

## Chapter Eight ~ 20<sup>th</sup> Century Obstetrics in the US

For the last hundred years, normal maternity care in America has been defined by the obstetrical profession. In the very earliest decade of the 20<sup>th</sup> century, obstetricians rejected the traditional form of physiological management as ‘old-fashioned’ and replaced it by an interventionist model of obstetrics. Normal childbirth in healthy women was to be conducted as a surgical procedure in order to eliminate childbed fever – a potentially fatal infection that many new mothers developed while being cared for in a hospital environment. This new way was assumed by the medical profession to be the modern or ‘scientific’ model, believed to be safer and better than the spontaneous biology of normal birth.

One of the mysteries of the 20th century is how and why *normal childbirth in a healthy population became the property of a surgical specialty and what the costs and consequences of such a policy are in the 21st century*. This customary form of intervention became the official ‘standard’ of care universally applied to all childbearing women and is the historical foundation for contemporary obstetrics in the US. Unfortunately, this policy means that *emergency interventions are being routinely used in non-emergency circumstances of normal labor and birth*. It’s incorporation into the surgical specialty of obstetrics is the reason that birth services provided by obstetricians have a surgical billing code.

Like those lacquered Russian dolls that nestle one inside of another, each smaller than the previous one, the heart of this story is a tiny but vital piece of information found at the center of a many-layered historical story. The ‘what’ and the ‘how’ are important, but the real heart of the matter is ‘why’ – why is childbirth in a population of the most healthy women in history and in the world, in a country that spends more money and health care resources than any other, why exactly is normal childbirth still considered to be a dangerous aspect of female reproduction. How did we arrive at the conclusion that normal birth is so potentially disastrous that scheduled Cesarean is safer than the model the Mother Nature gave us. How exactly did that come about?

The following is an abbreviated synopsis of the complex social and economic situation and the gender politics that weave the *what*, the *how* and the *why* into a compelling and interesting story, one I sometimes describe as the last untold story of the 20<sup>th</sup> century. This information may seem startling at first but all information is from thoroughly documented sources

### **The World of the Childbearing in 1910, USA**

The reality facing childbearing women and their doctors in the first decade of the 20th century was not as advanced as one would have expected. This was a time period that was particularly risky for women and babies who suffered any kind of obstetrical complication, as *abnormal* birth was itself still on the wrong side of history. In contrast to the bright theoretical promise of the new science, the practice of medicine in 1910 was long on hope and short on about everything else. Many of the most common and most serious problems of pregnancy -- toxemia (a life-threatening condition associated with high blood pressure, liver damage, and seizures), torrential hemorrhages, sepsis, babies born very prematurely, etc., -- had no effective treatment. Doctors had little to offer but sympathy. Worse yet, classical obstetrics was still unsupported by modern methods of

diagnosis. It was decades before the development of antibacterial drugs. Situations were sometimes misdiagnosed and obstetrical care could unwittingly make matters worse by introducing iatrogenic and nosocomial complications.

But the most important change in the history of medical practice had already taken place – the widespread acceptance of the germ theory. Medicine was no longer BC – Before Common-knowledge of microbiology, but unfortunately, it was still BD -- Before Development of antibacterial drugs. This was the no-man's land, the 50 years between the discovery of germs and the ability to selectively kill them once they started to cause disease in a human being. In the decades following Lister's perfection of surgical asepsis, the basic importance of antiseptic technique in obstetrical care was gradually accepted and implementation. Other scientific disciplines -- anatomy, biology, chemistry, immunology, physics, and physiology – all contributed to the general practice of medicine. However, there was still the problem of a long lag time between theoretical science and its practical implementation at the community level. To begin with, the practical applications of the new science were few and even then, they were only found in the high-brow institutions in New England and the Atlantic East Coast. It took decades before the more sophisticated services would show up in small community hospital and the average doctor's office.

From a public health standpoint, the early decades of the 20th century were still a dangerous time. The general health of American was very poor compared to many other industrialized countries. A large percentage of our urban population was foreign-born immigrants who lived in crowded tenements. In rural areas of the South, their was much suffering from racial discrimination and a lack of access to essential public services. Clean water, public sanitation, personal hygiene and nutritious food were all in short supply. Unlike the great charity institutions of Europe, public policies in most of the US included few social safety nets for the very poor.

