Why Maternity Care Matters

The National Center for Health Statistics (NCHS) reported that in 2021, 3.6 million babies were born in the U.S..[1] Of these 3.6 million births, about 1.2 million (32.1%) were delivered via cesarean section.[1] The NCHS also reported that in 2020, almost 331,000 (9.34%) babies were born such that they required significant medical care within the first several months of their existence due to low birth weight or prematurity.[2]

A growing concern is the number of births delivered via cesarean section, resulting in longer hospital stays and the use of specialty medical services – all for a surgery that might not have been necessary. As the American College of Obstetricians and Gynecologists (ACOG) asserts: "Potential risks of cesarean delivery on maternal request include a longer maternal hospital stay, an increased risk of respiratory problems for the infant, and greater complications in subsequent pregnancies, including uterine rupture, placental implantation problems, and the need for hysterectomy."[3]

The Leapfrog Group, long motivated to explore the quality of maternal care delivered at American hospitals, includes in its annual Leapfrog Hospital Survey five measures -- rate of nulliparous term singleton vertex (NTSV) cesarean deliveries, rate of episiotomies, two maternity care process measures, and a composite measure for high-risk deliveries.

NTSV Cesarean Deliveries

The rate of cesarean deliveries in the United States rose by 50 percent in the early part of this century.[4] The increased rate of cesarean deliveries is attributed to an increase in first-birth cesareans done in the course of labor as well as a decline in vaginal births after a prior cesarean (VBAC). Babies born by scheduled cesarean delivery have significantly higher rates of respiratory complications, infections, and prolonged length of stay in NICUs compared to babies delivered vaginally.[4] Health risks to women undergoing a cesarean delivery include increased rates of infection, hemorrhage, and hospital readmission.

In addition to the considerable health risks associated with cesarean delivery, there are also increased costs. As labor and delivery account for nearly a quarter of all hospitalizations, costs associated with pregnancy and its complications are a driving factor in the rising cost of health care.[5] Cesarean delivery rates have risen to just over 32% in the United States, an increase of about 20% from the 1996 rate.[6] Average total payments for maternal and newborn care with cesarean births are about 50% higher than average payments with vaginal births for commercial payers ($27,866 vs. $18,329).[5]

NTSV refers to a first-time pregnancy (nulliparous) that has reached its 37th week or later (term) and consists of one fetus (singleton) in the head-down position (vertex). Unlike other cesarean section delivery measures, the NTSV cesarean section delivery rate is associated with concrete quality improvement activities that can be performed to address the differences in cesarean delivery rates among hospitals. A recent study has shown that many hospitals have racial disparities in their NTSV cesarean section rates. Even in hospitals that meet the Healthy People 2020 target of 23.9% for NTSV cesarean section rate for white women still have rates around 29.5% rate for Black women.[7] To address these differences, quality improvement activities such as reducing admissions in early labor and eliminating elective labor induction before 41 weeks in the first births can be implemented. ACOG recognizes the importance of the NTSV population as the optimal focus for measurement and quality improvement action.

Leapfrog's Maternity Care Expert Panel recommended a hospital's rate of NTSV cesarean section delivery be measured against a national target of 23.6%, which aligns with the Healthy People 2030 goal set for the U.S. As shown in Leapfrog's 2023 Maternity Care Report, there continues to be limited improvement on this measure with the national average falling to 25.2% based on 2022 Survey results compared to 26.4% when Leapfrog first started reporting on this measure in 2015. However, the 2023 Leapfrog Maternity Care Report shows a significant and worrisome drop in the percentage of all reporting hospitals that achieve or exceed Leapfrog's C-section standard. Whereas in 2020 more than half of reporting hospitals met the standard, two years later only 42.3% do, down from 46.8% the year prior.

Episiotomies

Epidemiologic data shows that episiotomy remains in relatively high use, despite ACOG's recommendation to

limit use of the procedure.[8] The International Childbirth Education Association (ICEA) asserts that it "agrees with the World Health Organization…that routine performance of episiotomy is not supported by the evidence to decrease perineal damage and may lead to adverse outcomes."[9]

Episiotomy has been clearly linked to worse perineal tears and in turn, its attendant complications. These complications are noted to include perineal pain, blood loss, and potential for wound break down/abscess formation and necrotizing fasciitis. Predicated on these concerns, ACOG has called for "restricted use of episiotomy." Restricted use of episiotomy has been firmly linked to lower rates of perineal injury.

