

Benefits of Midwifery for Low-Income Women

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INTRODUCTION

The United States has been a leading economic power for nearly a century, if not more. The general wealth of its citizens and the standard of living they maintain have been envied around the world. Despite the resources this country has to offer, many Americans lack access to adequate healthcare. Birth statistics are especially revelatory of the problems that plague this nation's healthcare system; the United States' rates of infant mortality and low birthweight are abysmal when compared to a multitude of other countries'. One purpose of this paper is to elucidate the inadequacies of the American system of prenatal care, paying special attention to the impact this has on low-income women. Additionally, I will attempt to offer a solution.

Although the United States is known to be at the forefront of medical and technological innovation, such advancements have failed to produce significant results in terms of birth outcomes. Many of the tried and true methods of caring for pregnant women and delivering their babies have been forgotten by mainstream obstetricians. In the case of prenatal care, it may be that the most valuable innovations come from the rediscovery of age-old practices. Midwives, frequently remarked as the "best kept secret of affordable healthcare," have extracted the best birthing techniques to emerge over the centuries and have created a model of care that works with the natural capabilities of a woman's body. Their skills have been widely employed by almost every other western industrialized nation with better birth outcomes than the United States. The collaboration of obstetricians and midwives has the potential to improve birth outcomes for all women, but low-income women especially are expected to benefit.

In order to assess the feasibility of incorporating midwives into mainstream prenatal care, I will first introduce a brief history of prenatal care in the United States. This will help highlight any legitimate reasons why midwives might have been removed from their role as primary

healthcare providers for women in the United States. Next, I will explore the problems that persist in the present model of routine medicalization of labor and delivery and propose some causes for these problems. The injustices that low-income women face will be emphasized. A survey of various responses from international health organizations and American medical authorities will follow so as to frame the pros and cons of my thesis: midwives can best serve the unique needs of low-income women. With this framework in place, I will then investigate the benefits that midwives can offer low-income women with regard to financial concerns, accessibility, individualized care, empowerment and long-term motivation, as well as risk management. To conclude, I will summarize the findings, bring to light some perceived difficulties in reaching low-income women with midwives, and propose future studies that may facilitate the enactment of my proposal.

BACKGROUND

The history of prenatal care in the United States is a turbulent one filled with transitions and reactionary movements.¹ It begins in the colonies when midwives² and women healers attended almost all births and the trade was passed from one woman to another. In addition to providing prenatal care, midwives cared more broadly for a woman's reproductive health from the start of her period through menopause (Kotch 2005). Once slavery began to develop as an integral element of the United States' economy, it became common for West African midwives to attend the births of both black and white women (Rooks 2006). American Indian tribes even employed midwives and developed their own birthing traditions. At this point in history, birth was embraced as a natural event and similar birthing techniques were utilized by indigenous and colonized people alike.

Early in United States' history, midwifery laws were enforced at a local level and varied greatly as very few midwifery schools existed and laws mandating education could not be enforced. Because there were few doctors throughout the early to middle history of the United States, midwifery could not be effectively challenged and, as such, midwives practiced without government control until the 1920s. By the mid-18th century, however, the role of women in American maternity care was being questioned as the birthing practices of European women began to change. European women began to deliver in hospitals, while French physicians began to study the process and the English developed surgical procedures and tools such as forceps (Kotch 2005). In an effort to emulate this European trend, by the end of the 18th century

¹ All references to the conditions of prenatal care, including statistics and other facts, unless otherwise noted, pertain to the United States.

² This paper does not hinge upon the distinction between lay midwifery and nurse midwifery. While lay midwifery generally facilitates home births and nurse midwifery is more likely to function within a hospital or birthing center, the author acknowledges similar benefits to be offered by both. Different means of education are required to practice these two forms of midwifery, but both operate under nearly identical ideologies. In terms of the feasibility of this proposal, nurse midwives are more likely to be accepted by the public as they are more apt to work under a hospital framework.

American physicians began attending deliveries alongside midwives, thus initiating physician control over birth.

By the turn of the 20th century, deliveries by midwives and physicians were split half and half. Most practicing midwives were immigrants from Europe or Mexico, or were southern-born African Americans and were recognized as being better trained than American physicians to oversee childbirth (Dawley 2003). During this same period, however, xenophobia was on the rise, resulting in stricter immigration laws and ultimately decreased immigration. Taking advantage of this xenophobic mentality, a campaign to eliminate traditional midwives was waged by physicians and public health reformers. Midwives were blamed for increased rates of maternal and infant mortality, but in reality this was a movement rooted in discrimination (Dawley 2003). Data was ignored that not only demonstrated the quality of care provided by immigrant and African American midwives, but even proved their outcomes to be significantly better than those achieved by physicians (Dawley 2003). The goal of nurses and obstetricians involved in this campaign was to develop a medical specialty based on maternity nursing and nurse midwifery.

During the early 20th century, physicians helped pass laws requiring a medical degree to practice obstetrics, even though multiple reports concluded that American obstetricians were poorly trained. In an effort to improve the profession, the hospitalization of all deliveries was required and accompanied by the gradual abolition of midwifery. Poor women were directed to attend charity hospitals, which served as training sites for doctors. The Flexner Report, an evaluation of medical schools by the Carnegie Foundation, closed six of the eight black medical schools and a majority of those which were church-affiliated and happened to be more willing to

train women (Kotch 2005). By the 1920s, medicine became an exclusively white, male profession. As a result, males emerged in control of female reproductive health.

The medical presence in childbirth brought with it various interventions including drugs, anesthetics, and birthing instruments which helped lay the foundation of the current pathology-oriented model of prenatal care. Dr. Joseph DeLee was at the forefront of this medical movement and authored the most important text on obstetrics of the time. In it he proclaimed childbirth as a pathologic process that damages mothers and babies “often and much” (Rooks 2006). DeLee changed the focus of healthcare during delivery from responding to problems to preventing problems through the routine use of medical intervention. This form of controlled labor became commonplace in every delivery, and the trend continued virtually uninterrupted until the 1960s (Kotch 2005). It is now widely acknowledged that more deaths in childbirth resulted from the over-utilization of technology by physicians during this period than had ever been caused by infections under the care of midwives (Kotch 2005).

Although the main focus of prenatal care has centered on improving the foundations Dr. Joseph DeLee laid in the early 20th century, midwifery has reemerged on a few occasions. In post-WWI France, American nurse Mary Breckenridge encountered nurse-midwives and was intrigued by their model of care for pregnant women. At the same time in the United States, many rural areas of the country were underserved by physicians and maternal and infant mortality rates were therefore extraordinarily high. Breckenridge started the Frontier Nursing Service (FNS) in 1925 to provide maternity care in underserved areas. In response to the harsh criticism received by physicians, Breckenridge hired Louis Dublin, a statistician for Metropolitan Life Insurance Company, to study maternal and neonatal outcomes for the FNS. It was found that the FNS lost significantly fewer mothers and babies when compared to statistics for the

United States as a whole (Dawley 2003). The FNS developed midwifery as a mission to serve the poor, a decision which was reinforced by laws restricting their service to underserved areas where women could not afford prenatal care (Raisler and Kennedy 2005).

While the initial focus of midwives was on poor and working class women, by the mid-1940s their services were increasingly demanded by the middle class. Several factors compounded this demand. First, corresponding with the increased medicalization of childbirth, most women were administered an amnesiac commonly called “twilight sleep,” which relieved pain but also prevented women from having any memory of the delivery. Concerns grew regarding the adverse affects this drug might have on women and their babies, so many lay women and health professionals began to reject “twilight sleep” in search of other methods of pain management (Dawley 2003). To a certain extent, this movement fostered the reemergence of women’s participation in childbirth. Also during the 1940s, various pictorial essays were published in *Reader’s Digest*, *Life*, and *Today’s Woman* featuring natural childbirth (Dawley 2003). A general message was sent indicating that there existed a better way to give birth.

Reliance on midwives was further increased as WWII troops returned to the United States accompanied by a reform in healthcare. Whereas in 1940 only 9 percent of the population had third-party coverage for hospitalization (insurance), by 1950 at least 50 percent of the American population was covered. Promoting this trend, in 1943 the federal government instituted the Emergency Maternity and Infant Care Program (ERIC) which paid for prenatal and postpartum care, a hospital delivery, and infant care through the first year of life for servicemen’s wives (Dawley 2003). Following the reform in payment for healthcare, there was a postwar boom in hospital construction which subsequently encouraged women to give birth in hospitals. Hospitals and physicians alike were unprepared for the ensuing baby boom, and a

shortage of obstetricians resulted (Dawley 2003). Given the recent flattering publicity of midwives, their care was a welcome necessity among middle class women. For the next decade midwives established educational programs, clinical practices, and institutions for the practice of nurse-midwifery in response to women's needs. They introduced family-centered maternity care, childbirth education, mother-baby rooming-in, and encouraged breast-feeding in a time when hospitals promoted formula (Rooks 2006). Cost savings and good outcomes were documented for the midwifery model of care.

