ABSTRACT

A Historical, Social, and Medical Analysis on the Medicalization of Labor and Delivery in the United States

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Despite spending the most money in healthcare, the United States has the highest rate of maternal mortality when compared to other developed countries around the world. Additionally, there is a rise of medicalization that has been coupled to labor and delivery. This thesis first analyzes factors that have, throughout time, been associated with or supported medicalization. These include the social and medical history, social structures, government interventions and the institutions and policies that have or still do influence labor and delivery. Secondly, it examines the current medical interventions and their effects on the overall process of labor. The argument of this thesis is that there is a steadily increasing rate of the medicalization following the transition of birth from the home to hospitals. In order to determine the exact cause of this trend, further examination and reconsideration of current practices must occur to provide the best care to mothers in America.

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By

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Waco, TX

May 2021

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ACKNOWLDEGMENTS

First and foremost, I am incredibly thankful to Dr. Jodien Johnson, who during the reading, research, and planning of this thesis, so graciously mentored me through the entire process. Her teaching, guidance, and mentorship for the last two years was invaluable to this work but also in my journey as a lifelong learner.

I would also like to thank Dr. Sara Perry, who has been my friend and mentor since my time as a Community Leader at Memorial Residential Hall at the Honors College. Her friendship, wisdom, and prayers through these last few years are gifts I will carry with me for the rest of my life.

Lastly, I am grateful for Dr. Anna Chan Nackley, who is one of the most talented and compassionate physicians (and people) I know. She inspires me to be the best version of myself, to be open-minded, and is the reason I aspire to be a reproductive endocrinologist in the future.

All of my committee members are mothers themselves, and it is an honor to learn from them every day. Thank you.

DEDICATION

I dedicate this thesis to my incredible parents, Je and Mi Young, who raised me to the person I am today, sacrificed more than I will ever know, and believe in me with their whole hearts. I am eternally grateful for them and for my three younger siblings Sieun, Jin, and Hyun. And to Cuinn, who encourages me every day to follow my heart, but also my head. I love you.

I would also like dedicate this to all those who work now and who have worked to better the healthcare of women in America.

Lastly, I am grateful for God's gifts to this world: compassion for others, science, and life

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CHAPTER ONE

The Story of Medicalization and its Relationship with the Medicalization of Childbirth

The History of Medicalization

In order to understand the medicalization of labor, it is necessary to investigate first the history of medicalization and how its shifting relationship with society has created the door to the medicalization of labor and delivery. Medicine has significantly transformed in the past 300 years, and understanding how the general perspective and understanding of illness and the definition of disease has impacted gynecology is pivotal in the investigation of how, when, and why childbirth was medicalized.

There has been a changing pattern of thought surrounding "illness" and "sickness" in the United States. Like race, disease has now become a social construct and not "merely a physical one" (Birrer & Tokuda, 2017). In the last century, diverse conditions such as "shyness, chronic fatigue syndrome, inattention" and an even longer list of others have been placed under the large umbrella of medical disorders. (Birrer & Tokuda, 2017). With the continuous advancement of medicine, we no longer treat diseases *only* to prevent death, but to rather improve one's quality of life. A prime example of this shift is the fact that tuberculosis and chickenpox have become threats of the past. Consequently, the spectrum of disease has become largely expanded and it was the formation of hospitals that first fueled the beginning of the medicalization of human conditions.

The first American hospital was established in Philadelphia in the year 1752. This hospital was founded to treat the sick, poor, and "insane" who were living on the streets of the city ("The History of Pennsylvania Hospital", 2017). The first medical journals during this era consisted of information on treating ailments such as smallpox, dysentery, and puerperal fever (Wust, 2019). These diseases were diseases that led to death for a majority of those who fell victim to them. For most of human history, medicine was focused on preventing death rather than on preventing disease, and this only shifted when germ theory was confirmed in the early 20th century.

The Field of Medicine as an Emerging Influence

In 1755, there were only 3500 physicians in the country and only a fraction held a legitimate medical degree from an accredited university (Marcus et al., n.d.). According to the Association of American Medical Colleges, there was a recorded 860, 917 active physicians in the United States in 2015 ("Active Physicians with a US Doctor of Medicine," 2015). This difference shows the transition of medicine, beginning as an apprenticeship and now to a formal and legitimized industry in less than three centuries. At the turn of the 20th century, medicine was focused more on increasing the length of one's life than only preventing death as technological and medical advancements were made at the end of the 19th century and the beginning of the 20th century. As a result, transitioning the role of medicine from preventing death to improving health and lifespan became the birth of medicalization.

Two hundred years after the establishment of America's first hospital, the Diagnostic and Statistical Manual of Mental Disorders, more commonly understood as DSM, was born. Since then, there have been five revisions and updates that have added

more conditions as they are discovered or recognized as a medical disorder by the medical experts. This is significant because this is one of the prime examples of how medicine began to redefine the social norms through identification of disease. Originally, the DSM was developed out of a need from the American Psychiatric Association (APA) to classify mental illnesses (Marcus et al., n.d.). Today, the contents of the DSM are highly debated due to the unintended and intended consequences of labeling a condition as a disorder or disease.

When conditions are then thus medicalized, they become a subject of medical study and those conditions become viewed as an *unnatural* state of the human body. This has a positive and negative effect. For example, the DSM labels generalized anxiety disorder as an illness- this allows for recognition of this disorder, legitimizes it, and can help increase access to care for those who may have this illness. Additionally, calling a condition an illness implies that "the individual's anxiety is not due to a personal failing, but is brought about by a biological 'malfunction'…" (Marcus et al., n.d.). However, psychiatric conditions have a constantly shifting grey space between health and the lack thereof, which can create illnesses where there may not be one. It also created a social control where certain behaviors were listed as either normal or deviant. Another example was the usage of medical terminology, where specific terminology was used to "denounce the youth culture of sex, drugs, and rock and roll" and some clinical terminology was used to label radical students and draft resistors in the 1950s (Nye, 2003). These statements were used to control and define the 'outliers' of society, but not in a positive light. The spectrum of human condition is now bell shaped, where the midpoint has been arbitrarily listed as normal and healthy. The definition of optimal

became one in which was ironically untouched by medicine. Anything outside of this norm is generally considered an illness.

The Driving Factors for Medicalization in Society

Certain factors throughout modern history have contributed to the furthering of medicalization within fields beyond psychiatric care. By the 1960s, medicine had quickly evolved and expanded to include professional organizations (like the American Medical Association), patient expectations, and demands that created a need to further medicalize and define conditions. This section explores the various factors that led to the rise of medicalization in society.

One factor is patient expectation and the obsession with wellness. As a society, anything that is slightly deviant from absolute health is viewed as an illness. There are television advertisements for weight loss teas, weight loss programs, and foods in health stores dedicated to less calories and slimmer waists. Sickness (or arguable not truly sickness) is now something of a commodity that can be bought and sold (Huikari, 2016). Normal aspects of human life such as death or ageing is viewed to have a medical solution to it. Medicalization of the human body has allowed for a market to enter to capitalize on it, which resulted more medicalization. This idea that the body is a perfectly oiled machine that can theoretically run forever is a debilitating perspective, as it assumes that anything that is an imperfection can be constructed to be an illness (Birrer & Tokuda 2017).

Liposuction and breast augmentation are additional examples of medical procedures where medicine can act as a commercial business; hence, this became another driving factor of medicalization (Conrad, 2005). This “aesthetic market” is predicted to

be worth $124.7 billion by 2028 ("Aesthetic Medicine Market Growth and Trends," 2020). Serious medical issues such as obesity have been addressed through this change in perspective, but it also allowed for an increasing pressure from individuals to the medical system to treat natural conditions of the bodies as issues that must be addressed by medicine.

Another significant factor is the power and authority of the medical profession, which followed in the expansion of the medical jurisdiction. For conditions such as hyperactivity, menopause, and childbirth, medicine has adopted these conditions as disease (van Dik et al., 2016). Hyperactivity or attention deficit disorder (otherwise known as ADD and is reported to be commonly presented in children), is now a highly medicated disorder with stimulant medicine such as Adderall or Ritalin. Menopause, which is the natural change in a female's body around the ages between 40-50, has medical solutions to it as well. Finally, childbirth, which historically was assisted by midwives and female attendants, is now overseen by gynecologic care. Although this shift has improved care in various ways, many argue that it is beyond the point of "provable benefit", and it may be more harmful than helpful (van Dik et al., 2016).

