SMILE Data Report

Supporting **M**aternal mental health through **I**nitiatives, **L**earning, and **E**ngagement

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SMILE AIM: Screen 100% of women for perinatal mental health conditions who present to deliver and identify, refer, and/or treat those who need treatment.

Introduction

This report outlines the significant strides made in addressing perinatal mental health conditions (PMHC) in Virginia. PMHC rates have seen a rise since 2019 with disparities demonstrated among different racial and payor groups. Through the SMILE project, VNPC has implemented the AIM patient safety bundle for Perinatal Mental Health Conditions. Key achievements thus far include a high referral rate for treatment and extensive provider education, emphasizing the importance of early identification, and intervention to improve maternal health outcomes. The report also details plans to expand and sustain these efforts, ensuring long-term success in mitigating the impact of PMHC.

5 "R"s of Alliance for Innovation on Maternal Health (AIM) Patient Safety Bundle

Readiness: Develop integrated workflows, provide trauma-informed training, and establish referral resources to enhance mental health care while addressing biases and social determinants of health.

Recognition & Prevention: Consistently screen for perinatal mental health conditions and social determinants of health, linking patients to appropriate resources as needed.

Response: Implement a culturally relevant, evidence-based response protocol and establish coordinated care pathways for mental health treatment during the perinatal period.

Reporting & Systems Learning: Integrate mental health into multidisciplinary rounds, foster collaboration between providers, and monitor data to address disparities.

Respectful, Equitable, and Supportive Care: Include pregnant and postpartum women and their support networks as active care team members.

Glossary of Data Terms

Outcome Measures: Indicators used to assess the effectiveness of health care interventions.

Process Measures: Indicators that track the implementation of specific actions or practices.

Structure Measures: Track the availability of resources, infrastructure, and organizational systems.

State Surveillance Measures: Indicators to track population-level data.

Severe Maternal Morbidity: Unexpected, life-threatening complications during delivery.

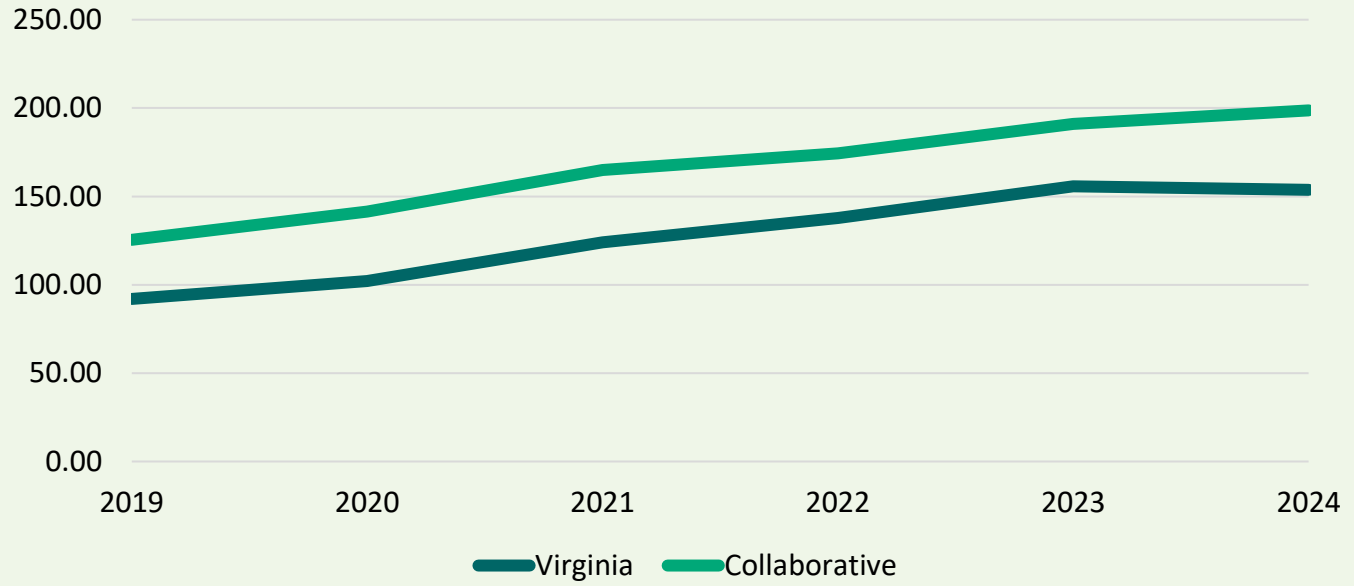
Perinatal Mental Health Conditions: Conditions that occur during pregnancy and effect a woman's emotional, psychological and social well-being.

