Reply to inquiry by Carol Sakala, PhD, MSPH ~ Childbirth Connections
(formerly Maternity Center Association of NYC)
Jan 2007

Topic # 2

In order to re-assign the category for normal spontaneous childbirth from a hospital-based *surgical procedure* to a non-surgical *biological process*, and simultaneously develop a non-surgical billing code for physiologically-based birth services, it would be useful to know a little more about how normal birth was morphed into 'the delivery' by the obstetrical profession, then considered a surgically sterile event, changed again into a surgical procedure 'performed' by a physician and eventually assigned a surgical billing code. These sequential changes took place in the first half of the 20th century and have not been changed or re-examined in the following fifty years.

I won't take up your time with citations or lengthy quotes from original sources, but I have them in my own archival library (available on-line). If you aren't familiar with this material yourself, I can only tell you that the actual words spoken or written by DeLee and Williams and their contemporaries are far more compelling (and chilling!) than my "cleaned up for public consumptions, don't make people think you are a feminist nut case" synopsis of these historical events.

Also, nothing in this document is for the direct consumption of the public, although it may be shared with other insiders or attorneys. If you need citations or original quotes, one good choice is a file entitled "Semmelweis and Common Sense" on <www.collegeofmidwives.org>, accessed thru the subdirectory on the home page titled "**MaternityCare_2.0**".

How a normal biological process became a surgical procedure owned by ACOG and a billing code owned by the AMA – a three-act play

Act One: In 1910 the most influential leaders within the obstetrical profession declared that normal vaginal birth should "henceforth, in intelligent communities" be conducted as a surgical procedure. The original purpose didn't initially have having anything to do with performing actual operations, such as episiotomy or forceps, although both of these were common at the time. According to historical documents of the era, it was fear that patients in the bio-hazardous environment of hospitals would die of childbed fever if the obstetrical profession didn't impose this degree of strict sterility on childbirth.

Strict *antiseptic* technique had been tried for nearly 30 years (since Dr Pasteur's 'discovery' of the germ theory in 1881) and yet it alone had failed to achieve the goal of zero nosocomial infections. So the new idea was to employ the same absolute level of surgical sterility used during abdominal surgery. In the decades before the discovery of antibiotic drugs, this was one of the few actions available to physicians to compensate for the virulent institutional pathogens that hospitalized childbearing women were inevitably exposed to.

The policy was also designed to absolve the doctor of any culpability, should his patient be unfortunate enough to manifest symptoms of hemolytic septicemia, as the doctor could point to his impeccable sterile technique and insist that it was impossible that he, the birth attendant (virtuous beyond compare!), could possibly be the source of the lethal bacterium (*translation*: the germs must

have been in the mother's vagina before she was admitted to the hospital, a consequence of her husband's disgusting sexual practices or her own ignorance about proper hygiene!). Dr DeLee complains about this unfair blaming of obstetricians in his 192 textbook:

> "Semmelweis, in 1847, called the attention of the world to *the physician as a carrier of infection**, and the latter's importance in the role has been recognized every since – in fact, it is exaggerated, for the public has held him responsible in cases of sepsis when he was not to blame. Cases of infection will occur under ideal conditions and we must look for the causes elsewhere than in the accoucheurs – probably <u>in the woman herself or even in the husband.</u>**
>
> **[p. 290 - *** emphasis in the original; ** emphasis added]

In 1910 Doctors DeLee and Williams, the architects of 20th century American obstetrics, responded to this dilemma by suggesting the radical idea of vaginal birth as a surgically sterile event, fervently believing such a protocol would dramatically reduce if not eliminate nosocomial mortality and morbidity. No doubt they privately hoped it would turn out to be the magic cure for the universal problem of childbed fever. Consider for a moment what it would mean to be the doctor who found the 'cure' to an ancient human problem of global proportions. This most worthy of achievements would guarantee any doctor associated with its discovery a place in the medical hall of fame.

