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To Reduce C-Sections, Change the Culture of the Labor Ward

The rate of caesarean births varies widely from hospital to hospital. Some researchers say that's rooted in staff views and practices.

by Amy Dockser Marcus | Sept. 12, 2017

Caesarean delivery rates in the U.S. remain high at many hospitals despite years of effort to lower them. Now, some researchers are focusing on an often overlooked reason: the culture of the labor ward.

Caesarean deliveries, surgical procedures that involve cutting into a mother's abdomen to deliver a child, make up close to a third of U.S. births. The procedure generally is safe but is associated with increased risk of certain health problems, such as hemorrhage and infection, and with complications in future pregnancies.

Researchers have theorized about a number of factors that may explain the persistence of high rates of caesarean deliveries, including higher-risk pregnancies involving women who are older, heavier, or got pregnant using in vitro fertilization, and some women choosing elective caesareans. But none of that explains why the rate of caesareans varies so widely from hospital to hospital.

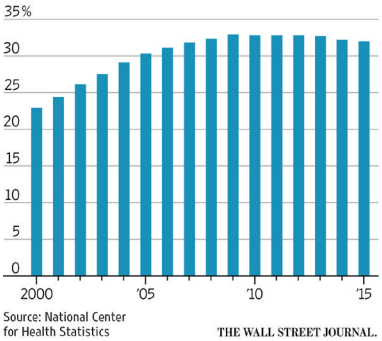
Instead, says Neel Shah, an obstetrician and public-policy researcher, the biggest factor in whether a woman will have a caesarean delivery "is the door she walks through" to give birth.

Dr. Shah and other researchers believe some of the differences in delivery methods arise from culture—the views and practices of the doctors, nurses and managers of a labor ward. The way the staff communicates, the managers' risk tolerance, attitudes toward employing technology, and even the design of the ward may tip a decision about how to manage a woman's labor and lead to greater intervention, these researchers say.

That argument is starting to gain attention at hospitals around the country. Dr. Shah joined Beth Israel Deaconess Medical Center in Boston as a practicing obstetrician in 2013, when an effort to change unit culture was already under way, led by the medical director of the labor and delivery ward, Toni H. Golen. The caesarean delivery rate at the hospital among low-risk women—defined as those who haven't previously given birth and are carrying a single fetus in a head-down position—fell from 35% in 2008 to 21% in 2015, according to a paper published this year.

Special Deliveries

C-sections as a percentage of all U.S. births



Source: National Center for Health Statistics

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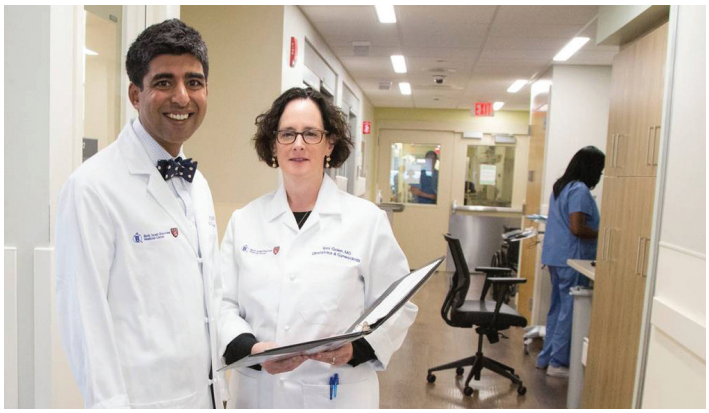

Obstetricians Neel Shah and Toni Golen have helped Boston's Beth Israel Deaconess Medical Center reduce the rate of C-sections substantially among low-risk women.
PHOTO: JAMES DEREK DWYER/BIDMC

The U.S. Department of Health and Human Services has set a goal of reducing the national rate of caesarean deliveries among low-risk women with no prior caesarean delivery from 26.5% in 2007 to 23.9% by 2020. Beth Israel Deaconess's Dr. Golen says that the hospital's 2016 rate was 20%, and that the staff believes they can go even lower and still ensure the health and safety of mothers and babies.

Dr. Shah, who is also director of the Delivery Decisions Initiative at Ariadne Labs in Boston, has started looking at unit culture at hospitals around the country. He spearheaded an examination of the views and practices of the directors of labor and delivery wards at 53 hospitals.

In a paper published in July, the researchers found that hospitals with more "proactive" management cultures—which they defined as following practices designed to anticipate and lessen the severity of challenges before they arise—had higher caesarean rates.

The authors suggested that sometimes hospitals face pressures that compete with the drive to reduce caesarean rates. For example, vaginal deliveries can be more costly to hospitals because labor can take a long time and require more staff, Dr. Shah says.

