LEAPFROG HOSPITAL SURVEY

Healthy Moms, Healthy Babies:
Hospital Performance on Leapfrog's Maternity Care Standards Based on Results of the 2020 Leapfrog Hospital Survey

Report Highlights

- Transparency galvanizes change: Across all three measures included in this report, public reporting has played a key role in reducing unnecessary interventions in childbirth
- The average rate of episiotomies amongst reporting hospitals has decreased to 5.2%, the lowest rate since Leapfrog began publicly reporting on the measure, though more progress is needed to achieve Leapfrog's target rate of 5% or less
- Hospitals continue to succeed at reducing or eliminating early elective deliveries, with nearly 92% of reporting hospitals meeting Leapfrog's standard of an early elective delivery rate of 5% or less
- Though the average rate of NTSV C-sections, the standardized measure of cesarean procedures in low-risk, first time mothers, remains too high, there has been progress, and more hospitals than ever before are achieving Leapfrog's standard

Where the data comes from

This report uses final hospital data from the 2020 Leapfrog Hospital Survey, the flagship initiative of The Leapfrog Group. Over 2,200 hospitals have Survey data publicly reported, representing 75% of U.S. hospital beds. The Leapfrog Group is a nonprofit watchdog organization that serves as a voice for health care purchasers, using their collective influence to foster positive change in U.S. health care. For more than 20 years Leapfrog has been the nation's premier advocate of health care transparency—collecting, analyzing, and disseminating data to inform value-based purchasing.

The Leapfrog Group invites all adult and pediatric acute care hospitals in the United States to voluntarily report to the annual Leapfrog Hospital Survey; additionally, ambulatory surgery centers (ASCs) are invited to report to the Leapfrog ASC Survey.

The Leapfrog Hospital Survey is developed with guidance from volunteer Expert Panels and receives scientific guidance from the Johns Hopkins Armstrong Institute for Patient Safety and Quality. Quality and safety data by facility collected via the Survey on measures such as maternity care, medication safety, and infection rates is available at ratings.leapfroggroup.org.

Introduction

Not all hospitals provide the same quality of maternity care for expectant mothers. In fact, maternity care can vary greatly from hospital to hospital, even within the same city. The birth of a child is a life-defining experience for both mothers and families, which is why research prior to delivery is critical.

The Leapfrog Hospital Survey collects and publicly reports data that reveals the variation in hospital maternity care and helps families make informed decisions when choosing a hospital. The Survey measures key areas of maternity care important to purchasers and consumers including cesarean sections, episiotomies, and early elective deliveries. Experts agree, and research has shown, that overuse of these three medical interventions unnecessarily increase risks to both mothers and babies.

What's more, disparities in maternity care are increasingly prominent for women of color. According to the Centers for Disease Control and Prevention (CDC), American Indian/Alaska Native and Black women are two to three times more likely to die from a pregnancy-related cause than white women[i], and the rate of C-sections in Black women is higher than women from other racial/ethnic groups.[ii] There is a crucial need to improve quality of maternity care for all women, with special attention to those most at risk for death or harm.

In the 2021 Leapfrog Hospital Survey, Leapfrog began asking hospitals if they stratify any of their quality measures by patient race, ethnicity, or primary language to understand and address possible disparities in the quality of care they provide. Much more work lies ahead to address this urgent problem.

Cesarean Sections

Around one in three childbirths occur by cesarean section in the United States.[iii] While the rate of cesarean births has decreased over recent years, according to the American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine, C-sections remain too common in the U.S.[iv] In some cases, a C-section is necessary to protect the health of the mother and baby, but C-sections can also carry serious risks of infection or blood clots, and many women experience longer recovery periods and complications with future pregnancies. C-sections can also impact the health of babies, like breathing difficulties that require treatment in a newborn intensive care unit (NICU). In the long-term, research shows that C-sections can cause chronic pelvic pain in some women, and babies born by C-section are at an increased risk of developing chronic childhood diseases like asthma and diabetes.

The Leapfrog Hospital Survey uses a nationally endorsed measure known as the Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Birth rate, referring to C-sections for mothers with first-time pregnancies (nulliparous) that have reached at least 37 weeks of gestation (term) and have a single baby (singleton) in the head-down position (vertex). This measure exclusively examines the population of women least likely to need a C-section, offering a standardized way to compare hospital performance. To meet Leapfrog's standard, based on the guidance of its national Maternity Care Expert Panel, hospitals must achieve the Healthy People 2020 NTSV cesarean birth rate target of 23.9% or lower.

