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Case Study: Tennessee's Perinatal Episode of Care Payment Strategy Promotes Improved Birth Outcomes

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Introduction

Improving birth outcomes, including reducing infant mortality,[1] is a priority of state Medicaid agencies across the country, which finance nearly half of all births each year.[2] Nationally, the estimated cost of Medicaid-funded births was over $40 billion in 2010,[3] and pregnancy-related services account for the largest share of Medicaid's hospital charges.[4]

Tennessee's Medicaid (TennCare) episode-based payment strategy reduced perinatal costs and improved care from 2014 to 2015 among rewarded providers by:

- Reducing perinatal episode of care costs by 3.4 percent or $4,719,519;
- Decreasing the cesarean section rate from 31.4 to 29.2 percent;
- Improving Group B streptococcus screening from 88.2 to 92.1 percent; and
- Increasing HIV screening from 90.1 to 91.7 percent.

Innovation in payment reform is one potential avenue for states to reduce health care costs while incentivizing high-quality perinatal care and improved birth outcomes. States such as Arkansas,[5] Ohio,[6] and Tennessee[7] have implemented a value-based payment strategy that makes a single payment for treating a pregnant woman across a full cycle – or perinatal episode -- of care to control costs while promoting patient-centered, high-value health care for pregnant women.[8]

The following case study explores Tennessee's perinatal episode of care. This case study accompanies two other case studies on Oklahoma and Wisconsin, and a 50-State Environmental Scan of state Medicaid performance measures, improvement projects, and incentives promoting women's health services.

Tennessee Health Care Innovation Initiative

Like many states, Tennessee's Medicaid program (TennCare) finances more than half of the state's births.[9] In 2013, the Centers for Medicare and Medicaid Services awarded a State Innovation Model (SIM) Initiative grant to Tennessee. The SIM grants are designed to help states advance multi-payer health care payment and delivery system reform models to achieve better quality of care, lower costs, and improved health. Tennessee leveraged its SIM grant to establish the Health Care Innovation Initiative (THCII) in 2013. The Tennessee Division of Health Care Finance and Administration used THCII to change the way the state pays for health care services. The initiative aims to incentivize providers for high quality and efficient treatment of medical conditions, and long-term maintenance of patients' health.

Tennessee designed its payment reform initiative after reviewing existing and proposed initiatives, including the Arkansas Health Care Payment Improvement Initiative. THCII comprises three strategies: primary care transformation, long-term services and supports, and episodes of care (EOCs). EOCs focus on the health care delivered in association with acute or specialized health care events, such as a surgical procedure or an inpatient hospitalization.[10] Episodes encompass care delivered by multiple providers in relation to a specific health care event.[11] Currently, there are over 40 EOCs in different stages of implementation in Tennessee, including the perinatal EOC.

Tennessee Perinatal Episode of Care

Tennessee's EOC model is designed to reward providers who deliver cost-effective, quality care, and the perinatal EOC promotes patient-centered, high-value health care for pregnant women.[12] The perinatal EOC was one of three EOCs Tennessee launched in 2014, with an additional 72 EOCs scheduled to be implemented by 2019.[13] Two key components of EOCs are quality measurement and retrospective performance-based payment. The perinatal EOC focuses on women with low- to medium-risk pregnancies, and is triggered by a live birth. It encompasses care provided during the course of the pregnancy, including prenatal care, care related to labor and delivery, and postpartum care. The perinatal EOC begins 280 days prior to delivery and ends 60 days after the delivery admission.[14]

Each EOC has a principal accountable provider (PAP), who is the health care provider deemed to have the greatest accountability for the quality and cost of care for the patient.[15] The PAP in the perinatal EOC is the provider or provider group who performs the delivery. PAPs are eligible to share in savings if they meet certain quality and risk-adjusted cost thresholds across their perinatal EOCs. They also face financial risk if they are high-cost providers. Tennessee uses two types of quality metrics for its EOCs: quality metrics linked to gain-sharing (financial incentives) and quality metrics tracked and reported for informational purposes only. These quality metrics are chosen with recommendations from Technical Advisory Groups (TAGs), made up of specialists who participate in a series of meetings and provide episode-specific clinical input into the EOC design process. In Tennessee's perinatal EOC, each PAP's average cost is calculated for all of the perinatal EOCs during the performance period, and compared to predetermined thresholds set by the payer.

PAPs who meet the quality metrics thresholds are eligible to receive a financial incentive called gain-sharing if they also demonstrate cost-effective care. As of calendar year (CY) 2015, more than $500,000 in reward payments had been made to providers who met the thresholds for all quality measures linked to gain-sharing.[16] The table shows the perinatal EOC quality metrics and thresholds to be met for the metrics linked to gain-sharing. For example, 85 percent or more of a PAP's perinatal EOCs must include HIV screening in order to be eligible for a financial incentive.

