 degree curve. Multiple café-au-late spots are noted on her trunk, neck and back. She has axillary and inguinal freckling, hallmark of NF1, as well as extensive freckling of her neck and some on her face. She states the freckling has worsened in the last 2-3 years. Mary has several neurofibromas on her back, one at her bra line that she has considered having removed as it rubs and gets irritated.

BP 120/68, pulse 88, breath sounds are clear and heart regular rate and rhythm, no murmurs noted. A baseline breast exam was performed and her breasts are nontender without masses, symmetrical, and no skin or nipple retraction noted, no nipple discharge. Abdomen is soft without masses, bowel sounds active. As she is under the age of 20 no PAP was performed.

Habits

Mary states she does not exercise regularly but is active, walks a lot, and has taken aerobic classes or yoga periodically during college. She is primarily vegetarian, though eats some fish. She is not on any medications, and takes only a multivitamin daily. She has never smoked cigarettes, and states she has been forced to use enough legal medications in her life that she has never had an interest in alcohol or drugs. She is not yet sexually active, though states she enjoys her boyfriend and anticipates the relationship becoming more sexual.

Menstrual history

Mary had her first menses at age 13, approximately one year after completing her second "long and complicated" course of chemotherapy. During this course of chemotherapy she had severe bone marrow suppression. Shortly after starting her menses, she developed a new brain tumor in her right parietal lobe that grew rapidly. She has continued to have regular menses since the age of 15. She states her menses are not painful and she has moderate flow for 4-6 days.

Chief complaint/issue

Mary states she always assumed she would not have children and since she was very young, assumed if she had children it would be through adoption. She states that as she is getting older, she simply wants to examine the issues and understand what her risks are. In addition, as she is exploring a sexual relationship for the first time, she is questioning the use of hormonal contraception with her NF. While exploring the issue that Mary presented to my office to discuss, that of the effects of pregnancy and oral contraceptives on individuals with NF1, we reviewed the fact that NF1 as an autosomal dominant trait and the transmission rates to offspring of 50%. Mary understood the basic genetic transmission rates of NF1 and is requesting specific information about the effects on pregnancy on **her**; how pregnancy affects a person with NF, and whether if she had children who were affected with NF1 if they would be as severe as her. She had a general understanding that pregnancy may result in increased tumor formation in persons with NF1. She stated that she did develop one of her rapidly growing astrocytomas as well as noting an increase in neruofibromas when she was first beginning to menstruate, and understood that this was common. When I asked Mary if she had discussed these issues with her oncologist, she stated that she is embarrassed because he has known her since she was 5 years old and was diagnosed with her first brain tumor. I did ask for Mary's permission to obtain her records and

information from her oncologist, and a release of information consent was signed. Mary returned for another visit after I had explored the research.

NF1 and Pregnancy

A review of the literature regarding NF1 and pregnancy was performed using Medline and searching NF1 and combining with pregnancy. Three main issues will be discussed: 1.) inheritance of NF1; 2.) incidence of pregnancy; 3.) effects of pregnancy on NF1.

First, as NF1 is an autosomal dominant trait with essentially 100% penetrance, each child of an individual with NF1 has a 50% chance of inheriting the gene mutation. The phenotypic variability of the disease is great, however, even within families (Sabbagh et al., 2009). Thus, while every child who inherits an NF1 mutation from their parent will develop the disease, the affected child may be more or less severely affected than the parent with the disease (Friedman, 2009). According to the Children's Tumor Foundation, approximately 60% of individuals with NF have mild forms, 20% have correctable problems, and another 20% have persistent and serious problems (Diagnosis of NF1/living with NF/ ctf.org).

Second, Roth et al., (2008) suggest that the incidence of pregnancy among women with NF1 is relatively low and inversely related to the severity of the disease, "from about 1/5000 to about 1/18,000 obstetrical patients has NF1, compared with the 1/3,000 to 1/3,500 overall NF1 incidence in live births (p.1625)."

The third issue, the effects of pregnancy on the women with NF1, is less straightforward than the likelihood of transmission. Throughout the literature, (Ars et al., 1999; Ben Aissia, Sadfi, Raissi, & Gara, 2004; Drouin et al., 1997; Hagymasy, Toth, Szucs, & Rigo, 1998; Kosec & Marton, 2006; Lam, Henriquez, & Cruzat, 1998; McEwing et al., 2006; Nebesio et al., 2007; P. Origone et al., 2000a; P. Origone et al., 2000b; Posma et al., 2003; Stefanidis et al., 2006;

Terzi et al., 2009) when discussing the effects of pregnancy on women with NF1, the information that is sited is that 50% of existing neurofibromas enlarge and up to 60% of new neurofibromas occur for the first time. This data is from a study by Dugoff & Sujansky (1996) of 105 women and 247 pregnancies. This study, from 1996, has been the largest study of pregnant women with NF1 to date and is the study that is referred to consistently throughout the NF1 literature regarding pregnancy. Dugoff & Sujansky (1996) stated in this article that "current obstetrical literature indicates that women with NF-1 have increased complications associated with pregnancy. However, the majority of publications are case reports involving no more than 11 patients each (p.7)". Prior to this study by Dugoff & Sujansky (1996), previous reports of increased incidence of spontaneous abortion (SAB), pre-eclampsia, pregnancy induced hypertension (PIH), pre-term delivery, IUGR (intrauterine growth restriction),stillbirth, and/or perinatal mortality were reported. Their study did not support these findings. Literature abounds with case reports with one or two pregnant women with NF1 (Drouin et al., 1997; Hagymasy et al., 1998; Kosec & Marton, 2006; Lam et al., 1998; McEwing et al., 2006; Posma et al., 2003; Roth et al., 2008; Stefanidis et al., 2006) though no other large number studies have been conducted.

In their classic study, Dugoff & Sujansky (1996), reported 60% of women developed new fibromas, 52% reported enlargement of existing fibromas, and 80% of women had either new fibromas or growth of existing fibromas or both. In addition, the authors reported the Cesarean Section rate to be 36%, significantly above the national average at the time, and reported cases where the C-Section was secondary to either boney abnormalities of the spine or pelvis, or the presence of a neurofibroma within the pelvis or spinal. Roth et al. (2008) reviewed Dugoff & Sujansky (1996) findings and concluded that the subjects in this study had relatively mild forms

of NF1, and attributed this underlying contributing factor as an explanation for the lack of significant affects on pregnancy on this cohort. In contrast, Roth et al also examined smaller case reports whose subjects had more severe manifestations of NF1, including cardiovascular, and renal involvement, as well as previous malignancies or existing plexiform neurofibromas that gave rise to MPNST. These smaller studies suggest that these women did have significantly affected pregnancies. Roth et al. (2008) also noted that women with severe NF1 "rarely elect to bare children" thus limiting the data about the affects of pregnancy on individuals with more severe forms of NF1.

Researchers have been exploring the reasons for the widely accepted finding that neurofibromas increase in puberty and pregnancy. An interesting study by Nebesio et al. (2007) found that lysophospatidic acid (LPA) is produced in higher concentrations in pregnancy. LPA modulates cell migration and the survival of Schwann cells, of which neurofibromas contain, and may play an important role in the development and growth of neurofibromas during pregnancy.

The concept that neurofibromas are triggered by hormones is based on the observation made that neurofibromas increase during puberty and pregnancy. In this case study, Mary found a relationship between the growth of her neurofibromas and the onset of menses, as well as a malignant brain tumor developing at that time. Roth et al. (2008) hypothesized that 17-β-estradiol (E-2), progesterone (P4) and 2-methoxyestradiol (2ME2) play a key role in the development of neurofibromas in pregnancy. Progesterone (P4) rises significantly during pregnancy and is essential to development and maintenance of a pregnancy. P4 is also responsible for inhibiting estrogen receptors. 2ME2 controls the growth of estrogen stimulated cells and they hypothesize that women with NF1 have lower levels of 2ME2 than women without NF, and those lower levels may make women with NF1 unable to compensate for the

elevated levels of E2 in pregnancy. This lack of ability to compensate may give rise to the formation of new neurofibromas as well as the transformation of benign neurofibromas to malignant tumors, as has been reported in multiple case studies.

NF1 and the use of Hormonal Contraception

While the link between increased hormones, estrogen and progesterone, stimulating neurofibroma growth has been discussed in the literature for years, there is limited information about the use of synthetic hormones, in the form of contraceptives, and women with NF1. Oral contraceptives are generally a combination of estrogen and progesterone. Other hormonal contraceptives are used that are only progesterone, such as Depo-Provera, an injectable form of progesterone only contraception, and Implanon, a single progesterone implant placed in the arm for contraception. In the only study to date exploring the effects of hormonal contraception on the growth of neurofibromas in women with NF1, Lammert, Mautner, & Kluwe (2005) surveyed 59 women with NF1 who are using or have used hormonal contraception, and received self-reported responses to questions about the growth of or changes in neurofibromas. These authors found that combined oral contraceptives did not seem to stimulate the growth of neurofibromas but that high doses of progesterone, such as in Depo-Provera, did have some affect on neurofibroma growth in some women. They related this to the finding that 75% of neurofibromas in vitro have progesterone receptors. They concluded that caution must be used when prescribing high concentrations of progesterone contraception in this population. A study by Overdiek, Winner, Mayatepek, & Rosenbaum (2008) support their findings by demonstrating that Schwann cells from human neurofibromas demonstrate progesterone receptors and under the influence of progesterone demonstrate proliferation, and normal, non-NF Schwann cells did not, suggesting that progesterone plays a crucial role in neurofibroma development with NF1. These

authors discussed whether hormonal contraceptives are safe for women with NF1. They suggest that the Lammert et al. (2005) data might be explained by the relatively low doses of estrogen and progesterone in oral contraceptives and thus showed no change in tumor growth, while the high doses of progesterone in injectable progesterone only contraceptives, such as Depo-Provera, demonstrated significant tumor growth. "This supports our experimental data and underlines the necessity of further investigation on this relevant topic (Overdiek et al., 2008)".

Discussion with Mary's Oncologist

H.S. Nicholson, MD, MPH is a Pediatric Oncologist at Doernbecher Children's Hospital, Portland Oregon. Nicholson is now the chair of pediatric oncology/hematology at Doernbecher, and has been the pediatric Oncologist for Mary since her diagnosis at the age of 5. Nicholson's expertise and specialization is with pediatric brain tumors, and Nicholson is a consultant for the Children's Tumor Foundation (CTF), previously known as the National Neurofibromatosis Foundation (NNFF), and considered to be a regional expert in NF. In a personal communication with Nicholson on 4/12/11, we discussed the issues of contraception and pregnancy, and Mary's specific case. Nicholson was very familiar with Mary and felt "very connected to this family as they had been through a lot together". We discussed the issue of pregnancy and NF1 and his understanding of the issue is consistent with the research identified; the variable nature of NF1 makes predicting the severity of children of women with NF1 impossible, but he felt that pregnancy for many women with NF1 was relatively safe. He stated that "due to severity of Mary's NF it would be difficult for him to recommend pregnancy", yet validated that "this is a very personal choice and some women are willing to accept the risks to their own health." He discussed the case studies of women with malignant brain tumors and their recurrence in pregnancy but agreed there were no good studies with significant numbers of women with NF1.

As for contraception, he stated that he uses oral contraceptives "with caution" in young women with NF1 and strongly urged them to be aware of any changes in neurofibromas, however stated the use of oral contraceptives clearly seems less risky than pregnancy to a women with severe manifestations of NF1.

Finally we discussed neurofibromas in general with NF1. Nicholson presented that in the "oncology world" benign always seems better than malignant, but with NF1, this isn't always the case. "While many tumors with patients with NF1 are benign, this doesn't mean they're not harmful." He described the deformities and pain associated with some neurofibromas, and even discussed death that occurred from "benign" tumors with NF1. Nicholson pointed out that in Mary's case, her malignant tumors were aggressive yet able to be surgically resected, yet her benign gliomas were very aggressive, difficult to treat, and very symptomatic. Friedman (2009) supports that often brain stem and cerebellar astrocytomas in people with NF1 can be less aggressive than with the non-NF population.

Discussion of Research

This case demonstrates several significant issues regarding clinical practice. After completing a detailed literature review about a subject that seemed like a straight forward genetic disease, it became clear that the reproductive health issues with NF1 are neither straight forward nor simple. NF1 is an autosomal dominant genetic disorder so the transmission pattern is predictable, yet there is extreme and unpredictable phenotypical variance of this disease. It reinforced the value of examining research yet it was surprising to see the limited number of large studies about pregnancy and NF1. The lack of research about hormonal contraception and NF1 was dismaying as there has long been an awareness of the effects of puberty and pregnancy on NF1; both times of hormonal change. While NF1 is one of the most common genetic

disorders, the lack of evidenced based research surrounding these monumental issues for women facing NF1 is disconcerting. It strengthened my belief in the importance of furthering research and data collection in this area, and hope to see more research specific to pregnancy and hormonal contraception with NF1 in the literature in the future.

Recommendations and lessons learned

By conducting a literature review, and reinforced by conversations with Nicholson and Mary, one gains a greater appreciation for the profound effect NF1 can have on an individual's life and health. A significant appreciation for the impact this genetic disease can have on a person's life, their reproductive decision making, and their perspective on the future is clearly demonstrated.

After reviewing the literature and meeting with Mary, the decision making difficulties for persons with NF1 in particular, but genetic disorders in general, around whether or not to reproduce became increasingly evident. Especially with a disorder as variable as NF1, the diversity in manifestations adds to the complexity of the decision for these women. Whether a woman's NF1 is severe or mild, she cannot predict if she will bear a child who is affected, as well as the degree that they may be affected. This is compounded by the known potential of the pregnancy process in worsening the severity of their own disease. The decisions are difficult.

When Mary returned for her second visit, we discussed the variance of the effects and lack of clear data about the effects of pregnancy on women with NF1. This reinforced for Mary that pregnancy was probably not in her best interest, as she had always suspected, but she clearly needs to continue to consider. At this second visit a lengthy conversation regarding hormonal contraception and contraceptive options occurred. The literature is inconclusive regarding the use of combined oral contraceptives and with observation for increasing numbers or growth of

neurofibromas, the risk of using oral contraceptives seems to be less than the risk of pregnancy on NF1 progression. There is some data to suggest that the use of progesterone only contraceptives, such as Depo-Provera and Implanon, seem to hold greater risk than combined low dose oral contraceptive and it would be difficult to recommend their use.

When exploring contraception options with Mary and other women with NF1, it is important to discuss non-hormonal options such as barriers and IUDs. Permanent sterilization, including office procedures such as Adiana and Essure, may warrant discussion for women who are clear they do not want pregnancy. After discussion of her options Mary elected to have an IUD (paragard, a non-hormonal IUD) though she did consider oral contraceptives and may consider them in the future. Mary felt the IUD will "buy her time" until she decides how she truly feels about pregnancy. At this time she thinks she will most likely consider sterilization in her future, but at age 20, does not feel ready to make this decision yet.

As advanced practice nurses working in women's health, we are in a unique and incredibly trusted role of talking with women about sexuality and intimate details of their life. Our nursing focus views the person as a whole, rather than a mere diagnosis. With a young women such as Mary, who has spent her life within the health care system living with a genetic disorder that has greatly impacted her life, it is imperative that we celebrate the whole young woman she has become, honoring that she is a sexual being and allowing her to move beyond her diagnosis. While she came to discuss the impact of contraception and pregnancy on her diagnosis of NF1, it is important to support her as a woman making conscience and well thought out decisions about her sexuality, not just as a part of her diagnosis.

Summary/Conclusion

NF1 is an autosomal dominant genetic disorder resulting in a suppression of the NF1 gene to encode for neurofibromin. The NF1 gene has one of the highest mutation rates of any known human gene. NF1 affects 1:3500 people and the penetrance of the disease is essentially 100%, yet the phenotypic manifestations of NF1 are incredibly diverse and complex. Neurofibromas are the hallmark of NF1. Times of increased hormonal activity, such as puberty and pregnancy, appear to increase tumor formation.

When an individual with NF1 has a child, each child has a 50% chance of having NF1, yet the severity of the disease may be greater or less severe than the parent, regardless of the severity of the parent. This greatly complicates childbearing choices for persons with NF1, for even if their disease is mild, it does not mean their child's will be.

The affects of pregnancy on women with NF1 are also variable. Most of the literature on the effects of NF1 and pregnancy are case reports rather than large studies and report severe outcomes with women with severe disease. In the only study with a large group of women (105 women and 247 pregnancies) the authors found that 80% of the women had either new neurofibromas, or increase in existing neurofibromas during pregnancy. There are case reports of significant worsening of tumors, and many complications from pregnancy.

There is minimal research regarding the use of hormonal contraception. As oral contraceptives are low dose hormones, the safety of oral contraceptives, while not completely clear, seems to be accepted, especially when compared to the risk of pregnancy for many women with NF1. Progesterone has been indicated as a significant trigger in neurofibroma formation and the high dosage of injectable progesterone used in Depo-Provera has been sighted as riskier for women with NF1. Clearly there needs to be additional research in this area.

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Options in Maternity Care

Case study: A Home Birth in The Netherlands

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Abstract

In the United States (US) cesarean section rates and induction rates have reached an all time high at 32% and 22.5% respectively (CDC, 2009). New models of care that decrease intervention have value both economically and in terms of outcome. In the US 99 % of births occur in hospitals. In a report of women laboring in US hospitals in 2005, researchers found that 94% of women had electronic fetal monitoring. Of these, 93% were monitored continuously or for most of the time during labor (Declercq et al., 2006). The use of continuous electronic fetal monitoring has had no corresponding improvement in cerebral palsy rates, the very thing it was designed to improve, but has been demonstrated to increase cesarean section rates (Gourounti and Sandall, 2007). Models of care that promote minimal intervention during labor and birth, as well as safety, are essential. Midwives have long been heralded as the guardians of normal birth, and international models of care utilizing midwives as the primary provider of maternity care can offer a framework for policy change that could decrease the cesarean section rate, decrease interventions, and improve outcomes in childbirth for healthy women. This case study of a home birth from The Netherlands, demonstrates one such model of care.

Keywords: Childbirth, Midwifery, maternity care, cesarean section prevention, electronic fetal monitoring, birth technology, Netherlands.

