Neonatal Hypothermia Prevention Initiative

Frequently Asked Questions

What is the ALPQC?

The Alabama Perinatal Quality Collaborative (ALPQC) exists to promote optimal health for Alabama mothers and babies by connecting clinical and community stakeholders, sharing opportunities for education and training, and advancing the quality and safety of care through collaborative cooperation, evidence-based practices, and equitable approaches to care.

The ALPQC is based out of the University of Alabama at Birmingham School of Public Health and has a presence in over 75% of hospital labor and delivery, and neonatal units in the state.

For more information on the ALPQC, please visit www.alpqc.org

What is the Neonatal Hypothermia Prevention Initiative?

The Neonatal Hypothermia Prevention (NHP) Initiative was created to equip neonatal/pediatric providers, clinical staff, and hospitals, with evidence-based strategies to prevent neonatal hypothermia and its associated complications, including increased infant morbidity and mortality. Throughout the NHP initiative, the ALPQC will work in collaboration with hospitals and providers throughout Alabama to reduce by 20% the proportion of infants that are hypothermic on admission to the NICU or well-baby nurseries by July 1, 2025.

Implementation of the NHP initiative in delivery hospitals includes establishing standardized, facility-wide protocols and checklists, improving speed and accessibility to equipment (radiant warmer) and supplies (thermometers, pre-warmed blankets, head caps, polyethylene bags/occlusive plastic wrap, etc.), timely staff debriefs, and education regarding best care practices for hypothermia prevention disseminated to staff, patients, and families.

Why Hypothermia?

One in 8 babies in Alabama are born pre-term. Regardless of gestational age, neonatal hypothermia occurs in about 21.7% of infants, with 4.6% experiencing moderate/severe hypothermia.[1] Hypothermia is a contributing factor to neonatal mortality and morbidity. It is associated with a higher risk of infants developing hypoglycemia, jaundice, respiratory distress syndrome, sepsis, and suffering from intraventricular hemorrhage.[1]

Newborns are at the highest risk of experiencing hypothermia immediately after birth. Newborns are more prone to rapid heat loss due to many factors including having less subcutaneous fat, a higher body water content, and their metabolic mechanisms not yet being fully developed.[2] With each degree decrease in body temperature, there is an 80% increase in the risk of infant mortality.[1] Preterm infants

are at a much higher risk of neonatal hypothermia due to these and other factors. Standardized and early interventions are vital in the prevention, care, and management of neonatal hypothermia.[2]

What are the benefits to hospitals participating in the Neonatal Hypothermia Prevention Initiative?

There are many benefits to participating in ALPQC initiatives. Monthly Action Period calls provide the opportunity for hospitals to engage with their peers across the state, share best practices and lessons learned, and interact directly with ALPQC clinical leads. Hospital teams will also benefit from monthly brief 1:1 Quality Improvement RN calls. Monthly 1:1 calls will include review different components of the initiative, review progress toward goals, and learn from hospitals directly about their challenges, and opportunities for change.

The ALPQC hosts regular webinars that qualify for continuing education credits for those in attendance. The ALPQC looks to hospitals for areas they are most interested in learning more about through webinars and other training opportunities.

Who is participating in the Neonatal Hypothermia Prevention Initiative?

All levels of newborn care are encouraged to participate in the NHP Initiative, from level 1 nurseries to level IV NICUs.

What is the scope of the Neonatal Hypothermia Prevention Initiative?

The NHP Initiative has the potential to positively impact all of the approximately 58,000 live births per year across the state of Alabama.

Is there any cost associated with participation?

There is no cost associated for hospitals to participate in the initiative. Hospitals will engage in cycles of performance improvement testing and implementation of changes that lead to improvements.

What are the expectations of the participating partners in this initiative?

Each participating hospital is expected to meet the following to be considered an active ALPQC hospital site:

- Form a hospital team consisting of at least one physician champion, one nurse champion, and a data champion (someone with access to medical charts).

- Complete pre-work activities as applicable to prepare for the learning sessions and action periods, including reviewing the Getting Started Kit and completing activities inside the kit (found on our website www.alpqc.org/initiatives/nhp under “Key Documents”).

- Fill out a Team Roster (below). We understand you may not yet have your team members identified; if that is the case, we ask that once you establish your team, please fill out a Team Roster on our Neonatal Hypothermia Prevention webpage (www.alpqc.org/initiatives/nhp).
    - Please also keep the ALPQC team updated of changes to your team membership by filling out a new Team Roster as applicable.

- Set an aim and a 30-60-90-Day Plan for your team related to the initiative's Driver Diagram (see template on our initiative webpage).

- Actively participate in monthly action period calls and coaching calls to share learning and results with your peers and the ALPQC team. Teams are also expected to participate in any learning sessions and webinars as they arise.

- Conduct tests of change using the "Plan, Do, Study, Act" (PDSA) cycle to identify opportunities for change that align with your aim and your 30-60-90 Day Plan (see template on our NHP webpage). Teams are expected to report PDSAs to the ALPQC when reporting other data.

- Report data measures and narratives, including baseline data on monthly and quarterly cycles for the duration of the project.

- Report any challenges, or technical assistance needs to ALPQC staff.

How will the data be collected?

Hospitals will submit data to ALPQC via a REDCap survey on a monthly, and quarterly basis for the duration of the initiative. Each hospital will receive an individual login to access REDCap and submit their data, including documentation of any PDSA cycles. Data Use Agreements have been sent to participating facilities for signature.

What are the data metrics being collected?