The system of modern medicine, with its preventative, diagnostic and emergency medical services did not yet exist. There were no effective drugs for contagious disease such as tuberculosis, diphtheria and typhoid fever. Life expectancy in the US was less than half what it is today. What the doctors did not know at the time was that the magic bullet they sought was a mere 27 years away, in the discovery of sulfanilamide, quickly followed by penicillin in the early 1940s. This would lead to the cornucopia of antibiotics drugs that forever changed the way we treated otherwise fatal infections and the way people related to the profession of medicine.

But for childbearing women in 1910, the wonder drugs of a future generation were of no help. Life was even more grim for them than the population as a whole. There were no federal programs to teach nutrition or provide supplemental food to pregnant women and children. For married women, there was no safe or effective contraception. The average birth rate was six children, so problems of pregnancy and childbirth were risks that women faced again and again. Many women had little or no access to obstetrical services when a complication occurred and many complications had no effective treatment. Prenatal care had not been invented, so there were no routine visits during pregnancy to a professional who performed lab work, monitored the mother's blood pressure and regularly accessed the wellbeing of the growing fetus. Women didn't meet either a doctor or midwife until *after* they were in labor.

From the standpoint of the newly emerging profession of obstetrics in 1910, the world was

still populated by women with untreatable diseases and fatal complications. Most of these dangers were associated with poverty, malnutrition, overcrowding, overwork, forced childbearing and a constant stream of closely spaced pregnancies. In addition to common pregnancy complications such as high blood pressure, placenta previa and premature labor, a significant proportion of the childbearing population also suffered from tuberculosis, syphilis, heart disease, kidney infections and a list to health problems too long to recount. The poor state of public health combined with the immature and transitional state of medical science resulted in the third highest maternal-infant mortality rate in the developed world during the first three decades of the 20<sup>th</sup> century.

Obstetricians faced these grim statistics every day, as they stood by helplessly and watched women die. Given such extreme circumstances, it's not surprising that they believed childbirth was a cruelty joke visited on the innocent by an uncaring Mother Nature. What was not so apparent to the obstetrical profession was the association between poverty, forced childbearing, the inability of the medical technology to successfully diagnosis and treat many of the complications associated with childbirth. Instead they mistook this dismal situation as proof that biology of female reproduction in humans was inherently defective. The belief that childbirth was a dangerous and potentially fatal condition was a call to arms for the fledgling profession of obstetrics that called for the most aggressive use of obstetrical interventions.

### **Can't Get No Respect – the Embarrassing Legacy of Man-Midwifery**

In addition to the many serious clinical challenges and the many practical limitations of medical science in 1910, the obstetrical profession also found itself fighting for the respect of its own peer group. Within the discipline of medicine, obstetrics was assigned to the lowest rung of the professional ladder. Doctors in other fields, surgeons in particular, went out of their way to treat obstetricians with disdain. The problem was the obvious association of obstetrics with “women’s work”, which made it the ugly stepsister of the medicine. As late as 1915, Dr. Moran wrote that:

“Obstetrics is the most arduous, least appreciated, least supported, and least compensated of all branches of medicine”.

“The story of medical education in the country is not the story of complete success. We have made ourselves the jest of scientists throughout the world .... [1911-C, p. 207]

“ ..... the ideal obstetrician is *not* a man-midwife, but a broad scientific man, with a surgical training, who is prepared to cope with the most serious clinical responsibilities, and at the same time is interested in extending our field of knowledge. .... No longer would we hear physicians say that they *cannot understand how an intelligent man* can take up obstetrics, which they regard as about as serious an occupation as a terrier dog sitting before a rat hole waiting for the rat to escape.” [emphasis added, Dr. Williams, 1911-B]

“The generally accepted motto for the guidance of the physician is ‘*primum non nocere*’ [in the first place, do no harm], and yet more than 3/4 of the professors of obstetrics in all parts of the country, in reply to my questionnaire, stated that incompetent doctors kill more women each year by improperly performed operations than the ... midwife....” [1911-B; Dr. Williams, M.D.; p.180]

“When public opinion has thus been raised and educated regarding obstetrics, the midwife question will solve itself. With an enlightened knowledge of the importance of obstetrical art, its high ideals, the midwife will disappear, she will have become intolerable and impossible.” [1911-B; Dr. DeLee, MD]

