PNQIN Perinatal Mental Health Conditions (PMHC) Bundle Toolkit

Version 4, July 2025

For the most up to date version and resources please refer to the Perinatal Mental Health Conditions Bundle Website.

Table of Contents

Dear valued colleagues,

From the Perinatal-Neonatal Quality Improvement Network of Massachusetts (PNQIN)'s Alliance for Innovation on Maternal Health (AIM) Initiative to improve maternal outcomes, we are excited to introduce this toolkit for the Perinatal Mental Health Conditions (PMHC) Bundle. Perinatal mental health conditions (PMHC) are a leading overall and preventable cause of pregnancy-related morbidity and mortality. **PMHC are the most common pregnancy complication**, with data showing up to **1 and 5 perinatal individuals are affected**. Further, evidence states that **rates of PMHC are higher in those experiencing racism and socioeconomic disadvantage**, yet screening and treatment rates in these populations is lower. When not addressed, PMHC have been shown to lead to negative outcomes for the birthing people who are diagnosed with them, their offspring, families, and their communities.

PNQIN launched the Massachusetts AIM Initiative in 2019 to answer a national call to prioritize and improve maternal health and safety for all. In October 2024, the Massachusetts Department of Public Health released a Data Brief, "An Assessment of Severe Maternal Morbidity (SMM) in Massachusetts: 2011-2022", which highlights the continued need for support for mental health and substance use disorders, such as opioid use disorder (OUD), in the peripartum period: For every 10,000 deliveries, there were 127.6 deliveries with SMM among those with OUD and 112.1 deliveries among those with a mental health (MH) disorder, making **people experiencing OUD and MH disorders the two most common populations experiencing SMM between 2011 and 2022 in MA**.

Maternal death is a tragic event, and although total numbers are small, there is no acceptable number. Investigators estimate that **more than 80% of all maternal deaths are preventable and up to 100% of deaths caused by perinatal mental health conditions are entirely preventable**. Eliminating preventable deaths and using disaggregated data to eliminate inequities in maternal outcomes is a public health priority. Further, **untreated mood and anxiety disorders are costly**, in a 2017 study reviewing US births, overall cost is estimated at $14 billion USD from conception to 5 years postpartum, **averaging $31,800 per mother-infant dyad**.

The National Center for Health Statistics reported the maternal death rate for 2022 as 22.3 deaths per 100,000 live births, a decrease from 32.9 deaths per 100,000 live births in 2021. Maternal mortality rates decreased significantly for Black, White, and Hispanic women, however the mortality rate for Black women at 49.5 deaths per 100,000 live births, is still significantly higher than that for White (19.0), Hispanic (16.9), and Asian (13.2) women. We still have a long way to go!

We hope that you find this toolkit helpful for the implementation of the Perinatal Mental Health Conditions Bundle in your institution. Standardization of health care delivery, collaborative quality improvement, and listening to birthing people have been shown to improve outcomes and quality of care for all.

Thank you for participating in this important patient safety initiative and thereby helping PNQIN to ensure that Massachusetts is a state where every birthing family receives safe, high quality, and equitable health care.

If you have questions regarding the enclosed materials or suggestions for additional materials to include, please contact us at PNQINAdmin@pnqinma.org.

Sincerely,
The PNQIN Perinatal Mental Health Conditions Bundle Workgroup

Sources:
1. Screening and Diagnosis of Mental Health Conditions During Pregnancy and Postpartum: ACOG Clinical Practice Guideline No. 4. Obstet Gynecol. Jun 1 2023;141(6):1232-1261. doi:10.1097/AOG.0000000000005200
2. Data Brief: An Assessment of Severe Maternal Morbidity in Massachusetts: 2011-2022. 2024:9. October 2024.
3. Hoyert DL. Maternal Mortality Rates in the United States, 2022. 2024:6. May 2024. https://www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc.html
4. Luca DL, Margiotta C, Staatz C, Garlow E, Christensen A, Zivin K, "Financial Toll of Untreated Perinatal Mood and Anxiety Disorders Among 2017 Births in the United States", American Journal of Public Health 110, no. 6 (June 1, 2020): pp. 888-896.
5. Diop H, Declercq ER, Liu CL, et al. Trends and inequities in severe maternal morbidity in Massachusetts: A closer look at the last two decades. PLoS One. 2022;17(12):e0279161. doi:10.1371/journal.pone.0279161

American College of Obstetrics and Gynecology (ACOG) Alliance for Innovation in Maternal Health (AIM) Patient Safety Bundle: Perinatal Mental Health Conditions

AIM
ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

Perinatal Mental Health Conditions

What are AIM Patient Safey Bundles?
A collection of evidence-based best practices developed by experts from many disciplines to address specific conditions in pregnant and postpartum people, especially those which may lead to severe maternal morbidity and mortality. The bundles include action steps and tools, and are built to be adapted to facilities and institutions of all resource levels.

What is the Perinatal Mental Health Conditions (PMHC) Bundle?
The Perinatal Mental Health Conditions Bundle provides a blueprint to improve the quality of care and outcomes for patients with perinatal mental health conditions. This initiative aims to improve the identification and treatment of all perinatal mental health conditions for all patients throughout the entire perinatal period. For the purposes of this bundle, PMHC includes mood, anxiety, and anxiety-related disorders that occur during pregnancy or within one year of delivery, including conditions that may have started prior to conception.

For a full list of conditions, please review page 8 of the AIM PMHC ICD-10 codes list.

Video: Introduction to Perinatal Mental Health Conditions

ACOG AIM Patient Safety Bundle: Perinatal Mental Health Conditions - Links to Materials

Patient Safety Bundle
- Format: PDF
- Content: Describes the primary drivers of changes in quality of care for Perinatal Mental Health Conditions, with review of AIM's "5 Rs" framework:
  - Readiness
  - Recognition & Prevention
  - Response
  - Reporting & Systems Learning
  - Respectful, Equitable & Supportive Care
- This can be used as a high-level summary of the implementation goals for the PMHC Bundle

Element Implementation Details and Guide
- Format: PDF
- Content: Further explores AIM's "5 Rs" Framework by sharing core strategies, aims, implementation phases, and steps to integrate obstetric and mental health care for each of the "Rs" in their framework. This document provides additional context for the Patient Safety Bundle (above)

Implementation Resources
- Format: PDF
- Content: Utilizing the "5 Rs" Framework, this document provides specific resources that correspond to each R and is an adjunct to the bundle and implementation guide noted above. Resources in this document include, but are not limited to, links to toolkits, webpages, publications, and training modules.

Data Collection Plan
- Format: PDF
- Content: This document outlines the structure, process, and outcome measures that we ask hospital teams to submit each month via REDCap to track participation in and implementation of this bundle.

Change Package
- Format: PDF
- Content: This document, developed and published by the Institute of Healthcare Improvement (IHI) and AIM and co-authored by PNQIN's Bundle Lead, Dr. Tiffany Moore Simas, covers the motivation for designing this bundle. More specifically, the Change Package matches resources to "change ideas," which are interventions that are defined to achieve the goal of integrating obstetric and mental health care and is directly aligned with each bundle element.

Learning Modules
- Format: Webpage, e-Modules
- Content: This webpage acts as a landing pad for free e-Modules, hosted by ACOG and Nursegrid that can be completed for CME/CE credit. Modules are hosted by ACOG and Nursegrid and are specific to each AIM Patient Safety Bundle.

PMHC Measures: Overview

These next two pages will serve as a summary of the measures in this bundle.

More detailed information and resources to tackle these measures can be found on pages 9-16.

Structure Measures

1

Workgroup:

Has your site established a multidisciplinary, inpatient-outpatient care coordination workgroup of inpatient and ambulatory 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

Community Resource Inventory:

Has your site created a comprehensive list of community resources, customized to include resources relevant for pregnant and postpartum people, that will be shared with all affiliated inpatient nursing units and ambulatory practices?

3

Assessment & Response Protocol:

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

4

Patient Education Materials:

Has your site identified, developed, or curated patient education materials (that align with culturally and linguistically appropriate standards) on urgent postpartum warning signs?

5

Validated Screening Tools:

Has your site shared validated screening tools for screening of PMHC with all its affiliated inpatient units and ambulatory practices?

PMHC Measures: Overview (continued)

More detailed information and resources to tackle these measures can be found on pages 18-23.

