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Organization Type	Participating Organization Name
State Medicaid Agency	TennCare
Managed Care Organization	UnitedHealthcare Community Health Plan of Tennessee (UHC)
Health Care Delivery Organizations	Tennessee Maternal Fetal Medicine Meharry Medical College

Identifying and Diagnosing the Problem

In Tennessee, perinatal hypertension is one of the leading underlying causes of pregnancy-related deaths, year after year. Black individuals have a nearly two-fold higher mortality rate than their white peers for hypertension-related heart disease deaths; nearly 58% of Black women have high blood pressure prior to pregnancy. Black women are more likely to be diagnosed with pre-eclampsia during pregnancy and more likely to have a higher systolic blood pressure. Those statistics led the Tennessee team to focus their efforts on birth outcomes, specifically those related to perinatal hypertension.

The team analyzed UHC claims data to focus their efforts on a pilot project within Shelby County at a hospital that serves predominately Black perinatal patients and has one of the highest rates of high-risk pregnancies and the fewest maternal fetal medicine specialists in the state.

Care Delivery Transformation

UHC provided funding to the Tennessee Initiative for Perinatal Quality Care to deliver a simulation training to providers at birthing facilities to improve health care providers' ability to recognize and appropriately intervene on high-risk pregnancies involving perinatal hypertension.

The team designed and implemented a Remote Patient Monitoring (RPM) initiative to improve access to home blood pressure monitoring equipment and identify pregnancy-related hypertension and associated issues earlier. They engaged an external vendor that provides remote patient monitoring and education services via a proprietary model. Bluetooth-capable blood pressure cuffs are provided to participating pregnant individuals to use at home. The perinatal health care team can view the data tracked via the app which can notify them of concerning or dangerous blood pressure readings. The team is evaluating the RPM pilot using the following Key Performance Indicators (KPIs):

- Enrollment in the app
- App Engagement
  - Total # of active users
  - # Sessions per user
  - Average time per session
  - Most frequently viewed content

- RPM Engagement
  - # and % of RPM members with active participation in the Hypertension Module
  - # and % of RPM members with active participation in the Diabetes Module
  - RPM: Number of notifications to health care providers and interventions

Payment Model

Blood pressure cuffs are not a covered benefit through Medicaid. Thus, UnitedHealthcare is paying for cuffs and the RPM pilot. TennCare will consider covering the cost of blood pressure cuffs for Members if the pilot results in earlier identification of hypertension, improved birth and maternal outcomes, and cost savings.

Lessons Learned

The Tennessee team learned that sometimes, a root cause analysis reveals a potentially overwhelming and complex array of factors. Yet, teams also must determine how to identify which solutions are feasible and a priority to address, lest they run the risk of becoming stuck in analysis paralysis.

The team identified a number of implementation challenges including:

- Staff education barriers: It took a great deal of time/resources to train staff and residents about how the RPM technology works and how to enroll patients. Additionally, each time new residents came on board, the training had to be repeated.
- Provider leadership buy-in: At the start of implementation, there was clear support for the initiative from providers in leadership positions. However, once those leaders left the health care system, their support was lost.
- EMR integration: It became infeasible for the patient-recorded blood-pressure data to be viewable in the health system's electronic medical record (EMR) system because of compatibility issues between the health system's EMR and the RPM app.

The team also faced challenges in regard to data management. First, they learned that the RPM care team notification parameters needed to be adjusted; health care providers reported frustration at receiving emergent notifications for patients who did not need intervention. Additionally, patient-recorded blood pressures were not entered into the patient record due to compatibility issues between the RPM technology and the health care provider system's EHR. Finally, the RPM app only included postpartum hypertension engagement for two weeks postpartum. To align more closely with American College of Obstetricians and Gynecologists (ACOG) guidelines, the team desired an engagement period of 12 weeks postpartum.

UHC also had difficulty getting quarterly update data from the health system, resulting in delays monitoring KPI outcomes which was complicated by the fact that they only had a verbal agreement for when pilot data would be submitted. Moving forward, the team believes that data requests and completion dates need to be outlined in detail in the project agreement among participating organizations (e.g., the health plan, the health care system, and the vendor providing the RPM service).

Value Adds

As a result of their participation in the Learning Collaborative, the Tennessee team has:

- gained insight into issues affecting populations enrolled in Medicaid in other states.
- learned, via AHE Cross-Team Learning Sessions, about what other organizations are doing to create positive outcomes that the TN team could consider (e.g., housing and how other states help to manage resources such as Section 8).
- used information from the Cross-Team Learning Sessions to educate front-line staff who interact with members regarding racial equity.

Looking Ahead

Looking ahead, the Tennessee team will explore ways to impact positive birth outcomes, decrease maternal mortality and morbidity, and decrease the newborn mortality rate. Over the next year, they will consider other initiatives (such as those involving UHC, TennCare, and two other Managed Care Organizations.