“Best for ALL”

Tennessee Initiative for Perinatal Quality Care

Inter-Institutional Quality Improvement Project

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The Tennessee Initiative for Perinatal Quality Care (TIPQC) would like to thank Illinois, California, Nebraska, Massachusetts, and New York PQCs. We have learned from their efforts and initiatives and have adapted portions from their work. Together, we can make a difference!

Project Pilot Teams

Vanderbilt University Medical Center, Regional One Health, Ascension St. Thomas Midtown, and Bonheur Methodist Germantown

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Introduction: *What are we trying to accomplish?*

Problem

Tennessee continues to have differences in care outcomes related to race, education, and socioeconomic status in both maternal and infant outcomes[1].

Maternal Mortality

According to the most recent Tennessee Maternal Mortality Report (MMR), Non-Hispanic Black women are 2.3 times more likely to die from pregnancy related causes compared to Non-Hispanic White women[1]. Some women share experiences of traumatic births and report feelings of dismissal, neglect, and disrespect by their healthcare providers[4, 5].

Infant Mortality

Provisional 2022 data suggest that infant mortality increased 3% from 5.44 in 2021 to 5.60 per 1000 live births in the United States[6]. Previously, from 2002 to 2021, infant mortality had declined by 22%. Both neonatal and post neonatal mortality increased from 2021 to 2022[6].

Tennessee had a higher infant mortality rate (6.61 per 1000) than the United States as a whole, ranking 39th and earning a "D" rating by the March of Dimes for preterm birth rates (2023 March of Dimes Report Card | March of Dimes). Tennessee's infant mortality rate increased to 7%. It had previously been 6.18 per 1000 in 2021, although this change was not statistically significant[7].

Nationally, based on this 2022 provisional data, infants born to non-Hispanic Black mothers continue to have twice the risk of mortality than infants born to non-Hispanic white mothers (10.86 versus 4.52 per 1000 live births)[6]. Similarly, in Tennessee, infants born to non-Hispanic Black mothers had more than twice the rate of mortality than infants born to non-Hispanic white mothers (12.3 versus 6.3 per 1000 live births)[6]. Historically, in addition to differences based on racial/ethnic group, socioeconomic group and geographical region were correlated with infant mortality rates in Tennessee. For instance, infants were twice as likely to die when born to less-educated mothers as opposed to more-educated mothers[6].

Lead drivers of infant deaths in Tennessee include birth defects, preterm birth and low birth weight, sleep-related death, and cardiovascular disease. Additional risk factors associated with infant mortality include maternal obesity (BMI≥30), late or lack of prenatal care, use of drugs or tobacco during pregnancy, maternal age younger than 25 years or older than 40 years, living in high-poverty counties, and living in rural counties. Sleep-related deaths accounted for over 1 in 5 (23%) of all infant deaths[6].

The 2008 landmark World Health Organization (WHO) report highlighted the importance of addressing the "causes of the causes" of poor outcomes, the social determinants of health[8]. Both American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) have subsequently recommended that providers routinely screen for risk factors within the social determinants of health, also

termed health-related social needs, during prenatal care and other patient encounters, and connect them to needed community resources[9, 10].

The social determinants of health have been described as "the conditions where people grow, live, work, and age." They include interrelated and overlapping conditions. Social determinants of health are associated with morbidity and mortality in mothers and infants and contribute to differences in health outcomes. Race, ethnicity, and socioeconomic status are the strongest predictors of perinatal outcomes[11]. Persons of color and those with lower incomes are likely to experience more unmet social needs due to social and economic policies[12, 13].

Unfortunately, while screening for social determinants of health is recommended and aligns with recent Centers for Medicaid Services (CMS) requirements, there is not a universally recommended and validated screening tool. Without universal screening, half of patients with resource needs will be missed.

Shared pathways influence differences in maternal and infant health outcomes. In healthcare settings, improving gaps in communication, shared decision-making and family engagement, attention to warning signs of complications, timely diagnosis and management of conditions, and coordination and continuity of care may prevent maternal and infant morbidity and mortality[14-17]. Members of this learning collaborative can work together to evaluate and mitigate barriers to assessing social determinants of health, identify strategies for connecting people to needed resources, and explore how care and perinatal outcomes are optimized and improved. In Tennessee, our goal is Best for All!

Best for all moms.
Best for all babies.
Best for all families.
Best for all communities.
Best for all healthcare team members.

Project Description (*what*)

Tennessee hospitals are invited to participate in the Best for All Quality Improvement Project as members of a Learning Collaborative. The Best for All project consists of the following strategies:

- ➔ **R**ecognize need and increase readiness.
- ➔ **E**ducate team members on respectful care and implicit bias.
- ➔ **S**creen patients for health-related social needs.
- ➔ **P**rovide updated discharge teaching.
- ➔ **E**valuate data by reported race/ethnicity, insurance status, substance use disorder, and preferred language.
- ➔ **C**ommunicate about respectful and equitable care.
- ➔ **T**ransform future care and outcomes.

The Best for All project was selected by stakeholders at the 2023 TIPQC Annual Meeting. Project development occurred in Q3, Q4 2023, and Q1 2024. The pilot phase of the project was Q1 & Q2 2024. The start of the statewide roll-out of the project is planned for May 2024. The project is proposed to end in March 2026.

TIPQC agrees to the following:

- Provide this toolkit and other resources to participating teams.
- Offer monthly huddles, quarterly learning sessions, and annual statewide meetings.
- Facilitate the sharing between participating teams, allowing them to learn from each other.
- Facilitate the capture of data metrics and provide reports to participating teams which show their progress towards improvement.
- Provide guidance and feedback to participating teams, facilitating their achievement of the project aim.

Participating teams will agree to the following:

- Hold regular, at least monthly, team meetings.
- Regularly review and revise your goals, current system, opportunities for improvement, and barriers.
- Plan and conduct tests of the recommended changes detailed in this toolkit.
- After successful testing and adaptation, implement the changes in your facility.
- Attend and actively participate in the monthly huddles, quarterly learning session, and annual statewide meetings.
- Capture and submit the defined project data as required (with minimal to no data lag).
- Submit a monthly report that includes data as well as information on changes being tested and/or implemented.
- Strive to achieve the project aim and the project's process and structure measure goals:
    - At least 90% compliance on all defined process measures.
    - Have all structures (defined by the structure measures) in place by the end of the project.

Rationale (*why*)

While efforts are underway to prevent maternal and infant mortality in Tennessee, more is needed to reduce mortality and morbidity. Differences in health outcomes exist by race/ethnicity, age, income, educational level, substance use disorders, and geographical area of residence. Unmet social needs may be identified and addressed through screening, however screening for social determinants of health is not widespread. Significant opportunities remain for improving care, outcomes and even preventing deaths.

Participating in the TIPQC Best for All Project will help your facility meet recent recommendations from The Joint Commission, WHO, ACOG, and AAP. It will also meet many of the requirements for the new 2024 Center for Medicaid and Medicare Services (CMS) Social Determinants of Health Screening requirements[18]. This is a low-cost project that does not require new equipment or skills. It will also have a minimal data collection requirement. This is an ideal project for any birthing institution whether a larger center which has participated in multiple TIPQC efforts before, or a smaller hospital interested in their first TIPQC project.

Because similar pathways influence care quality and outcomes for mothers and infants, tracking joint maternal-infant health outcomes, integrating patient feedback, and sharing practices and lessons learned across obstetric and newborn care units is beneficial and synergistic. Because intertwined maternal-infant health needs continues after birth, thoughtful discharge planning, education, and coordination of follow up utilizing current best practices is essential.

The data supports addressing social determinants of health through a joint maternal-infant quality improvement project. Integrating a maternal-infant dyad lens to transform care can result in improved outcomes during the perinatal period and potentially throughout the lifespan, as depicted in the graph below.

Applying the maternal-infant dyad lens (nih.gov)

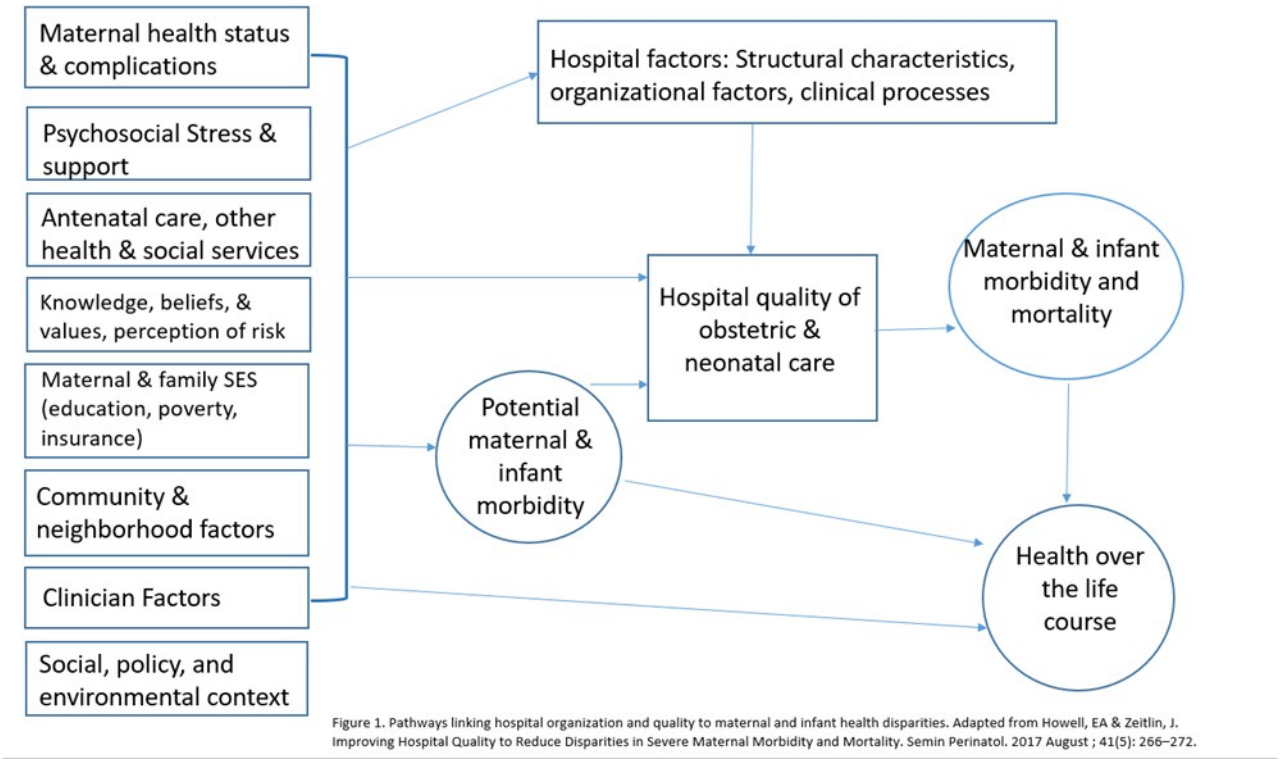


Figure 1. Pathways linking hospital organization and quality to maternal and infant health disparities. Adapted from Howell, EA & Zeitlin, J. Improving Hospital Quality to Reduce Disparities in Severe Maternal Morbidity and Mortality. Semin Perinatol. 2017 August ; 41(5): 266–272.

