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THE MEDICALIZATION OF CHILDBIRTH AND PREVALENCE OF CESAREAN
SECTIONS IN THE UNITED STATES

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Abstract

The United States is arguably in childbirth crisis as a result of the systematic medicalization of what used to be a natural, physiological process: childbirth. Sitting at the bottom of all developed nations in terms of infant mortality rates, the percentage of cesarean sections performed in the United States has continued to rise over the past several decades, now at a startling 32.9%. The practices, pressures, and factors which contribute to the United States' morbidity/mortality and cesarean rates are complex in nature; however, the potential ramifications of such statistics are evidenced by World Health Organization research, which has shown that the best outcomes for mothers and infants occur when cesarean birth rates fall between 5% and 10% (Althabe and Belizan, 2006). Furthermore, the World Health Organization asserts that no country is justified in having a cesarean section rate exceeding 15%.

The goal of this interdisciplinary study was to understand this "culture of cutting" in the United States in the context of the history and current practices of childbirth. This medicalization has affected the way in which doctors practice and, in turn, the care women receive in pregnancy and birth. This paper examines how the transformation of childbirth contributes to the practice of medical interventions during delivery and the prevalence of cesarean sections in American hospitals. Additionally, the paper addresses the possible adverse health effects for pregnant women and their fetuses attributable to this method of delivery. In addition, this paper attempts to answer questions surrounding the factors which transition birth into the hospital, the effects of the medicalization of childbirth on birth experiences and outcomes, and the influence of economics, malpractice, and culture on birth outcomes and choices. The paper also presents the Midwifery Model of Care and shows how its implementation can improve the birthing culture and consequences of medicalization in our society.

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Chapter 1:

Introduction

“She tells me that she has talked with her five-year old child about birth and because she thought the child was too young to understand vaginal birth she explained cesarean sections to her. Sometimes, she says, her daughter plays at having a baby by taking a knife and running it across her doll’s stomach” (Corea, 2003).

“We do not see childbirth in many obstetric units now. What we see resembles childbirth as much as artificial insemination resembles sexual intercourse” (Lang, 2006).

Childbirth is an event, ritual, and often, a procedure that is culturally significant across the world. Rituals are used by a people to organize and define their culture; anthropologist Robbie Davis-Floyd (1993) argues that Americans have rituals around birth as well—our rituals are now based on technology. The rituals, views, modalities, interventions, and implications of birth differ greatly from country to country.

The United States seems to be suffering from the consequences of a systematic medicalization of childbirth. Sitting at the bottom of developed nations in terms of infant mortality rate, the United States also boasts a cesarean rate of almost one in three births (32.9%) (Ponte, 2007). It is clear that an immediate investigation into the practice surrounding our childbirth is necessary; it is important to determine the practices and pressures that contribute to morbidity/mortality rates as well as the consistent rise in the

rate of cesarean sections. The potential ramifications of such a statistic are evidenced by the World Health Organization's statement that no country is justified in having a cesarean section rate exceeding 15%. Moreover, WHO research has shown that the best outcomes for mothers and infants occur when cesarean birth rates fall between 5% and 10% (Althabe and Belizan, 2006). This issue is one of increased importance to both the medical community as well as the general public. Although researchers have long studied fertility, birth rates, and, fetal outcomes, a significant research gap exists for the medicalization of childbirth in relation to childbirth choices.

It is important to discuss this dramatic increase in the number of cesareans through the medical, social, and feminist lenses. As feminist scholars and women's health activists, it is fundamental to examine the current state of birth in the United States – how has birth transitioned from a family-centered home experience to one which ends in major surgery for almost 1/3 of women? Additionally, why are women facing risky and often unnecessary medical intervention even if they do escape a cesarean section? The ultimate goal of this interdisciplinary study should be to understand this “culture of cutting” in conjunction with the history and medicalization of childbirth. As feminist scholar Villaverde (2008) also points out, “Key questions to ask are ‘what is the purpose of the text?’ and ‘what purposes do these ideas provide for one’s agency in the world?’ Remember, knowledge does not lead directly to action; however, the decentering of assumed givens is a step in unexplored directions, the start of new movements.”

There is a significant gap in literature examining the contributing factors to this rise in practice—both procedures and cesarean surgery—that warrants investigation. Even further, how has this medicalization of childbirth affected the way doctors practice and the care women receive in return? Therefore, the purpose of this paper is to examine how the transformation of childbirth contributes to the practice of medical interventions during delivery and ultimately, the prevalence of cesarean sections in American hospitals. Additionally, the paper will address the possible adverse health effects for pregnant women and their fetuses that are attributable to this method of delivery. The strengths of this review include the exigency of the study, the current clinical trials and scholarly articles, and the feasibility, novelty, and relevance to midwifery practice. The challenges of the paper include the interdisciplinary nature of the topic, which requires an unbiased examination of both medical as well as feminist literature. Specifically, this paper will address the questions: (1) What factors precipitated the transition of childbirth into a medicalized procedure in the United States? (2) How does the medicalization of childbirth contribute to (a) the birth experience, (b) birth outcomes, and (c) the practice of Cesarean section in US hospitals? How does the current practice of childbirth in the US compare to other industrialized nations? (3) How do the following affect the use of medical interventions (including cesarean sections) in childbirth: (a) economics, (b) health care and malpractice, (c) popular culture, (d) lack of knowledge and communication in the patient/health care provider relationship?

(4) What are the possible maternal and neonatal health effects of the routine use of medical interventions and the practice of cesarean sections? (5) How can a change in society's perspective of childbirth in conjunction with the practice of Nurse Midwifery affect positive change with regard to the medicalization of childbirth and US Cesarean rate?

Methods

A systematic review of the literature was performed using the ProQuest, CINAHL, and MEDLINE databases of studies published between 2004 and February 2009. Keywords in the search were *cesarean, cesarean outcomes, interventions AND birth*. This search was further limited to clinical trials or randomized clinical trials using humans and the English language. Further, the review was extended by a systemic review of the bibliographies from relevant review articles, studies, and books.

A total of 611 articles were identified and sorted using the abstracts and full text. Criteria for inclusion included maternal outcomes, cesarean complications, adverse fetal affects, trials of vaginal birth after cesarean, and medical and nursing interventions that may determine the delivery method.

Also, the issue of the medicalization of childbirth is interdisciplinary in nature, requiring not only a review of scientific clinical trials, but also an evaluation of scholarly paper and feminist literature that examine childbirth in the United States. Books, library searches, and bibliographies will serve as the process to identify this additional literature.

Gloria Steinem once said, “*the first problem for all of us, men and women, is not to learn, but to unlearn.*” This is a fitting statement to consider when faced with the issue of childbirth in the United States. The history of childbirth in this country is a rich one, with several recessions, transitions, and transformations. In conjunction with the

transitions in the way childbirth is performed and perceived, there have also been many transitions in the way the issue is addressed by women's health activists and feminists. When addressing the questions presented in this paper, it is important to address the pertinent history that has contributed to the current state of Cesarean practice in the United States.

Chapter 2:
The Birth of Medical Intervention
& the Transition of Childbirth to the Hospital

Normal, spontaneous childbirth is an automatic sequence, a series of internal and external movements, voluntary and involuntary, that a woman's body makes in order to have a baby. The pituitary gland releases the hormone oxytocin, which causes the smooth muscle lining of the uterus to contract rhythmically and those contractions gradually accelerate and intensify. The lower portion of the uterus, the cervix (Latin for "neck") softens and opens into the vagina; the pelvic joints and ligaments become pliant; the amniotic sac—the membrane that surrounds the fetus and fluid—ruptures. The baby descends into the pelvis and through the dilated cervix, and, with the aid of muscular efforts, bodily movement, and the stretching of the pelvic anatomy, is expelled from womb to world.....but very few women in the US experience this physiological sequence..." (Block, 2007)

Before the twentieth century, home birth was the norm; women took comfort in delivering in their homes surrounded by family and female neighbors who would assist in the childcare and household chores during the mother's confinement. Home birth was a women-centered environment. Home delivery was both cost effective as well as safe: most deliveries resulted in live babies. However, in the late nineteenth century, women of middle-to-upper class who were able to afford new technologies began having physicians

attend their home births. These physicians would administer analgesics such as chloroform in order to increase comfort. With the invitation of these physicians into the home also came the invitation of their medical supplies, most notably: forceps, chloroform, ether. The addition of physicians to home births arose from women's paralyzing fear over the possibility of fetal and maternal death and long term disability during this time period. These fears combined with the aura and promise of "new science" drove women and physicians alike to move birth to the hospital.

"New Science"

During the late nineteenth century, women believed that the use of physicians, their accompanying tools and drugs, and their ability to perform surgical procedures would help them "become living mothers of living children" (Leavitt, 1986). Thus, the same motivating force that drove women to invite physicians into their homes in the nineteenth century also carried women into the hospital for deliveries in the twentieth. However, this transition from the home to the hospital came at a severe cost to women. Women, in their own homes, were still in control of their bodies and all decisions relating to them. Physicians, invited into the home, were at the service of the woman who hired him there. Yet, in the hospital, women submitted their control to the power of doctors – to administer analgesia, to make incisions, and ultimately, to make all decisions. And, in light of the fear women had for death and injury combined with the hope for "new science," women enthusiastically complied in the early twentieth century. The reasons for

this compliance are not as clear, however. Arguably, the compliance was a combination of the aforementioned fear and hope: fear instilled by the rise of physicians arguing against the natural law of childbirth and hope for the science that these physicians promised.

What, though, was “new science?” Women gathered in masses to give birth in hospitals in this post-bacteriological era due to hospitals’ promise of fewer infections and sterile processes. It was at this time that the gap between lay person and physician widened to an astounding degree. The knowledge of aseptic and antibacterial practices garnered by physicians differed greatly from that which was understood by the public; therefore, this new science achieved a certain allure and mystery with the common public. It was that allure and mystery that held such hope for the guarantee of “becoming live mothers of living children” in the hospital. Though women and physicians were both so enthused and sure of new science’s potential, there were no statistics that showed that the transition of birth to the hospital was indeed any safer. In fact, it would later be proven that maternal and infant mortality remained high during this period, even increasing at times. It seems that it was not the fact that physicians, tools, drugs, procedures, hospitals, and even aseptic technique made birth safer (because indeed it did not), it was the promise of science, or rather, the potential of science to make birth safer that women bought into during this period. Nevertheless, this discrepancy was not made clear to women by their doctors nor in the popular literature of the period. The increased safety of birth was taken as proven fact, not of scientific potential. Because of the

growing gap between medical knowledge and the lay public, birth in the hospital was able to gain speed and the complete transition quickly was evident. By 1940, hospital births accounted for 55% of all US births; this number jumped to 88% by 1950, and by the 1960s, birth outside of the hospital was scarce. Indeed, most women came to accept birth in the hospital as the norm without truly understanding the science behind the promises being made to them. Women, on all fronts: family, female friends, *Good Housekeeping* and other popular magazines, were being told to just trust their doctors – “he will take care of the rest” (Leavitt, 1986). In fact, these same popular magazines boasted that “the new hospital-based childbirth meant real progress. Slowly but surely, childbirth is being lifted out of the realm of darkness and into the spotlight of a new science,” *Good Housekeeping* wrote. In addition, magazines of the times also published stories full of emotion regarding horrific home births that resulted in maternal and fetal death, claiming that these deaths could be prevented if the women had given birth in the hospital. These charged stories propelled women even further into the belief that “new science,” and thus, hospital birth was the only option. Yet, again, these claims were despite an ever-increasing maternal mortality rate.

Childbirth: A Women-Centered Event in the Home

In addition to the fear and promise of new science, women were also enamored by the thought of being taken care of in the hospital. In home birth of decades past, women relied on strong neighbor support systems with women to provide for the other children

and the household during the period during and after childbirth. However, women in the early twentieth century felt these traditional practices were no longer feasible in light of the urbanization of the US during this time. This urbanization caused fewer female members of the neighborhood or community to act as the support system during the birth and following. Because of decreased social support, women felt an added stress surrounding the birthing process especially if she had other children in the home. Many women felt that having their child in the hospital was the only way to eliminate the stress at home. One woman wrote, “How much simpler—and more restful—to be in a hospital where babies are an accepted business” (Leavitt, 1986). The question remains: does the perceived simplicity and “rest” outweigh the powerlessness and loneliness that accompanied birth’s transition to the hospital? Many women would later discover that answer was no.

For Doctors: Clean and Simple

For doctors, birth in the hospital was safe, simple, and secure. Women trusted physicians with their lives and the lives of their unborn children; women also trusted physicians to tell them what was safe and to make all decisions for them. Essentially, women relinquished control to their doctors. Who can blame them? All literature and social culture of the time period dictated such. In a society where women were already seen as subservient to men, how were women to question the respected and sought-after opinion of science, specifically, male physicians. However, in 1910, the Flexner Report

showed that, in fact, 90% of practicing physicians had no college education and most had substandard training (Wertz & Wertz, 1989). Was it these scantily educated and undertrained physicians who directed women's perceptions about birth during the early twentieth century? It seems that if this is the case, women's perceptions about birth in the early twentieth century, perceptions which laid the groundwork for and are still ever-present in modern birth today, were certainly skewed.

Despite their lack of training and education, doctors often asserted their opinions about hospitals' superiority to the home in the public realm. In 1924, Dr. Mabel Gardiner wrote,

“In the course of the delivery of a condition that would in the home constitute anything from an inconvenience to an emergency, with serious consequences, such as posterior position, failure of the head to descend, postpartum hemorrhage or second degree laceration, may in the hospital be cared for as a mere incident of the delivery, because the proper assistance, instruments, and lights are at hand. The home can never equal the hospital. The ‘lying-in-chamber’ is pictured down through historical scenes as the bed chamber in the home, but as the barber applying leeches has given way to the surgeon, so the bed chamber must give way to the hospital delivery room, and our united efforts should be to encourage women to know that hospital care is the best care, and to be obtained, if possible,

even at a sacrifice, and home care is second best, even though more sociable in its family relations” (Leavitt, 1986).

Once again, fear is the primary motivator used by physicians and women alike in disrupting the centuries old practice of home birth. Fear of the unknown prevents women from the natural physiological process of birth; the hospital combats that fear of the unknown not only by being prepared for emergencies or complications, but by going so far as to intervene prophylactically as to prevent what is unknown – to prevent what may or may not occur. The analogy Dr. Gardiner uses above of the leeches giving way to the surgeon is a commonplace justification for the transition of birth from the home to the hospital. It is grouped amongst all other technologic advances – even artificial knees. “Our knees were designed for our bodies, and even they need to be replaced by doctors,” one physician’s assistant recently claimed. But, was the movement of birth to the hospital a necessity? Was it a natural progression as Dr. Gardiner claims was the surgeon from the leech? Given the information history provides, it seems as though the transition was based on false pretenses of safety and security was neither necessary nor natural.

Hospital birthing practice was solidified and accepted as commonplace in the 1920s by Dr. Joseph B. DeLee, the president of the American Gynecological Society at the time. His speech, “The Prophylactic Forceps Operation,” has become a legend in American Obstetrics. For the first time, DeLee labeled birth as a pathologic process, stating that “only a small minority of women escape damage during labor” (DeLee,

1920). His process was standardized: give the drugs morphine, scopolamine, and ether (analgesics), make an episiotomy, use forceps to extract the neonate, repair the incision, give Ergot to stimulate post-partum uterine contraction, and administer more morphine and scopolamine to decrease the woman's memory of the labor (arguably not a labor, but a passive delivery). Dr. DeLee devised this process as to prevent the further "pathology" in the birthing process, he questioned: "so frequent are these bad effects that I have often wondered whether nature did not deliberately intend women should be used up in the process of reproduction, in a manner analogous to that of salmon, which dies after spawning?" This legendary speech was published as the main article in the first issue of the American Journal of Obstetrics and Gynecology, thus igniting and perpetuating the beliefs held by modern gynecology. Upon DeLee's recommendations, obstetricians around the country began employing what today we call active management of labor; this includes the routine and systematic use of drugs, induction, and medical intervention. One 1920s father stated, this is birth "the new way – the easy, painless, streamlined way" (Leavitt, 1986). Families were able to choose when they delivered, even attend a movie or a luncheon beforehand. This "new way" also appeased doctors because they were also able to predict labor because they were singlehandedly in control of its start, progression, and ultimate end. However, at what cost came these small conveniences?

At What Cost?

Women, throughout the early twentieth century, willingly went from the home to the hospital, relinquishing power, control, and perhaps most importantly, support. One woman, who admitted delivering in the hospital was her choice, expressed, “the worst feature is the loneliness.” Birth, a historically women-centered process, was attended not only by midwives in the home, but also by many women in the community who came to offer support to the laboring woman. Women at home also had their husbands and children readily available for support if needed, although male attendance was not yet socially accepted during this period. However, regardless of the attendance and support system at the home birth, the essential component is that it was the woman’s choice. All choices once women entered the hospital here were eliminated. Did the risk of the elimination of choice come with its promised outweighing benefit: increased safety? The promise of “becoming living mothers of living children?”