Even though the 1940s and 1950s brought about a reemergence of midwifery, this model of care was only utilized by a small proportion of women; most women continued to give birth in a medicalized setting, and many were dissatisfied by the approach governing women's reproductive health. The Women's Health Movement emerged alongside the second wave Women's Liberation Movement of the 1960s and 1970s spurred by women's desire to define their own sexuality and reclaim the birthing experience (Kotch 2005). To combat unnecessary medicalization, pressure was placed on hospitals to allow natural childbirth and the participation of the woman's partner, thus promoting the control of women and their families over their delivery. The lay-midwifery and home-birth movement also developed during this period as a grass roots campaign helping women to reclaim their bodies and births, although this effort was mostly embraced by a small number of well-educated, middle-class, white women and, as a result, became increasingly perceived as a counter-culture movement (Rooks 2006).

In response to the Women's Health Movement, physicians reacted strongly and sought not only to defend their model of care, but to present it as the safest practice available. In 1985, for example, the *New England Journal of Medicine* strongly recommended that all pregnant women have a "prophylactic (preventive) C-section," and that if a woman were to insist on a

normal birth, she must “be required to sign a consent form for the attempt at vaginal delivery” (Feldman and Freiman 1985). The 1980s saw a rise in C-sections from 16 percent to 23.5 percent of all births (Wagner 2007), and the rate continued to rise throughout the 1990s. In 2000, the federal government called for a reduction in these rates, but it was followed by a backlash on the part of physicians (Wagner 2007). Today, most births continue to occur in hospitals with obstetricians attending. As of 2003, 11 percent of all babies born, excluding those delivered by C-section, were delivered by certified nurse midwives (CNM). The remaining 89 percent of births were attended by physicians. Statistics, as of 2000, show a maternal mortality rate of 14 per 100,000 live births and a neonatal mortality rate of 5 per 1,000 live births (*Mortality Country Fact Sheet 2006* 2006). The past few decades have produced little improvements in birth outcomes.

THE PROBLEM

There is no doubt that strides have been made over the last century to improve birth outcomes in the United States and internationally. Various statistics have been used to analyze birth outcomes and compare different healthcare models, usually among different nations. Such statistical measures include the fetal anomaly rate, cesarean delivery rate, fetal death rate, maternal death rate, and incidence of premature birth. Of these statistics, the incidence of premature birth (low birthweight) is the most meaningful because, of all measurable factors, prematurity is most often responsible for infant mortality and disability among non-anomalous babies (Strong 2000). The term premature is used to describe all infants weighing less than 5.5 pounds (2,500 g) at birth, irrespective of gestational age (Strong 2000). This definition makes statistics regarding prematurity even more common because the figure is easily quantifiable and is thus widely available. In fact, as of 1990 in the United States, 8 to 10 percent of all births were characterized by low birthweight, and this small population of babies accounted for 75 percent of all infant deaths (Strong 2000).³ Another frequently used measure of birth outcomes is infant mortality rate, which is certainly meaningful when parameters are specified, but less so when comparing different systems of healthcare because different reporting practices exist; different countries have different cutoffs for the period after birth which constitutes infant mortality.

A comparison of international low birthweight and infant mortality statistics is displayed in Table 1 and Table 2 in the Appendix (p. 47-48). These recent statistics demonstrate that twenty-five developed nations have a lower infant mortality rate than the United States and 19 developed nations have a lower low birthweight rate than the United States. In comparison to

³ Although some of the statistics presented throughout this paper are somewhat dated, they are still relevant as the United States has made little progress in improving birth outcomes since 1990.

undeveloped countries with infant mortality rates as high as 15 percent or more, it is clear that the United State's system of prenatal care produces good results. Since the United States is among the leading powers in the industrialized world and boasts one of the strongest economies, questions as to why this nation is not a leader among birth statistics are legitimately raised. It has been proposed that different definitions of a "live birth" are utilized by different nations, which may explain the United States' low standing. Experts have rebutted that even with adjustments to account for differences in reporting, the United States still cannot compete within the top 10 percent (Strong 2000).

Further compounding the issue of low birthweight babies is cost. According to the College of Obstetricians and Gynecologists, in 1990 the treatment of low birthweight babies required a total of 5 million days of in-hospital care, and an average of \$30,000 to \$150,000 (in 1996 dollars) to graduate such a newborn from the intensive care unit. Furthermore, lifetime custodial care costs directly attributed to low birthweight were estimated to be as high as \$675,000 per child (in 1996 dollars) (Morrison 1990). With an estimated 400,000 low birthweight babies being born annually in the United States (as of 1990), and with a high correlation between low birthweight and low socioeconomic status, the magnitude of emotional devastation carried by the families and economic burden borne by public sources like Medicaid is evident.

The persistence of high rates of low birthweight and infant mortality in the United States is not without reason. Consider the training of most professionals providing prenatal care in the United States. As noted by the American Association of Medical Colleges, the American Academy of Family Physicians, the Congressional Committee on Graduate Medical Education, and the Institute of Medicine, obstetrics and gynecology is a surgical specialty (Strong 2000).

As such, the training of obstetrician/gynecologists (Ob/Gyns) is focused on the treatment of disease, rather than the maintenance of health. This, in turn, has established a strong cultural perception of childbearing as a disease when it is in fact “self-limited, non-communicable, and frequently gratifying” (Strong 2000).

The components of a typical prenatal visit have largely been established in response to the pathological classification of pregnancy. An Ob/Gyn will measure maternal vital signs including weight and blood pressure, which help detect, but not prevent, the development of pre-eclampsia (a condition similar to diabetes that sometimes develops in pregnant women, frequently associated with gaining too much weight). Urinalysis is conducted as a means to detect protein in the urine, so as to diagnose pre-eclampsia, but has been regarded as an ineffective indicator. Next, fetal growth is often determined by a uterine measurement, which is cheap and occasionally effective, but for the most part leads to unnecessary intervention should an incorrect conclusion be drawn from the uterine measurement. A fetal heart rate will determine the vitality of the baby, but offers no prevention of disease. Custom lab tests are used to identify additional problems ranging from anemia to STDs. Many of the tests and procedures just described have not evolved from a scientific basis, but more so from medical tradition. The Institute of Medicine has described prenatal care as an “inexact collection of interactions and procedures,” and while American women are encouraged to visit the doctor an average of 14 times while pregnant, women from countries with better outcomes than the United States only have an average of 9 appointments. (Strong 2000)

Beyond the typical prenatal visit, various practices have been instituted to minimize the risks of pregnancy and delivery, but have at most been ineffective, and in some cases even more detrimental to the health of the mother than the condition being treated. Perhaps the most well

known, and popular, of these practices is the ultrasound, a method by which the fetus can be viewed. Some doctors purport that ultrasounds confirm the vitality of the fetus or help determine its age, but this information can be determined by other means. Although ultrasounds have never been associated with complications during pregnancy, the technology has also never been approved by the FDA. Its use has served more as a marketing and money-making tool than a true instrument of diagnosis (Strong 2000).

Once a pregnancy has been classified with some degree of risk of preterm delivery, more invasive measures are frequently taken. For example, some women are prescribed the use of a home uterine activity monitor (HUAM), a device which is supposed to detect uterine contractions the mother cannot. Not only has this method proven ineffective at reducing the rate of preterm delivery, but it is also very costly at 60 to 80 dollars per day. In as many as 18 percent of all pregnancies, cervical cerclage is performed whereby a woman's cervix is sewn shut until delivery (Strong 2000). Another standard procedure is the administration of tocolytic drugs, which relax a contracting uterus (Strong 2000). Neither of these latter two methods has been associated with the reduction of the incidence of preterm birth.

The litany of medical procedures only increases as delivery draws near. Although drugs to induce labor have legitimate uses, such as when a pregnancy is at least a week overdue, more often than not these drugs are used to make delivery more convenient for the doctor's, and sometimes even the patient's, schedule. Two common drugs for induction are pitocin and cytotec, the latter of which is not approved by the FDA and has even been associated with uterine rupture (Wagner 2007). On many occasions these drugs are administered against the will of the patient, constituting a violation of one's fundamental human rights (Wagner 2007). Both

of these drugs have proven to increase the pains of labor, which initiates a cascade of other medical procedures meant to facilitate delivery or relieve pain.

Several procedures have been developed in an attempt to ease the emergence of a newborn from his mother's body, including vacuum extraction and episiotomy. Vacuum extraction literally sucks the infant from the mother's body, frequently leaving the infant's head misshaped for several weeks. Episiotomy, which is performed in 1/3 of all American births and in 70 to 80 percent of all first time mothers, involves the cutting of a woman's perineum (skin between the vaginal opening and rectum) in order to increase the size of her vaginal opening (Wagner 2007). In addition to the fact that there are less invasive means by which to minimize the risk of tearing, medical research has demonstrated that, for several reasons, even if a tear does occur, it is preferable to a surgical cut. A tear follows the lines of tissue and, unlike a cut, can be refit so as to reinforce the natural integrity of muscles, blood vessels, nerves, and tissues (Wagner 2007). Because a cut neglects this natural integrity, it frequently results in more pain and bleeding, a loss of muscle tone, greater deformity of the vagina, and long-term pain during sexual intercourse (Wagner 2007). In 1995, the Cochrane Library (a frequently updated, highly respected online library of reviews of scientific evidence for obstetric procedures) conducted a review of the best episiotomy research and concluded that, when performed on a routine basis, episiotomies result in increased trauma and complications during delivery (Chase 2000).

