

Perinatal Regionalization

Perinatal regionalization (PR) is a strategy to improve maternal and perinatal outcomes—particularly the reduction of infant mortality—by establishing systems designating where infants are born or transferred according to the level of care they need at birth. Regionalized systems assign hospitals risk-appropriate levels and ensure high-risk infants are born in facilities with appropriate technology and specialized health providers. State health agencies often manage regionalized systems, but sometimes a hospital network or non-profit organization oversees the system in its region.¹

IMPACT OF APPROPRIATE LEVEL OF CARE ON MATERNAL/PERINATAL HEALTH OUTCOMES

Low birth weight or premature infants born in risk-appropriate facilities are more likely to survive.² Multiple studies indicate very low birth weight (VLBW) infant mortality is lower for infants born in a Level III center (higher level of care), and higher for infants born in non-Level III centers. Data also indicate VLBW mortality is higher at Level III centers with lower-volume neonatal intensive care units (NICUs). Disparities exist in levels of care available. In New York City, for example, black VLBW infants were more likely than white infants to be born in “high mortality hospitals” (21% versus 11%).³

OPPORTUNITIES TO ADVANCE PERINATAL REGIONALIZATION

Enhancing perinatal regionalization is a priority of the [Collaborative Improvement & Innovation Network \(CoIIN\) to Reduce Infant Mortality](#), a HRSA-led public-private partnership to reduce infant mortality and improve birth outcomes. Following a 2012 Infant Mortality Summit, CoIIN state teams in regions IV and VI selected five priorities to reduce infant mortality and improve birth outcomes, including increasing the percentage of mothers delivering at appropriate facilities (including infants <32 weeks gestation and/or less than 1,500 grams) to 90 percent, or by 20 percent above baseline in Regions IV and VI by December 2013.⁴ State health agencies can play several important roles in supporting this and other efforts to advance perinatal regionalization.

Variability in the application of established criteria makes it a challenge for many states to monitor whether high risk deliveries are occurring at appropriate facilities. CDC, working with CoIIN state teams, is developing an assessment tool to help states monitor neonatal and maternal levels of care based on established criteria from the American Academy of Pediatrics, the American Congress of Obstetricians and Gynecologists, and the Society for Maternal and Fetal Medicine. The CDC Level of Care Assessment Tool (LOCATe) is designed to minimize respondent burden while collecting enough information for monitoring purposes. LOCATe is not intended to replace comprehensive onsite assessments, but is a powerful conversation facilitator between public health agencies and hospitals. The goal is to have the tool’s final testing and validation completed by late summer 2015.

Role of State Health Agencies in Perinatal Regionalization

- Work with state partners on health and community system changes
- Create a unified message and strategy that builds on best practices from around the nation
- Develop clear measurements to evaluate targeted outreach, progress, and return on investment
- Examine hospital licensure regulations to support PR system of care
- Collaborate with partners on mechanisms to support PR coordinators
- Provide epidemiological/data support to establish coordinated data reports

