

# Perinatal Safety Collaborative Makes Progress in Standardizing Best Practices

In a historic reform of its medical malpractice system, New York State has created a special compensation fund to cover the future medical costs of neurologically impaired newborns. The State has also created a Hospital Quality Initiative that will include an Obstetrical Patient Safety Workgroup and will focus on improving obstetrical care and outcomes. This issue of *Health Care News In-Depth* outlines GNYHA's initiatives to help members enhance perinatal safety and quality, and reduce malpractice costs.

Since 2007, GNYHA and the United Hospital Fund have been engaged with 44 hospitals in a Perinatal Safety Collaborative—a voluntary effort to improve perinatal care using evidence-based clinical protocols and safety practices. The hospitals in the Collaborative include large academic teaching centers, both public and private, as well as smaller community hospitals. These hospitals collectively delivered some 128,000 babies in 2008, half of which were covered by Medicaid.

The Collaborative hospitals came together with a commitment to identify and implement the best practices for care delivery that could be standardized and implemented across the region, with the goal of reducing adverse events, enhancing patient safety, and improving the quality of obstetrical and perinatal care for their patients. A supplemental benefit of reducing adverse events is the reduced incidence of medical malpractice claims and associated costs. From its inception, the Collaborative sought the obstetric community's expertise by involving the American Congress of Obstetricians and Gynecologists (District II/New York) (ACOG), and invited participation from the New York State Department of Health (DOH), other

provider organizations, obstetrical and neonatal clinical leaders from our member institutions, risk management professionals from medical malpractice carriers, and consumer organizations. Representatives from these organizations comprise the Perinatal Safety Collaborative Advisory Panel, the group charged with setting priorities for improvement efforts. The Collaborative's principal focus is on adverse events that can be prevented by adoption of evidence-based protocols and standardization of care, applied in a methodical and systematic manner.

## The Collaborative Approach

The perinatal initiative is being implemented using GNYHA's Collaborative methodology, a patient safety approach that GNYHA and UHF have successfully applied to clinical areas such as infection prevention, antibiotic management, critical care, and rapid response. Institutional commitment and leadership are essential for any collaborative to succeed, and once obtained, evidence-based practices are methodically adopted across a number of institutions by hospital-based teams. Site visits by GNYHA and UHF and ongoing, focused educational programs are conducted to support the collaborative

and further the clinical knowledge of a wide group of hospital clinicians. Data are often collected before and after evidence-based interventions are implemented to determine whether the collaborative efforts have influenced outcomes. Additionally, it is always a collaborative goal to improve the participating organizations' safety culture and level of effective communication between and among staff.

In adopting this approach, the Perinatal Safety Collaborative has created a community of hospitals that have identified the best practices for care and are striving to implement them in an effective, structured, and patient-centered manner.

## The Core of the Collaborative—*The Perinatal Safety Bundle*

Childbirth carries a degree of unpredictability that adds to the complexity of caring for the obstetrical patient—care that impacts both mother and baby. Recent efforts to standardize practices in the labor and delivery environment have demonstrated that patient safety and ultimately outcomes of care are well served by an organized culture of safety supported by defined clinical and safety protocols.<sup>1</sup> Several organizations across the country have demonstrated that implementation of perinatal structure and process

<sup>1</sup> Wagner, B., Meirowitz, N., Shah, J., Nanda, D., Reggio, L., Cohen, P., Britt, K., Kaufman, L., Walia, R., Bacote, C., Lesser, M. L., Pekmezaris, R., Fleischer, A. and Abrams, K. J., "Comprehensive Perinatal Safety Initiative to Reduce Adverse Obstetric Events," *Journal for Healthcare Quality*, (2011): 1-10.

measures as part of a comprehensive perinatal safety program can lead to a reduction in preventable adverse events.<sup>2</sup>