Collaborative: Partnership of stakeholders working toward a common goal. For SMILE, the collaborative is the group of participating hospitals.

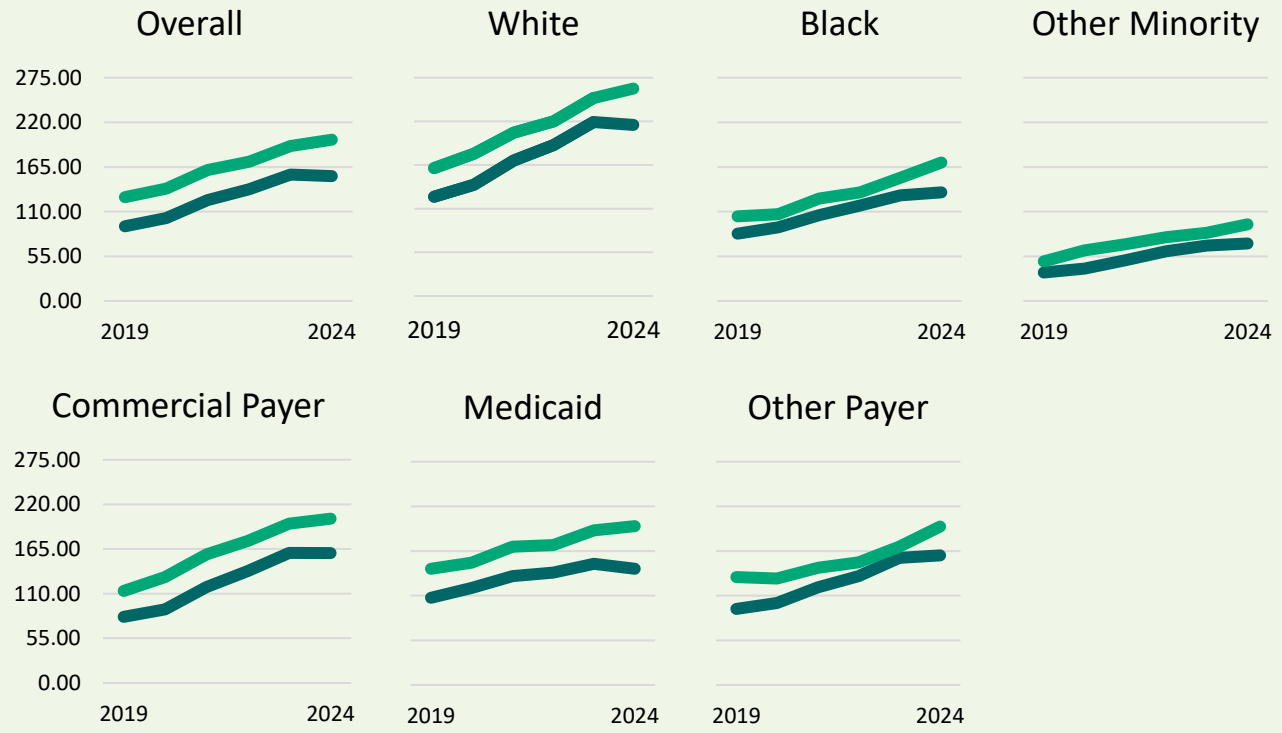
SMILE State Surveillance Measures

Prevalence of perinatal mental health conditions has increased in Virginia.

