

## How Childbirth Went Industrial: A Deconstruction

By [Henci Goer](#)

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"The trouble with people is not that they don't know but that they know so much that ain't so."

-- Josh Billings

Henci Goer, author of *The Thinking Woman's Guide to a Better Birth*, skewers a recent, ripe-for-the-deconstructing [article](#) in the New Yorker on the rise of cesarean sections. If you read Atul Gawande's article with mounting dismay, this brilliant, research-based riposte will leave you thoroughly restored.Â

Gawande's history of obstetrics begins with the premise that childbirth is a complicated, dangerous business where, "At almost every step . . . the process can go wrong." In particular, "obstruction of labor" poses a threat. To illustrate this, Gawande recounts the story of the English Princess Charlotte, who in 1817 gave birth to a stillborn boy after 50 hours of labor and then succumbed to a postpartum hemorrhage. The parallel with Rourke's labor is surely intentional.

According to Gawande, yesterday's tragedies can now be averted thanks to the development of new and improved obstetric procedures, drugs, and instruments. "By the early twentieth century," he says, "the problems of human birth seemed to have been largely solved." In the next paragraph, however, he retracts this statement. A 1933 report, he writes, found that most maternal deaths were attributable to medical mismanagement and that women were "better off delivering at home" with midwives who avoided using those same procedures, drugs, and instruments.

Faced with this "shocking" fact, the experts of that time concluded that the solution was not to study what midwives were doing right but to "standardize childbirth," that is, to set rules for how to manage labors and deliveries. Standardization meant applying obstetric interventions to everyone, needed or not, and, according to Gawande, in our day has resulted in the vast majority of women having electronic fetal monitoring (EFM), IV fluids, and an epidural or spinal analgesia; half having Pitocin to speed up labor; and nearly 1 in 3 women delivering their babies via major abdominal surgery.

Gawande makes no case that these interventions improved outcomes. In fact, he notes that EFM has not been shown to benefit babies while increasing the likelihood of cesarean, and cesarean section carries the risks attendant on any major surgery plus the future reproductive risks of a scarred uterus. Despite this, Gawande has no quarrel with the increased use of cesarean surgery on the grounds that it is:

easy to teach,  
is a "reliable" but not a better option,  
is "comfortable" for obstetricians,  
can be performed with "consistency,"  
is a "simpler, more predictable way to intervene," and  
is believed by obstetricians to be less risky than "natural childbirth." This, of course, is not the same thing as actually being so.

Unfazed by his own statements on the hazards of inappropriate obstetric intervention, Gawande next claims, "The package [of obstetric interventions] as a whole has made child delivery demonstrably safer." He then goes on to say, "In the next decade or so the industrial revolution in obstetrics could make Cesarean delivery consistently safer than the birth process evolution gave us," and follows this with a leap to the conclusion that that time has already arrived. He asserts that scheduled cesarean surgery may have lower maternal mortality rates

than vaginal birth, and there is "speculation" that it might lead to fewer problems in later life with incontinence and uterine prolapse.

Gawande applauds doctors for trying whatever appeals to them without "wait[ing] for research trials to tell them if it was all right." It is sufficient that obstetric innovators "looked to see if results improved," although how they would know this without a controlled evaluation of safety and effectiveness, he does not say. Neither does he bring up the obstetric disasters that have followed in the wake of this approach. DES, thalidomide, retrolental fibroplasia (blindness in premature newborns), and misoprostol (Cytotec) inductions come to mind as well as the damage caused by episiotomy (cutting the vaginal opening to enlarge it for birth).

The take-home messages of "How Childbirth Went Industrial" seem to be:

Women can have an easy, safe cesarean surgery or they can undergo difficult, dangerous labors and then have cesarean surgery.

Modern obstetric management is the key to healthy babies and mothers. One hardly knows where to begin to correct the illogic, erroneous information, fallacies, self-contradictions, prejudicial language, and false dichotomies, but perhaps by deconstructing these messages we can highlight many of these along the way.