Act Two / The Back Story: Since the early 18th century, when anatomical dissection and postmortem autopsy first became a regular part of medical education in Europe, it was common knowledge that childbirth in hospitals was associated with epidemic levels of maternal mortality. While mortality levels as high as 50 percent sometimes occurred, the rate in most teaching hospitals was consistently between 2 and 20 percent. Before the widespread understanding of the germ theory of infectious disease, doctors couldn't figure out what was causing maternity patients to become septic. Since sepsis was a rare occurrence when women gave birth in their own homes (the cultural norm at the time), the medical profession recognized that it was provoked by aggregating childbearing women together in an institutional setting.

The very earliest institutions for providing medical care arose in Europe during the Middle Ages (5th to 15th centuries). They were originally founded by religious orders and were more similar to Mother Teresa's homes for the dying than our modern-day institutions. An old French term for hospital is *hôtel-Dieu* or "hostel of God." These early hospitals were run by Catholic nuns who provided shelter and food to the indigent and homeless, and patiently nursed the ill or injured until they either recovered spontaneously or died. Our modern word 'hospital' comes from the 'hospitality' shown to the sick by these nursing nuns. The verbs 'to nurse' and 'to be patient' became the nouns 'nurse' and 'patient'. As the centuries passed, the ability of Western medicine to effectively treat illness gradually improved and these charity hospitals became places for medical therapy and education. It was obvious to the medical profession that institutional settings provided an ideal circumstance for the clinical training of medical students.

Unfortunately, these early hospitals were also dirty, dangerous places, with a reputation for bed bugs, body lice, bad smells and an absence of plumbing. People of means avoided them at all costs, so only the poorest of the poor – unmarried women, widows, prostitutes and petty criminals -- gave birth in hospitals. The first obstetrical teaching cases were drawn from this pool of social outcasts. The high maternal and infant mortality rate in early teaching hospitals was a direct but accidental consequence of medical students carrying the potentially fatal bacteria of hemolytic streptococcus on their ungloved and unsterilized hands from the dissection room where they'd performed autopsies on women who died from puerperal sepsis (childbed fever) to the vaginas of healthy women in the labor ward.

Hospital-based Epidemics of Childbed Fever

During the 18th and 19th centuries thousands of mother and baby died each year when epidemics of childbed fever swept through hospitals all over Western Europe. It was common knowledge within the obstetrical profession that the 'aggregating together' of childbearing women was strongly and directly associated with the baseline rate of puerperal sepsis and resulted in cyclical epidemics of hospitalized maternity patients.

However these grim facts were accepted philosophically, as doctors believed that endemic septicemia was simply a bitter but necessary price to pay for their clinical education, like the inevitable mortality among soldiers, regrettable but necessary to eventually win the war against death and disease. The noble aspirations of humanity were intimately connected to the advance of medical knowledge, which could never achieve its potential without the clinical training available only in the hospital setting. Grinding poverty and upper class privileges were unlikely bedfellows, but nonetheless, these two realities of the 19th century joined hands and made hospital childbirth a fundamental aspect of so-called 'modern' medical education and practice.

According to historical records, the all-time worst epidemic of contagion occurred at the University of Jena in Germany, where not a single mother left the hospital alive over a four year period of time. Since this pregnant population was assumed to be the dregs of society, the medical profession ascribed the high mortality rate of hospitalized maternity patients on their 'low morals' and/or on the 'constitutional weakness' of the female gender.

However, a historical novel written by Morton Thompson in 1949 -- gives us a chilling but more accurate[1] description of the problem by describing labor and birth in a teaching hospital during the 1840s. This was an era that had no understanding of the role of bacteria in contagious disease, no sterile exam gloves, no antibiotics and no scientific oversight from outside source. *The Cry and the Covenant* tells the true life story of Dr. Ignaz Philipp Semmelweis, a 19th century professor of obstetrics at a prestigious teaching hospital in Austria. At the University of Vienna hospital, where Dr. Semmelweis trained and taught, 700 new mothers (and their babies) succumbed to septicemia

---

Personal communications from Professor Walters documenting the validity of the information in *The Cry and the Covenant* as based on extensive and lengthy research on original sources. Except for the details on Dr Semmelweis' death, it is a factually accurate account of childbirth practices and maternal mortality in Europe during 1830 to 1865.

each year, an average of two a day. Between 1841 and 1846, there were 2,000 maternal mortalities in the medical school division.