Prevalence rate shown per 1,000 hospital deliveries, 2019-2024.



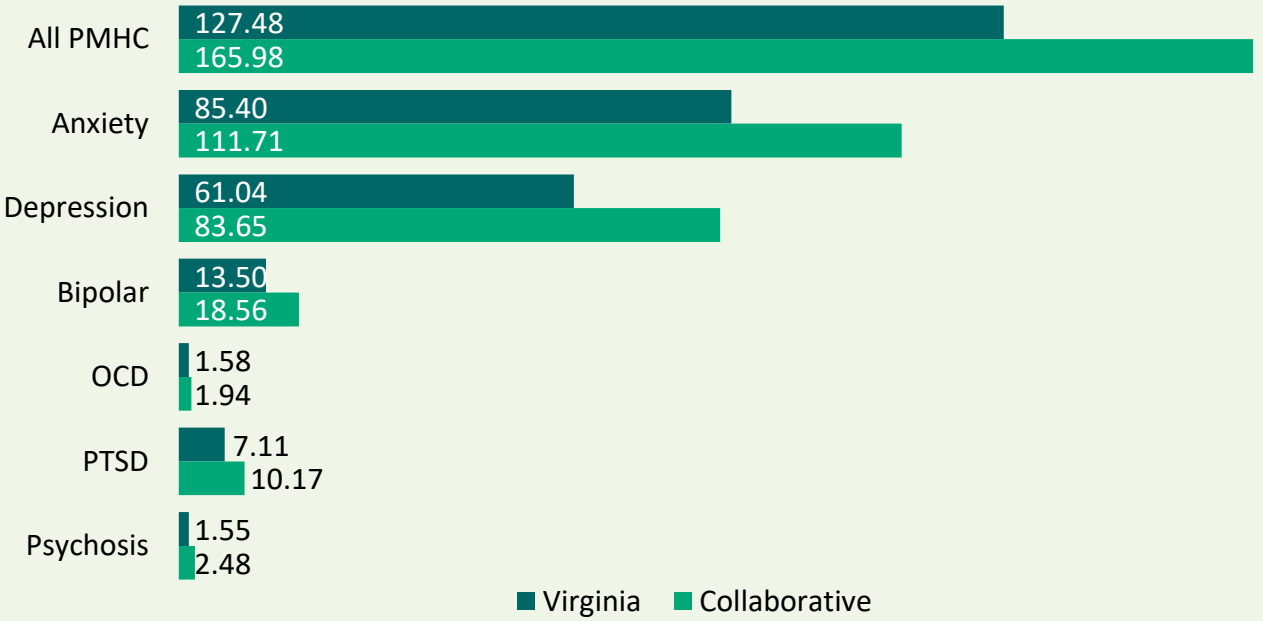
In Virginia, the incidence of PMHC has risen by 67.03% since 2019, from 91.99 to 153.65 per 1,000 deliveries. Similarly, collaborative hospitals have seen an increase of 55.34% in PMHC rates, from 127.90 to 198.68 per 1,000 deliveries. When disaggregating the data by race and payor categories, distinct trends emerge. Unlike many other maternal health outcomes, PMHC rates are higher among White deliveries and Commercial payor deliveries compared to other groups. Despite these disparities, the rising rates of PMHC across all demographic groups underscore the need for comprehensive efforts to improve outcomes for the entire population.



SMILE State Surveillance Measures

PMHC most commonly from anxiety and depression disorders.

Prevalence rates shown per 1,000 hospital deliveries, 2019-2024.

