

# Maternity Care

## Report Highlights

- While episiotomies — a procedure that’s often medically unnecessary and has been linked to many complications for mothers — declined in 2017, their use remains well above Leapfrog’s standard
- Within large metro areas, there’s a stunning variance in episiotomies among hospitals that may be within a few miles of one another
- Only two in five hospitals reporting to the 2017 Leapfrog Hospital Survey fully meet the standard for NTSV C-sections
- Hospitals that electively deliver very-low birth weight babies continue to put these newborns at risk, with only one in five meeting Leapfrog’s standard for high-risk deliveries, which includes treating large numbers of these babies, having outstanding outcomes, and giving mothers steroids prior to a baby’s birth
- Most reporting hospitals are performing well on standards for early elective deliveries and two maternity process of care issues — good news for mothers and babies



**For many families, the birth of a child is a life-defining moment — forever shaping the arc of a family. Childbirth is the number one reason for hospitalization across all populations and age groups.<sup>1</sup> Taken together, this makes the quality of care that mothers receive of critical importance to employers who cover much of the cost of childbirth through the healthcare benefits they provide to their employees.**

Leapfrog asks U.S. hospitals to report annually on their performance in four key areas of maternity care: episiotomies, NTSV (Nulliparous, Term, Singleton, Vertex) C-sections, early elective deliveries, and high-risk deliveries. In addition, hospitals report on two other process of care measures designed to prevent pulmonary embolisms in women undergoing C-sections, and to screen for an excess of bilirubin in the blood of newborns — which can lead to serious complications.

FIGURE 1: Maternity Care Standards Measured in This Report

|   | WHAT IT IS   | ASSOCIATED COMPLICATIONS  | LEAPFROG'S STANDARD  |
|---|--|---|--|
| <b>Episiotomy</b>                         | An incision made in the perineum to widen the birth canal during childbirth  | <b>Mothers</b> Linked to worse perineal tears, loss of bladder or bowel control, and pelvic floor defects   | Rate of <b>5.0% or lower</b>   |
| <b>NTSV C-section</b>                     | Caesarean delivery for a first-time mother of a single baby in the head-down position at term (37 weeks gestation or longer)   | <b>Mothers</b> Increased risk of infection and blood clots, longer recoveries, difficulty with future pregnancies, and chronic pelvic pain<br><br><b>Babies</b> Breathing difficulties, heightened risk of developing chronic childhood diseases (e.g., asthma, diabetes)                                     | Rate of <b>23.9% or lower</b>  |
| <b>High-risk delivery</b>                 | Delivery of very-low birth weight babies*  | <b>Babies</b> Low oxygen levels, breathing issues, difficulty feeding and gaining weight, trouble controlling body temperature, neurologic or gastrointestinal issues, sudden infant death syndrome (SIDS) <sup>2</sup>   | <ul style="list-style-type: none"> <li>• Must have an on-site or co-located neonatal intensive care unit (NICU)</li> <li>• Admit at least 50 very-low birth weight babies annually or maintain a better-than-expected standardized morbidity ratio for very-low birth weight babies</li> <li>• Ensure that <b>at least 90%</b> of mothers at-risk for premature delivery receive antenatal steroids prior to delivery</li> </ul> |
| <b>Early elective delivery</b>            | Scheduled C-sections or medical inductions performed prior to 39 completed weeks of gestation without medical necessity  | <b>Babies</b> Risk of respiratory diseases, pneumonia, or, in rare cases, death   | Rate of <b>5.0% or lower</b>   |
| <b>Maternity process of care measures</b> | Standard processes of maternity care that all hospitals should have in place to provide safe care to newborns and mothers: <ul style="list-style-type: none"> <li>• Takes appropriate actions to prevent deep vein thrombosis (DVT) in women delivering by C-section</li> <li>• Screens for bilirubin levels in newborns prior to discharge</li> </ul> | <b>Mothers</b> Risk of a blood clot in the leg that breaks loose and travels to the lungs — creating a high risk of death<br><br><b>Babies</b> Risk of hyperbilirubinemia, which can cause irreversible brain damage resulting in permanent visual, muscular, or other disabilities, or, in rare cases, death | <b>90% or higher</b> adherence on both measures  |

\* Leapfrog's volume measure for high-risk deliveries includes infants that are 500 – 1499 grams. The Vermont Oxford Network (VON) death or morbidity measure varies slightly and includes infants that are 501 – 1500 grams. Hospitals can report using either metric.