“Obstetrics is held in disdain by the profession and the public. The public reasons correctly. If an uneducated woman of the lowest class may practice [midwifery], is instructed by doctors and licensed by the State, [birth attendance] certainly must require very little knowledge and skill --surely it cannot belong to the science and art of medicine.” [Dr. DeLee, MD; 1915]

The pressure to succeed must have been nearly intolerable, given the high stakes nature of clinical practice and general disdain for obstetrics within their own ranks. This created something of an identity crisis for individual obstetricians, which was far more than just a status issue. The practical side was the problem of obtaining a suitable professional fee for services. Obstetricians expected to receive a comparable fee for performing deliveries that surgeons received for performing surgery. As long as midwives were available ‘for cheap’, it was nearly impossible to charge a fee that was appropriate for a physician.

The biggest challenge for obstetrical profession was to put an end to the historical idea that obstetricians were a vector of contagion for childbirth sepsis (the Semmelweis curse). Following that, they had to rise above the humiliation of doing women’s work and being referred to by the galling title of ‘man-midwife’. This would require that they create a whole new relationship between themselves, the biology of childbirth and the public.

### **Experimenting with the Pre-emptive Strike as a Policy**

"Do not put forward anything that you *cannot prove* by experimentation."

Louis Pasteur – 1879

**The Gathering Storm:** Three important elements combined in the early 1900s -- the perfect storm eluded to earlier -- that directed the obstetrical profession in the wrong direction for the rest of the 20th century:

- The high mortality rate from childbirth septicemia among hospitalized maternity patients
- The perennial need by medical schools to provide a steady supply of hospitalized maternity patients to function as ‘clinical material’ for their medical students
- An obsession by the obstetrical profession to protect itself from any accusations of blame should a mother, despite all their best efforts, die or become permanently disabled from a postpartum infection

### **Transforming 19<sup>th</sup> Century obstetrics into a New 20<sup>th</sup> Century Profession**

Most people living in modern times have precious little knowledge of the pre-microbial world that preceded the work of van Leeuwenhoek, Hooke, Semmelweis, Koch, Pasteur, and

Lister and the theories and technologies they introduced during the preceding two centuries. But professionals graduating from medical schools during the final two decades of the 19<sup>th</sup> century were *very* interested and knowledgeable about these scientists and their discoveries. The medical science break-thru between 1865 to 1885 changed the thinking of physicians even more than the discovery of antibacterial drugs in the later half of the 1930s. These ideas were as high in the mind of a science major or med student in 1895 as DNA and mapping the human genome are today. It was ‘cutting edge’ and *everybody* wanted to be out in front.

Within the specialized field of obstetrics, there was the special “problem” of Semmelweis, a form of blowback that (at least as far as history records) did not appear to be a problem for surgeons in the wake of Lister’s exposure of their ignorance about sterile technique. But when Semmelweis identified the iatrogenic nature of puerperal sepsis, it generated a deeply embarrassing type of public notoriety greatly resented by the obstetrical profession. They felt humiliated and believed they had been unfairly singled out. This position is quite tenable, as everyone in the pre-microbial world -- doctors and the public alike -- was either equally guilty or equally innocent, since no one knew that microscopic pathogens existed and could live on the hands of caregivers and be passed along to cause fatal diseases. Why was it that obstetricians got unfairly stigmatized while other medical practitioners did not?

Somehow Lister had managed to totally reconfigure the environment and protocols used during surgery without making people question the former practice of their surgeon. Also the type of care that surgeons were called on to perform – traumatic amputations following military wounds or horrible accidents, etc – were clearly pathological situations, ones that could easily have killed the patient had the operation not been attempted by the surgeon. When a critically ill patient dies, it is assumed that what killed him was his potentially fatal disease or serious injury. As a result, little suspicion is cast upon those who attempt to help. Unfortunately for the new obstetrical profession, they dealt almost exclusively with patients in the bloom of health. When they died three or four days after an obstetrician had attended their normal birth, obstetricians didn’t get the same kind of free pass. In fact, some families quoted Semmelweis’ indictment of unwashed hands, blaming the doctor for the loss of their daughter, wife or mother.