The specific practice in question was med students doing sequential vaginal exams on healthy laboring women without having disinfected their hands between the autopsy room and the labor ward or between each exam on individual labor patients. Once contaminated with streptococcal bacteria, a high percentage of newly delivered mothers developed a virulent septicemia that caused death within 72 hours. In an effort to stop the horrific loss of life, Dr. Semmelweis searched for the reason why women who gave birth under the care of his medical students and their obstetrical professors died in great number, while women who gave birth at home, on the steps of the hospital or in the midwife-run wards did not. He was the first person to scientifically establish that the fatal disease of childbed fever was an *iatrogenic* infection and that the vector for its transmission was purulent organic material spread from patient to patient by the medical staff and students.

Dr. Semmelweis reformed these iatrogenic practices by introducing mandatory hand-washing in a weak chlorine of lime solution (household bleach), as well as instituting other aseptic techniques. To the consternation of his students and the medical staff, he also forbid anyone who had attended an autopsy from entering the labor ward for 24 hours afterwards. Like a miracle, the maternal deaths in his institution fell from 18% (one out of five) to 0.2% (one out of 200!) in the eight months between April and December of 1847.

At great risk to his own career, Dr Semmelweis brought these facts to the attention of the medical profession and devoted the rest of his life to preventing unnecessary maternal deaths by teaching and preaching the use of asepsis principles. Unfortunately, his theories were diametrically opposed to the scientific opinions of the time, which blamed this disease on miasma (bad air), chilling, ‘milk’ fever, errors in diet, maternal emotions and the general ‘unstable’ condition of women.

While history knows him as the “father of infection control”, his contemporaries were ruthlessly contemptuous of his ideas. His simple but effective solution was dismissed as absurd by his physician colleagues who could not wrap their minds around something so unglamorous and straightforward as hand-washing. It was inconceivable to them that a doctor’s healing hands or surgical instruments could ever be a vector for a fatal illness. They also insisted that the repeated washing of their hands before and after every encounter with a maternity patient, as Semmelweis advised, would be an onerous burden and a waste of their time.

Over the course of the previous century a small but substantial number of physicians all over the world – Doctors White in England, Gordon in Scotland, Cederskjšld in Sweden and our own Oliver Wendell Holmes in Boston -- had all observed, studied and warned of the iatrogenic nature of childbed fever. But these sympathetic opinions were of no help to Dr Semmelweis. His efforts to reform maternity care first cost his reputation, then his prestigious post in Vienna’s most famous hospital and eventually his ability to practice. In 1865, he suffered a nervous breakdown and died tragically in an insane asylum at the age of 47, leaving behind a young widow and several children.

Medical Education –
Balancing Noble Ideals & Practical Realities

While clinical education was vital to the development of obstetrics, it was a mixed blessing to maternity patients. Institutional settings of any kind have always been (and still are) dangerous places for babies, childbearing women, the elderly and those with suppressed or impaired immune systems. Unfortunately the most vulnerable patients are often the ones most likely to need and benefit from sophisticated medical care, making sophisticated medical training a necessity.

Despite the obstetrical profession's infamous gender bias, doctors in the 1800s were not unsympathetic to the high mortality rate in their maternity wards. One reason was fear that it would besmirch the reputation of the medical profession. This would reduce their access to teaching cases, which would in turn threaten their overall ability to provide effective care. They genuinely lamented the well-known infectious dangers of aggregating pregnant women and babies in institutional settings and the virulent nature of nosocomial disease. But they also greatly treasured the 'clinical material' so crucial to a 'modern' medical education (circa 1840).

The key ingredient to effective medical education was clinical training. The word 'clinical' technically means 'bedside', but in popular use refers to "hands on" care. Obviously, hospitals were a model of efficiency for 'hands-on' learning by medical students. Only by actually performing medical procedures on living human beings, including surgical operations and the use of obstetrical instruments such as forceps, could obstetrical residents develop judgment skills and the necessary manual dexterity. Eventually these important abilities would permit the medical profession to rescue mothers and babies from the serious or even fatal complications of childbirth.