Process Measures

1. Provider and Nursing Education on PMHC
2. Prenatal Screening for PMHC*
3. Inpatient Screening for PMHC*
4. Postpartum Screening for PMHC*
5. Patient Education on PMHC*

Outcome Measure

1. Percent of Pregnant and Postpartum People with PMHC who received or were referred to treatment*

***A Comment on Disaggregation of Data**

As was done in our Equity Bundle, we are asking teams to disaggregate their data by **payor-status**, **language**, and **race/ethnicity**.

We are hoping that by asking teams to do so, we will be able to gain a better understanding of areas to target to improve equity in perinatal mental health care. We have chosen these three categories as there has been ample evidence to show that inequities exist between different subgroups.

Please refer to the "Resources for Implementation" section of this Toolkit for an example on chart sampling.

Structure Measures

Structure Measures

Structure measures are collected to identify whether infrastructure has been developed and implemented in support of the bundle.

AIM utilizes a Likert scale (1-5) to determine the degree of completeness of each structure measure. AIM purposefully left the 2,3,4 values undefined so that hospital teams could determine for themselves where they feel they fall between the outer parameters of "not started" and "fully in place."
PNQIN has developed an Appendix to aid teams with the interpretation of Likert values for this bundle. Note that these interpretations are mere examples and not set definitions.

The following pages will hopefully provide suggestions and instructions on how to tackle the five structure measures in this bundle.

1

Inpatient-outpatient Care Coordination Workgroup:

The workgroup should be multidisciplinary (consisting of inpatient and outpatient providers) and should meet regularly to identify and implement best practices on issues related to pregnancy and the postpartum period that cross the continuum of care. The goal for this structure measure is to create and maintain the workgroup and for the workgroup to help to coordinate the completion of the other PMHC structure measures at your site.

Identifying Invested Parties

1. Identify a co-champion pair (we suggest an OB-physician/midwife and nurse pair)
2. Create a rough aim statement for your project
    a. This will be further modified once your team has been created
    b. Further guidance on how to create an Aim Statement, using the SMARTIE framework, can be found within the "Quality Improvement Resources" section.
3. Think about which systems might be affected by your aim, and why these systems, in particular, might be impacted
4. Identify change agents that include representatives from the systems brainstormed in the previous step, use the CAST framework *(see next page for an example)*

CAST Framework

Champion – individual who believes in change, but may or may not be able to implement change at a unit/hospital level
ex: Junior Physician, Midwife, Patient Partner, L&D Unit Director

Agent** – individual who is responsible for implementing change at a unit/hospital level
ex: Hospital Team Lead

Sponsor – individual with authority who can express, model, and reinforce
ex: Physician Chair, CEO, CNO

Target** – individual to whom change is happening
ex: OBs, L&D nurses, Midwives, Resident Physicians, Anesthesiologist, Patients

**since the aim of this bundle is BIG the agents and targets may change for each individual project (eg. staff education vs collecting self-reported race/ethnicity data)

Example:

- **Champions:** H. Jones, DO, chair of OB & M. Wells, RN, nurse manager
- **Rough aim:** to screen 80% of birthing people for PMHC prior to delivery admission discharge from inpatient obstetrics unit
- **Systems that might be affected by our efforts:**
  - Nursing, physicians, social work, nurse educator, staff educator, medical trainees and students, IT, quality improvement department, pharmacy
- **Invested Parties:**
  - Champion: see above
  - Agent: L&D nurses, resident
  - Sponsor: OBGYN department chair
  - Target: patients, IT, nurses, physicians

Engaging Families and those with Lived and Living Experience

Before Engagement

1. Make a department commitment to including patients and family into the quality improvement work
2. Use data to understand the demographics of patients most severely affected by SMM rates at your institution
3. Develop a mechanism for compensation (can go beyond monetary- may include child care and/or food)
4. Create an outline of expected roles and responsibilities, time commitment, and compensation

Initial Engagement

1. Develop an engagement plan. Examples:
   a. Connect with family or community-based organizations and support groups
   b. Create an interest form for patients and family
2. Create an agreement outlining expectations and confidentiality which both participant and hospital team leader should sign

Sources:

- CPCQC FIRST Program
- Dworetzky, Beth, Clarissa G. Hoover, and Deborah Klein Walker. "Family Engagement at the Systems Level: A Framework for Action." Maternal and Child Health Journal (2023): 1-9.
- ILPQC Patient and Family Engagement Toolkit

Engaging Families and those with Lived and Living Experience (continued)

Continued Engagement

1. Provide mentorship and support
   a. Aim for two or more participants
   b. Utilize organizations like MoMMA's Voice for empowerment training
2. Ensure meeting materials are written in plain language and sent to all participants ahead of time, with ability to add to the agenda
3. Provide options to participate in meetings (eg. Zoom)
4. Maintain open communication to continually assess how the participant is engaged and how to better incorporate them in the core work

Lived Experience Interest Form

Using a paper or online form can be helpful in allowing patients and family to fill out the form and think about the opportunity on their own without feeling coerced.

At the top of the form you can explain who your team is, the time commitment and compensation rate. Also, be explicit if you are trying to engage a patient from a specific population for example: "*We are looking for a patient or a family member of a patient who had a birthing experience in Massachusetts and have a lived/living experience with a PMHC*"

Care Coordination Workgroup Family Consultant Interest Form:

1. Name
2. Email
3. Phone number
4. How would you like to be contacted?
   a. Email
   b. Phone
5. What languages do you speak?
6. What are your pronouns (ex. she/her, he/him, they/them)?
7. Please select what your role is/was during the birthing experience: (check all that apply)
   a. Patient
   b. Family Member
   c. Caretaker
   d. Provider
   e. Other:
8. Why are you interested in joining the Care Coordination Workgroup?
9. Being part of the Care Coordination Workgroup will take about 2.5-4 hours per month. You will be part of the Workgroup for up to 1-year (check all that apply)
   a. I can agree to work on the Care Coordination Workgroup for 1-year (2.5-4hrs/month)
10. Please notify me of other shorter-term projects (variable)
11. Other comments or concerns:

Sources:
- CPCQC FIRST Program
- Dworetzky, Beth, Clarissa G. Hoover, and Deborah Klein Walker. "Family Engagement at the Systems Level: A Framework for Action." Maternal and Child Health Journal (2023): 1-9.
- ILPQC Patient and Family Engagement Toolkit

Creating a Team: Engaging Partners

To engage partners, we recommend utilizing the 7Ps Framework. The 7Ps Framework is designed to be used in patient-centered outcomes research and identifies seven key groups to consider engaging in patient-centered projects in order to maximize the likelihood that interventions are successful and sustainable.

The seven key groups include:

1. patients and the public
2. providers
3. purchasers
4. payers
5. policy makers
6. product makers
7. principal investigators

These groups are further explained in the following table, adapted from Concannan, et al 2012.

The 7Ps Framework:

Category	Description
Patients & The Public	Current and potential consumers of patient-centered health care and population-focused public health, their caregivers, families, and patient and consumer advocacy organizations
Providers	Individuals (e.g., nurses, physicians, mental health counselors, pharmacists, and other providers of care and support services) and organizations (e.g., hospitals, clinics, community health centers, community-based organizations, pharmacies, EMS agencies, skilled nursing facilities, schools) that provide care to patients and populations
Purchasers	Employers, the self-insured, government and other entities responsible for underwriting the costs of health care
Payers	Insurers, Medicare and Medicaid, state insurance exchanges, individuals with deductibles, and others responsible for reimbursement for interventions and episodes of care
Policy Makers	The White House, Department of Health and Human Services, Congress, states, professional associations, intermediaries, and other policy making entities
Product Makers	Drug and device manufacturers
Principal Investigators	Other researchers and their funders

Creating Goals

Goals for the Workgroup should include at least one long-term goal (what you want to accomplish as a result of your quality improvement project) accompanied by the many short-term goals it will take to reach the overall goal.

See the "Quality Improvement Resources" section for further information on how to create and tackle these goals.

Source:
Concannon TW, Meissner P, Grunbaum JA, McElwee N, Guise JM, Santa J, Conway PH, Daudelin D, Morrato EH, Leslie LK. A new taxonomy for stakeholder engagement in patient-centered outcomes research. J Gen Intern Med. 2012 Aug;27(8):985-91. doi: 10.1007/s11606-012-2037-1. Epub 2012 Apr 13. PMID: 22528615; PMCID: PMC3403141.