And most unfortunate of all, there was the problem of the biological and sexual nature of the real estate involved – the vagina -- or as Oprah calls it these days on TV, the “va-jay-jay”. When a general surgeon operates on other parts of the body, he or she usually makes an incision into the sterile interior of the body. Assuming the surgeon uses good sterile technique, the incision and surgical wounds inside the body will remain free of any bacteria. However, this same circumstance does not apply to vaginal birth, as the mother might have already had a virulent strain of strep or staph bacteria in her birth canal before the obstetrician came on the scene. Obviously, this was something totally outside the control of the obstetrical profession and made obstetricians understandably wary of the claim that all infections were automatically an indictment of their technique. Doctors knew only too well that at least some of the time, sepsis was not their fault and the criticism was unfair.

### **The first malpractice protection for obstetricians ~ Listerizing Obstetrical Birth**

Just as surgeons saw their specialty as the scientific way to treat war wounds and traumatic

injuries, obstetricians saw the ‘new obstetrics’ as the scientific way counteract the pathological nature of childbirth. The obvious solution was to mirror the effective methods already being successfully used in the new discipline of surgery.

The development of this system can be traced to the two most influential obstetricians of the era -- Dr. DeLee and Dr. Williams. They are widely acknowledged as the founding fathers of American obstetrics as we know it today and both were authors of leading obstetrical textbooks of the era. They are still revered by successive generation of medical students.

**Dr. J. Whitridge Williams** was from Baltimore (1866–1931) and a highly distinguished professor of obstetrics at the Johns Hopkins School of Medicine. He was the founder of academic obstetrics in the United States, with an international reputation in academic medicine. His textbook, *Williams Obstetrics*, was the recognized leader in America during the first 30 years of the 20th century and is still published today in its **26th** edition.

**Dr. Joseph Bolivar DeLee** was a late-nineteenth century obstetrical pioneer who graduated from the Chicago Medical School (later became Northwestern University Medical School) in 1891 and became a professor of obstetrics at Northwestern. He was the founder of the Chicago Lying-In Hospital, which eventually became affiliated with the University of Chicago. At the time that the Lying-In Hospital merged with UC, Dr. De Lee and his staff had delivered 69,000 mothers and their babies (2/3rds in the mother’s home!) and performed 10,000 gyn surgeries.

Fig.310 (page 318)  
“Arrangement for Delivery  
On Side in a Home”

Obstetrician-attended  
planned home birth. Note  
table for sterile instruments  
and basin of antiseptic  
solution so the physician can  
rinse off his gloved hands if  
they became contaminated.

“Hot and cold sterile water  
in pitchers. One basin has  
HgCl<sub>2</sub> 1:1500; one 1/1/2  
percent Lysol solution.

Scissors, cord tape, artery  
clamp and catheter lie in a  
saucer in 1 percent Lysol solutions. A pile of sterile towels and the nurse’s hand pick-up forceps  
are on the table. At the extreme left is the warm receiver for the infant [early incubator] Three table-  
boards are under the mattress.



FIG. 310.—ARRANGEMENT FOR DELIVERY ON SIDE IN A HOME.  
Hot and cold sterile water in pitchers. One basin has HgCl<sub>2</sub> 1:1500; one 1 1/2 per cent. lysol solution. Scissors, cord tape, artery clamp, and catheter lie in a saucer in 1 per cent. lysol solution. A pile of sterile towels and the nurse's hand forceps are on the table. At the extreme left is the warm receiver for the infant. Three table-boards are under the mattress.

Doctors DeLee and Williams were fierce competitors in real life and but socially, they were worlds apart.

Dr. Williams was a fifth generation physician from a prominent New England family. The Williams bragged of an unbroken line of doctors and lawyers going back to their great-great-grandfather, who was a lawyer in London at the time he immigrated to the US decades before the Revolutionary War. Being born into a prominent family with a long history of academic accomplishments was the perfect background for Dr Williams' career as an academic obstetrician and his central role in American obstetrics.

In dramatic contrast to Dr. Williams' family pedigree, Dr. DeLee was an immigrant from South America. Instead of seeking a lucrative private practice, he devoted his life professional life to providing socially responsible medical care to the indigent women of Chicago. In 1896 he established a clinic to provide free obstetrical care to poor pregnant women who lived in the Chicago slums and also trained 64 students and physicians in practical obstetrics. He opened the Chicago Lying-In Hospital in 1897 in a tenement house on Maxwell Street in an effort to lower the high neonatal mortality rates among poor immigrant families, the majority of whom could not pay for their care. In the beginning, it had only thirteen beds. After purchasing necessary equipment and paying the first month's rent, Dr. DeLee had only 61 cents left to his name.

