NIHCM FOUNDATION

Promising Practices

Women, Children & Adolescents

Delivering Improvements in Infant Mortality Rates

October 2012

INTRODUCTION

Tennessee has the sixth highest infant mortality rate in the country.[1] Approximately $610 million is spent annually on costs associated with poor birth outcomes and infant mortality in Tennessee.[2] Since 2003, the BlueCross BlueShield of Tennessee Health Foundation (BCBSTHF) has invested $12.6 million on initiatives to combat infant mortality. BCBSTHF credits programs such as the BLUES Project and STORC (Solutions to Obstetrics in Rural Counties) with reducing Tennessee's infant mortality rate from 9.2 per 1,000 live births[3] in 2003 to 8 in 2009.[4] These programs combine the knowledge of the importance of traditional prenatal care with innovative techniques to incorporate psychosocial support and new technologies.

THE BLUES (BUILDING LASTING UNSHAKABLE EXPECTATIONS INTO SUCCESSES) PROJECT

In 2003 the infant mortality rate in Shelby County, Tennessee was 14.9[5] compared to the U.S. national average of 6.8.[6] In December 2003, in order to address the soaring infant death rate in Shelby County, the University of Tennessee Medical Group, collaborating with University of Tennessee Health Science Center (UTHSC), reached out to BCBSTHF to gauge their interest in partnering on a new pilot program, the BLUES Project. With support from BCBSTHF, the BLUES Project seeks to improve birth outcomes by addressing the social, emotional and health needs of expectant mothers living in counties with high rates of infant mortality. The project later expanded to Chattanooga in Hamilton County, Tennessee, another county with a high infant mortality rate.

The BLUES Project offers high-quality prenatal and postpartum education through site-based groups that provide health education and counseling, social support, and links to community resources. Licensed social workers or health educators deliver culturally competent and intellectually appropriate information to BLUES Project clients. Women with risk factors for an unhealthy pregnancy, such as low socioeconomic status, low levels of education and limited access to health care, are referred to the program through their health care providers, community outreach events or direct contact with a BLUES team member. Each woman is screened for literacy level, mental health issues and level of available social support to ensure that she receives appropriate education and resources through the BLUES Project. BCBSTHF works closely with BLUES Project staff to support the program, and BLUES Project staff has access to a BCBSTHF liaison who helps staff to obtain needed materials, secure speakers for events and link clients to community resources. The BLUES Project also offers information to help new moms and dads continue their educations and secure employment if needed. Participants in the BLUES Project agree to attend at least one site-based group session or individual meeting with a BLUES team member per month.

GROWING HEALTHY BABIES. GROWING BLUES.

The BLUES Project has contributed to a decrease in the infant mortality and the low-birth-weight rate in its client population, leading to lower medical care costs and decreased hospital stays for both mothers and infants. Women participating in the BLUES Project have an infant mortality rate of just 1 per 1,000 births. The program's positive results, coupled with ongoing support from the BCBSTHF, have provided the motive to propel the program into its next phase.

As of September 2012, the BLUES Project began a new chapter that will use a randomized trial to compare the receipt of traditional prenatal care with the added psychosocial support of the BLUES project. Approximately 1,650 participants from Shelby and Hamilton Counties will have the option of being enrolled in the study from the onset of prenatal care to the child's second birthday. BLUES Project staff hope to demonstrate that the psychosocial aspects of the program play a significant role in decreasing infant mortality, and they would like the BLUES Project to become a national model as well as a billable program. BCBSTHF will remain an important partner in the BLUES Project moving forward and has just

re-committed to the program by renewing its funding. To read more about the BLUES project, please visit its website: http://www.uthsc.edu/blues/.

SOLUTIONS TO OBSTETRICS IN RURAL COUNTIES (STORC)

BCBSTHF is also partnering to ensure that women living in rural areas of the state are able to access prenatal care. This access is essential to reducing preterm births and infant mortality, especially among women experiencing high-risk pregnancies.[7] Prior to the Solutions to Obstetrics in Rural Counties (STORC) initiative, women with high-risk pregnancies in southeastern Tennessee did not arrive for scheduled prenatal appointments between 12 and 15 percent of the time. The Regional Obstetric Consultants (ROC), a Chattanooga-based group of maternal-fetal medicine (MFM) specialists, had serious concerns that traditional methods of practice were limited in reaching women in rural areas. The president and staff at ROC viewed telemedicine as an economical and convenient solution capable of providing high quality of care for high-risk obstetric services, and they wanted to bring telemedicine to rural areas of Tennessee.