A group of physicians in New York came together in 1930s to examine the effect transitioning to the hospital had on maternal mortality; what they found, however, was in direct contrast to that which their peers had been advocating for two decades. Unfortunately for the women whose decision-making ability and support system was stripped of them, maternal mortality in the 1920s and 1930s remained frighteningly high. Upon discovering this, this group of physicians concluded that “hospital deliveries contributed to the high mortality with a high incidence of operative interference during

labor, undertaken when there was no indication or a plain contraindication” (Leavitt, 1986). As Leavitt summarized in 1986, using evidence from the NY physicians conclusions, “rather than making childbirth safer, physicians in the 1920s and 1930s, according to their own evaluation, were responsible for maintaining unnecessarily high rates of maternal mortality” (Leavitt, 1986). In addition to maternal mortality, the NY physicians also investigated the relationship between forceps and anesthesia, finding that, although there was no correlation related to home deliveries, in the hospital, the use of anesthesia had a direct relationship to the use of forceps. They again concluded, “The frequent use of instrumentation is based upon the easy accessibility of anesthesia. The increase in the use of anesthesia is a factor in keeping the maternal mortality rate stationary” (Leavitt, 1986). The cause of this direct relationship was theorized to be that the added analgesia reduced women’s ability to push. Even in the 1930s, doctors were concluding that “clearly a reduction of the mortality rate can be achieved through a reduction in operative interference” (Leavitt, 1986).

During the two decades after birth made the transition to the hospital at the turn of the twentieth century, the rate of puerperal infection increased for laboring women. It is important to note that one of the most prominent reasons for women’s choice to birth in the hospital was the “new science,” part of which allowed for infection control in the post-bacteriological era. This evidence shows that the very complication whose promise of prevention pushed the transition had risen more in the decades after the transition than ever previously when birth was in the home. Most notably, given these findings, Dr.

Joseph B. DeLee, whose approach and method of the “Prophylactic Forceps Procedure” directed so much of the practice of then and now, became a vocal critic of the sepsis occurring in such large numbers in the hospital. In 1926, just six years after his leading article was published in the inaugural issues of the *Journal of Obstetrics and Gynecology*, DeLee “blamed ‘the great evils which swell the mortality and morbidity of the mothers and babies in the United States’ on both physicians’ practices and hospitals’ physical structure” (Leavitt, 1986). He continued that he was “convinced by numberless proofs that it is impossible to keep infections in bounds in our hospitals today, and that it will continue to be so long as human nature is what we know it to be. The maternity ward in the hospital of today is a dangerous place for a woman to have a baby” (Leavitt, 1986). Almost a decade later, DeLee was still expressing the same concerns about hospital birth, “the increasing preference of the hospital as a place of delivery, one of the most marked changes that has taken place during the last few years and is growing, seems not only not to have bettered the results but seems actually to have made them worse. This development is increasing maternal mortality and morbidity. Home delivery, even under the poorest conditions, is safer than hospital delivery” (Leavitt, 1986). These statements are an obvious indication of the false pretenses to which women were brought to the hospital for childbirth. To have the physician whose thoughts and opinions built the field of modern day gynecology express his concerns with hospital birth as well as assert the safety of home birth would be a feat even today. However, unfortunately, DeLee reserved his statements for his colleagues and medical journals only. In a time when the gap

between the lay public and medical community was very wide, regular women did not have access to the knowledge revealed by DeLee in medical journals. In fact, DeLee continued to publically comment to popular magazines about the efficacy and safety of hospital birth, going so far as to say, “I am perfectly willing to repeat that general hospitals are cesspools of infection, but only in a medical journal” (Leavitt, 1986). Leavitt goes on to say, “He did not want to ‘frighten the women too much’ by revealing the full story in the lay press” (Leavitt, 1986). And, much like the articles of the past and without the awareness of the public, the popular press in the 1930s dealt with the potential of hospital birth instead of the reality. Here, however, physicians were aware of the infection and health risks women encountered in the hospital, yet they still vehemently persisted with their hospital birth campaigns.

Despite the fallacy presented by the popular media and physicians however, evidence was popping around the nation about the dangers of hospital birth. As Leavitt explains, “The New York Academy of Medicine, the Philadelphia County Medical Society, the White House Conference on Child Health and Protection, and countless individual physicians went on record in the early 1930s proclaiming physicians themselves responsible for over half of America’s preventable maternal deaths and claiming that the hospitals exacerbated these dangers.” She continued, “The public health commissioner for the state of New York calculated that maternal deaths were actually increasing during the first thirty years of the twentieth century and concluded that ‘they represent the results of meddling and unskillful obstetrical practice’ Philadelphia

doctors agreed that the midwife was ‘an almost negligible factor in mortality,’ but that 56% of preventable maternal deaths could be blamed on physicians’ errors of judgment and technique” (Leavitt, 1986).

Contrary to the practices occurring elsewhere in the country during the 1930s, the Chicago Maternity Center, a service which mainly provided home-based care, defied what “new science” was asserting. At the Chicago Maternity Center, providers practiced superb and complete pre-natal care as well as thorough screening for high-risk women. In this manner, women, who otherwise could not afford a “hospital” delivery, achieved standards of safe care that were unmatched in hospitals of the time (Leavitt, 1986). Because women were thoroughly screened and cared for before the birth and infection control procedures were enacted early, the maternal mortality rate was significantly lower at this center than in any hospital nationwide. This record for this type of care and practice still withstands today, with birthing centers boasting less cesareans, complications, morbidities, and deaths than any hospital and the national average.

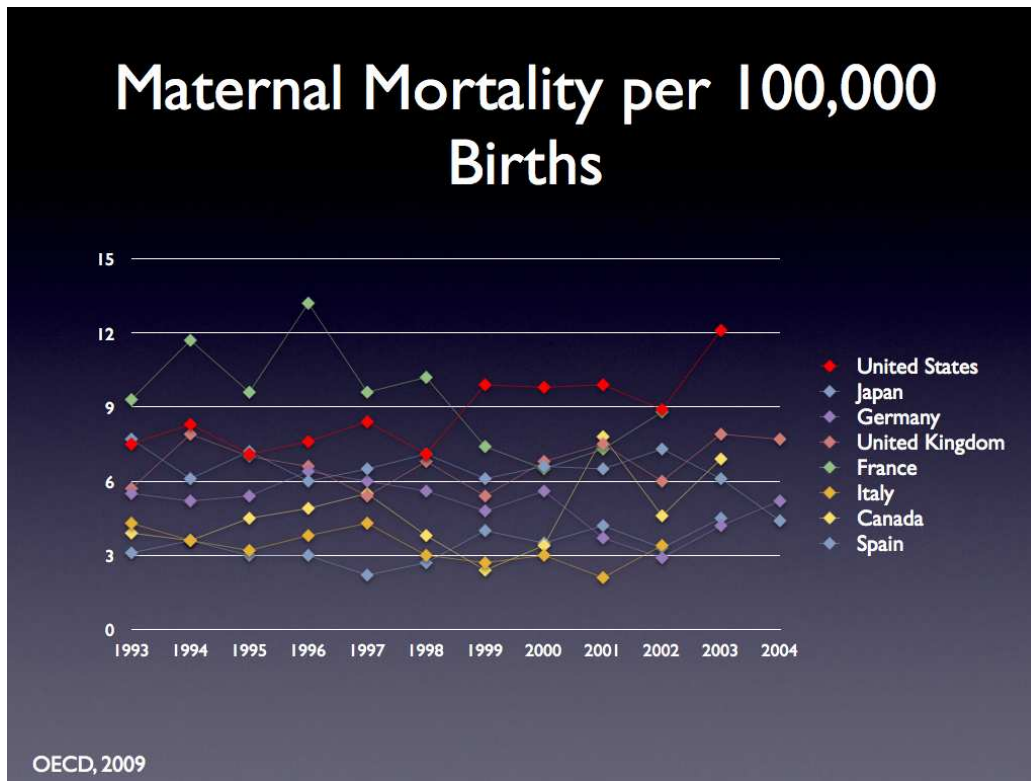
In the mid-to-late 1930s, women began to realize all the aspects of childbirth they gave up in their transition to the hospital two decades earlier. The imbalance of power, lack of support system, and inability to make decisions about their care discussed earlier began to affect women’s perception of their birth experience in the hospital. Women were treated as inanimate objects. The routine care desired by the women of the decade prior made women feel unimportant and undervalued; no one cared, no one celebrated, doctors

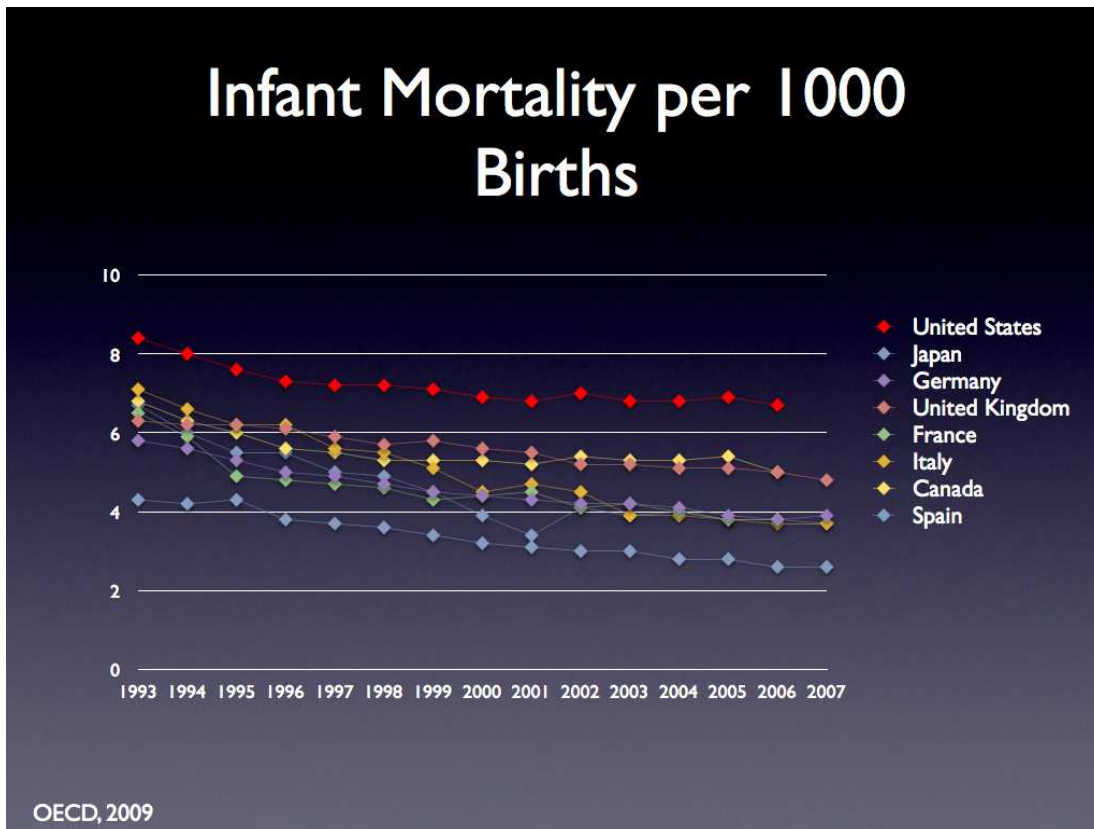
and nurses were not reassuring or kind. Perhaps hospital birth did not fulfill its promise; in fact, perhaps hospital birth was more dangerous than birth in the home, physically and emotionally. This dissatisfaction born of the loneliness women felt in the 1930s grew into vocal concern in the 1950s. It was at this time that women began asking for change in the practices that had become accepted as commonplace. Many women were unhappy with the cold, formal practices of systematic hospital birth and wanted more fulfilling and gentle experiences. However, the women demanding a change in systematic hospital practices did not speak for all women; indeed, some women did not mind the cold and formal delivery routine but preferred modification in other aspects of care. In essence, the nuances of the delivery do not need to be stream-lined, as each woman has different preferences for delivery and expectations of the birth. Rather, the important component here is the maintenance of women's ability to make decisions affecting their health and delivery on their own and the power to design their own reality instead of blindly accepting a reality prescribed by physicians, a reality which was proven by their own to be rooted in falsehoods.

After all, as birth transitioned to the hospital, women essentially not only lost control over childbirth but also they also lost the comforts of home and family support systems (Leavitt, 1984). Since pain medication and hospital birth soon became inextricably tied during this period, there was a time when there was little question over the new birthing practice. However, in the mid-1940s, birth began to face criticism again for its isolation and impersonality. In 1944, obstetrician Grantly Dick-Read argued in his

book, *Birth Without Fear*, that pain associated with childbirth is only a result of fear; thus, the “Natural Childbirth” movement was born (Rothman, 1982).

Luckily, by the 1950s, physicians had improved the obstetrics practice to include the successful management of infections and hemorrhages – the biggest sources of maternal mortality in decades past. However, these advances in the physical health of post-partum women should have brought advances in the psychological and emotional health of laboring women as well. Perhaps the Natural Childbirth Movement later in the century was a result of this lapse in evolution of the practice by physicians; however, little improvement was seen in this area at this time.





The Friedman Curve

It was also in the 1950s that the Friedman Curve, still widely used and accepted today, was first established. A New York obstetrician named Emmanuel Friedman in his young career decided to research the average length of labor. Friedman plotted several stages of active labor and women's progress through each stage and used the synthesis of his data to develop a simple rule: labor should progress with dilation occurring at 1 centimeter per hour. Upon replication of his study, the Friedman Curve gained widespread acceptability in obstetric practice. It set a standard for practice that not many

women could live up to; now, women were, and are, forced to progress along the outlined curve or face intervention. However, how accurate is the Friedman Curve?

During Friedman's study of women in different phases of labor, he unfortunately did not control for all aspects of its progression. When Friedman first encountered the women he studied, he was unable to be sure of how long each of them had been in labor. In addition, the advent and routine use of the epidural also goes unaccounted for when holding women to the curve. It is common medical and lay knowledge that epidurals alter (prolong) the course of labor; therefore, it is impossible to routinely prescribe women to a curve designed for labors much different than those studied by Friedman in 1950.

"Fast Birth:" The Evolution of Pitocin

Though women became more vocal about the impersonal nature of hospital birth, the 1950s also marked the decade where Pitocin became the protocol. Now, physicians were truly able to control the start and progression of labor with a more exact and potent drug.

Pitocin is a drug which mimics women's natural hormone, oxytocin. In 1909, a physiologist named Sir Henry Dale, discovered the effects of an unknown secretion from the pituitary gland when he administered it to pregnant cats: it contracted the her uterus. After a quick feline labor, Dale named the hormone oxytocin: *oxy* meaning "fast" and *tocos* meaning "birth" in Greek. After Dale's discovery, oxytocin was extracted from

cattle and marketed as a drug called Pituitrin with the motto, “Throw away your forceps and use Piruitrin!” Pituitrin replaced Ergot, which DeLee recommended in his “Prophylactic Forceps Procedure” to stimulate uterine contractions. This new medication proved more dependable and popular. In fact, this time period saw an increase in the diagnosis of “uterine inertia;” with the invention of a drug that sped up labor, physiological labor was measurably viewed as slow (Perkins, 2004). However, as the decade went on, the medication resulted in a number of serious adverse reactions including uterine rupture and maternal/fetal death. The drug was reformulated and marketed as Pitocin around 1930. Yet, like its predecessor, the animal derivatives in most medications caused side effects and unreliability.

The 1950s, however, marked the “perfection” of Pitocin. A chemist also responsible for synthesizing penicillin, Vincent du Vigneaud, synthesized Pitocin in 1953; he later won the Nobel Prize for his work. In the mid-to-late 1950s and by the 1960s, the modern day Pitocin protocol was well established. The CDC did not track Pitocin use until almost 1990; however, in NYC in the year 1955, 50% of patients were already receiving Pitocin to start their labor (Pinkerton, 1965). Again, now physicians were truly able to control the start and progression of labor. Throughout the 1950s, 60s, and into the 70s, Pitocin use continued to be the standard for “active management of labor,” a term that essentially conceptualized DeLee’s archaic belief of prophylactic intervention, a belief which he later recounted.