Introduction

Childbearing is a major life event for 4.3 million mothers, newborns and families each year in the United States (US). Throughout the US health care system, childbirth is the leading reason for hospitalization and approximately 23% of persons discharged from a hospital are either newborns or women who have given birth. Hospital charges for birthing women and newborns far exceed hospital charges for any other condition. This has a profound effect on health care expenditures in the US. These high costs are due to the current procedure-intensive style of maternity care in the US, with six of the 15 most commonly performed hospital

procedures associated with childbirth. Cesarean section is the most common operating room procedure in this country (Sakala & Corry, 2008). While cesarean births play an important role in any safe maternity service, there is a growing body of evidence of risks for the mother, especially in subsequent pregnancies (Villar et. al., 2007; Deneux-Tharaux, et. al., 2006; Gray et. al., 2007; Silver et al, 2006). The challenge is to ensure that every woman has care during her pregnancy and birth that provides the best chance of having a safe vaginal birth and that every cesarean section performed benefits the mother and baby.

Labor and birthing practices and interventions have resulted in rising cesarean section rates without improvement of outcomes. In the US, 99 % of births occur in hospitals. Use of continuous electronic fetal monitoring (EFM), induction, epidurals, and cesarean section rates continue to rise. From 1996 to 2009, the cesarean section rate rose by 50% to an all time high of 32%**,** while induction rates rose from 9.5% to 22.3 %, and preterm birth and low birth weight babies increased (CDC, 2009) and there has been no impact on rates of cerebral palsy (Clark & Hankins, 2003). Little attention, in general, has been given to promoting healthy, non-interventive pregnancy and childbearing options (Sakala & Corry, 2008). The National Institute of Health (NIH) has called for research devoted to strategies to increase the likelihood of vaginal birth, especially in first births (NIH, 2006). This case study is based on the Dutch model of maternity care and presents one such strategy. The Dutch model utilizes three important components: 1.) midwives as the main providers of maternity care; 2.) home birth as a norm which is allowed and encouraged for low risk women and includes the concept of determining birth site after the onset of labor; 3.) minimal technology utilizing intermittent monitoring with a doppler as an alternative to continuous fetal monitoring for low risk women.

Case Study

The woman in this case study, SV, is a 31 year old gravida 2 para 1001 at 39 4/7 weeks in early labor at home. SV calls her midwife who then goes to evaluate SV at home to check on her and assess her needs. During this visit the location of delivery will be determined. SV has obtained prenatal care regularly with a group of three midwives and is low risk. SV understands before going into labor that she has various options regarding where she can give birth, whether at home, a birth center, or a hospital. She had her first baby in the hospital with epidural anesthesia in the US. She is now living in Wassinxveen, The Netherlands. She is unsure how she feels about home birth but wants to see how it goes and she will consider her options. She believes she would like to have a home birth if all goes well, but wants to keep all options open and has not committed to any location.

Upon arrival the midwife talks with SV and gets information on how things are going. She states she is in labor with regular contractions, though they are not extremely intense. The midwife evaluates the fetal heart rate using a hand held doppler and listens through several contractions. She does a quick but thorough exam evaluating SVs vital signs, cardiac and respiratory status, a general systems review, and leopolds to determine fetal lie and estimated fetal weight. The midwife then simply sits with the family for a while, just observing. The family is obviously calmed by the presence of the midwife and shortly after, SV gets into the bath to further relax. There is no pressure or even discussion about where the birth will take place. SV's sister is there to help care for their 4 year old daughter. The sister and midwife go into the kitchen to make tea while SV is in the tub. SVs husband is upstairs with SV while she is in the tub.

After approximately one hour, SV is heard moaning in the tub. The midwife is regularly evaluating the maternal and fetal status. All is going well and the contractions are increasing in

frequency and intensity, though SV remains in the bath tub. A few more hours go by and SV requests for the first time to have her cervix examined. Her daughter comes to visit her mommy in the tub every so often, stroking her mother's brow and offering words of love and encouragement. At her first exam she is 6 cm dilated, completely effaced and -1 station with the bag of waters intact and bulging. SV is now obviously in active labor but remains relaxed in the tub, moaning, with her husband and sister offering support and encouragement. There is still no discussion of where birth will take place. Soon, when the contractions are coming very frequently and intensely, the midwife gently tells SV that she anticipates the baby will be coming soon and if she does not desire to complete her labor at home, this most likely will be the last opportunity to easily move to the birth center. She answers questions regarding how the baby is doing and they then discuss where in her home she had anticipated giving birth if they stayed at home (i.e. in bed, in the tub, in the living room). SVs husband states they have prepared the bed by covering the mattress with plastic and added extra sheets. SV states, quite strongly as she is in very active labor, that she has no intension of going anywhere. The birth assistant is called to assist the midwife at the birth.

SV is starting to groan more and there is a grunting nature to her vocalizations now. The midwife begins to assemble her equipment for birth. The midwife carries with her at all times her birth kit and resuscitation equipment. Shortly after the decision to stay at home, SV no longer wants to be in the tub. She stands up and her bag of waters breaks demonstrating clear amniotic fluid. Within minutes SV is assisted by her husband to come to the bed. Once in bed, the urge to push becomes overwhelming and SV begins involuntarily pushing her child into the world. The baby's heart rate remains reassuring. The midwife uses warm compresses to support

her perineum as the baby is gently pushed out into the world and into her mother's arms as the baby's father, auntie, and big sister are all on the bed with her.

Literature review

There are three important values this case study of a home birth in the Netherlands demonstrates: 1.) the value of continuity of care and the midwife-patient relationship; 2.) the importance of birth environment and home assessment to determine the birth site after the onset of labor; 3.) the use of less technology with intermittent monitoring rather than continuous electronic fetal monitoring. The literature will be reviewed for these three values.

A review of the literature using Medline, 1996 to present, was performed using the search terms electronic fetal monitoring, Dutch maternity care, and labor support. A combined search for cesarean section and midwifery, and for EFM and intermittent auscultation were also used.

Midwives and Continuity of Care

The role of continuous support for women during labor by a doula or midwife and the reduction of cesarean section rates and improved satisfaction have been investigated. Support and patient involvement in decisions are hallmarks in midwifery care. Midwifery care is well documented to promote maternal satisfaction and improved outcomes. A recent Cochrane Review (Hatem et al., 2008) definitively established the value and effectiveness of midwifery models of care in providing excellent perinatal outcomes. They included 11 trials (12,276 women) from multiple countries, using only licensed midwives and all births occurring in hospitals. The reviewers concluded that midwife-led care has significant benefits and no adverse outcomes. Several researchers have demonstrated that support in labor by a midwife can not only promote satisfaction and decrease cesarean section rates but also decrease the duration of active labor (Kashanian, Javadi, & Haghighi, 2010; Hodnett , Gates, Hofmeyr, & Sakala, 2007,

Khresheh, 2009). Women participating in midwife-led care, who are supported and encouraged through pregnancy and childbirth with a small number of midwives, establish a trusting relationship with their midwives. These women report a sense of calm and confidence that resulted in a positive impact on their experience of pregnancy, childbirth, and breastfeeding (Leap et al. 2010; Huber & Sandall, 2006; Huber & Sandall, 2009; Hatem et al., 2008).

US Model compared to International Models

When comparing the US with countries that utilize midwives as the primary provider of maternity care, the rates of out of hospital birth and cesarean section are very different. The Organization for Economic Co-Operation and Development (OECD), an organization of 33 countries, ranked the c-section rates from highest to lowest in 16 industrialized nations. The US ranked number 3 at 31%, the United Kingdom number 10, with 24% and the Netherlands, number 16 at 12.9% (OECD, 2009). The World Health Organization has set a goal of 15% as a safe and reasonable goal for cesarean section rates. Both the Netherlands and United Kingdom are countries that have a national health care system, and utilize midwives as the primary providers of maternity care. This is very different from the US system of maternity care where the providers are predominantly physicians and providers vary throughout the care.

Midwives, Birth Environment, and Determining site of Birth

In the US, less than 1% of births occurred out of the hospital in 2006. Of those 64.7% were in a home and 28% were in a freestanding birthing center. Midwives attended 60.9 %; the 2006 rates represent a 27 percent increase in midwife-attended home births and a 43 percent decrease in physician-attended home births over the past decade. The percentage of all births in the US attended by midwives is 7.9%. Most midwives attending birthing in the US are certified nurse midwives (CNMs). CNM attended births account for 94.3% of all births attended by a

midwife in the US, and 93% of all midwife attended births are in hospitals (CDC, 2009). Studies regarding out of hospital birth centers have demonstrated excellent outcomes, reduction in interventions, significantly lower c-section rates and increased levels of satisfaction with care (Rooks, Weatherby, & Ernst, 1992; Jackson et al., 2003, Walsh & Downe, 2004), though out of hospital births account for only 1% of births in the US.

In a nationwide study conducted in The Netherlands (de Jonge, et al, 2009), 529,688 low-risk women who started their care in midwife-led primary care were compared for perinatal mortality and severe perinatal morbidity between planned home births and planned hospital births. Of these women, 60.7% intended to give birth at home, 30.8% planned hospital birth, and for 8.5% the intended place of birth was unknown. The authors found that those women planning a home birth did not have an increase risk of perinatal mortality and severe perinatal morbidity, provided the maternity care system, such as that which occurs in the Netherlands, facilitates this choice through the availability of well trained midwives and through a good transportation and referral system. It is important to note that this is a maternity health care system with independent midwifery practice, encouragement of home birth and out-of-hospital birth practices, and a national C-Section rate of 12.9% compared to the 32% US rate. Also, the infant mortality rate in the Netherlands is 4.7/1000 compared to the 6.3/1000 in the US. To date, this is the largest study of home birth safety in a system utilizing careful screening and selecting of low risk women.

The Dutch Model

In the Netherlands, pregnant women are seen first by a midwife and then, based on risk criteria, will continue on with the midwife only, or be seen by a physician, either for consultation or to assume care. In the Dutch model, the role division between primary care by a licensed

independently practicing midwife caring for women during normal pregnancy and childbirth, and secondary care by an obstetrician who cares for pathologic pregnancy and childbirth, is clearly established. Maternity care in The Netherlands is based on the principle that pregnancy, birth and post partum are fundamentally normal physiologic processes. If the perinatal course remains uncomplicated the woman remains under the care of her primary midwife. She can make the choice of birth at home, an out of hospital birth center, or a short-stay hospital, all under the supervision of her midwife. Women are encouraged to consider all options, but do not need to make up their minds as to where they will give birth until they are in labor when all women are visited and assessed by the midwife at home as labor begins. If, at any point in the pregnancy, birth or post partum course, complications occur or threaten to occur, the woman will be referred to an obstetrician and remain in the care of the obstetrician as long as deemed necessary. Women with a high risk profile from the beginning will be cared for by an obstetrician from the beginning and will not be offered a home birth. All women receive post partum support and follow-up in their home from a midwife, and if at risk post partum, also receive medical follow-up with an obstetrician.

In 2006, 77.3% of all women started care with a midwife. The home birth rate in The Netherlands remains one of the highest of any industrialized nation, 30%, and their infant mortality rate is significantly lower than the US (Amelin-Verburg, &Buitendijk, 2010; Wiegers, 2009). While women in The Netherlands have the option of where they will give birth, Wiegers (2009) found women had increased satisfaction with the birth experience when it occurred at home and with their primary midwife. Maassen et al (2008) found a two time greater operative vaginal delivery rate and a four times greater cesarean delivery rate in low risk women who did not consider home birth but chose to give birth in the hospital in secondary care with a physician

from those who selected primary care at home or short stay birth center with a midwife; thus presenting some evidence that location of birth and provider has an effect on satisfaction, intervention and cesarean section rates.

Midwifery in the United Kingdom

The United Kingdom (UK) is another example of a midwife led maternity system. All women in the UK have a midwife; some may have a physician also. Essentially all vaginal births which do not require instrument delivery are performed by midwives. In an effort to decrease the number of births in large medical institutions and decrease the cesarean section rate, the Department of Health issued a policy entitled, "Maternity matters: choice, access and continuity of care in a safe service (Department of Health, 2007). This is a national maternal health initiative to increase the number of "normal births" and promote alternative locations for birth including out of hospital birth centers, community based and midwife led units, and home births.

One practice described by Leap et al (2010) in a socio-economically deprived area of London utilized a community based midwifery practice implementing a model similar to the Netherlands midwifery model in that women were "encouraged to keep an open mind about the place of birth and to make the final decision either to have an in-hospital birth or to stay at home in labour if it is clear that their labour is progressing well without complications (Leap et al, 2010, p. 235)". Leap et al (2010) report a 15.5% C-section rate with a 40-50% home birth rate over 12 years of practice. This is particularly noteworthy considering that the population served is low socio-economic and that all risk levels are able to access the practice.

Electronic Fetal Monitoring

Electronic fetal monitoring (EFM) was developed in the late 1960's and since its development has become widespread in its use during labor and delivery both in the US and in most developed countries. While initially considered a technology to reduce cerebral palsy, this technology has virtually eliminated unexpected intrapartum fetal death with no such impact on the rate of cerebral palsy. Longitudinal evaluation of rates of cerebral palsy in both developed and underdeveloped countries have failed to demonstrate any significant reduction in prevalence of cerebral palsy over the past three decades, despite a 5-fold increase in the rate of cesarean section that is due in part to the electronically derived diagnosis of fetal distress (Clark & Hankins, 2003). While EFM is the standard of care for most women laboring in hospitals, more than one study has demonstrated no improvement in outcome over intermittent auscultation with a doppler (Alfirevic, Devane, and Gyte 2006; Blix et al. 2005). A recent review by Gourounti and Sandall (2007) supported the findings of Clark & Hawkins (2003) demonstrating that not only was there no benefit for newborns, there was an increased likelihood of cesarean section and assisted vaginal delivery among low risk women experiencing EFM.

Discussion

This case study, taking place in The Netherlands, is an excellent example of a model of maternity care; the Dutch Midwifery model. Several principles of care are readily demonstrated. First is the value of a trusted midwife. Women participating in midwife-led care, who are supported and encouraged through pregnancy and childbirth with a small number of midwives, establish a trusting relationship with their midwives. These women report a sense of calm and confidence that resulted in a positive impact on their experience of pregnancy, childbirth, and breastfeeding (Leap et al. 2010, Huber & Sandall, 2006, Huber & Sandall, 2009, Hatem et al., 2008, Wiegers, 2009). This calm is demonstrated in this case study. SV had

received her prenatal care from a small group of three midwives that she had come to know and trust. The presence of this known midwife was a comfort to SV and she was immediately able to relax and continue her labor with the support of her family in her own home. Support and involvement in decisions are hallmark in midwifery care. Midwifery care is well documented to promote maternal satisfaction and improved outcomes.

The importance of birth environment is demonstrated in this case study. Birth experiences and environments can promote confidence and strength in women. Women need to be offered environments that support the normal process. "Birth territory consists of a physical terrain of the birth space over which jurisdiction or power is claimed for the woman" (Fahey, Foureur & Hastie, 2008, p.18). The role of the birth environment on the likelihood of promoting physiologic childbirth has been well documented. As demonstrated by Maassen et al (2008), even in a system promoting non-intervention, such as the one found in The Netherlands, when low risk women gave birth in an environment with greater availability of interventions, the operative vaginal rate and cesarean section rates increased significantly.

Along with demonstrating the importance of birth environment, this case study also demonstrates refraining from determining location of birth until labor. SV was unclear where she wanted to give birth, but with the presence of her known midwife in her own home during her labor, she was allowed to determine where she felt comfortable and able to make a choice based on options. The model of assessing a laboring woman in her home and then deciding where she will give birth is the norm in The Netherlands, but not practiced in the US. Alternative birthing practices within the US may offer women the choice of two different sites for birth; either home birth or birth center, or birth center or hospital. There are no models of

care that offer women all three choices for the location of birth after first assessing the woman at home in labor.

The final principle of care demonstrated in this case study is that of a low technology option for evaluation of fetal monitoring. In the Netherlands, midwives are skilled in the use of intermittent monitoring of fetal heart rate with a fetoscope or doppler. There is no use of continuous EFM except for births occurring in the hospital. Comparing fetal outcomes of EFM and intermittent auscultation, there was no improvement in fetal outcomes in low risk births (Alfirevic, Devane, and Gyte 2006; Blix et al. 2005; Clark & Hawkins, 2003). The American College of Obstetricians and Gynecologists (ACOG) readily states that the false-positive rate of EFM for predicting cerebral palsy exceeds 99% and that use of EFM is linked to higher rates of operative vaginal delivery, both vacuum and forceps, as well as cesarean delivery. They also acknowledge that EFM is the most widely used obstetrical procedure without documented reduction in perinatal mortality or risk of cerebral palsy. In fact, the rate of cerebral palsy has essentially remained the same since World War II despite fetal monitoring and all of our advancements in treatments and interventions (Barclay, 2009). The nearly universal use of continuous EFM in the US in not evidenced based but ingrained in the culture of birth. It is recognized by ACOG and the Association of Women's Health, Obstetrical, and Neonatal Nurses (AWHONN) that intermittent monitoring of low risk women with a doppler is safe and comparable for monitoring fetal wellbeing with EFM. Both associations, ACOG and AWHONN, have established guidelines for the use of intermittent monitoring of low risk women in labor (OCOG practice bulletin, 2005; Usher Ali & Gauthier, 2009). Wood (2003) points out that there are many reasons for the continuing use of EFM, suggesting such issues as habit,

convenience for staff, liability fears, staffing issues, and a general shortage of nursing staff that are comfortable and knowledgeable about intermittent auscultation.

Conclusion and application to practice

The model of care demonstrated in this case study is one of independent midwifery management, offering options of location of birth and assessment of women in the home when in labor, and low intervention care with normal healthy women. It is a model of care that could be utilized within the United States. While applying research from a more homogeneous population such as that of the Netherlands, to a very heterogeneous population such as that of the US has its limitations, there are clearly lessons to be learned. As both US cesarean section rates, intervention rates, and health care costs continue to escalate, exploring models of care that empower women through offering choices that decrease the likelihood of interventions and better utilize health care dollars, are essential. As CNMs and leaders in maternity care, we need to establish and promote the development of birthing centers and practices that focus on support of low intervention and availability of safe birthing choices for women.