The heart of GNYHA's Perinatal Safety Collaborative is a bundle of clinical and safety processes and protocols (the Bundle) that aim to decrease variation in practices and responses. The Bundle closely adheres to the principles and clinical practices established by The Institute for Healthcare Improvement (IHI) in its publication *Idealized Design of Perinatal Care*.<sup>3</sup> The four key components of the IHI model are:

- the development of reliable clinical processes to manage labor and delivery;
- the use of safety principles that prevent, detect, and mitigate errors;
- the establishment of prepared and activated teams that communicate effectively with each other and with mothers and families; and
- a focus on mother and family as the locus of control during labor and delivery.<sup>4</sup>

The Collaborative also adopted the IHI clinical bundles for induction and augmentation of labor—a group of evidence-based interventions that, when executed together, result in better outcomes than when implemented individually.<sup>5</sup> Induction and augmentation of labor both involve the use of oxytocin, a drug that stimulates uterine contractions and has been involved in more than 50% of situations leading to birth trauma and injury.<sup>6</sup> The clinical bundles were developed by IHI after a review of adverse events, medical malpractice claims, and guidelines developed by professional organizations. A critical element in the induction bundle is the assessment of gestational age, prior to induction, to ensure that the fetus is greater than or equal to 39 weeks. The Collaborative also adopted other critically important perinatal safety practices aimed at improving proficiency in electronic fetal monitoring (EFM) interpretation, teamwork, and communication. Recognizing the importance of competency in EFM interpretation, the Healthcare Association of New York State (HANYS) and ACOG have offered

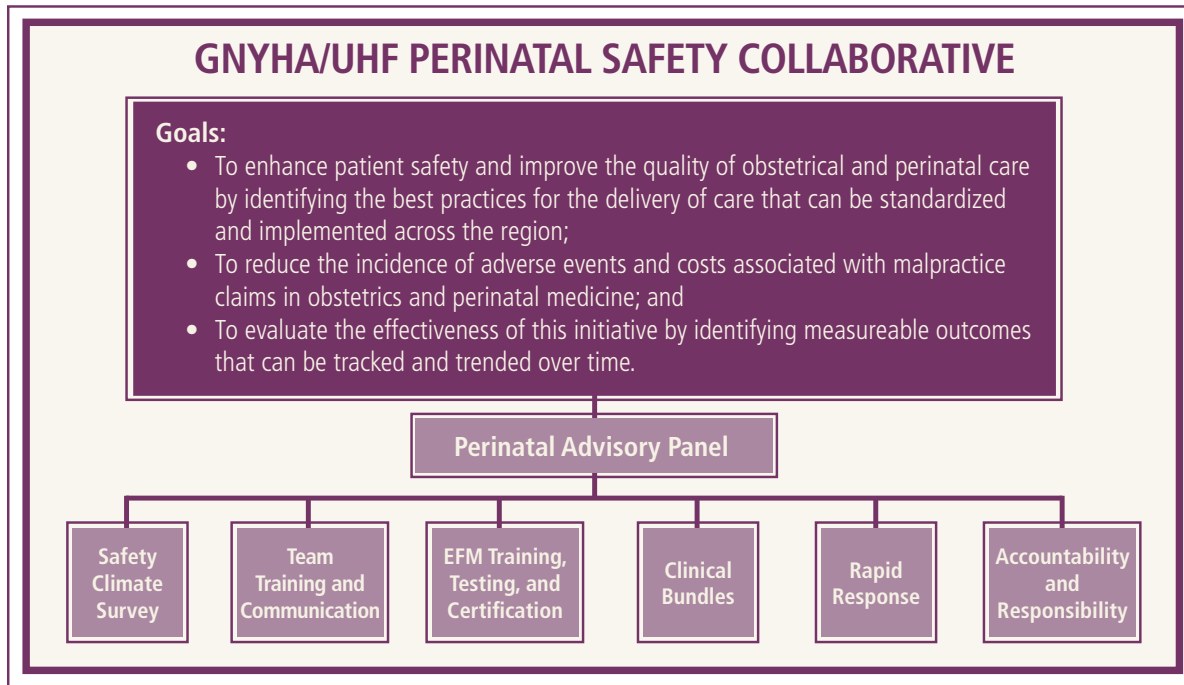
hospitals training in EFM monitoring and interpretation.