Even more invasive, but nearly just as common, 29 percent of all births in the United States, or about 1 million each year, are delivered by Cesarean section (C-section), even though multiple organizations have called for a reduction in this statistic. For example, the World Health Organization has calculated the rate of C-section that saves the most women and babies in the United States to be between 10 and 15 percent (Lancet 1985). This optimal rate was devised

from the observation that countries with a rate of C-section less than 10 percent or greater than 15 percent demonstrate higher rates of maternal and infant mortality. This estimate also accounts for hospitals serving populations characterized by high risk (Wagner 2007).

Furthermore, the risks associated with C-section are not trivial for either the mother or her baby and include hemorrhage, infection, organ damage during surgery, decreased ability to get pregnant, increased incidence of pregnancy outside the uterus (which is never viable), and increased potential for a detached placenta or uterine rupture in future pregnancies (Wagner 2007).

Several factors have contributed to the persistence of extraordinarily high rates of C-section, despite the recommendations of international health policy. First, certain attitudes regarding pain, convenience, and even the maintenance of vaginal tonus have driven a significant proportion of patients to demand a C-section, even when a vaginal birth is a viable option. The fact that women demand this surgery of their physicians and are successful demonstrates that (a) they are uninformed about the risks surrounding C-section (or else do not care), and (b) doctors are performing the procedure defensively so as to minimize the risk of being sued, or to remain marketable to the demands of today's women (Wagner 2007). Certain guides to pregnancy even attempt to persuade women to opt for a C-section. For example, the *Girlfriends' Guide to*

Pregnancy states,

With a scheduled cesarean section, you and your doctor have agreed to a time at which you will enter the hospital in a fairly calm and leisurely fashion and he or she will extract your baby through a small slit at the top of your pubic hair. There are a lot of reasons to schedule a cesarean section [...] Other women elect to have a cesarean because they want to maintain the vaginal tone of a teenager, and their doctors find a medical explanation that will suit the insurance company. (Lovine 1995)

This passage targets those women who have bargaining power with their physicians, as at least seven studies have shown that white, married women with private health insurance who give

birth in a private hospital are most likely to have a C-section even though there are populations characterized by a much higher degree of risk (Wagner 2007).

High rates of C-section have not been driven by patients alone. As previously mentioned, in 1985, an article in the *New England Journal of Medicine* recommended that all pregnant women deliver their babies by C-section, and that if a woman were to insist on vaginal birth she should “be required to sign a consent form for the attempt at vaginal delivery” (Feldman and Freiman 1985). The rate of C-section remains high despite the subsequent release of a statement by the International Federation of Gynecology and Obstetrics saying, “Because hard evidence of net benefit does not exist, performing cesarean section for non-medical reasons is ethically not justified” (Wagner 2007). Any attempts to show that fewer babies die as a result of more obstetric intervention, including C-section, have failed (Wagner 2007).

To exacerbate the stress of giving birth in an environment where even the slightest deviance from ideal delivery conditions could trigger any number of interventions, scientific evidence has shown that the pains of labor are increased by undergoing labor in an unfamiliar place with unfamiliar people where unknown procedures are likely to be employed. Although restrictions have been lifted in many hospitals, when a woman is confined to labor in a horizontal position, labor is not only less productive, but more painful as gravity cannot ease the emergence of the baby. Furthermore, drugs used to induce or augment labor are known to intensify labor pains (Wagner 2007). Wagner comments “women are naturally grateful to the staff for the relief of their pain, not realizing that the staff exacerbated the pain in the first place” (Wagner 2007). As such, the epidural, a form of anesthesia, is utilized in approximately 85 percent of all births in the United States (Wagner 2007).

The epidural, like many of the other interventions introduced, poses many risks including temporary paralysis (1/500), permanent paralysis (1/500,000), long-term back pain (in 20-30 percent of all deliveries), and decreased blood flow to the placenta, which is detrimental to the baby (Wagner 2007). Wagner has commented,

The physiological fact that pain is an essential component of normal labor, that it is necessary for the release of hormones that control the progress of labor, is either not understood by most American obstetricians or simply ignored. So, again, we have one intervention leading to another. When an epidural block removes all feeling in a women's lower body, the necessary hormones are not released and the labor does not progress normally, which leads to more interventions. (Wagner 2007)

Other less invasive methods for pain management should be considered such as the use of tubs or showers, acupuncture, hypnosis, and one on one attendance.

The general trend observed in each one of these interventions is blind faith in the procedures employed by obstetricians. In many instances, the natural procedures that have been replaced by intervention have proven to be at least as safe, or safer, than their replacement physician-prescribed procedures. For example, decades of research and intervention have failed to reduce the incidence of preterm birth in the United States. Such attempts that have proven unsuccessful include bed rest, the use of tocolytic drugs, frequent cervical exams, cerclage, and home uterine activity monitoring (Raisler and Kennedy 2005). Furthermore, obstetricians on the whole have failed to incorporate evidence-based practices during delivery in favor of those that have little to no basis. Please see Table 3: Practice vs. Scientific Evidence in the United States (Appendix, p. 49) for additional evidence of this trend.

Given this extensive background on problems that pervade the American system of prenatal care, the root causes of these problems must now be considered. The issue may lie in the degree of versatility Americans have come to expect out of their Ob/Gyns. While Ob/Gyns are largely trained as surgeons to handle complicated births, in the United States they are also

expected to be the primary care provider for women both pregnant and non-pregnant, a counselor and family planning provider, and a specialist in gynecological disease (Wagner 2007). No other medical specialist is required to maintain such high competence in so many areas. Childbirth seems to bear the brunt of the issue because it is so time consuming and, for both the doctor and patient, labor-intensive.

As the time of an Ob/Gyn is stretched thinner and thinner, the slack is generally picked up by a labor and delivery nurse who, on average, receives only six weeks of on-the-job training after basic training (Wagner 2007). Despite their lack of autonomy, labor and delivery nurses may be expected to oversee the progress of several women at any given time even in the absence of the doctor, frequently resulting in neglect. It is no coincidence that American birth statistics suffer while hospitals and HMOs deny funding for continuous patient care, as seemingly unlimited funds are available for expensive technology.

The flaws of the American prenatal care system have the potential to affect all populations, however statistics show that less affluent populations suffer the most. Several traits have been correlated with pregnancy outcomes including marital status, age, socioeconomic status, substance abuse, stress, incarceration, and race/culture (Strong 2000). It may come as no surprise that less affluent populations have a greater tendency to have children out of wedlock and at a young age. The stress of their situation makes them more prone to substance abuse, which may further lead to actions punishable by law. The higher incidence of these traits among low-income pregnant women puts them at a serious disposition when it comes to prenatal care; since mainstream American healthcare system is so fixed upon profit, it fails to meet the needs of individuals who lack wealth. The level of medical intervention employed in the average delivery drives up the cost to the point that, without the help of Medicaid, the service of an Ob/Gyn is

unaffordable to low-income women. As such, those patients covered by Medicaid are likely to be given even less attention in a system that already severely lacks individualized care.

Using the state of Indiana as a case study, the report *Trends in Birth Outcomes and Maternal Characteristics in Indiana* demonstrates that little to no progress has been made with regard to birth outcomes from 1990 through 2005. The low birthweight rate increased to 8.3 percent in 2005, up from 7.4 percent in 2000 and 6.6 percent in 1990. Between 1990 and 2005, low birthweight rates increased by 34 percent for non-Hispanic whites and by 8 percent for non-Hispanic blacks; the change for Hispanics was not statistically significant. The significant increase for non-Hispanic whites can be attributed to increased average age of pregnancy as well as fertility treatment, which frequently results in multiple (and therefore, low birthweight) births. Despite the convergence in statistics among the groups, in 2005, the low birthweight rate for non-Hispanic blacks was 13.4 percent compared to 7.8 percent for non-Hispanic whites and 6.6 percent for Hispanics. The report concludes, “the narrowing of racial disparity between 1990 and 2005 is not due to an improvement in low birthweight rate among non-Hispanic blacks, but mainly due to a noticeable increase in low birthweight among non-Hispanic whites.”