The Dublin Trials

In the first study of its kind, Irish obstetrician Kieran O’Driscoll tested his hypothesis that “if normal birth was to occur within a certain timeframe, then making ‘prolonged labor’ go faster would reduce complications and cesarean sections, which the doctors claimed were happening too frequently (the rate was 4%)” (Block, 2007). It is important to note here, that, in Ireland, a 4% cesarean rate was of grave concern, warranting an investigation into ways to decrease the rate. Moreover, though, the study attempted to prove that reliance and subsequent intervention based on Friedman’s curve would reduce the amount of complication and cesarean sections had a woman’s labor not been modified by her progress against the curve. In the trials, O’Driscoll labeled any labor exceeding 12 hours with the term dystocia. This study looked at 200,000 first-time mothers over a period of 25 years. Only women in “true, active labor” with regular contractions were admitted to the hospital. The procedure was as follows: “women had their waters manually broken upon admission to the hospital and were assigned a midwife ‘to monitor the labor and encourage the mother.’ If labor did not progress at 1 cm per hour, artificial oxytocin was administered by IV and was increased until five to seven contractions were occurring every 15 minutes” (O’Driscoll et al, 1969). Ultimately, the study concluded that over the study’s 25 year duration, the cesarean rate actually increased from 4% to 9% even though 40% of women received the Pitocin. An increase in the amount of patient-requested analgesia was also noted to be twelve-fold, potentially because of the tendency of Pitocin to produce unbearable contractions

(O'Herlihy, 1993). Nevertheless, O'Driscoll's confinement of labor to a maximum of 12 hours for the 25 years of the study further solidified the expectation that women must labor within a specific timeframe.

Following O'Driscoll's research, a group of obstetricians in the United States set out to test the same principle: does active management of labor reduce the cesarean rate? In the 1980s, the US cesarean rate had tripled, rising from 5% to 15% in a decade. Their quest revealed no conclusive results. Despite a lack of evidence, however, the move towards active management of labor trickled across from Ireland to the United States with great force, mimicking most aspects of care except one important component: midwifery support. Although the cesarean rate did slightly increase, it was certainly not as significant of an increase as was occurring in the United States. Perhaps, in O'Driscoll's study, the resulting cesarean rate was a result, not of Pitocin intervention, but rather the constant presence of a midwife or nurse, which was promised to women in the O'Driscoll's study (Thortan and Lilford, 1994).

Pathologic Labor

“Doctors used their growing political and cultural authority to redefine childbirth as a dangerous, pathological event, to denigrate and eliminate midwives, and to fuel the perception that middle and upper class women were less able to withstand the challenges of childbirth” (Beckett, 2005).

With the routine use of active management of labor, and studies such as the Dublin Trials, what is considered “normal” with regard to labor and its progression has narrowed over time. Thus, births that, in the home, would have been classified as purely physiological and healthy, were now classified as abnormal within newly established boundaries. Former Director of Women’s and Children’s Health at the WHO, Marsden Wagner reflected on these new boundaries stating, “The definition of the normal upper limit to labor has been reduced from 36 hours in the 1950s, to 24 hours in the 1960s, to 12 hours in 1972 when active management of labor was introduced.” She went on to express that with less “normal” labors, more labors would be classified as “pathologic.” Women diagnosed with dystocia (more than 12 hours, now defined as “failure to progress”) more than tripled from 1970 in 20 years, from 3.8% to 11.6% (Wagner, 1996).

The 1960s and 1970s also marked the emergence of the Alternative Birth Movement. This movement served to critique the “conventional” model of birth. Its goals included emphasizing childbirth as an important life event instead of a medical problem as well as establishing that women have the right to choose where to give birth and who

they want present. This movement continues even today; birth activists seek to overthrow medical control of birth as well as challenge the narrow definition of “normal” in the hospital (Beckett, 2005).

However, also throughout the 1960s and 70s, popular media perpetuated the idea that women were incapable of giving birth on their own, without the aid of medical intervention. For example, 60 to 90% of women received episiotomies (Graham, 1997). Whereas in the initial transition from home to hospital, women’s choice was a large contributing factor, in this time period, women were not only deemed unsuited for sports, science, or their own careers, but for the process of labor and delivery as well. During this period, “women were typically strapped flat on their backs, wrists secured in leather straps and legs up in stirrups (pelvises tipped against gravity), and dosed with Demerol, or morphine and scopolamine, an amnesiac, to initiate ‘twilight sleep.’ While they were under, forceps (curved metal tongs), in combination with episiotomy (a cut to the vaginal opening), were frequently used to extract the infant” (Block, 2007). Block’s description does not indicate improvement for women nor does it differ much from the accounts of women in the 1920s.

Carla Hartley, of the Ancient Art Midwifery Institute, summarizes, “We've put birth in the same category with illness and disease and it's never belonged there. Birth is naturally safe, but we've allowed it to be taken over by the medical community.” Evidently, regardless of improvements in infection control and other physical aspects of

delivery, not much has changed since the days when childbirth shifted from the home to the hospital. Examination of the transition's history, one which dates back over 100 years, shows, instead of a steady evolution, almost a straight line in the evolution of obstetric practice. In fact, arguably obstetric practice has been on the decline since the turn of the twentieth century with the incorporation of additional medications (i.e. Pitocin) and machines (i.e. EFM) as well as the sharp and dangerous increase in the national cesarean rate. As sociologist Barbara Katz Rothman appropriately describes this downward spiral of medicalization, "Have our uteri somehow lost the knack this generation or have doctors sped up the clock on us?" (Rothman, 1993). Indeed, though mislabeling of too many pregnancies as abnormal and doctors' acceleration of our labor clocks both contribute to the modern view of birth, perhaps society's perception shift to birth as pathological results from the fact that medical intervention during labor *actually does* result in more complicated or "pathological" pregnancies. Therefore, it is important to examine the most common interventions and how their use has become a self-fulfilling prophecy with regard to pathologic labors for women.

Chapter 3:

Medical Interventions and Childbirth

“Walk into any freshly occupied ‘LDRP’ room—it stands for labor, delivery, recovery, and postpartum—and you will find the expectant patient lying in a recumbent position on an obstetric bed. One of her arms is connected, by thin tubing that extends from a vein on the back of her hand, to a plastic IV bag suspended above her head, the other is probably wrapped at the bicep with a nylon and Velcro blood pressure cuff that automatically contracts every ten minutes or so. A finger might be ensconced in similar material, measuring her pulse and blood oxygen levels. An elastic band tether her belly to an electronic fetal monitor, a machine that rhythmically prints out a paper trail of fetal heartbeats like an accountant’s register and displays the reading on a flat-screen monitor mounted at the bedside. She’s likely to have several other appendages as well: an epidural catheter extending into the space between her vertebrae and spinal cord, a Foley catheter threaded into her urinary tract, an intrauterine pressure catheter inserted through her cervix and into the uterus, and circulation stockings on her legs. At any one time, she might have five or more drugs pulsing through the IV line. Altogether, she may have up to 16 different tubes, drugs, or attachments” (Nelson, 2006).

As history serves to show us, the drive to bring birth into the hospital was rooted in both reducing maternal and neonatal morbidity and mortality as well as increasing the

overall safety of the birth process. It has been over a century since birth began moving towards a process that is medically managed in our country; however, the United States is not seeing the benefits originally and currently promised through this widespread medical management. Of all developed nations, the US boasts the most extensive medical management of birth. For example, 99% of women have hospital births. Yet, as a country, we consistently have some of the highest maternal and infant mortality rates. Preterm births are increasing. Interestingly, the rates of cerebral palsy, which is hypothesized to be caused by fetal distress, have been unchanged in the US (Clark & Hankins, 2003). The United States is ranked 32nd of 33 industrialized nations by the World Health Organization (WHO) for our infant mortality rates (see Figure 2). In fact, in 2002, infant mortality increased for the first time since 1958 (Kochanek & Smith, 2004).

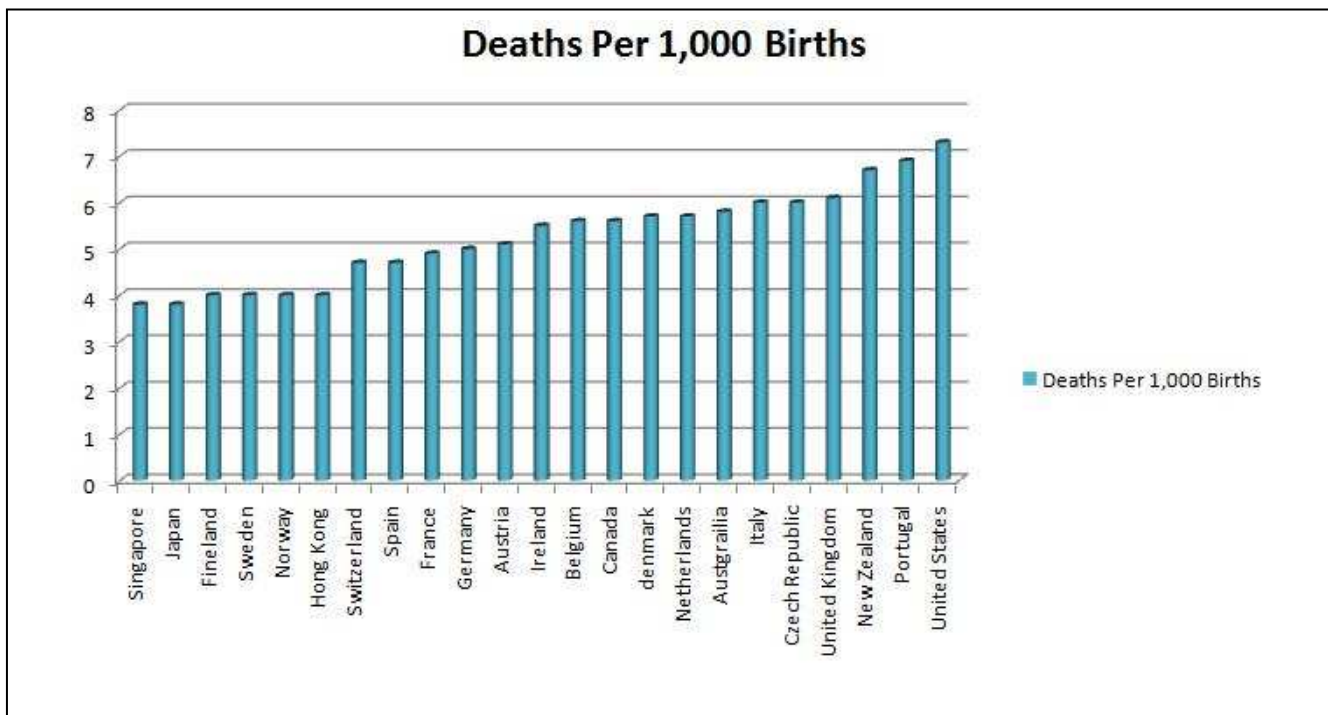


Figure 2: Fetal Mortality per 1,000 Births

Adapted from: Annual Study of Vital Statistics—1996 from B. Guyer, J.A. Martin, M.F. MacDorman, R.N. Anderson, D.M. Strobino

According to the WHO, the Netherlands, Sweden, and Denmark succeed with the best maternal and neonatal outcomes. In these countries, women and their infants have access to universal healthcare; however, there is a notable difference in the healthcare for pregnant women. In the Netherlands, Sweden, and Denmark, OBGYNs only are present at high-risk deliveries (Block, 2007). Most deliveries occur in the presence of a midwife who provides continuous, personal support for the laboring woman. In addition, women are able to maintain their mobility during labor, laboring and delivering in whatever position feels most comfortable. Inductions and anesthesia are rarely used. Their approach is “opposite to that of the US” and is to “support physiological birth, allowing labor to begin and progress in its own time and intervening only when necessary” (Block, 2007). Arguably because of this philosophy and the rarity of medical intervention, these countries have a 14-18% cesarean rate (WHO, 2006). The discrepancy between the maternal and neonatal outcomes in these countries versus in the US is almost certainly due to the discrepancies in the standards of care. The United State operates under a completely different philosophy—one that ignores the existence of physiological birth. Is our intense and pervasive medical management of labor to blame for our poor rankings internationally? Does the use of medical intervention (including the high rate of cesarean sections) contribute to maternal and neonatal morbidity in the United States? It is important to first look at the interventions permeating through Labor and Delivery wards nationwide. *“In normal birth there should be a valid reason to interfere with the natural process”* (WHO, 1996).

Enemas and Pubic Shaving

According to the WHO in 1996, “Enemas are still widely used because they supposedly stimulate uterine contractions and because an empty bowel allows the head to descend. They are also believed to reduce contamination and thereby infection of mother and child.” Yet, they assert that enemas pose a risk to bowel integrity. Studies by Romney and Gordon (1981) and Drayton and Rees (1984) concluded that enema use did not affect soiling in the first stage of labor, but reduced it during delivery. However, they did also find that in women who did not receive enemas, soiling was slight and more easily removed than in women in whom enemas were administered.

There is no evidence to support the claim that pubic shaving reduces infection, according to the World Health Organization and studies by Johnston and Sidall (1922) and Kantor et. al (1965). In fact, infection is not reduced in shaven women and moreover, shaving causes increased discomfort as hair grows back. In addition, WHO (1996) also states that pubic shaving can increase the rate of HIV and hepatitis—for both the women and those providing care. Women also agree with the WHO’s position in this area. In a 1990 study by Green et al., “women felt a greater lack of control the more interventions they received and this was also true for interventions such as pubic shaving, enemas and episiotomies.”

Pain Management

Non-pharmacological:

“Empathetic support, before and during labour, from caregivers and companions, can reduce the need for pharmacological pain relief and thus improve the childbirth experience” (WHO, 1996). In addition to support, WHO also acknowledges many other non-pharmacological methods for women in labor. These include: allowing women to choose their laboring position, hot showers or baths, massage, patterned breathing, verbal relaxation, distraction, music, TENS (transcutaneous electrical nerve stimulation), aromatherapy, use of hot and cold, and acupuncture. WHO especially advocates against the supine position for delivery and encourages women to sit, stand, or walk; therefore, women should never be confined to bed by their healthcare providers. Although pain relief may be achieved by pharmacological means, the World Health Organization asserts that the “more fundamental and more important is the non-pharmacological approach, starting during prenatal care by providing reassuring information to the pregnant woman and her partner, and if need be to her family.”

Pharmacological agents

Epidural analgesia:

“Today’s epidural is a combination of anesthetic and narcotic—each anesthesiologist has his or her own signature formulation—administered continuously into the lumbar spine via a catheter and programmed drip similar to Pitocin” (Block,

2007). It has been proven that epidural analgesia provides the best, long-lasting relief, more so than systemic drugs (Robinson et al, 1980; Philipsen & Jensen 1989; Swanstrom & Bratteby 1981; Thorp et al, 1993). However, the administration of this requires several hospital resources. According to the WHO, “labor and delivery should take place in a well-equipped hospital, the technical apparatus should be sufficient, an anesthetist should be available at all times and constant skilled supervision of the mother is called for” (1996).

Despite the efficacy of epidural pain relief, it has also been universally proven that its use elongates labor, specifically in its first stage. Because of this, oxytocin tends to be used more frequently to augment a labor slowed by epidural administration. The majority of women are unaware that the consequence of one intervention is typically the institution of many others. In fact, medical research shows that women who choose to have an epidural have lower rates of spontaneous vaginal delivery, longer labor, and are more likely to have intra-partum fever (Lieberman & O’Donoghue, 2002). In a study by Thorp et al. (1993), when epidural anesthesia was initiated before 5 cm dilatation, the rate of cesareans increased. However, there seems to be a gap in the literature with regard to the efficacy of epidural analgesia as compared to non-pharmacological measures. In addition, a lack of research exists identifying whether use of epidurals is associated with women’s birth experiences.

Epidural analgesia is one of the most commonly practiced interventions in the United States; it largely contributes to women being confined to the bed during labor with

continuous drips as well as IV access. Block asserts, “The ‘walking epidural,’ which involves an even lower dose of anesthetic is a misnomer, however. Few women are physically capable of walking, and almost none are allowed to...*Listening to Mothers* found that once admitted to the hospital with regular contractions, three-quarters of women did not walk around. For delivery, more than half of respondents lay on their backs, pelvises tipped against gravity” (2007). However, in other countries, such as the Netherlands where a large percentage of births occur at home, only a small amount of low-risk deliveries use analgesics (Senden et al 1988). Because of the popularity and association of epidurals with the idea of “normal labor” in the United State, many women must choose hospitals that are well-equipped and well-staffed in order to manage the administration and monitoring of such an intervention. Yet, although many women choose this intervention, it seems that there is a lack of education regarding alternatives. Or, there is a lack of support for the laboring woman in the initial stages of labor in conjunction with healthcare providers’ lack of administration of non-pharmacological interventions that may eliminate women feeling that they “need” an epidural. When women reach their highest pain threshold, it is then that they are closest to overcoming that pain. However, unfortunately due to a lack of one-on-one support by a care provider, it is at this time that most women ask for an epidural; in most hospitals, they have already fought through the initial pain, typically in the supine position, without any sort of relief measures discussed above performed or offered to them. US hospitals must begin implementing plans for non-pharmacological management of labor in an effort to

decrease the rate of analgesia administration, which serves to lengthen labor and increase oxytocin use. And, according to the WHO, these interventions are “no part of essential care during childbirth. Pharmacological methods should never replace personal attention to the labouring woman and tender loving care” (1996).