## Episiotomy Rate Declining, But Still Unacceptable

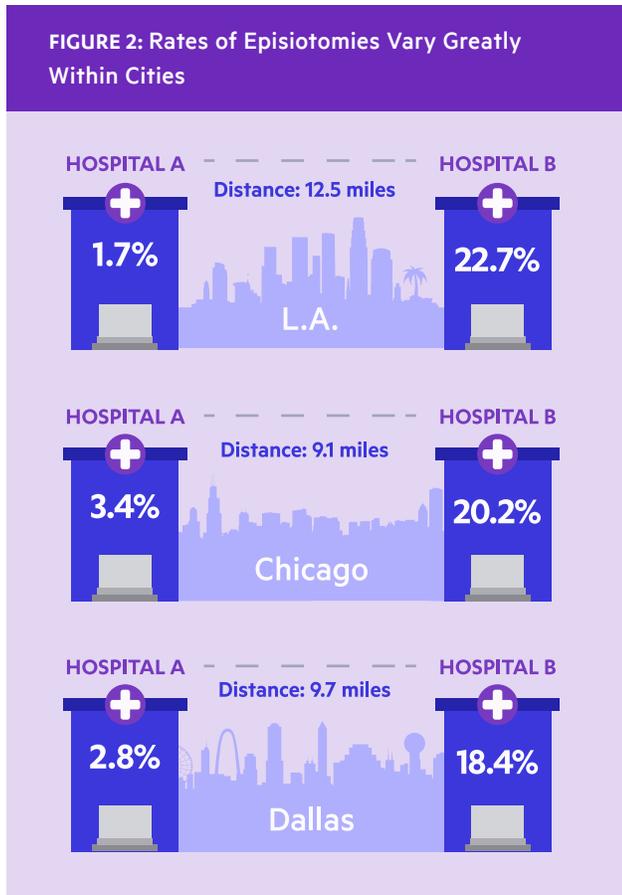
An episiotomy is an incision made in the mother's perineum (birth canal) during childbirth. While routine episiotomies were common for many years — ostensibly to prevent tears during delivery — recent studies have found that more selective use of this procedure

may result in 30% fewer women experiencing severe perineal/vaginal trauma<sup>3</sup> — including tears, pelvic floor defects, and loss of bladder or bowel control.

In 2017 according to the Leapfrog Hospital Survey, the average rate for episiotomies across all reporting hospitals declined from 9.6% to 7.8%, though this remains well above Leapfrog's standard of 5.0% or less.

Only 43.8% of hospitals fully met the Leapfrog standard, with 30.7% showing substantial progress (rates of 10.0% or less), and 13.0% reporting some progress toward the standard (rates of 15.0% or less).

20.2%. And in the greater Dallas area, hospitals less than ten miles apart report episiotomy rates of 2.8% and 18.4%, respectively. Clearly, a mother’s decision of where to deliver can make an enormous difference in the likelihood of avoiding this often unnecessary and potentially harmful procedure.



## Rate of NTSV C-sections Remains Too High

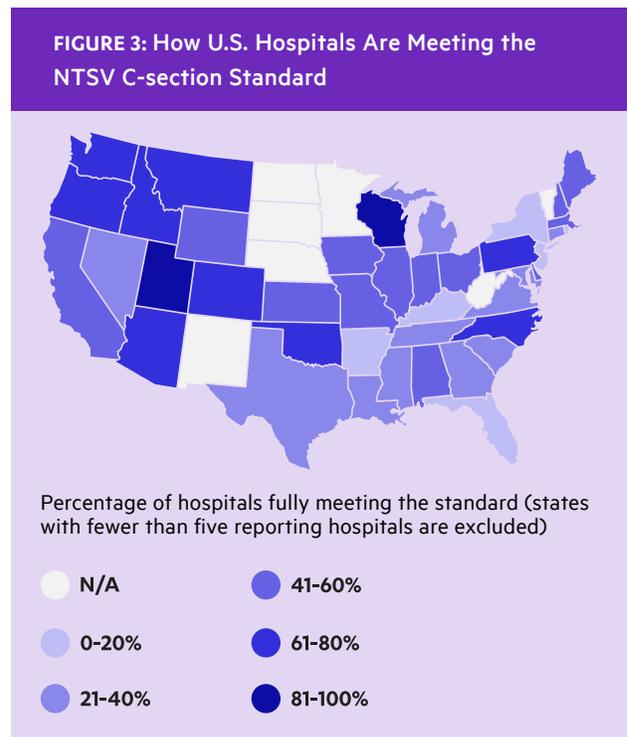
On the 2017 Leapfrog Hospital Survey, only two in five (39.9%) reporting hospitals fully met Leapfrog’s standard for NTSV C-sections of 23.9% or less. There has been no improvement and instead a slight decline in performance since the 2016 Leapfrog Hospital Survey when 44.7% of hospitals fully met the standard. This lack of progress is highly alarming and great cause for concern.