2

Resource Mapping/ID of Community Resources:

A resource map is a comprehensive list of community resources, updated annually, that includes resources relevant for pregnant and postpartum people. It should include mental health resources as well as OUD/SUD treatment resources and allow for customization based on patient population (e.g., BIPOC, LGBTQIA+, immigrant/migrant, young parents, parents experiencing IVF or infertility, etc.).

The goal for this structure measure is that your institutions' PMHC Care Coordination Working Group create the resource map and share it with all OB and postpartum inpatient nursing units and/or outpatient OB sites.

There are many phenomenal local, state, and national organizations that have compiled extensive collections of resources that are updated on a regular basis. To elevate their efforts, we have linked a number of community resources and resource-pages below to aid in the development of your resource mapping.

MCPAP for Moms Example

- Pregnant and Postpartum People Community Resource Page
  - Community resource page

PNQIN-Compiled Resources

- In an effort to ensure that the resources included in our toolkit are updated in a timely manner, we have decided to host the list of our community resources on our website.
  - PNQIN PMHC Toolkit Resource Page
- Resources compiled in this document include:
  - Provider-facing resources, including, but not limited to:
    - MCPAP Provider Resources
    - Postpartum Support International (PSI) Resources
    - Didactic information from partner organizations including:
      - American Academy of Pediatrics
      - Women's Preventative Services Initiative
      - LactMed - Drugs and Lactation Database
  - Patient-facing resources, including:
    - General Educational Resources
    - Support Groups
    - Information separated by specific populations, including but not limited to:
      - Resources for transgender people
      - Resources for migrant/immigrant parents
      - Resources for parents experiencing IVF or infertility
    - Program listings
      - Home-visiting Programs
      - Treatment Centers (PMHC, SUD)

Resources continued

- **Hotlines**

Hotline	Number	Hours
FOR PATIENTS		
National Suicide Hotline	Call/Text: 988	24/7
National Crisis Text Line	Text: "HOME" to 741741	24/7
Massachusetts Behavioral Health	Call: 1-833-773-2445	24/7
Postpartum Support International (PSI) – National *Free and confidential hotline for those experiencing perinatal mood disorders and their families to get support from fellow parents and/or referral to professionals, support groups, and other resources*	English: - Call/Text: "HELP" to 800-944-4773 Spanish: - Call/Text: "HELP" to 971-203-7773	Call anytime Calls returned by volunteers 8am-11pm EST
Postpartum Support International (PSI) – Massachusetts Warm Line *Free and confidential hotline for those experiencing perinatal mood disorders and their families to get support from fellow parents and/or referral to **local** professionals, support groups, and other resources*	Call/Text: 866-472-1897	**9am-4:30pm Mon-Fri** ***Evening and weekend messages returned within 14hr***
Health Resources and Services Administration (HRSA) – National Maternal Mental Health Hotline *For use by pregnant or recently postpartum birthing people for support from a trained counselor including listening, connection to local support groups and organizations, and referral to healthcare professionals*	Call/Text (English/Spanish): 1-833-TLC-MAMA (1-833-852-6262) *Interpreters available in 60 languages* Deaf/Hard of Hearing (use with TTY): dial 711 then 1-833-852-6262	24/7
William James College Interface Referral Service Helpline *Free and confidential mental health and wellness referral hotline* *For use by the following communities* *Callers will be matched with a licensed mental health provider within 2 weeks on average*	Call toll free: 888-244-6843 Call Local: 617-332-3666	Mon/Wed/Fri 9-5pm Tues/Thurs 8-6pm
Substance Abuse and Mental Health Services Administration (SAMHSA) *Provides 24-hour free and confidential treatment referral and information about mental and/or substance use disorder, prevention, and recovery*	Call (English/Spanish): 800-622-HELP (4357) Telecommunications Device for the Deaf (TDD): 800-487-4889	24/7
National Parents Helpline *Judgement-free, compassionate space for those in need of immediate emotional support from a trained counselor*	Call: 855-427-2736	7am-4pm Mon-Fri
FOR PROVIDERS		
MCPAP for Moms – Provider Hotline	Call: 855-Mom-MCPAP (855-666-6272)	9am-5pm

3

Perinatal Mental Health Assessment & Response Protocol:

The goal for this structure measure is for your Care Coordination Working group to develop and implement a written assessment and response protocol for perinatal mental health conditions that is tiered based on illness severity and risk of harm.

- Resources for developing written assessment and response protocols:
  - Toolkits
    - MCPAP for Moms
      - Obstetric Provider Toolkit
      - Pediatric Provider Toolkit
      - Substance Use Provider Toolkit
    - Lifeline For Moms
      - Lifeline for Moms Toolkits & Apps
    - ACOG Practice Guidelines
      - ACOG Practice Guideline – Screening and Diagnosis
      - ACOG Practice Guideline – Treatment and Management
  - AIM Obstetric Emergency Readiness Resources
    - Perinatal Mental Health Conditions
    - Care for Pregnant & Postpartum People with Substance Use Disorder
    - Reporting and Systems Learning
    - Respectful, Equitable, and Supportive Care
  - Additional Resources:
    - For Primary Care Providers
      - Healthy Mothers, Healthy Babies – The Montana Coalition
    - For Pediatric Providers
      - American Academy of Pediatrics (AAP) – implementation of screening

4

Patient Education Materials on Urgent Postpartum Warning Signs:

The goal for this structure measure is for your Care Coordination Working Group to develop/curate patient education materials on urgent postpartum warning signs that align with the cultural and linguistic needs of the patient populations you serve.

- Alliance for Innovation on Maternal Health (AIM)
  - Resource page for Urgent Maternal Warning Signs (UMWS) (*not limited to PMHC*)
    - Scroll to the bottom of the page for links to download:
      - Patient-facing poster in several languages
      - English/Spanish NON-OB Clinical Staff poster
      - UMWS Badge Buddy

5

Validated PMHC Screening Tools Shared with Affiliated Sites:

The goal for this structure measure is for your Care Coordination Working Group to share validated screening tools for diagnosis of PMHC with all your institution's inpatient units and/or affiliated prenatal care sites.

Validated PMHC Screening Tool Examples

- **Depression**
  - Edinburgh Postnatal Depression Scale (EPDS)
  - Patient Health Questionnaire-9 (PHQ9)
- **Anxiety**
  - Generalized Anxiety Disorder 7 (GAD-7)
  - Edinburgh Postnatal Depression Scale
    - *(anxiety subscale – questions 3, 4, 5)*
- **Bipolar disorder**
  - Mood Disorder Questionnaire (MDQ)
  - Composite International Diagnostic Interview (CIDI) Screening Scale for Bipolar Spectrum Disorders
- **Substance Use Disorder**
  - 5Ps (substance use disorders)
- **Suicidality**
  - Ask Suicide-Screening Questions (ASQ) - Toolkit
  - Columbia-Suicide Severity Rating Scale (C-SSRS)
  - Patient Safety Screener (PSS)
- **Refugee Health Screener**
  - Refugee Health Screener-15 (RHS-15)
- **Post-Traumatic Stress Disorder**
  - Post-Traumatic Stress Disorder Checklist for Civilians (PCL-C)

A reminder about Postpartum Psychosis (PPP) - a psychiatric emergency:

- Overview:
  - PPP affects 1-2/1,000 perinatal individuals
  - Onset is typically 24 hours to 3 weeks postpartum
  - >70% will have bipolar disorder
- Screening:
  - Psychiatric assessment: risk of harm to self, infant, and others
- Management:
  - 1:1 continuous observation in hospital with separation of infant
  - Stabilize with psychiatric medications while awaiting psych assessment
- **Additional Resources**
  - ACOG Practice Guideline – Screening and Diagnosis
  - ACOG Practice Guideline – Treatment and Management
  - Postpartum Support International (PSI) - Perinatal/Postpartum Psychosis Help Page

Process Measures

Process Measures

Process measures are collected to track how developed and implemented infrastructure is functioning.

