Centers for Medicare & Medicaid - Neonatal Outcomes Project
Summary of Key Change Concepts

Maternal Risk Reduction

Change Package Content
Intervention #1 –Prevention, identification and treatment of chronic medical conditions (diabetes, hypertension, heart disease, depression, etc.) and high risk behaviors (smoking, substance abuse, domestic violence) System Change • State will encourage prevention and healthy behaviors beyond pregnancy Office Change • Use evidence-based interventions developed to date (i.e. ACOGs 5 A principles) for smoking cessation • Plan follow up after delivery for prevention of subsequent high risk deliveries

Antenatal Practices

Change Package Content
Maternal Transfer Bundle
Intervention #2 - Early identification of mothers at high-risk for prematurity (including those in rural areas) and prenatal transfer of these expectant mothers to facilities with tertiary care NICUs (Neonatal Intensive Care Units) <u>System Changes</u> • States will promote changes at the regional level including the development of a system to identify women at high risk for preterm delivery and establish a maternal transport system which promotes early in utero transfer of women with threatened extremely premature delivery. <u>Office Changes</u>

NICHQ
National Initiative for Children's Healthcare Quality

- Develop an program to educate providers about evidence based management of high risk pregnant women
- Establish triggers to identify women at high-risk for preterm delivery.
- Educate expectant mothers about the signs and symptoms of premature labor and the possible need for intrauterine transfer.
- Targeted ("high risk") case management with reimbursement

Hospital Changes

Community Hospital:

- Optimize Peripartum Management: Achieve consensus with consulting perinatal center about initial management of women with threatened extremely premature delivery.
- Establish a maternal transport protocol which promotes early in utero transfer of women with threatened extremely premature delivery.

Perinatal Center:

- Ensure complete report and hand-off of the transported expectant mother.
- Achieve consensus amongst providers regarding the care and management of women with threatened extremely premature delivery.
- Routinely consult neonatology in developing the plan of care and surveillance of women with threatened extremely premature delivery.

NOTE: Use of 17P to prevent preterm delivery should be added to the recommended changes after FDA approval.

Intervention #3 - Use of antenatal steroids in pregnant women at risk of preterm delivery

- Educate physician and nursing staff about the use and benefits of antenatal steroids.
- Provide information about antenatal steroids to women with threatened extremely premature delivery.
- Administer and document steroid dose and time.
- Establish measurement strategy for antenatal steroid use.

Immediate Postnatal Practices

Change Package Content

Neonatal Transfer Bundle

Intervention #4 - For those premature babies born at facilities without tertiary care neonatal intensive care units, optimal resuscitation and stabilization of the baby before transfer to the appropriate facility

Optimal Resuscitation:

- Review organization policies regarding the availability of key personnel for emergency interventions.
- Ensure at every delivery, there is at least one person whose primary responsibility is the neonate and who is

capable of initiating resuscitation.
- Establish universal participation of hospital staff and maternal child caregivers in the NRP program (special emphasis on Lesson 8, prematurity).
- Conduct scheduled or impromptu simulated resuscitation drills with the multidisciplinary care team.
- Conduct timely reviews of care provided during the infant's resuscitation and stabilization.

Pre-transport Stabilization:
- Recognize that the best care for babies at risk is to have an experienced resuscitation/transport team at the birth. In those situations when a resuscitation team is not available, a transport team should be undertaken.
- Ensure hospital staff and maternal child caregivers complete the S.T.A.B.L.E. program or an equivalent educational offering
- In the absence of advanced practice neonatal personnel to manage and monitor the infant during pre-transport stabilization, have an in-person physician-directed stabilization and on-going care of the premature infant until arrival of the transport team at the birth hospital

Intervention #5 - Prophylactic or early administration of the first dose of surfactant to premature infants at risk for Respiratory Distress Syndrome

For premature infants at risk for Respiratory Distress Syndrome

☐ Administer surfactant to eligible premature infants in an appropriate and timely manner.
- Ensure early mobilization of a transport team to attend/administer to the care of the very premature infant.
- Consider the use of continuous positive airway pressure (CPAP) as part of initial stabilization of the very premature infant with, in the absence of the capability to intubate and administer surfactant.

Neonatal Intensive Care Unit Practices

Change Package Content
Intervention #6 – Nutrition Care Bundle in the NICU for infants at-risk for poor growth and bronchopulmonary dysplasia (BPD) • Use of early amino acids (on day 1) to minimize protein catabolism, and promote positive nitrogen balance • Early trophic feedings to improve gut maturation, feeding tolerance, and time to achieve full enteral feedings • Strategies to improve rates of maternal lactation • Improved use of human milk preferentially, both in the NICU and beyond discharge • Fortification of human milk for VLBW infants

- Increased emphasis on growth as part of daily NICU care
- Appropriate nutritional support during the transition to home phase of care; (i.e. sharing growth charts with local PCP, specific post-discharge nutritional recommendations, access to pediatric dietician, etc.)
- Vitamin A prophylaxis in infants with a birth weight less than 1000 grams to prevent chronic lung disease

Intervention #7 - Proper Infection Control Practices in the NICU and hospital to prevent hospital-acquired infection

- Standardize approach to the evaluation and management of infants of Group B Streptococcus colonized mothers.
- Emphasize proper hand hygiene practices (using CDC recommendations).
- Provide skin care.
- Standardize placement and maintenance of central line.
- Standardize diagnosis and treatment of bacteremia.
- Implement standardized order set for the appropriate antibiotic choices and doses for early-onset versus late-onset infection.
- Develop or adopt a surveillance system to monitor and report the NICU nosocomial infection rate.

Intervention #8 – Coordinating NICU discharge planning

- Involve families in defining planning and coordinating ongoing evaluative and preventive care in the process of establishing a medical home outside of NICU.
- Provide written and oral communication of follow-up care instructions to families at discharge. Assess family understanding: include understanding of the need for continued care.
- Increase communication between discharge team and accepting community organization (e.g., pediatrician in community, level II nursery, MCH Coordinator, licensed social worker, EIP) to ensure optimal follow-up care of infant.
- Identify specific community resources for the family including resources required to resolve outstanding health care issues at the time of discharge.

Intervention #9 – Optimizing follow-up care of high-risk infants

- Increase communication between discharge team and accepting community organization (e.g., pediatrician in community, level II nursery, MCH Coordinator, licensed social worker, EIP) to ensure optimal follow-up care of infant.
- Adopt quality of care indicators for the neurodevelopmental follow-up of VLBW (<1500 g) children.
- Ensure a process for developmental surveillance and screening. Develop or adopt a system within the NICU to monitor and report follow up rate and developmental outcome.

- Align billing/reimbursement to encourage follow-up services.