LINK (Linking Identification & Navigation for Perinatal Mental Health & Substance Use Care) Initiative

Minnesota Perinatal Quality Collaborative (MNPQC) Progress Report

October 2024-October 2025

Executive Summary

Perinatal mental health conditions (PMHC) and substance use disorders (SUD) are common, frequently co-occurring, and deeply interconnected drivers of maternal and infant morbidity. Despite growing awareness and evidence-based guidance, many hospitals continue to face challenges related to consistent screening, timely referral, and coordinated navigation to supportive services for pregnant and postpartum people.

In response to these persistent gaps, the Minnesota Perinatal Quality Collaborative (MNPQC) launched the **Linking Identification and Navigation for Perinatal Mental Health and Substance Use Care (LINK) Initiative** in October 2024. LINK was a twelve-month, statewide quality improvement initiative designed to strengthen hospital-based systems for identifying PMHC and SUD, reducing variation in screening practices, and improving referral pathways to mental health, substance use, and social support services.

Six hospital teams from across Minnesota participated in LINK, engaging in monthly learning sessions, testing changes through Plan-Do-Study-Act (PDSA) cycles, and submitting monthly data to track progress over time. Through multidisciplinary collaboration, trauma-informed approaches, and sustained quality improvement support, participating teams advanced more consistent screening practices, enhanced referral workflows, and strengthened coordination of care across the perinatal continuum.

By the conclusion of the initiative, hospitals demonstrated meaningful progress toward integrated, family-centered approaches to perinatal mental health and substance use care. LINK reinforced the value of addressing PMHC and SUD together, building sustainable systems that support pregnant and postpartum people while centering dignity, respect, and caregiver–infant connection.

MNPQC Background

The Minnesota Perinatal Quality Collaborative (MNPQC), established in 2018, is a nonprofit organization dedicated to improving perinatal health outcomes across Minnesota. As part of the national network of Perinatal Quality Collaboratives supported by the Centers for Disease Control and Prevention (CDC), MNPQC brings together hospitals, healthcare systems, public health agencies, and community partners to drive system-level improvements in maternal and infant health.

MNPQC supports participating hospitals through evidence-based quality improvement frameworks, including those developed by the Institute for Healthcare Improvement (IHI). These frameworks emphasize multidisciplinary collaboration, data-driven decision-making, and iterative testing of change. In 2022, MNPQC joined the Alliance for Innovation on Maternal Health (AIM), further aligning its work with national patient safety bundles and best practices aimed at improving maternal outcomes and reducing preventable harm.

Through its collaborative model, MNPQC partners with more than 80 organizations statewide, supporting hospitals of varying size, geography, and resource capacity to implement meaningful and sustainable improvements in perinatal care.

Linking Identification & Navigation for Perinatal Mental Health & Substance Use Care Initiative Introduction

Aligned with Minnesota hospital priorities for 2024–2025, the LINK Initiative was developed to address longstanding challenges related to the identification and navigation of care for pregnant and postpartum people experiencing PMHC and SUD. These conditions often co-occur and, when unrecognized or untreated, contribute to increased risk for adverse maternal and infant outcomes, fragmented care experiences, and unjust involvement of child welfare and social systems.

LINK intentionally addressed perinatal mental health and substance use together, recognizing that siloed approaches can limit effectiveness and exacerbate harmful stereotypes. The initiative focused on strengthening hospital-based systems for screening, referral, and follow-up, while promoting trauma-informed, culturally responsive, and person-centered care.

Participating hospitals received structured education, peer learning opportunities, and individualized technical assistance through monthly virtual sessions. Teams were supported in implementing or refining validated screening tools, testing referral workflows, and building sustainable processes tailored to their local context.

Project Structure

Hospital Teams
The LINK Initiative engaged six hospital teams representing diverse geographic regions and care settings across Minnesota:

- Aspirus St. Luke’s Duluth
- Centracare Health- St. Cloud
- Essentia Health-Virginia
- Essentia Health St. Mary’s Detroit Lakes
- United Hospital District
- Windom Area Health

Each hospital formed a multidisciplinary team, primarily composed of floor nurses, nurse managers, and nurse educators, with additional participation from social work, behavioral health, and leadership as appropriate. This nursing-led model positioned improvement work directly at the point of care, supporting practical, workflow-integrated change.

Teams participated in monthly collaborative learning sessions, submitted monthly data through the SimpleQI platform, and engaged in multiple PDSA cycles throughout the project period. This

structure allowed teams to test changes on a small scale, learn from data and peer feedback, and refine interventions to support sustainability.

Content Experts

Throughout the initiative, hospital teams were supported by a multidisciplinary group of content experts who provided guidance on quality improvement methodology, clinical implementation, and trauma-informed perinatal care. Faculty expertise spanned perinatal mental health, substance use care, nursing practice, behavioral health, and systems improvement.

- **Jane Taylor, Ed. D., MHA, MBA** (MNPQC Improvement Advisor)
- **Caralyn Schnick**, **MPH** (DHS Perinatal Program Consultant)
- **Amarachi Amaikwu, RN, BSN** (Regions Hospital)
- **Amy Hurst, APRN, CNM** (Allina Health)
- **Jessica Schwartz, RN, CARN** (SUD Program Manager- Essentia Health)
- **Lauren Graber, MD, MPH** (Family & Addiction Medicine- HCMC)
- **Emily Johnson, MHA** (Maternal Health Advocate & Patient Family Partner)
- **Lauren Klee, MD** (Psychiatrist- Health Partners)
- **Gabrielle Mauren, PhD, LP, PMH-C** (Psychologist- Park Nicollet)
- **Sky Rogers, APRN, CNM** (Nurse Midwife- Essentia Health)
- **Rachel Sprague, RN, PHN** (MDH- SUD Nurse Consultant)

This faculty model ensured that teams had access to timely, evidence-based guidance while maintaining flexibility to adapt strategies to local needs and resources.

Tools and Resources

MNPQC provided participating teams with a curated set of tools and resources to support implementation and sustainment of improvements. These included:

- **AIM Care for Pregnancy and Postpartum People with Substance Use Disorder Bundle,** offering actionable strategies to improve care quality and outcomes for birthing people with SUD.
- **AIM Perinatal Mental Health Conditions Bundle**, providing evidence-based guidance for screening, response, and follow-up related to PMHC.
- **LINK ECHO educational series**, featuring expert-led didactics and peer
- **Validated screening tools** for perinatal mental health and substance use disorders.
- **Task Force on Pregnancy Health and Substance Use Disorder resources**, supporting alignment with statewide recommendations.

These tools enabled teams to standardize practices, reduce variation, and align hospital-level changes with national best practices while maintaining adaptability across care settings.

Changes Tested by Teams

Through iterative Plan-Do-Study-Act (PDSA) cycles, participating hospital teams tested and implemented a range of interventions aligned with the LINK driver diagram. While approaches varied by facility based on local context, staffing, and available resources, several consistent themes emerged across the collaborative.

Hospital teams focused on **standardizing screening practices** by integrating validated tools, including SBIRT, 5P's, and the Edinburgh Postnatal Depression Scale (EPDS), into routine clinical workflows and electronic health records. Screening was implemented at multiple touchpoints, including prenatal care, hospital admission, postpartum encounters, and, in some cases, pediatric and family medicine visits, supporting **earlier identification and ongoing follow-up** for both perinatal mental health conditions and substance use disorders.

Teams also worked to **strengthen referral pathways and care navigation**, testing processes to track referrals made prenatally and postpartum, expanding access to telehealth mental health services, and embedding mental health and substance use resources into after-visit summaries. Several sites paired these workflow changes with staff education to ensure consistent response and follow-through after a positive screen.

A strong emphasis was placed on **multidisciplinary collaboration**, with nursing, social work, behavioral health, and care coordination teams working together to support patients and families. In some facilities, multidisciplinary team check-ins were leveraged to align care plans early in pregnancy and ensure continuity through discharge.

Across all sites, teams intentionally incorporated **trauma-informed and person-centered approaches**, recognizing the importance of addressing prejudice in screening, testing, and reporting practices. Education for patients and families prior to discharge, alongside clear communication about available supports, helped reinforce trust and engagement in care.

Collectively, these changes reflect hospitals' efforts to move beyond isolated screening toward integrated systems of identification, referral, and navigation that are embedded within everyday clinical practice and responsive to the needs of pregnant and postpartum women and their families.

Family of Measures

To assess hospital team progress and overall project impact, MNPQC established a structured family of measures for the LINK Initiative. In collaboration with MNPQC faculty and content experts, an initial broad set of potential measures was refined to a focused, feasible collection aligned with the changes tested by participating teams and the core aims of the initiative. Measures were selected to balance rigor with practicality, recognizing variation in hospital size, patient volume, and data infrastructure.

Together, the outcome and process measures provide a comprehensive view of how changes in screening and referral practices influenced care delivery and patient outcomes over time.

Outcome Measures: Outcome measures were designed to assess whether improvements in identification and navigation translated into meaningful connections to care and supported family-centered outcomes.

1. **Percent of pregnant and postpartum women with Substance Use Disorders (SUD) who received or were referred to supportive services.** This measure assessed the effectiveness of referral pathways and care navigation following identification of substance use concerns. It reflects hospitals' ability to move beyond screening to ensure timely access to treatment, behavioral health services, and community-based supports.
2. **Percent of pregnant and postpartum people with Perinatal Mental Health Conditions (PMHC) who received or were referred to supportive services.** This measure evaluated whether individuals identified with perinatal mental health conditions were connected to appropriate services, including counseling, psychiatry, and other supportive resources. Improvements in this measure indicate strengthened coordination between screening, clinical response, and follow-up care.
3. **Length of stay (in days) for all newborns exposed to opioids and/or other substances (if applicable).** This measure served as a downstream indicator of coordinated, family-centered care for substance-exposed newborns. While influenced by multiple clinical and social factors, reductions or stabilization in length of stay may reflect improved prenatal identification, caregiver engagement, and supportive care practices.
4. **Percent of newborns exposed to substances in utero who were discharged to either birth parent.** This measure assessed family preservation and caregiver–infant connection following birth. It reflects hospitals' efforts to support families through coordinated care, reduce unnecessary separation, and promote safe discharge planning when appropriate.

Process Measures: Process measures focused on assessing the reliability and consistency of key clinical practices necessary to achieve the initiative's aims.

1. **Percent of pregnant and postpartum people screened for Perinatal Mental Health Conditions (PMHC) with a validated tool.** This measure evaluated the extent to which standardized, evidence-based screening tools were embedded into routine care across participating sites. High and sustained performance indicates successful integration of screening into clinical workflows.
2. **Percent of pregnant and postpartum people screened for Substance Use Disorders (SUD) with a validated tool.** This measure assessed consistency in substance use screening practices and supported monitoring of fair application across patient populations. Improvements reflect reduced variation in screening and increased confidence among staff in conducting screenings using validated instruments.

Hospital teams submitted data monthly through the SimpleQI platform, allowing for real-time monitoring of trends and iterative learning throughout the project period. Data were reviewed during collaborative learning sessions to support shared learning, identify barriers, and inform subsequent PDSA cycles.

Rather than serving as punitive benchmarks, measures were used as tools for reflection, learning, and continuous improvement. This approach encouraged transparency, fostered peer exchange, and supported teams in adapting interventions to their local context while maintaining alignment with LINK's overarching goals.