Figure 1: Leapfrog reporting hospitals' average rate of NTSV C-Section by year

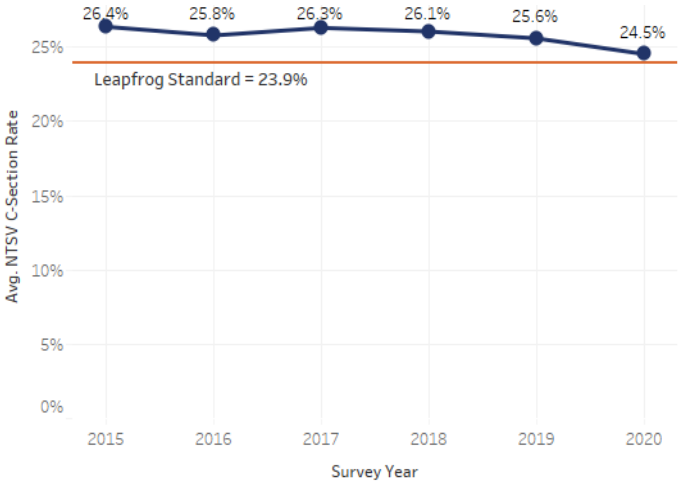
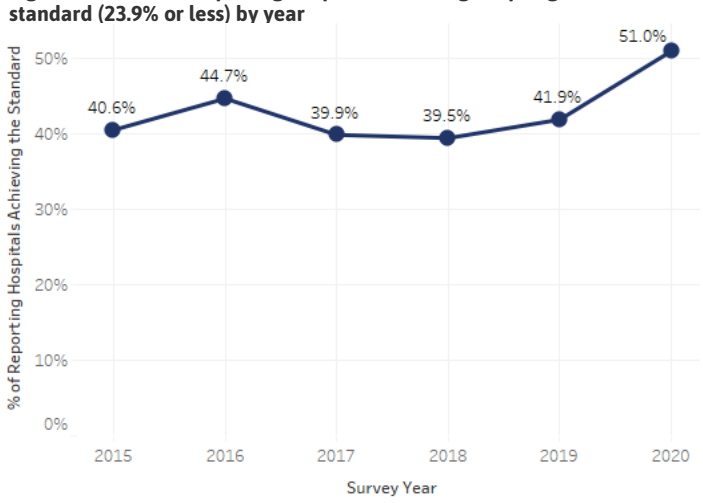