However different their lives and backgrounds were, DeLee and Williams were of a single mindset when it came to the 'nature' of normal birth. Both saw human childbirth as a pathological form of biology that sacrificed women the way spawning salmon die as a natural part of reproduction. In order to counteract this cruel fate, they proposed that all aspects of childbirth be medically-managed by obstetricians. Only by medicalizing birth – the prophylactic use of medical procedures -- could these dangers be controlled and the damage assumed to be caused by the pernicious nature of female biology be prevented. Both DeLee and Williams were convinced that it was theoretically possible for obstetrical medicine to eliminate all childbirth-related death and disability, a goal they each hoped to achieve within their lifetime. Their hypothesis was straightforward: Obstetrical management would make childbirth dependably safe for mothers and babies for the first time in human history. It was a noble idea -- seductive, exciting. For the sake of mothers and babies, people hoped they were right and were willing to go along with these ideas.

Being on the verge of such a dramatic breakthrough was a huge responsibility. *Carpi diem* or 'seize the day' was operative energy. "Pregnancy is a nine month disease that requires a surgical cure" was their motto. In their opinion, traditional methods of physiologically-based forms of care had *always* been inadequate. Now, with the new science of microbiology and aseptic technique, physiological management was deemed to be downright dangerous and old-fashioned. As surgeons had so recently and dramatically eliminated the historical forms of unhygienic surgery, obstetricians believed the backward ways of midwives and country doctors also had to be dispensed to the dustbin of history. Advancements in the 20<sup>th</sup> century disciple of obstetrics required that physiological process be permanently replaced by obstetrical management.

While the motives of DeLee and Williams were based on the idea of scientific principles, as discovered by Pasteur and implemented by Lister and others, their conclusions did not come from scientific experiments such as produced the scientific discipline of microbiology. There were no

rigorously controlled investigations such as the ones conducted by Koch, Pasteur and Lister. No extant lab notes record what happened when the prophylactic use of obstetrical interventions was compared to a control group of healthy women who received the traditional form of physiologically-based care during normal birth.

Many things contributed to this lack of scientific methodology in regard to the clinical practice of medicine, but the most important was the historical authority-based nature of medical practice, combined with the urgency born of a high mortality rate. Medicine has always been an ‘authority-based’ discipline, with doctors enjoying the same relationship to medical issues as the president of the United States exercises in the area of national policies – their word was law. Even today, the lay public and the law generally assumes that the safest and most effective practice of medicine, like the ‘safe’ practice of nuclear physics, can only be determined by a bona fide ‘expert’, i.e., a medical doctor. The physician’s opinion is at the top of the information pyramid, the only person who can declare that a person’s death was a murder instead of a natural occurrence. Only medical doctors are authorized to quarantine a population in the presence of communicable diseases or make the diagnosis that will determine whether or not someone will receive disability payments or a malpractice settlement.

A century later, we can all Google the latest research on any given topic, allowing us nearly instantaneous access to information on the most scientific treatment. But BI (Before-the-Internet) the physician’s brain, informed by a medical school education and clinical experience as a graduate physician, became the routing system for all relevant medical information and decision-making. In the world of early 20<sup>th</sup> century medicine a doctor’s opinion was literally the ‘final word’. Given this reality, Drs. DeLee and Williams never for a moment pondered our 21<sup>st</sup> century concept of ‘evidence-based medicine’. The only ‘evidence’ they needed was the astronomical mortality and morbidity rate – *thousands* new mothers were dying every year, most often from sepsis.

The preemptive use of intervention seemed like the most immediate and effective way to stop this carnage. While motivated by the best of intentions, the obstetrical profession was still burdened by the historical limitations of their era. Without the dependable diagnostic abilities used today were not, it was difficult to reliably distinguish the healthy mother with a normal pregnancy from women who were ill or suffering pelvic abnormalities and other non-apparent complications. There was no way to diagnosis a fetus with special needs, such as Rh disease or heart defect. The inability to tell a high-risk pregnancy from a low risk one argued for *medicalizing every pregnant woman as the ultimate precaution*.