Expected Outcomes and Benefits

If successful, this project will allow hospital systems of care to:

1. Create a culture of respectful care centering patients and their communities.
2. Help patients to access community resources to address the social drivers of health including housing, transportation, mental health support and perinatal care.
3. Ensure all patients receive evidence-based discharge instructions and care coordination.
4. Establish processes and structures that will improve maternal and infant outcomes.

Fostering respectful care, connecting families to resources to address unmet health related social needs, and providing updated discharge teaching will improve health outcomes and reduce differences in outcomes for mothers and infants. Increasing engagement and collaboration between hospitals and community-based organizations will facilitate upstream community-centric solutions for social determinants of health.

Aim Statement

Global Aim: Improve Severe Maternal Mortality (SMM) and Infant Mortality and Morbidity at participating Tennessee birthing hospitals by August 2026 for all. This project specific aim supports broader global aims of reduction in statewide maternal and infant mortality.

Statewide Aim:
The aim of this state-wide quality improvement (QI) project is:

TN Birthing Hospitals will:

1) Have 90% of all key process and structure measures (strategies) in place to reduce the differences in infant and maternal outcomes based on race/ethnicity, preferred language, SUD/OEN and payer status by August 2026.

2) Demonstrate a 10% improvement in patient satisfaction scores related to receiving respectful care (or optimal birthing experience as it relates to respectful care during their delivery stay by August 2026, based on the Patient Reported Experience Measures (PREM) survey.

Summary of Evidence

Health related social needs / social determinants of health risk screening:

A 2014 IOM report on Electronic Health Record (EHR) capture of social and behavioral measures identified 17 domains with valid measures. CMS developed a 10-item screening tool, the AHC HRSN Screening Tool[19], to assess patient needs in 5 different domains (housing instability, food insecurity, transportation difficulties, utility assistance needs, and interpersonal safety)[19, 20]. These domains were selected based on high-quality evidence linking them to health, health care utilization, and/or cost, ability to meet need through community interventions, and need not already met by hospitals. Several supplemental domains were also identified (financial strain, employment, family and community support, education, physical activity, substance use, mental health, disabilities)[20]. It was essential for the screening tool to be simple and streamlined, evidence-based and informed by practical experience. They developed the Accountable Health Communities Model to test whether systematically identifying and addressing health related social needs improves care quality, reduces costs, and improves health[20, 21].

A 2019 systematic review of screening in children identified 17 studies of 11 different screeners. The parent or caregiver was the primary informant for all screeners[21]. The most screened domains were family context and economic stability. Important considerations identified included whether a screener was available in the patient's primary language, if it was at their reading level, if it had been tested for reliability/validity, if the reference period was clear and consistent, and if it was presented in a way to facilitate "truthfulness." Few screeners assessed protective factors known to have a positive association with health outcomes[21].

Another 2019 publication described the use of community health workers to address social needs identified through screening[22]. Community health workers are lay members of the community who work with the local health system with the underserved populations by improving access to and use of health services, communication, and engagement between patients and health care providers, and adherence to

provider recommendations (Role of Community Health Workers, NHLBI, NIH)[23]. Community health workers may include "*promotoras*," peer health educators, and even doulas[23, 24].

An unsystematic review of tools to screen for Health-Related Social Conditions (HRSC) at the individual level was published in 2020. Nine (9) tools were reviewed and described in terms of domains. Domains were noted to be interconnected. Exposure to violence was the most commonly assessed. The authors noted that assessing this factor is a Grade "b" United States Preventive Services Task Force (USPSTF) recommendation for women of childbearing age. Employment, income, legal status, relational stability was commonly assessed. The authors noted that some data may already be collected for purposes other than screening. The Hunger Vital Sign was identified as a validated and concise screener[25]. Social support was less commonly assessed. The value of assessing patterns of HRSNs in designing solutions was emphasized[25].

A 2023 report of a pilot study during pregnancy developed a screening tool and identified that use of social determinants of health risk screening during pregnancy was feasible. The Social Determinants of Health in Pregnancy Tool (SIPT) included 32 questions in English at a Flesch-Kincaid grade level of 6. It was completed by the patient at the initial and 28-week visit. It measured perceived stress, relationship and family stress, domestic violence, substance abuse, and financial stress[26-28]. Results were reviewed by the provider. In the setting of this urban Federally Qualified Health Center (FQHC), 54% reported 3+ needs while 91% reported at least one. The authors identified the need for future studies to evaluate barriers to assessing social determinants of health risk factors during pregnancy, identifying effective strategies to connect patients to resources, and determining if pregnancy outcomes are improved[29].

A 2023 report of screening in a large, urban, academic health system's emergency departments identified 17.3% of patients reported a social need, with housing being the greatest, followed by food and transportation. Fifty percent (50%) of high-risk patients accepted assistance from a patient navigator. Lessons learned included the importance of establishing screening goals as connection of patients to community services, not just identification of needs, acknowledgement that some patients will not want assistance, leveraging existing resources, including community organizations in the process, and making data available[30]

Another 2023 publication described an analysis of 2,858 US hospitals in the 2020 American Hospital Association (AHA) Annual Survey Database suggesting that 79.2% screened for at least one health related social need, most commonly food insecurity or hunger and intimate partner violence. 79.4% of hospitals reported having community partnership and strategies in place to address needs, most commonly transportation[31].

Effective January 2023, the Joint Commission added new elements of performance for hospitals focused on screening for and addressing health-related social needs[18] (New Requirements to Prevent Health Disparities).

CMS is requiring hospitals to screen for five domains of health-related social needs starting in January 2024 (food insecurity, housing instability, transportation needs, utility difficulties, and interpersonal safety), according to the Hospital Commitment to Health Equity Measures (HCHEM). Reporting of the number of patients who were screened for these five needs among patients 18 years and older, and the positive rate for any of the five domains will be required. Start HQIN)[32].

In children, identifying and addressing health-related social needs may help to prevent primary and secondary childhood adversity and trauma and support resilience. According to a 2021 Clinical Report published in the

journal Pediatrics,[33] experiences in infancy and childhood affect subsequent health, mental health, development, and even life expectancy. Sources of trauma include abuse, neglect, and household dysfunction such as intimate partner violence, parental substance abuse and mental health issues, among others. Poverty affects 43% of US children and is associated with increased risk for trauma. Historical trauma may be passed intergenerationally among communities subject to discrimination. A secure relationship with a safe, stable, nurturing adult (i.e., parent or primary caregivers) support the development of resilience skills to prevent or alleviate the effects of adversity. Teaching and supporting effective parenting facilitate the development of secure attachments that may be relied on during times of stress.

Evidence-Based Discharge Criteria and Education:

The AAP has issued a Policy Statement to guide practices during hospital stay and discharge for healthy term newborns[34]. Length of stay for healthy term newborns and mothers after delivery should be sufficient to identify problems and ensure that the mother is recovered enough and prepared to care for the baby and herself at home. Because many problems, including jaundice, ductal-dependent cardiac lesions, and gastrointestinal obstruction in infants, and some significant maternal complications may not be apparent during the first 24 hours, education of the mother/caregivers, and close follow up is needed. Hospitalization is typically ensured for up to 48 hours after a vaginal delivery and up to 72-96 hours following cesarean delivery. All efforts should be made to keep the mother and newborn together. Common reasons for newborn readmission include jaundice, dehydration, feeding difficulties, as well as primiparity, associated maternal morbidities, preterm birth, low birth weight/small for gestational age, instrumented delivery, and Asian race[35]. Better coordination of post discharge care and close follow up were found to decrease readmission.

Appropriate assessment, support, and discharge planning for the breastfeeding dyad is essential to reduce adverse outcomes and support successful breastfeeding continuation. Breastfeeding support should be provided throughout the hospital stay, and any concerns should be evaluated and addressed. A family-centered approach to education and what to expect in the postpartum period is most effective. Integrative methods, including culturally appropriate communication, improving access to and continuity of care, consideration for maternal health in counseling, and addressing social and psychological needs are important to support breastfeeding [36].

Caregiver education on newborn care should include feeding, wet diapers, stools, jaundice, cord, skin, and circumcision (if applicable) care, temperature assessment, signs of illness, reasons to seek care, safe sleep, child passenger safety, non-accidental trauma, maintaining a smoke-free environment, and ways to prevent infection. Hospitals should have a process for providing parent/caregiver education from admission, utilizing a checklist, rooming in, and a teach-back process for verifying understanding, as well as education via phone or, preferably, video call when primary caregivers are not present at the hospital.

It is essential that all hospital screening and interventions have been completed and documented. Family, environmental, and social risk factors should be assessed prior to discharge. Special considerations are needed when discharging the high-risk neonate. High-risk neonates may include preterm infants, and those with special health care needs, family issues, or anticipated early death. A discharge checklist for opioid-exposed newborns has been developed by the ILPQC. Parents/caregivers will need extra information and support. A plan of safe care should be developed per the Child Abuse Prevention and Treatment Act (CAPTA) and state policy to protect infants and support caregiver recovery outcomes.

Preterm and low birth weight infants are at increased risk for issues requiring hospitalization or death during the first year of life. Preterm birth, special health care needs, and prolonged birth hospitalization are family stressors that are associated with future increased risk for family dysfunction and child abuse - as are maternal risk factors indicated by lack of prenatal care visits, lack of social support, lower educational level, parental substance abuse, and household dysfunction[37].

Contraindications

There are almost no contraindications.

Special Circumstances

Special considerations are needed when discharging the high-risk neonates, including preterm infants, and those with special health care needs, family issues, or anticipated early death, as well as the mom with substance use disorders and the neonate with substance exposure. Preterm and low birth weight infants are at increased risk for issues. Early and active engagement of the hospital multidisciplinary care team with families and outpatient providers is essential, as well as ongoing follow up services including home visits, social work, behavioral health, early intervention, high-risk clinic follow-up.

In addition, maternal mental health conditions and substance use disorders, with a focus on demographic groups with elevated rates of maternal mortality and morbidity and other adverse outcomes will also want to be closely followed.

How to Use This Toolkit

This toolkit focuses on providing support and resources to facilitate the implementation of “Best for All” in all birthing hospitals in Tennessee.

Included in this toolkit are:

- The rationale for Best for All.
- An overview of quality improvement (QI), specifically in the context of respectful care.
- The details regarding the data measures to collect and monitor to see the impact of your changes.
- The guidelines and best practices.

We recommend that you review the toolkit as a whole. We then suggest focusing on the change ideas and potentially better practices listed in the Key Driver Diagram (KDD). It is recommended that all the change ideas and best practices be implemented by the end of the project.

Research your current system and identify the opportunities for improvement. From this, we suggest creating a draft 30-60-90-day plan, which will help your team decide where to start and identify what you want to accomplish in the next 3 months. Thus, allowing your team to determine your first PDSA cycles.

The order of the change ideas on the Key Driver Diagram is the order we suggest (from top to bottom). As you conduct tests of change and accomplish individual change ideas, return to the Key Driver Diagram for your "roadmap" of which change idea to work on next.