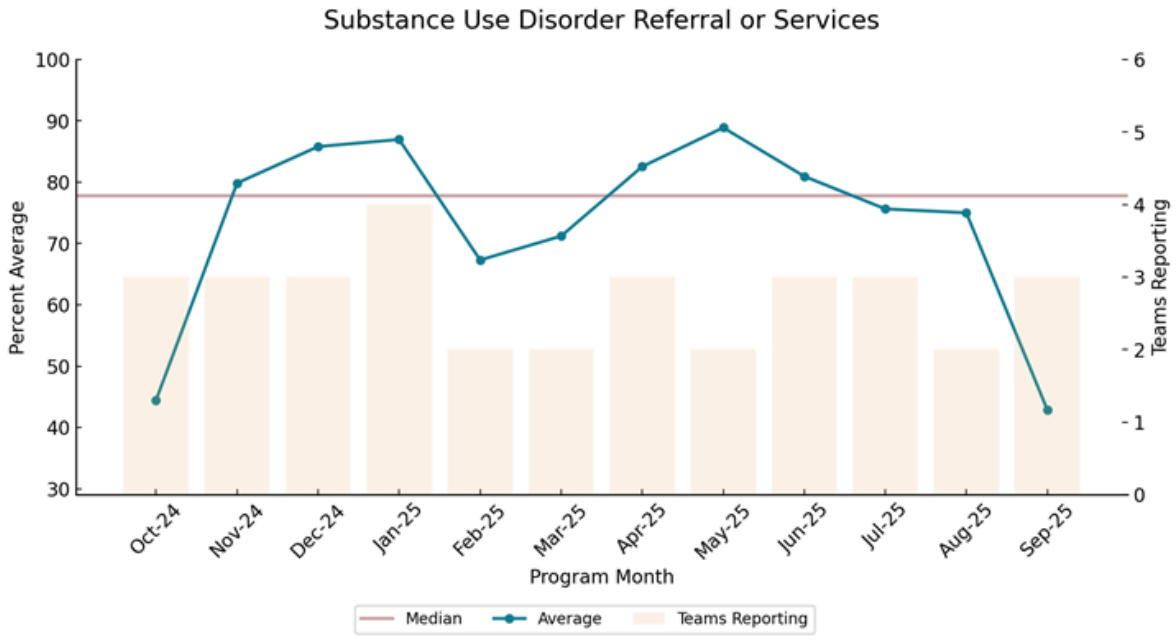
Results

Outcome Measures

Four outcome measures were collected across the 6 participating facilities to measure the impact of LINK interventions. Outcome measures included the percentage of patients with SUD or PMHC that received or were referred to supportive services, length of stay for substance exposed newborns and percentage of substance exposed newborns discharged to either birth parent. Results for each measure are summarized below.

Outcome Measure #1:

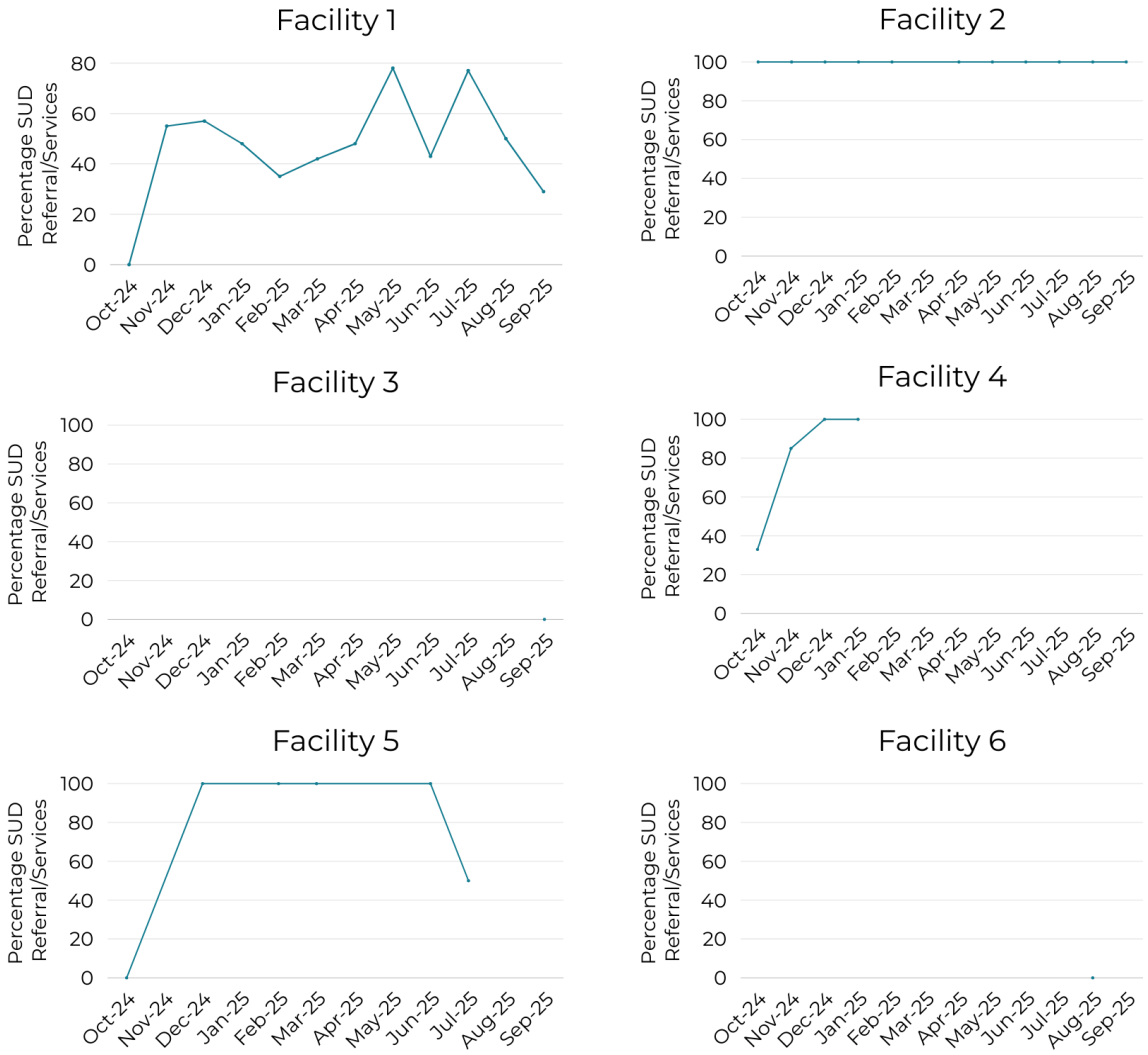
Aggregate Percent with Substance Use Disorder (SUD) Referral or Services



Reporting Period	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025
%	44.4	79.9	85.8	87.0	67.3	71.2	82.5	89.0	81.0	75.6	75.0	42.9
SUD Referrals or Services	9	42	33	16	10	15	13	17	16	22	9	10
SUD Pregnant/ Postpartum Patients	13	65	56	28	27	34	24	21	24	26	14	22
												Trend

Aggregate Measure Analysis: Similar to mental health referrals or services, the aggregate data for referral to or receipt of services following identification of a substance use disorder show notable variability across the initiative, with performance fluctuating above and below the median and no sustained trend or shift in the process over time. In general, a larger number of SUD pregnant and postpartum patients was associated with better performance, indicating the need for more consistency in the referral process.

Facility Percent Substance Use Disorder (SUD) Referral or Services



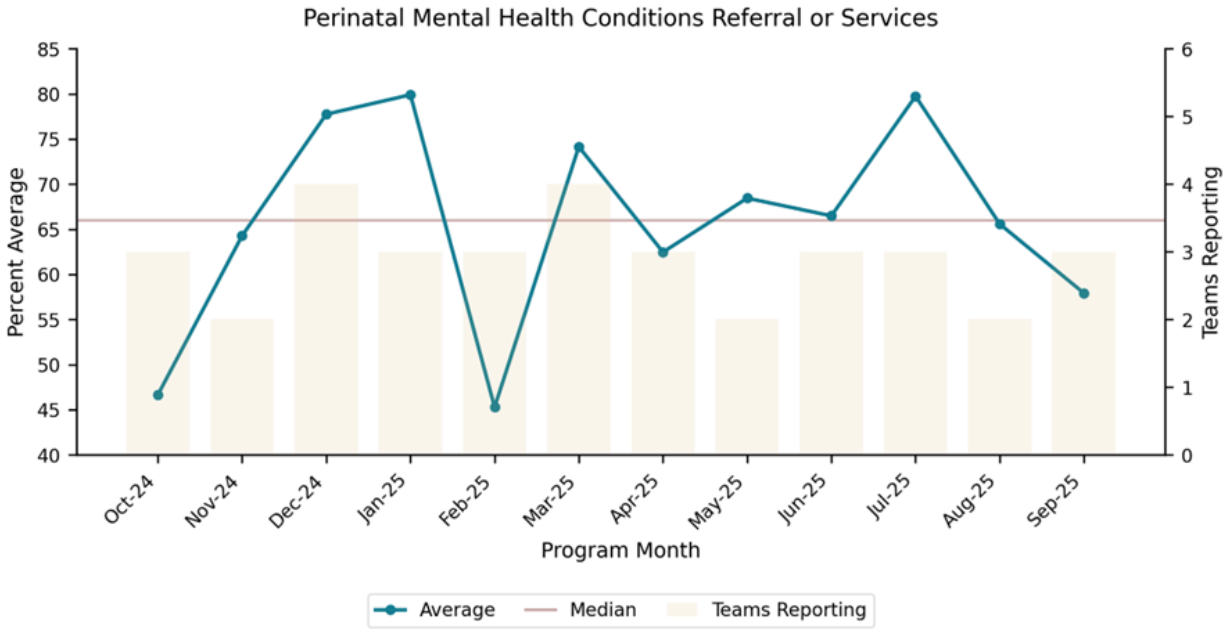
Percent SUD Referral or Services																		
	Facility 1			Facility 2			Facility 3			Facility 4			Facility 5			Facility 6		
	SUD Referrals or Services	Total Pts	%	SUD Referrals or Services	Total Pts	%	SUD Referrals or Services	Total Pts	%	SUD Referrals or Services	Total Pts	%	SUD Referrals or Services	Total Pts	%	SUD Referrals or Services	Total Pts	%
Oct-24	Unable to report			8	8	100%	No Exposures			1	3	33%	0	2	0%	No Exposures		
Nov-24	24	44	55%	1	1	100%	No Exposures			17	20	85%	Unable to report			No Exposures		
Dec-24	31	54	57%	1	1	100%	No Exposures			1	1	100%	1	1	100%	No Exposures		
Jan-25	11	23	48%	3	3	100%	No Exposures			1	1	100%	Unable to report			No Exposures		
Feb-25	9	26	35%	1	1	100%	No Exposures			Unable to report			1	1	100%	No Exposures		
Mar-25	14	33	42%	No Exposures			No Exposures			Unable to report			1	1	100%	No Exposures		
Apr-25	10	21	48%	2	2	100%	No Exposures			Unable to report			Unable to report			No Exposures		
May-25	14	18	78%	3	3	100%	No Exposures			Unable to report			Unable to report			Unable to report		
Jun-25	6	14	43%	9	9	100%	No Exposures			Unable to report			1	1	100%	Unable to report		
Jul-25	10	13	77%	11	11	100%	No Exposures			Unable to report			1	2	50%	Unable to report		
Aug-25	5	10	50%	4	4	100%	No Exposures			Unable to report			Unable to report			Unable to report		
Sep-25	4	14	29%	6	6	100%	0	2	0%	Unable to report			Unable to report			Unable to report		

Facility Specific Measure Analysis

Review of the small multiple charts indicates that the smaller facilities consistently report high performance. Other sites show greater variation or intermittent reporting, likely reflecting differences in referral workflows, access to treatment resources, staffing capacity, or the impact of small denominators.

