

The Impact of the Tennessee Initiative for Perinatal Quality Care

"Reduction in Severe Intraventricular Hemorrhage" Project



TIPQC
Tennessee Initiative for
Perinatal Quality Care

www.tipqc.org

PROBLEM

Intraventricular hemorrhage (IVH) is bleeding inside or around the ventricles of the brain. Severe IVH is defined as a Grade III or IV hemorrhage and is considered one of the most concerning complications of preterm birth and can lead to death.

ACTION

Twelve Level III and IV NICUs from across Tennessee worked to achieve a 25% relative reduction (facility's previous 3-year baseline) in sIVH in this population by June 2024, while also focusing on decreasing mortality rates. The target population for this project are infants less than or equal to 29.6 weeks gestational age. A total of 1305 infant records were collected, with 98% (1283 records) completed and analyzed for improvement.

The project was launched by six (6) pilot teams in December 2022. Detailed educational instruction occurred at TIPQC's Annual Conference, and the project was made available in May 2023, with the additional six (6) Level III and IV NICUs joining. Participating hospitals were provided a toolkit, QI education, data collection tools, content education from nationally recognized experts, and a road map for implementation. Teams participated in monthly huddles, quarterly learning sessions, coaching calls, and annual state-wide meetings. Based on their current practice, these teams implemented evidence-based procedures, protocols, and potentially best practices.

Monthly outcome measures included percent of severe intraventricular hemorrhage (sIVH) among targeted population & percent mortality by hospital discharge or 40 weeks corrected gestational age among the targeted population. These outcome measures were stratified by race/ethnicity and payor status. Balancing measures and structure measures were also collected. Monthly data capture began in December 2022 for the pilot teams and in April 2023 for the non-pilot teams. Data was shared in aggregate and by facility to evaluate current practices and opportunities for improvement.

EXPLANATION OF IMPACT

The initial collaborative baseline of sIVH rates for the three years prior to the start of the project was 9.0%. Over 19 months, the mean sIVH increased to 10.7%. Collaborative wide we did not see a decrease in sIVH during the course of this project. This may be due to the improvement in mortality which occurred with this project as more infants survived their sIVH as an impact of our efforts. See Figure 1. Longer tracking of sIVH rates may still show a difference and will be trended.

Decrease in mortality rates in the targeted population, shows improvement. Initial baseline mortality rate for the three years prior to the start of the project was 14.2%. The mean mortality rate decreased to 10.7%. See Figure 2.

Rates of sIVH & mortality will continue to be tracked in future Tennessee Tiniest Babies projects.

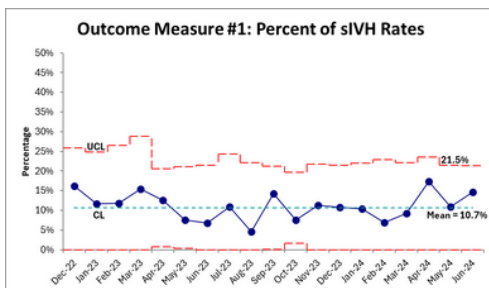


Figure 1: Percent of sIVH.

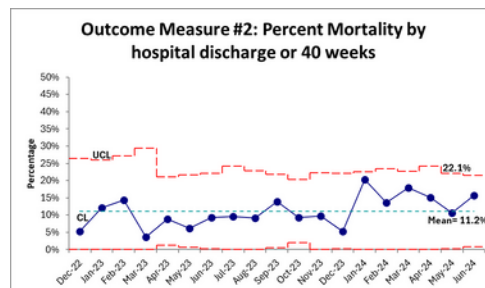


Figure 2: Percent Mortality by Hospital Discharge or 40 weeks

WHO WAS RESPONSIBLE

The collaborative and statewide efforts of TIPQC and the participating hospitals have all contributed to this improvement.

CONTACT

For more information, please contact Brenda Barker, TIPQC Executive Director, at brenda.barker@TIPQC.org, or visit our website at www.tipqc.org or <https://tipqc.org/ivh/>

Project Statistics

1305

Infants in this project

12

All of the Level 3 & Level 4 NICUS
in the state are participating

14.2%

Baseline Mortality Mean



10.7%

Project Mortality Mean

91%

of Providers and Nursing Staff
completed recommended education
& training

Data captured across all Level 3 & 4 NICUS.