Perinatal EOC Quality Metrics and Thresholds for Principal Accountable Providers

Metrics Linked to Gain-Sharing[17, 18]	**Threshold**
HIV screening	≥ 85 percent
Group B streptococcus screening	≥ 85 percent
Cesarean section rate	≤ 41 percent
Metrics Used for Informational Purposes Only (No Thresholds) [19, 20]	
Gestational diabetes screening	
Asymptomatic bacteriuria, hepatitis B specific antigen screening	
Adult tetanus, diphtheria, pertussis (Tdap) vaccination rate	

TennCare determines the acceptable cost threshold, (currently $7,783 for the perinatal EOC), and each managed care organization (MCO), which contracts with the state and providers to provide care to Medicaid enrollees, determines the commendable threshold. The gain-sharing limit methodology is defined by TennCare, but defined by the MCO. If the PAP's risk-adjusted average cost is lower than the commendable level *and* the PAP meets the thresholds for the gain-sharing quality metrics, the PAP will share in the associated savings.[21, 22] Conversely, if the PAP's risk-adjusted average EOC cost is higher than the acceptable level, the PAP is responsible for a share of the excess cost.[23, 24]

As a result of this value-based payment strategy, Tennessee experienced a 3.4 percent decrease in cost of the perinatal EOCs while maintaining quality -- this represents a $4,719,519 reduction in episode cost for CY 2014 to CY 2015.[25] The perinatal EOC also led to improvement in the rate of Group B streptococcus screenings from 88.2 percent in CY 2014 to 92.1 percent in CY 2015.[26] Tennessee also improved its HIV screening rate from 90.1 percent in CY 2014 to 91.7 percent in 2015.[27] Additionally, the cesarean section rate fell from 31.4 percent in CY 2014 to 29.2 percent in CY 2015.[28] The combination of Tennessee's first three EOCs (perinatal, acute asthma exacerbation, and total joint replacement) has resulted in a $11.1 million savings from CY 2014 to 2015.

Medicaid and Public Health Collaboration

The Division of TennCare, Tennessee's Medicaid agency, and the Tennessee Department of Health (TDH), which includes the state's Title V program, have collaborated on several initiatives to improve maternal and infant health:

- TennCare and TDH jointly administer the regionalized perinatal system, which features a tiered system of risk-appropriate care delivery where hospitals choose or are given specific designations based on the level of care they can provide. The system is funded through an agreement with Medicaid.[29, 30]
- TennCare and TDH sit on a task force addressing the increased incidence of neonatal abstinence syndrome in the state.
- TennCare partners with TDH to utilize non-claims data to guide quality measures for EOCs.
- TennCare and TDH identify strategies for connecting the maternal and infant population to quality health care, including prenatal, delivery, and postpartum care.[31]

Tennessee is an active member of the Collaborative Improvement and Innovation Network to Reduce Infant Mortality (IM CoIIN), led by the National Institute for Children's Health Quality and supported by the Health Resources and Services Administration's Maternal and Child Health Bureau. IM CoIIN advances state efforts to prevent and reduce infant mortality and eliminates disparities in birth outcomes. To date, Tennessee has focused its efforts on safe sleep education, early and preterm birth, perinatal regionalization, and smoking cessation.

Conclusion

An EOC payment strategy is one way states can seek to improve perinatal quality of care and birth outcomes, and reduce costs. Tennessee is among a group of states leading the way in perinatal health care payment reform through the implementation of episodes of care. Overall, the perinatal EOC has been successful in reducing costs and increasing screening rates. Medicaid officials cited stakeholder involvement as crucial in implementing Tennessee's payment reform initiative. Providers and other stakeholders provide input into the design of new EOCs, and share feedback throughout the development and implementation of every EOC. Additionally, Tennessee demonstrated how state agencies can collaborate to achieve shared goals to improve maternal and infant health outcomes. Looking ahead, the state aims to develop a joint perinatal-neonatal EOC to measure and improve outcomes for both mothers and babies.

Endnotes

1. Infant mortality is defined as the death of a child under the age of one year.
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13. "Introduction to Episodes of Care in Tennessee," Tennessee Division of Health Care Finance and Administration, https://www.tn.gov/assets/entities/hcfa/attachments/IntroductionEpisodes.pdf.
14. It does not include patients in active cancer management or patients with Human Immunodeficiency Virus (HIV).
15. "Perinatal Episode," Tennessee Division of Health Care Finance and Administration, https://www.tn.gov/assets/entities/tenncare/attachments/EpisodeofCarePerinatalDescription.pdf
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19. Ibid.
20. Ibid.
21. Commendable threshold - PAPs with average risk-adjusted episode spend below the commendable threshold that meet the quality metrics tied to gain sharing receive a gain sharing payment.
22. Gain Sharing - PAPs with average risk-adjusted episode spend below the gain sharing limit threshold and that pass the quality metrics tied to gain sharing receive a gain sharing payment up to a specified limit.
23. Acceptable Threshold– PAPs with average risk-adjusted episode spend above the acceptable threshold owe a risk sharing payment.
24. Ibid.
25. Ibid.
26. Ibid.
27. Ibid.
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