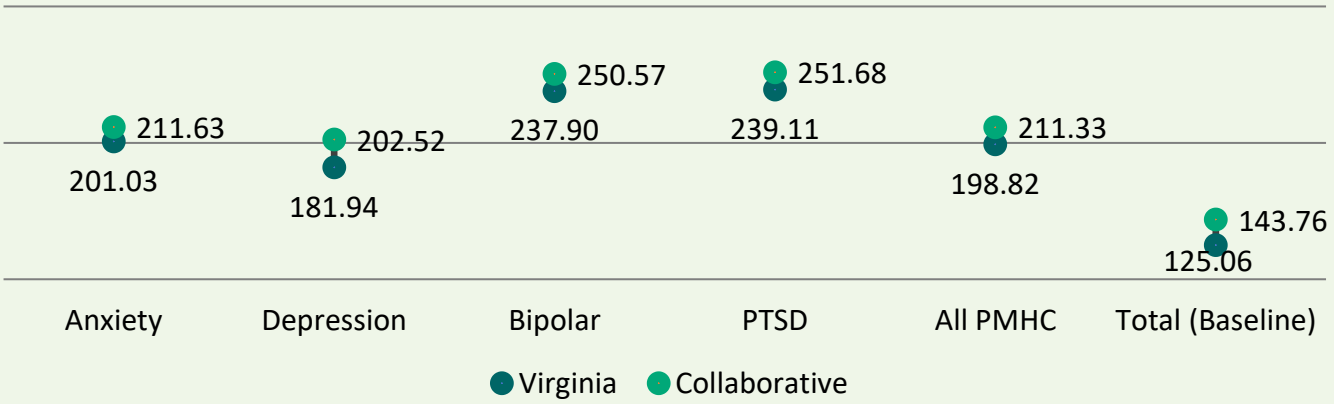


AIM defines PMHC as the identification of one or more mental health conditions during a perinatal healthcare visit including anxiety, depression, bipolar disorder, OCD, PTSD, or psychosis. Analyzing the prevalence rates for each condition reveals that anxiety and depression are more common than other diagnoses. Consistent with the overall trends, collaborative hospitals show higher average rates of these conditions compared to statewide data. Notably, anxiety affects over 11% of deliveries at collaborative hospitals, while depression impacts over 8%.

The risks associated with these conditions are evident, as Severe Maternal Morbidity (SMM) occurs more frequently when PMHC are present. Within the collaborative, SMM is observed in 143.76 out of every 10,000 deliveries, with a 47.00% increase in frequency when PMHC is identified. This underscores the critical need for early identification and intervention to mitigate the impact of PMHC on maternal health outcomes.

SMM occurs more frequently in patients with PMHC.

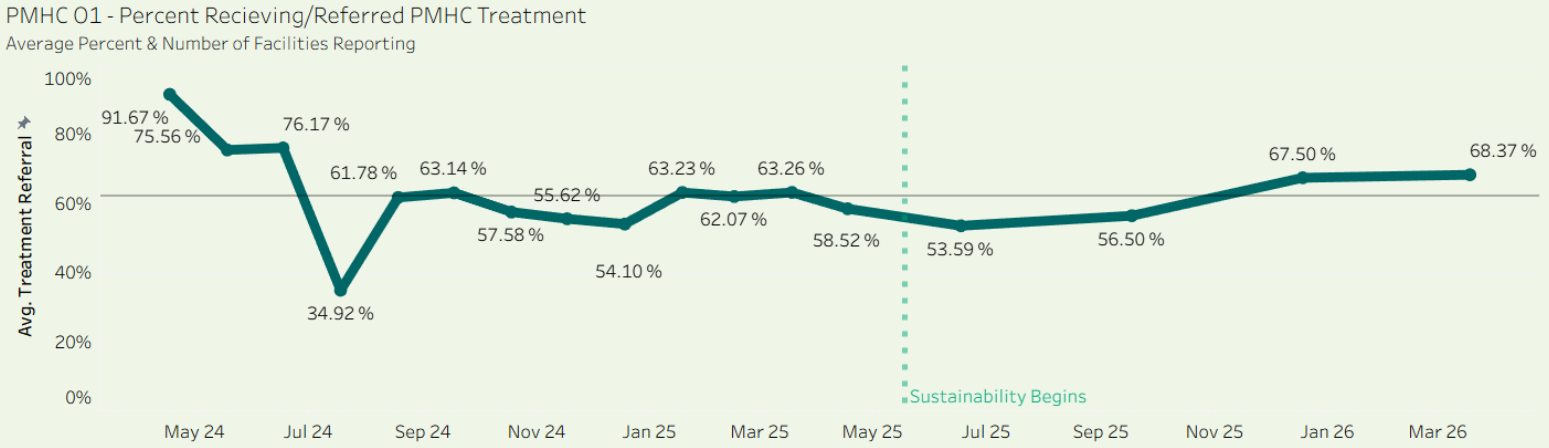
Severe Maternal Morbidity rates per 10,000 hospital deliveries, 2019-2024.