1

Provider and Nursing Education on PMHC

The goal for this process measure is for 100% of OB clinicians in your unit or practice to have received, within the last 2 years, education on care for pregnant and postpartum people with perinatal mental health conditions.*

**All clinicians who work in an inpatient OB service line, L&D, an Antepartum or Postpartum unit, or an ambulatory practice. These clinicians will likely be interdisciplinary and could be inclusive of, but not limited to, nurses and nurse managers, advanced practice nurses, nurse midwives, physician associates, and Family Medicine physicians or other specialties that provide obstetric care or have delivering privileges at your institution.*

- ACOG modules
  - Guide for integration of Mental Health Care (developed with Lifeline for Moms)
  - Provider Resources
    - Clinical Practice Guideline 4: Screening and Diagnosis of Mental Health Conditions During Pregnancy and Postpartum
    - Clinical Practice Guideline 5: Treatment and Management of Mental Health Conditions During Pregnancy and Postpartum
    - Practice Advisory: Zuranolone for the Treatment of Postpartum Depression
    - Coding for Perinatal Depression Screening and Treatment
- Postpartum Support International
  - PSI Training
  - Information about PSI's Certification in Perinatal Mental Health (PMH-C)
- Policy Center for Maternal Mental Health
  - Universal Screening for Maternal Mental Health Disorders – Issue Brief
- MassPPD Fund
  - Trainings
- Webinars
  - MCPAP for Moms Webinars
  - Lifeline for Moms Webinars
  - American Medical Association Behavioral Health Integration (BHI) Collaborative Webinars
    - Integrating Perinatal Mental Health into OB Practice
    - Dismantling Stigma Around Behavioral Health Conditions and Treatment
  - PNQIN Webinars - Perinatal Mental Health Conditions
  - AIM Technical Assistance Presentation (TAP) Webinars)

2-4

Screening for PMHC

The goal of these process measures are:

1. *For 100% of ambulatory patients to be screened prenatally, at least once, for depression and anxiety using validated tools.*
2. *For 100% of birthing people to be screened inpatient for PMHCs using a validated tool(s).*
3. *For 100% of ambulatory patients to be screened postpartum, at least once, for depression and anxiety using validated tools.*

See Structure Measures - validated tools for screening for resources

As mentioned previously, **we are asking all teams to disaggregate their data by race/ethnicity, payor-type, and language**, in an effort to ascertain potential inequities that may exist in our current approach to perinatal mental health condition management in MA birthing hospitals. There have been several studies that have shown there is a disparity that exists in screening for perinatal mental health conditions between the aforementioned categories. In a cross-sectional survey of patients who had a live birth tracked in the Pregnancy Risk Assessment Monitoring System between 2016 and 2019, **receipt of depression screening was significantly lower for racially minoritized groups, Medicaid-insured patients, and rural residents**. Further, a study from 2021 exploring inequities in perinatal depression screening in a large health system (35 clinics, 10 hospitals) in the Midwest, **disparities were seen primarily in postpartum screening particularly among non-white patients and women insured by Medicaid/Medicare, when controlled for clinic site**. As has been mentioned previously in this Toolkit, these frank disparities should further motivate teams to disaggregate data and work to close care gaps between certain marginalized communities.

Sources:

- Interrante JD, Admon LK, Carroll C, Henning-Smith C, Chastain P, Kozhimannil KB. Association of Health Insurance, Geography, and Race and Ethnicity With Disparities in Receipt of Recommended Postpartum Care in the US. JAMA Health Forum. 2022 Oct 7;3(10):e223292. doi: 10.1001/jamahealthforum.2022.3292. PMID: 36239954; PMCID: PMC9568809.
- Sidebottom A, Vacquier M, LaRusso E, Erickson D, Hardeman R. Perinatal depression screening practices in a large health system: identifying current state and assessing opportunities to provide more equitable care. Arch Womens Ment Health. 2021 Feb;24(1):133-144. doi: 10.1007/s00737-020-01035-x. Epub 2020 May 5. PMID: 32372299; PMCID: PMC7929950.

5

Patient Education on PMHC

The goal for this process measure is for 100% of inpatient/ambulatory patients to receive verbal and written education on perinatal mental health conditions and when to seek care before delivery admission discharge. Ideally, education is provided early in pregnancy and at multiple time points as about a third of persons enter pregnancy with a mental health condition whether recognized or not, about a third develop it over the course of pregnancy, and about a third will develop it in the postpartum period. Delivery admission is a time to assure even those without prenatal care received it and to re-educate all others given postpartum risks of mental health conditions and suicide as a preventable cause of maternal morbidity and mortaity.||

- Postpartum Support International (PSI) patient education
  - Group specific education - Groups include:
    - Perinatal Individuals, Dads & Partners, Families & Support People, Queer & Trans Parents, BIPOC Families, Military Families, Adoptive Parents, Deaf & Hard of Hearing, Postpartum & Perinatal Psychosis, Loss & Grief
- National Institute of Mental Health: Moms' Mental Health Matters
  - Order free materials here – English, Spanish
- Lifeline for Moms
  - Resource page for OB patients
  - Patient handouts
- Massachusetts Health Promotion Clearinghouse
  - Link to educational brochure on PMHC - available for free download in English, French, Portuguese, Spanish, Vietnamese
- American Academy of Pediatrics
  - Poster – English, Spanish

Patient education on PMHC, including urgent warning signs and classic symptomology, is of utmost importance to ensure that our patients seek help early and whenever necessary. Further, by ensuring that our educational materials are available in many languages and introduced at several points during the perinatal period, we can more equitably target the entire spectrum of PMHC within our diverse communities. **There is significant evidence that people of color are more like to have poor communication regarding PMHC, despite their increased risk of struggling with PMHC.** Further, **women who live in rural areas, have been shown to be less likely to seek care, be screened for, and/or receive treatment for PMHC**, increasing the importance of continued education throughout the perinatal period. It is absolutely necessary to consider the significant role that culture and language play in these conversations. Several studies have demonstrated that **non-Western minority women** may be more likely to withhold discussion of mental health concerns for fear of stigma, impact on family role, and being perceived as weak. Further, in some cultures and languages, **Depression,** *and by extension other mental health concerns,* **may not manifest as typically as they do in Western cultures, given differences in rules of emotional display and lack of equivalent terms to describe similar symptoms**. Therefore, it is even more important to **utilize and/or develop culturally relevant educational materials, utilize interpreter services early and often, and avoid stigmatizing language**.

Sources:
- Miller ML, Dupree J, Monette MA, Lau EK, Peipert A. Health Equity and Perinatal Mental Health. Curr Psychiatry Rep. 2024 Sep;26(9):460-469. doi: 10.1007/s11920-024-01521-4. Epub 2024 Jul 15. PMID: 39008146.
- Schouten BC, Westerneng M, Smit AM. Midwives' perceived barriers in communicating about depression with ethnic minority clients. Patient Educ Couns. 2021 Oct;104(10):2393-2399. doi: 10.1016/j.pec.2021.07.032. Epub 2021 Jul 24. PMID: 34340845.

Outcome Measures

Outcome Measure

There is one outcome measure for this bundle.

1

Percent of Pregnant and Postpartum People with PMHC who received or were referred to Treatment

The goal of this outcome measure is for 100% of birthing people/ambulatory patients with a PMHC diagnosis to have documentation of having discussed, received and/or been referred to treatment.

For the purposes of the bundle, PMHC includes: mood, anxiety, and anxiety-related disorders that occur during pregnancy or within one year of delivery, including conditions that may have started prior to conception. For a full list of conditions, please review page 8 of the AIM PMHC ICD-10 codes list.

As we are dong with our structure measures, **we are asking all teams to disaggregate their outcome measure data by race/ethnicity, payor-type, and language**, to ascertain potential inequities that may exist in our current approach to perinatal mental health condition management in MA birthing hospitals. Similarly to data seen for screening rates, there are a number of studies to support differences in referral patterns for those who identify as a person of color. In a study reviewing racial and ethnic inequities in care for those with postpartum depressive symptoms, people with a live birth in 2020, across 7 US jurisdictions, who identified as **Asian, Native Hawaiian or Pacific Islander, Southwest Asian, Middle Eastern, or North African, Hispanic, and non-Hispanic Black were significantly less likely to receive mental health care.** Given the diversity in locations sampled in this study, this further highlights the importance of adequate tracking of referral patterns with disaggregated data.