There is clearly a valuable role in the technology that is often utilized in childbirth. Treating all women regardless of risk status with the same level of intervention, however, can only result in continuing increase in the cesarean section rates and costs of maternity health care without improvement of outcome. Certified Nurse Midwives are leaders and experts in physiologic birth, and therefore need to promote public policy which support change and expand options in maternity health care. Women need to be offered models of care that enhance confidence in their body's ability to birth while increasing safe options. The role of intermittent auscultation rather than continuous EFM need to be addressed in all settings, including the hospital, and policies developed and implemented. Increasing nursing and midwifery's comfort

and experience with intermittent auscultation is essential to the decreased utilization of continuous EFM, a method of fetal evaluation that is not evidenced based for low risk women. Certified Nurse Midwives in the US need to learn from international midwife colleagues as they continue to support uncomplicated birth and keep women and their babies safe and healthy.

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Cesarean Delivery on Maternal Request:

A Case Study

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Introduction

Definition

Cesarean delivery on maternal request (CDMR) is the term which has been coined to define a cesarean delivery for a singleton pregnancy on maternal request at term in the absence of any medical or obstetric indication. CDMR is a subset of elective cesarean section. Elective cesarean section is generally includes a planned cesarean delivery for a wide range of maternal and fetal indications and is generally distinguished from emergency cesarean delivery and cesarean delivery in labor after planned vaginal delivery (NIH, 2006).

Purpose

The purpose of this case study is to discuss CDMR, the incidence and significance of the issue as it relates to rising cesarean section rates and clinical practice. A case study is offered as a demonstration of maternal concerns regarding vaginal delivery, and discussion of specific issues related to CDMR and what needs to be understood by patient and provider.

Significance

The current cesarean rate in the United States continues to rise and reached a new all time high of 31.8% in 2007 (CDC, 2009). Following a decline in the early 1990s, the cesarean rate increased by 53% from 1996 to 2007, from 21% to an all-time high of 32%. This increase in cesarean deliveries has occurred across all demographics of race, ethnicity, age and socioeconomic status. It has been suggested that maternal request for cesarean birth may play a significant role in this increase, but there is limited evidence on maternal perspectives toward cesareans or actual incidence of maternally requested cesareans. While CDMR is presumably a subset of medically elective cesareans there has been no analysis of outcomes of these births (Menacker, & Hamilton, (2010); NIH, 2006).

The National Institutes of Health (NIH, 2006) addressed the issue of CDMR in a State of the Science Conference Statement. They commissioned an evidence report that restructured the question to focus on a comparison of planned cesarean delivery and planned vaginal delivery. The report found little research structured to compare outcomes of these methods of delivery and an expert panel formed by NIH to review the evidence concluded there was a need for research that directly compared planned cesarean to planned vaginal births.

Internationally and domestically, estimates of cesarean delivery on maternal request range from 4 to 18 percent of all cesarean deliveries; however, there is little confidence in the validity of this estimate. Limited evidence suggests that CDMR is increasing, but it is unclear why. A case study will be presented of a woman requesting an cesarean section without medical indication; CDMR. A review of the literature will then consider: (a) maternal and fetal risks and benefits from cesarean section; (b) what is known about the risk of scheduled CS without medical indication; (c) what is known about the incidence of CDMR; and (d) factors influencing the choice for CDMR. Professional guidelines and recommendations on CDMR will then be reviewed, and recommendations for counseling women requesting CDMR considered.

Case Study

Ann was twenty-two year old woman who began receiving routine prenatal care at nine weeks with a sure LMP and ultrasound confirming her dates at her first visit. Ann received care from a nine person obstetrical practice including four certified nurse midwives (CNMs), four obstetrician/gynecologists (OB/GYNs), and one nurse practitioner. Ann was a gravid 1 para 0. Her past medical history was significant for methamphetamine abuse three years prior to pregnancy and depression. She had a history of depression in the past, never medicated, and stated it is had not been a problem since she stopped using drugs. Ann denied all use of

methamphetamines or any drugs for over two years, and was a non-smoker. She had no other significant medical history. Ann's BMI was 27 at the beginning of pregnancy; she received routine prenatal care without complications; and she had random urine drug screens throughout the pregnancy, all of which were negative. She attended all of her prenatal visits regularly. All prenatal testing, including genetic screening with a quad marker and diabetic screening were normal. Her total weight gain in pregnancy was 27 pounds. In the final weeks of her pregnancy Ann was coming to the clinic on a weekly basis and had met with all the practitioners in her obstetrical group. After a routine prenatal visit at 36 weeks, Ann informed the certified nurse midwife (CNM) seeing her for this visit that she was planning on having a cesarean section (CS) instead of a vaginal delivery and wanted to "have that scheduled so that my mom can buy her plane ticket in time." This was the first time it had been documented that Ann verbalized this request. At this visit her prenatal record was reviewed again, and she was told there were no medical indications for a primary CS and that this was not standard of practice. Upon further questioning, Ann informed the CNM that her sister "ended up with a cesarean after a two-day labor with her first child and that kid is a little screwed up. He's real hyper; my sister thinks that it is from the labor. They just scheduled her during her second pregnancy and it was so much easier. So that is what I want to do. Besides, I hate pain, and I don't want to feel labor". She further stated, "My mom can't hold her urine because I was so big. I don't want that problem either. "

After spending time exploring each of these individual issues with Ann and explaining all of the potential risks, benefits, and current evidenced-based research surrounding both delivery routes, it was determined that she had been thinking about this for quite some time and

felt adamant that she did not want to even attempt a vaginal delivery. She stated if the practice was not willing to perform the CS she would look elsewhere and find someone who would.

Ann's concerns and desire for a scheduled CS without labor in the absence of any medical indications was discussed within the obstetrical group. There were many mixed feelings regarding this issue among the providers of this group. The general practice of the group is not to offer cesarean delivery without medical indications. Ann then had consultation with one of the OB/GYNs in the group who felt she would be willing to offer her a CS if she believed Ann felt strongly about the issue and had been well informed and consented. A thorough counseling session was held discussing risks of the surgical procedure and discussing pain management options for labor, and Ann remained steadfast in her desire for a CS without labor. All counseling and discussion were documented and consents signed prior to the planned date for surgery. She was then scheduled for a CDMR at 39 2/7 weeks.

Ann had a scheduled CS and gave birth to a healthy baby boy weighing 7 pounds, 2 ounces. The CS was uncomplicated. Ann had some issues with pain management and breastfeeding, but was discharged home on post partum/post operative day three. Ann was readmitted to the hospital on day 6 with a wound infection. She received IV antibiotics, spent an additional four days in the hospital, and ultimately spent over six weeks in the wound clinic with complications from her surgery of the wound disruption. After a lengthy and complicated healing process, Ann did later state that she believed she "made a mistake" by deciding to have a CS, but also stated that "everyone in the practice tried to tell me it would be a harder recovery and it was my choice."

Literature Review

A review of the literature is presented considering: (a) maternal and fetal risks and benefits from cesarean section, including issues of incontinence; (b) what is known about the risk of scheduled CS without medical indication; (c) what is known about the incidence of CDMR; and (d) factors influencing the choice for CDMR. A review of the literature using Medline, 1996 to present, and PubMed was performed using the search terms cesarean delivery on maternal request, and searching specifically risks of cesarean section verses vaginal birth for mother and baby.

Maternal and Fetal Risks and Benefits from Cesarean Section

Maternal Risks

Given the surgical nature of cesarean sections, the procedure carries inherent risks that are associated with most major surgery, including bleeding, damage to internal organs such as the bladder and bowel, infection, and risks from anesthesia that include paralysis, or in very rare cases, death. When compared to vaginal deliveries, elective cesarean sections have higher rates of hemorrhage requiring blood transfusions and hysterectomies, and wound infections (Kor-Anantakul, Suwanrath, Lim, & Chongsuviwatwong, 2008). Liu et al. (2007), suggest that increased risks of total postoperative complications including wound disruption and hematoma need to be considered when women are considering risks and benefits of low-risk elective cesarean delivery.

A previous cesarean section increases the risk for future pregnancies. These can include miscarriage, abnormal placentation, placental abruption, unexplained stillbirth, and uterine rupture, that may be life threatening for the mother and fetus (Lydon-Rochelle, Holt, Easterling & Martin, 2001; Smith, Pell, & Dobbie. 2003; Althabe & Belizan, 2006).

Fear of urinary and/or fecal incontinence resulting from damage to the pelvic floor during the childbirth process is a common reason given by women requesting cesarean delivery. Urinary incontinence affects between 25-55% of adult women (Altman et al, 2006; Danforth et al, 2006; Herbruck, 2008). While ranging from occasional to severe, urinary incontinence may have a significant negative impact on a women's self image and quality of life (Herbruck, 2008). In a study by Altman, Ekstrom, Forsgren, Nordenstam, & Zetterstrom (2007), researchers compared the ten-year post delivery rates of fecal and urinary incontinence rates of women who had had vaginal deliveries to those who had had cesarean deliveries. The findings indicated that incontinence symptoms occurred more frequently with vaginal deliveries. Despite this, there was not an increase in the rate of incontinence-related surgery in the vaginal delivery group and the severity distribution of symptoms between the groups was similar. Frank fecal incontinence was rare in both groups. Severe urinary incontinence (occurring daily) and flatus incontinence was experienced by 10% of participants in both groups, that the authors suggested may be associated with full term pregnancy rather than the mode of delivery. Since all of the participants were premenopausal, the study did not examine how the effects of menopause affect these women. Much of the current available data also has the same long-term effects limitations.

Fetal Risks

Researchers have demonstrated increased Neonatal Intensive Care Unit (NICU) admissions for the newborn after cesarean section (Kor-Anantakul, Suwanrath, Lim, & Chongsuviwatwong, 2008). Evidence indicates that respiratory morbidity, which is sensitive to gestational age, is higher for cesarean deliveries than for vaginal deliveries. Researchers consistently report increasing respiratory morbidity with elective cesarean delivery compared to planned vaginal delivery with gestational ages earlier than 39–40 weeks of gestation. Most of the

respiratory problems that accompany cesarean delivery result from delays in neonatal transition, such as transient tachypnea of the newborn and mild respiratory distress syndrome (RDS). Infrequently, infants can develop severe respiratory failure and pulmonary hypertension (NIH, 2006).

Levine, Ghai, Barton, & Strom (2001) found nearly a fivefold greater risk of persistent pulmonary hypertension for elective cesarean than for vaginal deliveries. These authors suggest that labor induces the release of fetal catecholamines and prostaglandins that promote lung surfactant secretion. In comparing neonatal outcomes of vaginal and cesarean birth, MacDorman, Decelercq, Menacker, & Malloy (2006) report that vaginal births resulted in more neonatal trauma including brachial plexus injury associated with shoulder dystocia, cranial hemorrhage, intraventricular hemorrhage and hypoxic-ischemia. These neonatal trauma issues were significantly reduced when instrumental vaginal delivery is not a factor. Cesarean delivery is associated with increased incidence of persistent pulmonary hypertension, more septic evaluations, increased asthma, and accidental lacerations. There is an increased rate of fetal lacerations among emergency and labored cesarean deliveries than scheduled cesareans, such as CDMR. This suggests that CDMR poses less risk for fetal lacerations than CS after labor and no additional risk for fetal lacerations than those associated with planned vaginal deliveries (NIH, 2006). MacDorman, Decelercq, Menacker, & Malloy (2006) also present that respiratory morbidity is 2-3 times increased even with scheduled cesarean section and present that 50% of the NICU admissions were due to violation of the American College of Obstetrics and Gynecology (ACOG) criteria for only delivering via cesarean without labor after 39 weeks or with demonstrated lung maturity.

Risks of CS without medical indication

The NIH report (NIH, 2006) presents that there is insufficient evidence to evaluate the benefits and risks of CDMR as compared to planned vaginal delivery and suggests that more research is needed. They stress that all cesarean data is compiled together and the risk of scheduled cesarean without labor and without risk factors have not truly been compared with planned vaginal birth to truly understand the risks and benefits of attempting labor and vaginal delivery, and scheduling a cesarean. A large retrospective study performed by Liu et al. (2007), found that planned cesarean deliveries without labor were associated with increased postpartum risks of cardiac arrests, hematoma, hysterectomy, major puerperal infection, anesthetic complications, venous thromboembolism, hemorrhage requiring hysterectomy, and longer hospitalizations. The absolute difference between the groups was small, but the risk of severe maternal morbidity was greater in the group electing to have a cesarean delivery when compared to those found in the group delivering vaginally. Their data showed that the risk of major infection in women was about three times greater with a planned cesarean delivery than with a planned vaginal delivery. The authors suggested that severe maternal morbidity associated with either form of delivery is relatively rare. "Nevertheless, compared with planned vaginal delivery at term, elective low-risk cesarean delivery poses higher risks of severe maternal morbidity (p.459)". Increased risks of total postoperative complications including wound disruption and hematoma needs to be considered when women are considering risks and benefits of low-risk elective cesarean delivery. Liu et al. (2007) acknowledge that not all planned cesareans are maternally requested and stress that this data compares scheduled cesareans, not those without identified indications for cesarean. The NIH (2006) report states,

> Cesarean delivery, planned or otherwise requires a longer hospital stay than vaginal delivery does. … Numerous factors also may influence length of hospital stay, including

> obstetric complications, insurance coverage, regional practice patterns, health care provider and patient preference, and neonatal hospital stay (p.8).

Declercq et al. (2007) studied this issue and attempted to identify women with planned cesareans and planned vaginal births. This study used six years of data from a population based linked data system to look at maternal outcomes and costs associated with these two options. Although planned primary cesareans seem to be medically elective, they are not necessarily maternal request cesareans. Nonetheless, the authors did indentify that mothers who have a planned primary cesarean face outcomes they may not have anticipated, including more than double the chance of being readmitted to the hospital in the first month for complications associated with the surgery. The authors point out that these findings do not support one of the rationales proposed for elective cesareans, that of greater maternal convenience.

Incidence of CDMR

How widespread is CDMR? According to the NIH (2006) report, the incidence of cesarean delivery without medical or obstetric indications is increasing in the United States, and a component of this increase is cesarean delivery on maternal request. The NIH report further states that internationally and domestically, estimates of CDMR range from 4 to 18 percent of all cesarean deliveries; however, there is little confidence in the validity of this estimate. Limited evidence suggests that cesarean delivery on maternal request is increasing. The report also states that the magnitude of this component of cesareans is difficult to quantify. The NIH (2006) states that this category, CS without documented medical indication, increased from 3.3% of live births in 1991 to 5.5% in 2001. Declercq, Menacker, & MacDorman (2005), supported the NIH findings, reporting a primary caesarean rate for the no risk group that rose 67% between 1991 and 2001, from 3.3% to 5.5% respectively, with a gradual increase from 1991 to 1996 and a

rapid one thereafter. The NIH also reported that the incidence of cesarean by choice in Italy rose from 4.5% in 1996 to 9% in 2000. In Sweden the incidence rose from 8.9% in 1994 to 15.8% in 1995, and in Taiwan rose from 2% in 1997 to 3.5% in 2001. Declercq et al (2007), when reviewing incidence of cesarean section without medical indication, found that while planned primary cesareans constituted a small portion of all births during the period of their study, the authors did note a rapid increase in number between 1998 and 2003.

According to Listening to mothers II (Declercq, Sakala, & Corry, 2006), 2% of women surveyed stated they had no medical indication for cesarean section. When questioned specifically about who made the decision for cesarean, 5% of the women stated the decision was theirs and they decided before they went into labor.

Factors influencing the Choice for CDMR

There have been many factors indicated for the choice of CDMR, but good research to understand the frequency of the choice as well as why women make it is lacking. Some possible influences in the decision for CDMR have been offered. Authors suggest fear of birth experience, pain or previous adverse birth experiences, potential maternal consequences such as incontinence or needing emergency c-section, potential fetal consequences, including complications from birth and issues of control and convenience as possible reasons for maternal request for cesarean delivery (Mancuso et al., 2008; Hannah et al., 2002; Herbruck, 2008; Brink, 2002; Frenwick, Gamble, Nathan, Bayes, & Hauck, 2009; Kjaergaard, Wijma, Dykes, & Alehagen, 2008).

A study out of Italy, that has the highest European rate of cesarean deliveries at 36.9%, found that women requested elective cesarean deliveries more often if they were nulliparous and if they were in the second half of their gestation (Mancuso et al., 2008). Fear of childbirth was the main motivating factor reported by the participants, followed by the fear of pain, gestational

anxiety, and a previous negative experience. These findings have been replicated numerous times throughout the research (Hannah et al., 2002; Hannah et al., 2002; Herbruck, 2008; Brink, 2002; Frenwick, Gamble, Nathan, Bayes, & Hauck, 2009; Kjaergaard, Wijma, Dykes, & Alehagen, 2008). The women also reported a reduced amount of worry over the "health of the baby" if they were having a planned elective cesarean delivery.

Vaginal delivery may increase the possibility of urinary incontinence and may affect a woman's perception of quality of life. It has been suggested that if women have concern regarding the occurrence of significant vaginal lacerations, vaginal-rectal sphincter laceration, or impending incontinence, they may request cesarean delivery to avoid the issue. Herbruck (2008) suggests that a woman may fear developing urinary, flatus, or fecal incontinence. In addition, the author discusses that should it occur, she and/or her partner or family members may judge this aspect of her life with shame.

The media has widely publicized many trend-setting celebrity women scheduling elective cesarean sections instead of vaginal deliveries. Being "accustomed to controlling every detail of their lives, these women are too impatient for the uncertain timing of labor and are too pampered for hours of contractions. They are, in short, too posh to push" (Brink, 2002). Media images of the female body are correlated with self-objectification (Monro & Houn, 2005) and body dissatisfaction (Groesz, Levine, & Murnen, 2002). Andrist (2008) examined the implications of objectification theory on women's health and maternal requested cesarean delivery. She hypothesized that if women treat their bodies as idealized objects, surgical childbirth becomes acceptable as it creates a distance between themselves and a bodily function that may be considered "distasteful". A scheduled cesarean section is a controllable and predictable way to "sanitize the body so that it lives up to cultural ideal (Andrist, 2008)".

Professional Guidelines

The American College of Obstetrics and Gynecology (ACOG) acknowledges that CDMR is an ethical dilemma and states,

> If the physician believes that cesarean delivery promotes the overall health and welfare of the woman and her fetus more than vaginal delivery, he or she is ethically justified in performing a cesarean delivery. Similarly, if the physician believes that performing a cesarean delivery would be detrimental to the overall health and welfare of the woman and her fetus, he or she is ethically obliged to refrain from performing the surgery. A referral to another health care provider would be appropriate if the physician and the patient cannot agree on a route of delivery (ACOG, 2008).