Outcome Measure #2:

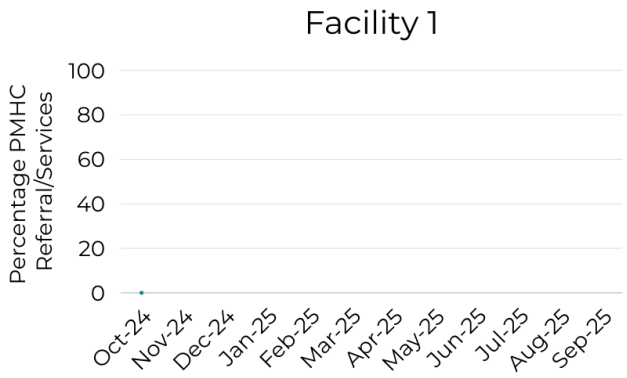
Aggregate Percent with Perinatal Mental Health Conditions Referral or Services

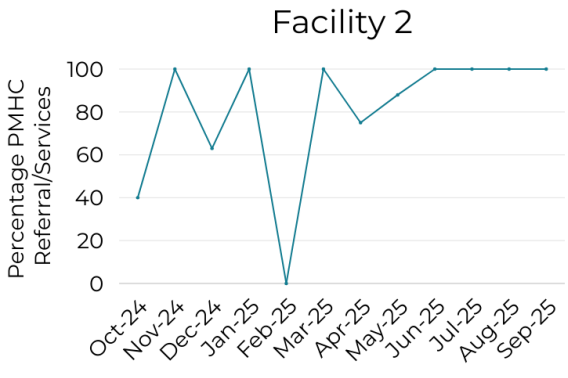


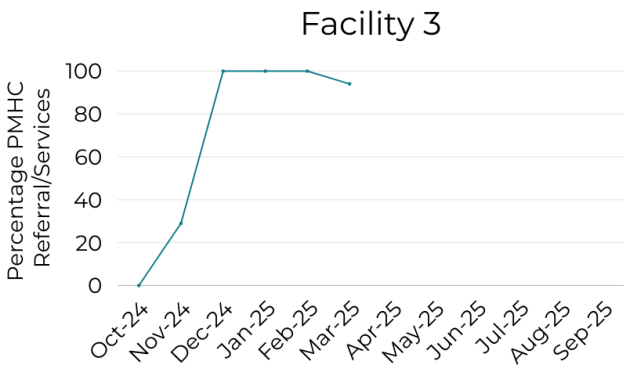
Reporting Period	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025
%	46.67	64.28	77.76	79.92	45.3	74.16	62.48	68.46	66.5	79.76	65.59	57.93
PMHC Referrals or Services	4	7	67	53	37	85	46	49	27	27	26	31
PMHC Pregnant/ Postpartum Patients	10	12	123	103	91	143	94	93	73	61	79	81

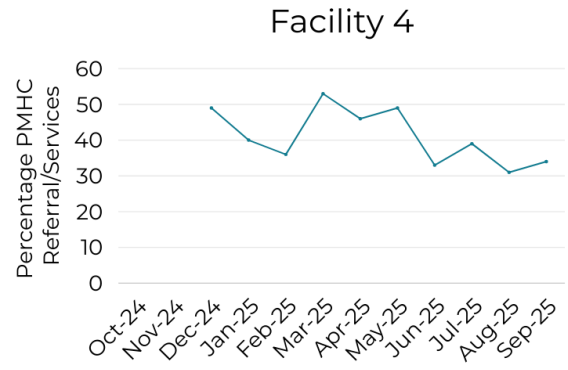
Aggregate Measure Analysis: Aggregate data for referral to or receipt of services following identification of a perinatal mental health condition show considerable month-to-month variability, with performance fluctuating above and below the median and no sustained upward trend over time. This suggests that referral processes are not yet consistently implemented across all participating sites.

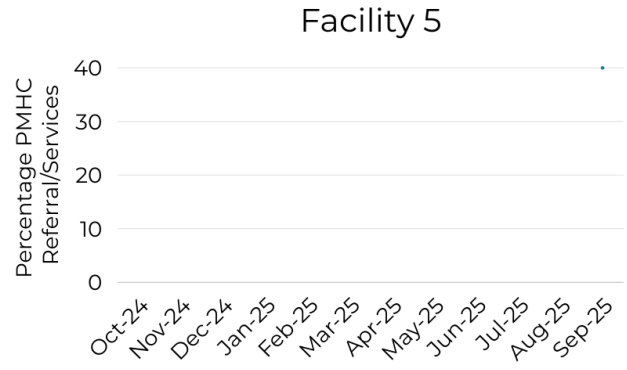
Facility Percent Perinatal Mental Health Conditions (PMHC) Referral or Services

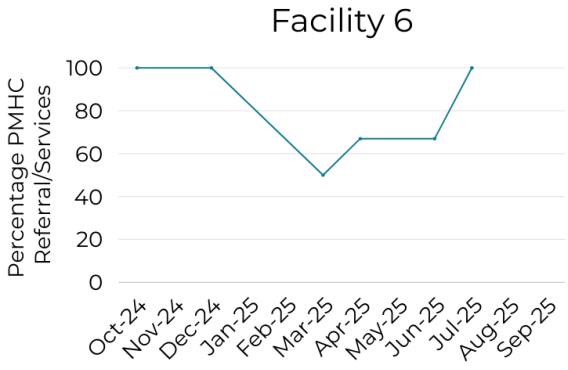












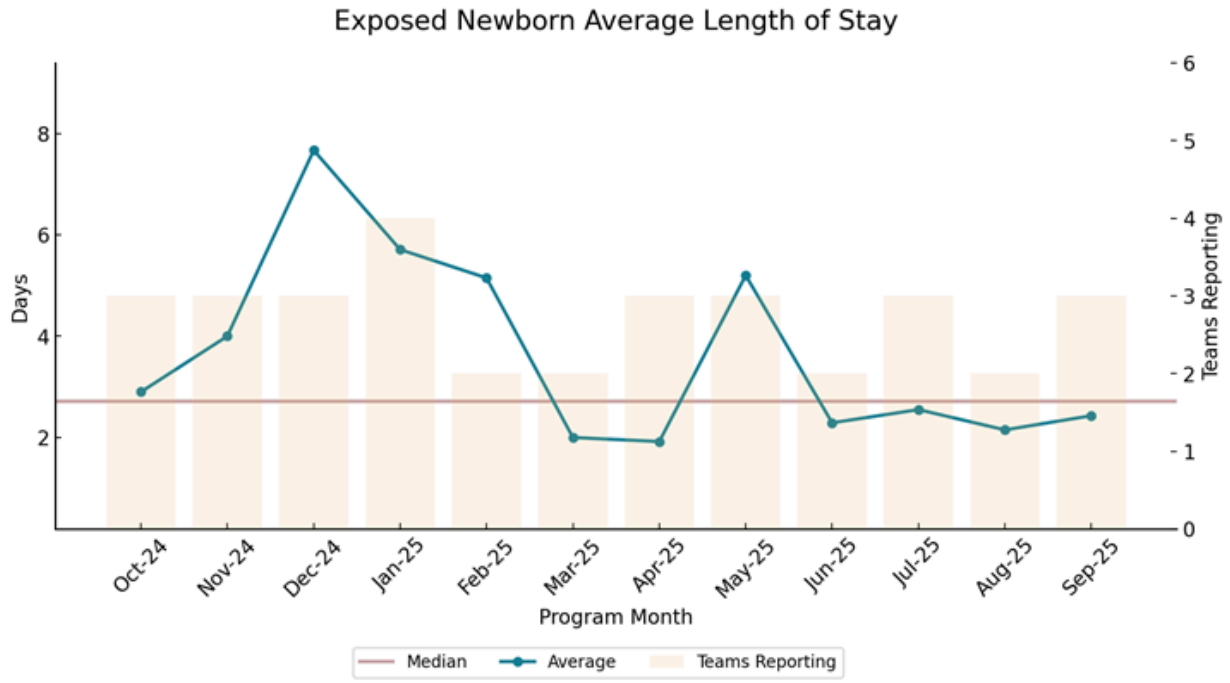
Percent PMHC Referral or Services																		
	Facility 1			Facility 2			Facility 3			Facility 4			Facility 5			Facility 6		
	PMHC Referrals or Services	Total Pts	%	PMHC Referrals or Services	Total Pts	%	PMHC Referrals or Services	Total Pts	%	PMHC Referrals or Services	Total Pts	%	PMHC Referrals or Services	Total Pts	%	PMHC Referrals or Services	Total Pts	%
Oct-24	No Exposures			2	5	40%	0	3	0	Did not report			No Exposures			2	2	100%
Nov-24	No Exposures			5	5	100%	2	7	29%	Did not report			No Exposures			Did not report		
Dec-24	No Exposures			5	8	63%	11	11	100%	50	103	49%	No Exposures			1	1	100%
Jan-25	No Exposures			8	8	100%	12	12	100%	33	83	40%	No Exposures			Did not report		
Feb-25	No Exposures			0	4	0%	9	9	100%	28	78	36%	No Exposures			Did not report		
Mar-25	No Exposures			6	6	100%	16	17	94%	62	118	53%	No Exposures			1	2	50%
Apr-25	No Exposures			6	8	75%	Did not report			38	83	46%	No Exposures			2	3	67%
May-25	No Exposures			7	8	88%	Did not report			42	85	49%	No Exposures			Did not report		
Jun-25	No Exposures			3	3	100%	Did not report			22	67	33%	No Exposures			2	3	67%
Jul-25	No Exposures			4	4	100%	Did not report			22	56	39%	No Exposures			1	1	100%
Aug-25	No Exposures			2	2	100%	Did not report			24	77	31%	No Exposures			Did not report		
Sep-25	No Exposures			5	5	100%	Did not report			24	71	34%	2	5	40%	Did not report		

Facility Specific Measure Analysis

Site-level review reveals that smaller facilities consistently report high referral rates, often near 100%. In contrast, larger volume sites demonstrate greater variability, likely reflecting differences in referral workflows, access to behavioral health resources, staffing capacity, or the impact of small denominators.

Outcome Measure #3:

Exposed Newborn Average Length of Stay (Days)

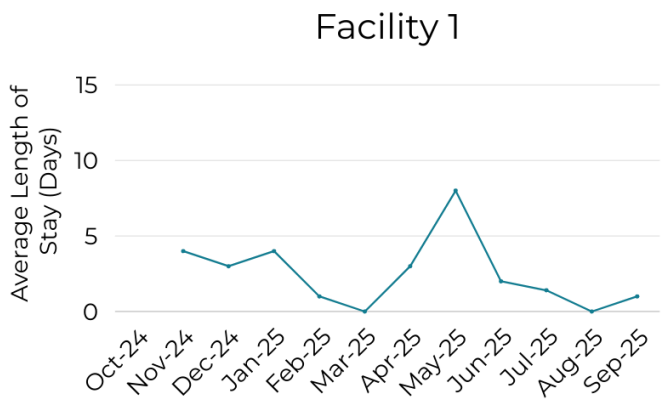


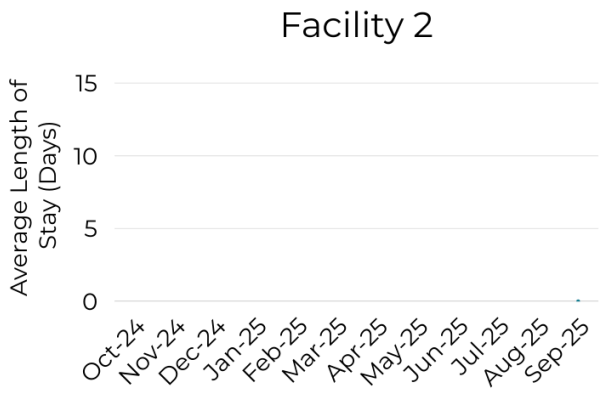
Reporting Period	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025
Average (Days)	2.9	4	7.67	5.71	5.15	2	1.92	5.2	2.29	2.55	2.15	2.43

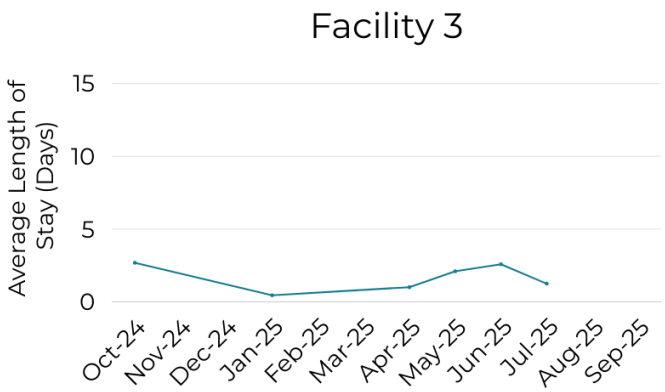
Trend

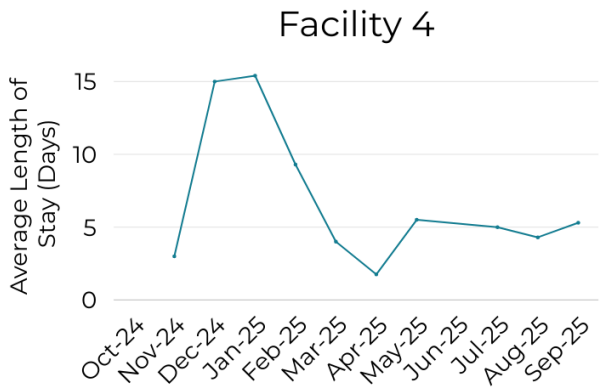
Aggregate Measure Analysis: Aggregate data for average length of stay among exposed newborns show considerable variability early in the initiative, followed by shorter lengths of stay that stabilized later in the reporting period. After an initial peak in late 2024, the average length of stay decreases and remains closer to or below the median for much of the remainder of the program, suggesting overall improvement and increased consistency over time. Data beginning in March 2025 suggests a shift in the process which would represent a strong signal of improvement.