Sources:

- Haight SC, Daw JR, Martin CL, Sheffield-Abdullah K, Verbiest S, Pence BW, Maselko J. Racial And Ethnic Inequities In Postpartum Depressive Symptoms, Diagnosis, And Care In 7 US Jurisdictions. Health Aff (Millwood). 2024 Apr;43(4):486-495. doi: 10.1377/hlthaff.2023.01434. PMID: 38560804.

Outcome Measure, continued

Further Information on Treatment

- ACOG Practice Guideline: Treatment and Management of Mental Health Conditions During Pregnancy and Postpartum
  - The practice guideline above includes descriptions and recommendations for treatment, particularly with psychopharmacotherapy, because psychotherapy is beyond the scope of Obstetric care clinicians. However, psychotherapy is first-line treatment and should be arranged if the patient is accepting and as needed either as solo treatment or concomitant with pharmacotherapy.
  - Medication recommendations, including safety and efficacy data, for the following disorders are included:
    - Depressive Disorders
    - Anxiety Disorders
    - Bipolar Disorder
    - Postpartum Psychosis
  - Additional Considerations are covered within the practice guideline including:
    - Psychopharmacotherapy during lactation
    - Psychopharmacotherapy titration and discontinuation
    - Health Equity
- ACOG Practice Advisory: Zuranolone for the Treatment of Postpartum Depression
  - Published in August 2023, this Practice Guideline was released in response to the FDA Approval of Zuranolone for Treatment of Postpartum Depression

Referral Programs:

- Programs are summarized in the "Community Resource Mapping/Identification of Community Resources" Subsection of "Structure Measures" and can be found on the PNQIN PMHC Resources webpage.
- They are included here, again, for simplicity:
  - Community Behavioral Health Centers – MCPAP for Moms
    - These programs offer immediate care for mental health and substance use needs, both in crisis situations and more routine settings
  - Find Treatment centers for SUD in MA

Quality Improvement Resources

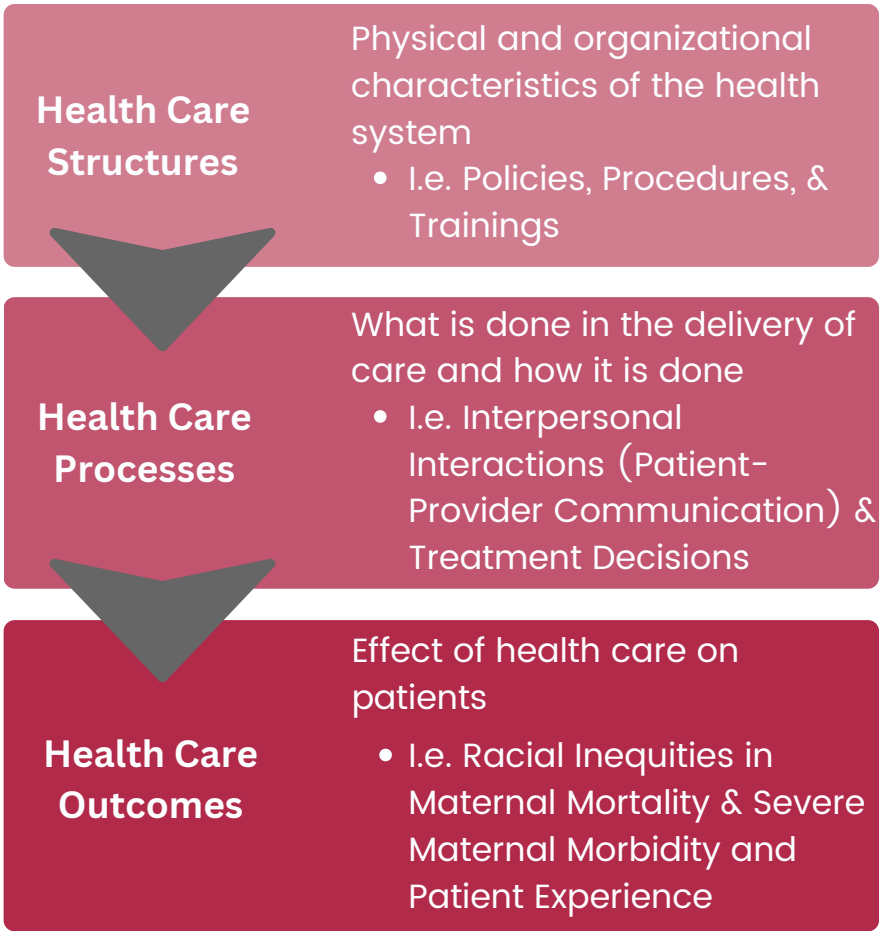
Quality Improvement Resources

This section can be used in conjunction with our PNQIN Quality Improvement Toolkit and PNQIN QI Starter Pack, to aid hospital teams in implementation of the Perinatal Mental Health Conditions Bundle.

Building a Plan for Improvement

PNQIN recognizes that all quality improvement projects must be based on adequate and appropriate data collection. The Donabedian Model for Measuring Healthcare Quality is typically utilized as a framework to evaluate the quality of healthcare and health services, through three main categories: structures, processes, and outcomes. This model is utilized by AIM to track bundle implementation progress and is reflected in the data PNQIN collects each month for our past and current bundles.

Adapted Donabedian Model for Measuring Healthcare Quality



Sources:
Donabedian A. Evaluating the Quality of Medical Care. Milbank Q. 2005;83(4):691-729. doi:10.1111/j.1468-0009.2005.00397.x
https://pmc.ncbi.nlm.nih.gov/articles/PMC4911723/

Creating Goals

Goal setting should include at least one long-term goal (what you want to accomplish as a result of your quality improvement project) and however many short-term goals it will take to reach the overall goal.