Through out the history of modern obstetrics, scientific education *and* scientific advancement both depended the kind of trial and error experiment only possible by having access to a steady stream of charity patients who, in return for medical free care, could ethically be used as teaching cases. But obstetricians recognized the tension between the best interest of their patients and the best interest of the profession and wondered among themselves if healthy maternity patients shouldn't be kept out of institutional environments. In a paper presented to the Edinburgh Obstetrical Society Session in 1881, this question was directly addressed. Its author, a professor from the Edinburgh Maternity Hospital, began by lamenting the profession's inability to eliminate deaths from childbirth septicemia in his own hospital.

> "These maternal deaths … have been shown … to be striking in their frequency. In our own hospital I find that out of 10,043 women who have delivered in it, almost 2 percent or nearly 1 in 50 have died.
>
> What then is the nature of this disease, which has proved fatal in our new hospital to one out of every 32 women who have been delivered here? And is it feasible to suppose that it can be prevented? I do not believe that we can hope to prevent puerperal fever entirely…. but I feel certain that by strict attention to antiseptics we shall be able to reduce its occurrence to a minimum and render its presence in hospital practice, where I have just said it is most common, a rarity."

But he regrettably concluded that the proper training of medical students *absolutely required* the medical profession to perpetuate hospital-based maternity care for its access to the needed volume and steady supply of clinical material. His observations ended with a Victorian rational that associated poverty with moral turpitude to explain the high maternal mortality rate among hospitalized maternity patients:

> "….. To me it seems sufficiently established that maternity hospitals must exist, as much for the benefit of women at a time when they most need shelter and assistance, as for the **clinical instruction which the medical student can receive there and there only**.
>
> It must be borne in mind that the majority of the intern cases [hospitalized maternity patients] are *single women who have been seduced*, and who, apart from their mental condition, ...have previous to admission, been in straitened circumstances and badly nourished, and are consequently specially liable to be quickly and gravely affected by any septic influence under which they may be brought." [Edinburgh Obstetrical Society Session 1880-1881 "On the systematic use of antiseptics in midwifery practice"; emphasis added]

In the final frame, the obstetrical profession accepted the loss of life as an act of God – something totally out of their control, something they didn't understand and didn't know how to stop. In sheer numbers, nosocomial fatalities from childbed fever on European Continent in the 17th, 18th and 19th century hospitals came close to the human tragedy of the 20th century holocaust.

Gradually the medical profession developed a formal philosophy of acceptance, believing endemic septicemia to be a bitter but necessary price to pay, like the inevitable mortality among soldiers, regrettable but necessary to win the war against death and disease. The noble aspirations of humanity were intimately connected to the advance of medical knowledge, which could never achieve its potential without the clinical training available only in the hospital setting. Grinding poverty and upper class privileges were unlikely bedfellows, but nonetheless, these two realities of the 19th century joined hands and made hospital childbirth a fundamental aspect of modern medical education and practice.

Bringing 20th Century Science to Medicine – The Germ Theory of Disease:

The medical profession did not finally acknowledge the iatrogenic nature of contagion until 1881, when a French physician, the now famous Dr. Louis Pasteur, established the central role of microbes -- commonly known as 'germs' or 'pathogens'-- in causing illness and infection. On a chalk board at a prestigious medical meeting Dr. Pasteur drew a graphic representation of what the streptococcus bacteria looked like under a microscope -- rectangular microbes that resembled a string of box cars on a train track -- and said "Gentlemen, this is the cause of Childbed Fever".

With this discovery, Dr. Pasteur delivered the fatal blow to the dangerous doctrine of **'spontaneous generation'** – an erroneous theory held for 2000 years by doctors that life (and infection) could *arise spontaneously* in organic materials. It is impossible to imagine what would have happened to health care if the physician-son of a French vintner had not 'discovered' the germ theory of infectious

disease, but we should all remain grateful to Dr Pasteur for bringing science to medicine and in essence giving rise to "medical science" as we think of it today.