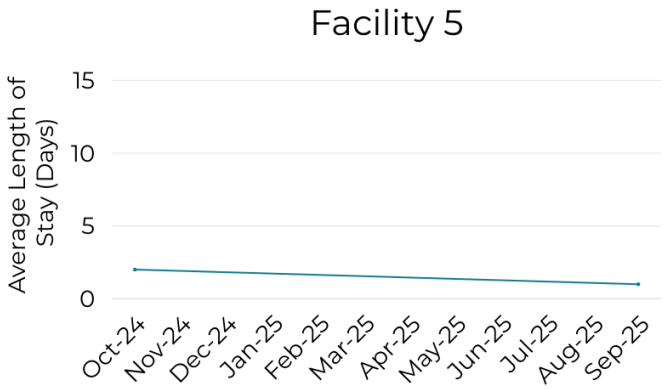
Facility Percent Exposed Newborn Average Length of Stay (Days)

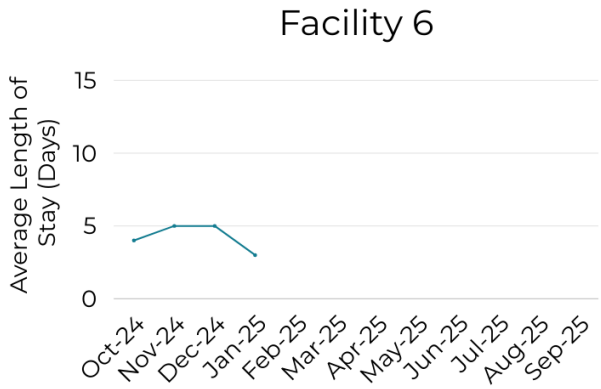












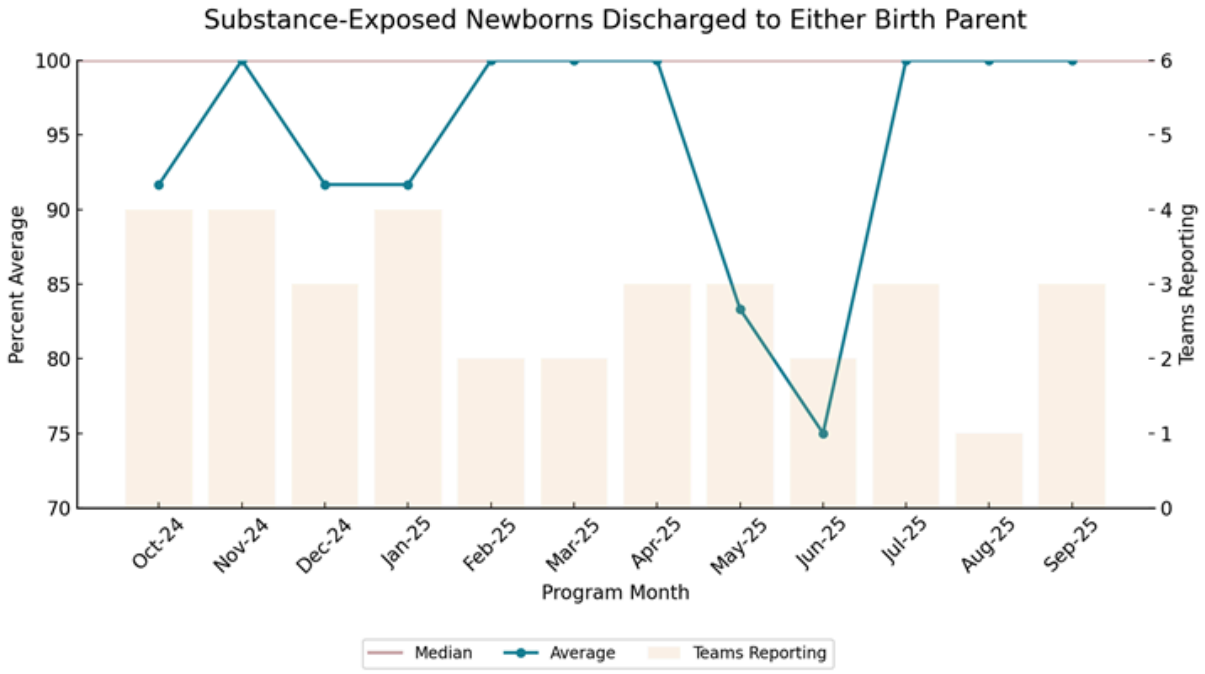
Exposed Newborn Average Length of Stay (Days)						
	Facility 1	Facility 2	Facility 3	Facility 4	Facility 5	Facility 6
	Average Length of Stay (Days)	Average Length of Stay (Days)	Average Length of Stay (Days)	Average Length of Stay (Days)	Average Length of Stay (Days)	Average Length of Stay (Days)
Oct-24	Did not report	No Exposures	2.69	Did not report	2	4
Nov-24	4	No Exposures	Did not report	3	No Exposures	5
Dec-24	3	No Exposures	Did not report	15	No Exposures	5
Jan-25	4	No Exposures	0.45	15.4	No Exposures	3
Feb-25	1	No Exposures	Did not report	9.3	No Exposures	Did not report
Mar-25	0	No Exposures	Did not report	4	No Exposures	Did not report
Apr-25	3	No Exposures	1.01	1.75	No Exposures	Did not report
May-25	8	Did not report	2.1	5.5	No Exposures	Did not report
Jun-25	2	Did not report	2.58	No Exposures	No Exposures	Did not report
Jul-25	1.4	Did not report	1.25	5	No Exposures	Did not report
Aug-25	0	Did not report	Did not report	4.3	No Exposures	Did not report
Sep-25	1	Did not report	Did not report	5.3	1	Did not report

Facility Specific Measure Analysis

Site-level analysis showed variation across facilities; two facilities consistently reported data for this measure throughout the program, while other sites were either unable to report or did not have reportable cases. As a result, these two facilities disproportionately influence the aggregate trends. Although this reflects strong and sustained performance at these sites, it highlights the importance of reviewing facility-level data to better understand differences in implementation, identify opportunities for targeted support, and ensure that aggregate results accurately reflect performance across the broader cohort.

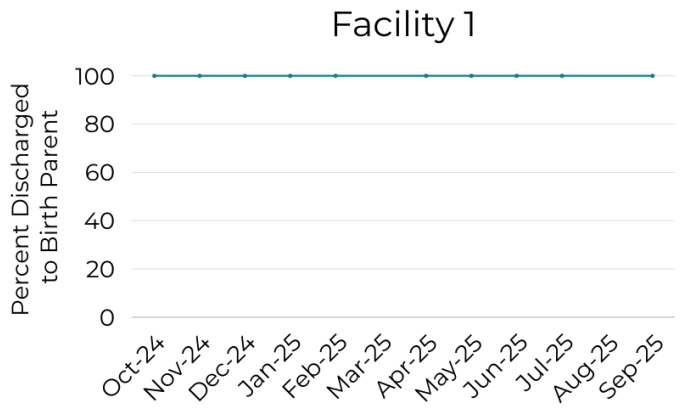
Outcome Measure #4:

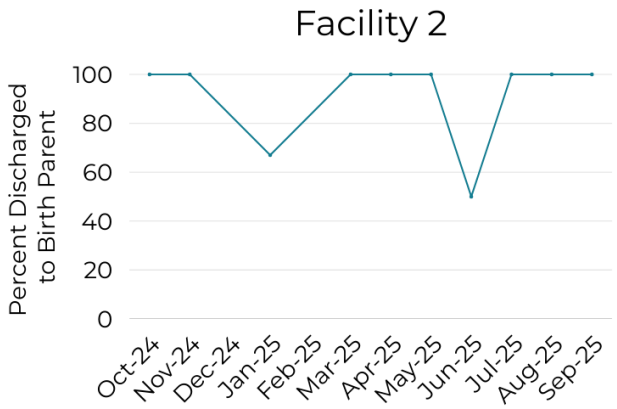
Aggregate Percent of Substance-Exposed Newborns Discharged to Either Birth Parent

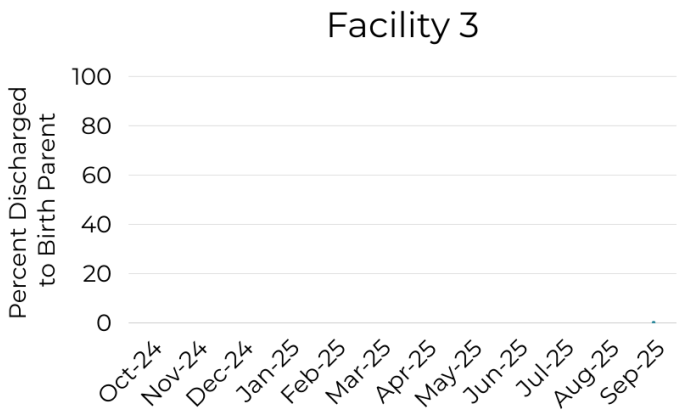


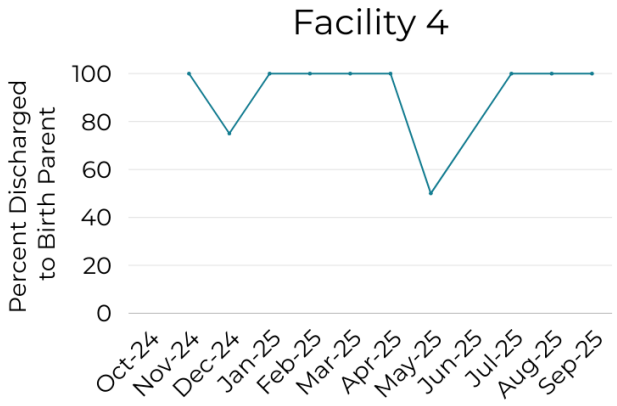
Reporting Period	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025
%	91.7	100	91.7	91.7	100	100	100	83.3	75	100	100	100
Exposed in utero discharged to birth parent	14	7	5	12	7	8	7	3	2	7	2	5
Total exposed in utero	15	7	6	13	7	8	7	4	3	7	3	5

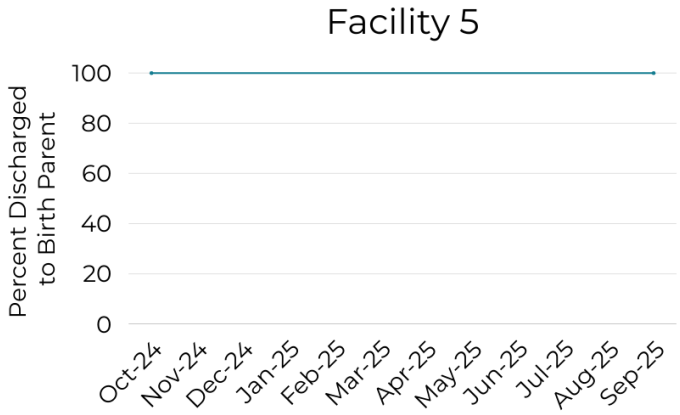
Facility Percent Substance-Exposed Newborns Discharged to Either Birth Parent