Fetal Heart Monitoring:

Studies show that, despite occasional necessary and life-saving intervention, many medical interventions cause both harm to mothers and babies. Moreover, one intervention makes another intervention even more likely. The use of the Electronic Fetal Monitor (EFM) contributes to an overestimation of fetal distress; the estimates of false readings are reported to be as high as 98% (Lent, 1999). Also, the high rate of false positives causes a high number of unnecessary interventions in otherwise low-risk women (Curzen et al, 1984 & Borthen et al, 1989). These statistics are particularly troubling due to the amount of emergency cesarean sections performed due to fetal heart stress identified by these monitors. In a study by Bloom et al. (2006), 1/3 of emergency cesarean deliveries occurred as a result of non-reassuring heart tracings. In addition, WHO found that “in some technically well-equipped hospitals the monitoring is even centralized, enabling the attendant to look at the monitor in a central office without being obliged to enter the labor room” (1996).

In a study by Sandin-Bojo et al (2007), investigators found that laboring women associate fetal health with Electronic Fetal Heart Monitoring (EFM). The investigators

then concluded that “Women’s faith in EFM might indicate that the general public has not been made aware of the scientific evidence that EFM does not result in healthier babies for women at low-risk and an unawareness that there is a higher risk for emergency caesarean section and instrumental delivery (WHO, 1996; National Institute of Clinical Excellence, 2001; Thacker et al., 2001).”

In addition, Internal Fetal Monitoring (IFM) is also prevalent. With IFM, an electrode is attached to the baby’s head and serves to monitor the baby’s heartbeat (Jolly, 2006). Unfortunately, both EFM and IFM require the woman to be lying down and virtually immobile. This prevents women to move around to relieve pain. In addition, the use of these technologies contributes to the idea that birth is “high risk” (Beckett, 2005). However, research proves just the opposite. In fact, several studies have indicated that home births, under the supervision of midwives, are as safe, if not safer, than hospital births for low risk women (Wagner, 2006). And, despite doctors claims that interventions save lives, the United States has the highest maternal and infant mortality rates than all other developed, and some developing, nations (Keefe, 2003).

However, there is another alternative: intermittent auscultation. This is performed using a monaural stethoscope or a Doppler, both of which are usable in many positions. In the first stage of labor, auscultation is performed every 15 or 30 minutes; in the second stage, it occurs after each contraction. This form of fetal heart monitoring is simplistic, non-invasive, economical, and provides insight into the baby’s health status without

confining the laboring mother to a single position. In trials which compared EFM to auscultation, it has been conclusive that medical intervention and incidence of cesareans is increased in groups monitored by EFM (Haverkamp et al, 1976; Kelso et al, 1978; MacDonald et al, 1985; Wood et al, 1981; Neldam et al, 1986). However, this intervention did not result in a risk reduction for the neonates. In fact, neonatal mortality and the incidence of low APGAR scores remained unchanged in both groups. This information has prompted the WHO to advocate for the use of intermittent auscultation as the protocol for low-risk women—“In the majority of labors without increased risk, electronic monitoring increases the number of interventions with no clear benefit for the fetus and with a degree of additional discomfort for the women” (1996).

Artificial Rupture of Membranes (AROM):

A 2005 “Listening to Mothers” survey found that 65% of women had an Artificial Rupture of Membranes (AROM) or amniotomy. In a 1973 trial by Schwarcz et al, results indicated that AROM resulted in decelerations of the fetal heart rate. Also, there is no evidence to suggest that AROM results in favorable outcomes for the infant (Fraser et al 1991, 1993 & Barrett et al, 1992). Because of this lack of evidence of AROM’s benefits, the World Health Organization asserts that in “normal labor there should be a valid reason to interfere with the spontaneous timing of the rupture of the membranes” (1996).

Induction & Active Management of Labor:

Oxytocin administration with AROM is also referred to as “active management of labor,” a term first introduced to us by DeLee in the 1920s. The implementation of active management of labor calls for administration of oxytocin if labor deviates from the Friedman Curve’s indication of 1cm per hour. In addition, it calls for hourly vaginal exams. After AROM, these hourly vaginal exams increase the risk of infection.

Several studies have focused on the question of whether oxytocin administration shortens labor. Of these studies, only one showed a shorter labor. Conversely, the induction of women’s labors increases the likelihood of uterine rupture and cesarean section (Walling, 2000). In fact, one trial called for the control group to be mobile and change positions as they wished during labor. In this trial, the mobile control group actually had a shorter mean labor as compared to the oxytocin group (Read et al, 1981; Hemminki et al, 1985; Bidgood & Steer, 1987; Cohen et al, 1987; Lopez-Zeno et al, 1992). In a study by Hemminki et al (1985), women indicated that they were dissatisfied with labor augmentation, most indicating that it was “unpleasant.” 80% of these women reported that augmentation increased their pain levels. In two separate studies by Waldenström et al (1999, 2004), medical interventions including oxytocin administration were related to negative childbirth experiences. These studies indicate that there is no clear justification for the routine use of active management of labor (AROM and oxytocin). In fact, since there is no evidence to support labor augmentation

benefitting women or neonates, it seems that administration of oxytocin is a detriment to women if 80% of women experience increased pain.

Despite these findings, CDC records indicate that induction of labor increased from 9.5% in 1990 to 21.2% in 2004 (Martin et al, Births: Final Data for 2004). However, Joyce A. Martin of the National Center for Health Statistics, warns that the incidence is underreported; the majority of women in the US receive oxytocin at some point in order to induce or augment labor (Block, 2007). In fact, in the 2005 “Listening to Mothers” survey, investigators discovered that induction rates are actually over double the rates reported by the CDC (Declercq, 2006). This survey concluded that healthcare providers attempted to induce labor in four out of ten women. However, chair of the ACOG practice committee disagrees with this practice stating, “Ideally, you wait for natural labor, just by the mere fact of induction, you’ve now intervened in a pregnancy that otherwise would have continued, and you’ve already increased the risk of a c-section” (Block, 2007).

Following the principle that one intervention leads to another, oxytocin use also necessitates the use of electronic fetal heart monitoring. In addition, the administration of oxytocin, like EFM, requires a well-equipped and well-staffed facility. Because of the unpredictability of augmented labor, it is necessary to have access to surgical facilities in case a cesarean is necessary (WHO, 1996). The World Health Organization issues the following guidelines, “Oxytocin augmentation is a major intervention and should only be implemented on a valid indication” (1996).

Premature Rupture of Membranes (PROM):

Women who experience PROM, or Premature Rupture of Membranes, follow a specific protocol in the hospital. Because of the fear of infection, women *must* deliver within 24 hours of the PROM. If the labor does not appear to be progressing quickly enough within the time constraints, medical interventions (such as oxytocin and in many cases, cesarean sections) are implemented. Hospitals practice the “24 hour rule” in an effort to prevent infection due to the loss of the “protective barrier.”

However, Ellen Hodnett, an adviser to the WHO Department of Reproductive Health and Research, a member of the Cochrane Collaboration’s Pregnancy and Childbirth Review team, and a professor of Nursing at the University of Toronto, co-authored a study which looked at PROMs in 5,000 women (2006); she found that there was no increased in infection in women who were watched for up to 4 days after PROM. She concluded that, “The vagina is a nearly airtight passageway, so loss of the plug and rupture alone don’t significantly increase the risk of infection. Vaginal exams, however, do, and should be kept to a minimum following rupture” (Hannah et al, 1996). However, it is important to consider here that, in conjunction with the “24-hour rule,” delivery must occur within 24 hours following PROM; therefore, if labor is not progressing fast enough, most often women are given oxytocin. Given previous discussion, we know that oxytocin administration requires close monitoring including vaginal exams and internal monitoring—both of which are large infection risks for women (Block, 2007).

Do babies fit?

Yet, despite the recommendations and guidelines from both ACOG and the WHO, United States physicians still practice routine inductions for a variety of what they consider “justifiable” reasons. These include: babies being past their due date, “measuring big,” PROM (Premature Rupture of Membranes), and low appearing levels of amniotic fluid (Block, 2007). However, induction based upon these reasons is not supported by the literature. Suspected macrosomia, or inducing a baby which “looks” large, is saying: “*Well the baby is getting big, and if it keeps on getting this big, it’s not going to fit,*” explains Jacques Mortiz, MD, director of OBGYN at Roosevelt Hospital in NYC, ‘*Well, guess what? We’re not that smart.*’ Evidence has shown that size estimates via ultrasound can be inaccurate by a pound, either smaller or larger. Ironically, studies show that palpating the belly with hands is a more accurate method to determine fetus size. Moreover, statistics also provide evidence that fetal size levels off after 40 weeks gestation; therefore, the assumption that the longer we leave babies in, the larger and more unmanageable they will be is an inaccurate one (Block, 2007; Oken et al, 2003; Zamorski & Biggs, 2001).

What, then, defines “macrosomia?” Technically, the term describes infants larger than 4000g or 4500g, depending on the definition’s source. However, according to 1999-2000 birth data, 15% of term infants weighed over 4000g. So are we to assume that 15% of babies are abnormal? Arguably, the answer to this question is no. There is also no literature to show that the majority of babies over 4000g cannot be delivered vaginally. It

is also important to realize that infants are weighing more than babies delivered in the early 20th century, when women were encouraged to diet and to not gain weight during pregnancy. Therefore, an adjustment may be required to the medical community's definition of "normal" birth weight.

Another consideration with "big" babies is the concern that they will not "fit" through the birth canal. Or, conversely, women's pelvises are too "small" to accommodate the infant, also called cephalopelvic disproportion (CPD). In CPD, the infant's head supposedly cannot fit through the pelvis. However, this is near impossible to estimate given that the maternal pelvis was designed to expand during labor. Moreover, how can we label a woman's pelvis as "too small" or a baby as "too big" when we have women delivering in the supine or lithotomy position? If normal body mechanics are followed, it is evident that the pelvis reaches its greatest expansion, with the addition of gravity, when standing and/or squatting. In fact, the maternal pelvis is well-constructed for this very reason and, in late pregnancy, it is a very flexible body structure.

"Post-Term" Pregnancy

Currently, babies are considered delivered at "term" when delivery occurs between 38 and 42 weeks gestation. Women's due dates are determined based on 40 weeks from the first day of women's last menstrual period. According to Dr. Philip Hall, director of maternal-fetal medicine at St. Boniface Hospital, 40 weeks is a midpoint.

Therefore, by the definition of “midpoint,” this would mean that the same amount of births occur before 40 weeks as those which occur after 40 weeks. Thus, 40 weeks should be considered the bell of the curve. According to basic statistics, we should assume that two standard deviations to the left or right are considered within normal range. According to Dr. Hall, this would allow for 13 days before or after the 40-week mark. He asserts, therefore, that using this analysis, “a due date would be expressed more accurately as a ‘due month’” (Block, 2007).

Dr. Gary Hankins, vice chair of obstetrics and gynecology at the University of Texas Medical Branch and chair of the ACOG’s Obstetric Practice Committee, indicates that “the biggest indication for induction is post-term pregnancy – 41 weeks and beyond.” However, there have been no studies that prove that “post-term” (as it may be inaccurately labeled in the US) pregnancies cause neither neonatal distress nor a greater number of stillbirths. In fact, Dr. Hall concludes, “Babies who are stillborn at 41 weeks die for the same reasons as babies who are stillborn at 39 weeks.” He goes on to label the policy of induction post-40 weeks as “nonsense,” stating that “women should not be led to believe that ‘another few days will kill my baby’” (Block, 2007). French OBGYN Michel Odent agrees with Hall noting, “If you induce all women over 41 weeks, this leads to a higher rate of cesarean section.”

Episiotomy and Tearing:

“The perineum is an in-between place, defined by its borders, the vagina and the anus. During birth, this small tract of muscle and connective tissue will bulge and stretch to several times its normal size. Meanwhile, inside the body, the maternal pelvic structure is also stretching. The joints gain flexibility with the increase in progesterone and relaxin; the ligaments surrounding the joints soften as well; and the pubic bones can separate as much as 12 millimeters” (Block, 2007).

History reflects that preserving the integrity of the perineum has been a priority of intrapartum care as far back as records were kept. Drawings of early birthing chairs (Carson Banks: Birth Chairs, 10) as well as the oldest midwifery texts (from the sixteenth century) show that standing or squatting positions facilitated better stretching of the perineum during birth—and, of this, women were well aware.

Medline Plus defines an episiotomy as, “a procedure in which the skin between the vagina and anus is cut. (This area is called the perineum).” The first time episiotomy was introduced into literature was the 18th century; here, it was indicated for freeing “stuck” infants. However, in the 19th century, physicians recommended the use of episiotomy “as a method to preempt and redirect a severe perineal tear away from the anus when the physician thought that such tearing was inevitable” (Block, 2007). During the early 19th century, however, birth was still viewed as a natural, physiological process. Therefore, it was not until the early 1900s, that episiotomies became routine.

In 1918, R.H. Pomeroy echoed the beliefs of DeLee when he equated childbirth to violence; he described the fetus' head as "a battering ram wherewith to shatter a resisting outlet" (R.H. Pomeroy, "Shall We Cut and Reconstruct the Perineum for Every Primipara?" *American Journal of Obstetrics and Diseases of Women and Children* 78 (1918): 211-20). He proposed the question: "Shall we cut and reconstruct the perineum for every primipara?" In conjunction with the routine use of forceps during this time period as well as the support of physicians such as Pomeroy and DeLee, episiotomies became the norm. By 1930, this protocol was even included in medical textbooks. And, by 1950, *Williams Obstetrics* identified the practice as the most common operation in obstetrics, besides cord cutting. However, the prevalence rate was not officially recorded until 1979; at this time, more than 65% of women were receiving episiotomies.

Episiotomies create a second degree tear. Second degree tears necessitate vaginal and perineal stitches. However, logic of the time asserted that this tear would prevent more complicated third and fourth degree tears. In addition, "proponents argued that a clean, straight cut was easier to sew up than a jagged tear, and that is more prudent than risking the possibility of a severe tear" (Block, 2007). Although the practice remained rampant throughout the 20th century, doctors did begin to question the routine use of episiotomies anonymously in the 1970s and 1980s. 1984 saw the publication of the first research study focused on episiotomy use. Many more studies were conducted subsequently in this time period. Like many other labor interventions, episiotomy clinical trials showed the exact opposite of the original justification for instituting the process.

Green and Soohoo's 1989 study showed that the cutting of an episiotomy increased the likelihood of third and fourth degree tears by nine times (Green & Soohoo, 1989).

Episiotomies also contribute to rates of infection, urinary/fecal incontinence, pain, and issues with sexual functioning (Block 2007). In fact, in a labor without episiotomy, most women experience first degree tears. And, even second degree natural tears are mended with little difficulty. According to the World Health

THE WORLD HEALTH ORGANIZATION	
<i>Practices which are Clearly Harmful or Ineffective and Should be Eliminated</i>	
1.	Routine use of enema
2.	Routine use of pubic shaving
3.	Routine intravenous infusion in labor
4.	Routine prophylactic insertion of intravenous cannula
5.	Routine use of the supine position during labor
6.	Rectal examination
7.	Use of X-ray pelvimetry
8.	Administration of oxytocics at any time before delivery in such a way that their effect cannot be controlled
9.	Routine use of lithotomy position with or without stirrups during labor
10.	Sustained, directed bearing down efforts (Valsalva maneuver) during the second stage of labor
11.	Massaging and stretching the perineum during the second stage of labor
12.	Use of oral tablets of ergometrine in the third stage of labor to prevent or control hemorrhage
13.	Routine use of parenteral ergometrine in the third stage of labor
14.	Routine lavage of the uterus after delivery
15.	Routine revision (manual exploration) of the uterus after delivery

Organization (WHO), "first-degree tears sometimes do not even need to be sutured, second-degree tears usually can be sutured easily under local analgesia, and as a rule heal without complications" (1996).

Despite these conclusive findings in the 1980s, it was not until 2006 that ACOG issued an official bulletin to stop the practice of routine episiotomies. This decision came after the Journal of the AMA's literature review which ultimately concluded that episiotomies serve no benefits and furthermore, it is injurious. Despite the agreement

amongst the medical community that routine use episiotomy is dangerous and results in no benefits and greater injury, one-third of women still receive the procedure (Hartmann, 2005). Perhaps even more startling is the description of episiotomy as a “minor surgical procedure” in the 2002 edition of *What To Expect When You're Expecting*—the coffee table staple of most pregnant women (Merkoff et al, 2002).