STATE EXAMPLES

- Regional Perinatal Programs of **California** was established in 1979 to promote access to risk-appropriate perinatal care to pregnant women and their infants through regional quality improvement activities. Program activities include: 1) facilitating local perinatal advisory councils to provide regional planning, coordination, and recommendations to ensure appropriate levels of care; 2) performing regional and statewide hospital surveys and perinatal assessments; 3) developing communication networks among agencies, providers, and individuals; 4) disseminating educational materials and producing a statewide newsletter (*Perinatal Care Matters*); 5) providing resource directories, referral services, and hospital linkages to the Northern and Southern [California Perinatal Transport Systems](#); and 6) assisting hospitals with quality improvement activities, data collection protocols, and quality assurance policies and procedures.^{5,6}
- In 2003, **New York** developed a community-based regionalization model to create 11 regional perinatal forums that designate hospitals to provide specialty care to high-risk patients; upgrade all obstetrical hospitals for each designated level of perinatal care in accordance with current ACOG/AAP guidelines for perinatal services; and promote regional perinatal partnerships that encourage healthcare facilities and community services providers to work together to improve birth outcomes. In 2008, New York had the highest percentage (88.6) of VLBW infants delivered at high-risk appropriate facilities among the 10 states with the most African-American births.⁷
- **Ohio** passed new maternity licensure laws in 2012 that require the Ohio Department of Health (ODH) to license maternity units and newborn care nurseries within hospitals. As part of this process, maternity units and NICUs are reviewed and designated as Level I-III based upon the level of care capabilities.⁸ Since the legislation was enacted, an ODH workgroup has been monitoring data on births in the highest-level care hospitals to determine appropriateness of care. Ohio Medicaid is also leveraging a regionalization model to ensure that, through its health plans, very ill or very small babies are born and cared for in hospitals with the most appropriate care.⁹
- In the 1970s, **South Carolina** established a [perinatal regionalized system of care](#) aimed at improving perinatal outcomes and reducing infant mortality across the state. Key partners include the South Carolina Department of Health and Environmental Control, the South Carolina Hospital Association, the South Carolina Department of Health and Human Services, the South Carolina chapter of the March of Dimes, the South Carolina Perinatal Association, and others. Key elements of the system include early risk assessment and referral to appropriate care; coordination and communication between hospitals and community providers; monitoring systems through data; and ensuring access to services from preconception through the first year of life. In 2011, 81.3 percent of all very VLBW infants were born at a Level III hospital, with no differences by maternal race. Preterm births also decreased between 2005 (12.7%) and 2011 (11.5%).¹⁰

¹ Barfield WD, Kroelinger CD, White VA. "Collaborative Efforts to Address the Impact of Perinatal Regionalization on Infant Mortality." *Pulse*. September 2010. Association of Maternal and Child Health Programs. Available at <http://www.amchp.org/AboutAMCHP/Newsletters/Pulse/Archive/2010/September2010/Pages/Feature1.aspx>. Accessed 04-08-2014.

² *Ibid*.

³ Howell EA, Hebert P, Chatterjee S, *et al*. "Black/White Differences in Very Low Birth Weight Neonatal Mortality Rates Among New York City Hospitals." *Pediatrics*. 2008. Available at <http://pediatrics.aappublications.org/content/121/3/e407.full>. Accessed 5-23-2014.

Fact Sheet



⁴ HRSA. "CoINN Strategy Team: Enhance Perinatal Regionalization." Available at <http://mchb.hrsa.gov/pdfs/enhanceperinatalregionalization.pdf>. Accessed 5-23-2014.

⁵ California Department of Health. "Regional Perinatal Programs of California (RPPC)." Available at <http://www.cdph.ca.gov/programs/rppc/Pages/default.aspx>. Accessed 5-23-2014.

⁶ California Department of Public Health. "Regional Perinatal Programs of California Fact Sheet." Available at <http://www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Pages/RPPC.aspx>. Accessed 5-23-2014.

⁷ Koshel J. "Overview of Birth Outcomes in New York State--The Role of Perinatal Regionalization." Available at CITED IN THIS PPT: <http://www.amchp.org/programsandtopics/womens-health/Perinatal-Health/Documents/Koshel%20-%20Overview%20of%20Birth%20Outcomes%20in%20New%20York%20State%20The%20Role%20of%20Perinatal%20Regionalization.pdf>. Accessed 5-23-2014.

⁸ Greater Columbus Infant Mortality Task Force. "Discussion Resource Guide Perinatal Regionalization." Available at http://gcinfantmortality.org/wp-content/uploads/2014/04/regionalization-resource-guide_Final.pdf. Accessed 5-23-2014.

⁹ Ohio Department of Health. "Ohio's Commitment to Prevent Infant Mortality." 2013. Available at <http://www.odh.ohio.gov/~media/ODH/ASSETS/Files/cfhs/Infant%20Mortality/collaborative/OhioCommitment2013-h.ashx>. Accessed 04-08-2014.

¹⁰ South Carolina Department of Health and the Environment. "SCAN Birth Certificate Data." Available at <http://scangis.dhec.sc.gov/scan/bdp/tables/birthtable.aspx>. Accessed 04-30-14.