OBSTETRICS INITIATIVE

OBI 2023 Site Visit Summary Report:
Barriers, Facilitators, & Strategies for Safely Lowering the NTSV Cesarean Rate

October 2023

OBSTETRICS
INITIATIVE

How to Use This Report

This report is designed for individuals leading quality improvement (QI) efforts to safely lower the NTSV cesarean rate. The goal of this report is to help QI champions conduct 2 key tasks:

1 **Measure barriers and facilitators to safely lower the NTSV cesarean rate**

2 **Link barriers/facilitators to QI strategies that will promote successful clinical practice change**

We invite you to carve out time to read and reflect on this report and discuss key findings with your OBI Champion Team.

- **Appendix 1** is a self-assessment tool to help you identify which barriers and facilitators might be operating at your hospital and consider which are most important to address
- **Appendix 2** includes a description of each potential barrier
- **Appendix 3** offers rich, colorful quotes from OBI colleagues that illustrate barriers and facilitators at work in OBI hospitals
- **Figure 2** includes a checklist of curated QI strategies to consider utilizing to promote changes on your unit

Your OBI Outreach and Engagement Nurse is available to assist your team, as needed, in interpreting this report and using it to drive QI at your hospital.

Your team has the power to transform barriers into facilitators with your QI activities, and all of us at the OBI Coordinating Center stand ready to partner with you in these endeavors. Thank you for all that you do every day to improve care for birthing people in Michigan!

Background & Methodology

Background

- Cesarean birth can be lifesaving and medically indicated but harmful when overused [1]

- Michigan's 2022 NTSV cesarean rate is high (28.6%), with wide variation across hospitals (12.9% to 47.1%) [2]

- **Objective**: Examine how organizational context and quality improvement (QI) strategies affect the success of efforts to safely lower the NTSV cesarean rate in Michigan
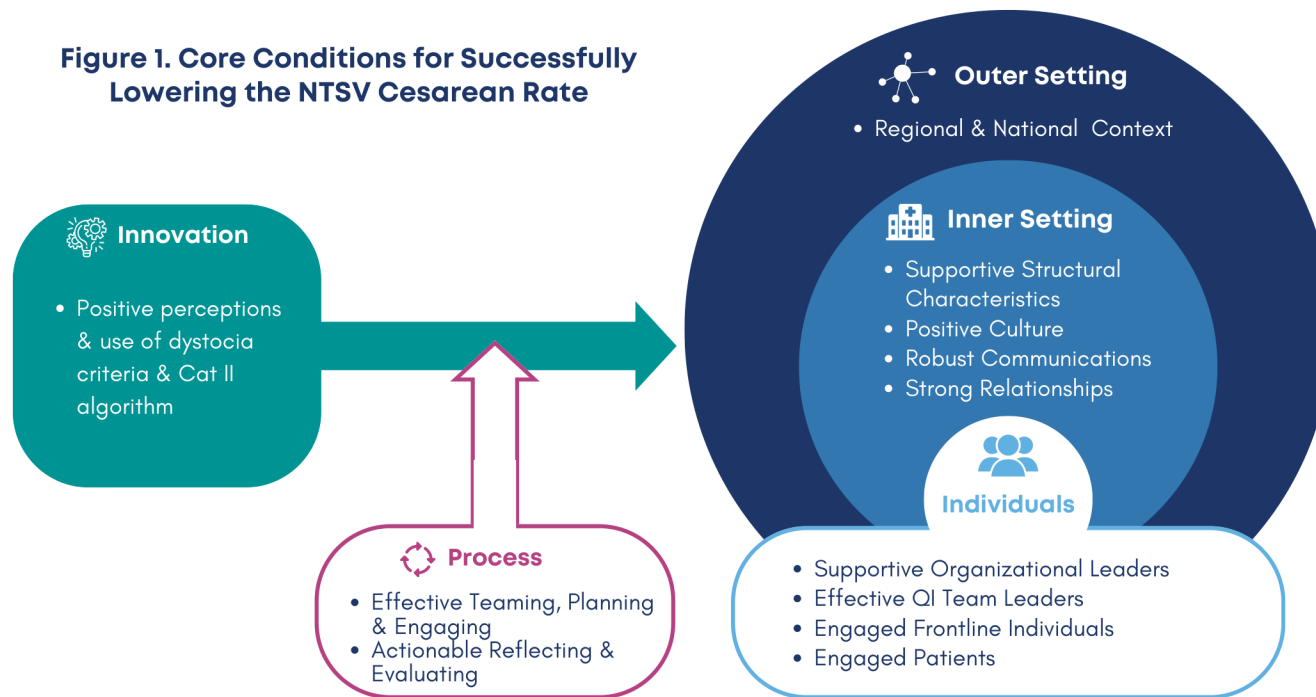
Methodology