The American College of Nurse Midwives (ACNM) has taken a position advocating vaginal delivery as the "optimal mode of birth for women who do not have a health indication for cesarean section" (ACNM, 2005). They elaborate and cite the "lack of scientific data, the safety and efficacy of elective primary cesarean section as a substitute for vaginal birth has not been established…and there is concern for harm."

The National Health Service (NHS) in the UK published the NICE (National Institute for Clinical Excellence) guidelines on caesarean section (NICE, 2004). In this guideline they clearly state that maternal request is not an independent indication for cesarean section and that specific issues and indications for the request must be explored, discussed and documented. They further state that when a woman requests a CS without an identifiable reason, the benefits and risks of CS must be discussed in detail. They continue on to discuss that if fear of childbirth is the reason, women must be offered counseling to help her address these fears, and discuss pain relief measures. They also state than an individual clinician has the right to decline to perform a

CDMR in the absence of a medical reason, however, the woman's decision needs to be respected and she should be offered a referral or second opinion.

NIH (2006) makes the following four recommendations regarding CDMR: (a) until there is clear evidence any decision to perform CDMR needs to be carefully individualized and consistent with ethical principles of care; (b) given the increasing risks with each CS for placenta previa and accrete, CDMR is not recommended for women planning several children; (c) the importance of not performing any elective CS prior to 39 weeks gestation or without verification of fetal lung maturity due to the significant risk of neonatal respiratory complications; and (d) CDMR should not be motivated by lack of availability of pain management and these services must be made available for women who request them.

Case analysis and recommendations

This case study describes a woman, Ann, who requested CS without risk or medical indication. Her stated reasons were consistent with what has been presented in the literature, fear of incontinence, fear of childbirth, and fear of outcome. Within the group of providers caring for Ann there was disagreement regarding offering CDMR. It has been suggested that elective cesarean section empowers women by providing decision-making control and convenience; however emphasis in the literature is placed on the negative implications of this mode of delivery. Women may make the choice for a medically unnecessary surgery believing they will avoid common sequelae associated with vaginal birth, when instead they may be putting themselves at risk for immediate and long-term surgical consequences. This knowledge deficit may be due to providers not supplying their patients with complete information or women not really believing that these complications could happen to them (Collard, Diallo, Habinsky, Hentschell, & Vezeau, 2008). A thorough discussion and consultation was held with Ann

reviewing surgical risks and discussing pain relief options, always encouraging her to consider attempting vaginal delivery. After thorough discussion, she remained steadfast in her decision and continued to request a CS.

The cesarean section was performed at 39 2/7 weeks, meeting the suggested guidelines for not performing CS without labor prior to 39 weeks due to risk of neonatal respiratory complications. After the CS Ann did experience two of the reported complications that occur even with scheduled CS, that of hospital readmission for wound infection and poor wound healing. The long process of wound healing ultimately led Ann to state that she regretted her decision; however she acknowledged that she had been informed very adequately that this was a possibility.

The management of Ann's CDMR met with the established professional guidelines. Her counseling was thorough and documentation of concerns, opinions, and recommendations occurred. One additional suggestion that was not utilized was referring Ann for counseling to address her fears. Due to Ann's specific concerns, discussion of pain relief alternatives such as epidural was essential. Likewise, suggesting continuous fetal monitoring may have given Ann and her family some reassurance of fetal wellbeing through the labor. While continuous fetal monitoring has not been shown to change outcomes, it is the most commonly utilized tool to assess fetal wellbeing in labor. Avoiding assisted vaginal deliveries if possible, as forceps and vacuums are known to carry an increased risk of vaginal trauma, may also be enough reassurance that the patient may agree to have a vaginal delivery. By eliciting the patient's values and exploring her physical, psychological and social needs, providers can work with the patient increase their sense of control and options (Kalish, McCullough, & Chervenak, 2006; Collard et al, 2008).

Summary and Conclusion

As the cesarean section rate continues to increase in the United States, cesarean delivery on maternal request (CDMR) has been implicated as a factor increasing the numbers of cesareans performed. The exact numbers of CDMR are difficult to document as it is not data that is readily collected. The NIH (2006) suggests striving to better document the true incidence of CDMR by adding this indication to birth certificate data. Understanding and documenting accurate frequency of CDMR is the first step to then understanding the reasons women make the choice.

Cesarean delivery rates in industrialized countries continue to rise. The rates vary widely by country, health care facility, and delivering provider, partly because of differing perceptions by health care providers as well as by pregnant women of its benefits and risks. The relative safety of cesarean delivery and its perceived advantages relative to vaginal delivery have resulted in a change in the perceived risk–benefit ratio, which has accelerated acceptance. Indeed, a belief has become widespread that the risks of cesarean delivery for healthy women are so low as to make it a reasonable elective option for childbirth (Collard et al, 2008). Although cesarean deliveries are believed to be safer than ever, and significant complications or mortality are rare, they are still major abdominal surgery. The longer recovery time required after CS necessitates the women to focus on her healing with potential impact on her care for and bonding with her new infant (Lobel, & DeLuca, 2007).

In summary, practicing clinicians who face this experience of a woman requesting CDMR must address these four key issues:

1. Determining the woman's concerns regarding vaginal birth.
2. Exploring ways to help her address her concerns and fears.

3. Offering her adequate informed consent regarding the risks and benefits of both vaginal and cesarean birth for both mother and baby, as well as possible implications for future pregnancies after primary cesarean section.
4. Exploring one's own concerns and biases regarding elective primary cesarean section, and referral to another health care provider if the patient and provider cannot agree on a route of delivery.

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Childbirth and the Affect on Post Partum Events

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Abstract

The aim of this paper is to explore the issue of postpartum adjustment and post traumatic affects of childbirth. Literature regarding stress of the postpartum period, the concept of social isolation during the post partum period, PTSD and childbirth, and women's responses to traumatic events of childbirth and what some of those events may be, are explored. Interventions focused on preventing childbirth trauma and postpartum stress are presented, and the importance of acknowledging the impact of the birth experience, and recognizing postpartum stress responses are discussed. The midwife by virtue of her role as being "with women" is uniquely qualified to offer education, support, information, and care to women during pregnancy, labor and postpartum. This role is invaluable in helping to protect women's memories of their birth experience and reduce the stressful response to childbirth and postpartum events.

Introduction

Childbirth is an experience most women remember for their entire lives. Ideally, it is an event they remember with sweet, warm feelings, and tender thoughts. It has long been recognized, however, that childbirth is a very complex event and that it leads to a variety of emotional and psychological responses, both positive and negative. The post partum period is a time when many women are vulnerable. Fatigue, lack of support, and feelings of overwhelming responsibility can predominate (George, 2005). For some women, childbirth itself can be an event that triggers traumatic stress responses. It is only recently that there is recognition that some women develop post-traumatic stress symptoms or even post-traumatic stress disorder (PTSD) from birth trauma and that this can result in a heighten sense of isolation for women during the already vulnerable post partum period (Ayers, Harris, Sawyer, Parfitt, & Ford, 2009; Bailham & Joseph, 2003; Beck, 2004b; Olde, Hart, Kleber, & Son, 2006).

PTSD was identified as a distinct disorder in 1920 and included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) in 1980 and was expanded in 1994 in the DSM-IV to include actual or perceived threat of death or serious injury or threat to ones' physical integrity. The response is that of helplessness, extreme fear, or horror. The DSM-IV does not specifically address the issue of childbirth as a potential extreme stressor, however for some, it certainly can be viewed as a traumatic event. The reported incidence of PTSD from childbirth ranges from 1.5% to 6% and the literature demonstrates that many more women experience feelings of trauma related to their birth (Beck, 2004b). These experiences can result in significant difficulties with interpersonal relationships, and life struggles. Women with post traumatic stress symptoms related to childbirth can struggle to survive, battling terrifying nightmares and flashbacks from birth events, anger, depression, anxiety and "painful isolation from the world of motherhood" (Beck, 2004b, p.216).

Birth experience is an often ignored part of post partum assessment. As clinicians we are focused on bleeding and breastfeeding, sore perineums, and bodily functions. We think nothing of

asking about bowel movements and difficulty urinating, but rarely consider how a woman experienced her birth. When a birth was obviously traumatic, such as an emergency cesarean-section or a sick newborn or demise, there is generally an understanding that this has been a traumatic event and that the woman will need to grieve. But if the child is born healthy, rarely do we stop to consider that birth still has its ramifications and effects on women. While there is literature exploring traumatic birth experiences and PTSD, it is important to recognize, that what one person considers traumatic, is not necessarily what another women considers traumatic or what we, as health care providers view as traumatic. What might seem routine and ordinary by obstetric providers may be perceived by a mother as birth trauma, for indeed, birth trauma is "in the eye of the beholder" (Beck, 2004a, p.28).

This paper will explore the issue of post partum adjustment and post traumatic affects of childbirth. It will explore the literature regarding the stress of the post partum course, women's responses to traumatic events of childbirth and what some of those events may be. It will begin to look at interventions and the role of the midwife in pregnancy, childbirth and post partum, with those women who are struggling post partum and recognizing post traumatic stress reactions to child birth. It will also explore the concept of social isolation during the post partum period and explore the effects of social isolation in women who view their birth as traumatic.

Literature Review

Post partum adjustment and social isolation

Those who care for women during pregnancy and childbirth recognize that adding a child to your life is a stressful event. It is both joyous and at times, overwhelming. Sleep deprivation, significant emotional, physical, and psychological changes occur for families. "This time of life for women who are assuming care of newborns represents a period of increased vulnerability" (George, 2005, p.251).

Classic nursing research by Rubin (1984) and Mercer (1995) describe the 'fourth trimester', that of post partum, as a time of significant transition and recovery. The transition into motherhood, or

readjusting to mothering another child, is a major developmental life event. Mercer (2004) describes the mother's need to develop a new concept of herself and acknowledges that there are many variables in that transition. Women draw back to their own relationship with their mothers and their experience of being parented, and their dependency on their partner and family for support becomes more important and prominent in their transition. Some factors which Mercer (2004) identifies as influencing the transition to motherhood are maternal age, socioeconomic status, social stress, social support, personality traits, role strain, health status, and birth experience.

Most midwives and nurses who work with post partum women acknowledge that tiredness and fatigue are significant factors for mothers in the post partum period. "Fatigue affects one's physical and mental state and has implications for everyday activities, motivation and social interaction" (McQueen & Mander, 2003, p.464). While there is research and information about the effects of fatigue on general health, there is little research regarding the effects of fatigue during the post partum period on mothers. McQueen and Mander (2003) points out that while one can make a comparison between fatigue from chronic illness and the fatigue that occurs for women after having a child, the "psychological effects are likely to be aggravated by the prospect of ongoing care of the infant, in combination with postpartum emotional changes" (p.465). The authors stress that there is lack of research on post partum tiredness and fatigue, especially when fatigue is extreme or prolonged. And what are the effects on mothers and babies when fatigue is unresolved? "Although psychosocial issues such as fatigue and anxiety occur commonly in the early weeks following pregnancy, these issues should not be dismissed as insignificant" (George, 2005, p.252). While these issues may not result in increased hospitalizations or even with women consulting health care providers, there is unknown and unmeasured cost for families and society (George, 2005).

In a study by George (2005), the author did in-depth interviews of first time mothers within four weeks of childbirth who had normal vaginal deliveries. One of her findings was a significant sense of

abandonment expressed by the new mothers interviewed. A general sense of social isolation of the family aggravated by difficulty coping with the stress of the transition to motherhood was identified by most of women interviewed. This sense of abandonment described by the women interviewed was from their health care providers, and general lack of support. It must be noted that for most women obtaining prenatal care, in the last months of pregnancy their visits to the midwife or physician are frequent and regular, but once a woman has her baby, she is not seen by her provider for six to eight weeks post partum. While the newborn will have routine visits to the pediatrician, the focus has changed from the mother to the infant. George (2005) points out that this system leaves women without a healthcare resource when they have questions or concerns. George (2005) also presents that while the sense of abandonment identified by these women was abandonment from the health care system, "the possibility that some of the 'sense of abandonment' may be related to geographic mobility and distance from family" (p.255). Certainly with a society as mobile as ours, having an available extended family is not the norm but the exception. In unnatural causes (UNNATURAL CAUSES), Becoming American, this PBS series presents that Americans are working more than individuals from any other nation and are becoming increasingly socially isolated. As other cultures acclimate to the American way of life, they lose extended family and family support and connections and this loss was a negative impact on their health. For most women giving birth in our society, they are socially isolated. Many within our culture do not have extended families or if they do, those family members are so busy they are barely able to help. Social support systems provide emotional support as well as task-oriented assistance. An individual's social support system is a coping mechanism (Hung & Chung, 2001).

Cheung (1997), in examining Chinese women obtaining care in Scotland discusses the Chinese custom of zuo yuezi, which means literally, sitting in for the first month. This traditional Chinese custom requires confinement in the house for one month after childbirth, at which time the woman has regulated rest, and is cared for by relatives, generally her mother or mother-in-law. This period of

confinement ends ultimately in a ritual celebration that recognizes her new social status. The belief is that these routines keep the woman healthy and help to maintain low levels of stress. Hung and Chung (2001), when looking at post partum stress identified three factors that were most significant; maternal role attainments, lack of social support, and body changes. The author's supported the findings of Cheung (1997) that Eastern women's support systems differed from Western because of the Eastern women's identified strong family support. As a result they had less identified post partum stress than Western women, unless Chinese women were separated from their family support system.

Childbirth experience and posttraumatic stress

Case studies and quantitative studies confirm that childbirth, an emotionally intense experience, can lead to the development of post traumatic stress responses and post traumatic stress disorder (PTSD). There is a growing body of research looking at childbirth and PTSD. A review of the literature demonstrates that 1.5 – 6% of women fulfill the diagnostic criteria for PTSD after childbirth (Ayers et al., 2009). PTSD is classified by the Diagnostic and Statistical Manual version IV (DSM IV) as occurring when an individual has been confronted with an event in which there is a perceived threat of death or serious injury to themselves or another. The response of the individual is intense fear, helplessness, loss of control or horror. For some women childbirth can be such an event (Ayers et al., 2009; Ayers, Joseph, McKenzie-McHarg, Slade, & Wijma, 2008; Bailham & Joseph, 2003; Beck, 2004b; Olde et al., 2006; Soet, Brack, & DiIorio, 2003).

According to the DSM IV, there are six diagnostic criteria for PTSD. First, to meet the diagnostic criteria there must be a stressor or traumatic event. After this stressor there are three symptom clusters and the individual must experience one or more of these. These three symptom clusters include re-experiencing the event through recurring dreams nightmares or flashbacks, avoidance or numbing, and increased arousal such as hypersensitivity or inability to sleep. The duration of the symptoms must be a month or more, and there must be disability, or symptoms which cause significant

distress or the impairment of social, occupational or other areas of functioning (Ayers et al., 2008; Bailham & Joseph, 2003; Olde et al., 2006).

While studies have indicated a 1.5 – 6% incidence of PTSD after childbirth, Bailham and Joseph (2003) point out that there are many women who do not meet the full diagnostic criteria of PTSD but are partially symptomatic and may be considerably distressed. Another 24.2% (Czarnocka & Slade, 2000) to 34% (Soet et al., 2003) of the subjects of their studies had various, significant symptoms of post traumatic stress without fulfilling the full diagnostic criteria of PTSD. Ayers et al. (2008) suggests that women often under report symptoms, feeling guilty about not being overjoyed by the end result of a healthy baby.

When examining the issue of PTSD and traumatic stress symptoms related to child birth, Ayers et al. (2009) points out that childbirth differs significantly from other types of traumatic events in several ways. Childbirth is generally entered into voluntarily and is experienced by the majority of women in the population. It is conventionally viewed as a positive and exciting thing by society. While the end result, the baby, is generally considered a positive and desired outcome, childbirth can result in significant changes in bodily integrity. In addition, the birth of the baby requires substantial adjustment and there are normal physiologic changes and fatigue after birth.

Studies looking at the clinical presentation of post traumatic stress and PTSD related to childbirth demonstrate specific manifestations after childbirth. Avoidance, a defining characteristic of PTSD, when examined in the context of PTSD after childbirth, is most commonly demonstrated by sexual avoidance and fear of another pregnancy or future childbirth. Sexual avoidance is considered to be primarily because of fear of unplanned pregnancy. Tokophobia is the term used to describe unreasoning dread of childbirth. Tokophobia can be so extreme that a woman, if an unplanned pregnancy occurs, may terminate or request an elective c-section without labor. Nightmares and flashbacks about the labor experience have been documented in the literature, as well as mother-infant

attachment difficulties. Studies have also documented symptoms of increased arousal involving trembling, sweating, increasing irritation and sleep disturbances (Ayers et al., 2008; Bailham & Joseph, 2003; Beck, 2004b; Olde et al., 2006). "Various examples can also be found in the childbirth literature, suggesting that childbirth can be a traumatic event with a lasting psychological impact" (Ayers & Pickering, 2001, p.112).

Studies looking at post traumatic stress attempt to identify predictors, events in labor and childbirth which can be predicted to trigger post-traumatic stress symptoms. Many obstetrical factors have been identified as increasing stress and predicting PTSD. Two interventions, emergency cesarean section and an instrumented delivery with vacuum or forceps, have been identified as potential triggers of PTSD (Bailham & Joseph, 2003; Beck, 2004b; Olde et al., 2006; Tham, Christensson, & Ryding, 2007) . While these events have been documented to put women at risk, Soderquist, Wigma, & Wijma (2002) point out that though women who experienced an emergency c-section had the greatest risk of PTSD and instrumented deliveries the second highest risk, numerically, there were more women in the normal vaginal delivery category with PTSD symptoms. "In other words, an objectively normal delivery can be experienced as traumatic, just as an EmCS [emergency c-section] does not necessarily have to be traumatic" (Soderquist et al., 2002, p.36). This supports Beck's (2004a) statement that birth trauma is in the eye of the beholder. Other variables discussed in qualitative case studies are issues such as women feeling out of control of events or their own behavior, pain and ineffective pain relief, unsupportive staff, expectations regarding childbirth which were not met, lack of information by staff, and a perception of or actual lack of obstetric care (Beck, 2004a; Beck, 2004b; Callahan & Borja, 2008; Olde et al., 2006).