Finally, the rise in power of medical authority has also led to the rise of biotechnical advancements. Consequently, increasing medical technologies meant that there would be an increase in the opportunities to discover more illnesses (Maturo, 2012). The pharmaceutical industry has long been viewed as a catalyst to medicalization. Historically, physicians are the gatekeepers of medicine, and the rise of Ritalin for hyperactivity and the increase of treatment through medicine was led by doctors (Conrad, 2005). However, revisions to recent FDA regulations have allowed wider usage and the

promotion of drugs on television and in the media. Now, pharmaceutical companies can make a profit off of medicine that treat diseases and have created a wider net for what an illness is. A prime example is sexual difficulties-that are natural with increasing age-have become redefined as a medical dysfunction, and hence, the well-known Viagra was born. Diseases are now marketed, and pharmaceutical companies have tapped into a multi-billion-dollar industry where the patients are consumers (Conrad, 2005).

The History of the Medicalization of Childbirth and Labor

The greater focus of this thesis will explore how the increasing medicalization and overmedicalization of labor/birth could be harmful and how the current standard US practices of labor support are outdated. Traditionally viewed as a natural process, labor and delivery is now treated as a disease. Women are restricted into hospital beds and are entered into triage and monitored during every second of their labor. Antepartum care is different in America than in other similar, developed countries, and our statistics show the variances.

According to the Centers for Disease Control (CDC), maternal mortality in America is at an average of nine times higher than other similar, developed countries such as Sweden, Canada, and the United Kingdom ("First Data Released on Maternal Mortality in Over a Decade," 2020). Our current rate is 26.4 deaths per 100,000 births and an average of 800 women die each year within 46 days after birth. As there are approximately 10,000 babies born a day in the US, so these statistics are beyond alarming ("Births- Method of Delivery," 2021). The most concerning of all is that there is a significant lack of data and research surrounding this issue. As stated above, the National Center for Health Statistics released the first national data on maternal death in 2020,

with the last report being in 2007 (“First Data Released on Maternal Mortality in Over a Decade,” 2020). These statistics place the US at the very bottom when compared to other advanced countries (Declercq & Zephyrin, 2020). The bottom line is that women are dying, and we are not addressing it. It is important to explore the deep and complex history of birth.

For most of human history, labor and birth was an extremely dangerous event. However, with the advancements of medical practices in the 19th and 20th century, birth slowly transformed into a safer, controlled event. Most women in the United States do not go into labor concerned whether or not they will be able to go back home with their babies. With medical advancements relieving a lot of pain (analgesics) and making the process of delivery easier, maternal mortality rates significantly dropped, showing that certain medical interventions were improving childbirth for women.

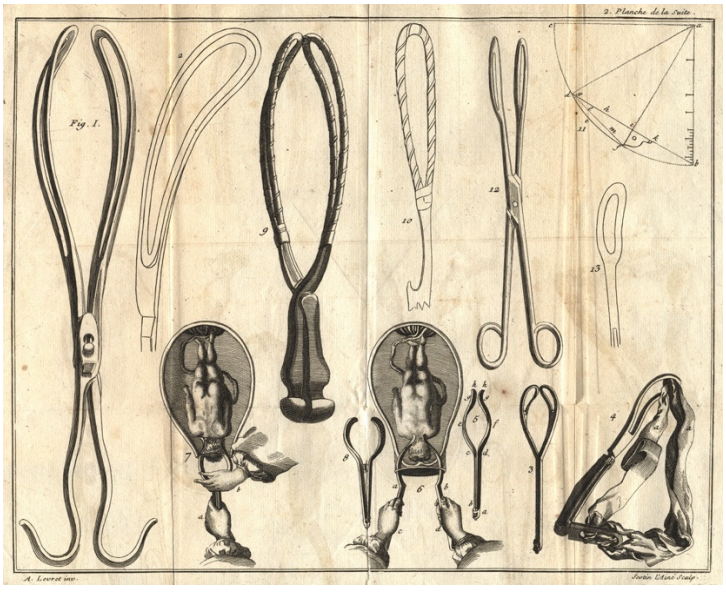

Figure 1 *Forceps and Medical Instruments Used in Assisting Birth, 1750*

Labor and delivery in the late 18th and 19th century and to the early 20th century consisted of midwifery and women-dominated assistance, where it was generally female family members who were present to help during the birth. In fact, it was viewed as "dirty work", which was to belong to women and beyond the scope of legitimate medicine (Henson, 2002). Hence, men were rarely allowed in the rooms and only entered if he was a trained professional during a life and death scenario. Otherwise, men were not allowed, and it was a female-dominated practice.

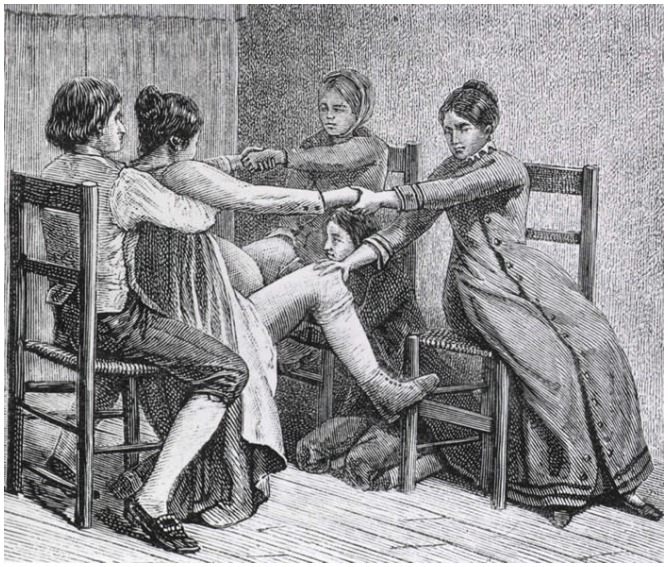

Figure 2: *An American Pioneer Birth Scene, 1887*

American women averaged seven live births through their lifetime and were pregnant at even higher numbers (Kaplan, 2012). It was normal for women to prepare themselves for the possibility of death during childbirth; one woman once wrote:

> If I live and regain my health, I will surely write [to whom she owed letters] (19th century), and another
>
> Between oceans of pain, there stretched continents of fear; fear of death and a dread of suffering beyond bearing [1800s] (Kaplan, 2012).

As the rate of maternal mortality continued to rise during the 19th century, several physicians sought to find the solution for this issue. Arguably, one of the most notable physicians is Dr. Joseph Bolivar DeLee. He was a leading physician in Obstetrics and Gynecology in the early 20th century, who changed this field of medicine. Although he is the father of the significant contributions that have saved the lives of women with issues related to childbirth, many also view him as the "father" of unnecessary interventions, who created the gateway to the many interventions that exist today (Leavitt, 1988). He wrote the (now highly controversial) article "The Prophylactic Forceps Operation", which was accepted as a "necessary reading for students and practitioners" during his time and was included in the first issue of the *American Journal of Obstetrics and Gynecology* journal (Leavitt, 1988).

In his writing, Dr. DeLee was primarily concerned with the rising number of maternal deaths but especially the physical damages that most women bore after birth. He was alarmed with the frequency of such events and their adverse consequences:

> I 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 [Direct quote of Dr. DeLee] (Leavitt, 1988).

He believed that childbirth put the mother's life and health at risk and hence created a system that would routinize medical intervention in the process of labor and delivery (Leavitt, 1988). He did not believe that a mother's death during birth should be normalized. DeLee argued that if one is to say that a woman is not 'anatomically perfect' postpartum as she was prior, then he or she must also agree that labor is *pathogenic*

(Leavitt, 1988). He was a firm believer that through medical intervention, maternal mortality could decrease, and he treated childbirth just like any other disease or an illness.

He was one of the first to list childbirth as a legitimate medical illness, and it changed the way women gave birth. His suggestions ranged from sedating the mother with scopolamine (medicine to treat postoperative nausea and vomiting and motion sickness) to pulling the fetus during the end of delivery with forceps. He believed these methods would keep the integrity of the pelvic floor as much as possible, decrease fetal damage, and save women from the effects of suffering (Leavitt, 1988).

While he was not the first to officially address these issues, Dr. DeLee was the first to believe that these methods could *prevent* issues that would normally result from childbirth. His methods were to direct and control the labor and allow minimal control from the mother to maximize the success rate for the mother and child. In the early 1900s, the medicalization of this birth was looked down upon, and DeLee's ideas were not immediately welcomed by the greater medical community. Many physicians who heard him present at the 45th meeting of the American Gynecological Society in Chicago of May 1920 criticized him, saying that doctors who hear of his methods will unnecessarily intervene (Leavitt, 1988). Most doctors during this time agreed that it is better to intervene when there was a present danger. DeLee disagreed, stating that the point of his methods is to *prevent* common issues from occurring in the first place.