- Patient Race/Ethnicity
- Gestational age of infant
- Birth weight of infant
- Mode of Delivery
- Temperature of infant on Admission
- Total number of patients during data monitoring period

How will ALPQC report data back to the participating hospitals?

ALPQC will generate individual hospital reports that will be shared with the respective hospitals. These reports will compare individual hospital data with statewide data, regional data, and data from similar hospitals in aggregate form. The ALPQC will also provide access to a Tableau data visualization dashboard.

By participating, hospitals agree de-identified versions of their data may be used to provide national benchmarking of de-identified measures and evaluate the ALPQC's initiative.

What is the timeline for the initiative?

- Baseline Data will be collected between December 2023 and February 2024
  - To be reported by March 31, 2024
- Prospective Initiative Data will be collected monthly, starting in March of 2024
  - Due 30 days after the end of the reporting period
  - The first month being due April 30, 2024 (for March 1-31, 2024)
- Data will then be reported quarterly starting in April-June of 2024
  - First quarter due July 31, 2024

Who are the primary contacts with the ALPQC for this initiative?

- Caitlin Ballard, MSN, RN, ALPQC QI-Nurse, Neonatal and Pediatric Initiatives
- Dr. Sam Gentle, Neonatologist and Clinical Lead
- Destiny Bibbs, Program Coordinator
- Emails should be directed to info@alpqc.org

FAQ for Participating Hospitals:

What if we do not have the number of infants requested to report on each month? (20 for Level I and II, 15 for Level III+)

You will only report on the number of patients you have that meet the reporting measures. For example, if you are a Level III and only have 8 patients who are less than 32 weeks, you will only report those 8 patients.

Where can I find the Key Driver Diagrams (KDD) for the initiative?

The KDDs for both the Neonatal Hypothermia Prevention Initiative and the Expanded Delivery Room Package (Golden Hour) can be found on the ALPQC website at:

Neonatal Hypothermia Prevention | Alabama Perinatal Quality Collaborative (alpqc.org)

(Under Key Documents)

Where can I locate the Data Tracking worksheet to track my patients?

The Data tracking worksheets for both the Neonatal Hypothermia Prevention Initiative and the Expanded Delivery Room Package (Golden Hour) can be found on the ALPQC website at:

Neonatal Hypothermia Prevention | Alabama Perinatal Quality Collaborative (alpqc.org)

(Under Data Resources)

What population should I report on?

Level I and II NICUs will report on 10 infants delivered vaginally and 10 infants delivered via cesarean section each month, all of whom are **32 weeks or greater** gestation.

Level III+ hospitals will report on 15 infants, regardless of delivery method, who are **less than 32 weeks** gestation.

What is considered "Admission" temperature?

The admission temperature is dependent on hospital practice/policy. This should not necessarily be the delivery room temperature, but the temperature at which the infant was admitted to the hospital. We realize that this could be varied and might be well after the infant is delivered, but we feel as though this gives teams time to implement steps to correct temperatures between the initial delivery temperature and the admission temperature.

Due to the varied ways in which hospital's collect "admission" temperatures, we are currently examining additional parameters for this measure and will keep teams updated if there are changes to data collection.

What about infants that are transferred to the NICU from Well Baby Nursery due to Hypothermia?

These infants will not be counted in this initiative at this time. We are mainly focused hypothermia as it directly relates to delivery.

What about infants that are transported to our facility from outside facilities?

These infants will not be counted in this initiative at this time. We are mainly focused on hypothermia as it relates to delivery and collecting data on patients born at your facility.

Can I enter my data into REDCap and save it as I go?

Yes, you may enter data and save as you go by hitting the "Save and Return Later" button at the bottom of the REDCap survey. Alternatively, if you would like to track patients as the data collection period progresses and then enter the data all at once, please visit our website for a Data Tracking Worksheet that can assist with this collection. The Data tracking worksheet (both excel and word versions) for both the Neonatal Hypothermia Prevention Initiative and the Expanded Delivery Room Package (Golden Hour) can be found on the ALPQC website at:

Neonatal Hypothermia Prevention | Alabama Perinatal Quality Collaborative (alpqc.org)

Why take a temperature at 10 minutes if this is not considered the "admission" temperature?

Collecting a temperature at 10 minutes of life allows the team to identify hypothermia early and implement interventions before the admission temperature. Having this 10 mol temperature and being able to compare that to the infant's admission temperature may also lead teams to explore methods for improvement along the path between birth and admission.

For example, if an infant is normothermic at 10 mol and then hypothermic on admission, teams can look at ways to improve the process by which an infant is cared for between birth and admission.

If we are a Level I or II facility that does occasionally see infants less than 32 weeks delivered and refers them to other facilities, do we collect data on those infants?

No, at this time Level I and II facilities will only collect data on infants born in their facility that are 32 weeks or greater.

References

[1]Yitayew, Y. A., Aitaye, E.B., Lechissa, H.W., & Gebeyehu, L.O. (2020). Neonatal hypothermia and associated factors among newborns admitted in the Neonatal Intensive Care Unit of Dessie Referral Hospital, Amhara Region, Northeast Ethiopia. International Journal of Pediatrics, 14:3013427. doi: 10.1155/2020/3013427

[2]Donnellan, D., Moore, Z., Patton, D., O'Connor, T., Nugent, L. (2020). The effect of thermoregulation quality improvement initiatives on the admission temperature of premature/very low birth-weight infants in neonatal intensive care units: A systematic review. Journal for Specialist in Pediatric Nursing, 25(e12286). https://doi.org/10.1111/jspn.12286