Chapter 4

Defensive Medicine and Pop Culture

“Medicalization recasts human existence in terms of health and illness and has evolved to include types of deviance – understood as sickness – not previously associated with the medical/physical sphere” (Schlich, 2007). It is clear that there are many factors that contribute to the medicalization of birth and the high cesarean rates in the United States. These include: (a) the growth of technology and the use of medical interventions, (b) economic factors, (c) the malpractice climate, and (d) the value society places on appearance and sex appeal. The combination of these factors has allowed birth to be accepted as a medical procedure, contributed to both the fear and liability associated with birth, and permitted the cesarean section rate to rise to over 1/3 of all births.

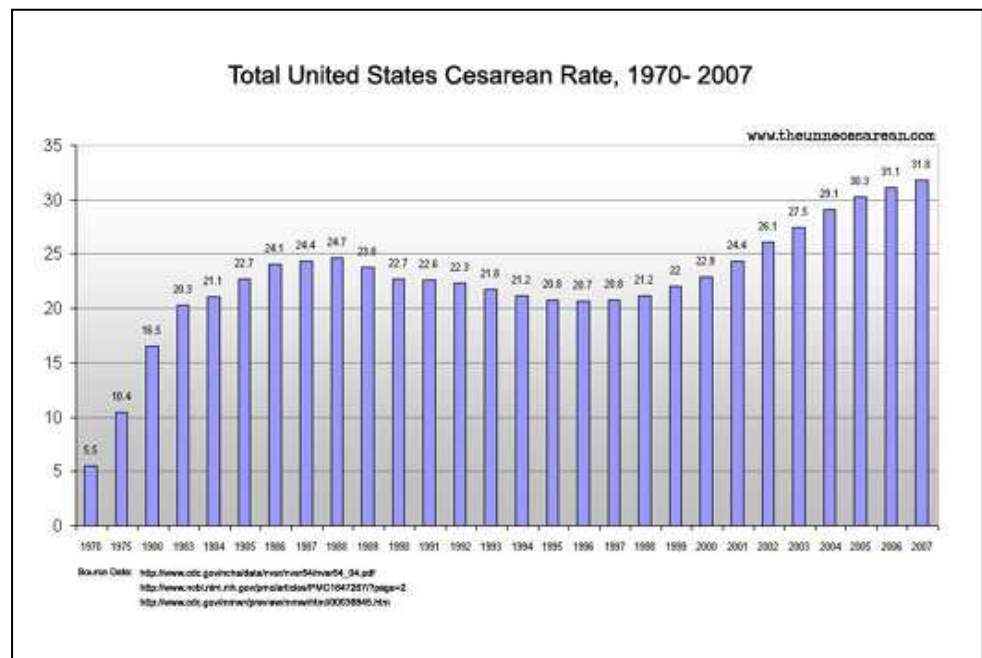
Economics

Childbirth is a business. Much like medicine is run by the same organizational structure as most large corporations in this country, childbirth always follows suit in its strategic business practices. Tonya Jamois, President of ICAN (International Cesarean Awareness Network), explains: “Obstetricians and hospitals have found that high-intervention birth, warranted or not, is very profitable. So there is a tremendous financial incentive to bypass the clinically optimal approach, and opt for convenience and profit. For example, many hospitals across the country have eliminated facility-based midwifery practices simply because the low-intervention approach, while clinically sound, does not

bring in as many dollars.” (Tonya Jamois, president of ICAN). Childbirth technology can wield a profit: “Induction is even a commodity: Adeza Biomedical, a CA based company, is seeking FDA approval for a diagnostic test that will predict a woman’s inducibility” (Block, 2007). “The betrayal of humanity’s greatest gift—birth—by the greed of US corporations. Hospitals, insurance companies, and other members of the health care industry have all pushed aside the best care of our infants and mothers to play the power game of raking in huge profits” (Ponte, 2007).

When discussing the economics of childbirth, cesarean section is typically the focus. “The cesarean section is one of the most common surgical procedures, and one of those most studied by economists, for good reasons: it absorbs billions of dollars of

health care resources annually, is used with widely varying frequency across regions and across providers, and is potentially responsive to a variety of economic



forces, including source of payment, malpractice liability, and financial incentives” (Grant, 2008). In a study by Gruber and Mayzlin (1999), researchers concluded that \$434

(1989 dollars) of additional reimbursement was the difference in the fee paid by Medicaid vs. private insurance. The explanation for this differential lies in financial incentives. Studies have consistently shown that doctors do respond to the differential fees between vaginal and cesarean births (Keeler and Brodie, 1993; Currie and Gruber, 2001; Currie, Gruber, and Fischer, 1995; Gruber and Owings, 1996; Gruber, Kim, and Mayzlin, 1999). However, the debate about the efficacy of financial incentives on physicians remains unsolved. In Jennifer Block's 2008 book, she writes: "Most literature on procedure use in obstetrics focuses on C-sections. There is a good deal of research showing that C-section rates are responsive to physician incentives and that American C-section rates are 'too high.' A Healthy People 2010 goal is to reduce the rate of C-sections to 15% from the current 30%. This figure suggests that unnecessary C-sections contribute as much as four billion dollars a year in excessive health care costs, as well as inflicting unnecessary surgery on million of mothers."

The issue of economics is intrinsically tied to the prevalence of cesarean sections in two ways: physician's profit and the public's healthcare costs. Scholar Angela Davis relates this issue to for-profit health care stating, "As growing numbers of medically indigent women are forced to go without prenatal care and proper nutrition, thus producing very low birth weight babies, every effort is made to keep those infants alive through the use of expensive, profit-making technology. The medical establishment's solution to an embarrassingly high rate of infant mortality in this country's poor communities is increased reliance on the technological miracles that keep low birth

weight babies alive, many of whom are born prematurely because their mothers could not obtain early, meaningful, and respectful prenatal care” (Edwards & Waldork, 1984). In addition, a study by Bailit, Love, and Mercer (2004), found that the rising cesarean rates are a result of physician and hospital behavior and have less to do with patient characteristics. This finding indicates that a majority of the burden for the rising rate of cesareans falls into the control of the healthcare system. This finding is an important one for standards of practice and patient care; it shows that the rise of cesareans is not because women are at more risk than in the past, but because there is a misuse of resources within the healthcare system. “Considering how lucrative the business of birth can be, it is not surprising that the health care industry is so deeply invested in keeping us all believing that we can’t live without them—in fact, that we can’t even enter life without them” (Ponte, 2007).

This misuse of resources is evident through several studies indicating that the current healthcare system ignores the needs of the underprivileged and over-treats those of high socioeconomic status. These studies found that female patients in private hospitals, with private insurance, have a higher likelihood of having a cesarean section despite the fact that the majority of births were deemed low-risk (Wagner, 2000). In fact, as early as 1989, researchers were investigating the costs of unnecessary cesarean sections. This research found that, “the high cesarean section rate in the United States is a major public health problem, one that is having and will continue to have a major impact on health care delivery. If the \$800 million that could be saved by reducing the cesarean

section rate by 5% were spent instead on prenatal care and preventative programs, dramatic effects on maternal and child health would be seen” (Sachs, 1989). The resources cesarean sections demand are vast: surgeons, additional doctors, anesthesiologists, nurses, equipment, additional medications, longer hospital stays, and additional training of all healthcare providers involved. This amount of resources dedicated to 1/3 of birthing women undeniably leaves fewer resources for other patients and healthcare disciplines.

In addition, according to Wagner (2000), planned home births attended by midwives are “as safe as or safer than” doctor attended hospital births for low-risk women. These midwives, operating as safely as or more safely than physicians, are able to assist in these deliveries at a lower cost. Therefore, not only is the medicalization of birth unnecessary physiologically, but it is also not necessarily economically sound for patients or insurance companies. However, if considering the economic gains of medical intervention in childbirth, it is also vital to examine contributors to this compliance and desire for financial incentives by physicians: the malpractice crisis.

Defensive Medicine

“You’d be crazy to do obstetrics now. It’s all about volume. You have to do volume now to survive,” says Dr. DeAngelis of St. Barnabas hospital in Block’s (2007) *Pushed*. He continues, “You tell me what other profession has to pay \$300 just to go to work every day. The bottom line is the care for patients. And as a consumer, the

consumer right now doesn't get a good evaluation. She gets 5 minutes in the office. [Labor] is a vicious cycle. I can't sit with the patient. I have to go back to the office." The volume of patients necessary, as DeAngelis describes, is due to high malpractice premiums, sometimes in excess of \$200,000 required to be paid by OBGYNs in order to practice.

In addition to the financial and time constraints placed on doctors as a result of high insurance premiums, we also live in a culture of fear. Tina Cassidy, in her book, *Birth: the surprising history of how we are born*, describes today's birth practices saying, "in another century, these birth plans will be the perfect time capsules of postmodern maternity, for if there is one thing that writing this book has taught me, it is that birth always reflects the culture in which it happens." And, it is undeniable that American culture is primarily based in fear. With regard to childbirth, as Ponte (2007) points out, birth is often directed by "the overriding fear of most doctors—even many midwives—of being sued for malpractice." This malpractice climate, in conjunction with our society's tendency to place blame, has caused physicians to look at all births as the worst case scenario. Ponte continues, "the safest route is to use every medical tool available, to show that all the bases have been covered." Maureen Corry, executive director of Childbirth Connection, the sponsor of the *Listening to Mothers* survey agrees stating, "our culture has an 'accident waiting to happen' mentality" she says of the survey's findings, "it makes birth go from a normal physiological process to something that resembles intensive care. I think it is indicative of the larger culture in general."

The fearful and cynical attitude of society overall clearly contributes to the tendency to sue and the threat of loss through litigation for doctors. In fact, Wisconsin is the only US state whose law precludes a damage judgment from taking doctors' property and assets. But, why is the climate in the US so litigious if our maternal and infant morbidity statistics prove so low year after year? Ponte (2007) points out, "we are an extremely risk-oriented society. We imagine all the things that can go wrong and we respond with a whole lot of preventive measures, many of which, in birth, cause the very things they are supposed to prevent." Ponte expands on the apparent conundrum saying, "why is it that the very things that cause birth-related morbidity rates to rise are seen as the 'safe' way to go? Why aren't women and their doctors terrified of the chemicals that are dripped into their spines and veins—the same substances that have been shown to lead to more c-sections? Why aren't they worried about the harm those drugs might be doing to the future health of their children as some studies are indicating might be the case? Why aren't they afraid of picking up drug-resistant staphylococcus infections in the hospital? And why, of all things, aren't women terrified of being cut open? Again, the response seems totally irrational."

One contributor, which both precipitates many childbirth interventions as well as feeds into the malpractice climate, is the Electronic Fetal Monitor (EFM). As Block (2007) discovered, "EFM exploited those medical legal fears, heightening the influence of malpractice on a physician's practice and on a woman's birth experience. It may have even helped create the litigious climate among obstetric patients. The 'strip' as the paper

readout is called, has been admissible courtroom evidence since the 1980s, so in most hospitals, continuous electronic fetal monitoring is mandated. It is their paper trail.” Not only does the EFM immobilize women during the period of labor where movement is essential to progression and pain relief, but it also causes a large amount of physician anxiety over the “paper trail” it leaves behind. EFM strips have been admissible in court since the 1980s; any expert can interpret the strip to mean a different thing. Freeman et al. expands on the “strip” anxiety faced by physicians saying, “Every patient is a potential plaintiff, every less than perfect fetal monitor strip potential evidence. Most doctors have dealt with more than one suit.” In Jennifer Block’s book *Pushed*, her interviews with doctors across the nation caused her to conclude that there seems to be a consensus among all the physicians she spoke with that EFMs only *increase* the chance of a cesarean. However, she goes on to explain that the legal protection of the hospital necessitates them, although it does not always offer the protection hospitals desire, she finds. One doctor told her, “the minute you see a deceleration on the heart monitor, you say maybe it’s fetal distress, better to do a cesarean. You see the ultrasound and think maybe it’s too big, maybe we’ll have a shoulder dystocia, better to do a cesarean. A lot of that is driven by fear of liability” (2007). Perhaps most interesting are the results of the studies on the accuracy of EFM. “The EFM is no better at detecting fetal distress than the humble fetoscope, and, in fact, the machine is more likely to be wrong” (Block 2007). A California study, which looked at 150,000 births, concluded that 99.8% of the time,

cerebral palsy was inaccurately predicted. This made the EFM “the only laboratory test in current use that, when abnormal, is wrong most of the time” (Resnik, 2006).

Similar to the discussion of financial incentives for doctors, the cesarean section is at the forefront of the malpractice and litigious climate surrounding childbirth in the United States. For example, Bakalar (2005) concludes that the increased US Cesarean rate (30% in 2004, from 20% in the 1980s) is motivated largely by the fear of litigation (Currie, 2008). One doctor was quoted as saying, “there’s no doubt in my mind that there’s more maternal morbidity with a cesarean. But a hole in the bladder, a post-operative infection—that’s not going to ruin their lives. A bad baby is going to ruin our lives” (Block, 2007). Many doctors admit that the decision for cesarean section is made much more readily than a few decades ago, mostly citing the malpractice crisis as the reason. The doctor continues, “everybody covers themselves in this profession. Unfortunately, this profession is outcome-based. If that kid has a shoulder dystocia, and there’s damage, that case will go to court and that doctor will lose. This same fear is behind the doctors refusing to attend high-risk breech births, VBAC, and twins, opting instead to schedule a cesarean, even though a cesarean also makes the birth higher risk.” Insurance companies are teaching physicians “how not to get sued;” many times this includes: no vaginal twins, no VBAC, no forceps, and cesarean at the onset of any complications. It seems that insurance companies are not the only ones cashing in on the malpractice crisis, however: “A Canadian company recently released a computer system called CALM (computer assisted labor management), and its purpose, essentially, is to

calm doctors down. Nurses punch in several criteria, and the software churns out a graphic representation of neonatal risks, such as shoulder dystocia and fetal distress.” (LMS, 2006). However, despite the fear driving both physicians and patients, it should still be the patient’s ultimate decision about the course of their labor, regardless of the fears or incentives premeditating the doctor’s procedure. Block writes, “from a legal standpoint, the moment a woman says, ‘I do not want a c-section’ or ‘I do not want continuous EFM,’ a physician’s fear of liability is irrelevant. The protocol is to document the patient’s decision and move on. Caregivers’ duty is to provide care and honor patients’ rights.” She continues, “There’s a concept in law called ‘undue’ burden. The term, which is understood as an excessive difficulty or expense, applies to abortion: the Supreme Court has ruled that a state can’t create so many obstacles to the procedure that the woman’s right to it is rendered meaningless. Is it an undue burden for a woman seeking optimal maternity care in the US to have to pay thousands of dollars out of pocket for a midwife that her insurance won’t cover? To have to travel to another state to avoid a cesarean? To have to give birth in a motel? Or labor in a parking lot? Or spend her entire birth experience saying ‘no’?” (2007).

Why is there so much hysteria over conditions with a low probability? The majority of babies are born without complication, as nature intended. “One could argue that the ‘liability crisis’ is to blame for the unique attitude in the United States, but it seems to me that suspended in the chasm between evidence and practice is a profound cultural denial that goes beyond malpractice anxiety of convenience. Somehow we are

willing to accept repeated major abdominal surgery for women—mothers, who have to go home and take care of an infant. Or twin infants, or an infant and toddlers, no less—when at the same time, in other surgical specialties, there’s been concerted effort to reduce the frequency of exposing the abdominal cavity.”

Cesarean upon Maternal Request

Using the information an analysis of our present society gives us, it is easy to conclude that fear would play a large role in women electing to have a cesarean section. Birth is perceived as a high risk, medical procedure. For example, “women are so worried, in fact, that there’s a new psychiatric diagnosis: tokophobia, the fear is giving birth” (Hofberg & Brockington, 2000). And, it is no wonder. Birth is portrayed in the media as painful and scary. In a recent study, a new mother expressed, “Why have all that prolonged pain when you can have your baby in 45 minutes? I feel that if I am less stressed then my baby is less stressed, and as far as I am concerned, that is good news all around” (Schindl et. al, 2003). This statement illustrates the lack of patient education that is occurring between women and their health care providers. Another woman elaborated, “I originally decided upon an elective c-section because I am a bit of a baby when it comes to pain—I was afraid I would not be able to handle childbirth and was so worried about all the things that could go wrong” (Schindl et. al, 2003). Patient education is clearly lacking with regard to childbirth. The 2006 *Listening to Mothers* survey found that “one in four women surveyed had attended a class in childbirth education—however,

68% of these women had watched one or more television ‘reality’ shows that depict childbirth” Maureen Corry, executive director of Childbirth Connection, which sponsored “listening to mothers” surveys believes that the sensationalism present in reality shows and the type of birth they depict cause women to label these television birth occurrences as “normal.” “It has become impossible to sort out the difference between sensationalism and valuable information. And this very uncertainty itself provokes more anxiety, adding yet another layer of fear” (Ponte, 2007). In the survey, 72% of first time mothers felt that watching these shows “helped me understand what it would be like to give birth.” Patient education is coming from television, not from the health care provider.