(Rahmanifar 2007)

The source of the racial disparity in birth outcomes may, in part, be related to the level of prenatal care being received by each racial group. Between 1990 and 2005, the percentage of women who began prenatal care in the first trimester of pregnancy increased by only 2 percent (to 80.4 percent) in Indiana. During this period, early initiation of care increased by 4 percent among non-Hispanic white mothers (to 84.2 percent) and by 9 percent among non-Hispanic black mothers (to 67.0 percent), in contrast to an 8 percent decrease (to 64.1 percent) among Hispanics. Please see Figure 1: Percent Distribution of Indiana Births According to Trimester

Prenatal Care Began By Race and Hispanic Origin of Mother for a summary of this data (Appendix, p. 50). The wide racial disparity in seeking prenatal care in the first trimester persisted over these years and grew even wider between Hispanics and non-Hispanic whites. Furthermore, in 2005, 24.7 percent of Hispanic women received inadequate or no care compared to 23.3 percent of non-Hispanic blacks and 10.2 percent of non-Hispanic whites. While the proportion of mothers receiving inadequate or no care decreased by 13 percent among non-Hispanic whites and by 23 percent among non-Hispanic blacks since 1990, among Hispanics it increased by 14 percent. Please see Figure 2: Percent Distribution of Indiana Births According to Adequacy of Prenatal Care By Race and Hispanic Origin of Mother for a summary of this data (Appendix, p. 51). (Rahmanifar 2007)

Trends in Birth Outcomes and Maternal Characteristics in Indiana has also noted a correlation between the statistics for non-Hispanic blacks and Hispanics and teenage pregnancy, unmarried mothers, inadequate education, and late or inadequate care (Rahmanifar 2007). Because these problems exist at a disproportionate rate among black and Hispanic populations, without an agent of change they will persist at a disproportionate rate. In light of the information that has just been discussed, it may be concluded that the United States has a system of prenatal care characterized by high levels of medical intervention, low levels of doctor-patient interaction, and poor outcomes. Even the most affluent mother-to-be should be skeptical of the quality of care she might receive under this system. Compound the problems of American prenatal care with those of a low-income pregnant mother who is prone to a myriad of other risks and what results is a dismal outlook for her birth outcome.

THE RESPONSE

The issues surrounding prenatal care in the United States, as described in the previous section, have not escaped the scrutiny of health organizations, policy makers, healthcare professionals, or academics. An analysis of these responses in addition to international comparisons has revealed an increased utilization of midwifery as a viable option to improve birth outcomes.

Before a means by which to improve the American system of prenatal care can be proposed, the root of the problem must be clearly identified. Any number of sources may be pinpointed, but the World Health Organization has chosen to speak out against unnecessary medicalization,

By medicalizing birth, that is by separating the woman from her own environment and surrounding her with strange people using strange machines to do strange things to her, the woman's state of mind and body are so altered that her way of carrying through this intimate act must also be altered. It is not possible for obstetricians to know what births would have been like before these manipulations- they have no idea what non-medicalized birth is. The entire modern published literature on obstetrics is based on observations of medicalized birth. (World Health Organization 1985)

In the United States, Ob/Gyns have a monopoly over maternity care as they attend over 90 percent of births (Wagner 2007). They are trained to view birth in a medical framework wherein atypical symptoms are sought out and treated, even if the birth is progressing normally. What few Ob/Gyns seem to incorporate into their practice is the fact that in a normal birth, the body can best handle the condition itself. In addition to their propensity toward medical procedures, Ob/Gyns rarely attend a full labor, and frequently come in only to catch the baby. Between the hours of 7 pm and 12 am, there is a 12 percent increase in neonatal mortality, and between 1 am and 6 am the rate increases by 16 percent (Wagner 2007). That is to say, Ob/Gyns are not as available as they need to be.

Of the western industrialized nations, the scenario just described remains true only in the United States and Canada. All other nations, including Australia, the Netherlands, Great Britain, all Scandinavian countries, Germany, and Ireland have turned to midwives to not only remove unnecessary medicalization from normal births, but also pick up the slack of physicians (Wagner 2007). In fact, in 75 percent of all pregnancies, midwives in these nations administer prenatal care, admit women to the hospital, attend labor, and assist birth (Wagner 2007). Ob/Gyns serve merely as specialists for complicated pregnancies, which constitute 10 to 15 percent of all cases (Wagner 2007). Furthermore, in every other western, industrialized nation that has a lower maternal mortality rate or infant mortality rate than the United States, midwives manage the majority of normal pregnancies and births (Wagner 2007). Studies have even shown midwives to be safer, less expensive, and more likely to produce a satisfying experience (MacDorman 1998). No data exists that shows midwives to be less safe than doctors for low-risk pregnant women (Wagner 2007).

Midwives have emerged as an attractive option as care providers for normal births for several reasons. First, a certified nurse-midwife (CNM) is trained specifically as a primary prenatal and gynecological care provider for low-risk women (Wagner 2007). All CNMs have completed between one and three years of additional training beyond their nursing certification, and the majority hold masters or doctoral degrees. Second, as specialists of normal birth, the care of a midwife is based on the principles of evidence-based facilitation, minimal intervention, and empowerment of the mother-to-be. Whereas a midwife knows how to facilitate autonomic responses rather than interfere with them, an Ob/Gyn takes the birthing process into his own control, overriding the natural process with drugs, medical procedures, and giving orders (Wagner 2007). The midwife embraces the fact that childbirth is not under conscious control,

but rather directed by hormones and neurological feedback; the birthing process cannot progress in a state of fear or alarm. Moreover, the training of a midwife takes less time and costs only one-quarter of that of an Ob/Gyn.

Another organization, the Coalition for Improving Maternity Services (CIMS), advocates several tenets embraced by midwifery. First they promote *normalcy* in that giving birth should be treated as a “natural, healthy process.” Next is *empowerment*, so as to “provide the birthing woman and her family with supportive, sensitive, and respectful care.” CIMS urges care providers to offer their patients the *autonomy* to make decisions based on a wide range of accurate information and that these care providers take the *responsibility* to practice evidence-based care in the best interest of the mother and her newborn. Above all, CIMS asserts *first, do no harm* in an effort to eliminate the routine use of drugs and restrictions. This organization has developed its tenets based on professional opinion. While any number of these aspects is likely to be neglected by physicians, midwives have developed these principles as the foundation of their practice. (*The Coalition for Improving Maternity Services: Promoting the care and well-being of mothers, babies, and families* 2008)

Comparisons of costs between midwives and Ob/Gyns have made midwifery an even more desirable option for prenatal care. Whereas midwives earn an average salary of \$50,000 per year, the median salary of an Ob/Gyn is \$200,000 (Strong 2000). This disparity in income is to be expected as physicians require a great deal more training. The costs of physician training are, however, frequently passed on to low-risk patients who do not require such surgical expertise. Because nurse-midwives are trained to care for normal births without intervention, they can cut the costs of induction, C-section, and other interventions in half (Strong 2000). On average, the cost of a normal delivery conducted by an Ob/Gyn is at least \$1300 more expensive

than the same type of birth handled by a midwife (Strong 2000). Because the United States continues to employ over-qualified professionals in cases of normal birth, the Center for Disease Control (CDC) has estimated that the United States spends more than two times per birth on maternity services than other countries (Wagner 2007).

Another more specific cost driver of obstetric care is the over-incidence of C-section, a procedure that costs \$5,000 more than a vaginal birth in direct costs alone. Indirect costs associated with this procedure have not been estimated, but include the intensive care unit for the newborn, potential emergency surgery to repair a detached placenta or ruptured uterus, or the treatment of hemorrhage. Based on the difference between the actual (29 percent) and recommended rate of C-section (12 percent), it has been estimated that the United States spent \$2.5 billion more than necessary on births in 2004 alone (Wagner 2007).

Given the evidence, there seems to be little doubt that increased incorporation of nurse-midwives into the American system of prenatal care has the potential to improve outcomes and cut costs in the case of normal births. The resolution of this problem, however, is complicated by the fact that so many additional factors, frequently beyond the control of the healthcare provider, put low-income women at a disposition when it comes to receiving prenatal care and having good outcomes. Strong writes,

Poor women generally fare less well because prenatal care can't compensate for the many problems that often complicate their lives. To a well-nourished, well-rested middle-class woman, prenatal care is like icing on the cake. But to a woman living in poverty, pregnancy can sometimes represent the last straw; and a series of pointless, ill-explained visits to an obstetrician will not likely counteract the morass of detrimental conditions which surround her twenty-four hours a day. (Strong 2000)

This is a legitimate concern, but it does not merit giving up on this class of pregnant women.

Rather, it raises an equally important question: how can the effectiveness of prenatal care be

improved for low-income women? This question has served as the basis for a great deal of legislation.

In the 1980s and 1990s, Congress conceptualized financial barriers as the greatest barrier to prenatal care and made attempts at expanded eligibility for Medicaid during pregnancy (Strong 2000). Surprisingly, this reform did not improve outcomes for low-income women. Similar efforts and results were observed in California, Tennessee, and Massachusetts when Medicaid eligibility was increased up to 200 percent of the federal poverty rate (Strong 2000). Improvements were only seen when a program was instituted in Washington that combined increased Medicaid eligibility with enhanced care including case management, nutritional and psychological counseling, health education, and home visits (Strong 2000). Given these findings, the answer to improving prenatal care for low-income women may be more obvious than anticipated. With its roots as a service to provide care to underserved populations, midwifery has the potential to meet the unique needs of low-income women with regard to financial concerns, accessibility, individualized care, empowerment and long term motivation, and risk management.