In a 2009 issue of the ACOG publication *Obstetrics and Gynecology*, the authors, both Chairs of participating Collaborative institutions, supported the safety bundle approach adopted by the Collaborative and noted that “Bundles reduce risk by assuring that key steps in a process are always taken. A fetal monitoring bundle would have four components: credentialed staff, an escalation policy, a known responsible party, and the capability for rapid response” to obstetrical emergencies.<sup>7</sup> These elements, all of which are a part of the GNYHA Perinatal Safety Bundle, are designed to increase the reliability of care delivered and decrease the number of avoidable adverse events and potential related obstetrical medical malpractice claims.

### Progress to Date

Recently a Collaborative-wide self-assessment was undertaken to determine how much of the recommended Perinatal Safety Bundle

has been implemented to date at each of the collaborating hospitals since its launch in 2007. The results demonstrate that a significantly high proportion of the recommended practices have been implemented by Collaborative hospitals. These results have been shared with the individual hospitals and follow-up by GNYHA and UHF is underway with the goal of 100% implementation of the recommended practices by all participants.



<sup>2</sup> Simpson K.R., Kortz C.C., Knox G.E., “A Comprehensive Perinatal Patient Safety Program to Reduce Preventable Adverse Outcomes and Costs of Liability Claims,” *The Joint Commission Journal on Quality and Patient Safety*, (November 2009): 565-574

<sup>3</sup> Cheroumy P., Federico F., Haraden C., Gullo S., Resar R., “Idealized Design of Perinatal Care,” IHI Innovation Series. Institute for Healthcare Improvement; (2005): 1-16.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

<sup>7</sup> Minkoff H., Berkowitz R.; “Fetal Monitoring Bundle.” *Obstetrics and Gynecology*, (April 2010): 1332-1335

\*At the same time GNYHA implemented its safety climate survey process, several of the Collaborative hospitals implemented their own survey, and therefore, chose not to participate in this exercise as part of the Collaborative.

Equally important, in mid 2010 32\* of the Collaborative hospitals administered the Agency for Healthcare Research and Quality (AHRQ) Survey on Patient Safety Culture to measure the impact of implementing the Perinatal Safety Bundle on labor and delivery staff perceptions of safety. Several of the Collaborative hospitals scored