- **In-Person Site Visits** to 17 hospitals across Michigan in February–April 2023, including interviews with over 110 healthcare workers

- **Theory-Driven Approach**:
  - The Consolidated Framework for Implementation Research (CFIR; **Appendix 2**),[3] a compilation of 39 factors associated with QI success, was used to identify barriers and facilitators to improvement
  - The Expert Recommendations for Implementing Change (ERIC),[4] a compilation of 73 QI strategies, was used to identify strategies in use at hospitals

- **Analysis**: Conducted cross-site comparison to identify key contextual factors (i.e., barriers and facilitators) and effective QI strategies for safely lowering the NTSV cesarean rate

OBSTETRICS INITIATIVE

Key Findings

12 Core Conditions for Success

We identified 12 core contextual conditions that enable OBI hospitals to successfully lower the NTSV cesarean rate (**Figure 1**). When these conditions are optimized as facilitators, they catalyze QI efforts to reduce medically unindicated cesareans. Conversely, when these conditions act as barriers, they impede QI efforts, making it harder for clinicians to change clinical behaviors that lead to medically unindicated NTSV cesareans.

Implication: OBI hospitals should assess for barriers and facilitators in these core contextual conditions, with a goal of optimizing these conditions as a lever to improve care quality.

Figure 1. Core Conditions for Successfully Lowering the NTSV Cesarean Rate

Innovation
- Positive perceptions & use of dystocia criteria & Cat II algorithm

Process
- Effective Teaming, Planning & Engaging
- Actionable Reflecting & Evaluating

Outer Setting
- Regional & National Context

Inner Setting
- Supportive Structural Characteristics
- Positive Culture
- Robust Communications
- Strong Relationships

Individuals
- Supportive Organizational Leaders
- Effective QI Team Leaders
- Engaged Frontline Individuals
- Engaged Patients

Appendix 2 includes a description of each condition, and *Appendix 3* provides a narrative synthesis and quotes from OBI colleagues demonstrating how each condition can function as a facilitator or a barrier on maternity units in Michigan.

Key Findings

Barriers Differ Across Hospitals

OBI hospitals with high NTSV cesarean rates had various combinations of barriers across the 12 conditions. In other words, we did not observe two or three barriers that were consistently a challenge for every site – rather, each hospital had its own unique set of challenges. For example, one hospital's major barriers were unfavorable perceptions of dystocia criteria, fractured team relationships, and poor communication, while another hospital's major barriers were a lack of effective QI team leaders and an inability to engage private physicians in QI.

Implication: Each hospital should identify its own barriers and build a site-tailored QI plan.

27 Key Strategies for Safely Lowering the NTSV Cesarean Rate

Of 73 ERIC strategies assessed, 27 emerged as essential (i.e., used by all hospitals with lower NTSV cesarean rates and used rarely or ineffectually by sites with higher NTSV cesarean rates; **Table 2**). Sites were more successful when sequentially executing strategies for team-building, planning, engaging, and then evaluating.

Implication: All OBI sites should strive to execute these essential QI strategies, in temporal order, to achieve an appropriate NTSV cesarean rate.

13 Optional Strategies

An additional 13 strategies emerged as potentially helpful if the essential strategies are insufficient to fully mitigate all site barriers (**Figure 2**).

Implication: Sites should consider whether any of the optional strategies might be helpful in their context.