## Lying-In Hospitals in the US

The population of hospitalized maternity patients in the late 1800s and early 20<sup>th</sup> century was similar to that of the *Hotel Dieu* in Paris and the *Allgemeines Krankenhaus* in Vienna. Hospitalization usually meant the mother did not have adequate social and economic resources. Women who delivered in early American hospitals were usually poor, socially disadvantaged immigrants, prostitutes, petty criminals, unmarried or suffering from some disease or complication of pregnancy. This category greatly outnumbered the healthy ‘private’ patients. Better off women actively avoided hospitalization, which was associated with death and disease and being so poor

that one had nowhere else to go. Women with status and resources preferred to be cared for in their own homes by their family doctor or midwife.

Physicians also considered it ‘improper’ and immodest for their upper class patients to be used as teaching cases for the clinical instruction of students. That was a role reserved for those of the lower class who, it was assumed, were also of lesser sensibilities. This class distinction included certain other prejudices, one of which was a fear that poor women had bed bugs or pubic lice on their person and might contaminate the hospital with such vermin. There was also the lingering idea of that puerperal sepsis was an autogenic disease---the consequence of poor personal hygiene or aberrant sexual practices by themselves or their husbands. This resulted in an emphasis on ritual cleansing to sanitize maternity patients, inside and out.

**The Deconstruction of Normal Childbirth:** Upon admission to the hospital, laboring women were immediately separated from their families and ushered into to a special ‘prep’ room behind foreboding double doors marked: “No Admittance -- Authorized Personal Only” that lead to the labor and delivery rooms. Since the prep room usually was just a few feet away from the labor ward, the new labor patient could hear all the other women laboring under the influence of “twilight sleep”. This was a mixture of morphine and the hallucinogenic drug scopolamine, which had an amnesic effect. Unfortunately, it had little effect on the pain itself. Women still felt the pain of each uterine contraction but had little or no memory of it.

The mental effect on the mother was equivalent to a temporary lobotomy, which is to say, it eliminated her ‘executive’ function and ordinary understanding of herself or her situation. Once medicated with these powerful drugs, laboring women didn’t know/understand that they were in labor. They were deeply in a drugged sleep between labor pains. When the pain roused them from their stupor, they didn’t know why they were hurting and would ask with every contraction “what’s wrong” or “what’s happening to me”. As could be expected, each woman was independently moaning, crying out, or screaming in an ascending crescendo. Some swore at the nurses with each contraction or made uninhibited pushing noises.

While this disturbing cacophony played out in the background, the newest labor patient in the prep room was being scrubbed down with an antiseptic solution and having her public hair shaved off to prevent the spread of lice. To be sure her vagina and alimentary canal did not harbor any potentially pathogenic bacteria, she was subjected to douches and enemas. After a half hour or more in the bathroom, she would be given a bath or allowed to shower and then dressed in a sterile nightgown and thigh-high stocking. At the conclusion of these admission procedures, she would be taken to the labor ward with five or more beds lined up in a row, separated only by hanging curtains. After being put to bed, the side rails would be pulled up and she would be required to stay there for the duration of her labor. Active labor was especially stressful in women who were isolated from all their family members, with no social support and not allowed to move around, get out bed, eat or drink for as long as two or three days (IVs were not part of labor room care). To deal with the pain of active labor and the anxiety of the labor ward, she would be given sleeping pills and frequent injections of drugs that produced the ‘twilight’ sleep.

Part of the twilight sleep protocol was to keep the medicated laboring patient in a darkened room. When that wasn’t possible, some hospitals put a short hood over the top half of her head, so

that her eyes were covered. Another problem was the propensity of the drugs used to trigger a paradoxical reaction. Instead of the expected sedative effect, some women became agitated, belligerent or even combative. Agitated labor patients often tried to climb out of the bed or fell out and chipped a tooth or broke their arm. Occasionally they hit or even bit the nurses. For this reason, four-point restraints were used to tie both arms to the upper end of the bed and both ankles to the foot of the bed. It is impossible to contemplate this situation without feeling profoundly sad – the idea of a young, first time mother lying alone in bed with a hood over her head, tied to the four corner of her bed and forced to lie on her back for 24 hours while she was laboring to give birth to her first baby.