# The GNYHA Perinatal Safety Bundle

IHI ELECTIVE INDUCTION BUNDLE ELEMENTS		IHI AUGMENTATION BUNDLE ELEMENTS		SAFETY CLIMATE BUNDLE ELEMENTS	
<ul style="list-style-type: none"> <li>Assess gestational age to ensure that the gestational age is <math>\geq 39</math> weeks</li> <li>Monitor fetal heart rate for reassurance of fetal status</li> <li>Assess pelvis to determine dilation, effacement, station, cervical position and consistency, and fetal presentation</li> <li>Monitor and manage hyperstimulation (tachysystole)</li> </ul>		<ul style="list-style-type: none"> <li>Document estimated fetal weight</li> <li>Monitor fetal heart rate for reassurance of fetal status</li> <li>Assess pelvis to determine dilation, effacement, station, cervical position and consistency, and fetal presentation</li> <li>Monitor and manage hyperstimulation (tachysystole)</li> </ul>		<ul style="list-style-type: none"> <li><b>Safety Climate and Team Work</b> <ul style="list-style-type: none"> <li>Implement initial &amp; periodic safety climate survey process</li> <li>Provide ongoing formal team training to all perinatal staff</li> </ul> </li> <li><b>Ensure perinatal staff proficiency in interpreting EFM tracings and escalating concerns during an emergent situation</b> <ul style="list-style-type: none"> <li>Require EFM certification for perinatal staff by:                             <ul style="list-style-type: none"> <li>Defining certification requirements for all staff</li> <li>Developing requirements for training and recertification</li> <li>Creating protocols to address non-compliant staff</li> </ul> </li> </ul> </li> <li><b>Standardize Communication Strategies</b> <ul style="list-style-type: none"> <li>Implement standardized communication strategies (e.g., SBAR) for:                             <ul style="list-style-type: none"> <li>“Hand-offs”</li> <li>Critical situations</li> <li>Escalating cases</li> </ul> </li> <li>Incorporate use of standardized nomenclature in all communications:                             <ul style="list-style-type: none"> <li>Verbal</li> <li>Documentation</li> <li>EFM interpretation</li> </ul> </li> <li>Implement 2x daily interdisciplinary rounds</li> </ul> </li> <li><b>Utilize a “rapid response” approach to emergent perinatal situations</b> <ul style="list-style-type: none"> <li>Conduct simulated drills to assess response to emergent situations (i.e., maternal hemorrhage, shoulder dystocia)</li> </ul> </li> <li><b>Physician accountability</b></li> </ul>	
ADVERSE OUTCOME MEASURES					
<p><b>Maternal</b></p> <ul style="list-style-type: none"> <li>4th degree laceration</li> <li>Postpartum hysterectomy</li> <li>Maternal death</li> <li>Uterine Rupture</li> <li>&gt;2 Units of blood for transfusion and/or blood loss &gt;1,000cc for vaginal delivery or blood loss &gt;1,500cc for cesarean section</li> <li>Return to OR</li> <li>Unplanned maternal ICU admission</li> </ul>		<p><b>Neonatal</b></p> <ul style="list-style-type: none"> <li>Admission to NICU</li> <li>Apgar &lt;7 at 5 minutes</li> <li>Iatrogenic prematurity</li> <li>Intrapartum/neonatal death</li> <li>Arterial cord blood gas pH &lt; 7.00</li> <li>Birth trauma including:                             <ul style="list-style-type: none"> <li>Subdural &amp; cerebral hemorrhage</li> <li>Epicranial hemorrhage</li> <li>Injury to spine &amp; spinal cord</li> <li>Facial nerve injury</li> <li>Erbs palsy</li> <li>Humerus fx</li> </ul> </li> </ul>			

well above the national average. Notably, as a group the Collaborative hospitals also demonstrated scores well above the national average in “reporting events in the last year,” which reflects the increased transparency and safety culture of labor and delivery units that promote communication openness and the reporting of adverse events.

The next step for the Collaborative is to determine whether implementation of the Perinatal Safety Bundle has made a difference in process and outcomes of care. A medical record abstraction tool was developed and implemented in February 2011 for this purpose,

and data collection has begun for a defined set of maternal and neonatal indicators.

## Statewide Buy-in for Comprehensive Perinatal Safety

In accordance with its perinatal safety efforts, in 2010 GNYHA spearheaded an effort to encourage DOH to develop a statewide quality agenda for perinatal care and to identify the essential components of an effective perinatal safety program that could be adopted across the State. Recognizing hospitals’ unique needs and challenges, GNYHA, along with ACOG and HANYS, recommended that DOH promote the adoption of the following,

all of which are included in GNYHA’s Perinatal Safety Collaborative:

- Implementation of evidence-based guidelines and clinical protocols that address:
  - induction and augmentation of labor;
  - management of maternal hemorrhage; and
  - management of shoulder dystocia;
- Comprehensive peer review for all pregnancy-related deaths and other serious outcomes;
- EFM training and certification; and

- Team training and standardized communication strategies, achieved through ongoing education, rapid response to emergent situations, and simulation resources.

DOH responded with a statement of support for these efforts and a desire to continue to work with hospitals to improve perinatal health care in New York. And, in fact, these recommendations are included in the 2011-12 NYS Budget's obstetrical patient safety activities.