OBSTETRICS INITIATIVE

Figure 2. Checklist of Essential & Optional Strategies for Safely Lowering the NTSV Cesarean Rate

Essential Strategies

Optimize Your Team

- ☐ Identify a multidisciplinary champion team (physician, RN/CNM, CDA)
- ☐ Build a coalition
- ☐ Secure administrative awareness, buy-in & needed resources

Plan

- ☐ Review baseline performance data
- ☐ Assess for readiness & identify barriers/facilitators
- ☐ Tailor strategies
- ☐ Develop a QI blueprint
- ☐ Obtain stakeholder feedback about blueprint
- ☐ Conduct consensus discussions
- ☐ Develop/adapt policies & protocols
- ☐ Plan education & training activities
- ☐ Establish a communications plan
- ☐ Change electronic medical record (EMR) options to support QI
- ☐ Involve patients in QI Planning
- ☐ Plan for outcome evaluation

Engage

- ☐ Provide dynamic, interprofessional training activities
- ☐ Disseminate educational materials
- ☐ Conduct ongoing training
- ☐ Remind clinicians
- ☐ Organize clinicians & staff team meetings
- ☐ Relentlessly communicate to engage frontline workers
- ☐ Prepare patients to be active participants

Reflect & Evaluate

- ☐ Evaluate the QI effort
- ☐ Audit and provide feedback
- ☐ Facilitate the relay of clinical data to clinicians (NTSV Case Reviews)
- ☐ Obtain and use patient/family and clinician feedback
- ☐ Communicate with stakeholders to sustain gains

Optional Strategies for Tailoring

- ☐ Facilitation
- ☐ Engage local opinion leaders
- ☐ Change physical structure & equipment

- ☐ Promote network weaving
- ☐ Peer mentorship
- ☐ Alter incentives/allowance structures

- ☐ Assess & redefine workflow
- ☐ Visit other sites
- ☐ Conduct cyclical small tests of change

- ☐ Engage community resources
- ☐ Access new funding
- ☐ Promote adaptability
- ☐ Stage implementation scale-up

OBSTETRICS
INITIATIVE

Table 1. Description of Essential Strategies For Safely Lowering the NTSV Cesarean Rate

Optimize Your Team

- **Identify champion(s):** Secure a highly effective multidisciplinary team (including physician, nurse/midwife, and CDA) who meet regularly and dedicate themselves to supporting new practices and overcoming indifference or resistance
- **Build a coalition:** Recruit partners in the QI effort, (ideally with representation of clinicians affected by the changes and administrators who can influence the changes), and define roles/responsibilities and meeting cadence
- **Secure administrative buy-in:** Secure awareness and needed support/resources from institutional and unit leaders

Plan

- **Review baseline performance data:** Collect and analyze data (e.g., rate of NTSV cesareans, overall and by indication) demonstrating a gap between current performance and goal, identify your key opportunities (i.e., drivers of the gap), and set time-bound, ambitious goals (e.g., related to cesarean rate, dystocia compliance, Category II management, and % NTSV cesareans for various indications)
- **Assess for readiness and identify barriers and facilitators:** Determine your unit's readiness for change, barriers that may impede QI, and strengths that can be used in the QI effort; consider provider attitudes and beliefs and points of resistance, knowledge and skill gaps that education and training must address, and patient needs and preferences
- **Tailor strategies:** Select QI strategies to address barriers and leverage facilitators
- **Develop a QI blueprint:** Develop a description of the 1) aim/purpose of the implementation; 2) scope of the change (e.g., units and individuals affected); 3) barriers, facilitators, and strategies; 4) timeline and milestones; 5) evaluation measures
- **Obtain stakeholder feedback about the QI blueprint:** Formally and informally solicit stakeholder (e.g., frontline workers, patients) input to refine the QI blueprint
- **Conduct consensus discussions:** Include stakeholders in discussions about how the QI effort addresses an important problem and will benefit patients and achieve consensus about what clinical behavior(s) need to change
- **Develop policies and protocols****: Optimize evidence-based, patient-centered policies to support right-sizing the NTSV cesarean rate (e.g., policies related to comfort measures and ambulation in labor, induction management, pitocin dosing, outpatient cervical ripening, fetal assessment approaches [e.g., intermittent auscultation])