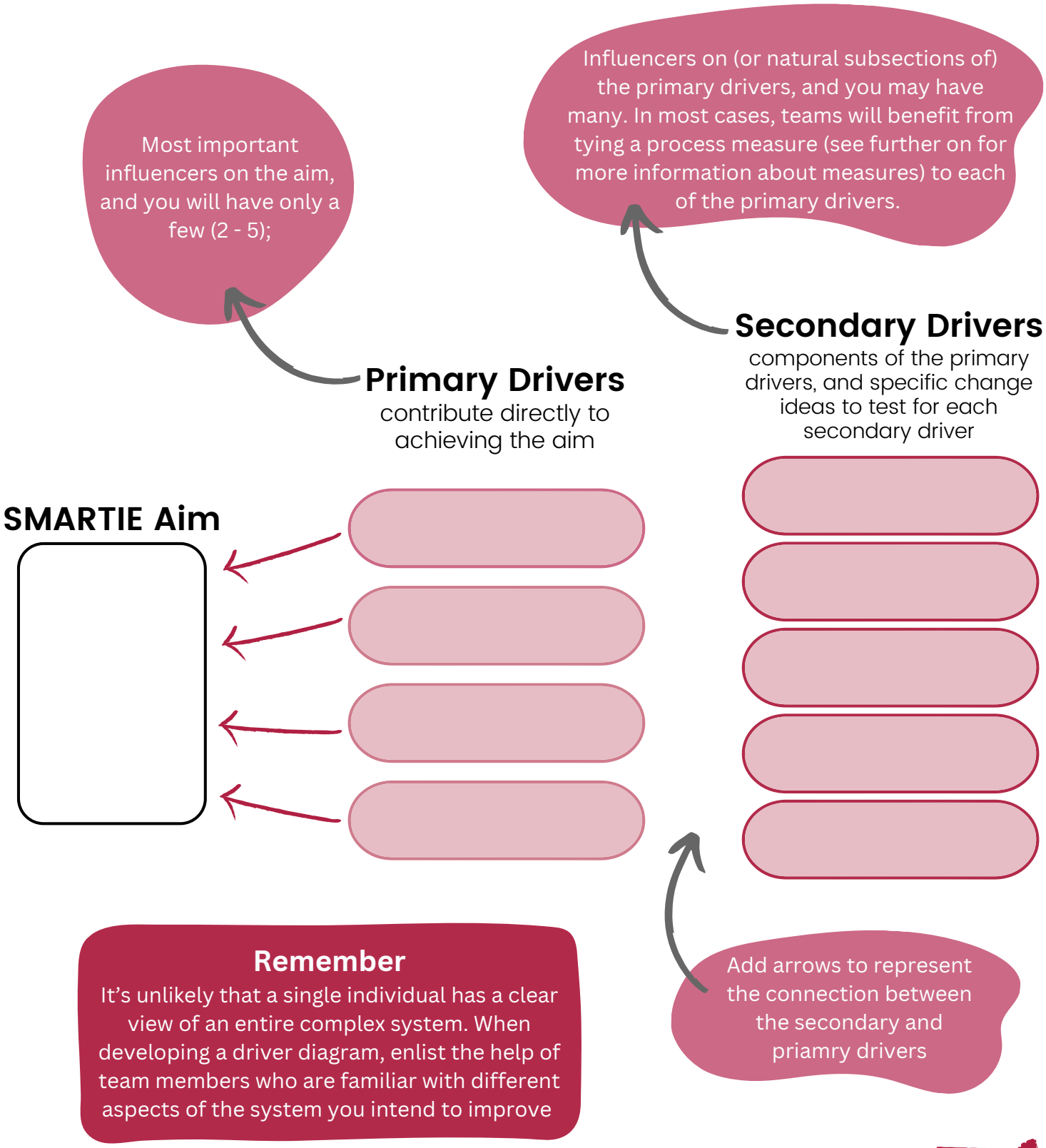
Uncovering Opportunities for Change

***All QI tools not discussed in this toolkit can be found in our PNQIN QI Toolkit.*

Uncover Patterns	Stratification	• Examine the population by subgroups • Compare subgroups
	Frequency Histogram	• Display variation in continuous data • Recognize & analyze patterns
	Scatter Diagram	• Examine association between 2 variables • See unusual patterns • How change idea measures affect outcomes • Determine relationship between measures
Explore Challenges	Driver Diagram	• Identify factors that contribute to outcome of interest according to themes • Themes ranked according to relative importance • Specify theoretical causal pathway for achieving aim
	Cause-and-Effect Diagram	• Graphic tool to display possible causes of an effect; causes are often grouped into major themes • Themes and elements of the diagram can become primary & secondary drivers on a driver diagram
	Flow Diagram	• Visual display of the activities of a process or system; helps to understand a current process • Helps the team see the system in which they are working and identify opportunities for improvement
Prioritize Goals	Pareto Chart	• Type of bar chart in which factors that contribute to an effect are arranged according to magnitude of effect • Identify factors that will have the greatest impact to focus improvement work
	Priority Matrix	• Tool that helps you rank potential change ideas within an improvement project • Helps you decide which improvement or change idea to start with • Impact-Effort grid

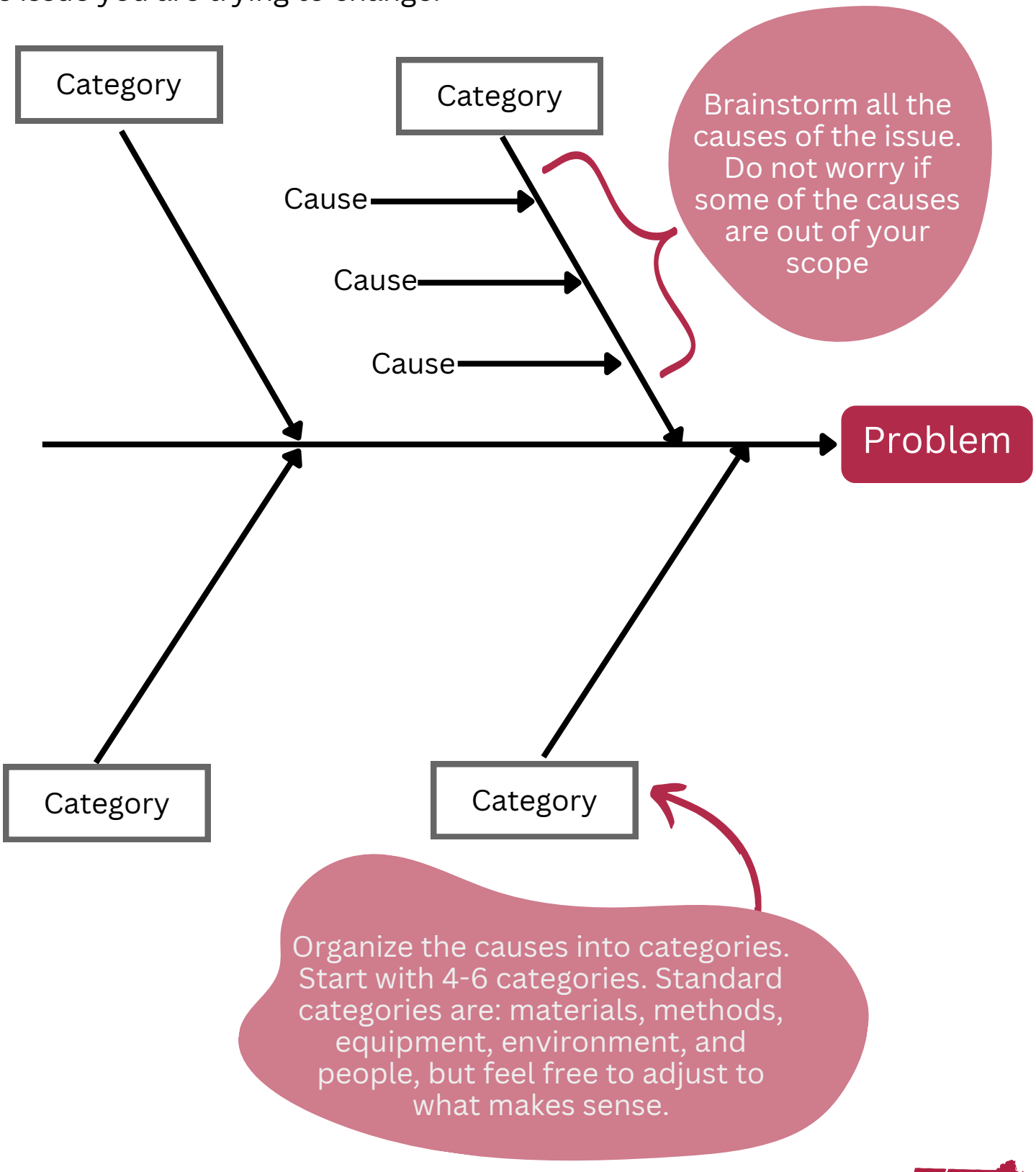
Exploring Challenges: Driver Diagram

In order to achieve your aim, the team should have a strong theory about what will lead to the intended improvement. Driver diagrams are one method to share your theory about how you'll achieve the aim.