The map in FIGURE 3 illustrates that hospitals in the Pacific Northwest, Mountain states, and desert Southwest are performing better on the NTSV C-section standard, while large swaths of the nation from the Midwest down into Texas and extending to the Southeast still have a long way to go.

## Specific Hospital Choice Is Critically Important

In addition, rates of episiotomies vary significantly within a given metropolitan area, making a mother’s choice of where to deliver critically important. For example, rates of episiotomies within the greater Los Angeles metro area range from 0.5% to a shockingly high 47.3%.

Taking a closer look at these large metros, in Los Angeles rates of episiotomies at two hospitals only 12.5 miles apart vary from 1.7% on the low end to 22.7% on the high end. In Chicagoland, two hospitals just nine miles from each other range from 3.4% to



However, even within a region that's doing relatively well on the Leapfrog NTSV C-section standard, there can be wide variance, such as in Seattle where NTSV C-section rates range from 18.7% to 39.0%.

On the positive side, some hospitals are using the results of the Leapfrog Hospital Survey to drive needed change. Such was the case a few years ago when [Virginia Hospital Center \(VHC\)](#) discovered its NTSV C-section rate was 33%, well above Leapfrog's target. The hospital took a number of steps including appointing an OB-GYN to be medical director of labor and delivery and holding monthly quality meetings. The result? VHC decreased its NTSV C-section rate to 20.9% by 2017, fully meeting Leapfrog's standard.<sup>4</sup>

## Nearly Four of Five Hospitals Handling High-Risk Deliveries Without the Necessary Resources and Expertise

Studies have shown that very-low birth weight babies weighing less than 1,500 grams (3 pounds, 4.91 ounces) do best when cared for in a neonatal intensive care unit (NICU) that has experience caring for these fragile babies and follows recommended processes of care.<sup>5</sup> Leapfrog's standard recommends that mothers at risk for premature delivery choose a hospital that's highly experienced — handling at least 50 very-low birth weight deliveries annually in an on-site or co-located NICU or maintaining a better-than-expected standardized morbidity ratio for these births — and that ensures at least 90% of at-risk mothers also receive antenatal steroids prior to delivery.

Unfortunately, in the 2017 Leapfrog Hospital Survey, only 22.1% of hospitals that reported that they electively deliver very-low birth weight babies fully met these standards — essentially unchanged from the 22.8% that did so in 2016. With the potential complications for these fragile newborns ranging from breathing difficulties to neurological or gastrointestinal issues or even SIDS, mothers at risk of delivering a very-low birth weight baby should carefully review the Leapfrog data for hospitals in their area before deciding where to deliver.

## Most Hospitals Meeting Standards for Early Elective Deliveries

Hospitals across the U.S. reporting to the 2017 Survey are performing well on minimizing early elective deliveries, with 91.4% fully meeting Leapfrog's standard of 5.0% or lower. The average rate for all hospitals has been steadily declining over the past five years — thanks in part to the transparency encouraged by reporting the data to the Leapfrog Hospital Survey — from an acceptable 4.6% in 2013 to an outstanding 1.6% in 2017 (FIGURE 4).