BENEFITS OF MIDWIFERY FOR LOW-INCOME WOMEN

FINANCIAL ASPECTS

The costs of prenatal care provided by a midwife are known to be less than the same services provided by an Ob/Gyn. Several reasons account for this including lower training costs and less medicalization. Despite these economic facts that allow the services of midwives to cost less, the low-cost structure of midwifery is very much an ideology of the practice. Ina May Gaskin, a leading midwife in the United States, writes of her practice, “[...] it is our basic belief that the sacrament of birth belongs to the people and that it should not be usurped by a profit-oriented hospital system” (Gaskin 1978). A majority of midwives continue to embrace the early roots of the practice when it was geared toward serving low-income, or otherwise underserved, populations.

It is neither fair nor accurate to say that all hospitals are profit-driven while all midwives are not. Profit-maximization certainly tends to be more of a concern, however, in hospitals than among midwives, and this mentality has made for some unpleasant birthing experiences among low-income women. Sandy,⁴ a low-income woman from Bloomington, Indiana gave birth to her first four children in a hospital, and then employed the services of a midwife for her fifth delivery. She first gave birth in the 1970s and, because she was either not aware of Medicaid, or because it was not an option, Sandy still owes money more than thirty years later for that birth. With her next three deliveries, after a great deal of struggle with doctors refusing to see her because of her inability to pay, Medicaid was finally presented as an option. Sandy recalled,

I vowed to not go another pregnancy without seeing the doctor. So, I just blurted to the doctor, ‘You know I have no insurance, you don’t want me to come in here because I owe you. You *will* see me, and you’ll figure this out.’ And then the social worker came and said, ‘Have you heard of Medicaid?’ And I said, ‘I’ve heard of it but it’s for kids or disabled [people], so I didn’t go apply.’ I ended up applying for Medicaid. But again, if

⁴ All names of low-income women interviewed are pseudonyms.

you're on Medicaid, you do not, *you do not*, get to see the doctor as often as you should if you are a paying person or you have better insurance than Medicaid. (Sandy 2008)

In the end, Sandy concluded, "It's not about the joy of having a baby anymore, it's the dollar bill. It's the dollar bill."

The experiences of Sandy are revelatory of the strides that Medicaid has made in not only paying for prenatal care and delivery, but also in becoming salient in the minds of low-income families as an option to help defer the costs of healthcare. Hoosier Healthwise is Indiana's healthcare program for children, pregnant women, and low-income working families.

Administered by the Social Services Administration, the goals of Hoosier Healthwise are to:

1. Ensure access to primary and preventive care services.
2. Improve access to all necessary healthcare services.
3. Encourage quality, continuity and appropriateness of medical care.
4. Provide medical coverage in a cost-effective manner. (*Hoosier Healthwise 2007*)

The Social Services Administration seeks to achieve these goals by making sure every recipient has a personal doctor. Services covered include hospital care, doctor's visits, check-ups, clinic services, prescription drugs, over-the-counter drugs, labs and x-rays, the care of a nurse-midwife or nurse practitioner, family planning, transportation, therapy, medical supplies and equipment, substance abuse, and prenatal care (*Hoosier Healthwise 2007*). Thus, nurse-midwives are an option for low-income women where their services are available.

In talking to several other low-income women in Bloomington, Indiana who have given birth more recently, or are soon to give birth, it became apparent that Medicaid is being well-utilized. At the same time, however, these women are not at all familiar with midwifery. There are apparently no birthing centers in Bloomington where nurse-midwives maintain a practice. A few nurse-midwives are employed by practices operating within Bloomington Hospital, but all

others operate as lay-midwives⁵ in somewhat of an underground operation, as this practice is illegal. As such, the care of a midwife is not presented as an option to low-income women in Bloomington upon subscribing to Medicaid for prenatal care.

Indiana State Representative Peggy Welch has worked on several issues regarding women's healthcare, including legislation for midwifery. She explained that, in Bloomington, lay midwives have been utilized by several families whose income is just beyond that of the Hoosier Healthwise eligibility cutoff. Even though the services of lay midwives are illegal, these families were not deterred because of the tremendous cost savings and the perceived quality of care. Because several birthing centers exist in Indianapolis, it is possible that midwives are presented as an option to low-income women. Comparison of the options presented in Indianapolis, an urban location, versus Bloomington, which may be considered rural, should be conducted in future research.

⁵ Lay midwives are prenatal care providers who have received national certification, but do not hold a degree in nursing or medicine. They tend to facilitate home births. While their services are legal in many states, they remain illegal in Indiana.

ACCESSIBILITY

Perhaps even more important than the cost of prenatal care is the sheer willingness of a healthcare provider to work with low-income patients. Service of a Medicaid patient is generally characterized by reduced profit potential even though the pregnancies of low-income women are prone to a higher degree of risk. It is not uncommon for physicians to avoid working with such patients. For example, a study conducted by the American College of Obstetrics and Gynecologists found that only 6 in 10 Ob/Gyns provide service to Medicaid women (Strong 2000). In northern California, this ratio dropped by an additional 20 percent in the early 1990s. A survey conducted by Dr. Barbara M. Aved in Sacramento cited cultural and socioeconomic differences, poor personal hygiene habits, and low level of compliance as reasons why physicians preferred not to work with low-income women (Strong 2000).

Although the impressive outcomes of births attended by CNMs are frequently incorrectly attributed to their clients being of low-risk, data shows that their client base is actually comprised of a disproportionate number of “high risk” pregnancies (Raisler and Kennedy 2005). For example, 55 percent of nurse-midwife salaries are paid by Medicaid and other government subsidized sources, while less than 20 percent of payment comes from private insurance (Raisler and Kennedy 2005). Other studies have shown that, by comparison, CNMs and physician’s assistants constitute a greater proportion of care providers in areas that are rural or suffer from a lack of health professionals (Raisler and Kennedy 2005). Birth certificate data has been used in some cases to demonstrate that mothers attended by midwives in hospitals tended to be younger, less educated, non-white, or unmarried (Declerq 1995). This same data showed that, despite the pregnancies having similar or more risk factors than the national average, when midwives

delivered the infants of low-income women, the infants were less likely to be low birthweight or to suffer neonatal mortality (Declerq 1995).

National trends have shown midwives to care more frequently for low-income populations than their physician counterparts. This does not hold true in Indiana as, of the 41,109 Medicaid births that took place in state fiscal year 2007, only 477 were attended by nurse midwives (State of Indiana Office of Medicaid Policy and Planning Data Management and Analysis 2007). The fact that an underground market for lay-midwives exists in Bloomington is evidence that midwifery, in all forms, has yet to be accepted as a routine medical practice within the state. Representative Welch is in favor of professionalizing lay-midwives in Indiana because there are so many families that elect to employ their services, and because there exists a very strong national program for certifying men and women who want to be non-nurse, non-doctor midwives (Welch, 2008).

With relatively low levels of tolerance for the profession, Indiana cannot hope to attract the numbers of midwives necessary to provide adequate care for its low-income population, or any pregnant women, for that matter. It is possible that the necessity of an underground market for lay-midwifery in Bloomington and other places is what prevents more birthing centers from being established by nurse-midwives, but until facilities are established to accommodate nurse-midwives, their services cannot be offered by Medicaid to low-income women. Evidence that such an offering is a viable option may exist in Indianapolis where several birthing centers have been established.

INDIVIDUALIZED CARE

Referring back to Strong's quote, "[...] a series of pointless, ill-explained visits to an obstetrician will not likely counteract the morass of detrimental conditions which surround [a low-income woman] twenty-four hours a day" (Strong 2000), the efforts of prenatal care to reach low-income women are allegedly doomed. In order to reform this dismal outlook, it must be considered how prenatal care can be improved to not only meet the needs of a low-income woman, but also peak her interest in maintaining a healthy pregnancy. The key may lie in communicating with the patient as a concerned peer, rather than an authoritative professional.

Ob/Gyns receive little to no training in psychological aspects of pregnancy or interpersonal communication, a skill that facilitates education and reassurance and therefore improves the experience of a pregnant woman with her healthcare provider (Strong 2000). Midwives, on the other hand, are more focused on psychological, interpersonal, and educational aspects of pregnancy and have therefore established a strong reputation of building rapport with their patients (Strong 2000). A study by the Institute of Medicine found that non-physician providers of prenatal care were better able to relate to their patients in a non-authoritarian manner, and patients were therefore more willing to comply (Strong 2000). With non-compliance among the primary disincentives for physicians to work with low-income patients, it seems that a model of care that is more successful at achieving compliance, such as midwifery, may be better suited to serving this population.