### **Has "fly by the seat of your pants" obstetric management improved outcomes?**

Gawande claims that while individual obstetric interventions are neither safe nor effective, somehow indiscriminately applying a package of them is responsible for the decline in maternal and newborn deaths. But the fact that two events occur during the same time period does not mean one caused the other.

Contrary to Gawande's claim, at no time has the routine or frequent use of obstetric interventions improved newborn outcomes. That holds true right up to the present day. Consider the following:

In the 1960s, in a rural, impoverished California county, introducing midwives into the county hospital more than halved the newborn death rate. When doctor opposition to midwives blocked renewal of the program, the newborn death rate promptly tripled.

An analysis of British data from the 1970s revealed that in every risk category except the very highest, babies were less likely to die around the time of birth (perinatal mortality rate) if they were born at home or in maternity homes run by general practitioners compared with hospitals. The perinatal death rate for high-risk births in homes or small units (15.5/1000) was slightly lower than that for low-risk births in the hospital (17.9/1000). Moreover, the perinatal death rates in homes and small units for very low, low, and moderate risk births were all similar, but hospital death rates increased twofold between categories, which suggests that hospital labor management actually intensified risks. The analyst calculated that had the British campaign to move birth into the hospital failed, the 1981 stillbirth rate would have been lower than it actually was.

A study compared infant outcomes of all U.S. women in 1991 who had vaginal births of a single baby born between 35 and 43 weeks gestation and who were attended by nurse midwives with a large random sample of similar women attended by doctors. After accounting for differences in social and medical risk factors, infants of mothers cared for by midwives were one-third less likely to die in the first week, 20% less likely to die in the first year, and one-third less likely to be of low birth weight.

As for maternal mortality, Gawande himself acknowledges that the shift to obstetricians and hospital delivery had no effect on maternal mortality until restraints on doctors, better

training, and new developments such as antibiotics and blood transfusions made operative delivery safer. In other words, improvement came when doctors were less likely to meddle, meddled more skillfully, and their meddling was less likely to prove disastrous.

Meanwhile, Gawande's examples of "improvements" in obstetric management mostly consist of trading one intervention for another: twilight sleep and general anesthesia for epidurals. cesarean surgery for forceps deliveries, cesarean surgery for episiotomy. Better outcomes may be seen, but they are nothing more than "frying pan" versus "fire" comparisons. They tell you nothing about how much better women and babies do with "none of the above."

In fact, we have a large body of studies that consistently show equally good or superior outcomes and much less use of potentially harmful interventions with care supportive of normal birth compared with similar populations undergoing conventional obstetric management. It remains as true today as it did in 1933 that healthy women are better off at home in the hands of a midwife than in the hospital with the typical obstetrician.

How could it be otherwise? Every intervention carries risks. If you apply them to women who either don't have problems or who have problems that could be solved by lesser means, or just by having patience, then you expose them and their babies to the risks with no counterbalancing benefit.

### **Is cesarean surgery the panacea for every problem?**

Gawande also argues that despite the risks attendant on cesarean surgery, resorting to it at the first sign of difficulty saves lives. That theory is not upheld by the facts.

A 2004 systematic review of the research found that women were more likely to die from complications directly attributable to cesarean surgery compared with women birthing vaginally.

A 2006 study of all French women having babies between 1996 and 2000 agrees. After eliminating women with conditions that would both influence their likelihood of a cesarean and their risk of dying, women having cesareans were 3 1/2 times more likely to die than women having vaginal births. Excess causes of death related to surgery were anesthesia complications, infection, and deep venous clots.

Another 2006 study reported that among U.S. women with no indicated medical risks having babies between 1998 and 2001, 1 more newborn per 1000 died with cesarean delivery than vaginal birth. In order to eliminate factors that might have led to a cesarean and increased the risk of death, investigators further excluded babies with congenital anomalies and babies born in poor condition. Babies still had double the risk of dying after a cesarean.

Gawande states that data from the U.K. and Israel show a lower maternal death rate with planned cesarean compared with vaginal birth. One can deduce that he got this from a commentary in the New England Journal of Medicine by two proponents of elective cesareans who cite data to that effect from those same two countries. If you track back to the original sources, you will find that statistical analysis of the U.K. data determined that the difference between these two death rates could have been due to chance. The difference was not, in the jargon of researchers, "statistically significant." The Israeli source was an abstract, a brief paragraph presenting the data without any statistical analysis.