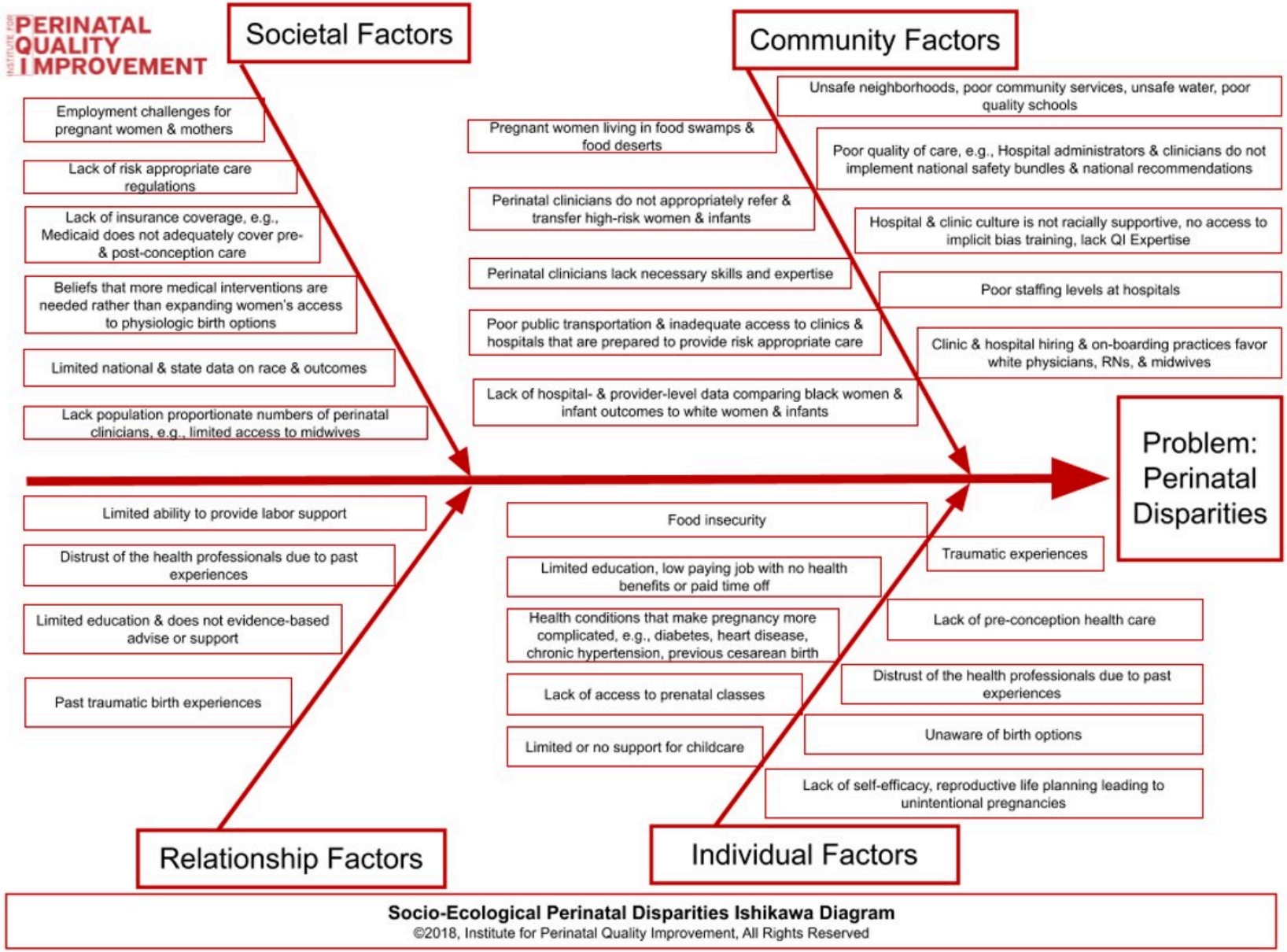


Exploring Challenges: Using a Cause-and-Effect (Ishikawa or Fishbone) Diagram

It is hard to know exactly where to start, a cause-and-effect diagram (also known as Ishikawa and fishbone) can help to determine the root causes of the issue you are trying to change.



Example: Socio-Ecological Perinatal Disparities Ishikawa Diagram



Source: Bingham D, Jones DK, Howell EA. Quality Improvement Approach to Eliminate Disparities in Perinatal Morbidity and Mortality. Obstet Gynecol Clin North Am. 2019;46(2):227-238. doi:10.1016/j.ogc.2019.01.006

Creating a SMARTIE Aim Statement

Specific- What's the problem or opportunity?

Measureable- By how much will you improve?

Achievable- Is this doable in the time you have?

Realistic- Do you have the resources needed?

Time- By when?

Inclusive- Who is most impacted? Are appropriate representatives on your team?

Equitable- Does the goal address inequities in the outcomes and processes?

Complete aim statement:

- [ ] Is the problem or opportunity clearly stated?
- [ ] Do you know what the team is going to do about the problem?
- [ ] Has the team set a numerical goal to quantify the amount of improvement they'd like to make?
- [ ] Do you know the calendar date by which the team plans to achieve the goal?
- [ ] Is it clear who will benefit from the improvement?
- [ ] Is the scope of the project clear?
- [ ] Do you know why this improvement effort is important?

Ask a colleague to check your work and recommend improvements:

SMARTIE Aim Statement, example

Specific- What's the problem or opportunity?

To improve screening for perinatal mental health conditions in the prenatal period, we will itrain our medical assistants to deliver EPDS surveys at the visit for Glucola Testing.

Measureable- By how much will you improve?

Increase from baseline of 30% of birthing individuals screened prenatally to 90% of birthing individuals screened prenatally.

Achievable- Is this doable in the time you have?

Yes, the goal is not too much or too little.

Realistic- Do you have the resources needed?

Yes, we have the staff and resources to accomplish this goal.

Time- By when?

In 12 months (by September 30, 2025)

Inclusive- Who is most impacted? Are appropriate representatives on your team?

We are relying heavily on the workflow at our ambulatory clinics, we will recruit at least one ambulatory clinic representative to our team.

Equitable- Does the goal address inequities in the outcomes and processes?

Inequities are seen mostly in racial and language differences, the goal is to specifically lessen that gap.

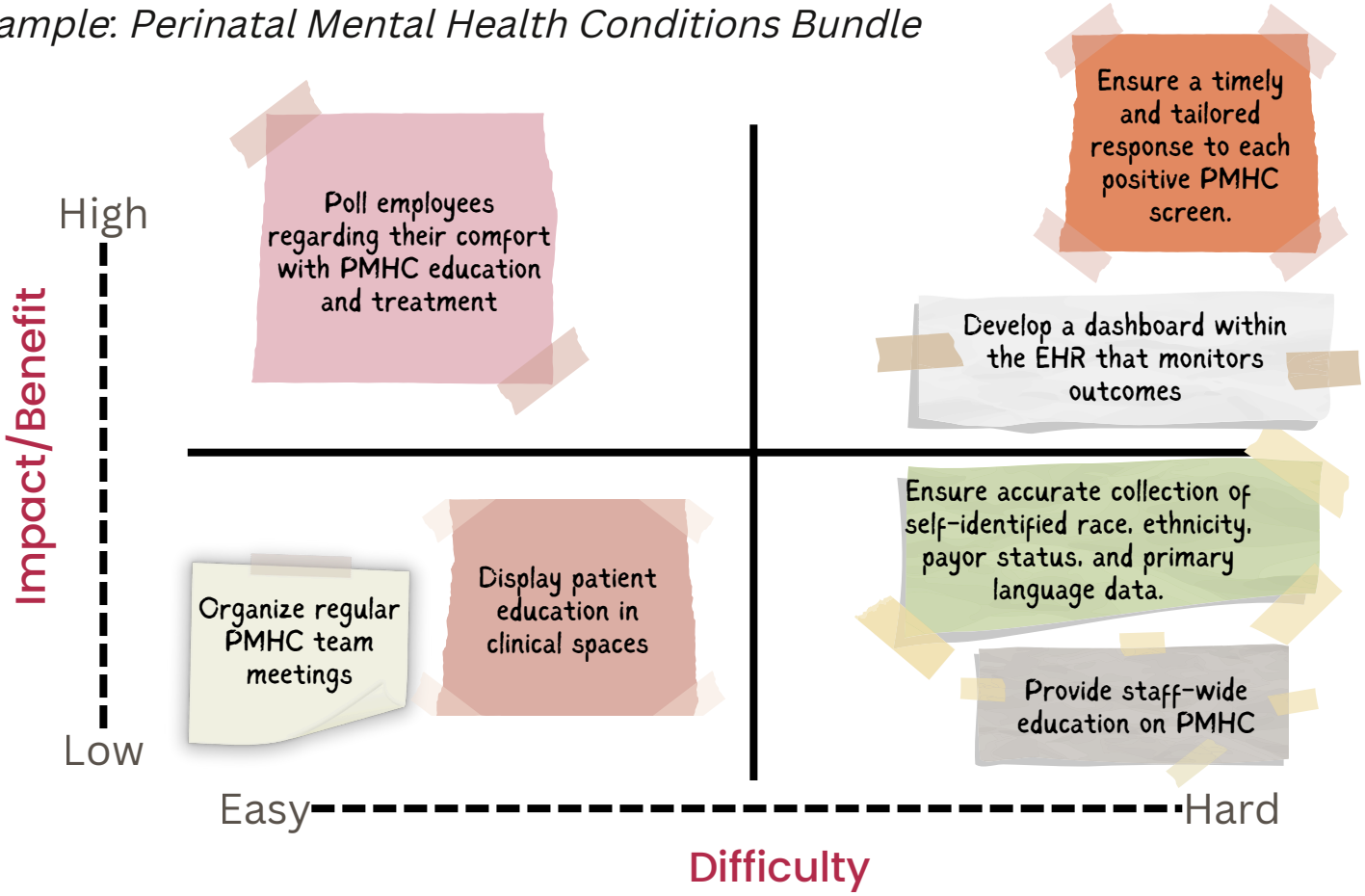
Complete aim statement:

To prevent denial and delay in the diagnosis and management of perinatal mental health conditions, we will increase the percentage of prenatal birthing individuals screened using the EPDS from 30% to 90% by September 30, 2025 by implementing changes developed with a team including at least 1 ambulatory clinic employee.