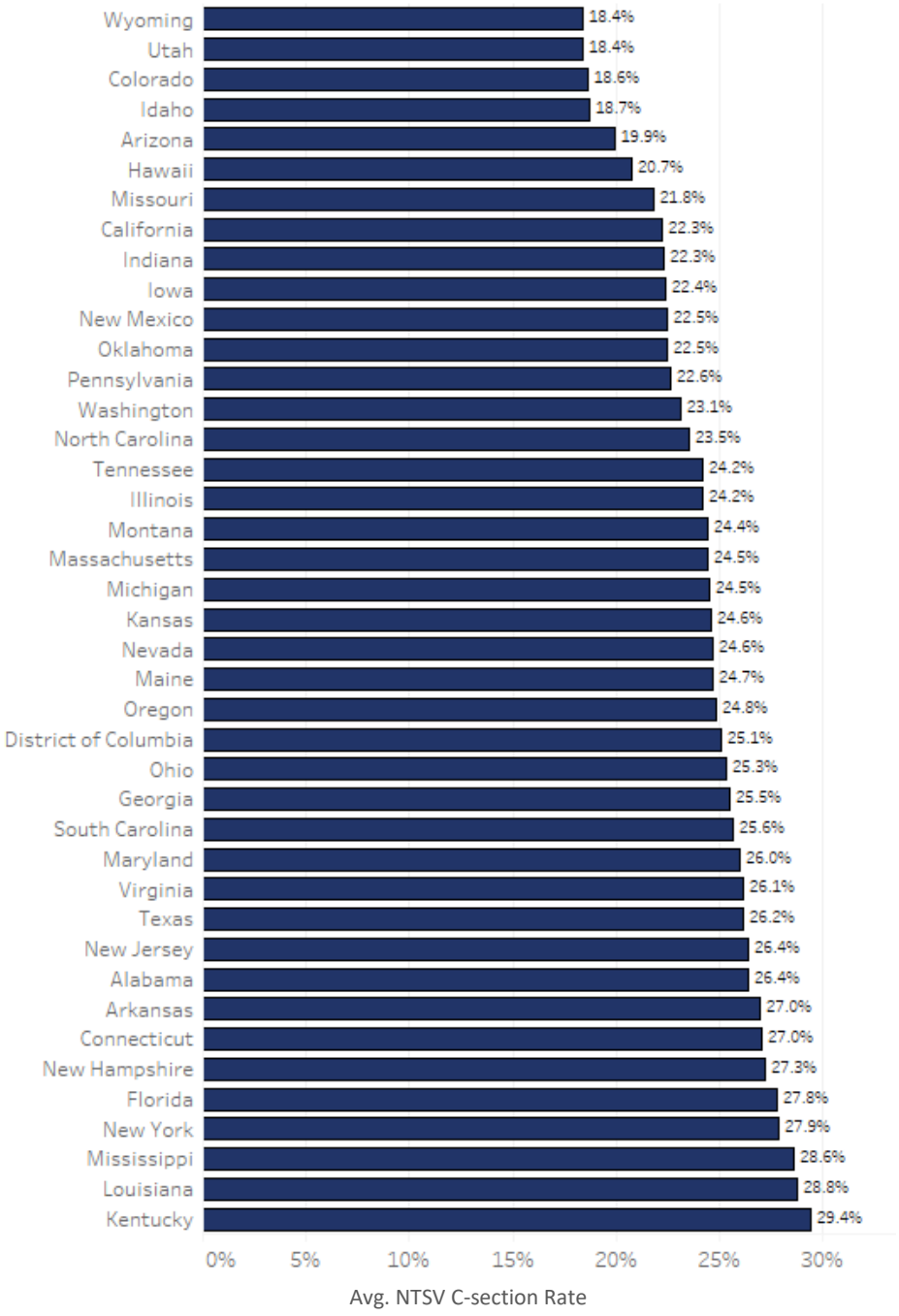
Figure 2: Percent of reporting hospitals achieving Leapfrog's standard (23.9% or less) by year



Since Leapfrog's public reporting on the NTSV C-section measure began in 2015, hospitals have demonstrated only minor progress year-over-year in reducing the average rate (Figure 1). However, 2020 Survey results encouragingly show that more hospitals than ever before, 51%, are achieving Leapfrog's C-section standard of 23.9% or less (Figure 2). This is notable improvement from 2019 when less than 42% of hospitals achieved the standard.

The Survey results also revealed significant variation by state when examining reporting hospitals' average NTSV C-section rates. Kentucky has the highest rate of NTSV C-sections at 29.4%, while Wyoming and Utah have the lowest rates, at 18.4% (Figure 3). States with fewer than five reporting hospitals were excluded from the analysis.

Figure 3: Average Rate of Leapfrog's NTSV C-section standard by state



Based on the guidance of its Expert Panel, Leapfrog will update its NTSV C-section target rate on the 2021 Leapfrog Hospital Survey to align with the Healthy People 2030 goal of 23.6% or less.

Episiotomy

An episiotomy is an incision made in the perineum to make the vaginal opening larger during childbirth. Once a routine practice in childbirth, medical guidelines today urge against the routine use of episiotomy, due to the risk of perineal tears, loss of bladder or bowel control, and pelvic floor defects. Other significant issues include infection and other complications, slow recovery, and the potential for lifelong discomfort. Due to these concerns, ACOG recommends the use of episiotomy only in highly restricted circumstances.[v]

Leapfrog is the only organization to track and publicly report rates of episiotomy by hospital. Based on the guidance of its Maternity Care Expert Panel, Leapfrog's standard for episiotomies is 5% or less. Since Leapfrog began public reporting on this measure in 2012, hospital rates have steadily declined each year. The average rate of episiotomies has decreased by around 49% between 2015 and 2020. In 2020, the average hospital rate was 5.2% (Figure 4). While still above Leapfrog's standard, this is significant and encouraging progress and suggests hospitals are actively addressing this critical safety issue.