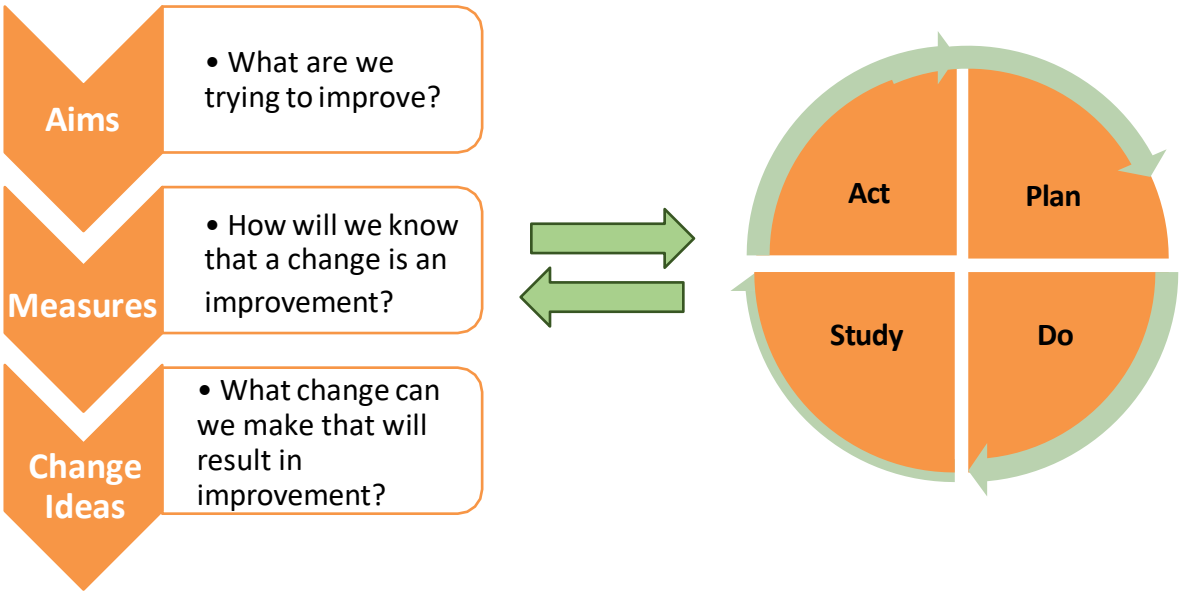
This toolkit is intended for application in conjunction with the learning opportunities and webinars offered and facilitated by TIPQC.

Any success realized from this toolkit is in part due to the generosity and collaborative spirit of the team that developed this toolkit, the practices that participated in the TIPQC pilot projects, and from thank Illinois, California, Nebraska, Massachusetts, and New York PQCs who provided ideas and direction.

QI Overview: *The Journey to Best for All*

All TIPQC inter-institutional QI projects are designed based on the IHI Model for Improvement, which provides the framework for developing, testing, and implementing changes that lead to improvement.

Model for Improvement*



For more information, see https://tipqc.org/jit-pdsa/. *Used by permission and adapted from: Langley, Nolan, Nolan, Norman, Provost. The Improvement Guide. San Francisco: Jossey-Bass Publishers; 1996.[7]

The following sections provide a more general overview of quality improvement – placed in the context of achieving respectful care at your facility.

Phase 1: Define the Problem

Where are we now? And how did we get here?

It is important to understand your local data and to consider it in the context of regional, national, and international standards observing any changes over recent years. The ability to convey these data to the wider

team clearly and concisely will facilitate a stronger commitment to the implementation of quality improvement interventions.

Project aim:

1) Have 90% of all key process and structure measures (strategies) in place to reduce infant and maternal differences in outcomes based on race/ethnicity, substance use disorder, preferred language, and payer status.

2) Demonstrate improvement in patient survey scores by 10% for ALL families during hospital delivery stay by August 2026

Questions to ask:

- What are the most important systemic barriers limiting our ability to advance respectful care during birth and delivery for all?
- What are the characteristics of an ideal system to advance respectful care during birth and delivery for all?

Understanding barriers and enablers and finding solutions

We suggest solutions that have worked elsewhere but encourage you to find solutions which are appropriate for your local setting as a solution which works for one team may not be successful in another.

In general, barriers fall into one of these categories: (Association of Maternal & Child Health Programs)[38]

1. Lack of awareness of benefits
    - Faulty assumptions about why pregnant women experience complications during birth.
2. Resistance to change:
    - A lack of flexibility in medical systems -- which could make it difficult for parents working multiple jobs to communicate with their baby's doctors in the NICU.
    - Failures to equally deliver evidence-based medical care to everyone.
    - A belief among decision makers that it is not critical to invest in workforce and service gaps.
    - Resistance to embracing a transformative mindset.
3. Concerns that diversity of workforce is not valued, for example the presence of a doula is treated as unwanted/unnecessary by hospital staff (despite evidence to the opposite).
4. Logistic concerns and human factors in carrying out the project.

Use some of these improvement tools to survey barriers and enablers in your own service:

1. **Forcefield analysis**- this tool balances the positive and negative drivers influencing respectful care, with scores assigned to describe the strength of each force. Plan, Do, Study, and act to strengthen the weaker positive forces and diminish the resisting forces (Figure 3). Resource: https://tipqc.org/jit-force-field/
2. **Pareto Chart**- in categorizing the underlying problem, a Pareto chart gives a visual depiction of the frequency of problems in graphical form, allowing you to target the areas that offer the greatest potential for improvement following the 80/20 rule (Figure 4). Resource: https://tipqc.org/jit-pareto-chart/

3. **Fishbone diagram**- cause and effect analysis tool. This is a useful tool for categorizing factors which influence the ability to deliver respectful equitable care (Figure 5). Resource: https://tipqc.org/jit-cause-effect/
4. **Case review** – take the last 10-20 cases and use a structured review tool to identify any common themes. Consider reviewing 10 cases and identify strengths as well.
5. **Process mapping** – walk through the journey that a patient takes before birth, during birth and immediately after birth and think about the factors within the process and the environment that may contribute to respectful and equitable care. Resource: https://tipqc.org/jit-flowcharts/

Figure 3: Example force field analysis

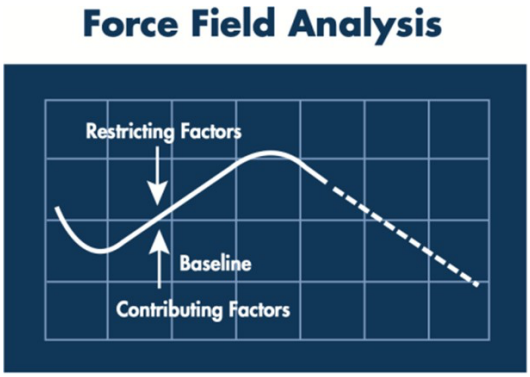


Figure 4: Example Pareto chart

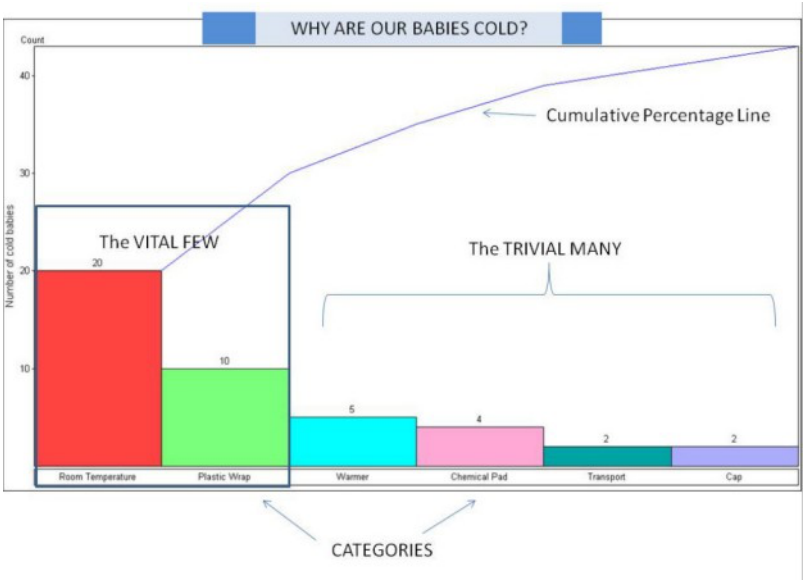
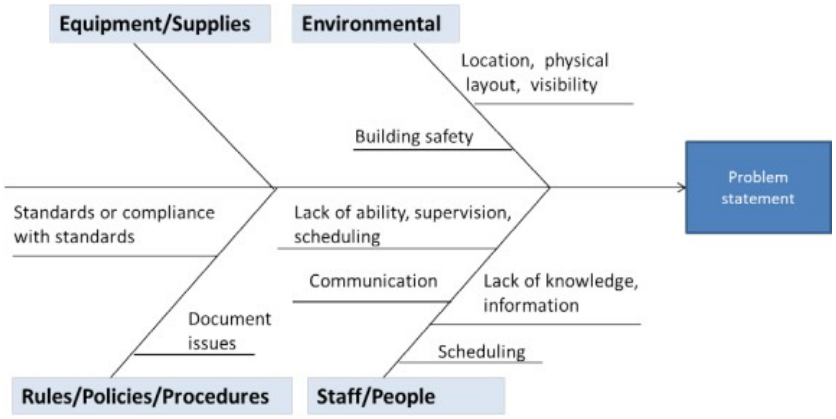


Figure 5: Example fishbone diagram



Phase 2: Develop a Shared Purpose

The evolution of the perinatal team

Obstetric and neonatal teams all have a key role to play in the safe delivery of care for women in labor and the subsequent care of their baby. This care at times may be delivered in professional silos which has the potential to lead to poor communication and missed opportunities for antenatal interventions which may lead to suboptimal outcomes. Developing a strong perinatal team within your workplace will help facilitate communication, understanding, and collaboration across departments and allow more cohesive implementation as well as embedding antenatal interventions. Having shared goals, a shared vision and shared experiences ensures your project has momentum and that barriers and enablers can be understood and addressed.

One key component to any successful project is having a team that is engaged, resilient, enthusiastic, and committed to working together to create the right culture for change. Teams should ideally be around 5-8 members. Suggested team composition includes:

- Project champion
- Physician champion
- Nursing champion
- Unit medical director
- Unit nursing management
- Front line nursing
- Nursing educators
- Nurse practitioners
- Midwives
- Physicians

- Patient/family members
- Patient safety officer
- Quality improvement office
- IT/EMR implementation experts
- Depending on the project – pharmacy, anesthesia providers, operating room leader, lactation, physical therapy, etc.

When forming your team consider:

- **Who** are the most influential people within the maternity/neonatal/pediatric team? These may not be the most senior staff members. Consider inviting those who are unsure or oppositional to understand perspective and secure buy in from the outset.
- **Where** are the areas likely to be affected by any changes? Consider staff in these areas.
- **Why** should people want to be involved in your project? Not everyone understands the benefits, so take the time to educate the staff. Consider how you are going to engage people and maintain their commitment.
- **What** are your expectations of team members? What will they be required to do in terms of time and effort? How will you manage team members who do not deliver on tasks/actions?
- **When** are people available and are the project's time commitments realistic?
- **How** often are you going to meet? Keep up momentum for change, short but frequent meetings.
- **What else** is going on? Are there existing workstreams with overlapping agendas that could be pulled together to prevent duplication? Are there other QI projects which take priority?