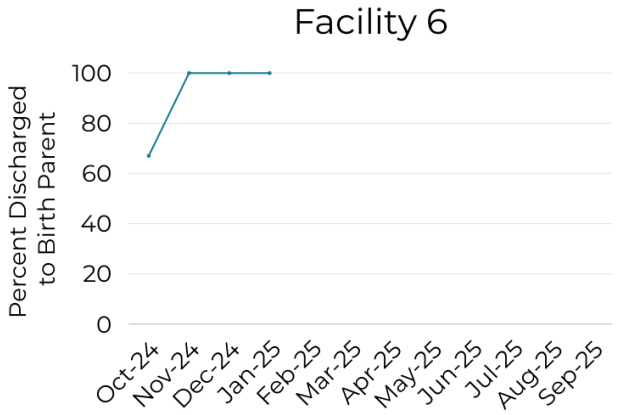












Percent Substance-Exposed Newborns Discharged to Either Birth Parent																		
	Facility 1			Facility 2			Facility 3			Facility 4			Facility 5			Facility 6		
	Discharged to Birth Parent	Total Pts	%	Discharged to Birth Parent	Total Pts	%	Discharged to Birth Parent	Total Pts	%	Discharged to Birth Parent	Total Pts	%	Discharged to Birth Parent	Total Pts	%	Discharged to Birth Parent	Total Pts	%
Oct-24	8	8	100%	3	3	100%	No Exposures			Did not report			1	1	100%	2	3	67%
Nov-24	1	1	100%	1	1	100%	No Exposures			2	2	100%	No Exposures			3	3	100%
Dec-24	1	1	100%	No Exposures			No Exposures			3	4	75%	No Exposures			1	1	100%
Jan-25	3	3	100%	2	3	67%	No Exposures			6	6	100%	No Exposures			1	1	100%
Feb-25	1	1	100%	No Exposures			No Exposures			6	6	100%	No Exposures			Did not report		
Mar-25	No Exposures			1	1	100%	No Exposures			7	7	100%	No Exposures			Did not report		
Apr-25	1	1	100%	2	2	100%	No Exposures			4	4	100%	No Exposures			Did not report		
May-25	1	1	100%	1	1	100%	No Exposures			1	2	50%	No Exposures			Did not report		
Jun-25	1	1	100%	1	2	50%	No Exposures			No Exposures			No Exposures			Did not report		
Jul-25	2	2	100%	1	1	100%	No Exposures			4	4	100%	No Exposures			Did not report		
Aug-25	No Exposures			3	3	100%	No Exposures			3	3	100%	No Exposures			Did not report		
Sep-25	1	1	100%	1	1	100%	No Exposures			3	3	100%	1	1	100%	Did not report		

Measure Analysis

The aggregate results for this measure show that 7 of the twelve data points are 100%. Two of the reporting facilities report 100% of newborns exposed in utero were discharged to one of the birth parents. Variability in this measure is due to the small number of newborns exposed in utero.The team-level small multiples reveal substantial clustering at 100 percent, with many teams consistently reporting that all newborns are discharged to either birth parent every month. Depending on the county in the state, the birthing facility may have less influence over this measure than other measures in the project.

Teams find it hard to learn about their performance when it is always 100%. As a result, supplementing the current metric with a “rare event” measure would provide additional insight by focusing on the infrequent occurrences of alternative discharge dispositions. Such an approach would better capture meaningful variation across teams and over time, and would support more actionable improvement and interpretation of performance.

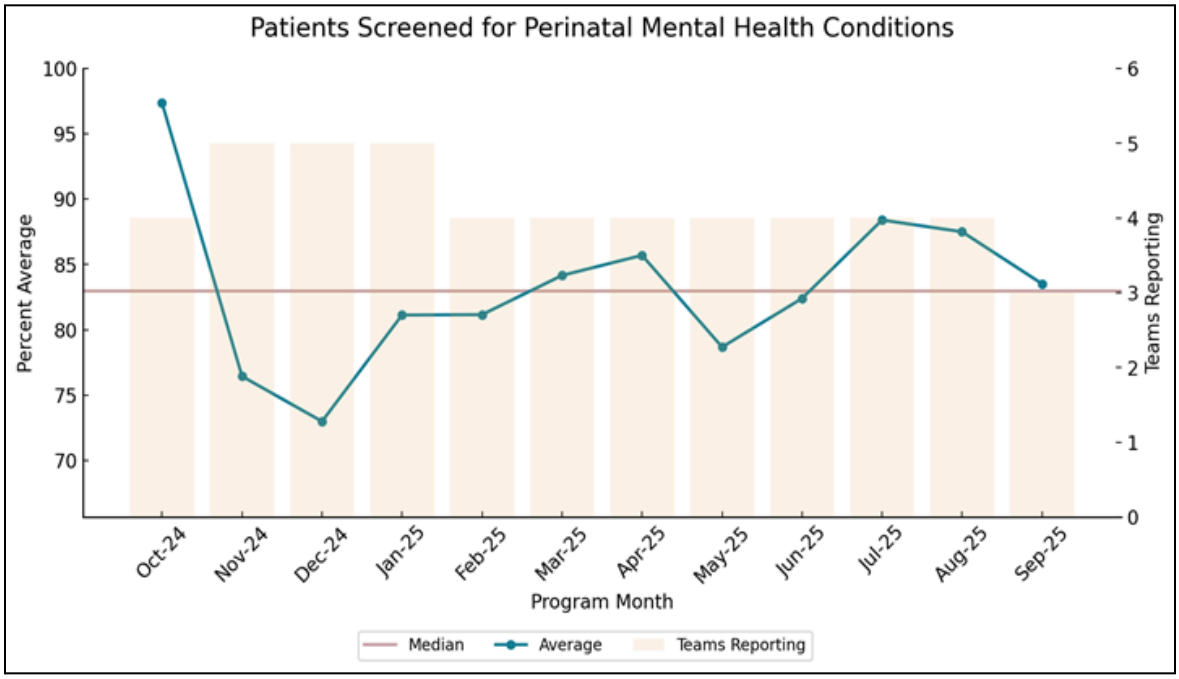
Process Measures

To determine the effectiveness of the LINK initiative, participating facilities collected data on screening, referral and follow-up of patients experiencing perinatal mental health conditions and substance use disorders. To effectively measure the impact of quality initiatives, initial process

measures were collected to ensure reliability and consistency of key clinical practices necessary to achieve the initiative's aim. The process measures utilized in the LINK initiative examined the percentage of patients who were screened for Perinatal Mental Health Conditions (PMHC) or Substance Use Disorders (SUD).

Process Measure #1:

Aggregate Percent Screened for Perinatal Mental Health Conditions (PMHC)

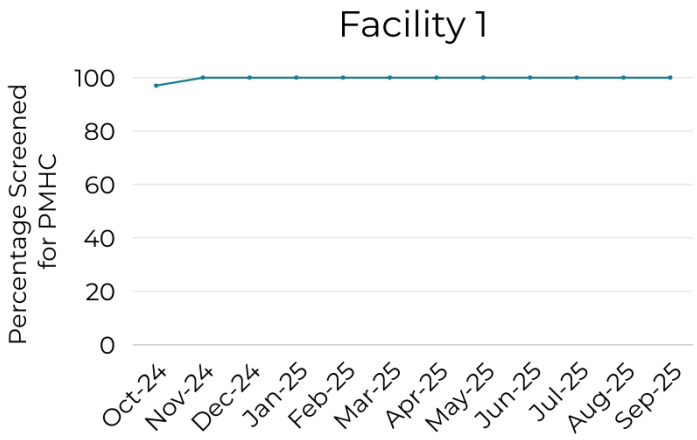


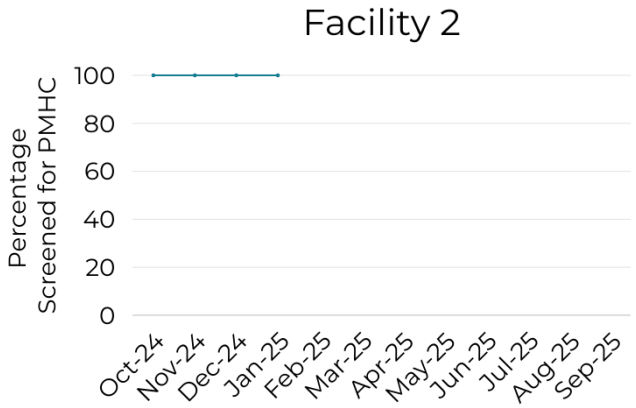
Reporting Period	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025
%	97.4	76.4	73.0	81.1	81.2	84.2	85.7	78.7	82.4	88.4	87.5	83.5
PMCH Screenings	146	214	256	235	189	224	227	198	214	279	215	232
Pregnant/ Postpartum Patients	149	307	338	313	280	268	270	282	283	323	276	260

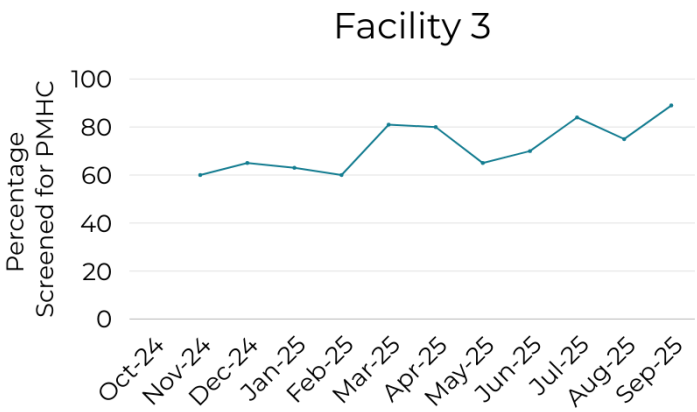
Trend

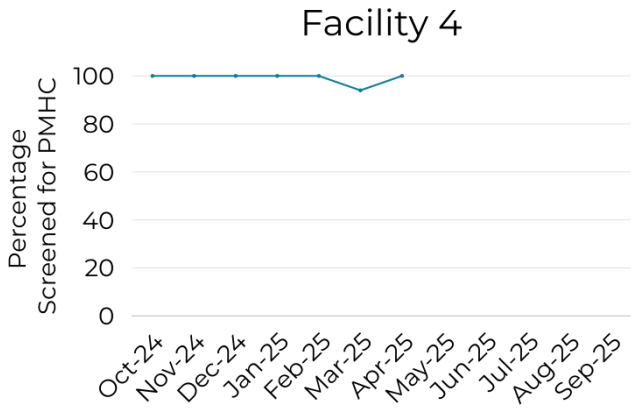
Aggregate Measure Analysis: From December 2024 through April 2025, the aggregate data show five consecutive data points trending upward - toward 100%, reflecting improvement, The data from May 2025- September suggests a new average level of improvement and sustained performance across most of the reporting period.

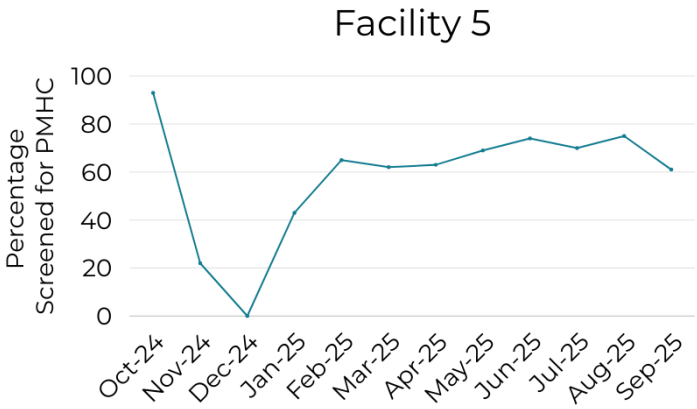
Facility Specific PMHC Screening Percentages

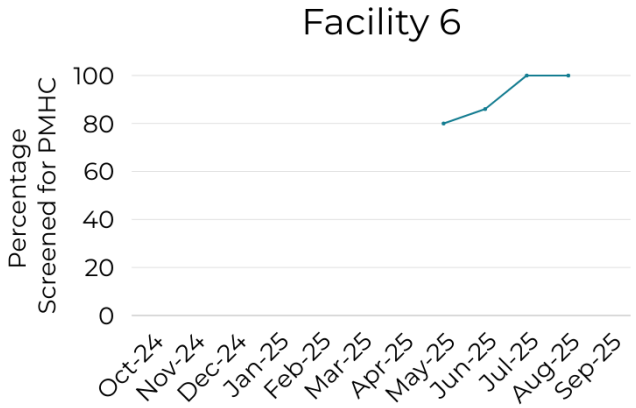












Patients Screened for Perinatal Mental Health Conditions (PMHC)																		
	Facility 1			Facility 2			Facility 3			Facility 4			Facility 5			Facility 6		
	PMHC Screenings	Total Pts	%	PMHC Screenings	Total Pts	%	PMHC Screenings	Total Pts	%	PMHC Screenings	Total Pts	%	PMHC Screenings	Total Pts	%	PMHC Screenings	Total Pts	%
Oct-24	57	59	97%	55	55	100%	Did not report			21	21	100%	13	14	93%	Did not report		
Nov-24	22	22	100%	54	54	100%	129	215	60%	7	7	100%	2	9	22%	Did not report		
Dec-24	45	45	100%	52	52	100%	137	211	65%	22	22	100%	0	8	0%	Did not report		
Jan-25	32	32	100%	63	63	100%	125	199	63%	12	12	100%	3	7	43%	Did not report		
Feb-25	43	43	100%	Did not report			124	208	60%	9	9	100%	13	20	65%	Did not report		
Mar-25	38	38	100%	Did not report			162	200	81%	16	17	94%	8	13	62%	Did not report		
Apr-25	43	43	100%	Did not report			163	203	80%	16	16	100%	5	8	63%	Did not report		
May-25	33	33	100%	Did not report			148	226	65%	Did not report			9	13	69%	8	10	80%
Jun-25	42	42	100%	Did not report			146	208	70%	Did not report			14	19	74%	12	14	86%
Jul-25	55	55	100%	Did not report			194	232	84%	Did not report			14	20	70%	16	16	100%
Aug-25	26	26	100%	Did not report			174	232	75%	Did not report			9	12	75%	6	6	100%
Sep-25	43	43	100%	Did not report			178	199	89%	Did not report			11	18	61%	Did not report		