Figure 4: Average rate of episiotomy rate by year

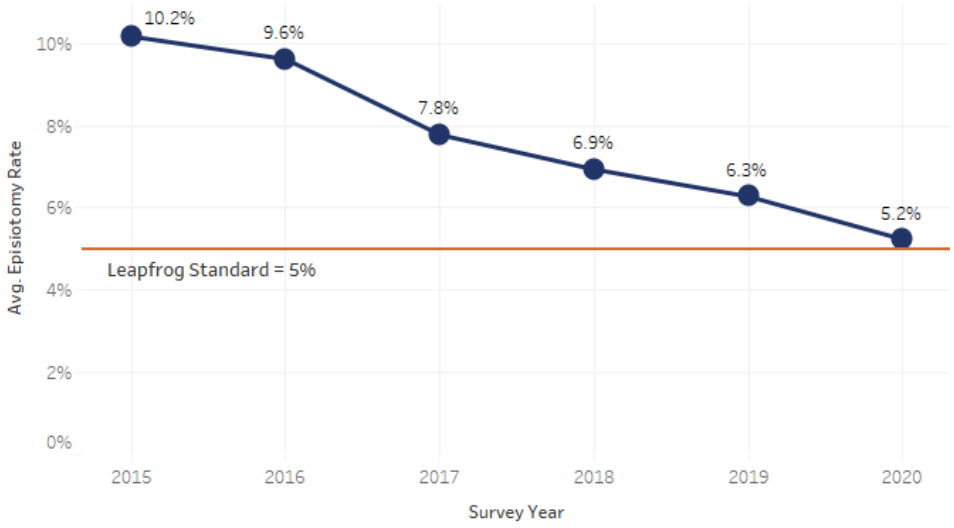
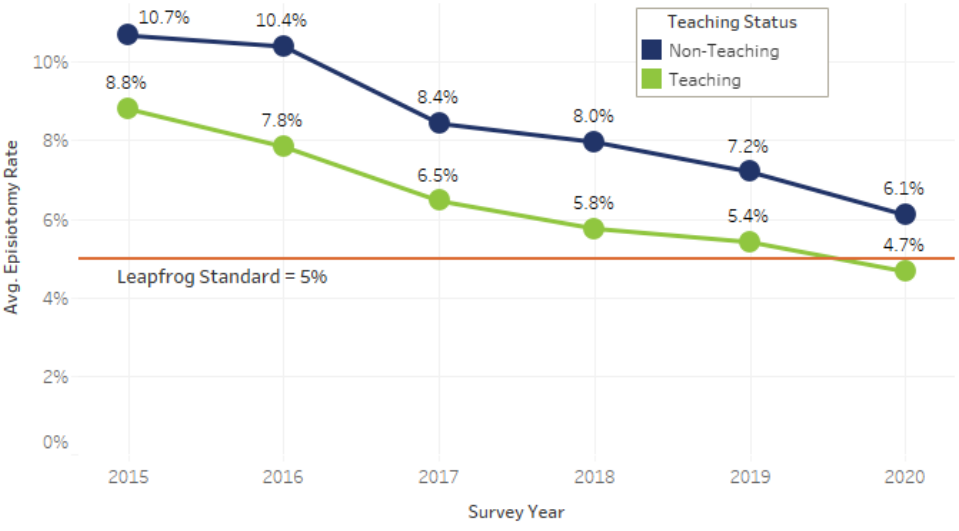


Figure 5: Average rate of episiotomy by teaching status



As in prior years, teaching hospitals have achieved a lower episiotomy rate than non-teaching hospitals. In 2020, the average rate of episiotomy across teaching hospitals was 4.7% compared to 6.1% in non-teaching hospitals (Figure 5). Though this gap has narrowed slightly compared to previous years, it still represents a statistically significant difference between the two types of hospitals.

Early Elective Deliveries

Early elective deliveries are scheduled C-sections or medical inductions performed prior to 39 completed weeks gestation without a medical reason. This is full-term as defined by ACOG and the Society for Maternal-Fetal Medicine, and deliveries before this period carries risks to both babies and mothers, like NICU admissions, longer hospital stays, and higher costs to both patients and payers. Studies also suggest an early delivery can have long-term developmental risks for infants.