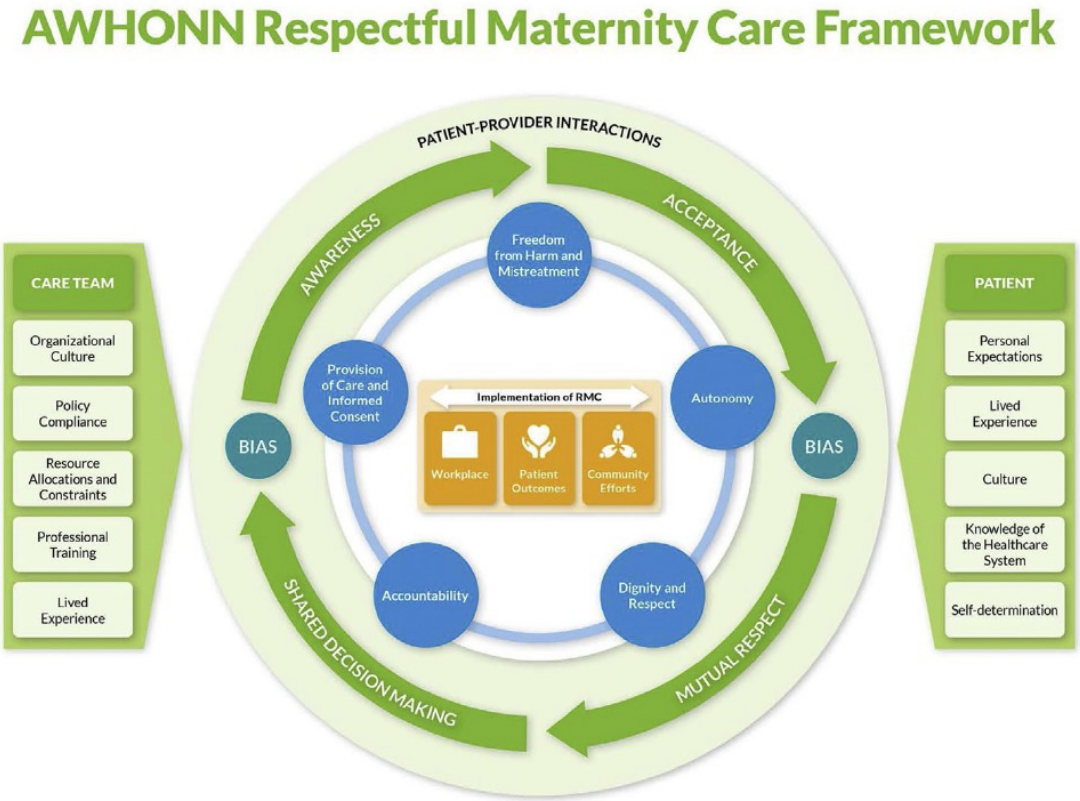
Find out if your facility has a central quality improvement team who can facilitate projects and provide valuable skills and knowledge in designing and implementing improvement work. Local data analysts are valuable in helping to collect, analyze, and display data.

<u>Stakeholder engagement</u>

Who else needs to be involved? Start by brainstorming the groups of people likely to be affected by the proposed change such as:

- pediatricians and neonatologists
- neonatal and obstetrical nurses
- obstetricians
- advance practice nurses – practitioners, midwives, CRNAs
- parent groups
- anesthesiologists

FIGURE 2 AWHONN RESPECTFUL MATERNITY CARE FRAMEWORK



Respectful maternity care framework and evidence-based clinical practice guideline. Washington, DC: Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2022 [39]

Resources:
https://tipqc.org/jit-teams/

Phase 3: Plan and Implement Changes

Project Charter

The quality improvement project charter provides a rationale for the team's work. It can help to clarify the team's thinking about what needs to be done and why. The charter helps the team keep the focus on a specific problem. The charter also identifies members of the project's team. An example charter and template can be found here: http://www.ihi.org/resources/Pages/Tools/QI-Project-Charter.aspx

Formulate, prioritize, and test solutions.

As mentioned, all TIPQC inter-institutional QI projects are designed based on the IHI Model for Improvement, which provides the framework for developing, testing, and implementing changes that lead to improvement.

The Model for Improvement

The IHI Model for Improvement consists of the 3 questions and the Plan-Do-Study-Act (PDSA) cycle. With PDSA cycles, the main idea is a mindset of continuous monitoring and testing of change ideas over time.

Plan

Which intervention(s) will you try first? This may be the intervention most likely to make an impact, the easiest to implement or the one that will best win hearts and minds. How will this intervention be introduced into clinical practice? Who and what will be required to make this happen? Predict what you think the change might be?

Do

When and how will this plan be carried out? A timeline is important. Document problems and unexpected observations.

Study

Use established tools to analyze your data (see Phase 4). Has your change idea resulted in improvement? Is this a real improvement? Does your data suggest your change idea needs to be modified? Why might this be so? Compare your data to your predictions.

Act

Identify and carry out any modifications needed to this change idea to make it more effective, using further PDSA cycles as needed i.e., Adapt, Adopt or Abandon, Repeat. Start with rapid testing your change on a small scale, for example small numbers of patients or a specific subgroup of patients. If effective, increase the numbers or widen to include other groups of patients. Test and repeat with increasing scale until you can show effectiveness throughout your patient group.

Resources:
https://tipqc.org/jit-model-for-improvement/
http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

Phase 4: Test and Measure Improvement

In this phase, improvements are tested, reviewed, and re-tested (using PDSA cycles) to find a solution.

Measures

Measuring for improvement is different from the data collected for research or to prove whether clinical interventions work or not. This type of measurement asks the questions "How do we make it work in our context?" and "How do we know that a change is an improvement?" It is important that you collect the right data for your project.

Groups of measures collected include:

- **Outcome measures**
  - Reflect the impact on the patient. This may include things like an increase in patient satisfaction with birthing experience.
- **Process measures**
  - The way systems and processes work to deliver the desired outcome, e.g., physicians and staff completing education to provide an optimal birthing experience for all patients.
- **Balancing measures**
  - This is what may be happening elsewhere in the system because of the change, e.g., an undesired increase in patients with dissatisfaction during birth admission.

The measures defined for this TIPQC Best for All Project are detailed in the "Measures: How will we know that a change is an improvement?" section.

Data analysis and display

How will any change be measured, assessed, and displayed in your unit or network? Common tools to present and analyze your data include run charts and statistical process control (SPC) charts. All require a level of knowledge and skill to collate and interpret correctly. Importantly, measurement should not be a 'before and after' audit which is unreliable in measuring true change, but a continuous process over time during which your changes can be evaluated and modified.

Note that you may choose a different type of chart to be understood by your audience. Run charts and statistical process control charts should always be used by the QI project team in understanding data and assessing change, while other charts and tools may be used to prepare your data in a format which is best understood by frontline staff. You may need an easy-to-read key to explain your chart or provide a summary interpretation.

Resources:
https://www.ihi.org/resources/how-to-improve/model-for-improvement-establishing-measures
https://tipqc.org/jit-types-of-measures/
https://tipqc.org/jit-run-charts/
https://tipqc.org/jit-control-charts/
https://www.ihi.org/resources/tools/run-chart-tool
http://www.ihi.org/resources/Pages/Publications/TheRunChartASimpleAnalyticalToolforLearningfromVariationHealthcareProcesses.aspx

Phase 5: Implement, Embed, and Sustain

This phase involves the wider implementation of improvements so that change becomes embedded in routine practice throughout the system.

Spread

This can involve formal methods such as *dissemination* that includes presentations, publications, leaflets, learning boards, social media, or informal methods of *diffusion* where word of mouth, champions, and opinion leaders can accelerate your message. Consider carefully what is required for the embedding of changes within your system. It is also important to consider how to disseminate this information to non-participating centers. This could be done through local and regional conferences and at professional organization meetings.

Exception reporting

We recommend that hospital units undertake a case review when outcomes are not achieved using the facility's risk reporting mechanisms. A case review or audit tool can be used or adapted for this purpose.

Sustainability

The ability of a service to implement and sustain change is dependent on various strengths and weaknesses of any one project. These can be assessed and addressed from the outset of a project and be reviewed regularly throughout the time course to improve the likelihood of sustaining improvement beyond its lifespan. A useful tool to guide sustainment efforts is available through the IHI at:
http://www.ihi.org/resources/Pages/Tools/Sustainability-Planning-Worksheet.aspx

Barriers and loss of motivation

It is not unusual to find the size of a previous improvement decreases over time. It is important to understand why, so that solutions can be tailored to the problem. Different approaches will be effective for different people and different situations. The following activities may be useful: talk to key individuals, observe clinical practice in action, use a questionnaire to survey staff, and/or brainstorm with a focus group. Education is a key element of overcoming barriers particularly within an interactive forum; using opinion leaders to influence others within your staffing structure; reminder systems to prompt clinicians; and ensuring feedback of data to staff in a format that they find useful; and proper use of parent stories. All these can help to reinvigorate and embed your changes for improvement.

Resources:
http://www.ihi.org/resources/Pages/IHIWhitePapers/AFrameworkforSpreadWhitePaper.aspx
http://www.ihi.org/resources/Pages/Tools/Sustainability-Planning-Worksheet.aspx
https://tipqc.org/jit-spread/
http://www.ihi.org/resources/Pages/Tools/HowtoGuideSustainabilitySpread.aspx.
https://tipqc.org/jit-holding-gains/

Measures: *How will we know that a change is an improvement?*

Target population

- All moms and newborns in participating Tennessee hospitals

Outcome measures

Frequency of Collection and Reporting: monthly and quarterly

#1. Tennessee Birthing Hospitals will have 90% of all key Process and Structure measures (strategies) in place.

- Cumulative proportion of implemented “Best For All” strategies as defined in this toolkit as Process and Structure Measures. Teams will report these measures in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%). Each process and structure measure are defined in detail below and reported quarterly. TIPQC staff will review quarterly data for each hospital team and report the cumulative proportion of implementation of all key strategies.

#2. Demonstrate improvement in Patient Reported Experience Measure (PREM) survey scores by 10% for ALL families during hospital delivery stay by August 2026.

- Utilizing the TIPQC PREM Survey, at the time of discharge patients will be asked to complete the survey as an opportunity to give feedback on their care experience.
- Hospitals will demonstrate a 10% increase in patient survey scores as demonstrated by a percent increase in the number of survey responses of 'agree or strongly agree.'
    - Surveys are distributed to all moms at discharge. Patients will be given a QR scan code and/or link to complete the survey via REDCap. Paper survey forms will be used as needed. Surveys will be provided in English, Spanish, Chinese, Mandarin, Arabic, Vietnamese, Hindi and French. Other languages may be included based on demand and feedback from hospital teams.
    - REDCap survey responses will be aggregated monthly, and data entered into SimpleQI by TIPQC staff.

Outcome measures will be stratified to report disaggregated race, preferred language, substance use disorder, and payor status data as applicable.

Balancing measures

Frequency of collection & reporting: monthly.

#1. **Percent of less-than-optimal patient experiences by analyzing the Patient Reported Experience Measure (PREM) survey responses of 'disagree/strongly disagree.'**

- Utilizing the PREM Survey, at the time of discharge patients will be asked to complete the survey as an opportunity to give feedback on their care experience.
- Patient survey responses of 'disagree and strongly disagree' will be analyzed.
    - Surveys are distributed to all women who gave birth at discharge. Patients will be given a QR scan code and/or link to complete the survey via REDCap. Paper survey forms will be used as needed. Surveys will be provided in English, Spanish, Chinese, Mandarin, Arabic, and French.
- REDCap survey responses will be aggregated, and data will be entered into SimpleQI by TIPQC staff.

Process measures

Frequency of collection & reporting: quarterly - Participating hospitals should report the cumulative proportion of completion for each structure measure in the SimpleQI platform.