Prioritizing Goals: Priority Matrix

Once you have identified multiple change ideas, use a priority matrix to help determine where to start. Though all the change ideas are important and necessary to get to your aim, they are not all equally impactful or easy to implement.

Example: Perinatal Mental Health Conditions Bundle



Keep track of what you have done and what you want to do.

Change Idea	Not yet tested	Plan to test	Currently Testing	Implemented
Ensure a timely and tailored response to each positive PMHC screen.	X			
Develop a dashboard within the EHR that monitors outcomes.			X	
Organize regular PMHC team meetings.			X	
Display patient education in clinical spaces.				X
Provide staff-wide education on PMHC.		X		

Implementing Changes: Plan-Do-Study-Act (PDSA) Cycles

The Plan-Do-Study-Act (PDSA) cycle is a useful tool for quality improvement projects in order to run and document a test of change. A PDSA cycle worksheet should be filled out for each change you test. In all quality improvement projects, teams should plan to go through several PDSA cycles. Plan to keep all PDSA cycles that you complete, to track your progress and efficiently plan for sustainment.

PDSA Planning Form

PLAN

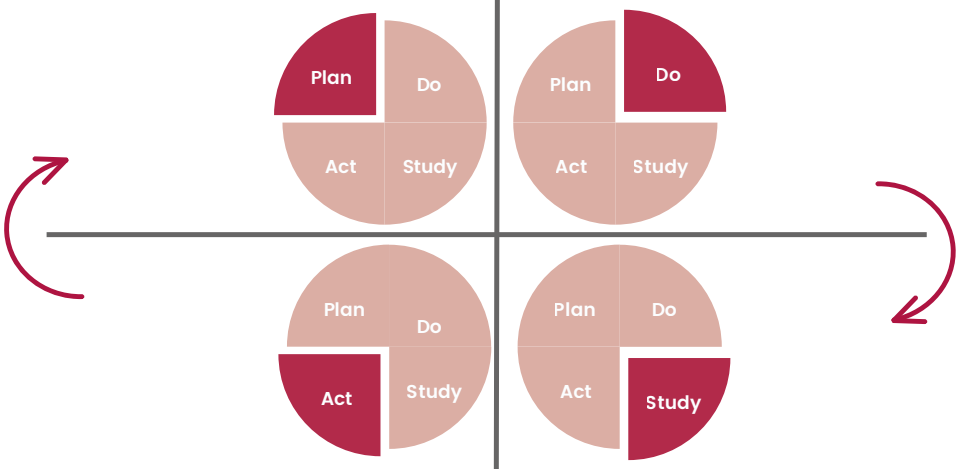
Plan the test, including a plan for collecting data

Questions and Predictions:
Who? What? Where? When?

DO

Run the test on a small scale

Describe what happened:
What data did you collect? What observations did you make?



ACT

Based on what you learned from the test, make a plan for your next step

Determine what modifications you should make:
Adapt, Adopt, or Abandon

STUDY

Analyze the results; compare to your predictions.

Summarize and reflect on what you learned. Describe what happened:
What data did you collect? What observations did you make?

When the time comes to start your PDSA cycles, download this example PDSA Cycle Worksheet, designed by the Institute for Healthcare Improvement (IHI).

Sustaining Changes

When we ask teams to implement projects, we aim to plan for sustainment **early** in the process.

The first step of preparing for sustainment is setting the stage for easy transition by:

- Completing a PDSA cycle for all portions of the project
- Keeping track of changes and collect data
- Constantly asking people if the changes are working

You are ready to move into sustainment when:

- Each component is functioning
- The process has become the daily work
- All resources are always there and updated
- Your team reports that the process happens consistently

Once you are in the sustainment phase, you should:

1. Set a plan for measurement
2. When a change is detected explore what affected the process
    a. Go back to the basics to explore these changes with tools you used during active implementation, such as:
        i. PDSA cycles
        ii. Flow chart
3. Be ready to incorporate new tools and ideas as technology evolves
4. Show measurement successes
    a. Present the data to invested parties at:
        i. Grand rounds
        ii. Staff meetings
    b. This will help to reinforce the correct action and remind everyone of the "why" of making these changes

To get started on your sustainability journey, we recommend using this example Sustainability Planning Worksheet, designed by the Institute for Healthcare Improvement (IHI).

Data Collection Resources

Chart Sampling Example

For the outcome measure and most process measures of the PMHC bundle, PNQIN requests a **chart review of individuals who delivered at your hospital or visited your practice during a given month** for each of the following demographics:

- Black non-Hispanic
- White non-Hispanic
- Hispanic
- Private insurance
- Public insurance
- English-speaking
- Non-English speaking

If you had **10 or fewer births/visits** for any of the above demographics this month, **please review ALL the charts for that demographic.**

If you had **more than 10 births/visits** in any of the above demographics, **please take a random sample** of that demographic using the instructions below:

1. Divide the total number of live births/ambulatory visits for the target demographic occurring at your facility in a given month by 10.
2. Select every nth chart where n is the result of that division.

Example: If your hospital/practice has 28 Black non-Hispanic live births in a month, divide 28 by 10 (= 2.8). You will select every 2nd chart for that month.

Relevant MassHealth Resources

MassHealth Resources

MassHealth Resources

1. Paid Family Medical Leave (PFML)
    a. PFML vs. FMLA
2. Subsidized Transport
    a. PT1 rides
        i. Patient-facing PT1 website
        ii. Provider-facing PT1 website
3. Resources for Pregnant MassHealth Members
4. Description of Maternal Mental Health Bill
5. Home Visiting Programs
    a. Coordinated Family and Community Engagement (CFCE) Network
    b. Early Intervention Parenting Partnerships (EIPP)
    c. FIRST Steps Together
    d. F.O.R. Families
    e. Massachusetts Home Visiting Initiative (MHVI)
    f. Welcome Family

Participation in the PMHC Bundle

PN QIN OF MASSACHUSETTS
PERINATAL-NEONATAL QUALITY IMPROVEMENT NETWORK

Site Team Expectations

To be a “fully participating” hospital team in this bundle, teams **must** complete:

1. **Onboarding Steps:**
   - Team Roster
   - Pre-Bundle Implementation Survey
   - Memorandum of Understanding for Bundle Sharing with the Betsey Lehman Center
2. **Monthly Data Submission**
   - Goal: 9 months or more
3. **Monthly Webinar Attendance**
   - Goal: 9 months or more
4. **Implementation Feedback Survey**
   - Submission at 6, 12, and 18 months
5. **Sustainability Plan**
   - Share a final or draft plan with PNQIN prior to bundle termination
6. **Sharing Opportunities**
   - Present your work on a monthly webinar or with a poster at a PNQIN summit

Agreement Summary

Before submitting data to the Betsy Lehman Center for Patient Safety (BLC), an independent center within the Massachusetts Center for Health Information and analysis, hospitals must sign a Memorandum of Understanding (MOU). Below is a short summary of what the MOU entails:

Responsibility of hospital teams:

- To submit aggregate and de-identified data in compliance with HIPAA
- To submit data through unique record identifier on REDCap (provided by BLC)
- May publish their own data and analysis using statewide aggregated data with prior review by BLC

Responsibility of BLC:

- Data submitted to BLC is not public record, it is confidential
- Host a REDCap password protected database for hospital data submission
- Submit de-identified hospital level data to American College of Obstetricians and Gynecologists (ACOG) quarterly
- Share data, including hospital names, with PNQIN personnel so they can advise hospital teams
- In collaboration with PNQIN, may publish aggregate and de-identified data and analysis
- No representation to the accuracy or usability of the data as it is provided by third parties
- Store hospital provided data for 7 years then delete and destroy that data
- BLC may request updates to the MOU as data and project needs shift

Both BLC and hospital teams:

- Can terminate the MOU by BLC or the hospital team with or without cause
- Neither can use the name, trademark, service mark or other identifying characteristic of the other without prior written approval

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The PMHC Bundle Toolkit could not have been completed without the hard work and significant contribution of the following editors:

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