And, the communication between doctors and their patients does not improve even when a woman requests a cesarean. Despite “informed consent” requiring the patient to receive information about all of the risks of the procedure, most women do not receive even a portion of the data on cesarean risk when discussing the possibility with their physician. In fact, according to a review of the literature, the majority of doctors *would* honor a woman’s request to have a cesarean section, even if nulliparas (first child) or no history of cesarean section (Gonen et al., 2002). This is due to their self-declared belief that a woman should have the right to choose her mode of delivery (Bettes et al., 2007). Doctors, the ACOG, and the NIH seem to have no qualms about these requests being honored without the proper information and education being given to women in order to make a decision.

This is further exemplified through the results of Bracken et al.'s study on maternal preferences on delivery, which showed that although women believe that cesarean deliveries could cause more maternal injury, they also believe that c-sections have less of an effect on sexual function (2008). Moreover, these women believed that cesarean is a less painful option, is least likely to affect sex, and less likely to injure the infant. Women who were nulliparas were most concerned with damage to the vaginal wall (affecting sexual function and desirability), changes to sexual drive and function, and the need for an episiotomy. Bracken et al. (2008) concluded that although the majority of women in the study did prefer a vaginal delivery, women, nulliparas especially, showed significant distress due to a lack of pre-natal patient education. This unique study suggests that with more education on the different delivery methods and risks and benefits of each, there could be a significant reduction in anxiety. Moreover, this education would lead to more informed decisions by patients.

The ACOG and the National Institute of Health (NIH)'s conference on Cesarean Delivery Upon Maternal Request have created quite the buzz over this topic. However, how many women are actually electing this procedure? Britney Spears and Victoria "Posh Spice" Beckham were not the first to speak out about elective cesarean, though the media has highly publicized their births. In fact, DeLee spoke of the choice to have a cesarean as far back as 1921 saying, "Many women are ready to undergo the slightly increased risk of cesarean section in order to avoid the perils and pain of even ordinary labor. I am confident that if the women were given only a little encouragement in this

direction, the demand for cesarean section would be overwhelming.” More recently, Hankins of the ACOG agrees with DeLee asking, “If women can make a choice to do things like breast augmentation or any other cosmetic surgery, then why would they not have the choice to have a cesarean delivery?” Yet, why is it that the medical community and our society as a whole believe women deserve the right to choose cesarean birth yet do not have the opportunity to choose natural, physiological birth under the supervision of a her doctor? As Block summarizes, the medicalization of childbirth today “leaves women ‘choosing’ between poor labor management and major surgery” (2007). There is not a simple answer to this choice. One doctor in Block’s *Birth* comments on this essential lack of choice saying, he blames “the subtle infusion of technology into obstetrics...the numerous tubes, drugs, and attachments...No wonder some women may choose cesarean delivery.”

And, in 2003, the process become much easier for doctors and the patients whose fear and lack of options presents limited room for real choice. In 2003, the ACOG released an opinion piece which essentially labeled cesarean delivery upon maternal request as “ethical;” this, in turn, made physicians much more free to perform the procedure. This begs the question: are women actually *choosing* to have a cesarean or are the limits to “ethically” perform a cesarean so low that doctors feel more justified performing them with little justification? Howard Minkoff, chair of OBGYN at Maidmonides Medical Center in New York’s largest L&D ward, and a member of the NIH planning committee for the Cesarean Upon Maternal Request conference weighs in

saying, “no one has come up to me and said, ‘I have absolutely no indication, but I’m like Britney Spears and I’m too posh to push.’ Maybe that happens where women do lunch, so to speak. But that’s never happened to me. What is happening is that the threshold for doing a cesarean has dropped” (2006). He continues, “doctors are sort of saying, sotto voce, ‘well, since we’re allowing elective sections, then why should I worry about sectioning somebody in labor for mediocre reasons?’ Now we don’t need any reason” (Block, 2007). This sort of freedom—the ability to perform patient-elected cesareans—also seems to give doctors a rationalization for physician-elected cesarean. One doctor and researcher in the field, Peter Bernstein, went so far as to call “the desire for a medically unnecessary cesarean a ‘failure of modern medicine and society at large’” (Block, 2007).

The question still remains: why is the focus on patient-elected cesareans? In reality, the data on the incidence of this is very poor. The NIH authorized a feasibility study in 2006 that “gathered focus groups of childbearing age women, pregnant and not, and asked them whether they would be willing to participate in a randomized controlled trial, risking randomization to surgery. They overwhelmingly said no.” In addition to women’s lack of desire to participate in electing the path of their birth, any study would lack one important control: the comparison to physiological birth. Minkoff agrees that the focus is misplaced: “Rather than focusing on the less than one percent of this that may be attributable to cesarean by choice, it’s time to reopen the question that hasn’t been looked at in 25 years, when the section rate was roughly half it is now.” Block reinforces his

opinion stating, “meanwhile, the focus on ‘patient choice’ ignores the larger issue, which is that the vast majority of women do not ask for cesareans, and two-thirds are still unplanned and performed during labor.” (2007). Where should the focus lie? As a culture, we need to tackle the real issues inherent in a cesarean rate exceeding 1/3 of the birthing population: what effects does this major abdominal surgery have on mothers? What are the maternal risks? What are the neonatal risks? Women and their bodies need to be empowered to complete the process their bodies were designed to carry out in their own way, designed by their own choices, and having been provided with the most current, accurate, and thorough information available. It is the responsibility of the health care profession to deliver this kind of care to women. And, if physiological birth became a real choice to women, perhaps medically unnecessary cesareans would become the exemption, rather than the rule. “Our future anthropologist might soon conclude that the answer lies in our culture’s biggest fear of all—of letting go and allowing natural processes to carry on—and our fascination with and blind faith in science and technology as the ultimate antidotes” (Ponte, 2007).

Chapter 5

Maternal and Neonatal Health Effects

“Many Western doctors hold the belief that we can improve everything, even natural childbirth in a healthy woman. This philosophy is the philosophy of people who think it deplorable that they were not consulted at the creation of Eve, because they would have done a better job” (Kloosterman, 1994)

The history of childbirth in this country is a rich one, with several recessions, transitions, and transformations. In conjunction with the shifts in the location of birth and the attending provider for that birth, there has also been a grand evolution in the use of technology and procedures during birth, which has left feminists, activists, health care professionals, and even mothers wondering “what *is* ‘normal’ birth?”

What is normal birth? In a study by Sandin-Bojö et al, researchers examined women’s perceptions of their birth in comparison the WHO recommendations. They asked the question: if WHO defines normal birth as achieving healthy mothers and babies while using the least amount of medical intervention, do women who experience multiple interventions identify their births as abnormal? The study actually found that the majority of women, 84%, rated their birth as normal despite the fact that most of their women received oxytocin, epidurals, and episiotomies. Hemorrhage and extended hospital stays also did not prevent women from labeling their births as normal. It follows that women

must have great faith in their health care providers; this is why it is essential that health care providers ensure women understand all interventions and procedures and the risks that follow with them. If health care providers do not take it upon themselves to inform their patients, they are taking advantage of women's broad definition of "normal," which clearly leaves adequate room for all types of medical interventions. This loose interpretation of normalcy warrants a more thorough approach for patient teaching. In order to provide patients with the proper teaching as well as be care providers committed to evidence-based practice, it is vital to consider the maternal and neonatal health effects of medicalized childbirths which so often result in cesarean sections.

Neonatal Respiratory Morbidity

When comparing vaginal delivery to low risk births delivered by cesarean section, the potential benefits for vaginal delivery include a lower risk of prematurity, shorter hospital stay, and fewer respiratory complications. In fact, transient tachypnea and pulmonary hypertension are increased with elective cesarean sections, regardless of gestational age (Jain and Dudell, 2006). At the same time, however, gestational age plays a role in the development of such respiratory problems as Respiratory Distress Syndrome (RDS). In a study by Morrison, Rennie, and Milton (1995), RDS is reduced in newborns if the cesarean delivery is delayed beyond 39 weeks gestation. Yet, the majority of cesarean deliveries occur before the onset of labor due to doctors and patients' preference to deliver once the baby reaches term. Here, the possibility of miscalculating gestational

age coupled with the morbidities that come along with this mode of delivery increase the need for care in neonatal ICUs across the country. As evidenced by the study by Morrison et al., these morbidities and admissions to NICUs are preventable, either by delivering vaginally or delaying cesarean section until post 39 weeks. These findings are consistent with research into fetal lung maturity and the passage through the birth canal.

Jain and Dudell's (2006) study also confirmed the commonly held belief that the passage through the birth canal along with the exposure to the hormones and catecholamines released in normal labor improve the transition for the neonate between the uterus and the open air. Also, although many respiratory morbidities do not require intervention, some neonates require prolonged oxygen therapy, mechanical ventilation, and, in rare cases, result in death (Jain & Dudell, 2006; Tita et al., 2009). Some studies (Gerten et al., 2005) have shown that there is a decrease in respiratory morbidities if a cesarean delivery is performed after the onset of labor; however, others (Levine et al., 2001) have conflicting findings. Due to these findings, some researchers recommend waiting until the onset of spontaneous labor to initiate an elective cesarean delivery, although the research is very conflicting. Yet, the National Institute of Health concluded that, "without biochemical assessment of fetal lung maturity, elective cesarean delivery should not be undertaken before 39 weeks' gestation by strict criteria" (2006). Tita et al.'s (2009) study also confirmed this recommendation by the NIH, stating that, "elective

repeat cesarean delivery before 39 weeks of gestation is common and is associated with respiratory and other adverse neonatal outcomes.”

Several clinical trials conclude that ECD (elective cesarean delivery) prevents the physiological changes in the respiratory system of the neonate from occurring, thus leading to increased morbidities. Moreover, infants birthed by cesarean section face respiratory complications ranging from Respiratory Distress Syndrome (RDS) to chronic asthma and are four times more likely to develop persistent pulmonary hypertension, a potentially life-threatening condition (Ponte, 2007). In another 2006 study, Many et al. examined the rate of respiratory morbidity in infants born by elective cesarean section. The population contained only those births that occurred by cesarean delivery at the scheduled time, serving as the experimental group. In the past, it has been hypothesized, and later confirmed through in vitro studies, that the vaginal mode of delivery results in physiological changes in the respiratory system of the neonate. Thus, cesarean delivery would prevent these changes from occurring, leading to increased morbidities. The control group was a group of women who labored spontaneously and delivered vaginally. The study found that the rate of respiratory morbidity in neonates delivered via cesarean section was significantly higher than in those neonates delivered vaginally. Specifically, 5 of 277 cesarean delivery infants were admitted to the NICU due to respiratory problems/disorders, while no vaginal delivery infants were admitted. In addition, this study found that other maternal morbidities, such as postpartum fever and hemorrhage,

were significantly higher in the study group (ECD) over the control group (vaginal delivery). Hansen et al. (2008) also showed that neonates delivered via cesarean at 37 weeks shared a 10% incidence of respiratory morbidities (RDS, TTN, or PPH), while 2.8% of neonates delivered vaginally suffered from RDS, TTN, or PPH. Yet, it is important to note that, again, with increasing gestational age, the rate of respiratory morbidity with cesarean delivery decreased to 1.5% and was comparable to the risk associated with vaginal delivery. However, among the 1.5% of term infants with respiratory morbidities, serious complications resulted, which required treatment for more than 3 days with continuous oxygen, continuous positive airway pressure, or mechanical ventilation.

United States birth data suggests that neonatal mortality is 1.5 times more likely in cesarean delivery than vaginal delivery (Macdorman et al., 2006). Vaginal deliveries are not without complication, however. Rare complications of vaginal deliveries include neonatal asphyxias, intracranial hemorrhage, and encephalopathy. Also, the risk for brachial plexus injury is higher for neonates delivered vaginally than via cesarean. Badawi et al. (1998) studied 164 term infants with encephalopathy and concluded that there was a decreased risk of encephalopathy with elective cesarean compared with spontaneous delivery. There was an 83% risk reduction for neonatal encephalopathy for patients who did not enter labor, but rather underwent elective cesarean delivery. Yet, another study by Hankins et al. (2006) concluded that the risk reduction benefit would

amount to over 5,000 elective cesareans in order to prevent one case of ischemic encephalopathy.

Maternal Morbidity

In addition to neonatal risks, there are severe maternal dangers to this increase in cesarean sections. Studies show that cesarean mothers face postpartum cardiac arrest, wound hematoma, hysterectomy, major puerperal infection, anesthetic complications, venous thromboembolism, and hemorrhage requiring hysterectomy, in far greater numbers than women who have vaginally delivered (Armson, 2007). Additionally, having a cesarean section means higher rates of infertility, ectopic pregnancy, and potentially severe placental problems in future pregnancies.

The cesarean mode of delivery is a surgical procedure; therefore, it poses several surgical risks. These risks include damage to other organs, hemorrhage, infection, and complications of anesthesia (Burrows et al., 2004). Cesarean sections often come at the expense of severe pain, blood loss, and the possibility of requiring a transfusion. Cesarean sections also demand a longer recovery period, with the woman often unable to stand up or walk for extended periods of time. A cesarean section also carries a higher rate of maternal mortality (Hannah, 2004). In the long term, women who have c-sections have an increased risk of uterine rupture, spontaneous abortions, hysterectomy, and ectopic pregnancy (Beckett, 2005). Proposed benefits of cesarean delivery include, in

some cases, prevention of fetal demise and injury as well as a reduced risk of disease transmission, such as Herpes or HIV (Handa et al., 2004).

The study, “Is planned cesarean childbirth a safe alternative?” (Armson, 2007), is a longitudinal study which included the population of all women in Canada who gave birth between 4/91 and 3/05. Of this population, researchers chose a cohort of healthy women who underwent low risk cesarean birth and a cohort of healthy women who underwent low risk vaginal birth. Researchers excluded women with a prior cesarean delivery, multiple pregnancies, preterm labor, and medical risk factors or complications. The study examined factors such as: (a) maternal morbidity, (b) postpartum cardiac arrest, (c) wound hematoma, (d) infections, (e) hemorrhage, and (f) hysterectomies between the two cohorts as a result of the birth. The results of the study showed that the cesarean group carried a maternal morbidity risk 3.1 times higher than the vaginal delivery cohort. In addition, the study concluded that there is a significant increased risk of the above factors in cesarean births. This suggests that, with regard to medical practice, health care providers, in the best interests of the patient, should make their patients aware of the increased risks of medical interventions and cesarean sections (especially when the medical interventions are shown to precipitate cesareans) and encourage the practice of low-risk vaginal delivery.

Research also supports that vaginal deliveries also pose risks to laboring mothers. Though the literature is conflicting (Waetjen, 2001), there are reports that vaginal

delivery accompanies increased risk of urinary incontinence (Bahl et al., 2005), fecal incontinence (Casey et al., 2005), and pelvic organ prolapse (Lukatz et al., 2006). The benefit of vaginal delivery is that it is not a surgical procedure, may not require anesthesia, aids in the pulmonary mechanics of the neonate, and offers mother and baby the opportunity for immediate nursing and bonding (Grisaru et al., 2004).

Adverse Health Effects

Many risks have been identified with this major abdominal surgical procedure. These risks include a possible pre-term delivery. Since the body does not go into labor naturally, physicians mainly estimate gestational age and subsequently decide when it is safe to deliver. In addition to effects on the mother, cesarean sections also affect the baby. Research has shown that babies delivered via cesarean section have lower APGAR (activity, pulse, grimace, appearance, and respiration) scores (Wagner, 2006). The rate of infant mortality doubles. There is also a correlation between c-section babies and the development of asthma in childhood or as an adult.

However, many cesarean section advocates argue that c-sections reduce the risk of pelvic floor dysfunction and urinary incontinence (Hannah, 2004). According to Dr. Elaine Waetjen, of the University of California Davis, “Preventative strategies should cause no more harm than the disease or problem that they are trying to prevent” (Waetjen, 2001). In fact, a recent study in Brazil found a 3.5 fold increased risk for pelvic floor dysfunction and urinary incontinence for women after elective c-sections;

this is equal to the increased risk for women giving birth vaginally. This study included more than 3,000 patients (Waetjen, 2001). It concluded that there is an equal risk for pelvic floor dysfunction and urinary incontinence in all methods of delivery. The rate of respiratory morbidity in neonates delivered via Cesarean section is significantly higher than in those neonates delivered vaginally. Maternal morbidities are significantly higher amongst elective cesarean delivery over the vaginal delivery groups. Overall, the risk of maternal morbidity for cesarean section is as much as 3 times that of planned vaginal deliveries. Risk of postpartum cardiac arrest, wound hematoma, hysterectomy, major infection, anesthetic complications, venous thromboembolism and hemorrhage requiring hysterectomy is also significantly higher for women undergoing cesarean section. The risks and consequences of Cesareans, especially when not medically necessary, outweigh any supposed benefit.