- Provider education
    - Cumulative proportion of delivering physicians, midwives, pediatricians, nurse practitioners and neonatologists who have completed an education training program on Respectful Care that includes the unit-standard policy and procedure for quality care.
        - Report estimates in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)
- Nursing education

- Cumulative proportion of OB, Newborn Nursery, and Neo nurses who have completed an education training program on Respectful Care that includes the unit- standard policy and procedure for quality care.
    - Report estimates in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

Structure measures

Frequency of collection & reporting: quarterly - Participating hospitals should report the cumulative proportion of completion for each structure measure in the SimpleQI platform.

1. Hospital has implemented a protocol for collecting race, preferred language, substance use disorder, and payor data for all pregnant women, collects self-reported data, and tracks and reviews missing data.

    - Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

2. Hospital has implemented a protocol to review disaggregated race, preferred language, substance use disorder, and payor data to identify differences in health outcomes.

    - Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

3. Each unit (OB, NICU, Nursery) has implemented a protocol for collecting race, preferred language, substance use disorder, and payor data for all pregnant women, collects self-reported data, and tracks and reviews missing data.

    - Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

4. Hospital has implemented standardized social determinants of health screening tools in the electronic record for all pregnant women during delivery admission to link patients to needed resources and services.

    - Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

5. Hospitals have implemented a process to monitor if patients received the needed services identified through screening.

    - Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

6. Hospital has implemented a strategy for incorporating discussions of social determinants of health as potential factors in hospital maternal morbidity reviews.

    - Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

7. Hospital has implemented a strategy for sharing expected respectful care practices with delivery staff and patients including appropriately engaging support partners and/or doulas.

- Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

8. Hospital has implemented a strategy to provide all patients the recommended postpartum safety patient education materials prior to hospital discharge, including infant patient safety and urgent maternal warning signs, and where patients call for immediate help with concerns, as well as scheduling early postpartum follow-up.

- Report in 10% increments (0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%)

9. Hospital has a patient/family partner who engaged in appropriate education, e.g., Momma's Voices' Training, and is actively participating on the improvement team.

- Report completion progress on a 3-point Likert scale.
    - 1 = Not Started
    - 3 = Started
    - 5 = Fully in Place

Data Collection

Each team should determine the process in which they will collect and capture the outcome, balancing, process, and structure measure for this project. For this learning collaborative, all participating hospitals will implement the respectful care strategies (defined in structure and process measures) and data is reported quarterly. Survey data includes patient level data, collected directly via REDCap. All survey data is aggregated and reported by TIPQC staff. The PREM survey is a validated tool, adapted from the Illinois Perinatal Quality Collaborative.

Change Ideas: *What changes can we make that will result in an improvement?*

All improvement requires change. And while there are many kinds of changes that will lead to improvement, the specific changes are developed from a limited number of *change concepts*. As described in the IHI Model for Improvement, "A change concept is a general notion or approach to change that has been found to be useful in developing specific ideas for changes that lead to improvement." These change concepts are used to design and run tests of change (i.e., Plan-Do-Study-Act cycles) to see if they result in improvement.

A similar idea to change concepts is *Potentially Better Practices* (PBPs), which are a set of clinical practices that have the potential to improve the outcomes of care. They are labeled 'potentially better' rather than 'better' or 'best' because until the practices are evaluated, customized, and tested in your own institution, you will not know whether the practices are truly 'better' or 'best' (or 'worse'). Depending on the circumstances in your facility, you may have to implement other practices or modify existing ones to successfully improve outcomes. The PBPs in this collection are not necessarily the only ones required to achieve the improved outcomes targeted. Thus, this list of PBPs is not exhaustive, exclusive, or all inclusive. Changes in practice, guided by these PBPs, will require testing and adaptation to your circumstances and context to achieve measured improvements

in outcomes.

Core Strategies to Support Respectful Care during Birth—Potentially Better Practices

Use of the following Core Strategies is described in detail below, including rationale, implementation steps, potential challenges, and who should be involved.

Recognize need and increase readiness.

Educate team members on respectful care and implicit bias.
Screen patients for health-related social needs.
Provide updated discharge teaching.
Evaluate data by reported race/ethnicity, insurance status, substance use disorder, and preferred language.
Communicate about respectful and equitable care.
Transform future care and outcomes by sustaining practices.

*R*ecognize need and increase readiness.

Rationale: Understanding the drivers of maternal/infant health outcomes will help motivate project participation and the creation of a culture that promotes respectful care. Conducting a facility self-assessment will help hospitals to identify steps they can take to address these differences in care.

Implementation steps:

- Participate in a webinar series on the differences in maternal and infant health outcomes.
- Perform a baseline needs assessment for the unit/organization using the Best for All Quality Improvement Project Baseline Survey, adapted from the Birth Equity Readiness Survey (healthlnk.org).
- Leverage the electronic health record to record patient-reported race/ethnicity, insurance status, substance use disorder, and preferred language.
- Implement institutional policies about documenting self-reported race/ethnicity, insurance status, substance use disorder, and preferred language for all patients and their infants consistent with new CMS and Joint Commission requirements.
    - Start Guide: Hospital Commitment to Health Equity Measure | HQIN
    - The Joint Commission New Requirements to Prevent Health Disparities
    - The Joint Commission elevated Health Equity to a National Patient Safety Goal
    - Cynosure Learning and Improvement Connection Hub: Social Drivers of Health Screening Tools Training (thinkific.com)
- Improve support from hospital administration / leadership & use of clinical champions.

Potential Challenges:

- Lack of IT support/resources
- Missing data

Who: Hospital administrators, unit managers and directors, information technology professionals

***E*ducate team members on respectful care and implicit bias.**

Rationale: Provider and team member training on respectful care and implicit bias with a goal of cultural humility facilitates an optimal birth experience and environment for patients[40, 41].

Implementation steps:

- Implement a respectful maternal care training program for doctors, midwives, nurses and staff. (Respectful Maternity Care Implementation Toolkit - AWHONN)
- Implement an Implicit Bias training program (ex. Implicit Bias Training-March of Dimes)
- Embrace the goal of staff/provider education beyond Implicit and Explicit Bias with a goal of cultural humility.
- Training activities may include self-assessments (Harvard Implicit Bias Test), application of skills to case-study examples, small-group discussions, and the development of an implementation plan, with a goal of cultural humility (See summary of additional training resources in Appendix 1).
    - Increase self-awareness by reflecting on the results of the implicit bias self-assessment.
    - Demonstrate conscious mitigation strategies to overcome implicit bias.
    - Apply implicit bias reduction skills to case-study examples.
    - Understand the effect of implicit bias on real-life patients.
- Share definitions of key terms to create a common language (See list in Appendix 2)
- Train staff in the art of "Active Upstanding" to respond to microaggressions.
    - Collect and share brief stories (1-2 minutes) about microaggression observations on the unit.
    - Identify "champions" who can hear and help address concerns.
- Track appropriate metrics and balancing measures that assess maternal, newborn, and hospital staff satisfaction with training efforts.
- Consider how the quality of and access to childbirth and newborn care education for patients may be improved using a respectful care lens.
  Consider how forms and patient communications may be improved using a respectful care lens (review with community/patient advisors).

Potential challenges:

- Time for training
- Resistance to training
- Measurable outcomes to bias training

Who: All obstetric and newborn healthcare providers who care for pregnant women and infants including physicians, nurse practitioners, nurse midwives, staff nurses, social workers, lactation consultants, and pharmacists; social workers, case managers, behavioral health, patients, community resource organization representatives.

***S*creen patients for health-related social needs.**

Rationale: Screening for health-related social needs and connecting families to needed community resources

improves social conditions and addressing underlying causes/key drivers of maternal and infant mortality and morbidity. Addressing unmet social needs in children may prevent adverse childhood experiences(ACEs) and childhood trauma.

Implementation Steps:

- Implement universal social determinants of health screening during delivery/birth admission to facilitate linkage to needed resources and services.
    - Choose or update screening tool.
    - Social Determinants Screening Tool Comparison_6.9.21_FINAL.pdf (ilpqc.org)
    - Example screening tools from the ILPQC BE Toolkit:
        - Sample Screening Tool for Social Determinants of Health from ACOG committee opinion #729
        - Social Determinants of Health EMR Screener (Developed by Erie Health Center)
        - Social Determinants of Health in Pregnancy Tool (SIPT) with 5Ps (from Chicago PCC Communities Wellness Centers) and Actionable Map and Scoring Sheet
        - Partner Healthcare Screening Tool from Massachusetts General Hospital Obstetrics & Gynecology, and Mass General Brigham
    - Develop screening protocol/policy consistent with new CMS and Joint Commission requirements that meets patient needs.
        - Start Guide: Hospital Commitment to Health Equity Measure | HQIN
        - The Joint Commission New Requirements to Prevent Health Disparities
        - The Joint Commission elevated Health Equity to a National Patient Safety Goal.
        - Cynosure Learning and Improvement Connection Hub: Social Drivers of Health Screening Tools Training (thinkific.com)
    - Incorporate screening questions into EMR.
    - Identify team members and/or community partners, such as social workers or navigators, and protocols to connect families to needed resources and services.
- ·Utilize tools such as www.FindHelp.org (community resources), FindHelpNow (SUD/OUD resources), or Unite Us to connect patients to community resources and services.
    - Key resource/service needs may include childcare, education, domestic violence support, food, housing (homeless services/shelter services/affordable or subsidized housing/eviction support), legal status, transportation assistance, utilities/bills/financial assistance, other.
- Community resources mapping to identify, share, and update resources. Start by identifying a team to complete this project. Next, identify the goal or vision for the mapping.
- Discuss SDoH in Maternal and Infant Mortality Reviews.
- Educate providers, nursing, and staff on SDoH screening goals and process:
    - How SDoH screening benefits patients?
    - Where and when are we screening? Who is performing the screening? And how?
    - Why are we screening?
    - Who will follow up with the patients who screen positive?
- Provide Trauma-Informed Care

- ACOG Caring for Patients Who Have Experienced Trauma (ilpqc.org)
- AAP Trauma-Informed Care | Pediatrics | American Academy of Pediatrics (aap.org)

Potential challenges:

- Screening fatigue
- Patient embarrassment or fear of stigma
- Inability to offer resources to meet needs

Who: Hospital providers, nurses, and administrators, social workers, case managers, behavioral health, community health workers, community resource organization representatives, information technology professionals, patients

***P*rovide updated discharge teaching.**

Rationale: Ensuring that discharge teaching is evidence-based, and current will increase the capacity of patients and caregivers to support healing, health, and safety, and promptly seek care when warning signs are present.

Implementation steps:

MATERNAL

- Standardize system to provide patient education prior to hospital discharge on postpartum safety including urgent maternal warning signs and tools to improve communication with providers.
  - Prenatal Through Postpartum Health Information Resources
  - POST-BIRTH Warning Signs Education Program - AWHONN
  - HEAR HER Campaign | CDC
- The American Academy of Family Physicians (AAFP) and ACOG both have courses to provide education and build skills focused on recognizing obstetrical emergencies. These evidence-based, interprofessional, and multidisciplinary programs train medical staff and first responders through a blend of didactic learning and simulated obstetrical emergencies, with a focus on team-based care.
- Document a postpartum visit (date, time, and provider) at the time of discharge.
- Consider the use of community based non-traditional workforce (doulas).
- Tennessee Resource Examples:
  - ETSU Health's Caring For Motherhood (etsuhealth.org)

INFANT

- Assemble a team to review and compare current discharge checklists and education and update protocols to reflect current guidelines and needs.
- Implement/update a process for providing parent/caregiver education from admission.
- Utilize a checklist, rooming in, and a teach-back process for verifying understanding (See Appendix 4).