Across the Pond – Obstetrical Care in the US

At the end of the 19th century, the obstetrical care in the US was little better than described in the 1881 Edinburgh Obstetrical Society paper. But Dr Pasteur's ability to scientifically establish the role of germs in contagion resulted in a greater and more rigorous use of the scientific method as applied to all other areas of medicine. A number of scientific discoveries quickly followed, which led to more effective treatments and greatly increased the public's acceptance of the medical profession. Anesthesia and antiseptic surgery reduced the mortality from injuries and operations and increased the options for successful surgical treatment. As in other aspects of medical science, obstetrics was also making great strides. By the end of first decade of the 20th century, obstetricians were able to advance the care of pregnancy and childbirth through an improved knowledge of anatomy and physiology, a specially designed stethoscope to monitor the fetal heart rate during labor and wide-spread implementation of the germ theory, which promoted the routine use of asepsis techniques in patient care.

Greater use of medical services led to a change in the role of hospitalization and in the institutions themselves. Instead of being run by charities, local governments or educational institutions, for-profit hospitals began to dominate between 1890 and1920. "Phase 3" in the history of hospitals was profit-making institutions operated by physicians singularly or as partners in a corporation. The new growth in hospitals was due in part to the potential for profit from surgery, which also included birth-related procedures. For example, the first cesarean section in a US hospital was performed in Boston in 1894**.**

The 20th century Dilemma for Obstetrical Educators in the US

As with other medical disciplines, the obstetrical training of doctors and the art and science of the profession depended on hospital-based clinical training. In the early decades of the 20th century, childbearing in institutions was still associated with an unnaturally large number of birth-related difficulties. Approximately one out of 50 women still routinely died of hospital-acquired hemolytic streptococcus or iatrogenic complications surgical delivery, such as anesthetic accidents and hemorrhage. The iatrogenic and nosocomial aspect of infection was high on list of concerns for the obstetrical profession. Here is one of Dr. DeLee's comments on the problem:

> "Without doubt the physician carries the greatest danger of infection to the confinement [i.e., labor] room. The germs in the air, in the bedclothes, in the patient's garments, even those of the vulva, may be the same in main as those he brings with him, but the former are **not** virulent...
>
> The physician comes in daily contact with infections disease, pus, and erysipelas cases, and his person, clothes and especially his hands may carry highly virulent organisms."
>
> [DeLee, Principles and Practice of Obstetrics; p. 291; emphasis added]

What proportion of these deaths were the result of Mother Nature run amok and which were the detrimental effects of medicalization is hard to say, but its not surprising that obstetricians believed pregnancy to be "a nine-month disease that required a surgical cure".

Whatever their origin, American obstetricians were desperate to stop this loss of life, which was both a humanitarian catastrophe and a profession frustration. People didn't expect midwives to be able to treat these serious complications, but once a university-trained 'medical man' (the preferred title for a doctor) was in charge, it was embarrassing for him to stand by helplessly while a mother died.

It would take another 30 years before the most important life saving drugs used in obstetrical practice – antibiotics, anti-hemorrhage drugs, safer anesthetics and safer blood transfusions – to be developed. Without antibiotics, infection in hospital-based maternity care continued to be the leading cause of maternal death. Drugs to prevent excessive bleeding after the birth were also not yet available. Women who had instrumental deliveries under general anesthesia were especially vulnerable to postpartum hemorrhage. Without anti-hemorrhagic drugs and safe blood transfusions, bleeding was still an untreatable, often fatal complication of childbirth.

As observed by the Edinburgh professor in 1881, the biggest threat to the orderly flow of clinical material was the large number of deaths, mostly from childbirth septicemia, associated with hospital birth. People with financial resources still avoid hospital care if at all possible. This generated an on-going conundrum between medical education, medical ethics, the welfare of the public and the perverse nature of the problem.

You can't have medical practitioners without first having medical education which trains its students to be effective and enables them to save lives in an emergency. The plain fact is that students must "practices" on patients, the way a student of music must practice the piano. It's also true that a student who is a just learning a skill will obviously make mistakes from time to time, perhaps even fatal ones. For sure, the intern or resident will not have the same high level of expertise as a medical student as he or she will have as an experienced physician.

