



Neonatal Opioid Withdrawal Syndrome NOWS Initiative Charter

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Problem Statement

There has been a continued increase in the incidence of neonatal opioid withdrawal syndrome (NOWS) from 1.5 cases per 1,000 hospital births in 2004 to 8.0 cases per 1,000 hospital births in 2014, causing costs of care for these infants to sextuple in the same time period from \$91 million to \$563 million (National Institute on Drug Abuse, 2019). Current practices of screening and treatment (pharmacological and nonpharmacological) are inconsistent across the state, and infants are being transported to higher level care when medically unnecessary. Data tracking is limited to determine how well identification and treatment are working due to lack of provider knowledge, lack of standardized protocols and complications with existing chemical endangerment laws.

Expected Outcomes and Benefits

This initiative is being implemented to help hospitals improve care of infants identified with NOWS, formerly known as Neonatal Abstinence Syndrome (NAS). The initiative will help hospitals implement best practices and develop protocols best suited to their hospital and patients. Expected outcomes of this project include reducing length of stay, reducing exposure to pharmacologic care, and increasing the percentage of infants discharged with a coordinated safe plan of care.

Project Description

The project will involve implementing a toolkit for standardizing best practices at Alabama delivery hospitals using quality improvement science. This includes developing and implementing guidelines, protocols and practices related to scoring, pharmacologic treatment, nonpharmacologic treatment, safe discharge and data collection. Monthly webinars will be conducted to review performance data, for hospitals to share successes and challenges in implementation, and to identify areas in need of improvement. Our long-term vision includes standardized hospital processes as a means of improved identification, management, and stigma reduction.



Project Aim

Our global aim is to optimize inpatient care strategies for infants born with neonatal opioid withdrawal syndrome. Specifically, among infants born with NOWS at ≥ 35 weeks GA in participating hospitals, by April 2022 we aim to:

- Reduce length of stay by 20%
- Reduce exposure to pharm care by 20%, and
- Increase the percentage of infants discharged with a coordinated care plan to 95%.

Following are the measures we will use to monitor progress toward our aim:

Structure Measures	The measures we want to use to track clinical protocols and organization.
	<ol style="list-style-type: none"> 1. Implemented education practices for staff for reducing stigma in opioid-exposed newborns (OENs). 2. Implemented education practices for hospital staff for scoring OENs. 3. Implemented standardized non-pharmacologic guidelines for OENs. 4. Implemented standardized practices for transferring infants with NOWS to higher level of care. 5. Implemented standardized pharmacologic guidelines for infants with NOWS. 6. Implemented standardized protocols/guidelines for Safe Discharge Planning of infant. 7. Implemented standardized protocols/guidelines for Safe Discharge Planning of mother.
Process Measures	The measures that will tell us if the system is performing as planned to affect the outcome measure.
	<p>Neonatal-A: Did the infant have evidence of opioid withdrawal? Neonatal-B: Was the non-pharmacologic bundle bedside checklist used consistently? Neonatal-F: Was a safe discharge plan created prior to discharge of baby? Neonatal-G: If not born at your facility, how many days old was infant when transfer was received? Obstetrical-B: Was a referral made for addiction services prior to maternal discharge? Obstetrical-C: Was Narcan counseling documented in medical record prior to maternal discharge?</p>
Outcome Measures	The measures we ultimately want to affect as a result of this project.
	<p>Obstetrical-A: Was the mother on Medically Assisted Therapy? Neonatal-C: Did infant receive pharmacologic treatment? Neonatal-D: If infant received pharmacologic treatment, for how many days? Neonatal-E: How many days old was the infant at discharge?</p>

Data Reporting	
Monthly:* <ul style="list-style-type: none"> • Baseline Data: Due March 2021** • Initiative data: Due April 2021 (For March 2021) 	*Aim to report by end of the month **Baseline data from: a) Dec2020-Feb2021 if this captures 10 neonates b) Sept2020-Feb2021 otherwise



Framework

This initiative takes the structure of the Institute for Healthcare Improvement's (IHI) Breakthrough Series Collaborative. A Breakthrough Series (BTS) Collaborative is a systematic approach to health care quality improvement in which organizations and staff test and measure practice innovations and share their experiences in an effort to accelerate learning and widespread implementation of best practices. Your experience will involve working together with hospital teams from across Alabama who share the same goals.