Researchers Jesse and Alligood devised the Holistic Obstetric Problem Evaluation (HOPE) Theory to predict infant birth outcomes in low-income women whose pregnancies may be characterized by psychological, spiritual, and perceptual concerns (Raisler and Kennedy 2005). HOPE Theory establishes a connection between one's mental state while pregnant

(happy, stressed, self-conscious, worried, anxious, etc.) and the physical outcome of the pregnancy. Lack of partner support during pregnancy and African American race were two predictors of low birthweight (Raisler and Kennedy 2005). Low self-esteem, used of drugs or alcohol (which has both physical and mental aspects), and a woman's negative perception of her pregnancy were additional predictors of preterm birth (Raisler and Kennedy 2005). These predictors are disproportionately relevant to the pregnancies of low-income women. Thus, HOPE Theory offers additional evidence of the correlation between high risk pregnancies and low-income women. Midwives, because they have a strong reputation of being able to relate to low-income women in an egalitarian and empathetic manner, are well-suited to handle pregnancies characterized by the aforementioned risk factors.

The findings of the HOPE Theory have served as the basis for many CNM practices that have designed methods to meet the unique needs of their clientele. For example, one practice in Michigan established a program to facilitate incarcerated mothers to live with their infants rather than separating the two (Raisler and Kennedy 2005). Within this program, the CNMs designed substance abuse treatment, jobs skills training, and support groups to prepare these new mothers to fulfill their role as a mother and provider upon being released from prison (Raisler and Kennedy 2005). The CNMs learned to ask less threatening questions and be less judgmental, which in turn instilled trust in their patients. One study predicted that "if longer-term 'soft' outcomes, such as attachment, parenting, and successful reintegration into the community could have been measured, it is likely that other differences [in the care of a midwife versus that of a physician] would also have emerged" (Raisler and Kennedy 2005).

Low-income and minority populations are all too often treated with less dignity than they deserve. The social barriers that divide these populations from highly educated healthcare

professionals, many of whom have not received training in interpersonal communication, are significant. Given these factors, it is not surprising that healthcare fails to motivate low-income pregnant women. One may argue that it is not the responsibility of a healthcare system to provide anything but basic access to care. The long term effects of motivating low-income women to take pride in their health and their future as a parent are sure to be substantial, even if it means investing more time (not necessarily more money) in their healthcare. The personal investment that midwives are reputed to make in their patients is one way to achieve this end. Another would be for physicians to receive more training in communicating with low-income patients.

EMPOWERMENT AND LONG TERM MOTIVATION

Up to this point, the terms “medicalized” and “non-medicalized” have been used to contrast conventional hospital births with those attended by a midwife. In a more general sense, “medicalized” refers to the use of drugs ranging from labor inducers to pain killers, while “non-medicalized,” also termed “natural,” refers to giving birth without the aid of such drugs. Forgoing the use of drugs during labor is a method often perceived as antiquated, but for reasons described earlier, can produce better birth outcomes in uncomplicated pregnancies and can be especially rewarding. In an effort to demonstrate the difference between “medicalized” and “non-medicalized” birth, a nurse from a birthing center writes of the conventional birthing experience,

The woman is passive. She is a physically immobilized patient. Her helplessness is epitomized by the lithotomy position, in which she lies flat on her back with her legs in stirrups – a posture that is clearly adopted for the convenience and comfort of the obstetrician, not the woman having the baby. Many women find it terrifying to be pushing the baby into thin air as they lie flat on a narrow slab. (Odent 1984)

In addition to the fact that the method of delivery just described is not at all accommodating to the actual physics of giving birth, imagine the impact this situation has on low-income woman’s birthing experience. She is already known to be rather intimidated by physicians. Now that the actual event of giving birth has come, she is put in an even greater position of subordination being given no control over how she gives birth.

The same nurse describes a non-medicalized birth in Dr. Odent’s birthing center in Pithiviers, France,

The one thing he will not provide is the kind of help most pregnant women expect nowadays: drugs for pain relief. When a woman books into his unit, there is an implicit contract with him not to have drugs in normal labor, but to receive everything that he can give her to help her work *with* her body rather than fighting or trying to escape from it. (Odent 1984)

Of course, in a society where epidurals are commonplace, the thought of giving birth without pain relief is shocking, to say the least. Let us look past this aspect of giving birth and observe what a woman receives in return. First, the attention of her care providers is centered directly on her, not the technology they are using to treat her, as “everyone who is present at a birth is there to serve and to cherish the woman who is bearing the child”(Odent 1984). With this change in perspective, the woman is free to make decisions and give birth in a way that is not only innate, but empowering. We tend to forget that people gave birth for thousands of years before systematized healthcare existed; the body knows how to handle birth without intervention. Left to her own devices under the midwifery model of care, “[...] a woman is free to do things *her* way. Anything goes” (Odent 1984).

Low-income women are prone to feel powerless in a situation where their lack of money provides them with few options for the pregnancy, or as a parent in general. Emotional support throughout the pregnancy followed by the opportunity to seize complete control over the act of giving birth may provide such women with a much needed sense of pride and ability. Whereas her authority is sure to be challenged in a hospital, under the care of a midwife, the woman makes decisions, and is taught not only to believe in her body but also to take responsibility for it (Wagner 2007). The role of the midwife is to express confidence in the pregnant and/or laboring woman in any way possible. As such, giving birth has the potential to become a life enhancing experience for the low-income woman, rather than “the last straw” (Strong 2000).

The long term impact of a woman’s birthing experience is being considered increasingly important by perinatal psychologists. First, “since a birthing woman will be faced with the daunting task of rearing a child for the next twenty years, having confidence in herself and her abilities is vital” (Strong 2000). This confidence is especially important for low-income women

who are more likely to have come from broken families and therefore have never observed a model of parenting. Additionally, the period immediately after birth “[...] may determine, in part, how children relate to their mothers, which in turn affects how they will approach other people in the world around them. This crucial period after birth may well influence a person’s capacity for loving, and for attachment in general” (Odent 1984). Midwives are especially committed to facilitating the mother-child bond during this period. Ideally, facilitation of such bonding will contribute to the low-income woman’s long term motivation to be a good parent.

RISK MANAGEMENT

While the services of nurse midwives are commonly proposed as a means to improve outcomes for low-risk pregnancies, in actuality most of these care providers work with low-income, high risk patient groups. Research suggests that births attended by a nurse-midwife or direct-entry midwife, whether at a hospital or in the home are “a perfectly safe option for the 80 to 90 percent of women who have had normal pregnancies” (Wagner 2007). Their services should not be disregarded in cases of higher risk because “their results are excellent, with very low rates of mortality for both women and babies, even though they often work with families who are at higher risk, such as families living in poverty” (Wagner 2007). Despite the perception of nurse midwives not possessing the skills to handle pregnancies of high risk, several case studies have demonstrated otherwise.

The first study to document nurse-midwifery practices and outcomes was conducted by Laird from 1932 to 1951, and the resulting “Report of the Maternity Center Association Clinic (MCA)” was published in the *American Journal of Obstetrics and Gynecology*. During these years, MCA’s domiciliary midwifery service provided care to poor women in New York. Of the 4,988 homebirths that occurred during this period, 86 were breech and 56 were multiple births. Even incorporating the data from these latter, typically more complicated deliveries, the average labor was short – less than 7 hours. Laird suspected these shorter labors may be attributed to “the confidence engendered in the patient and her family by the satisfying personal contact in this small service” (Laird 1955). The low-income mothers of this region were known to suffer from inadequate nutrition and poor living conditions, and were more likely to be unmarried (Laird 1955). Even so, the morbidity and mortality rates were much lower than those in hospitals (Laird 1955). Between the years of 1925 and 1954, the Frontier Nursing Service (FNS)

reported similarly outstanding results compared to national averages despite serving populations characterized by the same high levels of risk (Raisler and Kennedy 2005). For example, maternal mortality was only 9/10,000 compared to the national average of 34/10,000 and low birthweight was half the national average (3.8 percent versus 7.6 percent) (Raisler and Kennedy 2005).

Another study in Madera County, California from 1960-1963 presents especially conclusive findings because data was collected before and during the incorporation of nurse-midwives into the hospital system, as well as after their services were eliminated. Statistics from each of these periods are presented in Table 4 below:

Table 4: Pregnancy Outcomes in Madera County, 1960-1963 (Raisler and Kennedy 2005)

	Before	During	After
Prematurity	11.0%	6.4%	9.8%
Neonatal Mortality	24/10,000	10.3/10,000	32.1/10,000

At the start of the study, midwifery was illegal in California, so a special law was passed to allow two CNMs to provide care to the “county’s medically indigent agricultural workers, half of whom were receiving late or no prenatal care” (Raisler and Kennedy 2005). By 1963, 78 percent of hospital births in Madera County were attended by CNMs and prenatal care, hospital births, and postpartum visits increased substantially (Raisler and Kennedy 2005). As seen in Table 4 above, once the service of CNMs ended, the outcomes subsequently deteriorated. Because no similar changes were observed in surrounding hospitals in the period before, during, and after 1960-1963, the data strongly suggests that these outcomes can be attributed to the care of the midwives (Raisler and Kennedy 2005). Once the approved period for the project expired, the

midwifery program was eliminated, possibly because physicians felt threatened by the improved outcomes.⁶

The first prospective, randomized study comparing midwifery and physician care was conducted at the University of Mississippi Medical Center from 1972-1973. Results from the study are presented in Table 5 below:

Table 5: Midwife vs. Physician Care, 1972-1973
(Raisler and Kennedy 2005)

	Midwife	Physician
Kept Prenatal Appointment	94%	80%
Spontaneous Vaginal Birth	83%	62%
Forceps Delivery		3 x's more likely

Patients were not only more likely to keep their appointment with a midwife, but when it came time for delivery their pregnancies more frequently resulted in a spontaneous vaginal delivery, the ideal outcome. Furthermore, physicians were three times more likely to use technological interventions, such as forceps. No other significant differences in outcomes were observed.