This makes clinical training something of a catch-22 dilemma. Nonetheless, the risks associated with being a teaching case are seen differently when the patient is already seriously sick or injured. Critically ill patients might have died anyway. Under those circumstances, society is remarkably tolerant of bad outcomes associated with clinical education. But these ethical issues become a bigger problem in obstetrics when it provides maternity care to a *healthy* population. In order for obstetrical interns and residents to develop diagnostics skills and clinical judgment, the education process must expose a certain percentage of perfectly healthy women with normal pregnancies to the happenstance of the clinical training process. That's good for science and thus good for society. But the price of that social benefit for any individual woman may be enormously high – death or life-long disability. It's a conundrum without easy answers. However, there was no turning back – medical science was here to stay and so was the clinical training of obstetricians.

If the obstetrical profession was to protect obstetrical education, it was necessary to preserve hospital birth. To preserve hospital birth, it was necessary to protect its reputation. To protect its reputation, it was vital to eliminate the fatal epidemics of hospital-acquired septicemia. In that regard, the interests

of the obstetrical profession and the well-being of maternity patients were finally the same – doing whatever was necessary to end this tragic and unnecessary loss of life.

Act Three: How Normal Birth Became a Surgical Procedure in 1910 & Why It Matters Now

What follows might best be thought of as a forensic examination of how and why childbirth morphed into the category of a surgical procedure during the first decades of the 20th century. This story continues to track the historical conundrum of clinical training versus patient safety. But the issue for us in the 21st century is the impact that normal birth conducted as a surgical procedure continues to have on the practices of obstetrics and on the type of care received by healthy maternity patients who have normal pregnancies.

For contemporary readers, many aspects of this story may seem to be a 'distinction without a difference', but in the world of medicine, these distinctions make a world of difference. Let's start by identifying the major players -- the individuals who made most of the critical decisions -- and by defining the concept of 'medical' versus 'surgical'.

Since the broad dissemination of the germ theory, American professors of obstetrics immediately devoted the next 30 years (1890-1910) to an attempt to eliminate the nosocomial epidemics of puerperal sepsis by using the new knowledge of microscopic pathogens and the strict application of antiseptic technique. Unfortunately, the deadly outbreaks of childbed fever persisted in spite of their most rigorous efforts.

By the end of the first decade of the 1900s, the story of how normal birth became a surgical procedure returns to the pronouncements of Drs DeLee and Williams, and their theory that absolute sterility with "same minute attention to detail is required as for an abdominal section" would banish puerperal sepsis. But once again, their plans for perfection were foiled, as a significant incidence of nosocomial infection continued along on the back burner, no matter what they did – isolating labor patients from their families, labor ward admission policies that included forced bathing, pubic shaving, repeated enemas, restricting visitors to the maternity floor, etc, – all to no avail. Into this dismal and desperate situation, came the idea that maybe they just hadn't been rigorous enough yet.

The designation of spontaneous vaginal birth as a surgically sterile procedure was the next logical step, quickly followed by insistence that the birth attendant must be a surgeon, and ultimately, by turning the surgically sterile procedure into an actual surgical event, complete with general anesthesia, episiotomy, forceps, manual removal of the placenta and perineal suturing.

Twilight Sleep in 1914

The historical result is that in everyone's mind – the lay public as well as the medical profession—the mental picture elicited by the word childbirth or 'delivery' is that of the mother lying down, in an

inert and passive position, legs in stirrups, with a doctor standing between her widespread legs. In our mind's eye sees the doctor do something mysterious and unseen, then he suddenly holds up the baby, in a movement reminiscent of a magician pulling a rabbit out of a hat -- a medical trick of magic ascribed to the doctor, not to the mother, who is almost irrelevant in this scenario.

The rapid metamorphosis from 'mothers giving birth' to 'babies are delivered by doctor' was triggered by the problem obstetricians had in getting each mother to do her part in their plan – lie still, be passive and above all, not contaminate their sterile field. Here is how it unfolds.

