NEW YORK STATE
OBSTETRIC HEMORRHAGE PROJECT

The New York State (NYS) Obstetric Hemorrhage Project focused on reducing maternal morbidity and mortality statewide by translating evidence-based guidelines into clinical practice to improve the assessment, identification, and management of obstetric hemorrhage.

New York State (NYS) was ranked 23rd in the nation for its maternal mortality rate in a 2019 report by America's Health Rankings®.[1] Although this represents an improvement over its ranking of 46th in 2010 [2], NYS' 2016-2018, maternal mortality rate of 18.1 deaths/100,000 live births is 1.6 times the Healthy People 2020 target of 11.4/100,000.[2,3] Leading causes of maternal death in NYS based on the 2014 Maternal Mortality Report included: infection (21.2%), hemorrhage (15.2%), and embolism (12.1).[3] Further, Severe Maternal Morbidity (SMM) rates in NYS exceeded the national measure of 77.5 incidents of SMM per 10,000 delivery hospitalizations as reported in Healthcare Cost and Utilization Project (HCUP) data in 2018.

In response, the NYS Department of Health's (DOH) Perinatal Quality Collaborative (PQC) led the **NYS Obstetric Hemorrhage Project** between November 2017 and June 2021. The project was conducted in collaboration with the American College of Obstetricians and Gynecologists (ACOG) District II, Healthcare Association of NYS and Greater New York Hospital Association, with support from the National Institute for Children's Health Quality. This quality improvement collaborative engaged teams from 83 NYS birthing hospitals from diverse geographic areas and included: 17 Regional Perinatal Centers (RPCs); 23 Level III birthing hospitals; 18 Level II birthing hospitals; and 25 Level I birthing hospitals. The project aligned with the national Alliance for Innovation on Maternal Health program, led by the national ACOG.

Strategies

Readiness to respond to an obstetric hemorrhage by implementing standardized policies and procedures and developing rapid response teams.

Recognition of obstetric hemorrhage by performing ongoing quantification of actual blood loss and triggers of maternal deterioration during and after all births.

Response to hemorrhage by performing regular on-site, multidisciplinary hemorrhage drills.

Reporting of obstetric hemorrhage by using standardized definitions resulting in consistent coding.

Provider Education

The project's educational curriculum featured presentations by expert faculty, as well as team sharing and learning, which were an integral part of the improvement process. Coaching Call webinars and virtual and in-person Learning Sessions featured presentations focused on the project's goals and strategies to assist teams in improving their systems and care practices. Topics included: **structural preparedness; risk assessment; organizing teams and implementing staged checklists; quantification of blood loss; drills and simulations; protocols for massive transfusion and patients refusing blood products; racial disparities and implicit bias; engaging patients, families and the community after an obstetric hemorrhage event; and sustainability.**

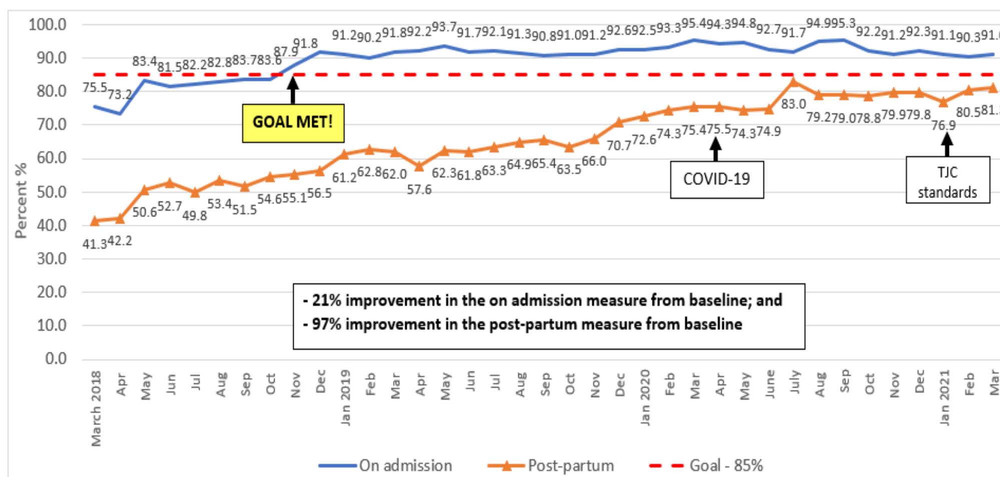
In Situ Simulation for Interdisciplinary Teams
In-person Learning Session, July 2018

Plenary Session
In-person Learning Session, July 2019

Project Data & Results

Participating hospital teams submitted monthly data through the centralized NYSPQC Data System application securely accessible via the NYSDOH Health Commerce System (HCS) to track progress in achieving their hospital team's goals. Data was analyzed and provided back to individual teams and to the collaborative in aggregate for the purposes of tracking continuous quality improvement.

Patients with a Documented Obstetric Hemorrhage Risk Assessment



- The percentage of pregnant people who received a hemorrhage risk assessment on admission to the birth hospitalization met the project goal of 85% in November 2018 and remained above 85% through the project close.
- During the project period, the percent of birthing people receiving a hemorrhage risk assessment during the postpartum period improved by 97% from baseline.

By the close of the project:

- 76% of NYS births were represented by the cohort of participating birthing hospitals.
- 100% of participating hospitals had obstetric hemorrhage supplies readily available, typically in a cart or mobile box.
- 99% of participating hospitals had a unit policy and procedures on obstetric hemorrhage.
- 78% of participating hospitals reported completing at least one drill in the past year.
- 90% of hospitals reported increased use of quantitative blood loss (QBL) measurement for more accurate measurement of blood loss and earlier response to hemorrhage, compared to 41% at the start of the project.
- Participating hospitals reported a 64% reduction in transfers to ICUs or higher-level hospitals and a 29% reduction in hysterectomies among patients with obstetric hemorrhage.

1.*Explore Maternal Mortality in New York | 2016 Health of Women and Children Report. 2017*; Available from: http://www.americashealthrankings.org/explore/2016-health-ofwomen-and-children-report/measure/maternal_mortality/state/NY.
2. Center, N.W.s.L., *Health Care Making the Grade on Women's Health: A National and State by State Report Card.* 2010.
3. *New York State Maternal Mortality Report: A Comprehensive Review of the 2014 Cohort*. New York State Department of Health. Available from: https://health.ny.gov/community/adults/women/docs/maternal_mortality_review_2014.pdf