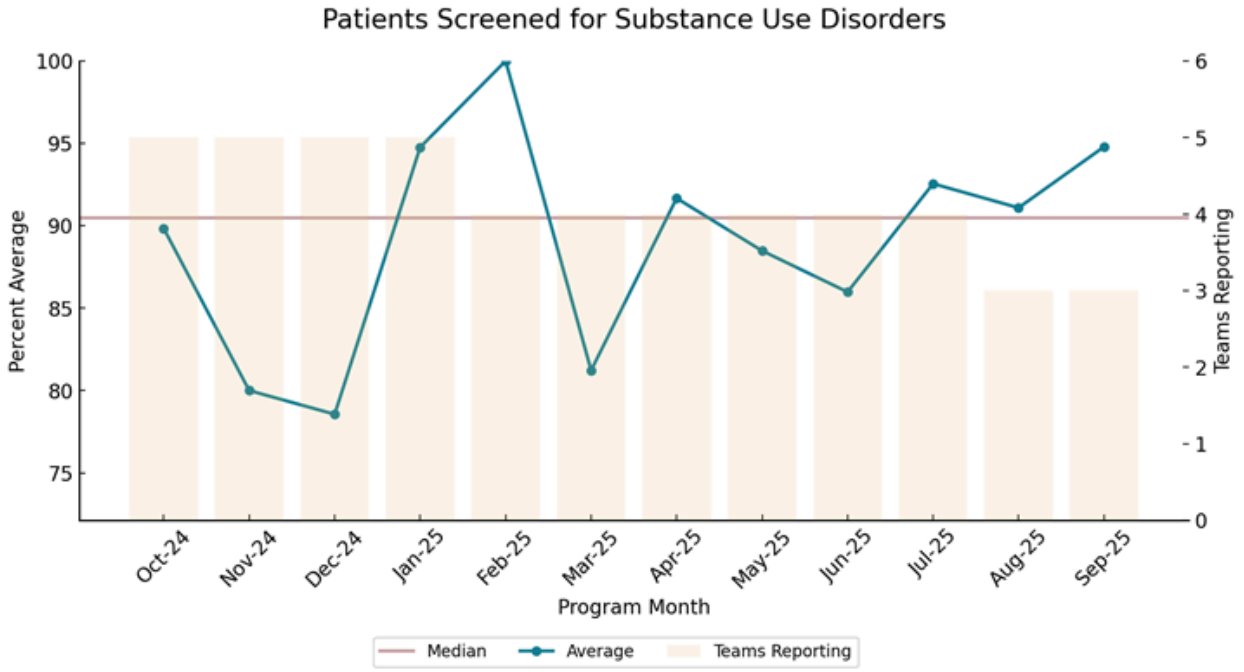
Facility Specific PMHC Screening Measure Analysis

Individual teams reported facility-specific PMHC screening data, visualized in the above chart. Each participating facility in the chart includes the number of PMHC screenings conducted, the total number of pregnant and postpartum patients, and the corresponding PMHC screening percentage.

Examination of the small multiple charts provides additional insight, indicating that three teams consistently reported values at or near 100% and therefore exerted a substantial influence on the overall aggregate trend. Consequently, the aggregate measure largely reflects the performance of these high-performing teams and partially obscures variability among the remaining sites. Notably, facility 3 and 5 demonstrate meaningful improvement over time, suggesting ongoing strengthening and increased consistency of screening protocols across participating facilities.

Process Measure #2:

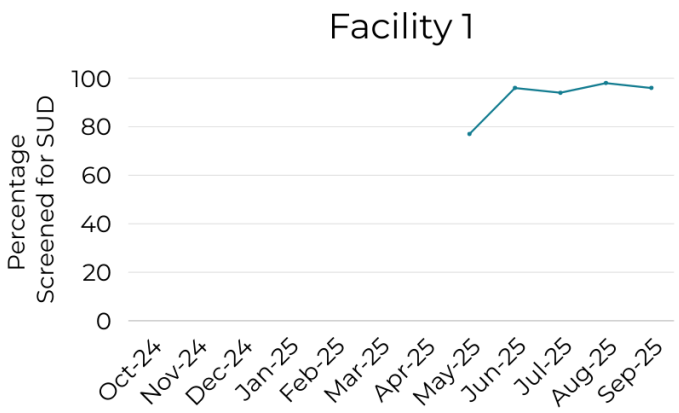
Aggregate Percent Screened for Substance Use Disorder (SUD)

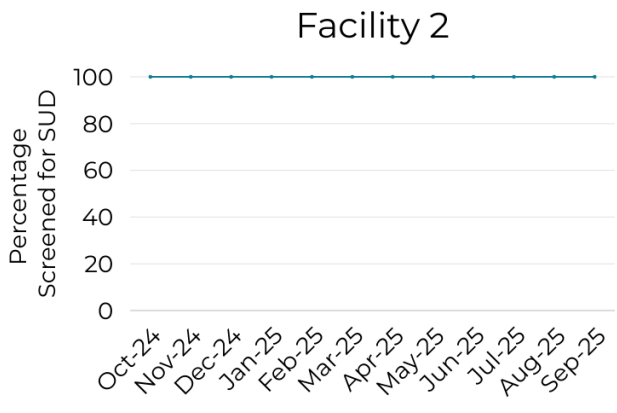


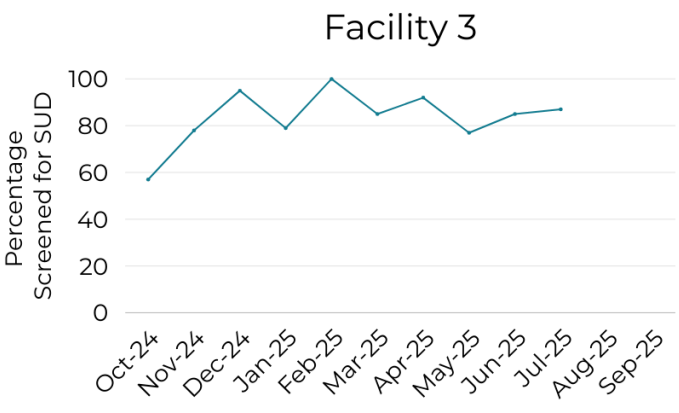
Reporting Period	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025
%	89.6	80.0	78.6	94.8	100	81.2	91.7	88.5	86.0	92.6	91.1	94.8
SUD Screenings	150	99	136	122	86	71	76	230	265	303	263	249
Pregnant/ Postpartum Patients	158	108	146	128	86	81	79	285	282	322	270	260

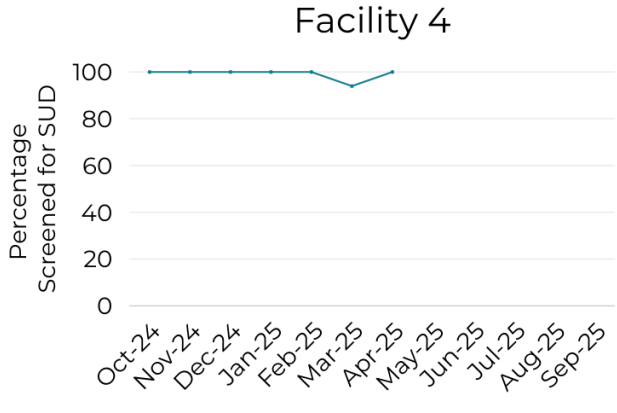
Aggregate Measure Analysis: The aggregate data for this measure exhibit substantial month-to-month variability over the course of the initiative, with fluctuations above and below the median that do not suggest a consistent or sustained trend over time. The number of teams reporting also affected the data. Improved data reporting in the sustaining the gains periods will promote better understanding of the system performance. The last 5 months of data are promising, as the variation appears to be narrowing and portends a stable improvement.

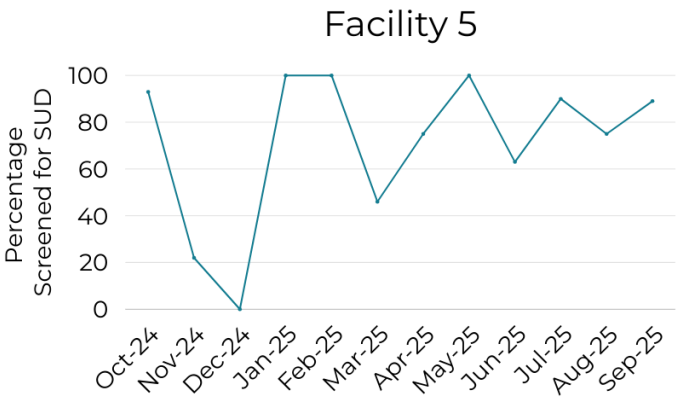
Facility Percent Screened for Substance Use Disorder (SUD)

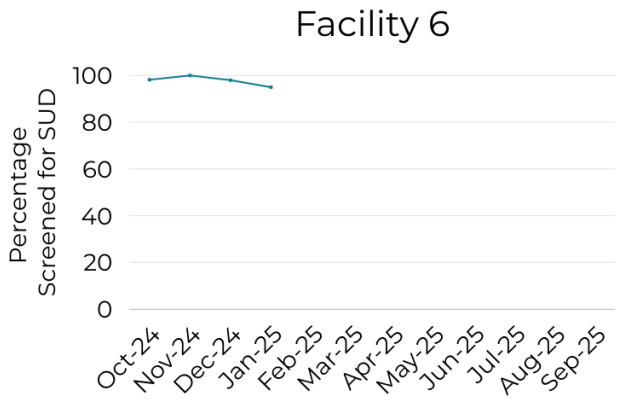












Patients Screened for Substance Use Disorders (SUD)																		
	Facility 1			Facility 2			Facility 3			Facility 4			Facility 5			Facility 6		
	SUD Screenings	Total Pts	%	SUD Screenings	Total Pts	%	SUD Screenings	Total Pts	%	SUD Screenings	Total Pts	%	SUD Screenings	Total Pts	%	SUD Screenings	Total Pts	%
Oct-24	Did not report			59	59	100%	8	14	57%	16	16	100%	13	14	93%	54	55	98%
Nov-24	Did not report			29	29	100%	7	9	78%	7	7	100%	2	9	22%	54	54	100%
Dec-24	Did not report			45	45	100%	18	19	95%	22	22	100%	0	8	0%	51	52	98%
Jan-25	Did not report			32	32	100%	11	14	79%	12	12	100%	7	7	100%	60	63	95%
Feb-25	Did not report			43	43	100%	14	14	100%	9	9	100%	20	20	100%	Did not report		
Mar-25	Did not report			38	38	100%	11	13	85%	16	17	94%	6	13	46%	Did not report		
Apr-25	Did not report			43	43	100%	11	12	92%	16	16	100%	6	8	75%	Did not report		
May-25	174	226	77%	33	33	100%	10	13	77%	Did not report			13	13	100%	Did not report		
Jun-25	200	208	96%	42	42	100%	11	13	85%	Did not report			12	19	63%	Did not report		
Jul-25	217	232	94%	55	55	100%	13	15	87%	Did not report			18	20	90%	Did not report		
Aug-25	228	232	98%	26	26	100%	Did not report			Did not report			9	12	75%	Did not report		
Sep-25	190	199	96%	43	43	100%	Did not report			Did not report			16	18	89%	Did not report		

Facility Specific Measure Analysis

Closer examination of the small multiple charts provides important additional context. Similar to patterns observed for screening for perinatal mental health conditions, a subset of facilities consistently performed at a very high level, frequently reporting values at or near 100%. These high-performing sites exert a disproportionate influence on the aggregate average, pulling overall performance upward and partially obscuring variability among other facilities. While some sites demonstrate stable, high-functioning screening processes, others show more pronounced fluctuations, suggesting differences in workflow consistency, demand, and data capture.