OBSTETRICS INITIATIVE

Table 1. Description of Essential Strategies For Safely Lowering the NTSV Cesarean Rate

Plan

- **Plan education & training activities**:** Prepare content and schedule activities to train all members of the maternity care team together (i.e., in shared, interprofessional activities), as well as patients and their supporters
- **Establish a project communications plan**:**
  - Determine how you will convey WHY change is needed and what clinical behaviors need to change (i.e., WHO needs to do WHAT differently WHEN, and HOW?)
  - Determine how you will proactively address likely points of resistance
  - Identify multi-media communication channels and frequency of communications
- **Change electronic health record (EHR) systems:** Change EHRs (e.g., incorporating standardized order sets, dot phrases, best practice alerts, patient educational materials, structured flowcharts) to facilitate better patient care or assessment of clinical outcomes
- **Involve patients in QI planning*:** Solicit and use patient feedback to help plan QI activities
- **Plan for outcome evaluation:** Identify relevant outcomes, measures, and data sources

Engage

- **Provide dynamic, interprofessional training activities:** Use a variety of interactive methods (e.g., standing learning systems, Grand Rounds, unit huddles) to teach stakeholders about the desired changes, with the goal of changing clinical behavior; shared, multi-disciplinary training (with physicians, nurses, residents attending together) may be particularly helpful
- **Develop and disseminate educational materials:** Develop and disseminate materials that make it easier for clinicians to learn about and know how to deliver the desired clinical practice
- **Conduct ongoing training:** Offer follow-up training, advanced training, booster training, purposefully spaced training, training to competence, structured supervision, and onboarding for new staff
- **Remind clinicians:** Develop reminder systems to help clinicians recall information and/or prompt them to use desired best practices (e.g., reminder card with ACOG/SMFM dystocia criteria on computers; unit posters with Cat II algorithm)

OBSTETRICS INITIATIVE

Table 1. Description of Essential Strategies For Safely Lowering the NTSV Cesarean Rate

Engage

- **Organize clinician & staff meetings:** Support the teams implementing the innovation & protect time at recurring meetings to reflect on their efforts & share lessons learned
- **Relentlessly communicate*:** Use robust formal & informal communication channels to keep all frontlines individuals informed of QI initiative progress
- **Prepare patients to be active participants:** Prepare patients to be active in their care, ask questions, & inquire about care guidelines & available evidence-based treatment options

Reflect & Evaluate

- **Evaluate the QI effort:** Monitor progress and adjust clinical practices and QI strategies to mitigate resistance, catalyze change, and continuously improve the quality of care
- **Audit and provide feedback:** Collect clinical performance data and give it to clinicians and administrators to monitor, evaluate, and modify provider behavior (e.g., track clinician-level NTSV cesarean rates, provide feedback to each clinician on their rates, share comparative clinician-level data [blinded or unblinded] with the unit)
- **Facilitate relay of clinical data to providers:** Provide as close to real-time data as possible about key process and outcome measures, using multiple channels of communication, in a way that promotes use of desired clinical behaviors
- **Obtain and use patient and family feedback*:** Develop strategies to increase patient and family feedback on the QI effort (e.g., attending coalition meetings, sharing their personal story with clinicians)
- **Communicate with stakeholders to sustain gains:** Communicate data to demonstrate the continued impact of the clinical practice changes, emphasizing ongoing benefit, cost-effectiveness, or return on investment of the effort

Definitions adapted from the ERIC strategies.[4]

*ERIC strategies rarely observed at OBI hospitals, but likely to be helpful based on observed barriers

**Strategies not in ERIC compilation but observed in use at sites with low cesarean rates

OBSTETRICS INITIATIVE

Table 2. Description of Optional Strategies for Safely Lowering the NTSV Cesarean Rate

