

Perinatal Quality Collaborative SUCCESS STORY

Ohio Perinatal Quality Collaborative Improves Birth Registry Data, Prematurity Outcomes, and Number of Babies Born Full-Term

Ohio's birth registry—the Integrated Perinatal Health Information System—is an extensive population-based data set. This registry is state and federally mandated—all births must be electronically recorded within 10 days. Despite its value, the data quality and accuracy have varied.

The Centers for Disease Control and Prevention (CDC) provides funding for the Ohio Perinatal Quality Collaborative (OPQC). OPQC is a statewide consortium that aims to reduce preterm (before 37 weeks) births and improve birth outcomes across Ohio. OPQC recognized the need to improve the accuracy of the existing birth registry data so that this accessible and valuable information could be used to measure and guide perinatal improvement activities across the state and document changes in population health over time.

OPQC guided maternity hospital teams to improve the accuracy of birth registry data for two clinically important topics: 1) scheduled deliveries from 37 to 39 weeks without a medical indication and 2) the administration of antenatal corticosteroids (medication given before birth to speed up a baby's lung development) to women from 24 through 33 weeks gestation who are at risk for preterm delivery.

Steps Taken for Data Quality Improvement

- In many maternity hospitals, clinical and clerical staff had never met or interacted with one another. OPQC conducted site visits and interviews, brought together teams of hospital clinicians and clerical staff, and used the Institute for Healthcare Improvement's Breakthrough Series collaborative learning model to learn how to improve data quality.
- OPQC facilitated face-to-face sessions to review individual and combined data and engaged teams who succeeded in making changes that improved data quality.
- With expert guidance, the OPQC applied the Model for Improvement and tested specific strategies related to clinic practices and administrative processes to help hospitals improve data accuracy, optimize use of antenatal steroids, and reduce elective deliveries. Data from reviews of medical records and the birth registry were used to document improvement.
- Given the tremendous variation in the way individuals defined and recorded important birth registry variables, OPQC worked with the Office of Vital Statistics and hospital clinical and clerical staff to



More than 48,400 births in Ohio have been shifted from 37-39 weeks gestation to 39 weeks gestation or later as a result of this project from 2008 through 2015.

83% of eligible women at risk for preterm delivery received antenatal corticosteroids from 24 through 33 weeks gestation from 2012 through 2015.



National Center for Chronic Disease Prevention and Health Promotion
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- Standardize definitions.
- Identify the location of key birth registry variables in medical records.
- Reduce the number of “unknown” variables in the birth registry.
- OPQC held monthly webinars to allow teams at each site to review small tests of change in clinical practice and receive support. On their website, OPQC also offered each team access to multiple useful tools and materials for data quality improvement. This includes online training modules; a key driver diagram to improve birth data accuracy; and brochures that describe key birth registry variables, their definition, location in the medical record, and tips for entry.

Accomplishments

Building upon its original initiative to reduce unnecessary scheduled births from 37 to 39 weeks in the 20 largest maternity hospitals in the state, OPQC increased membership in the 39-Weeks & Birth Registry Accuracy project to 35 maternity hospitals in 2012. OPQC has since extended the project to an additional 70 hospitals to reach 105 hospitals (98% of Ohio’s maternity hospitals).

From September 2008 to March 2015, OPQC has seen an estimated cost savings of over \$27,789,000 associated with a shift of 48,400 births to 39 weeks gestation or greater and a 68% decline in the rate of deliveries at less than 39 weeks gestation without a medical indication.

OPQC launched an initiative to improve rates of antenatal corticosteroid administration to eligible pregnant women at risk for preterm delivery in 2012. Medical record review at the beginning of the project indicated that birth registry documentation of antenatal steroid use in the 19 participating hospitals was substantially below the actual use rates. Accordingly, OPQC integrated strategies related to clinic practices and administrative processes to improve the accuracy of recorded birth data.

As of March 2015, the Ohio birth registry showed that 83% of infants born from 24 to 34 weeks gestation in the 19 participating hospitals received antenatal corticosteroids, approaching OPQC’s goal of 90% of eligible births. As a result of the project, antenatal corticosteroid administration rates are more accurately reflected in Ohio’s birth registry.

OPQC developed a toolkit for hospitals, *Optimizing Antenatal Use of Steroids to Improve Outcomes for Preterm Infants*. This toolkit shares lessons learned as well as strategies to maintain or improve administration rates and documentation of antenatal corticosteroids in the medical record and in the birth registry.

Lessons Learned

- **Raising awareness about the importance and value of birth registry data is an essential first step.** In the beginning, clinical and clerical staff did not appreciate the importance of birth registry data for public health surveillance and perinatal health decisions. OPQC increased buy-in for improving data accuracy by raising awareness about the importance of the registry.
- **Define key variables to improve accuracy of the birth registry.** While completing birth registry data is mandatory, accuracy is not. OPQC developed and disseminated tools to define and record important registry variables to improve data quality about the health of women and newborns.
- **Collaboration across disciplines is key.** The quality and accuracy of birth registry data depends on clinical and data abstractor teams working together.
- **Use partnerships to support learning.** State Office of Vital Statistics staff are willing partners in training and supporting birth registry staff.

Resources

- [OPQC website](#)
- [CDC Perinatal Quality Collaboratives website](#)
- [OPQC Birth Registry Accuracy Resources](#)
- [OPQC Quality Improvement Toolkit: Optimizing Antenatal Use of Steroids to Improve Outcomes for Preterm Infants](#)

Note: This success story, including background data and outcomes, reflects information as reported by OPQC.