In 2010, Leapfrog first reported rates of early elective delivery by hospital. This groundbreaking public reporting galvanized a movement to reduce early elective deliveries nationwide, dramatically decreasing the national average from over 17% in 2010 to 1.4% in 2019 and improving the start to life for thousands of babies. In 2020, the rate of early elective deliveries average was 1.6% (Figure 6). With nearly 92% of hospitals now achieving Leapfrog's early elective delivery standard of 5% or less (Figure 7), it is clear that every hospital in America can and should achieve this standard.

Figure 6: Average rate of Early Elective Deliveries over time

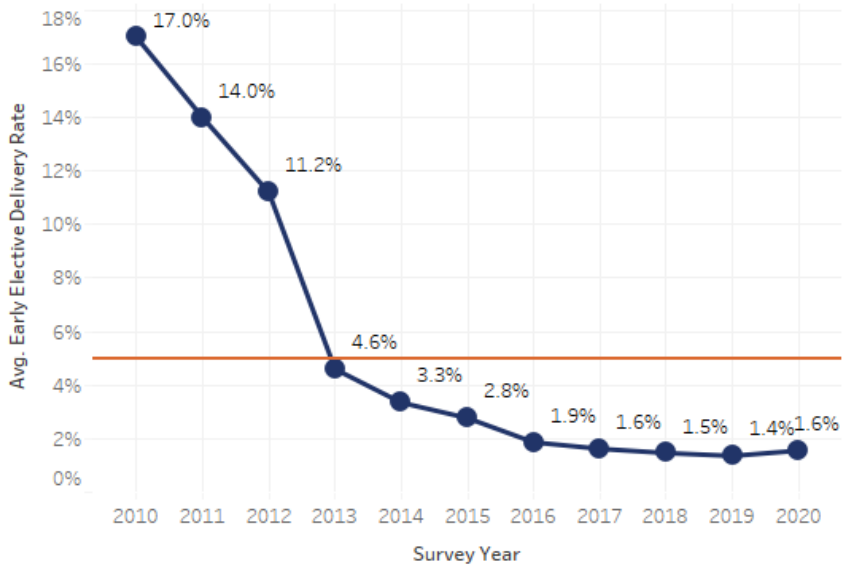
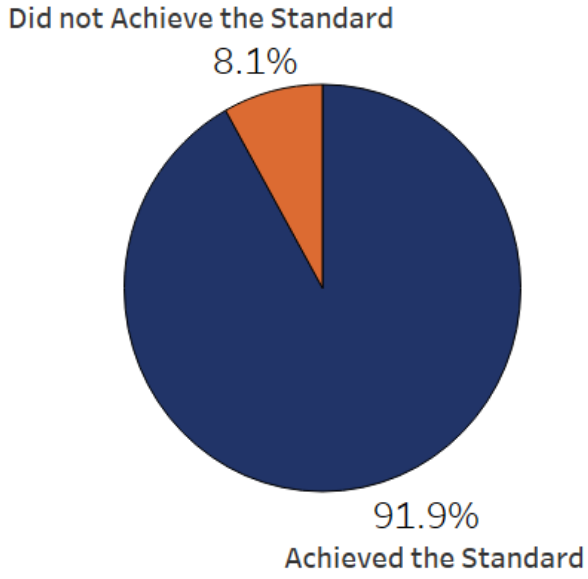