In reviewing the literature about childbirth as a traumatic event, there is now an increasing amount of literature, both qualitative and quantitative. The quantitative research uses a variety of tools to assess PTSD including the traumatic experiences scale (TES), the impact of event scale (IES), the

posttraumatic stress disorder questionnaire (PTSD-Q) and the PTSD symptom scale (PSS). There is a lack of data about long- term effects of post traumatic stress on women and on their relationships with their partners and children. Most of the research only goes up to 6 weeks to 6 months post delivery; there is no long- term effect data. Surprisingly the issue of social isolation and lack of support was never mentioned in the data about PTSD and childbirth as a factor which might aggravate or prolong the experience of PTSD after childbirth. As clinicians who work with women after having a baby, we recognize that this period of time with a new baby can be very isolating. Women describe "cabin fever" and being "trapped" at home with a newborn, and lack of support. A literature search did not uncover any research supporting this. Instead a literature search continuously led back to PTSD and there were some references to social isolation after traumatic birth experience. Again, it is important to recognize that one person's traumatic birth is not always what midwives and other childbirth providers, from the outside, view as traumatic. While some events are obvious - such as the emergency c-section for an abruption or fetal distress, the death of a baby during pregnancy or childbirth, or the forceps delivery after an exhausting 24 hour labor - others are less obvious. The woman who wanted an unmedicated "natural" labor who ended up with an epidural, or the woman who wanted an epidural that "went too fast" and was unable to get one and was overwhelmed with the pain are perhaps less obvious. Ayers et al. (2008) presents that research on stress of childbirth needs to change its focus from the presence or absence of obstetrical interventions to focus more on the subjective experience of childbirth. This is what Beck (2004a; Beck, 2004b) attempts to do in their qualitative analysis of women who have experienced post traumatic stress of childbirth. Ayers et al. (2008) also suggests that research has focused too much on PTSD and diagnostic measures of PTSD perpetuating an emphasis on the presence or absence of the disorder while ignoring the full range of responses to the experience of childbirth.

Topic Discussion/Analysis

We live in a very complex society with many inequities and injustices. Not everyone has the love and support of a partner or family. We also live in an extremely mobile society where people are often separated from their family of origin. When adding children to one's life, this lack of extended family and other life struggles, can result in social isolation. Post partum is a particularly vulnerable time, filled with fatigue, new demands, feelings of inadequacies and stressful transitions. This is a time when women and couples need support, and if extended family is unavailable, there can be a significant void. Add to this any traumatic stress from childbirth and women can feel incredibly alone and vulnerable.

As midwives, many of us were "raised" with the idea that birth really matters, and that a woman's experience of birth can have profound effects on her life and her parenting. All women remember their births; it is not just another day in life, but a momentous day. Examining the literature on traumatic stress and childbirth certainly reinforces this belief. There have been many midwives, researchers, and childbirth educators who have presented the value and importance of the childbirth process. Simkin *(Penny Simkin, author, doula, childbirth educator, birth counselor)*, throughout her long career, has discussed the importance of protecting a woman's memory of her birth. Protecting this memory comes from explaining and communicating with women in labor, providing alternatives and encouraging women to be active decision makers in their care (Simkin, Walley, Keppler, Durham & Bolding, 2008). The value of communication cannot be underestimated. Women in labor try to gain control by seeking reassurance and knowledge from staff and it is through a sense of control and understanding that women feel less traumatized by the experiences of their labors. It is essential that this communication continues after the birth, so women have an opportunity to review their births and ask questions. Most women who have given birth have a profound need to talk about their birth, to tell their story. If they perceive their birth as traumatic, they need to know details, give their perspective, and get answers to their questions (Beck, 2004b).

Beck (2004a) in her descriptive qualitative research analysis of 40 women self identified as having post traumatic stress responses to childbirth, identified four themes describing the essence of their experiences. These four themes were:

> To care for me: was that too much to ask? To communicate with me: Why was this neglected? To provide safe care: You betrayed my trust and I felt powerless, and The end justifies the means: At whose expense? At what price? (Beck, 2004a, p.28)

These four themes emphasize the sense of abandonment and neglect, the feelings of not being in control and powerlessness, which many women experience. These issues have been identified by other authors and supported in the literature. Examining and considering these four themes can provide guidelines for midwives and other obstetrical providers when caring for the birthing woman. If we consider these themes when caring for any laboring women, recognizing that any birth is memorable and can be potentially traumatic, how would our care of women change?

The final theme is particularly important and has rarely been discussed in the research by other authors; the issue that the end justifies the means. As health care providers we tend to look at the bottom line, the end result. A healthy baby and a healthy mom equal success. If the baby was healthy, the very experience of childbirth itself is often viewed as no longer valuable or important. Perhaps, as obstetrical providers, it is our own relief that another child is safely brought into the world that makes us feel a sense of relief, and contributes to our forgetting that the experience itself matters.

In the Cochran collaborations review of the role of continuous support in labor, Hodnett (2008) found that women who had continuous support in labor were more likely to have a slightly shorter labor, a spontaneous vaginal birth, less likely to have analgesia, and report fewer feelings of dissatisfaction with their childbirth experiences. These authors called for the “humanization” of childbirth through the use of a midwifery model of care. After reviewing the literature, there is a documented need for communication and support, the hallmarks of midwifery care. Midwife means

"with woman" and midwives are uniquely suited to protecting a woman's birth and helping her to feel that she has options, choices, and control.

When exploring the literature about post partum and post partum stress responses, there are several interventions which could be incorporated into a midwifery care model which could have a beneficial effect and need to be explored. These interventions begin during pregnancy and continue into the post partum period.

During prenatal care I propose two interventions. Beck (2004a) suggests that when a woman is admitted to labor and delivery it is important that her clinician take a careful history regarding any particular fears she may have about giving birth. I suggest that this is not the correct time for this intervention. Once a woman is in labor, she may well be overwhelmed and the experience of pain will alter her perceptions and this conversation becomes difficult. Certainly one can review general birth plans or desires when a woman arrives in labor, but these issues should be discussed during a prenatal visit. Every woman, preferably with her partner present and involved, at approximately 36 weeks should have a special visit. This visit is what I refer to as a time to "clean out the cobwebs". It is a time for the woman to discuss her birth plan and how she would like to see things go, what she thinks is required to help her adjust if changes in the plan are required, and what her expectations and concerns are. Women who have given birth before need time to review past birth experiences, what she remembers, what emotions she felt (joy, excitement, fatigue, fear, regret, anger) and what she would like to do differently, or what brought her comfort and support. It can be a time for women to voice their concerns, and for the partner to voice concerns about seeing her in pain, how they feel they can best help, and what they see as their role in the process. I call it "cleaning out the cobwebs" because it is a time for the couple to also hear each other's concerns and ideas, and explore if they are viewing the experience and the needs similarly, or need to rethink, or understand each other better. It is a time to air concerns. General open ended questions are asked such, as how do you cope with pain? In general,

do you desire to go without medication or do you see yourself wanting medication or an epidural as soon as possible? What role do you see your partner playing? How do you envision your birth? Any particular concerns or phobias (such as needle phobia or fear of seeing blood) should be documented, as well as general expectations and how they can best be informed about changes in the plan or concerns as they arise. This documentation should be available at the hospital in labor and delivery for when the woman arrives to have her baby. There is no research regarding an intervention like this and its impact on feelings of distress and trauma after birth. This could be an area of future study.

During this prenatal session there should also be time to explore what the plan is for after the baby is born. Who will help at home? How long before she has to return to work? Who is available to help promote rest when she is fatigued and what are the existing resources that can be accessed? McQueen & Mander (2003) recommends that during prenatal care

> education could be extended to foster more realistic expectations and more effective coping skills to facilitate women's adjustment to motherhood. The possibility of midwives educating mothers about the need to access, recruit and delegate some household activities to willing helpers is addressed. We propose that midwives can help women to have more realistic expectations about life after the birth, by providing advice and legitimating the need for support and the use of coping mechanisms to assist the transition to motherhood. (p.468)

Matthey, Kavanagh, Howie, Barnett, and Charles (2004) suggests an additional class during childbirth education classes which focuses on post-partum needs and gives couples a chance to role play various scenarios of "difficult day" in early parenting experiences and discuss options and specific plans. They found that these activities fostered the partner's sense of involvement and help partners to have more sympathy with the adjustment women experience after giving birth.

Once a woman has given birth, I propose several interventions. First and foremost, more post partum visits are needed. Not seeing a woman for 6 weeks after a birth is too long for many women.

They need support and to be heard. A visit schedule of two weeks, four weeks and eight weeks might be considered. More frequent post partum visits after birth requires that a practice stand behind the concept that women need interaction with their clinician postpartum and that it is a valuable use of the clinicians time. Many clinics will have "mothers groups" or some meeting place for women to come together to get support from each other with a clinician there for questions or additional support.

Another post partum intervention is that of birth review. All women need to be given time after their birth to talk about the experience. Whether a woman has nothing but delight in their birth or views it as "failure" and traumatic, reviewing the birth can be beneficial. This can most easily be done during the discharge visit from the hospital. "Women reported that an opportunity to talk with someone about the birth was helpful in facilitating recovery" (Gamble, Creedy, Webster, & Moyle, 2002 p.77). Simple open ended questions can offer woman an opportunity to discuss their birth. Simply asking women what stands out the most for them about their birth, or asking them to tell you their birth story, can open the door to communication and concerns. Providing an environment where women know that strong emotions after birth are common and encouraging them to talk recognizes the event as significant and the feelings as valid (Olde et al., 2006). Beck (2004a) points out that there are many events and factors during childbirth that are beyond the control of both the midwife or provider and the women. Clinicians need discuss with women, not only the outcome, but the process.

> When the best laid birth plans are dashed, women's unmet expectations regarding their anticipated birth process need to be addressed by clinicians. Mothers' perceptions of birth trauma can be based not only on the event, but also one their unmet expectations regarding the event. (Beck, 2004a, p.35)

By reviewing the birth and the sequence of events during labor and birth, a woman can begin to make sense of her feelings. Birth review may diminish trauma symptoms and allow the woman to better focus on caring for herself and her baby. It is also when attempting birth review that the midwife has an

excellent opportunity to identify women at risk for trauma related symptoms. It is when women do not want to talk about their birth, they seem withdrawn, have a dazed appearance, seem to have amnesia regarding events, or seem uninterested or uninvolved with their newborns, that clinicians should be alerted and know resources for women. Support and trauma counseling play an essential role in diminishing the impact of traumatic childbirth. Access to birth trauma groups, such as TABS (Trauma after Birth), an online support group for women who experienced birth trauma, can be very beneficial and diminish long term stress syndromes and helping to prevent feelings of loneliness and isolation. Gamble et al. (2002) also suggests that reviewing the birth needs to occur three weeks out or more as well. These authors voice concerns that often women are reluctant to criticize or discuss the care they received while they are still in the hospital and it may take time for women to recognize and acknowledge their concerns.

Health professionals who care for women postpartum need to be aware of questionnaires and measurement tools for screening for post traumatic stress of childbirth. Two measurement tools frequently used are the Perinatal Posttraumatic stress Disorder Questionnaire (PPQ) (Callahan & Hynan , 2002) and the Impact of Event Scale (IES) (Horowitz, Wilner, & Alvarez, 1979).

A take home message to providers.

It is essential that midwives and all those who care for women during this important life event of childbirth remember that birth matters. The experience of birth has an impact, and often simple words or statements said to a laboring woman can be placed in their memories forever. I have always believed that birth matters and that it can potentially affect a woman's life and parenting in ways we can't even begin to understand. In reviewing the literature and writing this paper, I was astounded by how when discussing the topic I was writing about with women friends and colleagues, even those "in the business" of birthing, they instantly started telling their birth stories. I was also amazed at the number of times, though childbirth was years ago for many, these women used phrases like, "I failed", "I wish I

had been stronger", "I wish I had …". And these were women who do not consider their births to be traumatic. The literature and these experiences reinforced for me how truly amazing the process of birth is and how it impacts women in many different ways and for many years, and what a time of transition postpartum truly is. It also emphasizes for me the awesome responsibility that those of us who participate in childbirth have, not only for the physical wellbeing of mother and baby, but also for the experience itself which is one that lives with women for years to come in many ways.

Conclusion

This paper explored the issue of postpartum adjustment and post traumatic affects of childbirth. Literature regarding the stressful nature of the postpartum course was reviewed and literature specific to PTSD and traumatic events of childbirth were explored and women's responses to these events were discussed. The concept of social isolation during the postpartum period was also presented and cultural implications examined. Interventions and the role of the midwife in pregnancy, birth and post partum were presented as a means to diminish the stress of birth trauma and support a woman's birth memory.

When considering the post partum experience, it is essential that those who provide care to women during childbirth and beyond recognize that post partum is a time of transition. Women are often separated from their extended family and it can be a time of isolation and loneliness. Birth itself can be a stressor and women can experience traumatic stress related to their birth experience, even when we, as midwives and providers, do not view their birth as "traumatic".

The concept of social isolation post partum is barely discussed in the literature, yet in my own practice and speaking with women, it seems to be an important issue and a common feeling. Women in western culture are often separated from extended family and there is little attention or concern for their needs once the child has been born. Women often have unrealistic expectations of themselves and experience frustration and loneliness when they cannot do it all themselves. Hung and Chung (2001) vividly present the differences between the expectations of Eastern women from Western

women postpartum. In their study, Eastern women who maintained traditional customs expected and accepted the care of others during this period of transition. The concept of post partum isolation in Western society is an area of research which needs to be explored.

This paper proposed several interventions directed at supporting women during their postpartum course. Research into the prenatal intervention of “cleaning out the cobwebs”, as a means of anticipating stressful childbirth outcomes and decreasing traumatic stress symptoms after childbirth, needs to be studied. Also the intervention of birth review on all post partum women is an idea that requires future research.

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Case Study; Home Birth

An Ethical Examination of the issues of Home Birth Transfer

Susan J. Wegelt Heinz

Ethical Case Study and Home Birth Transfers

You are a practicing Certified Nurse-Midwife (CNM) on call at General Hospital attending a woman in labor. While you are on the labor and delivery unit at 0200 you receive a phone call from a local home birth midwife, LH, a non-nurse midwife. LH states that she is at home with Jane R, a 29 year old g3 p2 at 40weeks 5 days who would like to transfer in to the hospital. Jane is a healthy adult female who has an uncomplicated medical history. She has a history of two previous full term spontaneous vaginal deliveries, both of which occurred in a hospital setting. Jane has been having contractions on and off for the last week and had irregular contractions through the prior night, and did not sleep. She is on her second night of no sleep, but is now in active labor and changing her cervix. The home birth midwife tells you that Jane was 2 centimeters dilated for the last week but her current cervical exam is 5 centimeters dilated, completely effaced, 0 station with her bag of waters intact and bulging. LH reports that Jane has had some vomiting on and off throughout the night, and is generally "exhausted". Jane is requesting to come to the hospital for hydration and perhaps pain management for her birth. Based on the information provided, including her history, you feel the likelihood that Jane will deliver vaginally is high.

There are two obstetrical services at General hospital. Your practice includes 4 CNMs and 3 MDs, and another practice which is MD only. The official hospital policy is that home birth transfers, as they are not patients of either practice, are cared for by the group on call for "drop ins" and other non-established or no care patients. The two obstetrical groups alternate which one is on-call on an every other day basis for non established patients. Your group is not on call for non-established patients tonight. In addition, at a recent provider meeting for your practice, there was discussion about the issue of home birth and several of the practitioners

discussed their concerns about being known as the "backup" to the home birth midwives in the community. You and another CNM also voiced feelings about not alienating the home birth community which has a strong presence in your community. Within your practice, you are the only CNM that has previously attended home births and this fact is known, not only in your practice, but in the community at large.

The home birth midwife, LH, called your practice directly because she learned that you were on call tonight for your practice. She tells you that it is "so important" to this woman to have a midwife, even though she needs to be transferred into the hospital. LH informs you that Jane is concerned about being treated unkindly by the nursing staff, and "believes the staff will think unfavorably her and her family because they wanted a home birth". LH asks, "Would you be willing to take her as a patient when she comes in to the hospital?"

You believe you are the best practitioner available to help this woman in her transition to the hospital, yet while you are available, you are not the provider required to care for this woman. What will your response be? Can you go against the established protocol for accepting a home birth transfer? What happens when your personal philosophical beliefs and approach to patient care differs from your practitioner partners? Does language and approach to care matter and how do you approach differences in philosophy of care?

Medical Indications

There are more than 130 million births annually in the world, of which 4 million occur in the United States. This makes management of labor and delivery one of the most common medical issues faced by health care personnel (Berghella, 2008). Jane is pregnant with her third child at 40 5/7 weeks and in labor. She was planning a home birth but is currently requesting a transfer to the hospital. She had a long latent phase of labor with irregular contractions and lost

much sleep, and now by report, she seems to be in active phase of labor though she is fatigued. Clinically, the latent phase of labor is poorly understood and hard to define. Its duration can vary so greatly that a normal range is difficult to measure. Labor frequently does not have a discrete beginning, thus determining the time of onset is a source of frustration for researchers and clinicians. It requires the laboring woman to recall when regular contractions began which is subjective in nature and may be clouded by previous episodes of preterm labor, false labor, and differing responses to pain. Additionally, because this is the time in labor when uterine contractions become synchronous and coordinated, identifying when they became "regular" may be a challenge, especially after enduring hours of painful contractions and sleep deprivation. The latent phase of labor heralds the onset of the active phase. During this time, uterine contractions become oriented and polarized and changes in the connective tissue of the cervix contribute to cervical softening, effacement, and dilatation. Negotiating the latent phase of labor can result in fatigue, dehydration, and fear (Greulich, 2007). Prolonged latent phase labor can be a physical, emotional, and mental challenge for the woman in labor, her support system, and nurse-midwife or obstetrical provider. The resulting exhaustion, dehydration and discouragement can effect progress and often lead to increasing intervention. (Deibel, 1985). In the 1960s, Friedman evaluated the labors of 500 nulliparas and nearly 500 multiparas, and identified normal time parameters for the latent phase of labor. His guidelines are still being used nearly 50 years later. Friedman reported that the duration of latent phase did not adversely affect the mother or fetus especially when exhaustion and dehydration where monitored and treated. "The duration of the latent phase of labor has little bearing on the subsequent course of labor, whereas the characteristics of the accelerated phase usually are predictive of the outcome of a particular labor" (Cunningham, 2009).