Midpoint & Post-Program Evaluation Results

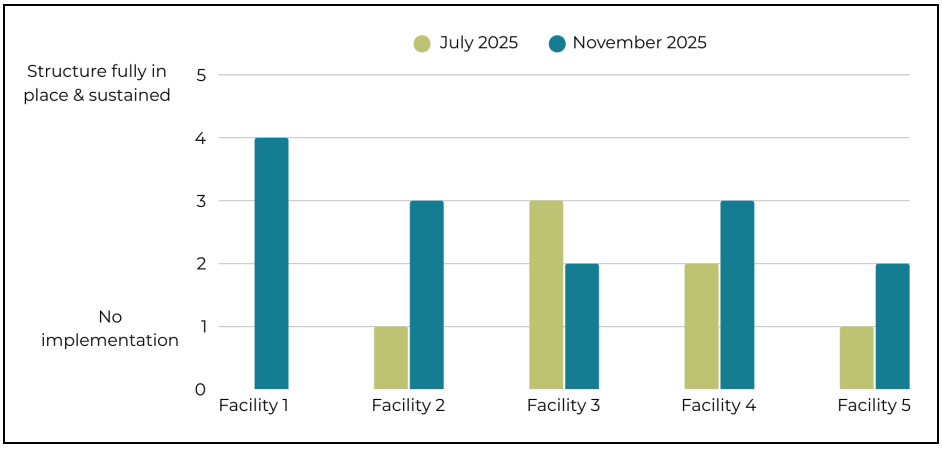
As part of MNPQC's action to capture qualitative feedback, each facility was asked to complete evaluation surveys during the middle and end of the LINK initiative to measure perceived improvement in the implementation of processes related to SUD and PMHC patient care. The evaluation survey included nine questions on a Likert scale of 1-5, where 1 indicated that implementation had not yet begun and 5 indicated that the structure was fully in place and sustained. Survey questions were adapted from the AIM "Care for Pregnant and Postpartum People with Substance Use Disorder Patient Safety Bundle" Core Data Collection Plan. The first survey was implemented in July 2025, with the end-of-program survey offered in November 2025. Four participating facilities completed both evaluations, with 1 facility completing only the November 2025 survey, and 1 facility failing to complete either.

The nine questions in the evaluation surveys aimed to measure standard work processes related to SUD and PMHC diagnosis and treatment. The questions included:

1. Has your hospital established a multidisciplinary workgroup of inpatient and outpatient providers that meets regularly to identify and implement best practices on issues related to pregnancy and the postpartum period that cross the continuum of care?
2. Has your hospital created a comprehensive list of community resources, customized to include resources relevant for pregnant and postpartum people, that will be shared with all postpartum inpatient nursing units and outpatient OB sites?
3. Does your facility have a written assessment and response protocol for perinatal mental health conditions that is tiered based on illness severity and risk of harm?
4. Has your facility developed/curated patient education materials on urgent postpartum warning signs that align with culturally and linguistically appropriate standards?
5. Has your facility shared with all its affiliated prenatal care sites a validated screening tool for diagnosis of PMHC?
6. Has your department established a standardized process to conduct debriefs with patients after a severe event?
7. Has your hospital implemented post-delivery and discharge pain management prescribing guidelines for routing vaginal and cesarean births focused on limiting opioid prescriptions
8. Has your hospital implemented specific pain management and opioid prescribing guidelines for patients with a diagnosis of opioid use disorder?
9. Has your hospital shared with all its prenatal care sites validated verbal screening and follow-up tools for diagnosis of opioid use and substance use disorders

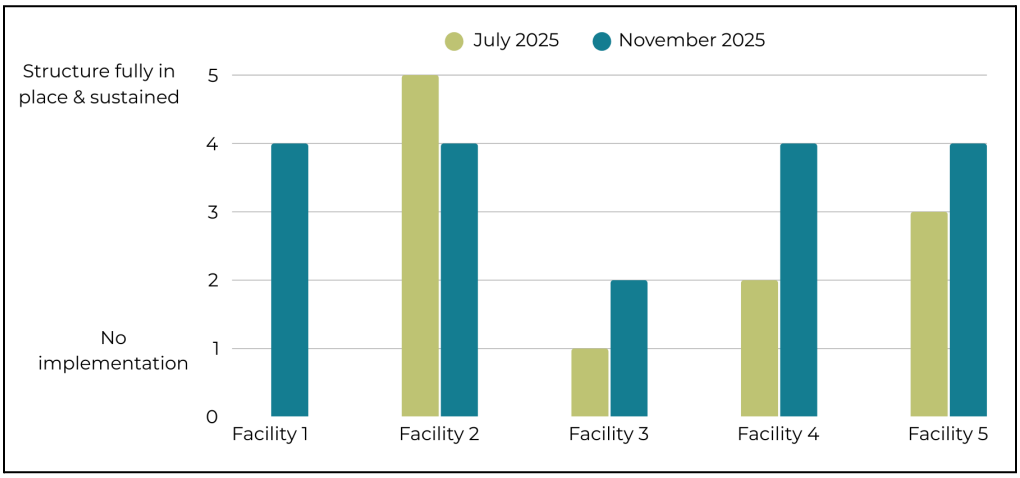
Notable improvement was determined in three of these evaluation questions and are discussed in the following section:

Question 3: Does your facility have a written assessment and response protocol for perinatal mental health conditions that is tiered based on illness severity and risk of harm?



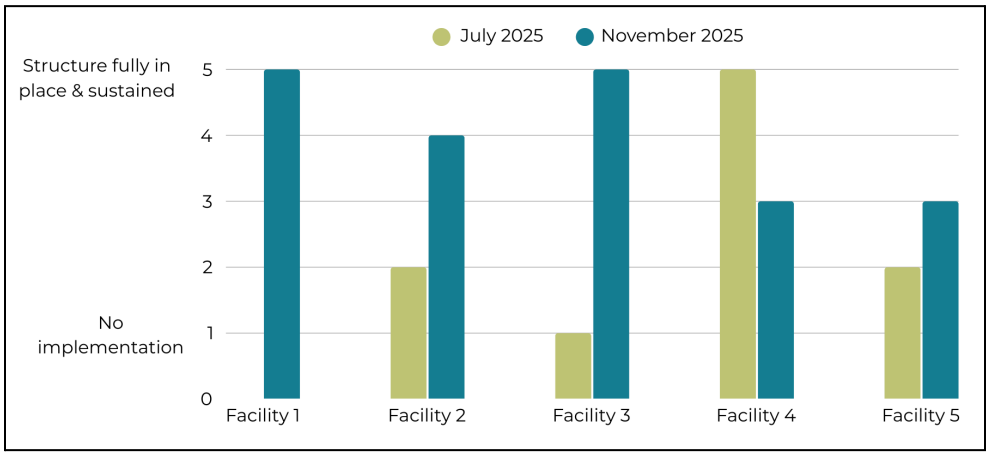
On this measure, Facilities 4 and 5 initially indicated no, or unstable, implementation of a written assessment and response protocol for perinatal mental health conditions. The implementation of this tool increased by one Likert scale level within five months of LINK program participation for each facility, as noted by their November 2025 response. Similarly, Facility 2 saw an increase of 2 Likert scale levels for this measure, indicating no initial implementation of written assessments and response protocols, to incorporating these tools within standard work in November 2025. Facility 3 saw a one-level decrease in the perceived strength of their written assessment implementation. This decline in implementation may be due to multiple factors, including, but not limited to, developing a stronger understanding of the evaluation question through participation in the LINK program or the lack of definition of each response option on the Likert scale. Overall, 3 out of 4, or 75%, of facilities with data from both time points indicated improvement in the implementation of written assessments and response protocols for perinatal mental health conditions, with a median Likert scale increase of 1 level.

Question 4: Has your facility developed/curated patient education materials on urgent postpartum warning signs that align with culturally and linguistically appropriate standards?



In July 2025, Facility 3 had not implemented a standard practice of creating patient education materials regarding postpartum warning signs that were culturally and linguistically appropriate. By November 2025, Facility 3's perceived progress on this measure increased by 1 Likert score level, indicating progress towards enacting this measure. Facility 5 also saw a 1 Likert score level increase between both timepoints, but had started at a higher level of implementation than Facility 3. Facility 5 therefore indicated progress towards sustained facility changes. Facility 4 saw a 2 level Likert score increase, suggesting greater improvement towards the creation and dissemination of culturally appropriate patient education materials. Finally, Facility 2 began the program indicating a sustained structure for this measure, yet rated themselves lower in November 2025. This may be due to confounding factors or improving their understanding of the evaluation question. 75% of facilities with both timepoints of data noted improvement in this measure, with a median Likert level increase of 1.5.

Question 6: Has your department established a standardized process to conduct debriefs with patients after a severe event?



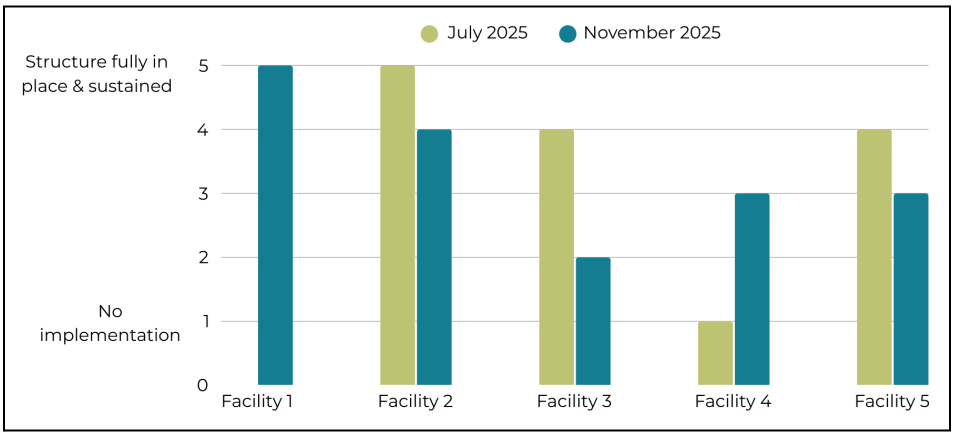
Facilities 2,3 and 5 all indicated no, to low levels, of the implementation of a standardized patient debrief process after a severe event in July 2025. However, each of these teams demonstrated progress on this measure, with Likert score increases of 2, 4 and 1 levels, respectively. This marks progress towards fully implementing and sustaining standardized patient debrief processes after severe events. Facility 4 initially scored their process as fully implemented and sustained, but rated themselves 2 levels lower in November 2025. This may be due to identifying barriers and gaps in care through participation in the LINK program. 75% of facilities with two timepoints of data indicated progress on this measure, with a median Likert score increase of 1.5 levels.

Another evaluation question, regarding the use of validated screening tools for diagnosis of PMHC yielded notable results:

Question 5: Has your facility shared with all its affiliated prenatal care sites a validated screening tool for diagnosis of PMHC?

For this measure, 75% of teams indicated a decrease in progress, with a median Likert score decrease of 1 level. Validated screening tools for diagnosis of PMHC was a large focus of the

LINK initiative, as various experts in the field were invited to present on the topic. The decrease in perceived progress in this measure is likely due to an increase in understanding of validated screening tools, and a newfound awareness that current practices are not fully meeting patient needs. Although this measure does not indicate progress towards the standardization of using validated screening tools for PMHC diagnosis, it does highlight a potential knowledge gap within participating facilities. Future programming is recommended to further identify barriers in this process, and work towards standardizing best practices.



By asking teams to complete two evaluations, progress towards the AIM Data Center's structural measures could be defined. Teams saw the greatest progress in standardizing the use of written assessments for PMHC, creation of culturally appropriate patient materials and standardizing patient debriefs post adverse events. The evaluations also highlighted potential areas of growth, including the standardization of PMHC validated screening tools. Overall, these results can be used to measure the impact of the LINK program, while identifying avenues for future quality improvement efforts.The remaining evaluation results can be visualized in figures 1 - 5 in the Appendix.