In one of Dr. DeLee's obstetrical textbooks, under the heading of "Asepsis and Antisepsis", he lists the three areas of bacteriological concern and later remarks on other aspects of the plan to make birth into a sterile surgical procedure 'performed' by surgeons:

> 1. "first, the physician; second the patient; and third, the environment, and the same minute attention to detail is required as for an abdominal section."
>
> 2. "If obstetrics is ever to attain the dignity of surgery, -- and it should, -- if the parturient women is ever to enjoy the same benefits as the surgical patient, and she should…".
>
> 3. "The conduct of labor is not a simple matter, safely in trusted to everyone. Let the people know that having a child is an important affair, …that needs the watchful attention of a qualified practitioner and that the care of even a normal confinement is worthy of the dignity of the greatest surgeon.
>
> Conclusion: "Let us pause here to take a glance back at the treatment of labor as a whole. It should be regarded as surgical operation: it really is such, and the obstetrician is really a surgeon." [DeLee 1924 textbook, p. 341, emphasis added]

This brand new and exciting idea was enthusiastically embraced and quickly implemented. The first in the list – the physician – was fairly easy to bring into line. Doctors were required to don surgical garb, do a 5 minute surgical hand scrub and then to gown and glove up in sterile OR attire with the help of the circulating nurse. As for the environment, again that was straightforward and easy to control. At first they used the operating room, but soon fashioned 'delivery' rooms on the same OR model of floor-to-ceiling ceramic tile, chrome-plaited equipment, sterilized instruments and a strict "No admittance" policy. But the last item on the list – the patient -- wasn't as easy to control as the first two. In fact that was where the idea broke down, as the patient's unpredictable, even 'irrational' behavior was making it impossible to guarantee the absolute sterility so central to their new plan to eliminate intrapartum sepsis.

Nothing I could write could top Dr Delee's own description of this problem, [p. 338] which is both colorful and revealing. He identifies the entire 2nd stage –"one, two, three hours", as the original focus of the sterile procedure of 'delivery':

> "Antiseptic surgery has very properly given way to aseptic surgery. An example will illustrate the need for this:

> A parturient is ideally prepared for delivery, with sterile night-gown, sterile leggings, sterile sheets and towels, all safely pinned together, with a sterile towel under the buttocks, leaving only the vulvae orifice exposed; the accoucheur is dressed as for a major laporotomy.
>
> What happens? The woman, in her throes of pain, tosses about, disarranging all the sterile covers; she grasps the hand of the attendant, or puts her hand over the sterile towels to the vulva; she coughs or expires forcibly and the droplets of saliva are blown on to the sterile cloths; the second stage drags on, one, two, or three hours, dust settles on the extensive area of sheets, leggings, towels, gloves, gowns, basins, etc., which are supposed to be sterile. How many of these things are really sterile when the actual time of delivery arrives and may safely be touched?" [emphasis added]

What to do about this problem – a mobile, sentient laboring woman in the "throes" of expulsive labor who wouldn't lie still and couldn't refrain from coughing, wiggling, grabbing, touching and contaminating their sterile field? Should they rethink the hypothesis? Or go back to the drawing board and start over? Should they do as many before had suggested, and move normal birth back out of the hospital?

None of these common-sense ideas made the final cut, at least none were recorded in the historical records. Instead the 'answer' to their sterile field problem was to render the mother suitably inert via chloroform anesthesia, shorten the mother and baby's exposure to lethal side effects of the anesthetic by using forceps to quickly "lift" the baby out, make the use of forceps more efficient and effective by cutting a 'generous' episiotomy, shorten 3rd stage by manual removal of the placenta and then suture the perineal incision, making delivery – 2nd and 3rd stage both. Birth as a surgical procedure was a straightforward affair of perhaps 45 minutes, start to finish, convenient and far easier on the doctor than waiting around for poky undependable Mother Nature to take her course.

The More Things Change, the More They Stay the Same:

This next sentence may strike you as extreme, but hear me out. That constructed model of birth as a surgical procedure (no longer just a sterile procedure) that I just described has **survived pristinely intact through out the entire 20th century and on into the first decade of the 21st**. The only real upgrade in DeLee and Williams blueprint comes from the 'ingenuity' of ACOG (infomercial courtesy of Dr Gawande and his "How Childbirth Was Industrialized" in the New Yorker!) is the much touted plan to move that messy vaginal delivery "from below" to the scheduled "delivery from above" model. Now that's a REAL surgical procedure "worthy of the dignity of the greatest surgeon"!