Facilitation	A process of interactive problem-solving and support in the context of a recognized need for improvement and a supportive interpersonal relationship with your OBI Outreach and Engagement Nurse. **Barriers Addressed: All**
Engage Local Opinion Leaders	Activate individuals recognized as "influential" on your unit to motivate colleagues to adopt desired clinical behavior changes; dampen resistance among opinion leaders, if needed. **Barriers Addressed: Frontline individual factors, Engaging**
Change Physical Structure & Equipment	Adapt the physical structure/equipment to promote quality improvement (e.g., co-location of residents & nurses to support joint strip review, addition of remote fetal monitors to facilitate movement). **Barriers Addressed: Structural characteristics, Available resources, Workflow incompatibility**
Access New Funding	Access money to facilitate improvement, including resources to secure unit supplies (e.g., birthing balls), offer employee trainings, or incentivize participation in QI activities. **Barriers Addressed: Structural characteristics, QI team, Engaging**
Promote Network Weaving	Cultivate high-quality working relationships within and across organizational units to promote information sharing, collaborative problem-solving, and a shared vision related to implementing the innovation. **Barriers Addressed: Relationships, Teaming**
Peer Mentorship	Capture local knowledge from other sites on how clinicians made something work in their setting and then share it with other sites. **Barriers Addressed: All**
Alter Incentive/ Allowance Structures	Actions to incentivize or reward the adoption and implementation of the desired clinical behavior. **Barriers Addressed: Frontline individual factors**

OBSTETRICS INITIATIVE

Table 2. Description of Optional Strategies for Safely Lowering the NTSV Cesarean Rate

Promote Adaptability	Identify the ways a clinical innovation can be tailored to meet local needs and clarify which elements of the innovation must be maintained to preserve fidelity. **Barriers Addressed: Frontline individual factors**
Assess & Redefine Workflow*	Map current work processes and plan for desired work processes, identifying changes necessary to routinize the clinical innovation. **Barriers Addressed: Frontline individual factors, Workflow incompatibility, Engaging**
Visit Other Sites*	Visit (or conduct virtual meetings with) sites where a similar implementation effort has been considered successful. **Barriers Addressed: All**
Conduct Cyclical Small Tests of Change*	Implement changes in a cyclical fashion using small tests of change before taking changes system-wide. Tests of change benefit from systematic measurement, and results of the tests of change are studied for insights on how to do better. This process continues serially over time, and refinement is added with each cycle. **Barriers Addressed: Engaging**
Stage Implementation Scale Up*	Phase implementation efforts by starting with small pilots or demonstration projects and gradually move to a system-wide rollout. **Barriers Addressed: Engaging**
Engage Community Resources*	Utilize health departments, non-profits, resources for addressing social determinants of health, and reproductive justice experts. **Barriers Addressed: Patient factors, Frontline individual factors**

Definitions adapted from the ERIC strategies.[4]

*ERIC strategies rarely observed at OBI hospitals, but likely to be helpful based on observed barriers

OBSTETRICS INITIATIVE

Conclusion

Interviews with 110+ maternity workers in Michigan suggest that hospitals face unique patterns of barriers to safely lowering the NTSV cesarean rate. Quality improvement initiatives promoting safe vaginal birth may be more effective if they select strategies to optimize local conditions for success. This report can help OBI hospitals identify local barriers and facilitators and build a site-tailored QI intervention to safely lower the NTSV cesarean rate. Together, we can change clinical practices in our hospitals and offer our patients exceptional birth experiences!

References

1. Curtin, S, et al. National Vital Statistics Reports. Center for Disease Control and Prevention Published May 20, 2015. www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_04.pdf.
2. Hamilton, B., et al. National Vital Statistics Rapid Release; Births: Provisional Data for 2021. Center for Disease Control and Prevention. Published May 20, 2022. www.cdc.gov/nchs/data/vsrr/vsrr020.pdf
3. Damschroder, L.J., Reardon, C.M., Widerquist, M.A.O, et al. The updated Consolidated Framework for Implementation Research based on user feedback. Implement Sci. 2022;17(1):75.
4. Powell, B.J., Waltz, T.J., Chinman, M.J. et al. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. Implementation Sci 10, 21 (2015).