SMILE Improvement Data

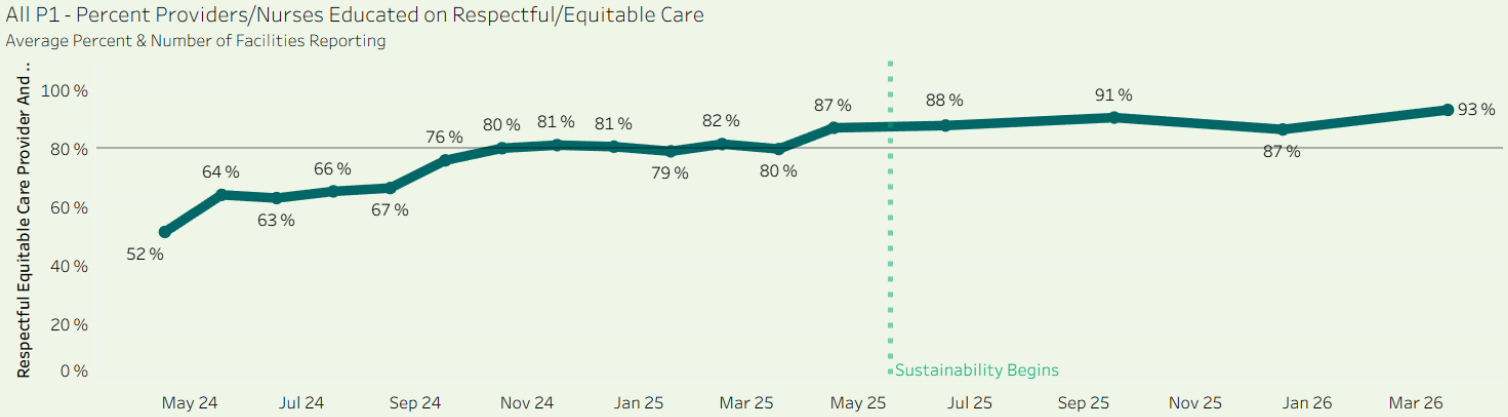
With the analysis highlighting perinatal mental health conditions as an increasing problem in Virginia, the Virginia Neonatal Perinatal Collaborative launched project SMILE (Supporting Maternal mental health through Initiatives, Learning, and Engagement) in the spring of 2024. Project SMILE is a quality improvement collaborative project focused on the implementation of the AIM PMHC bundle. In the first cohort, cohort Bravo, 19 hospitals were actively engaged and submitting monthly data to the VNPC. Cohort Charlie with 2 hospitals joined and began submitting data in December 2024. Data collection began in May 2024 for baseline measures at the beginning of this project with continuous collection occurring through May 2025. SMILE entered sustainability in June 2025 and switched to quarterly data submissions with the final data submitted in June 2026.