You may think I overstated the contemporary birth practices of the last few decades, what with the new LDRs and allowing of family members to be present at the uncorking. Unfortunately, 99% of the elements incorporated into the 1910 protocols for this 'surgical' process are still there. For example, the mother is still in an acute care institution and it is still the doctor who is said to 'deliver' the baby (as opposed to the mother getting kudos for giving birth!). The anesthetic rate (epidural, but still accomplishing a compliant patient lying horizontal, passive and still) is between 80% and 95%. While specialized surgical equipment is now temporarily hidden behind blond wood cabinet doors, every LDR is still equipped with a high tech bed that turns into an OR-style delivery table. Instead of

rolling the mother to the DR on a gurney (and leaving the family behind) we turn the tables on her, so to speak, by making her own bed into the DR table and yes, we let her husband and may a kid or two stay in the room.

Now days, some OB units let their docs skip the scrub hat, others skip the mask, some have eliminated both, but all of them still have their obstetricians gown up, sterile trays are still opened up and impressively display enough instruments to do an appendectomy. The mother is still draped and everyone in the room cautioned not to touch the sterile field. After all, if you're going to bill for a surgical procedure, it better at least look like a surgical procedure. For all the ideas of the new modern obstetrics, it's really a bait and switch optical illusion. So-called modern obstetrics is still pristinely organized by the same principles that DeLee and Williams employed and taught in 1910, three decades before the discovery of antibiotics, that birth as a surgical procedure is the sure cure for childbed fever.

Wrap-up and Comments:

In 1910, birth as a sterile/surgical procedure was made necessary by several interrelated situations. In the background was the medical profession's commitment to perpetuate hospital maternity care as (a) an on-going structure necessary to clinical training of medical students and (b) to preserve 'in-house' services, which were much more convenient and prestigious for individual physicians than domiciliary or 'outdoor' services. Each of these desired goals was threatened by the devastating epidemics of nosocomial infections, which might make people abandon their confidence in the medical profession and reject hospitalization. Front and center in the foreground was the compelling need to eliminate puerperal sepsis for humanitarian purposes and also to make good on the promise to the American pubic that obstetrical physicians were safer than midwives and last, but certainly not least, to make hospitals something other than a death trap.

As a result, the **hospital-based epidemics of puerperal sepsis of the 18th and 19th century** slowly **morphed normal birth in healthy women into a surgically sterile 'event' conducted by a physician**, which was then **morphed by physicians in an iatrogenic collection of surgical procedures** starting in the 1910 and **ultimately resulting in epidemic of surgical interventions** in otherwise normal childbirth that **spanned the entire 20th century** and is the push-off point to recommend the **ultimate obstetrical intervention – medically-unnecessary Cesarean surgery electively scheduled at 39 weeks in healthy women with normal pregnancies.**

The only question left is what will be the fate of healthy childbearing women in the 21st century – more of the same 19th century ideas? A weak attempt to look good, but really, a **distinction** without a **difference**? Cesarean as the 'new better way'?

Or just maybe, a rational system of science-based maternity care? Dare we hope?

We don't have to let this dysfunctional 19th century system become the blueprint for the 21st century. We can rehabilitate maternity care for healthy women and reform the coding system so that we are not longer burdened with the expensive category of NSVD as a surgical procedures, with its high fees and high malpractice premiums and the 'pay for play' straightjacket it imposes on healthy women

and attempts by consumers and midwives to made maternity care mother-baby-father friendly and, of course, affordable.

We can't let this travesty go on. Personally, I'm found of saying that the first 100 years is "shame on them" but the second 100 years of the same problem will be shame on us.
2010 will be the hundred-year anniversary of our 19th century dysfunction system. Only 4 years to go. I'll leave you with a quote from my favorite bumper sticker:

"Well-behaved women rarely make history"

Personally, I think it's time to make some history. \

========== ========== ==========