At the turn of the 20th century, around the time DeLee developed his hypothesis and his methods of delivery, there were other social issues that were being addressed: clean water, maternal/fetal care, urban sanitation, and others. These efforts were the beginning of a new way to practice medicine and society began to pay attention to ways

to prevent disease and sickness. Dr. DeLee's efforts in improving gynecologic care was one of the first cases for preventive care instead of reactive care, which launched the medicalization of this process. He also believed that his solutions would solidify birth as a doctor's job as only about 50% of babies were delivered by physicians during that time (Leavitt, 1988). The other 50% was delivered primarily by midwives who had a ranging spectrum of training. DeLee challenged conventional medicine and was the first to fight reactive medicine with preventive protocol for safer methods during delivery.

In the mid 1900s, there was also a rise of hospitalization, which further catalyzed the medicalization of labor. Women turned to hospitals for a safer birth. At this point, many hospitals adopted procedures similar to those Dr. DeLee developed. These procedures and protocols appeared to be safer and more sanitary. However, there was no statistically significant mortality difference of at-home births versus hospital births until the 1940s (Butler & Kay, 1988). It was also during this time that American physicians worked to differentiate themselves from midwifery, which was the traditional method of delivery assistance before the medicalization and routinizing of labor (Butter & Kay, 1988). Previously viewed as a natural process where female family members took a majority part in (alongside the occasional physician), physician-assisted birth became a normalized as maternal mortality rates began to decrease and as women opted for hospital births with greater frequency.

Since the mid 20th century, medicine and the medicalization of labor and delivery has drastically changed. In the 1940s, every caesarean section (c-section) had to be justified by numerous doctors as it was a new and high-risk surgery- today, c-sections are

becoming more common (31.9% of the births in the US), whereas the World Health Organization (WHO) suggests that approximately 15% of births should be done via c-section ("Births-Method of Delivery," 2021). We are quicker to address "unnatural" states of the body as a society and continue to find ways to eradicate pain, instead of viewing certain pains as a natural result of a natural process (Wolf, 2012). Birth is no longer viewed in a medical perspective as a completely natural process. Although there is still the perspective that labor can happen in a hospital without surgery and "naturally", medical intervention exists at nearly every step. Today, only a small percentage of individuals are choosing at-home deliveries with a traditional midwife or doula.

Although virtually all births happen in a hospital setting, maternal mortality rates have not changed since the significant decrease in the 1930s. With the world's most expensive healthcare system, it is shocking to know that the US has one of the highest infant mortality rates and maternal morbidity. Today, you can enter any large, established hospital setting, and discover that labor and delivery is continuously routinized and heavily controlled. The state of labor is viewed primarily as an illness, with medical solutions that were the result of the modernization and advancement of medicine in this field.

CHAPTER TWO

The Institutionalization of Birth

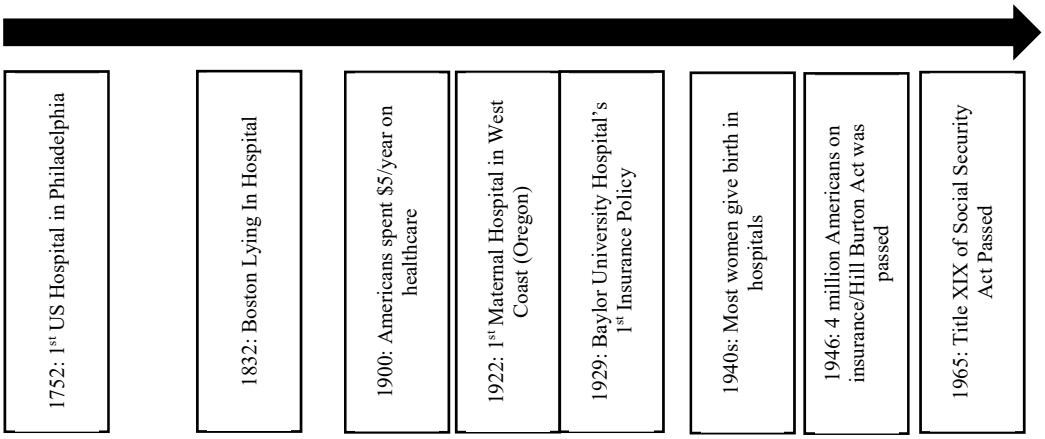

Figure 3, Timeline of The Medicalization of Birth (1752-1965)

The Beginning of the Establishment of Medicine and Hospitals

As discussed in the previous chapter, hospitals were generally a place where the poor, sick, and vulnerable went to receive care up until the 20th century. With the increasing establishment, medical advancements, and restructuring of labor and delivery, women began to transition out of giving birth at homes to delivering at hospitals. This eventually opened the door to something that had never been seen before- the *institutionalization* of birth. The reason this was significant is because it was the catalyst of the structuring, organizing, and politicizing of a historically natural process.

In the 1900s, people spent approximately $5 a year on healthcare (which translates to $100 in today's money) (Blumberg & Davidson, 2009). Health insurance did not exist at this point for two reasons: it was not profitable to insurance companies (insurance companies existed, but none had entered the scope of medical insurance at this

point) and there was no need for families to purchase insurance for something that was $5 a year. Up until this point, only sick people would visit hospitals and would need to see a doctor. Additionally, the practice of medicine was not illegitimate, but it was not regulated until a decade later (Kisacky, 2019).

In 1910, the Flexner Report on medical education "recommended stricter entrance requirements, better facilities, higher fees, and tougher standards for medical students" (Kisacky, 2019). These changes were in place to increase the quality of care that medicine could offer to Americans. The American Medical Association (AMA) saw a surge of membership in 1910 which also established the field of medicine (Kisacky, 2019). A decade later, the cost of medical care slowly began to rise as physician's salaries increased as a result of the growing demand and increase of quality standards for physicians and the hospitals. These advancements led to the general societal acceptance of hospitals as legitimate places of treatment (Kisacky, 2019). By 1929, families were spending about $103 a year; the average family earned $1,916, making this expense only 5% of the total income (Kisacky, 2019).

More and more mothers found themselves at the hospital to give birth. Before this, hospitals were a place for the truly impoverished mothers who were often single mothers with nowhere else to go for care (Martell, 2006). The east coast developed first with the Boston Lying-In Hospital that was formed in 1832, whereas the first maternity hospital in the west was formed in Portland, Oregon in 1922 (Martell, 2006).

The Beginning of Medical Insurance

In the 1920s, hospitals across America saw plenty of empty beds- people were not coming into hospitals at this point as trust in medicine, science, and safety were not established. In 1929, Baylor University Hospital experimented with the idea of hospital care based on a prepayment system (Reed, 1965). It was offered first to Dallas public school teachers: each teacher would receive 3 weeks of care for $6 dollars a year (Bloomberg & Davidson, 2009). When the Great Depression hit, hospitals were desperate to have patients (as they would have to close with no money), so they tried Baylor's experimental "insurance" (Reed, 1965). This idea was unique as it was the first to address the fear that commercial insurance companies had- a lack of customers (Celluci, n.d.). It was not only the sick Dallas teachers who were offered this insurance: *both* sick and healthy teachers were offered this and because of its affordability and flexibility, it spread the cost of catastrophic illness across a larger group of people (Celluci, n.d.). Soon, there were 10 plans across the country by 1934, with 54,000 patients. More people were interested in the idea of insurance and it was soon profitable for groups of hospitals to create these "plans".

The first established plan was the Blue Cross and other major plans appeared throughout heavily populated states such as California and Michigan. By 1946, there were 44 plans with over 4 million people. These initial plans were based on single medical services (like an x-ray) that patients could choose from specialized care was mostly limited to some surgeries and obstetrics. Specifically, all plans provided emergent services and partial maternity care. Maternity care under these plans were not comprehensive but rather insured up to a maximum dollar amount, and it limited the

number of days after delivery (Reed, 1965). These plans rose to become large insurance plans which were then profitable as many Americans were signing under them.

The American Conveyer Belt Hospital Structure

On August 23rd, 1946, President Truman signed the Hill Burton Act, which resulted in the hospitals and hospitals systems that we see (Celluci, n.d.). It is considered to be the first major healthcare policy in the United States. In summary, this act distributed government funds to hospitals, nursing homes, and other health facilities that were for construction and modernization (Bargo, 2020). Originally meant to build higher quality and to provide efficient hospitals to poor communities, it led to hospitals becoming standardized, hence the routes of patient care also became standardized and like "conveyer belts" (*Does the Medicalization of Birth Harm Mothers?*, 2020). Although the policy was successful and built over 4,200 hospitals, it did not address the cost of healthcare and left hospitals after the act's termination in 1975 to self-sustain themselves (Celluci, n.d.). As a result, hospitals had to increase their costs which resulted in higher hospital bills for patients. The Hill Burton Act did provide more hospitals, technology, and care to areas that needed it, but it also made medicine more standardized and later left hospitals to increase treatment prices. Realistically, the job was done but the people in these communities were not provided the care needed due to the rising costs.