Additional descriptive studies conducted in the 1980s and 1990s were based on service statistics of midwifery practices in Georgia, New York, Washington, DC, rural Kentucky, and California. These studies documented safe and effective CNM care for large numbers of mixed-risk, low-income women, including inner-city, rural, and ethnic minority mothers. (Raisler and Kennedy, 2005).

Perhaps the epitome of a high-risk situation for delivering a baby, according to the medical community, is embodied by the Zuni-Ramah Native American population, who live on a primitive reservation. This community employs the services midwives in childbirth and in 1996 boasted a 7.3 percent C-section rate despite the high rate of poverty and poor general health that plagues the community (Leeman 2003). No adverse outcomes were related to the low rate of C-

⁶ This is the author's personal speculation.

section, even though this rate is much lower than that recommended by the World Health Organization. Rather, the excellent outcomes observed are likely attributable to the continuous involvement of family-physicians and nurse-midwives throughout the pregnancy, the cultural attitude toward childbirth, and the strong social support surrounding the pregnant women (Leeman 2003).

In all, these studies demonstrate that because midwives are willing to provide care to high-risk populations, they have been immensely successful at increasing access to prenatal care. When comparing the outcomes of their services to local, state, or national reference statistics which are, by and large, based on medicalized births, midwives have also successfully lowered the rates of C-section and obstetric intervention, and have achieved higher birthweights.

PERCEIVED DIFFICULTIES AND CONCLUSION

The course of this paper has demonstrated that the United States' system of prenatal care is in need of reform to better serve all populations. The high costs and impersonal nature of prenatal care combined with the risk factors that disproportionately characterize pregnancies of low-income women are prohibitive toward positive birth outcomes. Despite the high risk that afflicts the pregnancies of many low-income women, this paper has demonstrated that the services of midwives may prove especially adept at improving prenatal care for this population. The most concrete benefit of midwifery is purely financial; the services of midwives cost less. Additionally, nurse-midwives are accessible in the sense that Medicaid will pay for their services, and midwives are especially dedicated to working with underserved populations, which are typically low-income and high-risk. Finally, midwives are reputed to provide emotional support and empowerment that is known to improve birth outcomes and is suspected to play a role in instilling long-term confidence in the new mother. As has been discussed, low-income women can benefit from this model of care in many respects. Despite the many benefits of this proposal, the drawbacks must also be considered.

While midwives are willing to work with low-income women, healthcare system changes are making it more difficult for them to provide care to disadvantaged women, especially in the case of managed care. For example, because the cost of malpractice insurance is continuously on the rise and midwives earn substantially less than physicians, in some cases midwives simply cannot afford to work (Raisler and Kennedy 2005). In other cases, midwives have been driven out of business as managed care organizations have forced their customers into physician networks. In cases where CNMs are paid by managed care organizations or private practices, they were less likely to serve the high risk populations (Raisler and Kennedy 2005).

The threat of being sued has forced many midwives to utilize a system of risk assessment, which has also proven very prohibitive in allowing midwives to serve their target population. This system assigns one point for each of the following conditions met by a patient: expecting first baby, low-income, has a parent with diabetes, drank a glass of beer before a positive pregnancy test, gained too little weight, abnormal pap smear, etc. (Jensen 2005). If a patient scores over 5 points, she is considered high risk – no negotiations. One midwife has objected to this system asking, “Does she need care by a physician to prevent problems from developing? Or does she need the loving, supportive care of a midwife more than at any time in her life?” (Jensen 2005). In this case, risk is being used as a prohibitive measure, when in actuality the higher the risk a woman possesses, the more she may actually benefit from the model of care a midwife has to offer.

Perhaps most prohibitive to the availability of midwives is their varying legal status, as the state of Indiana has demonstrated. Some states prohibit all forms of midwifery, while others exclude only lay midwives from practicing. Because midwives have failed to obtain a consistent legal status throughout the United States, their reputation suffers from the public misconception of their services as antiquated and unsafe. In some cases, because the services of midwives are not widely utilized, their existence is altogether unknown. Midwives are greatly disadvantaged by their rivalry with physicians, who have the upper hand in the competition because of their consistent, nationwide legal status. The relationship between physicians and midwives, in many cases, is much better described as sheer subordination.

In the end, the decision to employ the services of a midwife seems to be determined by the realities a low-income woman is liable to face, including a lack of money, transportation, health insurance, or information, rather than the obstetric risk factors and birthing experience that

distinguishes the care of a midwife from that of a physician (Raisler and Kennedy 2005). When time and money are scarce, a low-income woman is going to see the physician to which her Medicaid case manager directed her. Beyond this speculation, little is known about how poor women choose their method of prenatal care, or even how much choice they have. In order to improve prenatal care through increased utilization of midwives, low-income (and all women) must be educated with regard to the options that exist. Further research could improve our understanding of the best ways to disseminate information on the subject: which avenues are best suited to reach low income women? Additionally, midwives must be made available in all communities through an increase in certification programs and the national legalization of their services. Once these hurdles are overcome, midwifery will become a more realistic option for low-income pregnant women.

Midwifery has been described as the “best kept secret of affordable healthcare” (Raisler and Kennedy 2005). With the prenatal care system of the United States having made no significant improvement in outcomes for decades, and the cost of healthcare on the continuous rise, it is time to start unveiling the secrets. There exists a solution supported by the best-performing systems of prenatal care in the world: the collaboration of midwives and Ob/Gyns. Despite the evidence in favor of this reform, no action is being taken to improve the system in the United States. A founding principle of this nation is proclaimed on the Statue of Liberty:

Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless, tempest-tossed, to me:
I lift my lamp beside the golden door.

We are failing to uphold this ideology as low-income women are left in the dark regarding their options. There is no “golden door” to healthcare in this nation unless you have money. Those who have benefited from opportunity and financial success have a responsibility to the less

fortunate to ensure that their most basic needs are met. Access to competent, caring healthcare providers is one of these needs, and so it is vital that we work to make this opportunity available to all.

APPENDIX

TABLE 1: PERCENTAGE OF LOW BIRTHWEIGHT (LBW) INFANTS BY NATION
(Low birthweight: country, regional, and global estimates 2004)

Country	Year	% LBW Infants
Finland	2001	4
Iceland	2001	4
South Korea	2000	4
Sweden	1999	4
Denmark	2001	5
Norway	2000	5
Canada	2000	6
Cuba	2001	6
Ireland	1999	6
Italy	1998	6
New Zealand	2000	6
Spain	1997	6
Switzerland	1999	6
Czech Republic	2001	7
Australia	2000	7
Austria	2001	7
France	1998	7
Germany	1999	7
North Korea	2002	7
United States	2002	8

TABLE 2: *INFANT MORTALITY RATE (IMR) BY COUNTRY, 2005*
(Hamilton 2007)

Country	No. of Births	IMR (Per 1,000 births)
Hong Kong	46,965	2.3
Singapore	37,485	2.7
Japan	1,123,610	3.0
Finland	56,630	3.1
Sweden	99,157	3.1
Norway	56,458	3.4
Czech Republic	93,685	3.9
Spain	439,863	3.9
Greece	104,420	4.0
Portugal	112,515	4.1
Germany	706,721	4.2
Switzerland	71,848	4.3
France	760,300	4.4
Denmark	64,682	4.4
Austria	76,944	4.5
Italy	539,503	4.6
Australia	251,161	4.8
Netherlands	200,297	4.8
Israel	144,936	4.9
New Zealand	56,134	4.9
Korea	493,471	5.0
Ireland	61,517	5.1
United Kingdom	695,549	5.3
Canada	330,919	-
Cuba	136,795	6.3
United States	4,089,950	6.9

TABLE 3: PRACTICE VS. SCIENTIFIC EVIDENCE IN THE UNITED STATES
(Wagner 2007)

Procedure	Practice	Evidence-based approach
One continuous attendant for all labor	< 10 percent	100 percent
Routine midwife care	5 percent	80 percent
Routine no food or drink	86 percent	no
Routine electronic fetal monitoring	93 percent	no
Routine intravenous drip	86 percent	no
Confined to bed during all or part of labor	86 percent	no
Lithotomy (on back with stirrups) near end of labor	69 percent	no
Episiotomy (cut vagina open)	35 percent	< 20 percent
Induce labor with drugs	44 percent	10 percent
Accelerate ongoing labor with drugs	53 percent	10 percent
Vacuum or forceps	13 percent	< 10 percent
Cesarean section	27 percent*	10-15 percent
Mother holds baby during routine exam of her newborn	seldom	yes