In another recent Ariadne Labs study of 12 hospitals, researchers found higher caesarean rates in hospitals where delivery rooms were farther apart or located farther from rooms where doctors and nurses sleep and shower when they are on call. Dr. Shah says more work is needed to understand why, but he theorizes that in the highly complex and rapidly changing environment of a labor and delivery unit, a simpler layout saves time and alleviates stress. "Design is never neutral," Dr. Shah says. "Things that increase a unit's workload may make it more likely for providers to use caesareans."

Caesarean rates for hospitals and providers are now more readily available, which some hope might affect delivery practices. In July, Yelp —working with the California Health Care Foundation and Cal Hospital Compare, a nonprofit that rates hospitals in California—said it would start adding information about caesarean rates, vaginal births after caesareans and other data on births alongside the consumer ratings on its site for the approximately 250 hospitals that deliver babies in the state.

Beyond awareness

Better and more detailed information about hospital caesarean rates, particularly among low-risk women, has helped lower caesarean deliveries at many hospitals in California, says Elliott Main, medical director of the California Maternal Quality Care Collaborative, based at Stanford University. But he adds that groups, including his own, realize that "transparency only gets you so far. It builds awareness, but it doesn't necessarily change culture itself."

Dr. Main says the California group, in collaboration with a University of Chicago researcher, is now conducting surveys of physicians, nurses and midwives about their views of the culture of their labor and delivery units. Providers are asked such questions as whether they believe it is a woman's right to choose a caesarean delivery for herself even without a medical reason, or whether they would prefer a caesarean delivery over vaginal birth for themselves or their partners in cases of a normal pregnancy.

The survey also tries to assess providers' personal views on which form of delivery is safer for a mother and baby. "Attitudes on that issue can drive practice," Dr. Main says.

At Beth Israel Deaconess, Dr. Golen says she had just accepted the job as medical director of the labor and delivery ward in 2008 when she attended a meeting of local experts addressing the caesarean rate in Massachusetts. Beth Israel Deaconess, which delivers around 5,000 babies a year, is ensconced in a heavily resourced area—surrounded by other renowned hospitals, and just down the street from Harvard Medical School. The hospital's high caesarean rate was called out at the meeting.

"I was shocked and embarrassed," Dr. Golen says, "and also concerned." She led a team of people trying to figure out why the rate was high and to safely lower it.

One morning, walking around the labor and delivery ward, Dr. Golen says that among the key findings that emerged from the research was the recognition that, "with childbirth, you frequently need to do nothing." But it is difficult not to deploy every available resource, she says, especially when the results are uncertain.

In one room, Dr. Golen points out the fetal heart-rate monitor, a ubiquitous presence for decades at the bedside of pregnant women. Monitoring a fetal heart rate can reassure a physician or nurse that the baby is receiving adequate oxygen or indicate that something is likely amiss and intervention is needed.

But frequently, says Dr. Golen, the results fall in the middle—and the ambiguity and uncertainty can be drivers of caesarean delivery.

Role of uncertainty

Indeed, one of the most difficult challenges when trying to make cultural change is how to shift "the tolerance for uncertainty," says Dr. Shah.

In cases of ambiguous fetal heart-monitor results, this might mean trying other therapies, such as a change in the mother's position or intravenous fluids to see if oxygen delivery is improved, or to keep monitoring but not immediately move to surgery if labor is progressing normally, among other factors.

At Beth Israel Deaconess, Drs. Golen and Shah say that both small and large changes in the environment on the ward can affect culture. For years, the unit adhered to strict guidelines on the amount of time they felt comfortable allowing women to push during labor before suggesting a caesarean. For women who haven't previously delivered, the outer limit was considered three hours.

"We removed those outer boundaries of how long women are allowed to push," says Dr. Golen, based on emerging research that "these strict cutoffs don't stand up under rigorous analysis."

At the twice-daily meetings held on the unit, when the day's cases are discussed, the doctors and nurses talk about not only why they want to order a particular test for a patient, but also what they plan to do with the information once they get it. In one recent meeting, Dr. Golen wants to know why a pregnant woman on the ward was sent for an ultrasound to get an estimated weight for her fetus. Fetal-weight estimates aren't always accurate, and often end up in what Dr. Golen calls "the mid zone"—8 or 8.5 pounds, "when you don't know what to do with the information and the number hangs in the air influencing your decision on whether to perform a caesarean."

The pregnant woman in this case had a previous delivery of an 8-pound baby, and Dr. Golen suggests that the ultrasound was unlikely to offer additional pertinent information and might influence a decision to operate rather than allow a vaginal birth.

"The decision for a caesarean should be based on what is happening with the labor," Dr. Golen says.

To reinforce the hospital's success in reducing its caesarean rate, Dr. Shah, bleary-eyed after a night spent on call delivering babies, gives a talk to a 7 a.m. gathering of young doctors, a group embarking on years of training in the labor and delivery ward. Changes in culture aren't easy to maintain, he says. "So much of the system pulls you toward action."