Additionally, this "conveyer belt" system resulted in mothers who gave birth at hospitals to have very similar experiences. There were designated birthing/delivery rooms, post-partum rooms, and surgical wings (*Does the Medicalization of Birth Harm Mothers?*, 2020). Traditionally, women would give birth in the safety of their homes with people that were familiar and comforting. With hospital births, mothers would give birth

in one wing of a hospital and then be wheeled to another minutes after delivery. The restructuring of hospitals in this fashion as a result of government involvement and the standardization of patient care, made labor more and more like a medical illness that needed to be treated. Birth under this insurance was looked upon like any other procedure like a broken bone- something that needed to be fixed.

Government Involvement of Healthcare Insurance

Today, the US government (including state) is heavily involved in healthcare and insurance. However, the government was not as drastically involved until the passing of the Social Security Act of 1935 under President Franklin D. Roosevelt (Celluli, n.d.). Although this act did not establish a national healthcare insurance, otherwise known as universal healthcare, it was strongly considered. Nonetheless, this act created the precedent for what would later become Medicaid and Medicare under President Lyndon B. Johnson in 1965 (called Title XIX of the Social Security Act) (Ceculli, n.d.). Another major government involvement was when employer-based healthcare became tax free in 1943 (Bloomberg and Davidson, 2009). As a result, these tax advantages grew the scope of insurance so that it soon became a common purchase a family or individual made.

With the early models of Medicare and Medicaid, healthcare services were fee for service. Thus, hospitals, after the end of the Hill Burton Act and its government funding, increased the number of services they would provide to the patient, which increased the reimbursement the hospital would receive for the care. While birth was virtually free in the early 1900s because most births were at home, the average cost of labor and delivery today (from employer sponsored insurance) is $13,811 (Melillo, 2020). Government involvement in healthcare consequently rose the cost of healthcare (and thus healthcare

insurance) for Americans. Because insurance became so intimately tied to the government, labor and delivery was also swept under its wing.

The Progressive Era and Its Relationship to Labor

As discussed in the first chapter, women desired more solutions to labor pain. Women entrusted the care of their bodies and babies to science because medicine was viewed to be the only solution to their concerns as birth often placed women in vulnerable physical and emotional states (Martell, 2006). The shift of birth from homes to hospitals marked the beginning of the Progressive Era, which further promoted hospitals and hospital beds as "the place" for childbearing during this time (Martell, 2006). Midwifery began to die due to both legislation and the increase of physician-assisted care, as it was believed that physician intervention would make deliveries safer (Martell, 2006). These interventions took away the independence of mothers and thus maternity advocacy, and eventually led to women doubting whether or not they can safely deliver their own baby. In emergent cases or for high-risk mothers, hospitals were available and saved the lives of many, many women. But it also shifted the social perspective and trust from the mother during delivery and rested the fate of labor only to the hands of doctors.

The History of Maternal Mortality and Factors that Reduced It

This is only half of the story. It is true that women were dying at significant rates for most of human history. It has been recorded that the annual maternal mortality rates hovered around 400 per 100,000 births between 1800-1935. For over a century, mothers were dying at the same rate (Loudon, 2000). Although there were initial medical advancements made throughout those years (i.e. Forceps), decreases in mother mortality

was mainly due to social changes such as better housing and the discovery of hygiene practices (Loudon, 2000). Surgical interventions during birth were at their peak in the late 1930s where maternal mortality was still high.

Dr. Joseph DeLee, as introduced in the previous chapter, advocated for intervention during birth to prevent death in the first place (Loudon, 2000). However, these interventions were not simply the use of forceps: anesthetizing the mother at the second stage of labor and manually removing the placenta (which can kill the mother) were common recommendations (Loudon, 2000*).* Forty percent of maternal deaths were caused by sepsis: an infection triggers inflammation throughout the body, resulting in multiple organ failure/damage or death ("Achievements in Public Health, 1900-1999: Healthier Mothers and Babies", 1999). This large sum of the deaths was due to unclean medical practices during surgery and delivery as a whole ("Achievements in Public Health, 1900-1999: Healthier Mothers and Babies", 1999). The remaining deaths were noted to be from hemorrhage and toxemia. Unfortunately, clean aseptic practice was not regulated during this period.

In 1933, the White House called for the "Child Health Prevention, Fetal, Newborn, and Maternal Mortality and Morbidity" conference that stated that the high rates of maternal mortality were linked to the poor aseptic practices and "excessive operative deliveries" ("Achievements in Public Health, 1900-1999: Healthier Mothers and Babies", 1999). This created a call for action for states to begin regulating maternal mortality at the state level and "institutional practice guidelines"; guidelines for physicians were also established ("Achievements in Public Health, 1900-1999: Healthier Mothers and Babies", 1999). As introduced in the first chapter, the 1940s saw a surge of

hospital births. With safer practices, less intervention, access to blood transfusions, antibiotic use, and others, the rate of maternal death was significantly reduced. However, it is necessary to note that maternal mortality as discussed in this section is not complete due to the lack of data for non-White mothers.

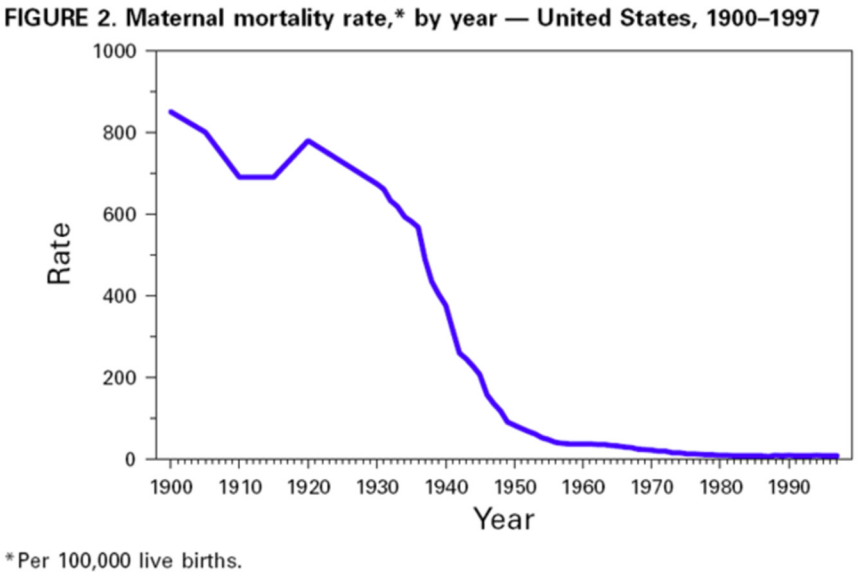

Figure 4: Maternal Mortality Rate in the 20th Century (Source: CDC)

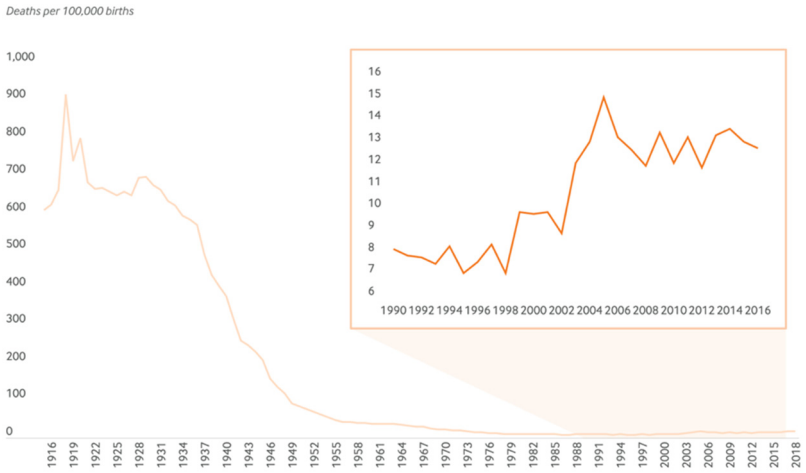

Figure 5: Maternal Mortality Rate Until 2016 (Source: CommonWealth Fund)

The Consequences of Transitioning to the Hospital

By the mid 1900s, a majority of children were born at hospitals and mothers across America were slowly adapting to this new way of delivery. However, critics in the 1970s and early 1980s argued that "by redefining the 'natural' process of childbearing as

inherently risky, obstetricians had deceived women into accepting hospital and medical interference as the rule for all births" (Al-Gailani &Davis, 2014). With government involvement in insurance and with insurance's involvement with birth (as it was now seen primarily as a medical procedure), women's health became the center of the political stage (Al-Gailani & Davis, 2014). This left little agency for the mother which gave greater room for medicalization.