- Offer education via phone or, preferably, video call when primary caregivers are not present at the hospital.
- Incorporate assessment of family, environmental, and social risk factors into discharge planning. Discharge may need to be delayed when risk factors are present to prepare a plan to safeguard the infant with social work and/or child protective services. These risk factors include untreated non-prescribed parental substance use/misuse, history of child abuse or neglect any caregiver, household mental illness, lack of social support, history of domestic violence, adolescent mothers, barriers to adequate follow up (lack of transportation, language, or communication barriers).
- Incorporate checklists and education into EMR.
- Consider the use of community based non-traditional workforce (i.e. doulas, community health workers, patient navigators, etc.)
- Educate all providers, nurses, and staff on updated discharge protocols.
- Document newborn visit (date, time provider) and other appointments at the time of discharge
- Resources:
    - Your Newborn's First Week: How to Prepare & What to Expect - HealthyChildren.org (In Spanish: Traer a su bebé a casa: cómo prepararse para la llegada de su recién nacido - HealthyChildren.org)
    - Discharge Procedures for Healthy Newborns | AAFP
    - Rear-Facing Car Seats for Infants & Toddlers - HealthyChildren.org (In Spanish: Asientos orientados hacia atrás para bebés y niños pequeños - HealthyChildren.org)
    - How to Keep Your Sleeping Baby Safe: AAP Policy Explained - HealthyChildren.org (In Spanish: Cómo mantener seguro a su bebé cuando duerme: explicamos la política de la AAP - HealthyChildren.org)
    - Safe Infant Sleep Checklist | Safe Kids Worldwide (In Spanish: SPANISH Safe Infant Sleep Checklist-lettersize.pdf (rackcdn.com))
    - Shaken Baby Syndrome: Protect Your Infant from Abusive Head Trauma - HealthyChildren.org (In Spanish: Síndrome del bebé sacudido: proteja a su bebé del traumatismo craneal por abuso - HealthyChildren.org)
    - Guns in the Home: How to Keep Kids Safe - HealthyChildren.org (In Spanish: Armas de fuego en el hogar: cómo mantener seguros a sus hijos - HealthyChildren.org)
    - 5 Water Safety Tips for Kids of All Ages - HealthyChildren.org (In Spanish: 5 consejos para niños de todas las edades para mantenerse a salvo en el agua - HealthyChildren.org)
- Tennessee Resource Examples:
    - ETSU's ReadNPlay Baby Book mobile app ReadNPlay (etsuhealth.org)
    - Facilitate signing up for Dolly Parton's Imagination Library Programs - Governor's Early Literacy Foundation (governorsfoundation.org)
- **Special Populations / Considerations:**
    - Special considerations are needed when discharging the high-risk neonate. High-risk neonates may include preterm infants, and those with special health care needs, family issues, or anticipated early death. Follow up appointments should include one with a primary care provider with experience caring for high-risk newborns and plans for continued surveillance of growth and development.
    - Guidance for Planning the Mother-Infant Dyad Discharge in cases of Opioid Use

Disorder/Opioid Withdrawal Syndrome was developed by the AAP and a discharge checklist for opioid-exposed newborns has been developed by the ILPQC. Parents/caregivers will need extra information and support. For instance, they should be taught how to soothe an infant with neonatal abstinence syndrome (NAS) or, as it is more recently called, neonatal opioid withdrawal syndrome (NOWS). A plan of safe care should be developed per the Child Abuse Prevention and Treatment Act (CAPTA) and state policy to protect infants and support caregiver recovery outcomes.

- Preterm and low birth weight infants are at increased risk for issues requiring hospitalization or death during the first year of life. Preterm infants are typically not ready for discharge prior to 36-37 weeks corrected gestational age. While hospitalized, they should be routinely placed on their backs to sleep starting at 32 weeks. Those infants born preterm or with special health care needs should have arrangements made for all supplies and equipment needed at home prior to discharge (i.e., gavage or total parenteral nutrition (TPN), home oxygen, cardiorespiratory (CR) monitor). Early and active engagement of the hospital multidisciplinary care team with families and outpatient providers is essential.
- Preterm birth, special health care needs, and prolonged birth hospitalization are family stressors that are associated with future increased risk for family dysfunction and child abuse - as are maternal risk factors indicated by lack of prenatal care visits, lack of social support, lower educational level, parental substance abuse, and household dysfunction. Involvement of multidisciplinary follow up including home visits, social work, behavioral health, early intervention, high-risk clinic follow-up and/or recovery resources as appropriate to provide extra support and surveillance is recommended in these situations. Here is a series of NICU patient discharge education videos from the AAP.
- For terminally ill newborns, there should be arrangements for addressing pain, other distressing symptoms, oxygen needs, etc. through home visits and hospice, and consideration for the need of a Do Not Resuscitate (DNR) letter and bereavement resources.
- Additional Resources:
    - Hospital Discharge of the High-Risk Neonate | Pediatrics | American Academy of Pediatrics (aap.org)
    - NICU discharge preparation and transition planning: guidelines and recommendations | Journal of Perinatology (nature.com)
    - Neonatal Opioid Withdrawal Syndrome | Pediatrics | American Academy of Pediatrics (aap.org)
    - Academy of Breastfeeding Medicine Clinical Protocol #2: Guidelines for Birth Hospitalization Discharge of Breastfeeding Dyads, Revised 2022 (bfmed.org)
    - Care of the Well Newborn | Pediatrics In Review | American Academy of Pediatrics (aap.org)
    - Sleep-Related Infant Deaths: Updated 2022 Recommendations for Reducing Infant Deaths in the Sleep Environment | Pediatrics | American Academy of Pediatrics (aap.org)
    - Child Passenger Safety | Pediatrics | American Academy of Pediatrics (aap.org)
    - Reportable Diseases (tn.gov)

Potential challenges:

- Low health literacy
- Language barriers
- Other sources of misinformation

Who: Hospital unit managers, providers, nurses, social workers, case managers, community health workers, information technology professional

*E*valuate data by reported race/ethnicity, insurance status, substance use disorder, and preferred language.

Rationale: Stratifying data facilitates identification of differences and opportunities for improvements in care and helps to meet new Joint Commission and CMS requirements.

Implementation steps:

- Review unit-level maternal and infant data by race, ethnicity, insurance status, substance use disorder, and preferred language to identify differences and opportunities for improvement.
    - PREM (see Outcome Measures above)
    - Social Determinants of Health (SDOH) screening
    - Incorporate into maternal and infant mortality reviews.
- Implement changes to address different outcomes (process, structural, balancing measures)
- Track improvement or changes using run charts.
- Make modifications based on outcomes.

Potential challenges:

- Lack of IT support/resources

Who: Hospital providers and administrators, nurses, social workers, case managers, community health workers, information technology professionals, patients

*C*ommunicate about respectful and equitable care.

Rationale: A respectful maternity care framework is a necessary adjunct to quality improvement initiatives and can potentially increase pregnant women's engagement with health care systems[51]. Increasing patient engagement with health care systems has the potential to improve maternal outcomes. According to the WHO, respectful maternity care maintains dignity, privacy, confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labor and childbirth[52, 53]. Patients from marginalized communities describe mistreatment from care providers and nursing during their hospitalization[4, 54]. According to the Giving Voice to Mothers study, of the 2700 cohort, 17% reported being disrespected in labor and delivery[4]. Types of disrespectful care included loss of autonomy; being shouted at, scolded, or threatened; and being ignored, refused, or receiving no response to requests for help[4]. Black women and women with lower socioeconomic statuses were more likely to report incidences of disrespect

compared to White women and those with a higher socioeconomic status[4]. It is imperative to operationalize the ethical principles of respectful care using concrete strategies detailed below.

Implementation Steps:

- Implement a strategy for sharing expected respectful care practices during delivery admission and surveying patients before discharge on their care experience (using the PREM tool) to provide feedback.
- Develop and distribute your institution's commitment to the Birthing Person's Bill of Rights. (Appendix 5)
- Share a QR code with link to the PREM Survey (or distribute paper copy)
- Engage in open, transparent, & empathetic communication with pregnant & postpartum people to understand diagnoses, options, & treatment plans.
- Protect patient autonomy to enable the patient's personal choice with a focus on family- centered care.
- Obtain informed consent through shared decision making at major decision points of care.
- Include each patient that experienced a negative birth experience as members of & contributors to the multidisciplinary care team & as participants in patient-centered huddles and debriefs.
- Convene patient focus groups twice a year. (Resource for convening maternal focus group listening sessions.)
- Participate in TIPQC Regional Community Engagement Meetings
- Engage patient partners on improvement teams.
- Host Respectful Care Breakfasts - see Guide from ILPQC.
- Avail doulas and other lay support persons for vulnerable patient groups.

Potential Challenges:

- Inadequate education for providers detailing the importance of respectful care and how it impacts maternal and neonatal health outcomes.
- Getting buy- in from hospital administrator stakeholders, Pediatric, NICU, and OB leadership.
- Lack of coordination and communication between providers/nurses and physician leadership.
- Inherent mistrust of marginalized communities with hospital systems.

Who: physicians, midwives, nurse practitioners, nurses, patients

***T*ransform future care and outcomes by sustaining practices.**

Rationale: Maternal and infant mortality need urgent and sustained action. Listening to patients and communities helps us understand what changes are needed. Building collaboration with community partners can inspire upstream solutions.