Outcome Measures



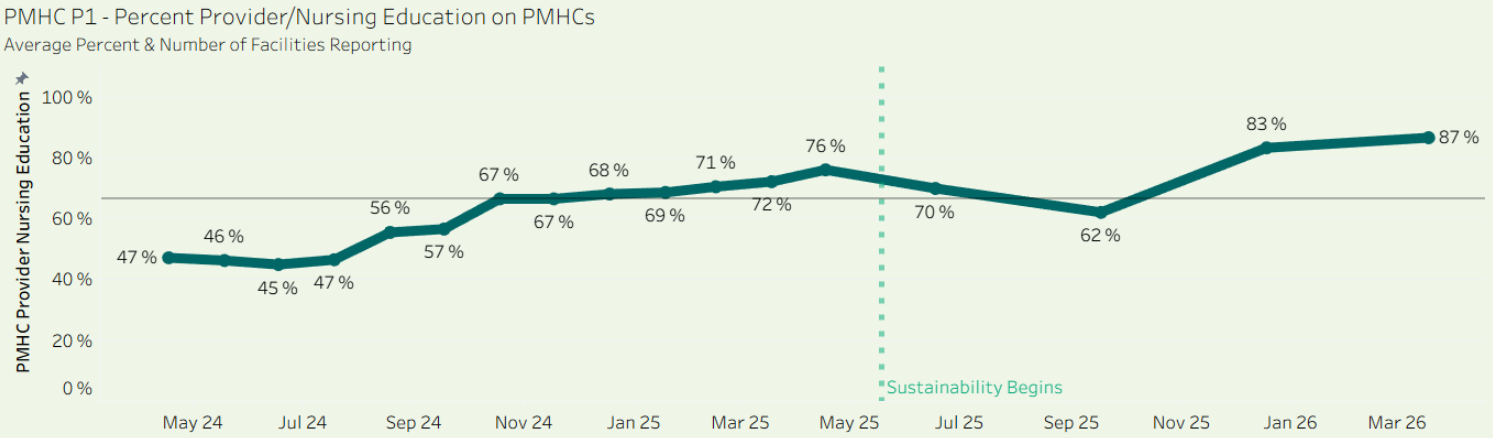
The single outcome measure for project SMILE is looking at the percent of patients with a diagnosis of a perinatal mental health condition who received or were referred to treatment. The graph above is showing the average percentage of patient treatment referrals in SMILE facilities reporting nonzero numbers. The number of facilities reporting is also showing. In the bundle, AIM defines treatment as pharmacological and/or behavioral interventions. Many facilities couldn't track this metric as it required significant changes to electronic health records and hospital policy which takes time to implement. 3 facilities were reporting nonzero numbers in the baseline period, and we have gotten up to 11 facilities reporting nonzero number in February 2025, and down to 5 reporting in Mar-May 2026. This outcome measure, largely stayed consistent, although a slight increase is observed in recent months.