CHAPTER THREE

The Shifts of Birth: The Physiology, Humanizing, and Routinizing of Labor

A Brief Physiology of Birth and Birth Expectations

As seen in previous chapters, it is my belief that birth is a natural process that has become medicalized for both the good and bad. This is a result of the rise of the power, trust, and advancement in medicine, government intervention, laws, the political stage, and other involvement. Labor became institutionalized and began to transition births from the bed of a woman's home to maternity wards. This eventually left little room for mothers to practice autonomy in the process of giving birth to their children.

When thinking about interventions and the need for interventions, it is important to note that although some parts of birth may be present in grey areas, the anatomy and the physiology and endocrinology of birth is natural. Birth results in the combination of both the "fetus' readiness as well as the mother's physiological readiness" (Lothian & Romano 2008). This natural progression contains four stages, as described in the Journal of Obstetric, Gynecologic, and Neonatal Nursing (Lothian & Romano, 2008). First, the baby's hypothalamic-pituitary-adrenal (HPA) has a proper cortisol surge which signals the organs to mature for proper exiting of the womb. Second, there is a cascade of hormonal signals for the beginning of labor. Then, the receptors in the myometrium, the middle layer of the uterus, are active. Lastly, the uterine muscle contracts and cervical dilation. A commonly accepted model states that failure to progress (meaning, inability to progress further in the labor process and stages) during labor is primarily a physical one.

For example, this model lists that the failure to progress in labor is a "mechanical dysfunctionality", which in itself fails to mention the extrinsic factors that influence the natural flow of labor (Lothian & Romano, 2008).

This perspective feeds into the harmful idea that the failure to progress during labor is the fault of a "mechanical dysfunction" of the mother (Lothian & Romano 2008). Although there may be a true mechanical factor that prevents a mother from progressing at the "expected" pace of labor, the belief that a mechanical *dysfunction* is the cause of a mother's failure to progress, is an inherently degrading and privileged one. This belief can also lead to early interventions that potentially alter the natural progression of that individual mother. As shown above, the natural progress of birth is a slow and unique event, and this idea assumes that birth should be as fast as possible, and that the quicker the pace, the safer it is. However, there is not much evidence pointing to the fact that a quicker birth is necessarily a safer one.

In 2018, the World Health Organization released a new set of recommendations for mothers during labor to shift the mindset of birth to be more of an experience and less of it as a strictly medical case ("Intrapartum Care For A Positive Birth Experience," 2018). Traditionally, it has been medically recognized that the average progression for cervical dilation was 1 centimeter per hour ("Intrapartum Care For A Positive Birth Experience," 2018). However, this new recommendation officially recognized that this is not the case and that every laboring mother will labor different from the proposed "average". In addition, it was stated that "[cervical dilation rate] alone should not be a routine indication for medical intervention to accelerate labor or expedite birth" ("Intrapartum Care For A Positive Birth Experience," 2018). These recent changes show

that there has been a shift in the medical world to begin advocating again for another look at the interventions that exist today. This chapter follows the shifts in labor in modern history and medical interventions and discusses whether they are still necessary.

The Humanization of Labor and A Brief History of Natural Birth

In 2019, in a committee opinion paper from the World Health Organization (WHO), new recommendations were provided with edits that are more appropriate with what is now known in medicine surrounding labor and delivery. For example, one of the new recommendations included adding "family-centric interventions", such as lowered or clear drapes during c-sections (Bryant & Borders, 2019). The idea behind this suggestion is to not only decrease the stigma surrounding cesareans, but to also create a more holistic and more involved experience with birth for the entire family unit. Although these changes can appear to be untraditional, they are efforts for a more inclusive and mother-centered births that could possibly reduce the quickly rising trend of medicalization.

There have been movements since the institutionalization of birth that have attempted to shift birth back to a more natural process. For example, birth reform began in the late 1950s and 1960s, after the surge of hospitalization of women during birth in the 1940s (Martucci, 2018). There was a rise in the breastfeeding movement that "helped nurture a belief among some that women's bodies had a natural flow….and connectivity to them" (Martucci, 2018). This further supported the natural birth movement that saw birth as something beyond a medical condition.

However, as discussed in the previous two chapters, the general attitude towards birth was that it was an unnatural process that needed constant medical attention and assistance. In the 1970s, birth reformers like Ina May Gaskin introduced the idea that

natural childbirth is intimately tied to female autonomy and choice, which argued that birth was "something other than a medical event" (Martucci, 2018). Besides Gaskin, there were additional movements and advocacy for women in birth in the 80s surrounding 'birth planning' (Cook and Loomis, 2012). This introduced the idea of women-led birth that focused on empowering and supporting the woman as she guides her body through birth. This shift was an attempt to look at birth again as a process that guided itself, with the mother guiding her own body with as little intervention as possible. Additionally, it gave back the power to women who were afraid of pain during birth and were fearful of it.

Unfortunately, this idea of birth again becoming a personal, individual, and sacred event was not as widely accepted as reformers such as Gaskin may have hoped. In 2018, 74% of Californian mothers agreed that intervention should not be administered unless it was absolutely necessary, but a mere 5% of births were reported to have no intervention ("Infographic: The Overmedicalization of Birth," 2018).

Labor Interventions and Their Consequences

When used appropriately, technology has proven to be lifesaving for mothers during emergencies in labor, in c-sections, and in the delivery room itself. These advancements were necessary for the prevention of both infant and maternal death. This chapter (or thesis) does not denounce medicine, but rather looks critically to whether or not there should be a limit to such interventions. It looks critically at the system that promotes the furthering of medicalization.

Logically, intervention has increased throughout history with the advancement of technology and the greater offerings for such care for mothers during birth. C-section

were 7% of all births in 1970 but 30.2% in 2005 (Lothian & Romano, 2008). This statistic shows that either mothers are choosing c-sections, or c-sections have become more available and encouraged.

Birth in America looks different when compared to birth across the world in similar, developed countries. For example, in South Korea, birth plans are highly recommended and multi-day postpartum stay at hospitals are encouraged even with vaginal births (Lee, 2013). Additionally, it is a commonly held medical belief that vaginal births are the 'best method', and cesarians are not encouraged unless absolutely medically necessary (Danuri, 2019). However, this is not the case in America. In the US, there is a culture of fear surrounding childbirth as the media popularizes and pushes c-sections (Panazzolo & Mohammed, 2011).

The cause of the vast difference between the United States and other developed countries may be rooted to medical interventions. In the UK, US, and Canada, almost a third of all reported c-sections were performed due to dystocia- difficult birth (McNiven, 1998). This means that nearly a third of all mothers who delivered children by c-section had to do so due to a hard labor. Research shows that these difficulties can be a result of interventions.

The length of a stay, the medical and physical interventions, routine vaginal and cervical checks are some of the factors medical professionals should take into consideration when caring for a mother in labor, active or not. In a scenario published in *The Journal of Perinatal Education* (2013) there is a story following the interventions a mother, Cara, and her experiences as she navigates through her birth.

Cara was immediately placed on fetal monitoring after entering the hospital. During her laboring, she had the following interventions: frequent vaginal exams, epidural, catherization, amniotomy, Pitocin, vacuum extraction, along with others (Jansen et al., 2013). A report released in 2008 stated that "interfering with the natural physiological process of labor and birth in the absence of medical necessity increases the risk of complications for mother and baby" (Lothian & Romano, 2008). Interventions aimed at progressing women through the four stages of labor may contribute to why births are becoming more surgical.

What exactly in the process of natural birth can interfere, and what does it result in? Below, Figure 6 shows the consequences of administering bedrest for women in labor (Jansen et al., 2013). The red words indicate medical interventions, and the black words are their consequences, with arrows leading to the next intervention that resulted from the intervention prior. A seemingly innocent ask of the mother during birth can potentially lead to a cesarean section, an intense surgical procedure that many women attempt and plan to avoid due to the long healing process and other possible complications. However, the question to ask here is why bedrest was ever considered in birth? What are the medical reasons for this? In the next section, I explore the various 'standard' interventions that most women experience giving birth in a hospital setting.

