PERINATAL REGIONALIZATION

National Performance Measure 3: Percent of very low birth weight (VLBW) infants born in the hospital with a Level III+ Neonatal Intensive Care Unit (NICU).

Goal: To ensure that higher risk mothers and newborns deliver at appropriate level hospitals.

Definition: Numerator: VLBW infants born in a hospital with a level III or higher NICU/ Denominator: VLBW infants (‹1500 grams).

Healthy People 2020 Objective:

> Related to Maternal, Infant, and Child Health (MICH) Objective 33: Increase the proportion of VLBW infants born at level III hospitals or subspecialty perinatal centers (Baseline: 75%, Target: 83.7%).

Data Sources: Linked birth certificate and hospital data on NICU levels from American Academy of Pediatrics (AAP).

Policy Context:

Since the 1960s, the evidence has clearly shown that very low birthweight (VLBW) and very preterm infants are significantly more likely to survive and thrive when born in a facility with a level-III Neonatal Intensive Care Unit (NICU), a subspecialty facility equipped to handle high-risk neonates. (Laswell et al. 2010 http://jama.jamanetwork.com/article.aspx?articleid=186516 ; Robert Wood Johnson Foundation http://www.rwjf.org/content/dam/farm/books/books/2001/rwjf37196)

In 1976, the Committee on Perinatal Health and the March of Dimes issued Toward Improving the Outcome of Pregnancy (TIOP), which outlined a model for the regionalization of perinatal services to be implemented throughout the United States. TIOP II reinforced these recommendations in 1991. Guidelines over the past 40 years have repeatedly called for regional perinatal systems to ensure that high-risk women give birth in an appropriate facility.

In 2012, the AAP provided updated guidelines on the definitions of neonatal levels of care to include Level I (basic care), Level II (specialty care), and Levels III and IV (subspecialty intensive care). The AAP recommends that VLBW and/or very preterm infants (‹32 weeks' gestation) be born in only level III or IV facilities. This measure is endorsed by the National Quality Forum (#0477).

Regionalized systems are typically designed, structured, funded, and managed by state health departments in partnership with hospitals and perinatal professionals, but in some states hospital networks or non-profit groups manage the system. (http://www.amchp.org/AboutAMCHP/Newsletters/Pulse/Archive/2010/September2010/Pages/F

eature1.aspx) Regionalized perinatal systems define or designate hospitals at risk levels, typically I-III. For example, Level III hospital NICUs (or III+ or IV as they sometimes are called) provide the most appropriate care for the sickest infants. (http://www.hrsa.gov/advisorycommittees/mchbadvisory/InfantMortality/Meetings/20140709/petrini.pdf).

Since the 1980s, changes in the structure of the health care system (e.g., emergence of health and hospital systems and managed care), competition for patients in a proliferation of NICUs, and reduced health system planning and regulatory power of states have led to modifications and breakdowns in regional perinatal network structures. Even state performance levels for having VLBW infants admitted directly to NICUs vary, ranging from 64% to 94% overall and racial/ethnic disparities are reported. (MMWR. http://www.cdc.gov/mmwr/pdf/wk/mm5944.pdf) Today, states are aiming to create modern, effective, and evidence-based perinatal regional systems.

Action Agenda for State Title V MCH Block Grant Programs:

- Collect and review state and hospital-level perinatal regionalization policies.
- Provide public health support for administrative functions of regional perinatal centers within the overall system (e.g., data collection and reporting, transport, quality improvement projects).
- Use state and hospital data to measure the baseline and recent trends for this measure, giving attention to known measurement issues.
- Convene a multi-stakeholder group (existing or newly formed) to assess the effectiveness of current perinatal regionalization efforts and make recommendations for action, including representatives from: public health, Medicaid, state insurance agency, state hospital regulators, state legislature, hospital associations, health professional organizations, family advocacy groups, managed care organizations, and health plans.
- Engage the Vermont-Oxford Network (VON) in a quality study of performance and outcomes for newborns in your state (e.g., Ohio and Louisiana).
- Define policies, procedures, and payments that offer incentives for women to give birth to high risk newborns in appropriate facilities, not just transport of infants.
- Create or improve a voluntary reporting system for Level II and III newborn facilities.
- Analyze the policies and procedures of Level II related to transport to an appropriate Level III care perinatal program.