It strains credulity that academic obstetricians given a sounding board in a prestigious medical journal would not know what the statistical analysis meant or how meaningless raw differences are any more than we would not know that rolling a "7" two times in a row does not justify claiming that the dice are loaded. Unfortunately, however, obstetric researchers

and editorialists are not above spin-doctoring the facts to advance their cause. (For more on this topic, see "[Spin-Doctoring the Research](#)" and "[When Research Is Flawed](#)".

In fact, the disparity in maternal deaths with cesarean surgery is undoubtedly worse than it appears because:

*Studies of this issue limit the cesarean population to planned cesarean deliveries or exclude women who have serious health problems but compare outcomes with all women having vaginal births:* Women having scheduled cesareans are, by definition, not in danger, and excluding women with medical complications excludes high-risk women. By contrast, some women having vaginal births will be gravely ill.

*Studies focus on delivery route and a limited time thereafter and exclude cases where there was no live birth:* This means they don't capture cesarean-related deaths that:

do not result in deliveries, such as cesarean scar ectopic pregnancy,  
do not result in a live birth, such as deaths due to abnormal placental attachment,  
occur months or years after the surgery, such as bowel obstruction resulting from adhesions.

Gawande's list doesn't begin to cover the list of excess harms of cesarean surgery, and while women having planned surgery are less likely to experience some of them, they still incur the risks of major surgery and the risks of a uterine scar in future pregnancies. Here is a more complete list:

#### **Excess maternal harms compared with vaginal birth:**

hysterectomy

deep venous clots, pulmonary embolism, stroke

surgical injury to bladder, bowel, ureters

anesthetic complications

longer postpartum stay

infection

more severe and longer lasting postpartum pain

hospital readmission

unsatisfactory birth experience

poor overall physical functioning

poor overall mental health and self-esteem

possibly depression (studies disagree)

psychological trauma, including full-blown post-traumatic stress disorder

chronic pain

adhesions: This is exclusive to surgery. Adhesions make subsequent surgeries more difficult, can cause chronic pain, and can lead to bowel obstruction.

Excess newborn harms compared with vaginal birth: NOTEREF \_Ref150828985 \h \\*

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cuts: this is exclusive to surgery.

respiratory complications

special care nursery admission

reduced early contact with mother

mother's negative early reaction to infant

not breastfeeding/failure of breastfeeding

sensitivity to allergens

possibly asthma (studies disagree)

#### **Excess reproductive harms compared with vaginal birth:**

infertility

ectopic pregnancy (embryo implants elsewhere than in the uterus), in particular, cesarean scar ectopic pregnancy.

placenta previa (placenta overlays the cervix)  
placenta accreta (placenta invades the uterine muscle, sometimes growing through it and invading other organs)  
placental abruption (placenta detaches before birth)  
uterine rupture: can occur in future pregnancies as well as labors  
death around the time of birth  
low birth weight and preterm birth  
congenital malformation  
central nervous system injury  
Some differences, especially for catastrophic outcomes, may be small, but when it comes to unnecessary surgery performed on a healthy woman, even one case is one too many. Finally, because few women are permitted to have vaginal births after having had a cesarean, the list also includes:

**Risks that escalate with accumulating cesarean surgeries:**

placenta previa  
placenta accreta  
hemorrhage requiring transfusion  
hysterectomy  
surgical injury  
ileus (paralyzed bowel)  
maternal intensive care admission  
newborn respiratory distress syndrome  
adhesions

Gawande also states that there is “speculation” that planned cesarean surgery prevents urinary incontinence and uterine prolapse in later years, but that speculation is not supported by the facts either. Studies fail to find excess urinary incontinence in older women according to birth route, and we have no studies of acceptable quality that looked at uterine prolapse. So much for the theory that profligate use of cesarean section saves lives and improves the well-being of mothers and babies.