FIGURE 4: Transparency Drives Continued Progress on Early Elective Deliveries



## Hospitals Performing Well on Maternity Process of Care Measures

Finally, 84.0% of hospitals reporting to the 2017 Survey have also been taking appropriate precautions on two key maternity process of care measures. These processes include using pneumatic compression devices or taking other steps to prevent a blood clot in the leg from becoming a pulmonary embolism in women undergoing caesarean section, as well as screening newborns prior to discharge for bilirubin levels to detect possible hyperbilirubinemia.

## The Leapfrog Hospital Survey

The Leapfrog Group invites all adult general acute care and free-standing pediatric hospitals in the United States to voluntarily report on topics such as maternity care, healthcare-associated infections, medication safety, safe practices for better health care, and never events through its annual Survey. In 2017, nearly 2,000 hospitals submitted a Survey, representing two-thirds of inpatient beds nationwide. This report uses final hospital data from the 2017 Leapfrog Hospital Survey (data submitted through December 31, 2017).

The Leapfrog Hospital Survey includes measures that are endorsed by the National Quality Forum (NQF)

and/or aligned with those of other significant data collection entities, including the Centers for Medicare & Medicaid Services (CMS) and The Joint Commission. Leapfrog partners with the Armstrong Institute for Patient Safety and Quality at Johns Hopkins Medicine to review Survey measures and standards, and updates them annually to reflect the latest science. Additionally, panels of volunteer experts meet regularly to review the Survey measures and recommend performance standards for each subject area covered in the Leapfrog Hospital Survey. The full list of measures included in the Survey is available at

<http://www.leapfroggroup.org/survey>.

1. Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2015. <https://www.hcup-us.ahrq.gov/faststats/NationalDiagnosesServlet>. Accessed April 18, 2018.
2. Lucile Packard Children's Hospital Stanford
3. Jiang H, Qian X, Carroli G, Garner P. Selective versus routine use of episiotomy for vaginal birth. Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD000081. DOI: 10.1002/14651858.CD000081.pub3. <http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD000081.pub3/full>. Accessed April 18, 2018.
4. "Case Study: How the Leapfrog Hospital Survey Helped Virginia Hospital Center Lower Its NTSV C-section Rate." <http://www.leapfroggroup.org/vhc-case-study>. Accessed April 18, 2018.
5. Phibbs, CS; Bronstein, JM; Buxton, E; Phibbs, RH. The effects of patient volume and level of care at the hospital of birth on neonatal mortality. JAMA. 1996; 276:1054-9. <https://www.ncbi.nlm.nih.gov/pubmed/8847767>. Accessed April 18, 2018.

Castlight is on a mission to make it as easy as humanly possible to navigate healthcare and live happier, healthier, more productive lives. Our health navigation platform connects with hundreds of health vendors, benefits resources, and plan designs, giving rise to the world's first comprehensive app for all health needs. We guide individuals—based on their unique profile—to the best resources available to them, whether they are healthy, chronically ill, or actively seeking medical care. In doing so, we help companies regain control over rising healthcare costs and get more value from their benefits investments. Castlight revolutionized the healthcare sector with the introduction of data-driven price transparency tools in 2008 and the first consumer-grade wellbeing platform in 2012. Today, Castlight serves as the health navigation platform for millions of people and is a trusted partner to many of the largest employers in the world. For more information, visit [www.castlighthealth.com](http://www.castlighthealth.com) and connect with us on [Twitter](#) and [LinkedIn](#) and [Facebook](#).

Founded in 2000 by large employers and other purchasers, [The Leapfrog Group](#) is a national nonprofit organization driving a movement for giant leaps forward in the quality and safety of American health care. The flagship [Leapfrog Hospital Survey](#) collects and transparently reports hospital performance, empowering purchasers to find the highest-value care and giving consumers the lifesaving information they need to make informed decisions. [The Leapfrog Hospital Safety Grade](#), Leapfrog's other main initiative, assigns letter grades to hospitals based on their record of patient safety, helping consumers protect themselves and their families from errors, injuries, accidents, and infections.



Castlight Health, Inc.  
150 Spear Street, Suite 400  
San Francisco, CA 94105

Tel: 415 829 1400  
[info@castlighthealth.com](mailto:info@castlighthealth.com)  
[castlighthealth.com](http://castlighthealth.com)

© 2018 Castlight Health, Inc.  
Castlight Health® is the registered trademark of Castlight Health, Inc.