Because of the perception that birth is dangerous and high risk, cesarean rates continue to rise because women have grown to fear birth, and nurses and doctors currently do not educate patients about the errors of that belief. With regard to nursing practice, certified-nurse midwives, in the best interests of the patient, should make their patients aware of the increased risks of elective cesarean sections and encourage the practice of low-risk vaginal delivery.

The maternal and neonatal health effects of intervention-laden labors often resulting in cesarean sections is one of grave importance to the medical community. As

evidenced by the clinical trials cited above, there are severe maternal and neonatal consequences to cesarean sections. These studies show that mothers face postpartum cardiac arrest, wound hematoma, hysterectomy, major puerperal infection, anesthetic complications, venous thromboembolism, and hemorrhage requiring hysterectomy. Infants face Respiratory Distress Syndrome (RDS) and other respiratory complications. These findings point towards one conclusion: the issue of cesarean birth in the United States is one that needs to be addressed by the medical community for the well-being of both the woman as well as the fetus she is carrying.

There is a definite need for further research here. Studies need to include large sample sizes, specific independent variables, and also provide ways to explain why the variables are affected in the results. Many of these studies lack the ability to explain why certain factors affect one group more than the other. If we were able to explain the process rather than solely the result, we would progress further towards a more evidence-based practice with regard to obstetrics and gynecology. In addition to further quantitative research, there is a need for qualitative research as well. As a society, we need to examine why women are so inclined to elect to have a cesarean section. The reasons, rationale, and fears that contribute to this culture of cutting need to be studied so that ways to combat those very fears can be identified.

Chapter 6

Midwives and a Broken Maternity System

Dirty and unscrupulous. Gin-fingering. Filthy and ignorant. Not far removed from the jungles of Africa. Pestiliferous. Malicious. Un-American. With woman. These phrases have all been historically used to describe midwives. The derogatory words were adopted by American medical journals in the early 20th century in the effort to abolish the practice of midwifery and move birth into the hospital under the care of obstetric surgeons. The last term, “with woman,” is the actual Old English meaning of the word “midwife.” Before the 20th century, midwives were “with woman” in the United States as well; however, in Gardner, Massachusetts in 1909, a judge sentenced a woman to three months on prison. Her crime was that she was midwife. Physicians labeled midwives incompetent, and the legal system took their word for it. Soon after, midwifery was illegalized in Massachusetts, and the rest of the states followed suit. Midwifery remained illegal for more than half a century. Unlike other nations, as medical technology progressed, midwives were singled out in a proverbial witch-hunt in the US and ultimately eradicated. In Europe and the rest of the world, physicians began to utilize technology to assist high risk pregnancies and the midwives remained the caretakers for the low risk women, who benefited most from this midwifery care, and still do today. Nevertheless, this was not the standard in the US in the early 20th century and remains markedly absent from our national maternity system presently as well.

At the Madera County Hospital in Madera, CA, obstetricians were tired of delivering so many women and ultimately refused to attend low risk births. Instead, midwives were introduced into practice at the hospital. Two years after this shift, the rate of babies dying at the Madera Country Hospital was reduced by 50%. Afraid that the medical model of birth was threatened, the same obstructions who essentially quit agreed that they would begin attending births again contingent upon the firing of the midwives. The hospital complied with their request, and not much after the doctors' return, the rate of neonatal death in the hospital rose to its previously high levels. This story is not unlike what has happened, and is happening, across the country with regard to midwives and the quality of maternity care they provide. Midwives face many obstacles and challenges in their practice, despite scientific evidence proving their efficacy and superior quality of care. Yet, the power the physicians wield is undeniable, as evidenced by this example.

The general population, including obstetricians, has a narrow understanding of the practice of midwifery. After the witch hunt of the early 1900s eliminated the practice of midwifery, it was lost as a legitimate health profession and replaced with a legacy of circumspection, misinformation, and confusion. Finally when Mary Breckinridge introduced the idea of Nurse-Midwifery in the mid-to-late 20th century, legal midwives remerged after more than fifty years. Today, there are three types of midwives in the United States. The first is the Certified Nurse Midwife (CNM), an RN who goes on to graduate school and is certified by the American College of Nurse Midwives (ACNM). Next, there are the direct-entry midwives of which there are two types. The Certified

Professional Midwife (CPM) is certified by the North American Registry of Midwives and Certified Midwives (CM) are certified by the ACC, a branch of the ACNM. Though midwifery has been legal for almost a half century in the United States, they are still forced to fight against their legacy of persecution and illegitimacy. Today, midwives face the conflict between their practice and the practice of obstructions, legal, social, and political challenges, the lack of evidence-based practices in the modern maternity care system, and a general ignorance of the midwifery model of care. However, if we are to bring the focus of the maternity care system in the United States back to the woman and baby, it is vital to examine the challenges midwives faced, the strengths and successes they boast, and a vision for a system in which medical intervention is virtually eradicated for low risk women due to the deliverance of care by midwives.

Modern Maternity Warfare: Obstetricians vs. Midwives

If researcher and author Irvine Loudon (1993) had to pick “one factor above all others as the detriment of high maternal mortality in the USA, I would unhesitatingly choose the standards of obstetric training in medical schools.” Neonatologist and author Marsden Wagner goes so far as to say, “midwives are not second class obstetricians, but rather obstetricians are second-class midwives” (2006). It is clear there is a dichotomy between the practice of obstetricians and that of midwives. Unlike the rest of the world, the US lacks a collaborative relationship between the two specialties—one which should be based on mutual respect and acknowledgement of equal standing. Wagner goes on to

explain this dichotomy through an analogy: “Having an obstetrical surgeon manage a normal birth is like having a pediatric surgeon babysit a normal two year old. Both will find medical solutions to normal situations—drugs to stimulate labor and narcotics for a fussy toddler. It’s a paradigm that doesn’t work” (2006).

Midwifery, however, does not operate under such principles. Midwifery views birth with an aura of normalcy, while the obstetric mentality is one of abnormality. Midwives focus on patient relationships, education, satisfaction, and other subjective feelings and fears women experience during the trying period which is pre and post partum. Physicians focus on the physiological, often the pathological (most pregnant women’s concerns do not deal with specific medical problems, but rather, focus on the emotional aspect of care). In fact, mothers served by nurse-midwives are more likely to keep prenatal care appointments, to follow treatment regimens, and to express fears and anxieties that they feel are too trivial or silly to put to physicians (Strong, 2000). The difference in practice methods is evidenced by the difference in the average office visit times: obstetricians see women for an average of 10 minutes, while midwife visits normally last 24 minutes on average (Wagner, 2006). Low risk mothers truly need this time provided by midwives, their caregivers—this time is a commodity in physician’s offices. The midwife-client relationship provides an opportunity for advice, reassurance, and alleviation of common fears and anxieties; most physicians have neither the desire nor the time for this kind of relationship.

For some physicians, it is, indeed, a matter of being spread too thin: in no other area of medicine are doctors expected to be general practitioners (office visits), skilled surgeons (cesareans and general gynecological surgery), and gynecological diagnosticians (women's reproductive care throughout the lifespan). For this reason, in Europe and the rest of the world, physicians only attend high risk births, focusing their profession on its basis: medical procedures and surgery. It should be noted that in every country (Western and Central Europe, Australia, New Zealand, Japan) that has a lower maternal mortality rate than that of United States, it is midwives who manage normal pregnancies and birth (Wagner, 2006).

Wagner suggests that it is simple to decipher whether a physician possesses a genuine care and concern for pregnant women and openness about their care: ask their opinion on midwifery, he says. Yet, most physicians do not see midwifery as a burden relief for them, rather, they see them as competition. Wagner asserts that midwifery is a career path which has historically attracted powerful, strong, and independent women; because these women are often unable to be manipulated or controlled, men (obstetricians in this case) come to fear them. Thus, they must find a way to control midwives in order for childbirth practice to remain a largely patriarchal system. This antagonistic view of midwives in the US is in stark contrast to the rest of the globe where midwives are highly valued health professionals. So antagonistic a view is midwifery in the United States that the American College of Obstetrics and Gynecology (ACOG) has spoken out against its practices time and time again. Two past presidents of the ACOG,

W.H. Pearse (1977) and Dr. Keith Russell (1992), made public statements equating planned home birth with child abuse (Wagner, 2006). Even more shocking, at ACOG's 2006 conference in Washington, DC, they gave out bumper stickers which read "Home Deliveries are for Pizza" (Block, 2007). Another disturbing announcement came on the heels of the largest, most scientifically rigorous study on out-of-hospital birth in US history, ACOG, in 2006, stated that they do not support the provision of care by lay midwives or other midwives, also going so far as to say that ACOG does not support programs or individuals that advocate for or who provide out-of-hospital births. The 2005 study that preceded this declaration by Johnson and Daviss followed 5,000 planned home births attended by CPM. Of the 5,000 women, 95% gave birth vaginally with babies born just as safely as those born in the hospital (2005). Despite this overwhelming evidence of the safety of midwives and home birth, the ACOG has been unrelenting.

Making American Childbirth Practices Evidenced Based

Though much research exists on the efficacy, benefits, and success of midwives, the United States has not moved towards a maternity system in which midwives attend the births of low risk women. In fact, only 9% of US births are attended by midwives annually (Wagner, 2006). Nevertheless, it is important to examine the scientific literature that exists in support of the advancement of the midwifery practice.

Many studies have proven that midwife attended births result in more satisfied women with more positive birth experiences than women who deliver with an

obstetrician. Moreover, a 1998 study by MacDorman and Singh, examined all births in the United States in one year (eliminating high risk births, leaving only low risk in the study group) and found that midwife deliveries boasted 33% fewer neonatal deaths, 31% less low birth weight infants (thus reducing the number of brain damaged infants), and far fewer medical interventions. In fact, in midwife attended births, actual medical procedures (interventions) occur less than 20% of the time. Ironically, the Journal of Medical Economics shows that while midwives more than halve the amount of dangerous, unnecessary medical interventions; in return, their salaries are more than halved when compared to obstetricians. Still, studies such as that by MacDorman and Singh provide a means of comparison between low risk births attended by midwives vs. obstetricians—studies which consistently result in midwives providing safer, less expensive, and more satisfying experiences for mom, baby, and family.

Wagner asserts that the ACOG and medical model's focus on the concept of 'safety' is irresponsible and misleading to women and families. "If the obstetric tribe says that out-of-hospital birth is not 'safe,' the implication, of course, is that a hospital birth is safe, which is not true," he says. He points out that babies die in hospitals daily, sometimes because mistakes are made, yet "when the obstetrics establishment implies that this doesn't happen, the family naturally feels deceived when it does happen" (2006). Neonatal death and caregiver mistakes are often related to the complicated medical interventions and procedures imposed on women during the course of a typical hospital birth. With regard to interventions, a study by Benjamin, Walsh, and Taub (2001), found

that pregnant women under the care of midwifery practices have less “interventionist labors” than conventional care. These results suggest that the incorporation of midwifery practice into all low risk women’s labors would reduce maternal and fetal risk due to medical interventions such as EFM, epidurals, vacuum extraction, and episiotomy during delivery. In addition, the extra care, time, and attention provided by the midwife would also benefit the health of mother and baby. One study found that one-on-one continuous care by the same person throughout labor results in shorter labor, less pain, fewer complications, and increased safety for mom and baby (Enkin et al., 2000). A study by Eugene Declercq at the Boston University School of Public Health looked at more than 80,000 home births in the US between 1989-1992. Outcomes in this study, which included poor women with little access to prenatal care, were no worse than hospital deliveries. In another home birth study, in a group of 496 low-risk mothers receiving care from NM, only 14.5% (72) were transferred to obstetricians for delivery (Schimmel, 1992). This was compared to a low-risk group of mothers receiving care from obstetricians, which identified a cesarean rate 50% higher than that of the nurse-midwives (Blanchette, 1995). Again, the safety of home birth is arguably due to the midwifery care’s intervention free goal: fewer episiotomies, fewer forceps and vacuum deliveries, fewer epidurals, and fewer c-sections.

Furthermore, in an extensive review of pain and women’s satisfaction with birth experience, personal expectations, the amount of support from caregivers, the quality of the caregiver/patient relationship and involvement in decision making appeared to be

more important than pain relieving methods, the physical birth environment, medical interventions and continuity of care (Hodnett, 2002). The reduction of pain as a result of the quality and compassionate care of midwives raises an important question about women's perceptions of childbirth pain in the United States. In a study by Senden et al. (1988), strikingly different expectations of labor pain were found between Dutch women as compared to United States women. Though both groups were informed of the possible negative side effects of the pain medication, only 1/3 of the Dutch group received medication, while 5/6 of the US women requested and were administered narcotics and analgesics. The study found that the majority of United States women expected labor to be significantly more painful than Dutch women; these expectations were directly tied to receiving medication (those who perceived intense pain before labor requested medication during labor). In another study on labor pain, Morse and Park (1988) compared home birth pain to that of pain experienced in the hospital. Women in the hospital rated pain significantly higher than the home birth group. This is likely due to women giving birth in the hospital being confined to bed during labor, forced to be without food and drink, and without the continuous, one-on-one care from a healthcare provider they trust.

A study by Dr. Elaine McGravely (1992), from the University of Texas San Antonio, compared the costs and outcomes of: (1) physician based offices (2) nurse specialist based offices and (3) mixed staffing clinics for low risk mothers. The study identified no significant differences with regard to maternal and neonatal outcomes.

Notably, the study found that mothers who received care from nurse specialists had significantly higher levels of satisfaction. It is obvious that a wide knowledge and solid evidence base exists for the transition of midwives as the primary care givers and birth attendees of low risk women. However, these studies have not affected much change in this area. In fact, in a study by the Robert Wood Johnson foundation, the American College of Nurse Midwives (ACNM) determined that: (1) nurse-midwives provide good pregnancy outcomes, (2) nurse-midwives save money compared to obstetricians, (3) *there is a shortage of nurse-midwives*, (4) *current levels of funding for nurse-midwifery are inadequate to meet present and future needs*, (5) *restrictions on nurse-midwifery limit the development of clinical teaching sites for students* (Educating, 1993). It seems that the United States is operating on the antithesis of what the evidence is telling us; doctors replaced midwives for low risk births—evidence proves midwives are safer. Hospitals replaced the home—evidence proves that planned out-of-hospital births are as safe, resulting in less interventions and cesareans, as hospital births.

Though the evidence and science is abundant in support of midwifery practice, little data substantiates the current practices of the modern maternity system. As Wagner recalls, “I recently testified before a state legislative committee in CA on pending midwifery legislation. Among other things, I said in my statement that midwives are perfectly capable and that planned home birth is a healthy option for many women. I then presented scientific evidence to support both statements. I finished by suggestion that if anyone said otherwise to the committee, they should ask: ‘Where are your data?’” Later,

the opposition made statements regarding the increased danger and death associated with home birth; one of the committee members listened to Wagner's advice and asked, "where are your data?" The opposition could provide none. The legislation passed. It is important for women and all childbirth advocates to push for the incorporation of evidence based practice into the maternity system in the United States, for it may be the only thing that improves the experience, safety, and emotional and physical health of mother and baby.

Midwifery Roadblocks

Despite overwhelming evidence to the contrary, there exists today a resistance to midwifery practice as a result of: (a) cultural norms, (b) lack of cooperation from insurance companies and state and federal governments, and (c) fear. It seems that the persecution of midwives in the United States has extended beyond the early 20th century as many midwives today are facing insurmountable challenges and obstacles in order to practice. Some are even being driven out of practice. Nurse-midwives in Austin and San Antonio, TX, Cleveland, OH, Columbian Presbyterian Hospital in NYC, and Georgetown Hospital in Washington, DC were all fired; the grounds for dismissal was claimed to be "financial reasons." Obstetricians clearly have a monopoly on maternity care in the United States, and they make their opposition of midwives very apparent. Even midwives who are able to hold onto their jobs in hospitals nationwide fight daily to practice the way they want to—the way they were taught and believe in. The term "medwives" is often

used to describe midwives who accept the medical model of birth, usually under pressure from doctors (Wagner, 2006). As Betty Anne Daviss, consultant to the International Federation of Gynecology and Obstetrics, midwife, and researcher, asserts, “another way in which obstetricians control midwives is to withdraw back-up. It is a common misconception that transferring to the hospital is unnatural and more dangerous than being in the hospital in the first place. It’s totally normal to transfer into hospital if the mother is not progressing well and you need some help. That’s not a failure; it’s just like any other part of medicine (she draws a parallel to a general doctor who refers to a cardiologist when heart problems arise) That’s the way medicine works. That is the way midwives and physicians work all around the world, and very well together” (Block, 2007). Therefore, midwife backup by a physician is integral to the successful and safe practice of midwifery, and this is used by physicians to stop the practice of midwives. Because midwives are concerned and focused on the health and well-being of the mother and baby, midwives will not practice without this backup. It is another common misconception that nothing can be done when trouble arises during a home birth with a midwife. In fact, midwives can intervene in many adverse situations: midwives can administer oxygen, medicate for hemorrhage, and fix shoulder dystocia using the only effective method, the Gaskin Manuever (named for midwife Ina May Gaskin). Thus, often times, if problems arise, it would not matter whether the woman was at home or in the hospital; even in the case of hospital birth, if there is a complication, the nurse still has to page the doctor who will require transport time to the hospital.