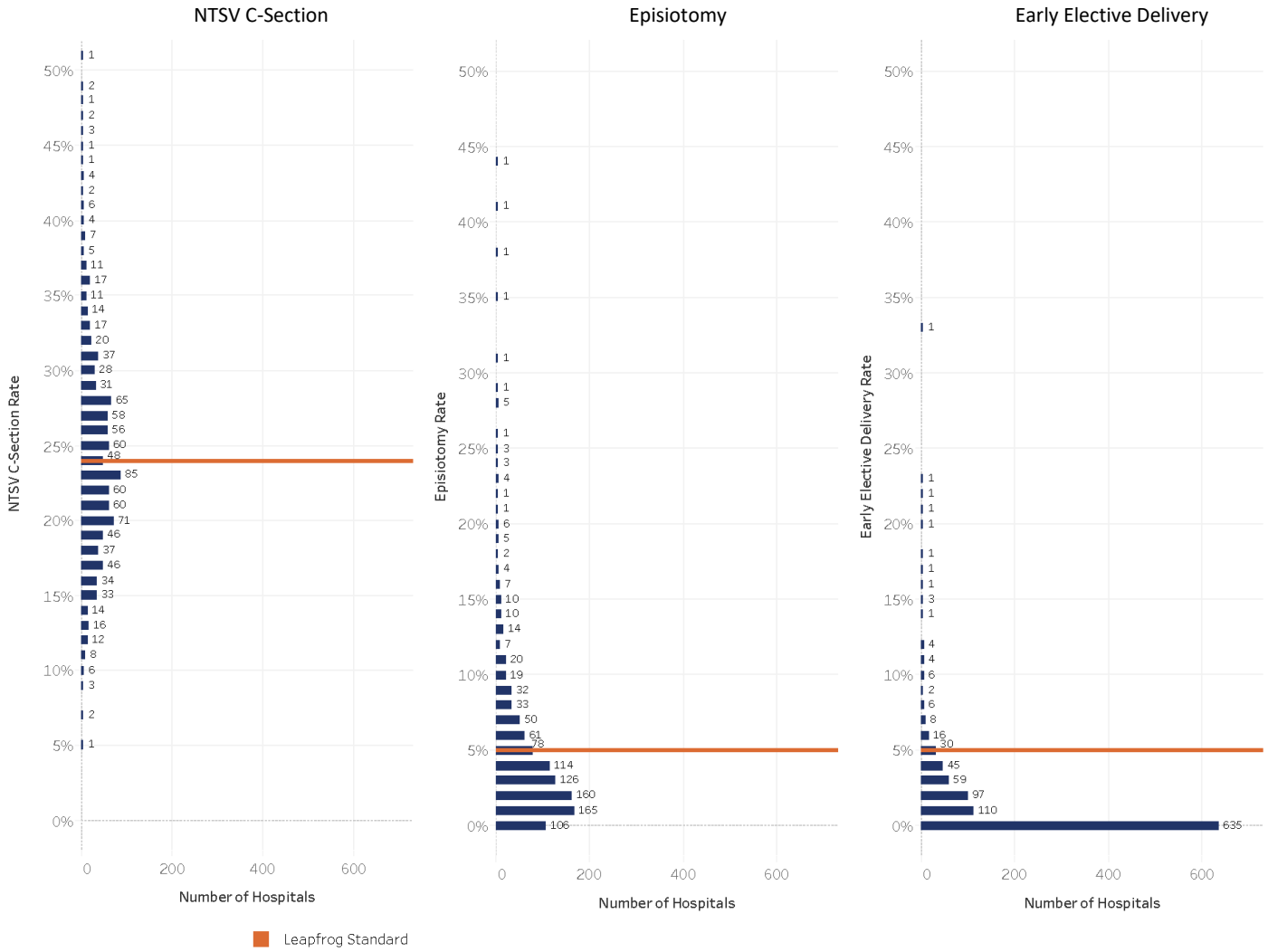
Figure 7: 2020 performance on Leapfrog's early elective delivery standard



Maternity Measures Compared

Despite overall improvement across all of Leapfrog's maternity care measures, substantial variation across hospitals remains. As revealed in Figure 8, this variation is most pronounced for NTSV C-sections, with rates by hospital varying ten-fold from the lowest rates and the highest rates. Though still substantial, variation in episiotomy rates is less pronounced. The least amount of variation is seen in the early elective delivery rates, with most facilities' rates well below Leapfrog's standard. Public reporting on early elective deliveries and episiotomy have clearly improved the delivery of care, and the reduction in variation in hospital performance suggests a gravitational pull toward widespread adoption of successful improvement practices. That same gravitational pull is less evident for C-section rates, where persistent variation among hospitals suggests the call to action has yet to be heard. The notable advances in episiotomy and early elective delivery demonstrate change is possible for C-sections.

Figure 8: 2020 Facility NTSV C-Section, Episiotomy, and Early Elective Delivery Rates



How to Use this Information

Since Leapfrog began reporting on the quality and safety of maternity care ten years ago, tremendous progress has been made. Undoubtedly, public reporting and transparency has galvanized improvement. So too has alignment with national and state associations, quality collaboratives, and other nonprofits calling for improvement. Leapfrog data on maternity care can be used in a variety of ways by many different stakeholder organizations.

