



Project Charter

Updated (04/15/2011)

Project Name	Reducing NEC in Infants < 1500 grams Across 3 Cincinnati NICU's		
Project Dates:	03/01/2011 to 06/30/2013		
Team Leader	Amy Nathan, MD		
Physician Leader	Laurel Moyer/Heather Kaplan (GSH), Andy South (CCHMC), Laura Ward (UH)		
Project Description / Statement of Work			
<ul style="list-style-type: none"> • Necrotizing Enterocolitis (NEC) is a complication of prematurity where portions of the intestines undergo necrosis. NEC reduction was identified as one of the Perinatal Institute's institutional strategic improvement priorities. • We will implement a series of quality improvement interventions in which multidisciplinary teams will test, adopt, and spread evidence-based approaches to reducing the incidence of NEC over a 15- month period. We will focus on preventive measures, seeking opportunities to deliver the right care to the right patients at the right time. • A focused improvement effort targeting NEC can align and take advantage of the Perinatal Institute's: (1) strong clinical program including expertise in intestinal rehabilitation, neonatal care, and nutrition, (2) well-established QI processes, and (3) robust research efforts in intestinal biology and human milk to achieve improvements in outcomes for our patients 			
Statement of Need			
<ul style="list-style-type: none"> • NEC affects 5- 10% of infants <1500 grams, with mortality rates of 50% or more depending on severity • Of those patients who survive, half may develop a long-term complications such as intestinal stricture or short-gut syndrome (which can lead to long term dependence on IV nutrition and possibly small bowel and liver transplant) and they are at increased risk of poor neurodevelopmental outcome • Current treatment is limited, so focus must be on <i>prevention</i> • NEC is associated with increased costs: ~\$75,000 for cases of NEC treated medically to ~\$200,000 for cases requiring surgery • Rates of NEC in the Cincinnati NICU's are significantly higher than comparable NICU's in the NICHD Neonatal Research Network and Vermont Oxford Network. Based on current rates, cases of NEC contributed to at least \$ 2 million dollars of additional cost in 2011. 			
Project Definition			
Project Aims	To decrease the rate of NEC in all infants <1500 grams to 0.18/100 VLBW days by June 30, 2013		
Project Scope	NICU's and feeding preparation sites at CCHMC, GSH, and UH. The patient population includes infants ≤ 1500 grams at birth and <34 weeks gestation and excludes infants who developed NEC or died within the first 14 days of life and those with congenital anomalies.		
Initial Change Ideas	<ul style="list-style-type: none"> • Standardizing the approach to feeding infants <1500 grams with early initiation of small volume feeds • Increasing human milk—prioritizing mothers own milk, with donor milk as back up • Standardization of the preparation (and fortification) of human milk and formula • Decreasing potential for nasogastric tube colonization and feeding disruption by stopping aspirate checks 		
Performance Measures		Baseline	Goal or Target
NEC Rate per 100 VLBW Patient Days (Outcome—Hand Collected)		NA	0.18
% of Infants Discharged with NEC (Outcome--VON)		9%	5%
% of VLBW Infants following the feeding protocol in first 14 days (Process)		0%	75%
% of Feeding Events with Aspirate Check (Process)		100%	10%
Percent of VLBW Infants with Weight <3% at Discharge (Balancing)		19%	19%
Plan for Major Milestones		Due Date	
Establish System to Collect Feeding Protocol Adherence Data and NEC Rates across All 3 NICU's		May 2011	
Test Feeding Protocol with a small group of physicians		March 2011	
Eliminate staff failures for feeding protocol		August 2012	
Achieve 75% compliance on Feeding Protocol		October 2012	
Reduce Aspirate Checks to <10% of feeding events		February 2013	
Potential Barriers to Success			
<ul style="list-style-type: none"> • Mother's willingness to provide own milk and lack of support to facilitate pumping • Cost of extending donor milk program to 30 days to cover time frame of maximal NEC incidence • Setting up a data system to track feeding protocol compliance and NEC rates across three independently operated NICU's 			



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- Building tests of change into the current clinical flow
- Holding monthly multi-disciplinary meetings including team members from three geographically disparate NICU's

Resources Needed

- QI Consultant at 10% FTE to assist local teams in learning and applying QI methods for 2 year project span
- Data System to enable local data collection at three sites and exporting data to create combined measures across sites—Anderson Center data analyst can set up Access Database and regular exports of data with 60 hours of support time
- Leadership agreement at all three hospitals to share outcomes data transparently across sites

Communication Plan

- NEC QI team will present at Perinatal Institute QI Steering Committee every other month
- NEC QI team will meet with Senior VP of Quality every 6 months

Stakeholders

Neonatologists, Nurses, Nurse Practitioners, Surgeons, Dietitians, Families

Project Team Roles and Responsibilities

GSH Team

Team members	Roles	Responsibilities	% Time
Amy Nathan, MD	Team Leader	Lead local team	5%
Heather Kaplan	Physician Lead	Lead local team	5%
Laurel Moyer	Physician Lead	Lead local team	5%
Trayce Gardner	Dietitian	Feeding Standardization, formula prep; Data entry	10%
Heather Williams	NNP	Case Review, PDSA testing-Aspirates	10%
Nancy Howard	NNP	Case Review, PDSA testing-Aspirates	10%
Kim Moore	RN	PDSA testing-formula preparation, aspirates	5%

Sign Off

Team Leader: _____	Date: _____
Medical Director: _____	Date: _____
Nursing Director: _____	Date: _____
Division Director: _____	Date: _____
Senior Leader: _____	Date: _____