Process Measures

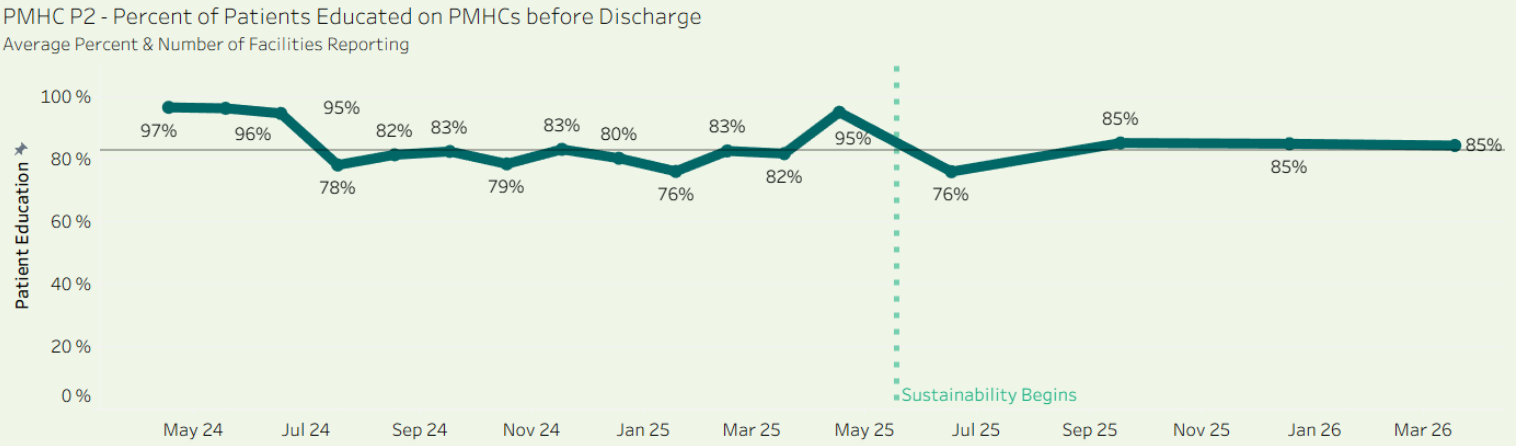


SMILE Improvement Data

Process Measures



For project SMILE, there are three process measures being collected. The first two, ALL P1 and PMHC P1, are related to provider and nursing education for respectful/equitable care and perinatal mental health conditions, respectively. Both process measures have been well reported with most facilities submitting data for them each month. Facilities report percentages of providers and nurses educated within the last 2 years to the nearest 10%. It is up to the discretion of the facility to determine what education to use and how to measure completeness. For both provider and nursing education measures we can see a steady increase since the baseline period. Provider/nursing education for respectful/equitable care to 87% in June2025, and slightly up to 93% in May 2026. Similarly, for provider/nursing education for perinatal mental health conditions there is an increase to 87% in May 2026.



The third process measure, PMHC P2, is measuring the percentage of patients educated on perinatal mental health conditions before being discharged from the hospital. AIM recommends patients to have verbal and written education before their discharge to be counted in this metric. Similar to the outcome measure, many facilities needed to make significant changes to electronic health record systems and systematic changes to accurately measure patient education. In the baseline period, 6 to 10 facilities reported up to 16 facilities reporting in December 2024, and down to 6 May 2026. Since August 2024, the average percent of patients educated at each facility has remained around 85%. Again, with more facilities able to report this metric we also observe process and structural improvements.

SMILE Improvement Data

Structure Measures

5 structure measures are collected, seen below, where facilities rate their progress on a scale of 1 (not started) to 5 (fully in place). Though not the primary AIM for the collaborative, facilities are working to reach 5 for each structure measure.

Structure Measures: Measured 1 (Not Started) to 5 (Fully in Place)	Baseline May-July 2024	Baseline Facilities Reporting 5	Updated in May 2026	Updated Facilities Reporting 5 – May 2026
All S4: Patient Education Materials on Urgent Postpartum Warning Signs	3.64	33.33%	4.70	66.67%
ALL S6: Inpatient-Outpatient Care Coordination Workgroup	3.67	40.00%	4.20	50.00%
ALL S7: Resource Mapping/ Identification of Community Resources	3.71	40.00%	3.80	33.33%
PMHC S1: Perinatal Mental Health Assessment and Response Protocol	4.24	65.00%	4.50	83.33%
PMHC S2: Validated PMHC Screening Tools Shared with Prenatal Care Sites	3.86	45.00%	5.00	100.00%

In the progress of project SMILE there have been observed structural improvements in all five of the structure measures. In the most recent sustainability data, all structure measures reported higher than the baseline period. These mark significant improvements in structure measures since the baseline period in May 2024. Validated screening tools shared with prenatal care sites has shown continuous growth, up to 100% fully in place, even into the sustainability period of the project highlighting a continues practice for quality improvement at participating facilities. Structure measures are often the first to show improvement, and they anchor the future success of a project. Hospital achievements with structural changes highlight the ongoing efforts to improve PMHC care even as the project has entered sustainability.

At the conclusion of SMILE, 19 facilities were part of the first cohort (Bravo) and 2 facilities were in the second cohort (Charlie). Starting in June 2025, SMILE shifted its focus toward sustainability, with data collection and technical analysis transitioning to a less frequent schedule. These steps aim to ensure long-term success and integration of PMHC practices within participating facilities as seen with updated trends.

For more information see AIM PMHC Bundle Materials