**Has standardizing care reined in obstetricians?**

What happens during labor and birth has little to do with the condition of the woman or her baby, and everything to do with her caregiver’s philosophy and approach. Standardizing care has done nothing to limit the use of medical intervention to cases where it is indicated. Looking at the U.S. cesarean numbers:

1 in 3 mothers (32%) surgically delivered in 2005: The cesarean rate can safely be less than half this percentage.

1 in 4 low-risk first-time mothers (24%) surgically delivered in 2003: The cesarean rate can safely be 1 in 10.

1 in 10 first-time mothers (9%) surgically delivered in 2001 for no discernable reason.

More than 1 in 10 (13%) of cesareans performed during labor in one study were done simply because the obstetrician felt like it.

Among 11 obstetricians at a single hospital serving “very low-risk” patients, cesarean surgery rates overall ranged from 1 in 10 to nearly 1 in 2 among the doctors, and rates for first cesareans ranged from 1 woman in 10 to 1 woman in 3. A similar study of a different group of 11 obstetricians reported cesarean surgery rates ranging from 1 in 20 to 1 in 5, again with no differences among the women that explained the variation.

This is not surprising when you consider what U.S. obstetricians consider justification for performing major surgery on healthy women. Here are reasons acceptable to 5-7% of Maine obstetricians responding to a survey:

“convenience”

“certainty of delivering practitioner”

“[labor] pain”: Major surgery is pain free?

Some Portland, Oregon obstetricians surveyed would agree to cesarean surgery under the following circumstances:

13%: "physician not in labor who is tired of being pregnant"

3%: "secretary in early labor requesting cesarean because of painful contractions"

Here are reasons for cesarean surgery considered valid according to a presenter at a 2006 National Institutes of Health conference on elective cesareans and the [conference report](#) itself:

"woman's ability to take time off from work"

"her need to have a distant relative in the home around the time of the birth"

"the control of the process afforded by cesarean delivery": You are never in less control of a process than when undergoing surgery.

"hospital resources such as operating rooms and staff"

"economic considerations, such as insurance coverage, payment, and scheduling conflicts"

"unpredictability of the timing and length of labor for a provider's lifestyle and fatigue level"

This cavalier attitude is not limited to cesarean surgery. Looking at two other potentially harmful interventions:

Nearly half (47%) of women planning vaginal birth in 2005 had labor induced: The induction rate can safely be 1 in 10.

1 in 4 (25%) women having vaginal births had an episiotomy. That rate can be as low as 1 in 100.

It is telling that despite the evidence, 1 in 5 Maine obstetricians surveyed preferred cesarean surgery for themselves or their partners to prevent pelvic floor dysfunction, and 3 in 10 Portland, Oregon obstetricians surveyed would agree to perform a cesarean on a woman fearful that vaginal birth would cause urinary incontinence.

Just as in the 1933 report, we still have cowboy obstetricians doing whatever they want for any reason they want or for no reason at all. To borrow Gawande's automotive metaphor, if you knew a mechanic who performed extensive repairs with potential to damage the engine on 1 in 3 cars brought in for routine maintenance, would you take your car to that mechanic?

### **Is Rourke's birth an appropriate "cautionary tale"?**

Rourke's failed attempt at normal birth cannot be taken as typical of what happens to women foolish enough to reject obstetric management because Rourke's experience is an anomaly. Normal birth is almost never an option in hospitals. Listening to Mothers II, a national survey of U.S. women having hospital births in 2005, reported that at most 2% of them received all [six care practices](#) Lamaze International, based on World Health Organization recommendations, deems supportive of "normal" birth. Virtually all women laboring in hospitals will be exposed to procedures, drugs, and restrictions that research shows to be harmful, ineffective, and usually both with routine or frequent use, and in some cases, with any use at all. Here is a partial list together with the percentage of women in the survey having that procedure or practice:

35% induction for non-medical reasons: Many would also have been induced for discredited medical reasons such as the baby is predicted to be larger than average

60% nothing by mouth

83% IV drip

93% continuous electronic fetal monitoring

59% rupture of membranes

75% confinement to bed in labor

(not reported) preset time limits for making progress in dilation or pushing

57% unphysiologic pushing positions

79% unphysiologic pushing techniques

17% fundal pressure (pressing on the mother's belly to help expel the baby)