### Ongoing Support and Collaboration on Emerging Issues

On a monthly basis, the Collaborative convenes the participating hospitals for focused education on various relevant clinical topics. In addition, GNYHA is

working to address the clinical issues raised in the most recent ACOG/DOH Safe Motherhood Initiative Triennial Report related to post-delivery mortality. In an effort to decrease the incidence of preventable mortality, a main concern raised in the report, the Collaborative is focusing on anesthesia management of post-operative obstetric patients and is working with both ACOG and DOH to standardize care processes in this area. A recent report from the New York Academy of Medicine, *Maternal Mortality in New York: A Call to Action*,<sup>8</sup> emphasizes the importance of the efforts of the Perinatal Safety Collaborative in reducing maternal mortality and more effectively managing chronic illness during pregnancy. For the management of chronic conditions such as obesity in pregnancy, GNYHA is working with the

Collaborative hospitals to develop more effective risk assessment and care management strategies for these high-risk patients.

Improving the quality of care in the obstetrical setting is both complex and difficult, and must focus on individual performance, competency, accountability, systems and processes. The need to reduce variation in practice and adopt evidence-based protocols has been proven to effectively decrease adverse events in obstetrics. GNYHA, with the continued support of UHF, is committed to helping improve outcomes for mothers and newborns through its Perinatal Safety Collaborative, which can serve as a model for improving perinatal safety throughout New York State and beyond. ■

## GNYHA MEMBER HOSPITALS CURRENTLY PARTICIPATING IN THE PERINATAL SAFETY COLLABORATIVE\*

### NEW YORK

#### Catholic Health Services of Long Island

- Good Samaritan Hospital Medical Center
- St. Catherine of Siena Medical Center
- St. Charles Hospital

#### Continuum Health Partners

- Beth Israel Medical Center
- The Long Island College Hospital
- St. Luke's-Roosevelt Hospital Center

#### Kaleida Health

- The Children's Hospital of Buffalo
- Millard Fillmore Suburban Hospital

#### The Kingston Hospital

#### Lutheran Medical Center

#### Maimonides Medical Center

#### MediSys Health Network, Inc.

- The Brookdale University Hospital and Medical Center
- Flushing Hospital Medical Center
- Jamaica Hospital Medical Center

#### Montefiore Medical Center

#### The Mount Sinai Hospital

#### New York City Health and Hospitals Corporation

- Coney Island Hospital
- Harlem Hospital Center
- Jacobi Medical Center
- Lincoln Medical and Mental Health Center

- Metropolitan Hospital Center
- North Central Bronx Hospital
- Woodhull Medical and Mental Health Center

#### New York Hospital Queens

#### NewYork-Presbyterian Hospital/Columbia

#### North Shore-Long Island Jewish Health System

- Forest Hills Hospital
- Huntington Hospital
- Lenox Hill Hospital
- Long Island Jewish Medical Center
- North Shore University Hospital
- Plainview Hospital
- Southside Hospital
- Staten Island University Hospital

#### Orange Regional Medical Center

#### Richmond University Medical Center

#### Southampton Hospital

#### St. Barnabas Hospital

#### St. John's Episcopal Hospital

#### Stony Brook University Medical Center

#### Vassar Brothers Medical Center

#### Winthrop-University Hospital

### NEW JERSEY

#### Christ Hospital

#### Hackensack University Medical Center

#### Trinitas Regional Medical Center

\*MANY OTHER GNYHA MEMBERS HAVE ALREADY IMPLEMENTED, OR ARE IMPLEMENTING, THEIR OWN PERINATAL SAFETY INITIATIVES USING THE SAME PRACTICES AND PROTOCOLS AS THE PERINATAL SAFETY COLLABORATIVE.

<sup>8</sup> *Maternal Mortality in New York: A Call to Action*, The New York Academy of Medicine (December 3, 2010): 1-11.

For additional information on perinatal safety issues, contact Lorraine Ryan at GNYHA.