Implementation steps:

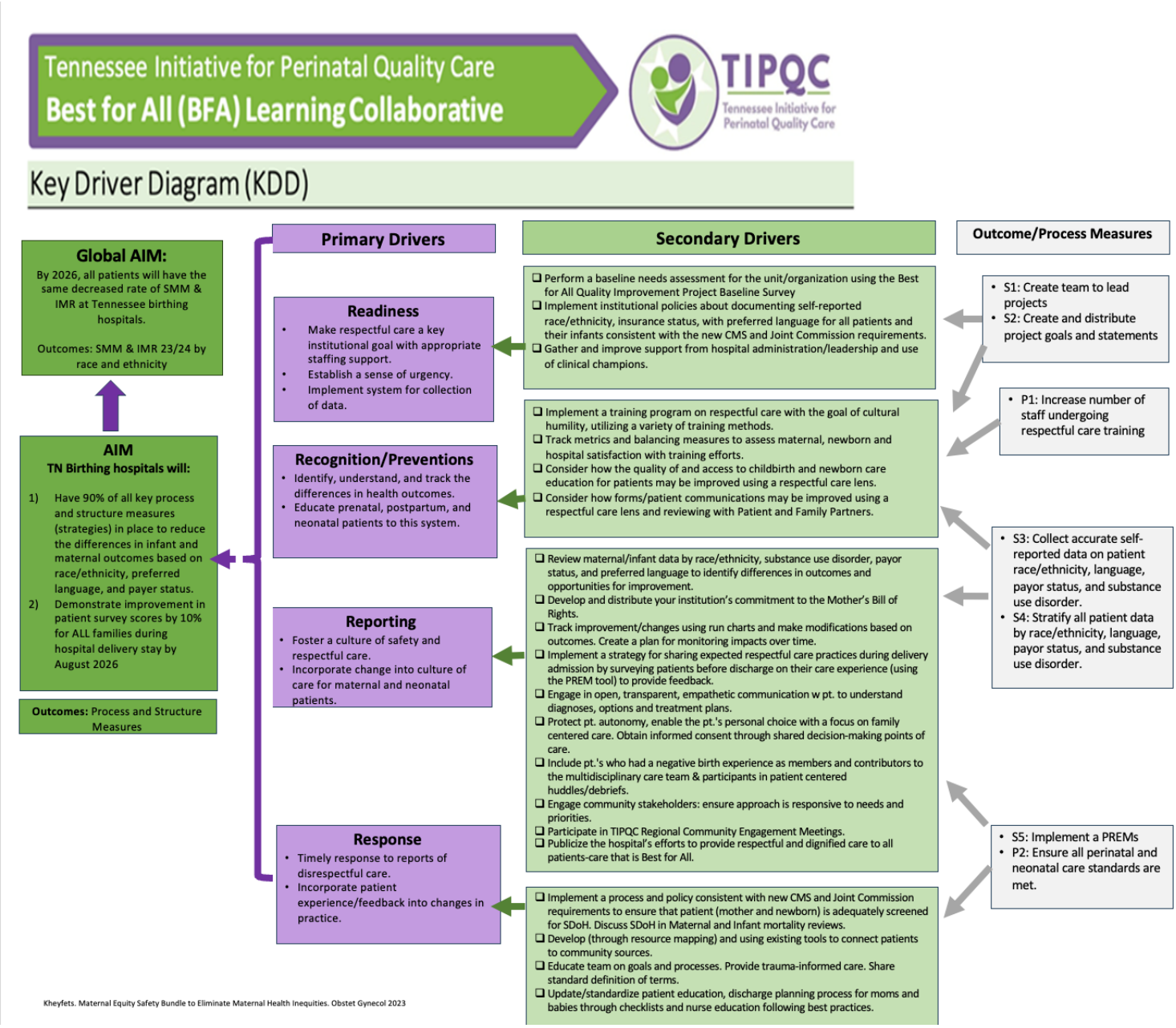
- Engage your leadership team.
- Continue to increase awareness and inspire motivation.
- Publicize the hospital's efforts to provide respectful care to all patients - care that is Best for All.
- Have a structured approach for identifying respectful care improvements ahead of time.
    - Understand the data.
    - Identify the gaps and opportunities for improvement.
    - Actively listen.
    - Engage, educate, and improve.
    - Provide support for sustaining beneficial changes in systems and structures of care.
    - Connect with your clinical team.
- Have a plan for monitoring impacts over time.
- Engage community stakeholders to ensure your approach is responsive to needs and priorities.

Potential challenges:

- Staff turnover
- Competing priorities

Who: Hospital administrators, unit managers, providers, nurses, social workers, case managers, information technology professionals, patients

Key Driver Diagram



Appendix 1: Respectful Care Training Resources

Tier/Type of education process	Resource/ tool available	Targeted staff	Brief description
Tier 1: Free and scalable maternal health focused e-module trainings for independent completion	Diversity Science	All staff	Three e-modules focused on implicit bias. Option to integrate into hospital learning management systems through ILPQC access
	The Office of Minority Health: Think Cultural Health	All staff	Four e-modules focused on Culturally and Linguistically Appropriate Services (CLAS) in maternal health care
Tier 2: Tools to facilitate feedback among providers and staff and communication between providers and patients	Inequity Inbox (example from Massachusetts General Hospital OB department)	All staff	Example of a strategy used by an OB department to provide opportunity for anonymous feedback of workplace environment and patient interactions
	Professionalism: Microaggression in the Healthcare Setting	All staff	Article provides strategies for health care professionals to use to address microaggressions when they come up in day-to-day interactions with other healthcare professionals.
	Protecting your birth: a guide for Black mothers (and OB care team)	OB care team	Guide on how bias can impact pre- and postnatal care and ideas to facilitate optimal patient-provider communication and promote respectful care
	CDC Hear Her Campaign	All staff	Resources to raise awareness of life-threatening warning signs during and after pregnancy and improve patient-provider communication, including patient story videos and discussion tools
Other Supportive Resources	Perinatal Quality Improvement Speak-up Training	Birth Equity QI team leads	TIPQC will provide access for one member per QI team to this live training for health professionals (date TBD)
	Harvard Project Implicit Association Test	All staff	Test to check implicit bias

Additional resources:

- Advancing the Mission: Tools for Equity, Diversity, and Inclusion (link is external) (The Annie E. Casey Foundation)
- VON for Health Equity (Vermont Oxford Network)
- Dear anti-racist allies: Here's how to respond to microaggressions (link is external) (CNN)
- Disarming Racial Microaggressions: Microintervention Strategies for Targets, White Allies, and Bystanders(link is external) (Sue DW, Alsaidi S, Awad MN, Glaeser E, Calle CZ, Mendez N, American Psychological Association)
- Equity vs Equality Tool (link is external) (Robert Wood Johnson Foundation)
- Guide to Allyship (link is external)(Amélie Lamont)
- Protecting Your Birth: A Guide for Black Mothers (link is external) (Erica Chidi and Erica P. Cahill, M.D.)

- Staff education:
  - March of Dimes (link is external)
  - Diversity Sciences (link is external)
  - Office of Minority Health

Appendix 3: Respectful Care Commitment for Every Patient

Our Respectful Care Commitments for Every Patient

1. **Treating you with dignity and respect** throughout your hospital stay.
2. **Introducing ourselves and our role** on your care team to you and your support people upon entering the room.
3. **Learning your goals for delivery and postpartum:** What is important to you for labor and birth? What are your concerns regarding your birth experience? How can we best support you?
4. **Working to understand you,** your background, your home life, and your health history so we can make sure you receive the care you need during your birth and recovery.
5. **Communicating effectively** across your health care team to ensure the best care for you.
6. **Partnering with you for all decisions** so that you can make choices that are right for you.
7. **Practicing "active listening"**—to ensure that you, and your support persons are heard.
8. **Valuing personal boundaries and respecting your dignity and modesty at all times**, including asking your permission before entering a room or touching you.
9. **Recognizing your prior experiences with healthcare may affect how you feel during your birth**, we will strive at all times to provide safe and respectful care.
10. **Making sure you are discharged after delivery with an understanding of postpartum warning signs**, where to call with concerns, and with postpartum follow-up care visits arranged.
11. **Ensuring you are discharged with the skills, support, and resources** to care for yourself and your baby.
12. **Protecting your privacy** and keeping your medical information confidential.
13. **Being ready to hear any concerns** or ways that we can improve your care.

As a provider, nurse, or staff member caring for pregnant and postpartum patients on this unit, I have reviewed and committed to these respectful care practices with every patient.

_____ _____

Signature Date

Adapted from ILPQC

Appendix 4: Criteria for newborn discharge include:

o Physiologic stability (based on feeding, temperature maintenance, and respiratory status)

- o For term newborns (defined as infants born between 37-0/7 and 41-6/7 weeks of gestation), vital signs should be documented as normal for 12 consecutive hours prior to discharge, as defined below:
  - Axillary temperature of 36.5 to 37.4 degrees C or 97.7-99.3 degrees Fahrenheit in an open crib with appropriate clothing
  - Respiratory rate less than 60 per minute
  - No signs of respiratory distress
  - Awake heart rate 100-190 beats per minute - and no lower than 70 beats per minute while sleeping - without signs of circulatory compromise.

o Infant should have completed at least two successful feedings and have voided and stooled.

o Assessments for clinically significant jaundice and early onset sepsis should have been completed based on current practice guidelines.

o All maternal and infant laboratory tests should be available and have been reviewed, including:

- Maternal blood type and antibody screen
- Maternal Rubella immunity
- Maternal Syphilis
- Maternal Hepatitis B surface antigen
- Maternal Hepatitis C status
- Maternal HIV status
- Maternal HSV status
- Maternal GBS status and assessment of infant risk for early onset sepsis
- Maternal gonorrhea and chlamydia
- Infant blood type and Coombs (if clinically indicated)
- Infant glucose (if clinically indicated)
- Infant hearing screen
- Infant congenital heart disease screen
- Infant state screen collection
- Infant bilirubin screening and assessment of risk for clinically significant jaundice

o All hospital and provider reporting requirements are completed (Reportable Diseases (tn.gov)

o An infant car safety seat that meets Federal Motor Vehicle Safety Standard 213 should be available at hospital discharge with demonstration of appropriate infant positioning and use.

o All infant interventions have been completed and documented:

- Vitamin K
- Erythromycin eye ointment
- Immunizations (i.e. Hepatitis B, nirsevimab).
- Eye examination (if clinically indicated)
- Other appropriate primary care interventions).

- Adequate social support

- Scheduled follow up appointments, including with the primary care provider.
    - Newborn visit within 24-48 hours of discharge for infants discharged prior to 48 hours of life.
    - For longer hospital stays (i.e., 5 days), the first outpatient visit may be scheduled further out from discharge (i.e., 2 weeks of age).

- Caregivers (preferably two) prepared to feed and care for the infant at home:
    - Caregiver education topics reviewed: feeding, wet diapers, stools, jaundice, cord, skin, and circumcision (if applicable) care, temperature assessment, signs of illness, reasons to seek care, safe sleep, child passenger safety, non-accidental trauma, maintaining a smoke-free environment, and ways to prevent infection.
    - How to hand express her milk to alleviate engorgement and provide supplementary feeding if needed. Anticipatory guidance provided should cover engorgement, newborn hunger cues and feeding frequency/patterns, signs of adequate/inadequate intake, signs of excessive jaundice, and safe sleep.
    - For infants who are exclusively or partially breastfed: give your baby 10 mcg (400 IU) vitamin D each day until they consume at least 1000 ml/day vitamin D-fortified formula or milk. This vitamin is needed for building strong bones and is not adequately provided in breast milk.
    - Provide a list of breastfeeding websites, mobile applications, and community-based breastfeeding support resources.

Appendix 5: Mom's Bill of Rights- University Chapel Hill

- You have the right to bodily autonomy and self-determination. For example, you can decide whether or not to get an epidural or whether to accept a recommended c-section, regardless of hospital policies. Your consent is also required before any procedures like vaginal exams or breaking the bag of water. This can include leaving the hospital if you do not want to be admitted (Please see below about how to leave the hospital).
- You have the right to choose your birth setting—in a hospital, birth center, or home. You have the right to choose your provider (a midwife or a doctor) to attend your birth.
- You have the right to support during your labor and birth, from a family member, partner and/or a birth support worker such as a doula.
- You have the right to breastfeed if you decide that this is best for you and your baby. If breastfeeding is not recommended, you have the right to have the risks and benefits of breastfeeding explained to you by your healthcare provider.
- You have the right not to be separated from your baby. If separation is recommended, you have the right to have any risks and benefits explained to you by your healthcare provider.
- You have the right to understand the pros and cons of any procedure. You also have the right to understand other options including what will happen if you don't do any of the options. You have the right to have all your questions answered before you make a decision about your health care. You have the right not to be threatened into choosing certain options.
- You have the right to be able to reach your prenatal provider during your pregnancy if you have concerns that cannot wait until your next scheduled visit.
- You have the right to an interpreter if you do not speak English, and to disability accommodations in accordance with the Americans with Disabilities Act, even during the COVID-19 pandemic.
- You have the right to be treated with dignity and respect.
- You have the right to file a formal complaint about concerns related to the care you have received, and to have the healthcare provider or institution respond to your concerns in a timely fashion. This also includes the right to be provided with clear alternatives for switching to another provider within 24-72 hours. In some cases, you also might be able to switch your health care plan. Information on how to file a complaint is provided below.