25% episiotomy

Meanwhile, few women enjoy supportive care they say increases comfort, and in the case of doulas (women trained or experienced in providing labor support), reduces the need for medical intervention. These include:

3% attended by a doula

6% immersion in a tub or pool of warm water

4% shower

6% local application of heat or cold

We cannot know if Rourke's cesarean could have been avoided, but several factors increased her chances of having one that wasn't necessary:

*She didn't choose a caregiver who practiced care truly supportive of normal birth:* Rourke's obstetrician was more accommodating and patient than most, but the only solutions she offered for Rourke's difficulties were drugs and procedures.

*She didn't have a doula:* A doula could have helped Rourke cope with her long early labor with measures to help her rest, distract her, and promote stronger contractions. A doula would have encouraged Rourke and reassured her and her partner that they were doing well, something badly needed and rarely provided by medical staff during difficult labors. A doula might have helped Rourke achieve her goal of avoiding an epidural with comfort measures and other techniques. She would have known no-risk strategies for promoting progress and coaxing the baby into a more favorable position. As the labor wore on, the doula could have taken turns with Rourke's partner so that Rourke always had someone relatively fresh working with her. Finally, a doula could have helped Rourke deal with her very natural negative feelings after the cesarean, and could have helped her to have a better chance of succeeding at breastfeeding. By rejecting doula care, Rourke condemned herself to fighting the system with no one in her corner. Rourke's choice also left her to struggle alone in the cesarean's aftermath.

*She had unrealistic anxieties:* As a doctor, Rourke must surely have absorbed the "something can go wrong at any moment" philosophy that drives obstetric management. Rourke may have seen 50 births, but, as Listening to Mothers II documents, it is a safe bet that the only normal birth she saw was the emergency birth in a car in the hospital parking lot on a cold winter's night, clearly a scenario Rourke did not want to emulate. It is hard to believe in something you have never seen, and which all your training and experience tell you is neither achievable nor desirable. Your head may say "yes," but your gut will be saying "no," and in labor, your gut will win. As one precept of home birth midwife Ina May Gaskin's Sphincter Law states: Scared sphincters—and the cervix, the neck of the uterus, is a sphincter—don't open.

Medical model management reinforced Rourke's fears, discouragement, and feelings of helpless inadequacy: Physiologic processes vary widely. A leisurely early labor is typical, although it needs good, supportive care. But Rourke was told she could go home to await "true" labor—message: your painful, regular contractions aren't real—or accept a drug to speed up her "stalled" labor—message: something has already gone wrong. Later, the baby's head was deemed "stuck," facing the wrong way at 6 cm dilation with the head still above the pelvic inlet. The head cannot get stuck, in the sense of being unable to turn or maneuver, at this point in labor, but again, what a disheartening message.

Rourke's labor management also precipitated some alarming iatrogenic, meaning "caused by doctors," complications. Rourke's blood pressure dropped so dangerously low after the epidural that she needed urgent treatment to bring it back up. The fetal heart rate plunged after the obstetrician broke the bag of waters, undoubtedly because the loss of the fluid cushion led to umbilical cord compression during contractions. The baby's so-called "cry for help" was entirely the fault of intervening as may have been the continuing malposition and lack of progress. Releasing the amniotic fluid can cause the head to surge downward and get stuck for real. Interestingly, Gawande ignores the implied lesson about injudicious use of

obstetric interventions. Either one could have led to an emergency c-section, although they did not in Rourke's case. Even so, Rourke must have felt she was jeopardizing her baby by continuing to resist surgical delivery.

It is not logical to use what may have been a necessary cesarean as an argument for routine intervention. Intervening may be required in some cases, and some interventions such as cesarean section have been made safer, but this hardly justifies routine or frequent use. One might as well say that improved equipment and techniques for rescuing people from burning buildings makes tossing accelerant on the fire or starting the fire yourself a good idea. As an [article](#) on the Childbirth Connection website states: "All mothers should have access to safest vaginal birth practices. We should not expect them to choose between vaginal birth with avoidable harms and cesarean section."

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