Jane has a history of two previous spontaneous vaginal deliveries at term and has a high likelihood of delivering vaginally again. In December 2007, the National Center for Health Statistics released the preliminary U.S. national cesarean rate for 2006: 31.1% with primary c-section rates approaching 22%. (CDC, National Vital Statistics System). Once one has had a prior vaginal birth that rate is significantly diminished. There are no specific rates of expected vaginal delivery after 2 previous vaginal deliveries, but at term, with a vertex presentation, the expectation is a repeat vaginal delivery.

Patient Preferences

It is clear that this patient chose to have a home birth, however, now she is choosing to transfer in to the hospital. In the United States, less than 1% of births are planned home births. Those that do plan a home birth often face substantial obstacles when making this decision. Decisions about birth site are based on many factors and include physical, emotional, social, spiritual, and cultural considerations. Boucher (2009) presents that the most common reasons given for wanting to birth at home were: safety, avoidance of unnecessary medical interventions common in hospital births, previous negative hospital experience, more control and comfortable, familiar environment. Another dominant theme was women's trust in the birth process. Women equated medical intervention with reduced safety and trusted their bodies' inherent ability to give birth without interference. (Boucher, 2009). It is impossible to determine why Jane specifically desired a home birth, but as she received all her care from a home birth midwife and had labored at home intending to give birth at home, it was obviously her choice and her preference.
Now Jane is requesting a transfer to the hospital. This again is her choice. She is requesting the transfer; her home birth midwife is not recommending transfer for complications. Several prospective analyses of the outcomes of planned homebirths have described reasons for transfers

from home to hospital before and after onset of labor at term. In these studies, the rate of antepartum referrals for obstetric reasons (e.g., fetal growth restriction, placenta previa, pregnancy-induced hypertension, twins, or preterm) for women who intended a planned homebirth ranges from 10% to 20%. Of those women who reached term without medical complications, 5% to 10% required intrapartum referrals, 1% postpartum maternal referrals, and 1% neonatal referrals. The large majority of intrapartum transfers occurred for non-emergent conditions – the desire for pharmaceutical pain relief and fatigue (Vedam, 2007). The information provided regarding Jane is that it is her desire to transfer to the hospital though she is now in active labor for support and possible pain relief options.

Quality of Life

Jane's transfer to the hospital is an important decision and one which for many women is wrought is a sense of failure. A woman's dissatisfaction and negative feelings about her experience of labor and birth may affect her emotional well-being and her willingness to have another baby (Waldenstrom, Hildingsson, Rubertsson & Radestad, 2004). Vedam (2007) in her analysis of home birth transfers points out that the woman's perception of loss normalcy and control, and potential loss of a low intervention birth experience can contribute to dissatisfaction and depression, especially if women are not allowed to participate in decision making. She suggests that the continuing in hospital involvement of the midwife once transfer has occurred will greatly assist the woman in her transition.

Within the hospital setting, women who come in from home are often referred to as a "failed home birth". Changing that language, referring to the process as a "transfer" helps not only the woman, but staff to reframe their thinking about a woman coming in from a home birth. Four factors—personal expectations, the amount of support from caregivers, the quality of the

caregiver-patient relationship, and involvement in decision making—appear to be so important that they override the influences of age, socioeconomic status, ethnicity, childbirth preparation, the physical birth environment, pain, immobility, medical interventions, and continuity of care, when women evaluate their childbirth experiences (Hodnett, 2002). Hodnett's conclusion: "The influences of pain, pain relief, and intrapartum medical interventions on subsequent satisfaction are neither as obvious, as direct, nor as powerful as the influences of the attitudes and behaviors of the caregivers" (Hodnett, 2002, p. 162). In looking at home birth transfers specifically, it has been suggested that when hospital transfer occurred to the hands of a hospital based midwife, the woman transferring in were as positive about their birth experience and the attendance of the midwife as the women who had wanted to give birth in a hospital (Wiegers, 1998).

Contextual features

Regardless of whatever law may be applied to the surface of women's lives, homebirth is a right. Still, homebirth is fraught with controversy and as such, accepting the care of a woman who is transferring from home to hospital is controversial as well. In the last decade, controlled trials and observational studies have described excellent perinatal outcomes for planned homebirths. There are women who praise the increased control of the environment and process of care when delivering at home. Rates of intrapartum intervention differ according to birth setting. In developed nations, out-of-hospital births have been associated with the appropriate use of technology and reductions in health care expenses. Several national and international advisory panels have supported informed choice for place of birth and increased access to appropriate out-of-hospital maternity services (Vedam, 2007).

The debate over "the safety" of home birth in the United States grew louder in May 2007 when the American College of Obstetricians and Gynecologists (ACOG) published a policy statement strongly opposing home births. They have continued to restate this stand:

> The American College of Obstetricians and Gynecologists (ACOG) reiterates its long-standing opposition to home births. While childbirth is a normal physiologic process that most women experience without problems, monitoring of both the woman and the fetus during labor and delivery in a hospital or accredited birthing center is essential because complications can arise with little or no warning even among women with low-risk pregnancies.

ACOG acknowledges a woman's right to make informed decisions regarding her delivery and to have a choice in choosing her health care provider, but "ACOG does not support programs that advocate for, or individuals who provide, home births" (ACOG 2008).

The American College of Nurse Midwives (ACNM) also has a position statement on home birth. They make statement to the belief that every family has a right to experience childbirth within a context that respects cultural variations, human dignity, and self-determination. They point out that while the majority of women in the United States choose hospital births, some families desire home births or births in an out-of-hospital birth center.

> In accordance with evidence-based and ethical practice, the American College of Nurse-Midwives (ACNM):
>
> - Supports the right of women who meet selection criteria to choose home birth.
> - Recognizes certified nurse-midwives (CNMs) and certified midwives (CMs) as providers who are qualified to attend planned home births.

- Encourages the promotion of clinical experiences with home birth in education programs.
- Encourages third party payors to reimburse qualified providers for home birth services.
- Urges professional liability insurance carriers to provide coverage for qualified providers who attend home births.
- Urges all healthcare providers and institutions to collaborate in the creation of seamless systems of care when transfer is needed from the home to hospital setting.
- Recommends that further studies focus on the characteristics and management of normal birth, markers morbidity as they relate to birth site and qualitative assessments of client satisfaction and experience as they relate to planned home birth. (ACNM 2005)

One can easily see how a CNM with experience in home birth and a general support of home birth as an option would have a conflicting view with others in her practice that believe that home birth in an inherently unsafe practice and do not support the practice of home birth. One can also see that a practitioner who supports the ACOG position on home birth would have medical-legal concerns about accepting home birth transfers in that it may be seen as supporting home birth and home birth providers.

An anthropologist, Barbara Rothman, was intrigued by the differences in homebirth and hospital birth, not only for the birthing woman, but for the women and men attending births. Her key insight was seeing that there are different models underlying practice, different ways of thinking about birth that resulted in different ways of practicing. Ways of thinking, ideology and

concepts underlie ways of practicing, of behaving, and doing. She found from her interviews and research that it wasn't really about "home" or "hospital". A midwife could bring the hospital way of thinking into the home with her, just as surely as a midwife could bring the home way of thinking into the hospital. It is this philosophy, this ideology, which can result in differences of opinion about home birth, and ultimately home birth transfers, not degrees or certification. She also believes it is important for home-based midwives to have hospital-based midwives to accept the transfers, to work with the women who "risk out" of homebirth, to work with the women to maintain their trust in their bodies when they no longer are able or willing to remain at home (Rothman, 1999). Again, if as Hodnett (2002) presents, when women evaluate their birthing experience "medical interventions on subsequent satisfaction are neither as obvious, as direct, nor as powerful considering as the influences of the attitudes and behaviors of the caregivers", is not an experienced CNM, with home birth experience, the best provider available for this woman during a potentially stressful time?

Case Analysis and Recommendations

Jane was planning a home birth but after a prolonged latent phase of labor and experiencing fatigue, she desired to transfer to the hospital when she was in active labor. Originally planning a home birth, she was anxious about transferring to the hospital, and she and her home birth midwife believed she could still get the birth experience she wanted in the hospital if she had a nurse-midwife attending her in the hospital. As a nurse midwife you personally believe that you can best facilitate this transition for her, though other members of your group do not hold the same belief that this is important for women transitioning from home. One important ethical principle presented in this case study is that of patient preferences and the principle of respect for autonomy. Patient preferences are the choices that persons make when

faced with decisions about medical treatment and health care. These choices are often based on the patient's own beliefs, values and experiences. Jane believes that transferring to the hospital is necessary for her care and the care of her unborn child, yet she also believes that continuing midwifery care is an important factor in her health care. She has a preference for midwifery care, even though she is leaving her home.

Another important ethical principle is the principle of loyalty and fairness. In this case there are differences in opinion and philosophy between practice partners within the same practice group. These differences and contextual features can affect the care provided. As a CNM, you believe you are the best practitioner to care for this woman. You believe that you can best facilitate the transfer of care to this woman. If one provider has the philosophical belief that Jane's experience during her transfer to the hospital and her ultimate birth experience will have a prolonged effect on her life, and the other provider does not hold this belief and instead believes it is unnecessary to accept this transfer and it is in fact assuming a liability, these practitioners have a moral dilemma. When different health care providers disagree in their understanding of what is right or wrong, what impacts health care and what doesn't, an ethical dilemma may arise. Narrigan (2004) presents that these dilemmas can occur in everyday practice and those health care providers have an obligation and professional responsibility to analyze these dilemmas. Since it is important to this client to have a midwife during her transition from home to hospital, and a CNM is available and willing to facilitate this translation, it is recommended that this CNM will assume Jane's care. As the MD partner is not supportive of this transfer of care, it is essential that communication occur between these providers and this dilemma be examined in greater detail and discussion of each providers perspective be considered. At a future provider meeting, the CNM will present data to the entire group, both CNMs and MDs, about the

importance of birth experience and continuity of care and support. In addition, working towards a change in language with the entire staff, referring to women who come in from a home birth as a "transfer" of care, rather than a "failure" in attempting home birth, is an important intervention for not only Jane, but for future women who come to the hospital for care when planning a home birth.

Ethical Essay

Thompson and Thompson present a bioethical decision-making model which is a ten step process (Thompson, 2004). Included in this 10 step process is the defining of personal and professional moral positions on ethical concerns. They stress that understanding personal values which are affected by a situation, reviewing professional codes of ethics for guidance, and identifying any conflicting views among professionals and family in the given situation is paramount to ethical decision making. Jonsen, Siegler, and Winslade (2006) support this view when they discuss contextual features and the principles of loyalty and fairness. They present that there may be provider issues which can influence and affect treatment decisions.

When identifying conflicting views among professionals, Kennedy and Lyndon (2008) stress that most of the tensions which arise on a labor and delivery unit between health care providers, specifically midwives and RNs, generally revolve around issues of communication and mutual respect, especially related to differing philosophies of care and labor pain management. These differing philosophies can result in conflicts between all staff; nursing, midwifery and medicine.

One of the greatest strengths of the profession of midwifery is that it is a profession which includes in its scope of practice, many professional boundaries. There are within the profession of midwifery, elements of nursing, medicine, obstetrics, and social work, to name a

few (Thompson & King, 2004). While one of the professions greatest strengths, it is this crossing of many professional boundaries which often lead to ethical dilemmas.

Parker and Gibbs (1998) point out that midwifery has two divergent demands to recognize. The first to utilize the benefits of western medical science to improve mortality and morbidity outcomes, and the second is to remain sensitive to the cultural and social importance and value of the birthing experience and understand the roles these play in the health and well-being of mother and child. Again, it is these two divergent roles that can lead to ethical dilemmas in practice. Hunter (2006) presents that there are two differing health paradigms and their language can greatly affect childbirth practices and culture. She stresses that language is a tool of power and explores differences in perspectives and language between the dominant paradigm or culture, that of the biomedical model of curing, and the alternative paradigm or culture, a holistic model of caring. Many midwives spend their entire careers straddling these two paradigms, which can lead to ethical conflict and distress for the midwife.

If we accept that language is power, the words we use not only carry information, but they also carry value. Increase use of technology has contributed to much of the language used in the dominant practice of obstetrics today. "Technologic interventions and medical terminology become symbols of power in the hospital setting and reinforce the control of the provider at the expense of the woman" (Hunter, 2006, p. 120). This is vividly demonstrated in this case study by the use of the term "failure" when referring to a woman who transfers in from a home birth. Referring to this as a failed home birth not only sets up the woman for feelings of loss of control, but also perpetuates the concept to all staff and strengthens their need to save this woman from her failure, rather than support this woman in the next phase of her journey.

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Health Policy; CNM Hospital Admitting Privileges

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Define the context

In the United States, Certified Nurse Midwives (CNMs) are licensed to practice in all 50 states and the District of Columbia. CNMs meet the JCAHO definition of a Licensed Independent Practitioner (LIP) in Oregon and in all but eight states in the US. State governments play a crucial role in determining the extent to which CNMs may practice. It is state laws and regulations which determine licensure requirements and scope of practice for CNMs. These regulations frequently determine ability to receive payment and access to health care facilities. "For certified nurse-midwives (CNMs) state regulation has evolved from a haphazard patchwork of highly variable regulatory models into a fairly uniform set of rules and requirements from one state to the next" (Reed & Roberts, 2000p.130). CNMs are licensed in the state in which they practice and nationally certified by the American College of Nurse Midwives (ACNM). In the State of Oregon, CNMs are licensed by the Oregon Board of Nursing as Nurse Practitioners (NPs) and regulated by the Oregon State Board of Nursing (OSBN) and the Nurse Practice Act of Oregon. Oregon licensure of NPs, and thus CNMs, defines NPs as independent practitioners within their scope of practice. The ACNM also defines and certifies CNMs as independent practitioners, subject to practice standards and requirements established by the ACNM.

Care from Certified Nurse Midwives has been well documented to be valuable to women during their births, with excellent birth outcomes and value to mothers and babies. In the outpatient setting, CNMs and all NPs provide independent care, and physician oversight or co-signing is not required. The understanding is that NPs are practicing under their own license and will consult when needed and function within their scope of practice. In the inpatient setting, these rules vary much more. In general, the hospital has historically been the domain of the MD (Almgren, 2007), and often CNMs meet with obstacles in the process of credentialing and privileges. While the State of Oregon, through Oregon Statute 441.064, allows a hospital to grant admitting privileges to Nurse Practitioners who are licensed

as Nurse Practitioners in the State of Oregon, many CNMs in Oregon are required to have admission and discharge notes, as well as orders, co-signed by an MD, and do not have independent admitting privileges. Most CNMs "admit" women to the hospital, care for them during their labor and birth as well as post-partum course, and then discharge them without a physician ever being involved in their care. These CNMs are then required to have a physician retrospectively co-sign their notes and orders and thus become ultimately responsible. This system limits the access women have to important and valuable health care when giving birth. It also requires a physician to agree with and sign for care already administered by another licensed practitioner, who by definition of their license can practice independently.

Problem Statement

The women of Oregon and their babies have the right to access safe, humane birth in the hospital setting by utilizing CNMs. Policies which restrict CNMs ability to practice limit women's options to receive care which is beneficial to women and to the health of Oregon citizens.

Search the Evidence

The state of Oregon designates licensed Nurse Practitioners, including Certified Nurse Midwives, to be independent practitioners able to obtain hospital admitting privileges. CNMs in many hospitals in Oregon are required to have physician oversight for admitting and cannot practice independently to the extent of the law. Hospitals which require MDs to co-sign orders of CNMs, and decline the right of a CNM to independently admit women whom they care for, do three things: they limit access to Midwifery care for women, restrict the practice of midwifery as allowed by licensure and law, and increase legal risk to the MD by implying responsibility for the actions of the CNM.

In reviewing this policy, the evidence surrounding it will be explored through the position of the various stakeholders. The stakeholders in this policy include; the Women and children of Oregon, the State of Oregon, the American College of Nurse Midwives (ACNM) and CNMs, Physicians and hospital administration, and liability companies and insurance companies.

Women of Oregon and their Newborn children

Hospitals that require direction and/or supervision by physicians of midwives limit access to midwifery care, and risk the appearance of conflict of interest. Maternity care in the United States is a fragmented system dominated by obstetricians yet nationwide 10% of vaginal births occur into the hands of CNMs, and in Oregon, that percentage is nearly 20. CNMs offer care which is unique and specialized, and favored by some women. Galotti, Pierce, Reimer, and Luckner(2000) site in their study comparing pregnant women and their choices of providers, midwife or physician, that there were few differences between women who did or did not consider having a midwife, but there were differences between women who did select a midwife and how they felt about their birth and birth attendant. These authors found that women who had a CNM attend them in labor felt more knowledgeable about birth attendant options, had increased satisfaction with their delivery decisions, felt more in control and satisfied with pain medication decisions, and more autonomous in their decision making during pregnancy. These women also were more in agreement with 'alternative' birthing options and less interested in 'conventional' birthing philosophies.

Hatem, Sandall, Devane, Soltani, and Gates (2008) reviewed midwife-led models of care for childbearing women as part of the Cochrane data base. They included 11 trials (12,276 women) with all studies using licensed midwives only and all with hospital births. Their conclusion is the midwife led care has significant benefit and demonstrates no adverse outcomes. Their 'plain language' summary was that "Midwife-led care confers benefits for pregnant women and their babies and is recommended" (Hatem et al., 2008 p.2). This data analysis found that women who received midwifery care were less

likely to experience hospitalization during their pregnancy, use epidurals, receive episiotomies, experience a normal vaginal delivery without assistance (forceps or vacuum), and feel more in control and satisfied with their delivery. In addition the babies were noted to have higher apgar scores. The author's conclusions were that "most women should be offered midwife-led models of care and women should be encouraged to ask for this option although caution should be exercised in applying this advice to women with substantial medical or obstetric complications" (Hatem et al., 2008, p.2). An article in the British Medical Journal compared obstetrician care to midwife and general practitioner care, and their conclusion was that obstetrician visits "for women at low risk offer little or no clinical or consumer benefit" (Tucker et al., 1996) compared to midwifery care.