Participating in a Collaborative is an excellent foundational tool to creating long-term success, helping hospitals accelerate work that is underway and plan for meaningful progress over time.

Teams will embark on this project with other Alabama birthing hospitals focused on the same aim and objectives. We will achieve our aim via engaging in iterative cycles of testing and implementation of changes in the [NOWS Toolkit](#), measuring progress toward meeting our goals, and sharing lessons learned, with various forms of support along the way. The overall framework of the collaborative is as follows:

Learning Sessions

Learning Sessions are in-person or virtual meetings bringing together participating hospital teams and expert faculty to exchange ideas in real time. Faculty experts present a vision for ideal care and specific changes, based on the Change Package (Toolkit), that when applied locally will significantly improve the hospital's performance. The teams also learn the [Model for Improvement](#), which enables them to test these powerful change ideas locally by conducting [Plan-Do-Study-Act cycles](#)—this way teams reflect on, learn from, and refine tests before successfully implementing changes in their unit. During learning sessions, team members also learn from one another as they share successes, barriers, and lessons learned during the learning sessions.

Action Periods

Between Learning Sessions, participating hospitals will engage in Action Periods that provide the time for maximal learning—this is when teams implement changes and receive support from ALPQC and peers. The goals of the Action Periods are to support teams in their improvement work, build collaboration and shared learning, and assess collaboration and progress.

Actions Periods will include the following:

- *PDSA Cycles*: Teams implement site-specific tests of change in alignment with the collaborative's and their team's aim
- *Monthly Reporting*: ALPQC developed a monthly reporting system, including assessment using a 0-5 scale, to collect and review progress on implementation tasks from each hospital, reflect on lessons learned during that month, and plan for the next month. The ALPQC team will review each report submitted by teams monthly to provide feedback.



- *All-Teams Conference Calls:* Hospital teams are to participate in monthly, one-hour calls on different change topics related to the work. These calls are led by ALPQC project faculty and feature opportunities for team learning and highlighting successes in the collaborative.
- *Shared Learning and Communication:* Between meetings and conference calls, teams can communicate with each other on a shared electronic workspace. This will be a place where teams can also access project resources, report measures, and share their work.

Expectations for participation in the NOWS Collaborative:

The ALPQC Team will:

- Include a project lead, improvement advisor and coordinator, data portal resources, and faculty who have expertise in the subject matter and improvement methods.
- Provide information on NOWS, application of evidence-based practices to improve care, and quality improvement methods for structure, process and outcome improvement.
- Provide guidance, feedback and resources to teams throughout the course of the project.
- Facilitate communication to keep teams connected to the faculty and each other.

Participating Hospitals Expectations:

- Form your hospital team consisting of at least one physician champion, one nurse champion, one pharmacy champion, and a data champion (someone with access to medical charts).
- Set a team aim related to the Collaborative's aim stated above. Note that the aim can change/broaden throughout the course of the project.
- Complete pre-work activities to prepare for the learning sessions and action periods, including reviewing the [NOWS Toolkit](#) and filling out the checklist inside the toolkit.
- Actively participate in learning sessions and monthly action period calls to share learning and results.
- Conduct tests of change in alignment with the aim and, after successful testing and adaptation, implement changes in your unit. Report Plan-Do-Study-Act (PDSA) cycles monthly to ALPQC.
- Report data measures and narratives by the end of each month for the duration of the project.



Opportunities for Spread

In the work of IHI and other states over many years, some important lessons have emerged about promoting and sustaining the spread of improvement over time, including:

- The development of an explicit tracking plan so senior leaders can quickly assess the progress made during spread of the changes, and readily intervene to help when the spread plan is not performing as planned
- The development of a spread infrastructure (training, communication methods, reviews of progress)
- The assessment of groups and individuals for readiness to adapt and adopt the changes before deployment
- The expectation that other sites will want to customize the changes
- Senior leaders decide on the level of desired spread (the number of areas to which applicable changes are spread) and establish a schedule for spread (the tempo and order of spread)
- Senior leaders make the work visible and give it high priority

The strategy for rapid spread within participating hospitals is an integral part of the collaborative that is fueled by participating hospitals documented successes, engages senior leaders, and allows for local adaptation and customization.