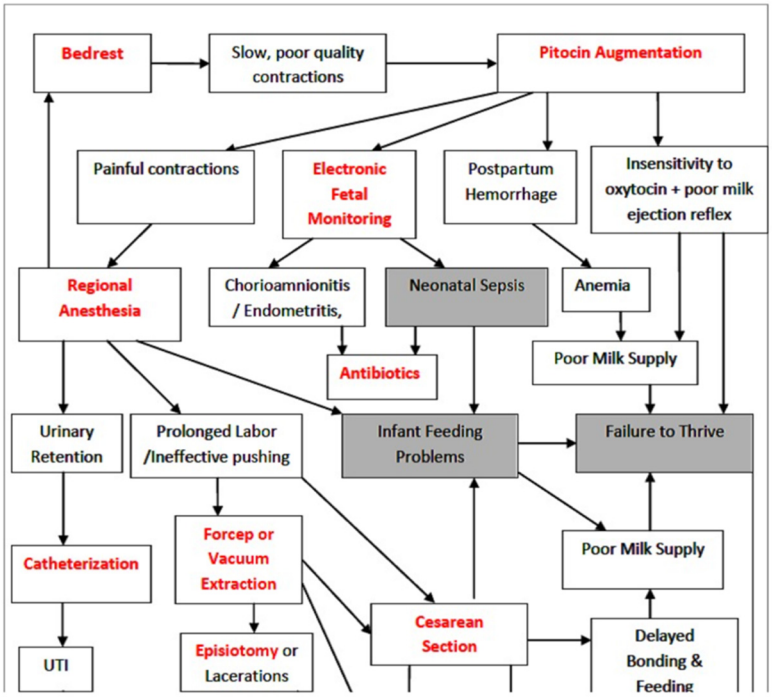

Figure 6: Interventions and their Consequences Starting With Bedrest (Jansen et al., 2013).

Common Medical Interventions and Their Effectiveness

The most common intervention during labor in America is bed rest (Jansen et al., 2013). Nearly a fifth of women pregnant in the US each year are prescribed 'bed rest' at some point (Van Eerden, 2017). As shown in Figure 6, the impact of a single act of bed rest can be harmful and potentially hindering during labor.

Bed rest was first introduced back in the time of Hippocrates, who recommended bed rest as treatment for many disorders (Van Eerden, 2017). However, the idea of bed rest as a treatment for many issues for pregnancy did not come about until the end of the 19th century, led by Dr. John Hilton (Van Eerden, 2017). Dr. Hilton was a naturist physician, one who referred to injuries as "Nature" inflicted and also trusted in rest to be healing of the body. Although his main thought behind bed rest as treatment was directed towards orthopedic disorders, "this principle was applied in multiple fields with little

question of its benefit for nearly 100 years" (Van Eerden, 2017). Bed rest was suggested and recommended for many pregnant women for over a century. This is different from the cultural concept of "lying in", in which a woman rests in bed after giving birth or prior to birth to prepare for labor.

Unfortunately, studies have shown that bed rest can increase the risk of deep vein thrombosis and pulmonary embolism for pregnant women, who already are at high risk for those conditions (Van Eerden, 2017). Bed rest also is restrictive for laboring mothers as their movement is limited. In addition, it leaves mothers to labor through the contractions without moving or finding pain relief in baths or showers (Jansen et al., 2013). Today, the ACOG and the Society for Maternal-Fetal Medicine have stated that bed rest is ineffective for preventing preterm birth, and generally recommends against this. Mayo Clinic also suggests that woman should change positions frequently ("Labor Positions," 2021).

ACOG defines another common intervention, fetal monitoring, as "…the process of checking the condition of [the] fetus during labor and delivery by monitoring [the] fetus's heart rate with special equipment" ("Fetal Heart Rate Monitoring During Labor," 2018). There are two types, internal and external, but external is more common as it reduces the risk of infection for the fetus. Electrical fetal monitoring (EFM) is stated on ACOG's website to be necessary because it "helps to detect changes in the normal heart rate pattern during labor" ("Fetal Heart Rate Monitoring During Labor," 2018). In addition, it is used to help doctors make decisions in the chance that there is a medical emergency that is detected by the monitor. It provides an ease of mind for the mother and physician caring for her. However, although it is a common standard of care in hospitals,

the continuous use of EFM can restrict the mother during movement and has been reported to be related to higher rates of cesareans (Jansen et al., 2013). It was recommended in a journal released in 2013 (only seven years ago) to reserve this for mothers in high-risk pregnancies, and not in every pregnancy. Unfortunately, this is a standard of care and there needs to be more studies on why certain neutrally beneficial standards of care persist when initial research shows that it may be less reassuring, despite its intention.

Although there appears to be a movement that is moving away from heavily medicated births to more mother-centered care, there is still a long way to go in how society views the status of birth and how care is provided during laboring. There needs to be more research that further studies how labor is continued to be medicalized and how it is changing. Questions need to be raised to ask whether or not the interventions listed in Figure 6 are medically necessary and if they are truly beneficial for the mother. As of recent, the WHO and the ACOG appear to be transitioning into a more holistic care that was provided for women nearly 100 years ago, but with modern medicine available as a live saver for many women and their children. In compliance to the current standard, US birth care for women should be re-evaluated for their effectiveness.

CHAPTER FOUR

The Future of Birth in America

The Obstetrical Dilemma: Myth or Fact?

Most mammalian species normally give birth alone, and on average, in less than a couple of hours (Shipman, 2013). However, humans have generally received assistance during birth. In today's society, birth is always attended with midwives, doctors, spouses, partners, and other family and friends. The question at hand is why birth is different for humans when compared to other species of mammals who seem to have an easier birth that is done solo. The answer may lie in the 'Obstetrical Dilemma' (OD), a possible explanation for why birth is significantly more difficult for homo sapiens. It was first introduced in 1960 by American anthropologist Sherwood Washburn when babies were overwhelmingly born at hospitals (Glausiusz, 2017).

The hypothesis behind the 'Obstetrical Dilemma' is that human babies are born because they need to "escape before they outgrow the mother's pelvis" (Dunsworth, 2018). This hypothesis was popularized because humans are a bipedal locomotive species, who need to optimize the size of the pelvis but also need to fit larger headed babies (Shipman, 2013). Compared to other mammals, particularly chimpanzees (our closest biological relatives in terms of genome and DNA), humans have narrower waists and much larger brained offspring. According to the *American Scientist*, 1 out of every 1,000 mothers need to give birth through a cesarean section because their babies' heads are anatomically too large to give birth through the vaginal canal (Shipman, 2013).

However, OD is also a primary example of how limiting certain theories that relate to birth are, and how more research needs to be conducted in this field. In the modern scientific community, OD has been challenged because recent biomechanical research rejects this 'dilemma', and the more accepted idea is that the methods of birth have made birth increasingly more difficult for women (Huseynov et al., 2016). One study's results did not find evidence to support the idea that females will have "higher locomotive costs due to the wider pelvis" (Macfarlane, 2018). A new theory that appeared in 2001 by Peter Ellison hypothesizes that it is metabolic needs, rather than locomotion, that begins the process of the baby exiting the mother. In addition, more careful consideration of this dilemma needs to be made because simply putting the cause of difficult labor as evolutionary history masks disparities in different women (Glausiusz, 2017). However, the "Obstetrical Dilemma" has not been fully rejected; rather the scientific community has been revisiting and reconsidering a long time held belief.

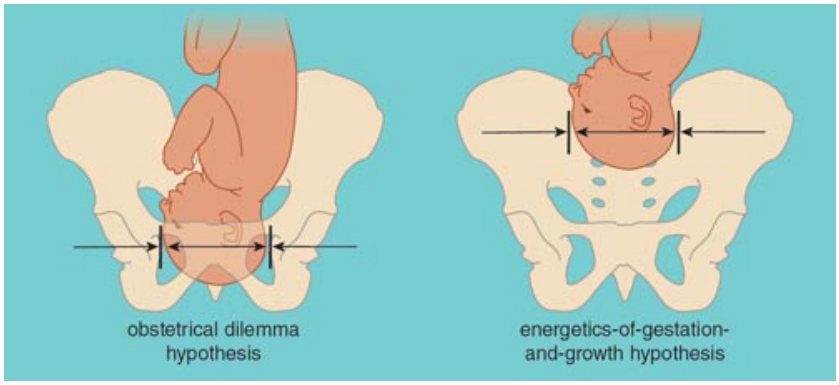

Figure 7: The Obstetrical Dilemma versus The Metabolic Theory (Source: American Scientist)

With my research, I find more reasons to believe that instead of an OD, there is a greater chance that a "Childbirth Dilemma" exists with the medicalization that is paired

with most births that occur today. OD is not an acceptable or fully encompassing explanation for the rise of difficult birth for women and fails to consider medical interventions that exist in births today.