Bibliography (EndNote Library)

1. Jona Bandyopadhyay M, MPH Adele Lewis, MD, James Brinkley Daina Moran M, LMFT, Kitty Cashion R-B, MSN Jackie Moreland BSN, RN, MS, et al. Maternal Mortality Review Committee. Tennessee: Tennessee Department of Health; 2023.

2. Owens DC, Fett SM. Black Maternal and Infant Health: Historical Legacies of Slavery. *Am J Public Health.* Oct 2019;109(10):1342-1345.

3. Ukoha EP, Snavely ME, Hahn MU, Steinauer JE, Bryant AS. Toward the elimination of race-based medicine: replace race with racism as preeclampsia risk factor. *Am J Obstet Gynecol.* Oct 2022;227(4):593-596.

4. Vedam S, Stoll K, Taiwo TK, et al. The Giving Voice to Mothers study: inequity and mistreatment during pregnancy and childbirth in the United States. *Reprod Health.* Jun 11 2019;16(1):77.

5. Rosenberg L, Palmer JR, Wise LA, Horton NJ, Corwin MJ. Perceptions of racial discrimination and the risk of preterm birth. *Epidemiology.* Nov 2002;13(6):646-652.

6. Ely D DA. Infant Mortality in the United States: Provisional Data From the 2022 Period Linked Birth/Infant Death File. NVSS Vital Statistics Rapid Release. . 2023;33.

7. Dimes Mo. https://www.marchofdimes.org/report-card; 2023.

8. Organization WH. Closing the gap in a generation. *Commission on Social Determinants of Health FINAL REPORT | EXECUTIVE SUMMARY.* 2008.

9. Committee on Health Care for Underserved W. ACOG Committee Opinion No. 729: Importance of Social Determinants of Health and Cultural Awareness in the Delivery of Reproductive Health Care. *Obstet Gynecol.* Jan 2018;131(1):e43-e48.

10. Council On Community P. Poverty and Child Health in the United States. *Pediatrics.* Apr 2016;137(4).

11. Blumenshine P, Egerter S, Barclay CJ, Cubbin C, Braveman PA. Socioeconomic disparities in adverse birth outcomes: a systematic review. *Am J Prev Med.* Sep 2010;39(3):263-272.

12. Himmelstein KEW, Lawrence JA, Jahn JL, et al. Association Between Racial Wealth Inequities and Racial Disparities in Longevity Among US Adults and Role of Reparations Payments, 1992 to 2018. *JAMA Netw Open.* Nov 1 2022;5(11):e2240519.

13. Darity W, Jr., Hamilton, D., Paul, M., Aja, A., Price, A., Moore, A., & Chiopris, C. What we get wrong about closing the racial wealth gap. Samuel DuBois Cook Center on Social Equity and Insight Center for Community Economic Development. *1.* 2018;1:1-67.

14. Glazer KB, Zeitlin J, Howell EA. Intertwined disparities: Applying the maternal-infant dyad lens to advance perinatal health equity. *Semin Perinatol.* Jun 2021;45(4):151410.

15. Julian Z, Robles D, Whetstone S, Perritt JB, Jackson AV, Hardeman RR, Scott KA. Community-informed models of perinatal and reproductive health services provision: A justice-centered paradigm toward equity among Black birthing communities. *Semin Perinatol.* Aug 2020;44(5):151267.

16. James R, Hesketh MA, Benally TR, Johnson SS, Tanner LR, Means SV. Assessing Social Determinants of Health in a Prenatal and Perinatal Cultural Intervention for American Indians and Alaska Natives. *Int J Environ Res Public Health.* Oct 21 2021;18(21).

17. Tarazi C, Skeer M, Fiscella K, Dean S, Dammann O. Everything is connected: social determinants of pediatric health and disease. *Pediatr Res.* Jan 2016;79(1-2):125-126.

18. Commission TJ. New Requirements to Reduce Health Care Disparities *https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_disparities_july2022-6-20-2022.pdf*; 2023.

19. . *Capturing Social and Behavioral Domains and Measures in Electronic Health Records: Phase 2*. Washington (DC); 2015.
20. Services CfMaM. *The Accountable Health Communities*

Health-Related Social Needs Screening Tool 2017.
21. Sokol R, Austin A, Chandler C, et al. Screening Children for Social Determinants of Health: A Systematic Review. *Pediatrics.* Oct 2019;144(4).
22. Fiori K, Patel M, Sanderson D, et al. From Policy Statement to Practice: Integrating Social Needs Screening and Referral Assistance With Community Health Workers in an Urban Academic Health Center. *J Prim Care Community Health.* Jan-Dec 2019;10:2150132719899207.
23. National Institutes of Health Heart L, Blood Institute. Role of Community Health Workers. *https://www.nhlbi.nih.gov/health/educational/healthdisp/role-of-community-health-workers.htm.* 2014.
24. Kane Low L, Moffat A, Brennan P. Doulas as community health workers: lessons learned from a volunteer program. *J Perinat Educ.* Summer 2006;15(3):25-33.
25. Hager ER, Quigg AM, Black MM, et al. Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics.* Jul 2010;126(1):e26-32.
26. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav.* Dec 1983;24(4):385-396.
27. Curry MA, Burton D, Fields J. The Prenatal Psychosocial Profile: a research and clinical tool. *Res Nurs Health.* Jun 1998;21(3):211-219.
28. McFarlane J, Parker B, Soeken K, Bullock L. Assessing for abuse during pregnancy. Severity and frequency of injuries and associated entry into prenatal care. *JAMA.* Jun 17 1992;267(23):3176-3178.
29. Harriett LE, Eary RL, Prickett SA, Romero J, Maddrell RG, Keenan-Devlin LS, Borders AEB. Adaptation of Screening Tools for Social Determinants of Health in Pregnancy: A Pilot Project. *Matern Child Health J.* Sep 2023;27(9):1472-1480.
30. Peretz P, Shapiro A, Santos L, et al. Social Determinants of Health Screening and Management: Lessons at a Large, Urban Academic Health System. *Jt Comm J Qual Patient Saf.* Jun-Jul 2023;49(6-7):328-332.
31. Ashe JJ, Baker MC, Alvarado CS, Alberti PM. Screening for Health-Related Social Needs and Collaboration With External Partners Among US Hospitals. *JAMA Netw Open.* Aug 1 2023;6(8):e2330228.
32. Quick Start Guide: Hospital Commitment to Health Equity Measure; 2022.
33. Forkey H, Szilagyi M, Kelly ET, et al. Trauma-Informed Care. *Pediatrics.* Aug 2021;148(2).
34. Benitz WE, Committee on F, Newborn AAoP. Hospital stay for healthy term newborn infants. *Pediatrics.* May 2015;135(5):948-953.
35. Danielsen B, Castles AG, Damberg CL, Gould JB. Newborn discharge timing and readmissions: California, 1992-1995. *Pediatrics.* Jul 2000;106(1 Pt 1):31-39.
36. Hoyt-Austin AE, Kair LR, Larson IA, Stehel EK, Academy of Breastfeeding M. Academy of Breastfeeding Medicine Clinical Protocol #2: Guidelines for Birth Hospitalization Discharge of Breastfeeding Dyads, Revised 2022. *Breastfeed Med.* Mar 2022;17(3):197-206.
37. Hospital discharge of the high-risk neonate--proposed guidelines. American Academy of Pediatrics. Committee on Fetus and Newborn. *Pediatrics.* Aug 1998;102(2 Pt 1):411-417.
38. Systems mapping tools to advance birth equity. *Association of Maternal & Child Health Programs*; 2023.
39. *Respectful maternity care framework and evidence-based clinical practice guideline*. Washington, DC: Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN); 2022.

40. Afulani PA, Okiring J, Aborigo RA, et al. Provider implicit and explicit bias in person-centered maternity care: a cross-sectional study with maternity providers in Northern Ghana. *BMC Health Serv Res.* Mar 14 2023;23(1):254.

41. Kalata M, Zeineddine S, Lentino A, Finnegan B. Addressing Racial Disparities in Maternal and Infant Health Outcomes Through an Anti-Racism Curriculum. *Obstet Gynecol.* Jun 1 2023;141(6):1225.

42. Creanga AA, Syverson C, Seed K, Callaghan WM. Pregnancy-Related Mortality in the United States, 2011-2013. *Obstet Gynecol.* Aug 2017;130(2):366-373.

43. Creanga AA, Berg CJ, Syverson C, Seed K, Bruce FC, Callaghan WM. Race, ethnicity, and nativity differentials in pregnancy-related mortality in the United States: 1993-2006. *Obstet Gynecol.* Aug 2012;120(2 Pt 1):261-268.

44. Lange EMS, Rao S, Toledo P. Racial and ethnic disparities in obstetric anesthesia. *Semin Perinatol.* Aug 2017;41(5):293-298.

45. Minehart RD, Bryant AS, Jackson J, Daly JL. Racial/Ethnic Inequities in Pregnancy-Related Morbidity and Mortality. *Obstet Gynecol Clin North Am.* Mar 2021;48(1):31-51.

46. Giurgescu C, Misra DP. Structural Racism and Maternal Morbidity among Black Women. *West J Nurs Res.* Jan 2022;44(1):3-4.

47. Montalmant KE, Ettinger AK. The Racial Disparities in Maternal Mortality and Impact of Structural Racism and Implicit Racial Bias on Pregnant Black Women: A Review of the Literature. *J Racial Ethn Health Disparities.* Nov 13 2023.

48. Gamble VN. Under the shadow of Tuskegee: African Americans and health care. *Am J Public Health.* Nov 1997;87(11):1773-1778.

49. Bower KM, Kramer B, Warren N, et al. Development of an instrument to measure awareness and mitigation of bias in maternal healthcare. *Am J Obstet Gynecol MFM.* Apr 2023;5(4):100872.

50. Garrett SB, Jones L, Montague A, et al. Challenges and Opportunities for Clinician Implicit Bias Training: Insights from Perinatal Care Stakeholders. *Health Equity.* 2023;7(1):506-519.

51. Green CL, Perez SL, Walker A, Estriplet T, Ogunwole SM, Auguste TC, Crear-Perry JA. The Cycle to Respectful Care: A Qualitative Approach to the Creation of an Actionable Framework to Address Maternal Outcome Disparities. *Int J Environ Res Public Health.* May 6 2021;18(9).

52. Puthussery S, Bayih WA, Brown H, Aborigo RA. Promoting a global culture of respectful maternity care. *BMC Pregnancy Childbirth.* Nov 17 2023;23(1):798.

53. Ibrahim BB, Vedam S, Illuzzi J, Cheyney M, Kennedy HP. Inequities in quality perinatal care in the United States during pregnancy and birth after cesarean. *PLoS One.* 2022;17(9):e0274790.

54. Basile Ibrahim B, Kozhimannil KB. Racial Disparities in Respectful Maternity Care During Pregnancy and Birth After Cesarean in Rural United States. *J Obstet Gynecol Neonatal Nurs.* Jan 2023;52(1):36-49.