Summary of Results

Over the course of the LINK Initiative, one aggregate outcome measure demonstrated meaningful improvement. A trend in improvement is defined as 5 or more consecutive data points moving in the same direction. This was noted in the aggregate length of stay of exposed newborns measure. Between December 2024 and April 2025, length of stay for exposed newborns decreased from 7.67 to 1.92 days, indicating improvement in the aggregate. While causation cannot be confirmed, factors that contributed to this trend may be participation in the LINK initiative and incorporating quality improvement changes and strategies into standard work. Other contextual factors that may have contributed to the decrease in length of stay, include greater consistency in care practices, more efficient discharge planning, improved interdisciplinary coordination, and increased staff experience over time. Changes in patient mix or acuity, seasonal variation, concurrent QI programs, improved access to outpatient or community-based supports, and greater consistency in documentation and length-of-stay definitions may have also influenced the aggregate trend.

When interpreting these results, it is important to acknowledge extenuating circumstances that may have impacted capacity to fully engage in quality improvement initiatives. During the span of the LINK Initiative, facilities were uniquely impacted by a federal government shutdown and continuing to mitigate the effects of COVID-19. Both contribute to staffing challenges, which can impact the ability to engage with new programs. Therefore, when summarizing the results, engaging with the context of external events is important in order to fully understand the environments in which healthcare staff were operating in. Therefore, while only one trend of improvement was identified through the LINK Initiative, extenuating factors may have influenced success. With continued data collection, trends may emerge as pre-existing barriers are mitigated.

Conclusions/Recommendations

Over the course of the LINK Initiative, participating teams implemented validated screening tools, introduced new flowsheets in EPIC to streamline screening documentation processes, began offering virtual inpatient consultations for PMHC, and developed a community resource list to provide postpartum patients at discharge. These interventions were driven by education provided at Action Period Calls and advice from quality improvement subject matter expert faculty and coaches. While few trends were identified within the data, meaningful new processes were implemented at facility sites that may drive improvement in future months. The Link Initiative itself was 12 months, and with 5 months of consecutive improving data needed to define a trend, there was little room for error when trialing new processes through PDSA cycles. As facilities enter the maintenance phase and continue to improve upon these processes, additional data trends may be identified.

In future iterations of similar quality improvement initiatives, the following strategies are recommended:

- **Analyze Both Aggregate and Individual Data:** Due to the differing volumes of patients served at each facility, aggregate trends were driven by larger facilities. When analyzing data, reporting on both the aggregate and individual facility data is essential in order to fully contextualize the impact of programming.

- **Foster More Complete Monthly Data Collection:** Facilities were asked to report on four measures, two process and 2 outcome measures, monthly. Due to capacity and reporting limitations, unreported data became an issue. In future programs, increasing the training and capacity building of facilities to encourage timely data collection would provide more information regarding the impact of PDSA cycles.

- **Adapt the ‘Percent of Infants Discharged to Either Birth Parent’ Measure:** In future SUD in pregnancy and postpartum quality improvement initiatives, it is recommended

that the measure of percent of infants discharged to either birth parent be used as a balancing, rather than outcome, measure.The goal of this measure is to encourage appropriate discharge, which may not always result in discharge to either birth parent. If a child is not being discharged to either birth parent, in depth case reviews are recommended to understand the variables contributing to the situation, rather than defining it as a good or poor performance measure.

- **Consider Different Measures for Low Volume Facilities:** Additionally, when developing measures, it is recommended to consider what metrics are meaningful for small hospitals and birthing facilities. Due to low volume of patients and adverse events in such facilities, metrics such as cases between failures may be more informative of improvement than attribute measures.

- **Clearly Define Evaluation Questions and Expectations:** To collect more informative data regarding program experience, it is also recommended that evaluation questions are properly explained and understood by participating facilities. As teams progress through the program, their understanding of the work deepens, and they are more likely to accurately assess their progress than at the beginning of the program. Therefore, clearly defining measures and goals of a project prior to participants taking the first survey is recommended for data validity across multiple evaluations.

Funder Acknowledgement

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Appendix

Figure 1: Evaluation Questionnaire, Question 1

Has your hospital established a multidisciplinary workgroup of inpatient and outpatient providers that meets regularly to identify and implement best practices on issues related to pregnancy and the postpartum period that cross the continuum of care?

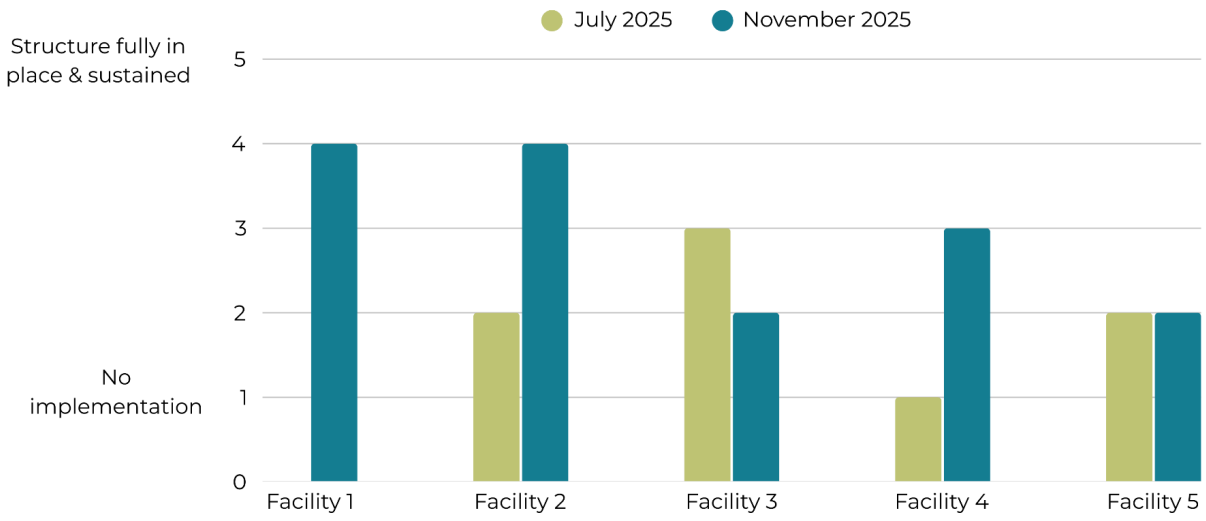

Figure 2: Evaluation Questionnaire, Question 2

Has your hospital created a comprehensive list of community resources, customized to include resources relevant for pregnant and postpartum people, that will be shared with all postpartum inpatient nursing units and outpatient OB sites?

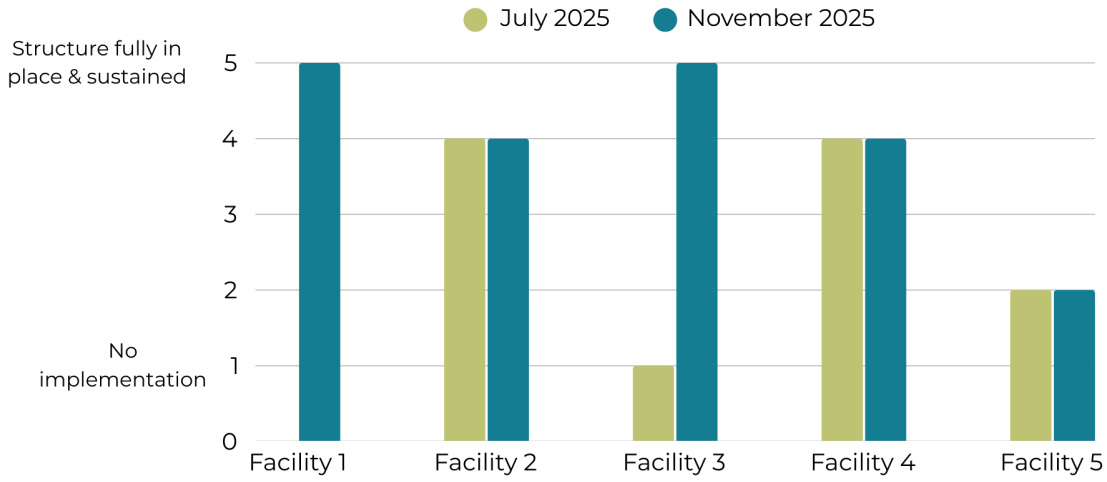

Figure 3: Evaluation Questionnaire, Question 7

Has your hospital implemented post-delivery and discharge pain management prescribing guidelines for routing vaginal and cesarean births focused on limiting opioid prescriptions

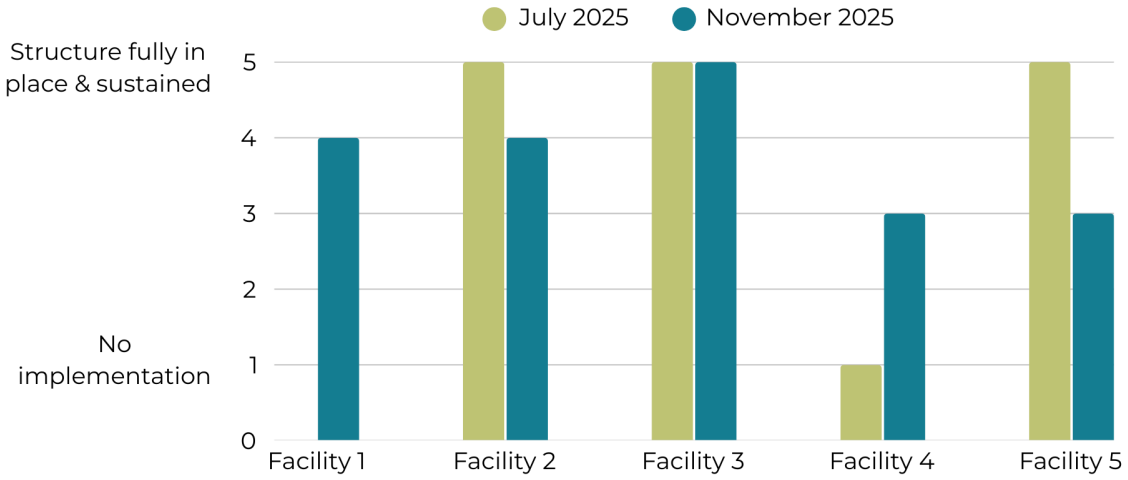

Figure 4: Evaluation Questionnaire, Question 8

Has your hospital implemented specific pain management and opioid prescribing guidelines for patients with a diagnosis of opioid use disorder?

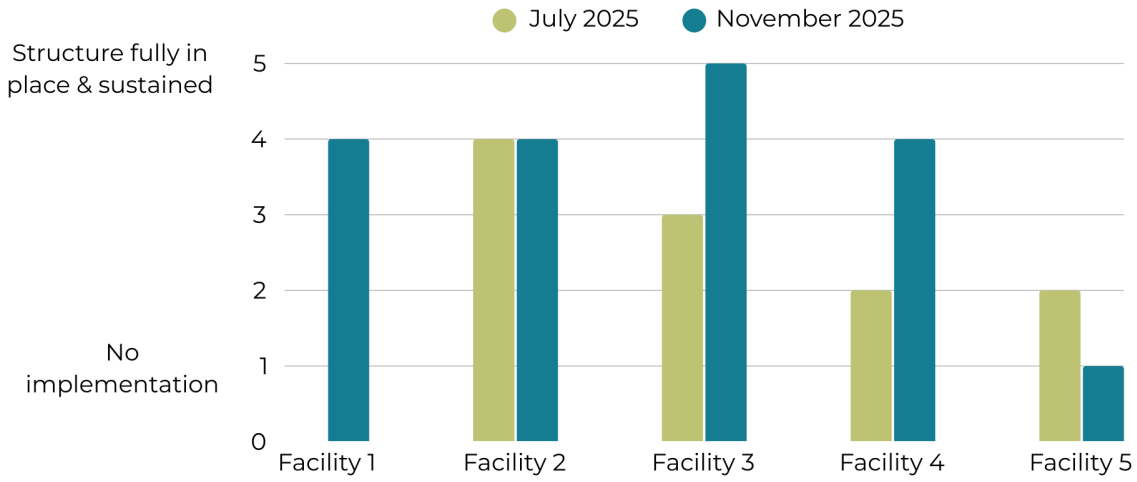

Figure 5: Evaluation Questionnaire, Question 9

Has your hospital shared with all its prenatal care sites validated verbal screening and follow-up tools for diagnosis of opioid use and substance use disorders