This opposition and manipulation by physicians results in fewer options for women with regard to childbirth. Also, the government limits women's childbirth choices through the withholding and restriction of licensure and prescriptive authority. In most parts of the US, even if pregnant women desire the care of a midwife, she needs to go outside of the mainstream health system and risk persecution and sometimes, prosecution. Historically, the United States is the single nation in the world to have made the modern home-birth midwife an outlaw (Block, 2007). And, despite a wealth of evidence to the contrary, midwives are still fighting the battle for respect, autonomy, and a balance of power between the two disciplines.

One midwife, Cynthia Caillagh, learned the complex social and political struggle all too well in 2000. Caillagh operates under the principles that "if you view the body as a self-healing, self-describing, self-navigating entity, if you trust it, then it will give you all the signposts it needs when it is failing in its own defense" (Block, 2007). Her record is impressive: of 1,000 births she attended to in Virginia, she transferred just 10 cesareans, delivered 24 sets of twins, 218 VBACs (only 2 transferred to hospital) and 112 breeches—all at home. Yet, in 2000, she found herself pleading guilty to practice of midwifery without a license, to practicing medicine without a license, and to abuse and neglect of an incapacitated adult due to complications during one of her home births—complications, which in the hospital, would have never even made the paper, let alone landing someone in jail. Despite her conviction and sentencing (she received a 36 month suspended sentence and court fees), in a confusing chain of events, the next day the

governor of Virginia declared it “Midwives’ Day” acknowledging “the positive impact that midwives...have had on improving infant mortality rates and decreasing the incidence of complications and unnecessary medical interventions in childbirth” (Block, 2007). Virginia, following this case, went on to legalize certified professional midwives.

Clearly, the practice of midwifery in the United States faces many challenges. Edward Sekscenski, of the US Department of Health and Human Services in Rockville, MD studied factors which influenced the practice of nurse-midwives citing pressing issues as: (a) nurse-midwives legal status as professionals in a given state, (b) whether or not reimbursement for their services is required, (c) whether or not nurse-midwives have authority to write prescriptions, (d) acceptance as professionals by physicians, (e) inclusion in the terms of private health insurance policies, (f) ability to obtain malpractice insurance, and (g) acceptance by the public. (Sekscenski et al, 1994). These issues all must be addressed by the medical community, ACOG, state and federal governments, state nursing and licensing boards, mothers, women, and the general public. Midwives need and deserve a professional relationship with physicians and they should be afforded willing and faithful access to those physicians in a time of need.

The Midwifery Model of Care

“Just as a woman's heart knows how and when to pump, her lungs to inhale, and her hand to pull back from fire, so she knows when and how to give birth.”

(Virginia DiOrio)

“The traditional midwife believes that birth proceeds in a spiral fashion: labor starts, stops and starts, while the baby goes down, up and down, and the cervix opens, closes and opens. Nature has no design for failure; she holds her own meaning for success”. (Sher Willis)

Midwives approach care during pregnancy and labor with a different mentality and subscribe to a different model of care than their obstetrical counterparts. The medical model and the midwifery model are distinctly different paradigms in their views on women and childbirth. Physicians see themselves as the “doers;” they, through an active process, deliver the baby. Yet, midwives approach birth from the standpoint that women as the ones who give birth. The woman is the doer; she is the active participant. Midwives ensure that their client is the one who makes the choices about her labor and delivery. Unlike most physicians, midwives do not view birth as a pathological process; their clients are not receiving medical treatment. Midwives serve as birth assistants who facilitate a process that the body of programmed to perform: an autonomic response. By not interfering in this natural process, midwives achieve the efficacy, success, and client

satisfaction for which the evidence and science note them. Their focus is normalcy, the natural, and empowerment; they strive for minimal intervention. Their role during labor becomes one of calming, reassurance, and encouragement of what the woman does herself—give birth. Under the midwifery model of care, birth is a life-enhancing experience. Midwives have confidence in women’s bodies and do not focus on what can go wrong (like physicians). This model of care knows that women have the ability to birth successfully without intervention. Confidence and a positive attitude are important components of a midwife’s plan of care.

Where do we go from here?

The maternity system in the United States should be one that operates on the following principles: (1) normalcy, (2) empowerment of the mother, (3) autonomy in decision making and practice for both midwives and mothers, (4) operation under the principle “First, do not harm,” (5) and responsibility. As Laura Harm puts it, "we have a secret in our culture, and it's not that birth is painful; it's that women are strong." It is time for this secret to move into the public sphere and become a belief that is commonly accepted: women should have faith in themselves and confidence in their ability to birth. Dr. Robert Egebert, 1972, Special Assistant for Health Policy at the US Department of Health, Education, and Welfare asserts, “It is paradoxical that the United States, which does as well in training nurse-midwives as any nation would, lags so far behind other countries of making effective use of such highly trained and urgently needed healthcare

professionals.” Indeed, the science supports their training. Midwives consistently show more interest in their clients, work to dispel the mystery of modern and complex medicine, and educate and convey more information to their clients. Even the World Health Organization (WHO) maintains that “the midwife appears to be the most appropriate and cost effective type of health care provider to be assigned to the care of normal pregnancy and normal birth.”

The American College of Nurse Midwives (ACNM) supports the advancement and expansion of the midwife’s role to attending all low risk births nationwide. Their recommendations for midwifery practice include: (1) include nurse midwives as integral part of the healthcare reform, (2) increase support for nurse-midwifery education, (3) promote universal acceptance of full-scope nurse-midwifery practices, (4) monitor the need, demand for, and supply of nurse-midwives over time, (5) gradually adjust nurse-midwife/physician ratios within maternity care, (6) offer prenatal care provided by nurse-midwives as an option in employee benefits packages, support full payment for maternal services by nurse-midwives. State and federal government should (1) include nurse-midwives in the decision and policy-making process within the perinatal healthcare system, (2) encourage nurse-midwives to practice in medically underserved areas by way of educational loans, traineeships, and expansion of health service corps scholarships, (3) permit professional autonomy for nurse-midwives. Famous midwife Ina May Gaskin makes her own suggestions which include: (1) more midwives, (2) a national database on maternal and neonatal mortality and injuries, (3) midwives teaching medical students

normal birth before they learn the pathology, (4) stop using machines for what women can do far better, and (5) give women a real choice on where to give birth.

Presently, a pregnant mother's risk level does not correspond directly with the level of care she receives; the evidence supports rather than questions the advantages of a less medicalized maternity system for the majority of pregnant women nationwide (Strong, 2000). Psychiatrist, Ronald Lang, analogizes, "We do not see childbirth in many obstetric units now. What we see resembles childbirth as much as artificial insemination resembles sexual intercourse." A shift is required toward midwives attending the 80-90% of annual births in the US that occur in low risk women. A return to childbirth where women and babies are the focus is necessary. In order for that to happen, midwives need greater prescriptive authority, less restrictive regulations, increased autonomy, and universal acceptance.

"Medicalization recasts human existence in terms of health and illness and has evolved to include types of deviance – understood as sickness – not previously associated with the medical/physical sphere" (Schlich, 2007). It is clear that there are many factors that contribute to the medicalization of birth and the high cesarean rates in the United States. These include: (a) the value society places on appearance and sex appeal, (b) the growth of technology and the use of medical interventions, (c) economic factors, and (e) lack of education. The combination of these factors has allowed birth to be accepted as a medical procedure, contributed to both the fear and liability associated with birth, and permitted the cesarean section rate to rise to over 1/3 of all births.

Conclusion

It is evident from this investigation that changes to the United States' childbirth practices are required. These changes include decreasing the use of medical intervention during low-risk birth, a reduction in the amount of unnecessary inductions, an increase in the amount of midwives attending low-risk births, and more control placed in the hands of women with regard to their own health and the health of their children. Enabling women to feel empowered over their birth, manage it, and make choices about the way their pregnancy and birth progress will result in more favorable labors and outcomes, both physically and psychologically. This paper shows that there is a need for the public and women to be more educated about childbirth options and outcomes and demand choices and explanations. It also provides clear proof that the medical community needs to reexamine its commitment to evidence-based practice and begin to change childbirth to reflect what the evidence has consistently shown.

If both the public and the medical community moves toward changing the culture of cutting and the overt medicalization of childbirth in this country, slowly attitudes, perceptions, and traditions will begin to change, and, much like our history, birth can, should, and will evolve. This evolution will result in a collaborative and respectful relationship between midwives and obstetricians, between health care practitioners and their pregnant clients. And, in turn, these relationships and new philosophies will

facilitate a more open and physiological approach to the birthing process, with women's choice at its core.

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Anna Marie T. DiPietro

Academic Vita

Education

The Schreyer Honors College, Pennsylvania State University

University Park, PA

B.S. Nursing; B.S. Women's Studies

2005-2010

Clinical Experience

Long Term Care, Altoona VA Hospital

Geriatric Nursing, Windy Hill Village, Philipsburg

Medical/Surgical Nursing I, Mount Nittany Medical Center, PCU

Medical/Surgical Nursing II, Mount Nittany Medical Center, PCU

Nursing Care of the Young Adult, Mount Nittany Medical Center

Community Health in Nursing, State College, PA

Nursing Care of Children and Adolescents, State College & Altoona, PA

Advanced Medical/Surgical Nursing, Mount Nittany Medical Center, PCU

Mental Health Nursing, The Meadows Psychiatric Center, Centre Hall, PA

Work Experience

Medical Assistant, Office of Dr. Robert Mooney, DO, State College, PA

May 2009-Present

- Tasks/Skills:
 - Vital Signs, medical record, immunizations, throat swabs, urinalysis, ear lavage
 - Patient education and health promotion
 - Developmental screenings
 - Eye/Hearing exams

Patient Care Technician, Philadelphia, PA

Summer 2008-Spring 2009

- Tasks/Skills:
 - Complete Home Care
 - One-to-one supervision
 - Ambulation, toileting, dressing, bathing, feeding
 - Range of Motion (ROM) exercise
 - Morning/night care

Research Intern, Office of Institutional Research, Burlington County College

2006-2007

- Tasks/Skills:
 - Completion of national community college data projects
 - Examination of college remedial course success through grade analysis
 - Completion of college-wide effectiveness survey through the use of speedometer displays
 - Proficiency in Microsoft Excel

- Assistant Manager, Cold Stone Creamery Ice Cream** 2004-2006
- Tasks/Skills:
 - Coordinating and scheduling employees
 - Inventory and ice cream production
 - Open and close of store
- Retail Craft Sales, A.C. Moore Crafts** Summer 2004
- Tasks/Skills:
 - Customer service
 - Ribbon and Craft counter
- Arts and Crafts Counselor, Church Farms School** Summer 2003
- Tasks/Skills:
 - Design, coordinate, and execute arts and crafts projects daily for children age 5-13

Honors

- Scholar, Schreyer Honors College** 2005-Present
- Inductee, Sigma Theta Tau International Nursing Honors Society** Fall 2009
- Inductee, Phi Kappa Phi Honor Society** Spring 2008
- Chapter President of the Year, Hyperochos Greek Awards** Spring 2008
- Recipient, Phi Sigma Delta Sigma Educational Foundation Scholarship** 2009
- Recipient, Evan Pugh Scholar Award** 2008
- Member, Lion's Paw Senior Society** 2008-2009
- Dean's List**
- Fall 2005, Spring 2006, Fall 2006, Spring 2007, Fall 2007, Spring 2008, Fall 2008, Spring 2009, Fall 2009

Presentations

- Creator & Facilitator, "Sex or Rape? The Difference is Consent"** Fall 2007
- Developed, planned, and facilitated rape and sexual assault program to over 500 Greek men and women
 - Program included a presentation of resources, including phone numbers, hospitals, and free taxi services, as well as coverage of University and hospital policies on confidentiality, a question and answer session, and distribution of brochures and recourse cards. Program continued with a reenactment of the story, *The Rape of Mr. Smith*, and a subsequent discussion of any bias victims encounter by the police and media with regard to rape and sexual assault cases. The program concluded with a lengthy interactive activity/discussion with the audience on "rape myths."
 - Evaluations returned by audience members after the program indicated that they felt this was a program they would like to bring back to their individual chapters and one which helped create a more open dialogue about the topic of rape and sexual assault in the Greek community.
- 2nd Place Winner, "Fighting Rhabdomyosarcoma"** Fall 2005
- New York Times, Pearson Custom Publishing, & Penn State Civic Engagement Public Speaking Contest

- Speech detailed the rare cancer Rhabdomyosarcoma, who it affects, why research is so scarce & the politics behind it, and what we should do to change those politics, increase research and funding, and save more children's lives
- Speech Published, June 25, 2006: **The Philadelphia Inquirer**

Involvement

Special Events Director, Pennsylvania State University Homecoming Organization

2008 – 2009

- Special Events Director for one of the largest and oldest Homecoming celebrations in the country
- Corresponded with and directed a team of fifteen assistants
- Planned and orchestrated four large University and community-wide events and programs throughout the October week

President, The Panhellenic Council

January 2008 – January 2009

- Panhellenic President for 20 NPC organizations, 3 associate organizations, and 8 executive board members
- Corresponded and met with chapter presidents, advisors, and national representatives
- Planned and implemented a Spring Recruitment Fair for 10 organizations and 130 potential new members
- Maintained a \$25,000 recruitment budget and \$20,000 programming budget
- Worked with the Executive Board to plan initiatives such as *Bling My Suite* and *Sorority Scoop*
- Developed and implemented a new Panhellenic Social Policy
- Planned and executed a philanthropy project, *Flapjack Friday*, to benefit a local Greek alum suffering from cancer

President, Alpha Delta Pi Sorority

January 2007 – December 2007

- Chapter president for 85 undergraduate sorority women and seven executive board members
- Corresponded and met with chapter officers, two chapter advisors, Panhellenic officers and staff, and national representatives
- Officiated weekly chapter meetings, executive board meetings, standards council meetings, and all initiation ceremonies
- Completed, interviewed for, and was the only NPC sorority named a **"Penn State Chapter of Excellence"** for both 2006 and 2007
- Instituted accountability through standards council meetings, fines, and community service
- Developed and oversaw the institution of two new annual philanthropy events, *"Jail & Bail"* and *"Lion Hunt"*
- Developed and facilitated, along with national representatives, a weekend-long sisterhood retreat
- Maintained a \$25,000 working budget and a \$45,000 savings account
- Attended the *District Leadership Conference* and *National Grand Convention* as the Delta Kappa chapter representative
- Developed, trained, and implemented a new recruitment style and strategy for Fall 2007 formal recruitment, which resulted in the most successful recruitment for the chapter to date

Executive Vice President, Alpha Delta Pi Sorority

April 2006 – December 2006

- Officiated executive committee meetings weekly, and all meetings and ceremonies in the absence of the president
- Corresponded regularly with chapter advisors and collegiate province director
- Served as the liaison between the chapter and the international headquarters
- Kept record of, mailed, and distributed to chapter advisors, collegiate province director, and the International Headquarters all meeting minutes, forms, reports, and applications completed by chapter officers
- Developed, planned, and facilitated the first comprehensive 8-hour *"Officer Transition Workshop"* including guest alumni and district team speakers as well as interactive activities and discussion

THON Family Relations Chair, Alpha Delta Pi Sorority

September 2006 – September 2007

- Served as the Family Relations representative from Alpha Delta Pi for the *Penn State Dance MarATHON*, the largest student run philanthropy in the world

- Coordinated visits and corresponded weekly via phone, email, or mail with Alpha Delta Pi's three THON families
- Organized events during THON weekend for the families to socialize with the sisters of Alpha Delta Pi

Director , <i>TREMIN Women's Research Project</i>	2006-2008
Project Intern , <i>TREMIN Women's Research Project</i>	2005-2006
Teaching Assistant , <i>Critical Issues in Reproduction Course</i>	Fall 2007
Intern , <i>Birthcircle</i> with local midwife	2006-2007

Leadership Development

Participant , <i>LeaderShape</i>	Summer 2007
<ul style="list-style-type: none"> • Milroy, PA 	
Chapter representative , <i>Alpha Delta Pi Grand Convention</i>	June 2007
<ul style="list-style-type: none"> • Boston, MA 	
Chapter representative , <i>Alpha Delta Pi District Leadership Conference</i>	February 2006
<ul style="list-style-type: none"> • Columbia, MD 	