What hospitals can do:
Hospitals use Leapfrog data to track and measure their progress on quality and safety. Notably, many hospitals have effectively used the Leapfrog Hospital Survey to design a performance improvement plan that has enabled significant gains on Leapfrog's maternity care measures. The case studies below demonstrate how participating in the Leapfrog Hospital Survey prompted action within hospitals and motivated positive change.

- Case Study: How the Leapfrog Hospital Survey Helped Virginia Hospital Center Lower its NTSV C-section Rate
  When Virginia Hospital Center (VHC) in Arlington, Virginia reported to the 2014 Leapfrog Hospital Survey, it recognized that its NTSV C-section rate was much higher than Leapfrog's standard. VHC began reporting NTSV C-section rates by provider to other physicians. VHC continues to achieve Leapfrog's NTSV C-section standard, most recently reporting a rate of 21.8%.
- Case Study: Implementing the Leapfrog Episiotomy Standard to Promote Improved Maternal Health
  Since 2014, Texas Children's Hospital in Houston has been focused on reducing and sustaining an episiotomy rate that exceeds Leapfrog's standard. The hospital developed a taskforce to help oversee these efforts and as a result, saw a 62.2% reduction in its episiotomy rate in five years. The performance standards set out by the Leapfrog Hospital Survey and its benchmarking was a key lever in that success.

What employers can do:
Employers can play an active role in helping their employees achieve a safe delivery. They can start by educating employees on the importance of choosing the right facility for delivery and encouraging them to use free resources, like Leapfrog's public reporting website. Employers can also leverage their collective influence and urge hospitals in their area to improve on maternity care measures as well encourage them to participate in the Leapfrog Hospital Survey so maternity data can be accessed by their employees.

What advocates can do:
Associations and quality improvement collaboratives should urge hospitals to adhere to peer-reviewed medical guidelines surrounding maternity care and to participate in the Leapfrog Hospital Survey to track and measure progress on maternity care safety and quality. Coordination between stakeholder organizations can assist hospitals in improvement efforts and sends an aligned message that excellence is achievable and will be recognized.

What mothers can do:
Expectant mothers should review Leapfrog's maternity care results at www.ratings.leapfroggroup.org to find the highest performing hospital available to them for delivery. Leapfrog is the only publicly available source of this maternity care quality data; most but not all hospitals are willing to make their data public. If Leapfrog reports that your hospital "declines to respond," share your concern with the hospital and ask them to report to the Leapfrog Hospital Survey.

Please visit www.ratings.leapfroggroup.org/measure/hospital/maternity-care to learn more about Leapfrog's maternity care measures.

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[i] Centers for Disease Control and Prevention (CDC), Infographic: Racial/Ethnic Disparities in Pregnancy-Related Deaths—United States, 2007-2016. 2007-2016. https://www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html. Accessed March 12, 2021.
[ii] March of Dimes Peristats, Total cesarean deliveries by race/ethnicity: United States, 2016-2018 Average. 2021. https://www.marchofdimes.org/Peristats/ViewSubtopic.aspx?reg=99&top=8&stop=356&lev=1&slev=1&obj=1. Accessed March 12, 2021.
[iii] The American College of Obstetricians and Gynecologists, Safe Prevention of the Primary Cesarean Delivery. 2014. https://www.acog.org/clinical/clinical-guidance/obstetric-care-consensus/articles/2014/03/safe-prevention-of-the-primary-cesarean-delivery. Accessed March 12, 2021.
[iv] The American College of Obstetricians and Gynecologists, Safe Prevention of the Primary Cesarean Delivery. 2014. https://www.acog.org/clinical/clinical-guidance/obstetric-care-consensus/articles/2014/03/safe-prevention-of-the-primary-cesarean-delivery. Accessed March 12, 2021.
[v] The American College of Obstetricians and Gynecologists, Practice Bulletin No. 165: Prevention and Management of Obstetric Lacerations at Vaginal Delivery. 2016. https://journals.lww.com/greenjournal/Fulltext/2016/07000/Practice_Bulletin_No__165__Prevention_and.46.aspx. Accessed March 12, 2021.