*This is the rate from 2002; the rate in 2004 was 29.1 percent

Sources: Practice statistics are from "Listening to Mothers," a national survey of obstetric practices, published October 24, 2002, by the Maternity Center Association of New York City, and available at www.maternitywise.org. Evidence statistics are from I. Chalmers, M. Enkin, and M. Keirse, eds, *Effective Care in Pregnancy and Childbirth* (Oxford: Oxford University Press, 1989), and from the Cochrane Library (www.cochrane.org)

FIGURE 1: PERCENT DISTRIBUTION OF INDIANA BIRTHS ACCORDING TO TRIMESTER PRENATAL CARE BEGAN BY RACE AND HISPANIC ORIGIN OF MOTHER (Rahmanifar 2007)

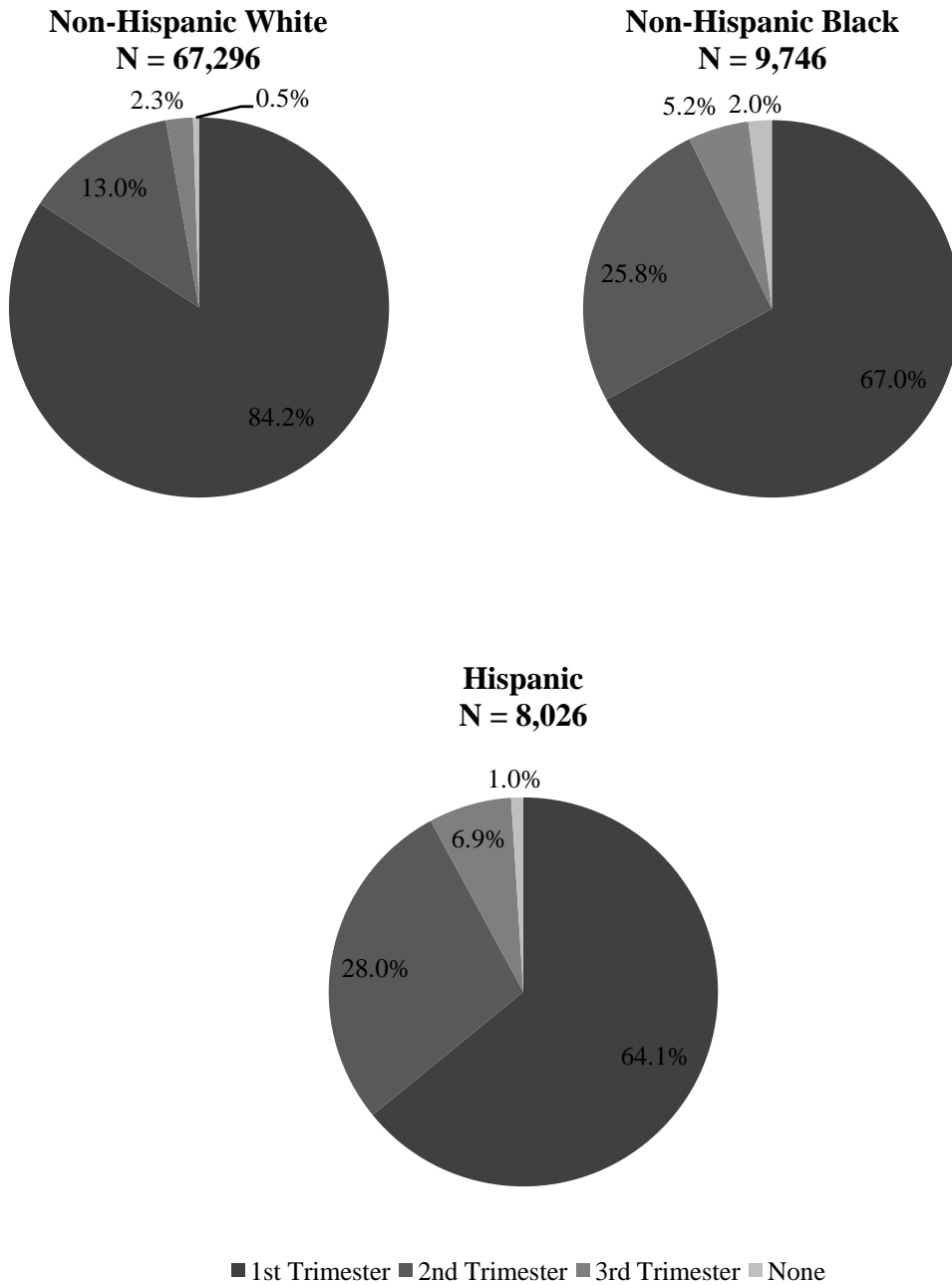
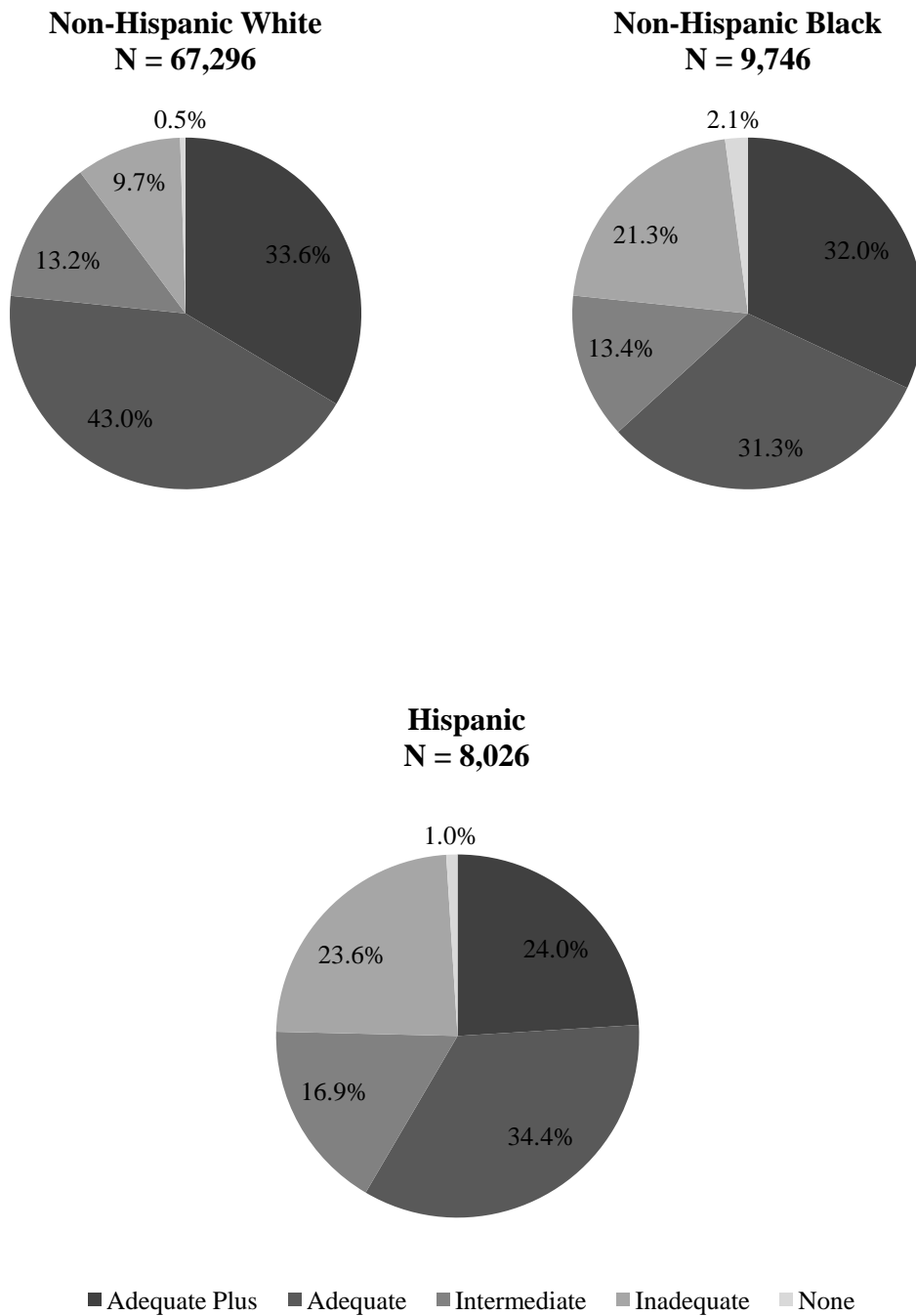


FIGURE 2: PERCENT DISTRIBUTION OF INDIANA BIRTHS ACCORDING TO ADEQUACY OF PRENATAL CARE BY RACE AND HISPANIC ORIGIN OF MOTHER
 (Rahmanifar 2007)



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