Hatem et al. (2008) make recommendations to policy makers and health care systems and providers to be aware of the benefits of midwife-led care. They encourage that policy makers "who wish to achieve clinically important improvements in maternity care, particularly around normalizing and humanizing birth, should consider midwife-led models of care and consider how financing of midwife-led services can be reviewed to support this" (Hatem et al., 2008, p.17). One final statement from the Cochran Collaboration, "Government and hospital policies affect how midwives are 'allowed' to practice, and/or the institutional structure within which midwives practice, and would thus affect practices and outcomes by limiting the potential of midwife-led care in some settings" (Hatem et al., 2008, p.17).

The State of Oregon

According to the Oregon Administrative rules (*Oregon administrative rules. board of nursing. division 50, nurse practitioners.*2009), Oregon Statute 678.380 defines Nurse Practitioners stating requirements for education and licensure and general scope of practice. This statute identifies CNMs as Nurse Midwife Nurse Practitioner (NMNP) and defines NMNP as independent practitioners, providing

care to women, including pregnancy, childbirth, postpartum, care of the newborn, and gynecologic needs of women including, but not limited to, family planning.

In 1995 the 68th Oregon Legislative Assembly passed house bill 2661. Included in this bill is section 441.064 which stated that the "rules of any hospital in this state may grant admitting privileges to nurse practitioners licensed and certified under ORS 678.375 for purpose of patient care, subject to hospital and medical staff bylaws and rules and regulations governing admissions and staff privileges" (68th Oregon Legislative Assembly, 1995). This Oregon statute while allowing NPs admitting privileges, did give hospitals the right to impose restrictions, including that they may require a NP to co-admit patients with a physician who is a member of medical staff. It is important to note that this bill was sponsored by the Oregon Medical Association.

Since 1995 NPs have been included in other state statutes including ORS 441.055, in the Oregon Administrative Rules on November 13, 2009 (*Oregon administrative rules. department of human services, public health division. division 510. patient care and nursing services in hospitals.*2009). This statute discusses patient admission and treatment in hospitals. This ORS states that no patient can be admitted to a hospital except on the order of an individual who has admitting privileges, and states specifically, the admitting physician or nurse practitioner. This ORS goes on to states that a " Doctor of Medicine (MD) or Doctor of Osteopathy (DO) or nurse practitioner with admitting privileges shall be responsible, as permitted by the individual's scope of practice for the care of any medical problem that may be present on admission or that may arise during an inpatient stay" (*Oregon administrative rules. department of human services, public health division. division 510. patient care and nursing services in hospitals.*2009)(*Oregon administrative rules. department of human services, public health division. division 510. patient care and nursing services in hospitals.*2009 section 333-510-0010).

The American College of Nurse Midwives

The American College of Nurse Midwives (ACNM) is the National professional organization representing CNMs in the United States. The ACNM is responsible for the National certification exam for CNMs and provides research, continuing education, establishes clinical practice standards for midwifery, and is involved in state and federal agencies to promote the health and well-being of women and their families and communities "through the development and support of the profession of midwifery as practiced by certified nurse-midwives, and certified midwives" (American College of Nurse Midwives, 2009a). As the organization which certifies CNMs and is politically active in the promotion of CNMs, the ACNM is a major stakeholder when considering admitting privileges for CNMs. The ACNM produces several publications and resources for CNMs seeking credentialing in hospitals and stresses the importance of CNMs being recognized as independent practitioners and having independent admitting privileges (American College of Nurse Midwives, 2006; American College of Nurse Midwives, 2009b; American College of Obstetricians and Gynecologist & American College of Nurse Midwives, 2002; Reed & Roberts, 2000; Summers & Williams, 2003). The American College of Nurse Midwives (2006) in their position statement regarding credentialing and privileging of CNMs makes several strong statements. They state that hospitals which require a CNM to be under the supervision or direction of an MD when acting within the CNMs license and scope of practice "expose these physicians to vicarious liability, limit access to midwifery care and risk the appearance of conflict of interest"(American College of Nurse Midwives, 2006). This position paper also states that "routine requirements for co-signature create significant barriers to care and discourage physicians from entering into collaborative relationships with CNMs/CMs. A co-signature can be misinterpreted to mean that a physician has assumed responsibility for a plan of care." When co-management or concurrence with a plan is required, the ACNM presents that a separate chart entry is an appropriate mode of documentation.

CNM

The underlying philosophy of midwifery practice is normality, continuity of care and being cared for by a known and trusted midwife during labor. Midwife means, "with woman". There is an emphasis on the natural ability of women to experience birth with minimum intervention. Nationwide CNMs attend approximately 10% of spontaneous vaginal births. In Oregon, in 2004, CNMs attended 19.6% of the total number of births for that year. As of 2008, there were 211 CNMs living in Oregon, and approximately 111 practice sites (Midwives of Oregon, 2008). CNM services are sought and utilized. CNMs are trained to be independent practitioners, and licensed as such.

Historically, midwifery practice occurred in the home – where most births occurred. With time, the hospital became the place where most CNMs attended births. As the profession of Certified Nurse Midwives transitioned into the hospital, power struggles developed between MD and CNM. While CNMs share a knowledge base with nursing and with medicine, they have a focus which is uniquely midwifery. CNMs "growth and acceptance has been related to their initial education and 'credibility' as nurses with acceptance by both the professional community and the public, and their practice has re-established the merit and nature of midwifery "(Reed & Roberts, 2000p.132). "The practice of midwifery within the US health care system at-large has contributed to nurse-midwives feeling strongly about their identity as midwives who have a unique service to offer childbearing families" (Reed & Roberts, 2000p.132).

CNMs have had to address their interdependency with medicine. The ACNM has always attempted to maintain a relationship with ACOG (American College of Obstetricians and Gynecologists) and issued a joint statement in 1971 endorsing the role of the nurse midwife in maternity care. This original document of 1971 was last revised in 2002 (American College of Obstetricians and Gynecologist & American College of Nurse Midwives, 2002) . This joint statement, a document between ACNM and

ACOG, acknowledges the need for collaboration, while acknowledging the mutual respect and trust between these two professions as well as the professional responsibility and accountability of each.

> Recognizing the high level of responsibility that obstetrician-gynecologists and certified nurse midwives/certified midwives assume when providing care to women, ACOG and ACNM affirm their commitment to promote appropriate standards for education and certification of their respective members, to support appropriate practice guidelines, and to facilitate communication and collegial relationships between obstetrician-gynecologists and certified nurse-midwives/certified midwives (American College of Obstetricians and Gynecologist & American College of Nurse Midwives, 2002).

The ACNM continues to retain a relationship with ACOG, the organization representing Obstetricians, the physician specialty nurse midwives are most involved with in their practice, while resisting the mandate of physician supervision of midwifery practice. Ongoing positive relationships with midwifery and medicine are important. For most midwives, their priority is being expert and caring providers for women, but as King, Summers, and Williams (2000) points out, "longevity will belong to those who pay close attention to the social, political, business, and legal environment in which they practice" (p. 521). For today's CNM, that environment is the hospital, a place dominated by the physician.

MDs and Hospital Administration

To understand the role of physicians and hospitals, a historical perspective is required. In the history of the medical profession outlined by Almgren (2007), he points to the development of the medical profession struggled for identity in early colonial days. There were many who called themselves physicians, but the experience and education was varied and inconsistent. Initially the education of physicians was an apprenticeship education and the candidates where male, white, of good character, industrious, intelligent and literate. There were many who claimed to be physicians who were deemed to be incompetent and 'outright quacks'. There was in fact a very limited amount of medical knowledge

and limited actual cures or therapies. As a result many people continued to rely on folk medicine and more traditional healers – "ranging from mystics to women who, despite being spurned by the nascent medical profession, were gifted practitioners of the medical arts" (p.41). This demonstrates an early removal of woman from the healing arts and the early dominance of the male medical model. Gradually the AMA developed and cemented in 1903 into one voice excluding non-allopathic physicians. As the AMA's ranks swelled, the AMA gained unity and the political clout to uniform standards of medical licensure and obtained "dominion over what acts by the various groups of other healers constituted the illegal practice of medicine" (Almgren, 2007p.41).

In 1910 as the issue of medical education came to the forefront, Abraham Flexner conducted an investigation of medical schools throughout the US, and within 2 years of Flexner's report 80% of medical school graduates completed their training in hospital internships, "thus cementing together the prestigious triad of universities, hospitals, and medical schools" (Almgren, 2007 p.44). Medicine and physicians have dominated and controlled hospitals since that time.

It is important for this discussion to also include the movement of birth out of the hands of midwives and into the hands of the specially trained obstetrical physician. Lynch (2005), in her review of the practice of midwifery and birth discusses that as the medical profession gained control of hospitals, there was active outreach by physicians to women promising them safety as medicine developed the discipline of obstetrics and turned pregnancy and birth into pathology. Before the mid-20th century most American women gave birth at home and under the care of midwives. As the specialty of obstetrics grew, the percentage of hospital births increased. In 1940, 40% of births to white women and 73% of births to non-white women occurred at home. Total hospital births in 1940 were 56%, in 1950 the percentage rose to 88% and by 1969 more than 99% of births occurred in the hospital; the percentage where it remains today (Boucher, Bennett, McFarlin, & Freeze, 2009). Lynch (2005) presents that the reasons for the decline in midwife attended births and move to birth in the hospital is

multifaceted. Among the reasons is that midwives were a group which lacked in unity and organization. She supports the position taken by Almgren that Medicine had developed and built a strong profession built on unity and pushing their own political agenda and that gradually weeding out groups of other healers medicine considered to be performing the " illegal practice of medicine" (p.43). Midwifery certainly fell under this distinction of a group of other healers whose licensure was controlled by medicine. We see this today in the fact that while Nurse Practitioners, including CNMs, can by licensure and state statute, admit independently of a physician, there is much resistance.

A recently developed, though not yet publically released "scope of practice series" by the AMA (American Medical Association, 2009) is a 74 page document, plus appendixes, describing NP educations and practice. It includes a criticism of the DNP degree and calls for MDs to "retain authority for patient care in any team care arrangement" (p.56) and for medical societies to "work with legislatures and licensing boards to prevent dilution of the authority of physicians to lead the health care team" (p.56). One portion, under the heading of the American Academy of Family Physicians doesn't even call nurse practitioners, NPs, but rather "non-physician providers (NPP)" and calls for NPPs to "function under the direct and responsible supervision of a practicing, licensed physician" and states that the physician is responsible for managing the health care of patients "in all settings"(p.60). It is interesting to note, however, that CNMs are rarely mentioned throughout this document and are not listed as a NP specialty.

This scope of practice document on NPs demonstrates two issues vividly: that nursing and nurse practitioner's education and licensure is varied and inconsistent, and that medicine believes they have dominion over all of health care, ignoring rights given to other providers by national certification and state licensure. It is easy to understand, based on documents such as these why hospital staff, composed of physicians, and administrators who want to please the physicians on staff, are resistant to the concept of CNMs obtaining direct admitting privileges and independent provider status. Hospitals

have long been the private domain of physicians and letting go of that exclusive domain is difficult at best.

Liability companies and insurance companies

Medicine has developed and built a strong profession by uniting and pushing their agenda. They historically took over maternity care from midwives by defining pregnancy and childbirth as a pathological process within a risk-based value system and, despite significant evidence to the contrary, promised women better outcomes under a physicians care in a hospital setting."We are living with this value system to this day: one that has directly led to the current malpractice crisis, where women sue when the promised good outcome does not occur (Lynch, 2005 p.3)." In general, CNMs have not shared the same risk of involvement in malpractice claims as their physician colleagues. This is believed in part to be due to the emphasis midwifery places on communication, education, patient participation in decision making and relationship with the women they care for (Angelini & Greenwald, 2005).

It is important to restate that when physicians co-sign documentation completed by a CNM, there is an assumed responsibility for a plan of care by the co-signing physician, even if the physician was not involved in this care. Hospitals which require physician direction or supervision of CNMs, who meet the definition of a Licensed Independent Practitioner (LIP) by JCAHO (which CNMs do in the state of Oregon), expose these physicians to vicarious liability (American College of Nurse Midwives, 2006).

August 18, 2005 the Centers for Medicare and Medicaid Services (CMS) revised and clarified their guidelines for Medicare hospital conditions for participation (CoP). The CMS at that time clarified that only Medicare patients admitted by CNMs require physician supervision, not Medicaid or other non-Medicare patients. Medicaid or other non-Medicare patients may be admitted by a CNM without the care of a physician (American College of Nurse Midwives, 2006).

Consider Policy Alternatives

After exploring the research, three policy alternatives will be considered. 1.) To leave the

existing policy as it is, allowing hospitals to choose whether or not they will "allow" CNMs to independently admit to the hospital where they attend births. 2.) To change the existing policy amending it to read that any CNM who attends women in labor at a hospital must have independent admitting privilege. 3.) To establish a system where a CNM in a particular state can access documentation and information about existing state regulations specific to the state in which they practice and which includes consistent national guidelines to present to their hospital credentialing committee.

Project Outcomes

Leaving the existing policy of allowing hospitals to choose whether or not they grant CNMs independent admitting privileges will continue to limit women's access to safe care; care which is beneficial to them and their newborn children. It perpetuates a model of care which states that only physician based care is valued. It is the easiest option for hospitals as it allows them to maintain the status-quo. It also consistently places CNMs in the position of needing to place value and worth on the care they provide and attempt to justify their safety and contribution to the care of women in their practice and in their community. The existing policy also continues to place MDs who are required to co-sign and co-admit increased liability for care they did not provide.

Changing the policy to **require** hospitals that utilize CNM services to allow them to practice within the full extent of the law not only leads to less liability and risk for the physicians with whom they collaborate and consult, but also demonstrates a value and confidence in the service which the hospital provides to the women in the community. This option is the most cost and labor intensive of the options as it requires a state statute change; one which would meet with resistance from portions of the medical community. This policy would help CNMs in the State of Oregon but does not directly assist

CNMs in other states. This legislation would, however, be a demonstration for other CNMs in other states to use when they explore legislative changes.

Establishing a system where a CNM can access the necessary information, state regulations, and have access to consistent national guidelines, will not only facilitate the CNM in her quest for independent admitting privileges, but will do more to unify the profession and demonstrate consistent guidelines and expectations for the profession. This system could easily be set up through the ACNM website, which already publishes position statements and guidelines for privileging and credentialing. What is needed and should be added are specific state statutes and rules for each state and how to apply these to the process of applying for independent privileges. Having access to this information does not necessarily require hospital policies to change, but offers assistance to CNMs in their attempt to change them. In addition, as the AMA has learned through the years, a united front has strength.

Apply Evaluative Criteria

Collins (2005) outlines five criteria for evaluation of policy outcomes . These five criteria are relevance, progress, efficiency, effectiveness and impact. Using these five criteria and applying it to the three alternatives identified, the following matrix is formed:

Policy alternative	relevance	Progress	efficiency	effectiveness	impact
#1 no change	-	-	+	-	-
#2 Amend existing policy	++	++	+	+	++
#3 Information system	+	+	++	+	+

+ Positive ++strongly beneficial - negative effect

The no change of policy (alternative #1) is efficient in that it is easy. Maintaining the status quo does not require energy or effort, but clearly does not have the desired impact of enhancing the health of Oregon's women through access to Midwifery care in hospitals.

Amending existing policy to require hospitals which offer CNM attended births to have independent admitting privileges (alternative #2) has the greatest impact and is highly relevant to the concept of improving women's access to safe care through midwifery care in Oregon's hospitals. It does require significant effort and energy to develop new policy.

Establishing an information system available to all CNMs with national recommendations and specific State regulation information (option #3) is easy and can provide an excellent resource for CNMs throughout the Country, but essentially does not have any impact on State policy and does not result in policy change. It may, however, assist CNMs to work with their individual hospitals to achieve change and thus increase women's access to this valuable care, but does not require policy change.

Weigh the Outcomes

After using the five criteria presented in Collins (2005), the policy alternative of not making any change does not result in the desired outcome of effecting change and increasing women's access to midwifery care. It is efficient in terms of not requiring an expenditure of energy or resources, but continues a policy which limits options and increases risk.

The second option, amending the existing policy to require hospitals utilizing CNM services to credential them as independent practitioners requires the greatest amount of energy expenditure in terms of time and resources to change policy, and has the potential to not be successful, but if the policy in amended, it holds the greatest opportunity for creating change and having an impact. It does not, however, directly affect CNMs in other states.

The third option, providing an information network and system has no risk and expands on a system already in place. It would be a valuable expansion of an existing service. It is a reasonable alternative in that it is efficient, though its degree of impact and progress is less than actually changing policy. This alternative is not actually a change in policy.

Make the Decision

The policy option which has the greatest impact is that of amending the existing ORS 441.064 to require hospitals where CNMs provide services to grant admitting privileges to CNMS. While this policy change will meet with resistance, it requires hospitals that utilize CNM services to value and stand behind the care CNMs provide and acknowledge that they are truly acting as independent providers, according to their scope of practice and licensure. If, as the Cochrane data suggests, "most women should be offered midwife-led models of care and women should be encouraged to ask for this option (Hatem et al., 2008)", and those "who wish to achieve clinically important improvements in maternity care, particularly around normalizing and humanizing birth, should consider midwife-led models of care" (Hatem et al., 2008), hospitals in Oregon would be leading the way in providing excellent care to the women in their community.

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Sexual Minority Women and Disparities in Health and Health Care

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Abstract

The issue of sexual orientation is rarely discussed in the general health disparities literature. Equity in health and healthcare is defined as the absence of disparities in health that are associated with social advantage or disadvantage, and put already socially disadvantaged populations at further disadvantage in respect to their health care and health needs (Braveman & Gruskin, 2003). The Institute of Medicine (IOM) in their Unequal treatment report (IOM-UTR) focused on disparities within the health care system which arise from clinical practice and from patient-provider discrimination. The IOM-UTR is generally concerned with racial and ethnic discrimination (Almgren, 2007).