Finding an enthusiastic partner in the BCBST Health Foundation, ROC created the STORC initiative to improve patient outcomes and access to care for women experiencing high-risk pregnancies. The goal of STORC is to preserve, protect and improve the quality of life for both mother and child and to provide ready access to services and continuing education to their physicians and other caregivers. BCBSTHF initially provided $3.6 million to fund six years of the STORC initiative. Representatives from BCBS of Tennessee serve on STORC's board of directors, and ROC staff report that the great working relationship between ROC and the health plan has allowed the STORC initiative to thrive.

The patient is referred to STORC by her local obstetrician and is able to see an MFM specialist at ROC using videoconferencing technology set up at a local hospital, clinic or doctor's office. The ultrasound images are transmitted to the MFM specialist who views the images at one of the primary ROC offices. The MFM is able to discuss these images and other issues with the patient and the two traveling ROC staff members, a sonographer and an experienced labor and delivery nurse or clinical nurse practitioner, during the appointment. ROC staff members cite this inclusive care model as one of the reasons for high patient and provider satisfaction.

STORC DELIVERS SMOOTHER PREGNANCIES

Besides reporting very high levels of satisfaction with the program, women participating in STORC have missed significantly fewer appointments, and no-show rates have declined to between 2 and 6 percent, even better than the no-show rate at ROC's Chattanooga office. Despite the high-risk nature of their pregnancies, 85 percent of the 813 women participating in the STORC initiative gave birth in local hospitals, and 92 percent of the 488 babies born to women participating in STORC did not require NICU stays. In addition to saving $5,000 to $10,000 per day in the NICU,[8] STORC has saved families significant time, money and stress by reducing their need to travel great distances to see an MFM specialist or give birth. In addition, physicians and other caregivers in rural areas were provided access to Continuing Medical Education (CME) opportunities through STORC that were previously unavailable to them.

GROWING UP

BCBSTHF is helping STORC to expand the number of sites where women can have a tele-appointment with an MFM specialist and to offer more CME sessions. Thanks to an additional three-year commitment from BCBSTHF, a new telehealth initiative is being planned for the state based on the success of STORC. Staff at ROC report that support from BCBSTHF has allowed them to think beyond STORC, and BCBSTHF has encouraged them to create the Tennessee Partnership for Telehealth that will utilize the telemedicine technology used in STORC for other medical specialties. ROC staff says that BCBSTHF has been a receptive partner in this endeavor, and they look forward to continuing to work together to bring needed specialty health care to rural areas of Tennessee.

CONCLUSION

While the Blues Project and STORC are showing promising reductions in adverse birth outcomes, they also are working to change the way maternal health care is defined and delivered. BCBSTHF's support for these programs in their innovative deployment of counseling services and communications technology shows how strong partnerships can cultivate expansive objectives that look beyond the immediate problem and address broader improvements in health care quality and efficiency.

ABOUT NIHCM FOUNDATION AND BCBST HEALTH FOUNDATION

The NIHCM Foundation Promising Practices program was created to recognize emerging and promising programs or policies in maternal and child health. www.nihcm.org

The BCBST Health Foundation promotes the philanthropic mission of BlueCross BlueShield of Tennessee. http://www.bcbst.com/about/community/TN-health-foundation/

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[1]Kaiser Family Foundation. *State Health Facts: Infant Mortality Rate.* http://www.statehealthFacts.org/comparemaptable.jsp?ind=47&cat=2 (accessed July 5, 2012).

[2]Detch E, Gibson T. *Charting a Course to Tennessee's Future*. The Tennessee Advisory Commission on Intergovernmental Relations, 2012. www.tn.gov/tacir/PDF_FILES/Agenda/June12/Tab%207_Vision.pdf (accessed August 22, 2012).

[3]Tennessee Department of Health. Office of Policy, Planning, and Assessment. *Racial Disparity in Infant Mortality in Tennessee*. 2006.

[4]The Urban Child Institute. *The State of Children in Memphis and Shelby County: Data Book.* Memphis, TN: The Urban Child Institute, 2012. http://www.urbanchildinstitute.org/sites/all/files/databooks/TUCI_Data_Book_VII_2012.04_health.pdf (accessed October 4, 2012).

[5]Ibid.

[6]Matthews TJ, MacDorman MF. "Infant Mortality Statistics from the 2003 Period Linked Birth/Infant Death Data Set." *National Vital Statistics Reports* 54 (2006):16.

[7]*Prenatal Care*. Fact sheet of womenshealth.gov, a project of the U.S. Department of Health and Human Services. http://www.womenshealth.gov/publications/our-publications/fact-sheet/prenatal-care.cfm (accessed August 1, 2012).

[8]Adair CD. *"STORC" Solutions to Obstetrics in Rural Counties*. Powerpoint presentation, 2011 BlueCross BlueShield of Tennessee Health Foundation Infant Mortality Best Practices Forum. http://www.bcbst.com/about/community/forums/infant2011/ (accessed September 18, 2012).