The Childbirth Dilemma

As described in Chapter Two, with the increasing technological and medical advancements, there is an increasing difficulty that pertains to birth. Besides these changes, there is a different and more new change: expectations surrounding birth (Leggitt, n.d.). A century ago, mothers and physicians did not always expect a healthy baby after a birth. Today, most women in industrialized nations can safely expect they will return home from the hospital with a healthy newborn in their arms (Leggitt, n.d.).

The discovery of safe birth control has allowed women the ability to plan for their babies, pregnancies, and families. This provided women with options and the opportunity for the first time to discuss family planning. With further autonomy for women, there has also been a rising culture where more and more women are opting to have births that are painless, fast and surgical. While it may appear at first that these options give women more control, the flip side to consider is that natural births can also grant these same controls. Birth is a woman's right on its own, and regardless of the way birth happens, it is ultimately the mother who should make these decisions. Instead of discussing the sizes of heads and hips, I suggest that the more pressing and important question is why women are choosing at alarming rates to be inducted for births or to give birth through a c-section.

There is no shame for the mother choosing these methods to give birth, but as mentioned in the last chapter, we are a society that tries to use surgery as the last resort,

but for birth, it appears to be an option for our first; even in the cases where it was not medically necessary. This is disturbing because if these methods continue to increase, this will be the future of birth in America. The future of birth could be a field of medicine that is unchecked by the consequences of unnecessary medical intervention.

The Labor Curve and Its Lasting Impact

One night on June 11, 1952, world renown physician, Dr. Emanuel Friedman, discovered "The Labor Curve" (Romero, 2016). Dr. Friedman realized that the progression of cervical dilation graphed was a sigmodal "S" shape. This was how the terms "latent phase of labor" and "active phase" were discovered (Romero, 2016). The latent phase of labor showed slow progression and cervical dilation whereas the active phase was the second part of labor that was characterized by quick cervical dilation. After his discovery, he published these findings in the American Journal of Obstetrics and Gynecology, calling this "The Labor Curve" (Romero, 2016). This curve was how abnormal labor was identified and this is still the method physicians use to determine slow progressing labor.

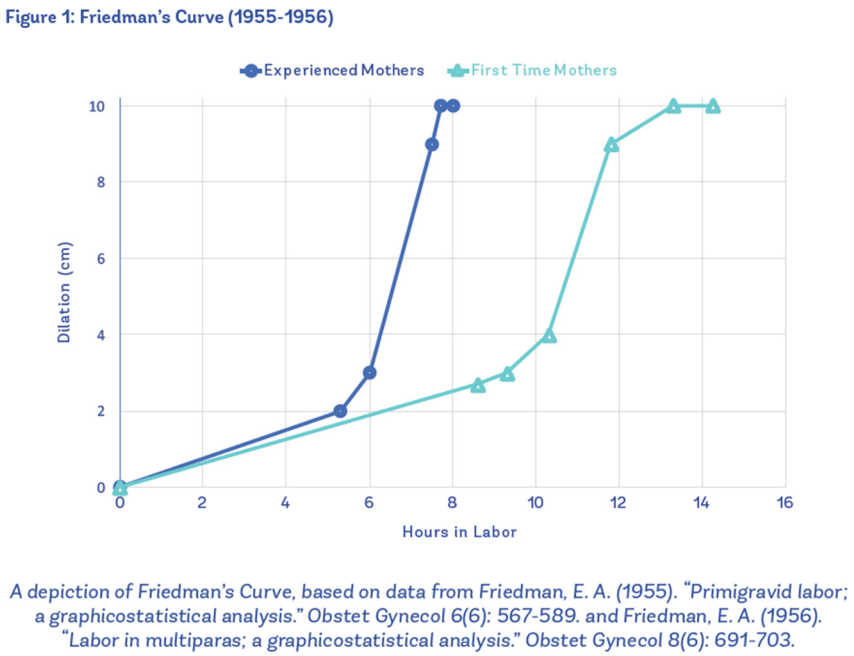

Figure 8: Friedman's "The Labor Curve" (Source: Evidence Based Birth, Dekker 2013)

However, there is a major consequence to this incredible discovery. Although Dr. Friedman's curve showed what most *average* births looked like, it made an assumption of what most *normal* births *should* look like. In addition, his conclusions were based on a data set of only 500 women (Dekker, 2013). The definition of "normal labor" and "labor arrest" have a significant impact "on labor management and cesarean delivery rate" (Zhang et al., 2010). A recent study that looked at labor and delivery records from 19 hospitals and data from over 62,000 women showed that:

> …Allowing labor to continue for a longer period before 6 cm of cervical dilation may reduce the rate of intrapartum and subsequent repeat cesarean deliveries in the United States (Zhang et al., 2010).

These results show a major flaw to this curve- it is not timeless. The concept of the slower, latent phase and the quicker, active phase still exist. But, like all data, the data Dr. Friedman was looking at in the 1950s is logically not the same as the data that exists

right now. In addition, the mothers that are giving birth and having families today are different from what they were 70 years ago.

A study published in 2012 compared various differences of labor patterns from data from 1950-1966 (D1) to data from 2002-2008 (D2) and discovered that mothers were on average two years older (24 versus 26 years) and had an increased body mass index (BMI) of 29.9 for recent mothers versus 26.3 in the older mothers (Laughon et al., 2012). It has been clinically found that an increase in both age and BMI are associated with prolonged births (Laughon et al., 2012).

In a more recent finding from 2018, it was found that 71% of mothers had epidurals or spinal anesthesia (White, 2018). The startling part of this finding was that anesthesiologists themselves were shocked at this finding and "were really blown away…we were really surprised the rates were so high" (White, 2018). Not only are the mothers giving birth different from those who did 70 years ago, physicians are shocked as well with the rates of intervention that are happening today.

Another factor to consider is the population differences between the mid to late 1900s to today. The racial makeup of America and the family models are not the same as they were in the past (Livingston, 2018). Today our population contains far more racial-ethnic diversity. More data is needed to capture how these populations differ. As discussed in short in Chapter One, race is a factor of birth outcome.

Since there is a different profile for the women who are giving birth today, it is important to note that this means the birth data is different as well. The first stage of labor (latent stage) for D2 mothers were longer by 2.6 hours for nulliparas (women who have never given birth) (Laughon et al., 2012). The cause of prolonged labor has been pointed

to increased interventions, but more so highlights the differences between Dr. Friedman's time to now. After controlling for the profile differences between D1 and D2 mothers, the "differences in the first stage of labor persisted…indicating that modern labor differs…largely because of changes in obstetric practices" (Laughon et al., 2012). Dr. Ware Branch, a lead author in a recent federal study agreed that one of the conclusions that can be drawn from the results are that more physicians are rushing to perform cesareans because "they [are] using an out-of-date yardstick for how long a 'normal' labor should take" (Knox, 2012).

The Labor Curve can only truly assist physicians so long as it is relevant to the current population. While the phases are still in use, but the curve needs to shift to the population it is to be used for. In addition, there needs to be a comprehensive investigation and more studies done to clinically show that the interventions that exist today are necessary. Normal labor is not the same for all women, and average does not equal normal.

The Money in Labor

There were monetary opportunities attached to labor from the very beginning of medical insurance. As discussed in Chapter One, hospitals were motivated to fill hospital beds and created insurance to pull patients who would then become life-long customers. Childbirth is the most common inpatient admission and c-sections are the most common surgeries in the United States (Melillo, 2020). Researchers look at over 350,000 births between 2016-2017 and found that the average birth, with employer-sponsored insurance was nearly $14,000 (Melillo, 2020). Not surprisingly, vaginal births approximately $4,400 cheaper than cesareans (Knox, 2012).

Doctors from Intermountain Healthcare found that if the US decreases the national cesarean rate from 33% to 21%, it could save $3.5 billion dollars (Knox, 2012). It is not uncommon for obstetricians to be paid more for c-sections and it was found that doctors can make “a few hundred dollars more for a c-section compared to a vaginal delivery” and “a hospital might make a few thousand dollars more” (Vedantam, 2013). In addition, c-sections result in faster labors. These (mostly) scheduled surgeries are quicker because the labor itself is shorter or nonexistent and have a greater financial return for hospitals. From a financial perspective, it is clear which one is more favorable in the money side of labor. Unconscious decisions may be made by healthcare professionals who may be pressured by hospitals or by their own finances to perform c-sections when they are not absolutely necessary.