The lowest achievable rate of episiotomy remains unclear. Leapfrog's Maternity Care Expert Panel recommended a rate of 5.0% as a national standard for this measure. According to Leapfrog's 2023 Maternity Care Report, since Leapfrog began publicly reporting hospital rates of episiotomies in 2012, the average episiotomy rate has declined by 63%, and in 2022 the average is finally below Leapfrog's standard, with an average national rate of 4.6%.

Newborn Bilirubin Screening

If not detected and treated, hyperbilirubinemia (high bilirubin level) in a newborn can cause irreversible brain damage resulting in permanent visual, muscular, or other disabilities and even death. Unfortunately, visual inspection of the baby for jaundice frequently fails to identify the presence of the condition, particularly if the infant is discharged after a short inpatient stay. Simple serum or transcutaneous screenings conducted before discharge significantly improve the detection and treatment of hyperbilirubinemia.[10]

Appropriate DVT Prophylaxis

Pulmonary embolism (PE) is a leading cause of death in women undergoing cesarean delivery.[10] To reduce the risk of PE, current ACOG recommendations call for the use of pneumatic compression devices (PCD) in all women undergoing cesarean delivery who are not already receiving medical venous thromboembolism (VTE) prophylaxis. PCD use has been shown to reduce the incidence of PE in the general population of patients undergoing major surgery by about 70%. In cesarean deliveries, PCD use has demonstrated a two-thirds reduction in post-cesarean deaths from thromboembolism.[11]

High-Risk Deliveries

Babies with low birth weight or major congenital anomalies are more likely to survive if they are delivered and treated at a hospital with a high–volume, experienced NICU, [12,13] defined by caring for 50 or more very-low birthweight babies (VLBWBs; <1500 grams) per year, or at a hospital that has demonstrated "better than expected" performance on the Vermont Oxford Network's measure of death or morbidity. Hospitals are asked to report their annual NICU volume of VLBWBs or their performance on the VON measure.

Maternity Care Standards

Hospitals achieving the standards for normal newborn deliveries have:

- An NTSV C-Section rate of 23.6% or less
- An Episiotomy rate of 5.0% or less
- Has a 90% adherence rate of Newborn Bilirubin Screening Prior to Discharge and Appropriate DVT Prophylaxis in Women Undergoing Cesarean Delivery

Hospitals achieving the standard for high-risk deliveries admit 50 or more very low birth weight newborns/year to its neonatal ICU or achieves favorable outcomes for high-risk deliveries as measured by the Vermont Oxford Network.

Download the complete Leapfrog Hospital Survey scoring algorithms document at Hospital Scoring and Results webpage.

Maternity Care Services

In addition to the five measures that Leapfrog scores and publicly reports, Leapfrog believes additional information about the maternity care services that a hospital offers may be helpful for patient decision-making. To help inform those that will be delivering a baby, Leapfrog publicly reports on whether a hospital offers the following maternity care services:

1. Has certified nurse-midwives and/or certified midwives deliver newborns
2. Uses doulas for labor and delivery

3. Offers breastfeeding/lactation consultants
4. Offers patients the opportunity to attempt vaginal birth after cesarean section (VBAC)
5. Offers postpartum tubal ligation during the labor and delivery admission

Leapfrog also publicly reports on whether a hospital has a policy in place to protect women and newborns from early elective deliveries, which are scheduled cesarean sections or medical inductions prior to 39 completed weeks of gestation, which are known to cause serious complications.

Why Purchasers Need to Get Involved

Maternity care needs to be safe, guided by sound medical evidence, and cost-effective. Purchasers should urge hospitals to adhere to peer-reviewed medical guidelines surrounding maternity care. This approach not only saves the precious lives of mothers and their babies, but also health care dollars.

Purchasers might also consider looking at alternative payment models and innovative benefits design to drive the desired changes. For example, the Washington State Medicaid Purchasing Administration restricts inductions of labor at less than 39 weeks of gestation without medical indication.[14]

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For a comprehensive list of references please review the Maternity Care Bibliography, available here: https://ratings.leapfroggroup.org/measure/hospital/2024/maternity-care