Women's health is conventionally discussed in a heterosexual framework. Health inequities exist for sexual minority women (SMW), lesbian and bisexual women, within the realm of women's health. Experiences of discrimination, homophobia and heterosexism lead to health disparities. In this paper the concepts of heterosexism and heteronormality will be presented, and exploration of how these issues can lead to health and health care disparities. Limited disclosure of important health related information to health care providers and avoidance of health care routines and screening in lesbian and bisexual women can result in diagnosis and treatment being compromised, and access to care, support, and advice restricted (Goldberg, 2005). Two specific areas of concern for lesbian women are presented; breast care and screening, and sexually transmitted infections, including HPV and Pap smear screening. Ways in which healthcare providers can develop cultural competence in lesbian issues to enhance the care provided as well has promoting awareness of lesbian health issues and inequities are also considered.

Definitions

Sexual Minority Women; Being Lesbian

Sexual orientation is multidimensional and has a great deal of variability. Many women who have sex with other women do not identify themselves as lesbians, whereas others self-identify. Sexual orientation is generally defined in terms of three dimensions: desire or attraction, behavior, and identity (Gay and Lesbian Medical Association GLMA, March 28, 2006b). International population based studies suggest a 1.5% prevalence of lesbian and bisexual identity and up to 8% of women report homosexual behavior or thoughts (McNair, 2003). Weisz (2009) points out that lesbian and bisexual women are found throughout every ethnic, cultural and socioeconomic group. Although lesbian is commonly defined as a woman whose affections, affiliations and sexual orientations are directed toward other women, Goldberg (2005) suggests that there is no universal lesbian experience. She suggests that the category of lesbian is on a continuum and is a range of experience and not simply the experience or desire to have genital sexual experience with another woman. She points out that it is this continuum that "opens new possibilities for lesbian experience: a way to move beyond the traditional binary of the heterosexual/homosexual divide" (p.465), and whether we view the lesbian experience as a continuum or as a category, those in health care are as diverse as the women to whom we provide care.

Homophobia, Heterosexism and Heteronormality

Discrimination against non-heterosexual women takes various forms. Overt homophobia is a based on prejudice and discriminatory practice. It is generally manifest by fear, hatred, ignorance, and exclusion, and is a learned and internalized behavior. Homophobia has a significant cost to society at large as it has been linked with alcohol use, depression, physical violence, increased suicide attempts in the lesbian, gay, bisexual, transgendered and queer (LGBTQ) community (Goldberg, 2005). It is important to note that until 1987, homosexuality

was listed by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders. The classification of homosexuality as a disorder legitimized the cultural oppression sexual minority women and men faced in a society that values medical diagnoses and labels, and formalized support for the already-existing negativism toward an already marginalized population (McDonald & Anderson, 2003).

Heterosexism and heteronormality are overlapping concepts. Heterosexism is an issue of value. Heterosexism is the assumption that all people are heterosexual and the corresponding value placed on heterosexuality above other types of sexuality. Included in heterosexism is the assumption that since heterosexuality is the norm for relationships, any variation must therefore be considered deviant (Goldberg, 2005). Heteronormality is the normalizing of heterosexuality. Underlying heteronormality is the supposition that all women are in primary sexual relationships with men, or wish to be. Heteronormality is the pervasive belief demonstrated throughout health care. The norm of heterosexuality is reflected in sexual and reproductive health care practices and is demonstrated throughout posters and pamphlets, questioners and health care forms within health care systems (McDonald & Anderson, 2003).

Homophobia, Heterosexism and Heteronormality in Women's Health

> The climate of the health care system is a reflection of society, which often hesitates to support individuals who choose paths other than those, that are heteronormatively constructed. Consequences of such limited directedness include fear, misunderstanding, avoidance, and discrimination on the part of [health care providers] toward individuals involved in same-sex partnerships (Goldberg, Ryan, & Sawchyn, 2009 p. 536).

Many health care professionals hold the belief that lesbian health and women's health care are synonymous. McDonald & Anderson (2003) present that women's health is viewed

very narrowly; generally in terms of reproductive health, maternal health, and heterosexual health. With such a narrow perspective, many are left out. Where in this perception are adolescent women, the elderly, those who choose not to reproduce? The authors present that for women of color, older women, and or sexual minority women, health issues are intensified by discrimination; racism and ethnic discrimination, ageism and homophobia. For these women, their health experiences and encounters with health care providers are lived "in a complex interplay of their social reality and society's discourse surrounding their reality" (McDonald & Anderson, 2003 p. 703). The authors suggest that we need to broaden the concept of women's health and become more inclusive and aware.

Secure in the belief that women's health care encompasses lesbians, while perhaps well meaning, many within health care view enquiry about lesbianism or sexual orientation in general to be overly intrusive and unnecessary (McNair, 2003). Goldberg (2005) suggests that it is fear of the unknown, indifference or the inability to understand the difference, or perhaps just general ignorance, that leads otherwise caring compassionate individuals to diminish or devalue women that they serve based on their sexual orientation.

For many SMW accessing health care, fear of disclosure can be the norm. Goldberg (2005) submits that lesbians "lived experience and ways of being in the world are different" (p.464), and as a result, the lesbian population frequently becomes an invisible minority in the health care system (McDonald & Anderson, 2003). Discrimination and lack of understanding affects health seeking behaviors either by preventing access to health care or by reducing openness and trust when in the health care system. The silence compromises the trust relationship established with the provider and can result in women not disclosing important aspects of their life to their practitioners.

Health Disparities and Sexual Minority Women

In a review of literature, there is a pervasive assumption of heterosexuality within the health care structure resulting in the lesbian population frequently becoming a forgotten minority within the health care system (Dohrenwend, 2009; Goldberg et al., 2009; McDonald & Anderson, 2003; McNair, 2003; Weisz, 2009). Sexual minority women (SMW) experience health care inequities for a large part because of issues and experiences with homophobia, heterosexism and heteronormality. Heterosexism is particularly oppressive to SMW because they hold the double minority status of being both female and homosexual (Trettin, Moses-Kolko, & Wisner, 2006). Sexual orientation can influence health behaviors, risk for disease and health outcomes in important ways. Discriminatory practices can lead to avoidance of routine healthcare and screening as well as decreased disclosure of health issues when health care is accessed (Bowen, Powers, & Greenlee, 2006; McNair, 2003).

Healthy People 2010 (Gay and Lesbian Medical Association GLMA, March 28, 2006b) presents data that sexual minority men and women face documented financial, structural, cultural and personal barriers to health care. These barriers result in sexual minorities not seeking preventative and routine health care and testing, as well as delaying treatment for acute or chronic health problems. Without access to appropriate resources, disparities in quality of life, health and longevity will persist and that disparity will widen. In addition, many same sex couples are denied health care coverage that heterosexual couples experience, as many employers do not cover domestic partners benefits and thus greater numbers of sexual minority individuals are uninsured. SMW are often a silent voice, facing obstacles and discrimination in their search for health care.

The heteronormalitive environment of health care can result in SMW being resistant to disclosing their sexual orientation. The need to "come out" to health care providers increases because of the assumption of heterosexuality. The result for many individuals who have identified themselves as lesbian over a lifetime may find, as Goldberg et al., (2009) states, they have to "repeatedly 'become lesbian', describing this as enduring perpetual outing" (p.538).

Failure to disclose an individual's sexual orientation to their health care provider accentuates feelings of invisibility, irrelevance of health care teaching, and can lead to misdiagnosis. In a climate of discomfort and embarrassments, there is an undermining or impeding of the development of a positive lesbian identity and in addition, this environment can deter SMW from the use of mainstream health care. There has been research indicating that SMW utilize primary care less and complementary or alternative medicine more, or count on the advice of friends, than heterosexual women. This is particularly true for SMW in the arena of gynecological care. Many women seek gynecological care for obtaining birth control or prenatal care, needs which are generally less prevalent among SMW than heterosexually active women. In addition the context of the gynecological exam, which includes a breast and pelvic exam, is an exam in which issues of sexual behavior and sexuality are likely to be addressed, and thus lesbians with fear of disclosing their sexual orientation may be most resistant to this type of care (Dehart, 2008). "The invisibility of these clients and their health care needs remains a dangerous facilitator of predictably poor health outcomes" (Weisz, 2009) p. 82).

Weisz (2009) also presents that SMW have been reported to have increase depression and suicide attempts than heterosexual women. She suggests this may be a result of the "suppression of sexual identity, discrimination in the workplace and elsewhere, and rejection by family members" (Weisz, 2009 p. 84). Social stigmatization is a known risk factor for depression and

mental disorders in marginalized populations, including SMW. Ross, Steele, & Sapiro (2005) present that lesbian and gay individuals are 2.4 times more likely to experience mood disorders, anxiety, and substance abuse related issues than heterosexuals.

The Women's Health Initiative (WHI) is a longitudinal research project which collects health risk information for older women. This study is one of the first large scale health studies which includes sexual orientation, specifically lesbian and bisexual (not transgender), in the data. With over 96,000 participants, lesbians and bisexuals were significantly more likely to be heavy drinkers, heavy smokers, obese, and nulliparous than heterosexuals. Lesbian and bisexual women were also significantly less likely than heterosexuals to have never had a mammogram, gone longer without a Pap smear or pelvic exam, and to eat less vegetables and fruits each day. Some of this data was supported in a large survey conducted in California that in addition found SMW were more likely to have used illicit drugs and to be tested for HIV than heterosexual women, and have less cholesterol screening and less frequent mammograms than heterosexuals (Gay and Lesbian Medical Association GLMA, March 28, 2006b). According to two studies, one taking place in California, and one from Oregon and Washington, women who identified as lesbian or bisexual had significantly higher rates of smoking, over 70% higher than women who identified as being heterosexual (Dilley et al., 2005; Tang et al., 2004). (Of note, overall numbers of women smoking were higher in Oregon and Washington than in California.)

In a study by Hiestand, Horne, & Levitt (2007), the authors found a difference between SMW who identified themselves as "butch" and those that identified as being "femme". The authors found that those who identified as being butch perceived poorer treatment within the health care system than those who identified as femme and had greater difficulty finding providers who were positive and supportive. As a result, butch identified SMW accessed care

less frequently and had significantly less routine gynecological exams, including breast and pelvic exams, than did those SMW who identified themselves as being femme.

Breast Health and Sexual Minority Women

Numerous studies have found lesbians to be at a heightened risk for breast cancer. Sexual orientation may influence health behaviors, health outcomes and risk for disease in important ways. SMW may be at increase risk for breast cancer due to a convergence of risk factors more common in lesbian and bisexual women than heterosexual women. Some reports estimate the lifetime breast cancer risk for SMW at 1:3 compared to 1:8 for the average American women. These risk factors include nulliparity, greater obesity, heavy smoking and alcohol intake (Bowen et al., 2006; Dehart, 2008; Gay and Lesbian Medical Association GLMA, March 28, 2006b; Hiestand et al., 2007; Power, McNair, & Carr, 2009; Walden, 2009; Weisz, 2009), as well as performing health screening activities, such as mammograms and self and clinical breast exams, less frequently than heterosexual women. Lack of access to health care services, feelings of discrimination, and economic barriers including lack of insurance may be contributing factors as well (Bowen et al., 2006; Dehart, 2008).

Sexually Transmitted Infections, HPV and PAP smears, and Sexual Minority Women

Seventeen percent of woman who identify themselves as lesbians in the United States report having a diagnosis of a sexually transmitted infection (STI) at some time in their lifetime. Seventy-eight percent state they have had intercourse with a male at some time in their life. This can put many SMW at risk for sexually transmitted infections from both male and female partners (McNair, 2003). Human Papilloma virus (HPV) transmission resulting in genital warts is possible though woman to woman sexual contact. Herpes virus and hepatitis B can also be contracted with woman to woman contact (Weisz, 2009). The prevalence rates of HPV among

women who have sex with women (WSW) are estimated at 13% and 8% had HPV related genital warts (Eaton et al., 2008). In a study by Eaton et al. (2008), the authors demonstrated that 27% of women who identified themselves as having sex with women, reported having abnormal Pap smears, and 5% had been diagnosed with HPV. They also found that overall, women having sex with women perceived they were at much lower risk than women in general, which is inaccurate. Studies have shown the rate of women in general to have had an abnormal Pap smear to be 26%. Overall, their results "suggest that WSW perceive their risks for HPV lower than should be expected given their high prevalence of abnormal Pap smears and HPV diagnosis" (Eaton et al., 2008 p. 80).

There is also widespread ignorance among health care providers regarding WSW risk of sexually transmitted infections and abnormal Pap smears. Health care providers mistakenly often advice lesbians that they cannot contract a STI from a female partner, and do not encourage them to have Pap smears (Goldberg, 2005).

Health Care Providers;

Developing Cultural Competency with Sexual Minority Women

Developing cultural competency in lesbian issues includes understanding issues and reasons lesbian and bisexual women may be reluctant to seek health care, the impact of homophobia, heterosexism and heteronormality, and an awareness of specific health risks and issues experienced by SMW. The importance of providing an atmosphere of safety and openness in which SMW can safely disclose their sexuality is essential. McNair (2003) stresses that SMW prefer to obtain their health care from a provider who is open-minded, knowledgeable about their health care needs, and easily able to encourage open conversation and not immediately assuming heterosexuality.

Weisz (2009) points out that social justice and advocacy for marginalized groups has a rich history in nursing. She suggests that by virtue of the intimacy with which nurses function in their contact with individuals, families and communities, they are in a unique position to effect change when confronted with social discrimination and stigma. "Nurses have the potential to advocate for lesbian and bisexual clients who feel 'unsafe' and to work to end discrimination and poor treatment in the health care setting" (Weisz, 2009, p. 85).

Specific Guidelines and Recommendations

The Gay and Lesbian Medical Association, GLMA, (March 28, 2006a) in their guidelines for care of lesbian, gay, bisexual, and transgender patients, offers many suggestions for providing care to SMW which is sensitive, encompassing, and appropriate. McNair (2003) also summarizes the GLMA recommendations. The specific areas of consideration are:

- a welcoming practice environment;
- knowledge and understanding about lesbian and bisexual issues, practices and risks;
- communication skills; and
- attitudes of non-judgment and support.

Specific suggestions for practitioners include use of gender-neutral words such as "partner" and terms which are more inclusive and not immediately heterosexual. Changing forms to include options besides married, divorced, widowed, or single; being inclusive of same sex relationships. It is essential to have discussions with women regarding documentation of next of kin, and asking questions about who the woman considers part of their family, and who their supports are. Exploring how the clinician's own attitudes affect clinical judgments and considering ways of being non-judgmental, and being willing and open to disclosure of sexuality are other important suggestions. In addition, involving partners in decision making when desired

by the woman, and watching for barriers that increase stigmatization including being aware of the presence of pictures, brochures and information which show only heterosexual couples play a role in providing sensitive and appropriate care (Gay and Lesbian Medical Association GLMA, March 28, 2006b; McNair, 2003).

Weisz (2009) made additional recommendations and consideration for practitioners with regard to SMW. The author suggests displaying a pink triangle or rainbow flag to demonstrate a safe and welcoming environment, as well as having information or pamphlets which address health issues or concerns which are lesbian and bisexual specific. The author also presents the importance of education for health care providers in the area of sexual orientation. "Research has demonstrated that the addition of even one seminar regarding LGBT [lesbian, gay, bisexual, transgender] considerations for quality health care to a training curriculum for health care providers has improved the comfort level of those caring for LGBT patients" (Weisz, 2009 p. 86). The author stresses the importance of education regarding sexual orientation and sexual minorities in all education programs for health care providers and encourages practitioners to join the Gay and Lesbian Medical Association (GLMA) to receive updated information for health care providers regarding LGBT issues.

The Bigger Picture of Sexual Orientation And Health Care Disparities

Studies show that lesbian, gay, bisexual, and transgender (LGBT) populations, while having the same health care needs as the general population, experience barriers to care and have health disparities related to their sexual orientation and gender identity and expression. Many avoid routine health care and delay care or services required because of real or perceived judgment in the form of homophobia, heterosexism and heteronormality within the health care

system. Many health care providers are uncomfortable or biased against persons who are not heterosexual in their orientation, and in turn are not able to provide care which is not homophobic or heterosexist in nature. When one adds color and ethnicity to sexual orientation, and socioeconomic factors, this can compound the experience and issues SMW and all LGBT individuals face in their life and in their accessing health care.

It is important to remember that lesbian and bisexual women - sexual minority women - are an infinitely diverse group and comprise a whole spectrum of women. Their sexual orientation is only a part of who they are and what they value and experience as individuals. It is also important to recognize the continuum of sexuality; from the very traditionally feminine, to androgynous, to very masculine or "butch", and that there is great variety within all these continuums. Women may display or experience different aspects of this continuum at different times and stages of their life. Sexuality and sexual orientation are a complex phenomenon (Almgren, 2007; Dohrenwend, 2009; Gay and Lesbian Medical Association GLMA, March 28, 2006a; Goldberg, 2005; Goldberg et al., 2009; Hiestand et al., 2007; MacDonnell, 2009; McDonald & Anderson, 2003; Walpin, 1997; Weisz, 2009).

A final note of summary from Dohrenwend (2009):

> Social responsibility, a dearly held value in the medical community, requires that medicine use its influence to end discrimination and to reduce barriers that affect access to care. Although the gay, lesbian, bisexual, and transgender (GLBT) population has been identified as suffering from health care disparities and oppression, the medical community and its affiliated organizations have done little to lobby in defense of the GLBT population. And with regard to the specific issue of gay marriage, medicine has yet to raise its voice in that debate, even if only to correct unscientific, capricious, and

> slanderous depictions of GLBT relationships. . . . Those who support gay rights believe that the denial of marriage rights, discrimination in hiring, denial of adoption rights, and problems with access to health care that currently are experienced by the GLBT population are violations of human rights (p. 788).

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OREGON HEALTH & SCIENCE UNIVERSITY

SCHOOL OF NURSING
Ashland Klamath Falls La Grande Portland

DNP Clinical Inquiry Project Report & DNP Portfolio Approval

Student Name: Susan Wegelt Heinz

Degree: Doctor of Nursing Practice

Title of Study:

Why Women Choose Physiologic Birth and What They Believe Supports the Choice

APPROVED:

Committee Chair: Maggie Shaw, CNM, PhD (name and credentials) Signature: _____

Committee Member: Deborah Messecar, PhD, MPH, GCNS (name and credentials) Signature: _____

Committee Member: _____ (name and credentials) Signature: _____

Michael R. Bleich, PhD, RN, MPH, FAAN
Dean, School of Nursing Signature: Michael R. Bleich, PhD, RN

Date: _____

Submit completed original form to the Graduote Program office.

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