It is critical to note that doctors are probably unaware that they are making these decisions. Their training includes a surgery that can be life saving for mothers (and babies) in bleeding, fetal distress, hypertensive disease, and some other high-risk situations (Melillo, 2020). Healthcare economists believe that incentives that come with more expensive interventions may be impacting the decisions of the physicians subtly (Vedantam, 2013). When physicians were paid a flat fee for c-sections, it was discovered that they were “disincentivized to perform surgical procedures” (Vedantam, 2013). Patient education and increased maternal autonomy in her birth plan can potentially reduce these disparities (Vedantam, 2013).

Medicine is the Answer to Medicalization

A new term in medical economics is defensive medicine, which is the idea that there is a strong possibility that doctors provide more intensive care where there may be a chance that there may be a lawsuit at play (Sanger-Katz, 2018). In a study done between MIT and Duke, when there was an increase of intensive care with the present outcome of a lawsuit, those patients that received that care were no better off than patients who did not receive any additional care (Sanger-Katz, 2018). Healthcare economist expert, Jonathan Gruber, is a firm believer that the factor that is driving US healthcare costs to the extremes is in fact, defensive medicine (Sanger-Katz, 2018).

However, this is not necessarily the fault of the physicians. There is a growing culture in America where suing physicians are becoming normal. A startling fact is that high risk physicians, like obstetricians, are sued "about once every six years" (Gawande, 2005). Another is that general surgeons pay approximately $30,000 to $200,000 in a single year for insurance to protect them from malpractice lawsuits (Gawande, 2005). There are horror stories of physicians needing to defend themselves from accusations by previous patients. Although these statistics do not excuse the realities of medical malpractice, it does highlight the possible reasons for physicians subconsciously or consciously providing more intensive care, thus increasing the medicalization in their practice. Labor and delivery is not immune to defensive medicine.

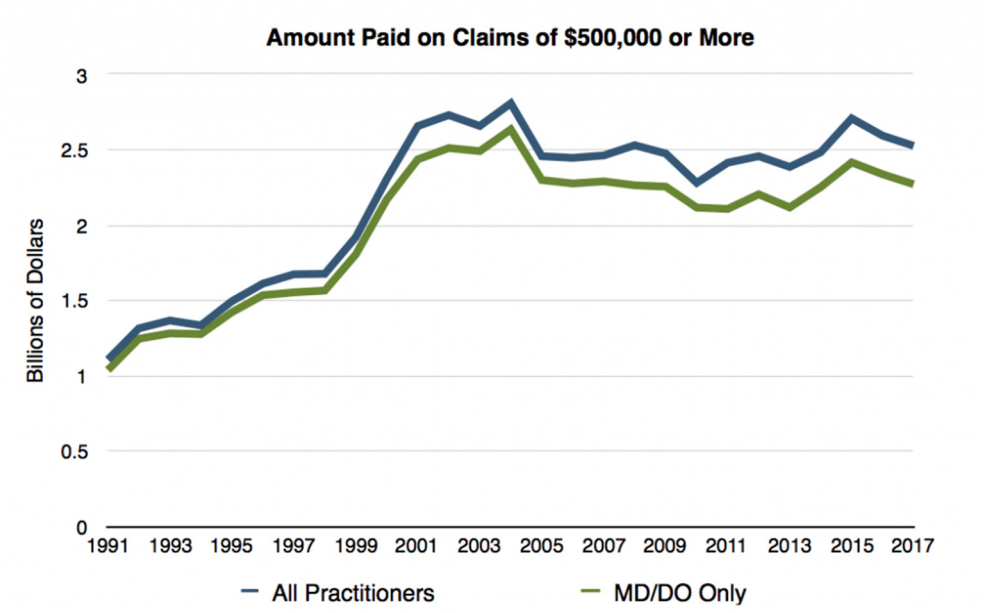

Figure 9: An Increasing Trend of the Amount Paid of Claims of $500,000 or More (Source: True Cost of Healthcare)

I believe medicine will continue to save the lives of those we may not have been able to save in the past. Medicine was necessary to advance to save mothers who may have died from twin births and other high-risk situations. Cesareans gave a chance for mothers who are unable to give birth vaginally to safely delivery healthy babies. As medicine brought labor and delivery under its umbrella and resulted in much of the current medicalization, medicine is also the way out of medicalization. The line that needs to be drawn in medicine is the extent of the medicalization that exists in an originally natural process. A thorough, investigate, and curious reassessment of the healthcare system of the birth system in America needs to be conducted.

CONCLUSION

The Future of Labor: Recommendations for Healthcare Policy Makers, Scholars, and Healthcare Professionals

The United States has one of the most robust and advanced healthcare systems, technology, and capacities in the world. Further investigation is required in the systems, policies, procedures, and attitudes surrounding labor and birth to examine why our robust healthcare system is failing mothers in America. As explored in this thesis, the medicalization of labor and delivery is inherently complex and has a deep and intimate tie to the development of modern medicine. From the history of medicine and labor to the modern clinical interventions, there is no one single factor that has led to the increase of medicalization, and not one single factor has been wholly negative or positive. One may argue that this the path of medicalization will always head towards an increase. It is my recommendation that healthcare professionals, policy makers, and scholars need to re-evaluate and challenge the current practices and factors that influence labor and delivery. As a future health care worker, I believe that it is our duty to advocate for the best available care for a group of patients who have historically been underserved.

Recommendations

Despite the US' vast spending on hospital-based maternity care being larger than any other country in the world, the maternal mortality rates in this country are alarming. While there are various factors that influence outcome of birth in different parts of the

country such as administration and physician to patient ratios, the current system of spending of federal funds appears to result in a dissatisfactory. As other countries have higher rates of satisfaction during birth and better outcomes with *less* spending, policymakers and healthcare professionals should consider the restructuring of the distribution of funds to focusing on clinical research and patient education. Many mothers in America walk into their birthing rooms fearful and with feelings of hesitation. Currently, data gathered from federally sponsored organizations such as the Centers for Disease Control, are outdated and have only recently begun conducting research on maternal illness, death, and birth outcomes. In addition, comprehensive investigation should be launched internally to determine if funds are being effectively used.

The danger of outdated data is that this will result in healthcare policy and protocol that is also outdated. During my personal research for this thesis, I noticed that more than often, the data was over 20 or 30 years old, and even within those studies, the number of patients that were considered was underwhelming. Racial differences and a variety of socioeconomic backgrounds were not always included in these sets of data. While most common diseases such as heart disease and lung cancer have extensively studied reports, maternal health and labor/delivery is often overlooked. However, cardiovascular disease complications are one of the most common ways women lose their lives after having children. Maternal health is a crisis in the United States, and more research must be conducted towards this issue, to better understand if the current protocols that exist today are the best that we can offer to our mothers.

In partnership with scholars, I suggest that current medical interventions and practices should also be investigated thoroughly. This will determine whether or not the

current practices such as the routine use of Pitocin, constant fetal monitoring, labor positions, medically unnecessary cesareans, or inducement of labor are doing more harm than good. These topics are neither emphasized nor studied in the current literature to the scale that they deserve, considering what we presently know about the outcomes of birth in America. Funds should be allocated to more research because the current published studies often have inconclusive results and most recommend that "further studies" are needed to reach a definite conclusion. Medicine is multi-dimensional and not linear by any means, but I believe that the standards in care in the US now are not thoroughly challenged, and that these current standards may be harming mothers.

Medicalization was and is necessary to save the lives of many, and in some cases, extensive intervention prevents even more loss. The course of history as explored in Chapter One explored this. There was a clear shift of labor as it transitioned from the comfort of one's home to sterile hospitals in an attempt to decrease maternal and neonatal mortality. Cesareans gave mothers the chance to survive childbirth in the modern era. However, the current experience of a laboring mother in America appears to disrupt the natural progression of labor. Labor is seen as an unnatural, and sometimes, diseased state. This perspective is harmful because it further supports intervention where there can be no apparent need.

In conclusion, the medicalization of labor is an extremely complex process and has been on the rise since the shift of birth to institutionalized hospitals. It has been woven into hospital systems, influenced by government policy and funding, and has made birth more complex for normal birthing women. This trend will continue if efforts are not pursued to determine if the current practices involving labor are left unchallenged.

I recommend a top-bottom restructuration that recognizes the changing demographic of America's mothers and a shift of view of a woman's laboring body as a natural state than a medical condition that requires constant monitoring, unless proven otherwise. The question we must answer now for the future is whether or not what we are doing today is the best we can do with what we understand, and if everything that we are doing is for the sole benefit of and beneficial to mothers. Medicalization transformed birth in numerous ways, in both good and bad, and my hope with this thesis is to shine a light to a topic that is often overlooked but will no longer be in our future.

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