

Ohio Department of Health Convenes Perinatal Quality Collaborative

The Ohio Department of Health recognized the need to improve birth outcomes in the state and convened partners to create the Ohio Perinatal Quality Collaborative. Since forming the collaborative in 2009, the state has reduced rates of unnecessary scheduled births prior to 39 weeks gestation.

Babies born in Ohio suffer from poor birth outcomes including low birth weight and infant mortality at a rate that is higher than the national average. With approximately 140,000 births per year in the state, a focus on advancing birth outcomes has the potential for large scale population health improvements.

The Ohio Department of Health's (ODH) Title V Maternal and Child Health Block Grant Program has been supporting regional perinatal centers across the state since the mid 1970s. Throughout the years, ODH has convened experts to build capacity within the state to address quality improvement and has held regular trainings with regional perinatal center teams. Despite these efforts, it was difficult for ODH to maintain clinician involvement in this work. However, this shifted when a regional meeting participant neonatologist Edward Donovan suggested that ODH connect with the Vermont Oxford Network (VON) to Ohio-specific hospital outcomes data. Clinicians supported ODH's purchase of the requested VON report and began to take a greater interest in ODH's statewide birth outcome improvement efforts. This endorsement also set the stage for the statewide quality improvement collaborative work.

Steps Taken:

- In 2007, two doctors from Cincinnati Children's Hospital, neonatologist Edward Donovan and Carole Lannon, a pediatrician known for her extensive knowledge of quality improvement methods, convened a meeting with ODH, the Ohio Department of Medicaid, and other clinicians to assess interest and willingness to work on improving statewide birth outcomes. Representatives from these organizations later became the core group of the Ohio Perinatal Quality Collaborative (OPQC).
- ODH invited a leader from the California Perinatal Collaborative to share California's experience in starting and implementing a perinatal quality collaborative.
- The core group committed to working together to improve birth outcomes just as the Centers for Medicare & Medicaid Services (CMS) released a request for proposals for grants related to neonatal care transformation.
- The core group members wrote a funding proposal to officially initiate OPQC.
- The group had pre-existing relationships with the Ohio Department of Medicaid, Office of Vital Statistics, and obstetricians working closely with neonatologists. The group believes that this existing framework was one of the reasons CMS decided to fund the official start of OPQC with

- OPQC's initiative to reduce unnecessary scheduled births at 36 0/7 to 38 6/7 weeks gestational age led to early elective deliveries decreasing from 13 percent to 7.5 percent, and 180 NICU admissions have been avoided annually.
- OPQC's initial neonatal project produced a 20 percent sustained decrease in bloodstream infections in premature infants among 24 NICUs.

over \$1 million for a 2 year period. The funding prescribed a strong focus on quality improvement resources, training, and data infrastructure to facilitate regular data feedback from VON and vital statistics to participating partners.

- Once funded, members set out across the state to garner support from other clinicians, hospitals, and provider groups. Forty-four separate teams (20 obstetrician teams and 24 neonatal intensive care unit teams) pledged to participate in the newly formed collaborative group.
- OPQC's structure supported quick data turnaround. OPQC held monthly action calls for teams to share information on current projects and results from recent initiatives.
- The March of Dimes and CDC also supported OPQC financially throughout its early years. OPQC is currently funded by three separate contracts through the state, as well as CDC.
- OPQC established two inaugural projects to [reduce early elective deliveries](#) and to [reduce late onset infections in premature infants](#) born at 22 to 29 weeks. Both projects utilized quality improvement techniques such as providing support to participating hospitals through training, the creation of tools and materials, and on going coaching and support. One tool used to reduce early elective deliveries was a key driver diagram comprised of actions that typically lead to planned early deliveries. These actions were listed along with interventions that hospitals can choose to take to avoid early planned deliveries. Reducing late onset infections required bundling of catheter insertion and maintenance.
- The collaborative involved partners from Agency for Healthcare Research and Quality, Best Evidence for Advancing Childhealth in Ohio Now, Centers for Education & Research on Therapeutics, March of Dimes, Medicaid Technical Assistance and Policy Program, Ohio Colleges of Medicine Government Resource Center, ODH, Ohio Department of Medicaid, Ohio Hospital Association, CDC, Ohio Collaborative to Prevent Infant Mortality, Ohio Children's Hospital Association, and Ohio Better Birth Outcomes.

Results:

- OPQC achieved excellent results with its inaugural early elective delivery project. An estimated 6,000 births have been delayed to occur after 39 weeks gestation each year, avoiding 180 neonatal intensive care unit admissions annually. This was achieved without implementing a statewide "hard-stop" policy. The early elective delivery project is taking place in all but two maternity hospitals in the state.
- Similarly, OPQC's inaugural neonatal project, aimed at reducing late onset infections in premature infants born at 22 to 29 weeks, resulted in a 20 percent sustained decrease in bloodstream infections in premature infants among 24 NICUs.
- OPQC has cited improvement in birth certificate accuracy as another important achievement. Birth certificates in Ohio have been updated to collect information to drive continued improvement; they now include a question on use of progesterone, a drug that has been proven to improve birth outcomes for pregnant women at risk of delivering a preterm baby.
- OPQC changed the way the state health department uses vital records data. The state's maternal and child health program established connections with the vital records office to shift the way data was used and understood. Previously, vital statistics were protected and their use was limited. ODH continually reassured outside partners that the data would not be used in a regulatory fashion. Instead, ODH reiterated that this data, along with data from VON, was used

in order to encourage collaboration between OPQC and hospitals, and so that hospitals can see where they stand related to others in Ohio.

- Because OPQC achieved such positive results from its initial projects, the group has evolved to now focus on optimizing antenatal corticosteroid usage to improve outcomes for preterm infants, increasing identification of and compassionate withdrawal for full-term infants with neonatal abstinence syndrome, and increasing breastfeeding rates among preterm babies in Ohio.

Lessons Learned:

- Clinical leadership and support is essential. While ODH had been trying to coalesce regional teams to generate interest among provider groups, it wasn't until core members from the newly formed OPQC invited clinicians that more provider groups committed to being a part of OPQC.
- It is vital to involve people with varying backgrounds and expertise, such as computer programmers. A computer programmer with OPQC wrote a code that allows for monthly downloads of preliminary statewide birth certificate data. Real-time birth certificate data has been remarkably helpful to the collaborative learning process.
- It is important to recognize, and make clear, the role of the state health department during the formation of a perinatal quality collaborative. ODH allowed clinicians to take the lead in the efforts to improve birth outcomes in the state. ODH and OPQC leadership repeatedly stated that the role of OPQC was not to regulate hospitals, but rather to bring attention to issues and allow hospitals to make the decisions about the best way to move forward.
- Peer-to-peer learning among participating regional perinatal centers is proving to be one of the most valuable aspects of OPQC.
- Diversifying funding is of high importance. Despite the generosity of the funders during the early years, OPQC received critically important in-kind support from all of the organizations involved during periods of time when it was between funding streams.

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