OBSTETRICS INITIATIVE

Appendix 1: Self-Assessment for Barriers to Safely Lowering the NTSV Cesarean Rate

QI efforts may be more successful if Champions explicitly identify local barriers. Complete the self-assessment and review it with your team. Consider soliciting frontline nurse, midwife, physician, and resident perspectives as you complete this form.

Self-Assessment Questions *Answering "No" to any of these questions suggests that you might have a barrier in this area.*	Y/N
Perceptions of ACOG/SMFM Dystocia Criteria: Do frontline clinicians have a thorough knowledge of the criteria, positive perceptions of the criteria as evidence-based and beneficial to patients, and willingness to make clinical decisions in accordance with these criteria?	
Perceptions of Category II Algorithm: Do frontline clinicians have thorough knowledge about the algorithm, positive perceptions of the algorithm as evidence-based and beneficial to patients, respect for nursing contributions to algorithm use, and willingness to make clinical decisions in accordance with the algorithm?	
Regional and National Context: Do frontline clinicians demonstrate awareness and support for OBI efforts and the ability to offer evidence-based medical care independent of medicolegal constraints?	
Structural Characteristics: Does your unit have shared physician and nurse workspaces that encourage teamwork, physician staffing models that avoid perverse financial incentives, AWHONN-aligned nurse staffing ratios, and a strong midwifery presence?	
Culture: Does your unit have a supportive, collaborative, humanistic culture, with high psychological safety that promotes collaboration, communication, and shared learning experiences?	
Communications: Does your unit have strong structured communication processes (e.g., huddles, safety rounds, debrief processes, unit boards), robust multi-disciplinary communication in real-time to guide clinical decision-making, and active ongoing efforts to continually improve unit communication?	

Appendix 1: Self-Assessment for Barriers to Safely Lowering the NTSV Cesarean Rate

Self-Assessment Questions	Y/N
Relationships: Does your unit have strong, trusting, supportive relationships across the healthcare team that center collaboration and joint problem-solving during care delivery?	
Organizational Leaders: Are your hospital and unit leaders supportive of QI work broadly and OBI initiatives specifically?	
Leaders of QI Efforts: Do you have an engaged multidisciplinary QI team with a commitment to safely lowering the NTSV cesarean rate, genuine respect and camaraderie for one another, time to complete QI responsibilities, and high capacity to engage frontline staff and address emerging QI obstacles with creative problem-solving?	
Frontlines Individuals: Do your unit's frontline clinicians believe that it is possible and necessary to safely lower the NTSV cesarean rate and demonstrate a personal commitment to following evidence-based care guidelines for labor management and indications for cesarean birth?	
Patients: Does your unit offer anticipatory, patient-centered education about labor, involve patients in care decisions, and explicitly strive to avoid the potential additive risk of cesareans for patients with medical and social risk factors?	
Teaming & Engaging: Do unit QI leaders communicate regularly with frontline clinicians about your QI efforts, utilize user-centered approaches to make desired behavior change easy, offer effective training in the QI efforts (e.g. dystocia and category II algorithm use across all team members, and generally cultivate a deep sense of ownership of the QI initiative by all frontline clinicians?	
Reflecting and Evaluating: Do you conduct robust NTSV cesarean case reviews and regularly disseminate unit and peer comparison data to motivate and sustain clinician engagement in your QI effort?	

OBSTETRICS INITIATIVE

Appendix 2: The Consolidated Framework for Implementation Research

I. INNOVATION DOMAIN
Innovation: The "thing" being implemented

Perceptions of • **ACOG/SMFM Dystocia Criteria** • **Category II Algorithm**	The innovation source is perceived as credible and the innovation itself is perceived as having robust evidence supporting its effectiveness and distinct advantages over current practice

II. OUTER SETTING DOMAIN
Outer Setting: The setting in which the hospital exists

Regional & National Context	Local conditions (e.g., economic and/or political conditions), policies and laws (e.g. legislation, regulations, accreditation standards), market pressures (e.g., peer competition), and performance-measurement pressure (e.g., quality or benchmarking metrics) enable or impeded delivery of the innovation

OBSTETRICS INITIATIVE

Appendix 2: The Consolidated Framework for Implementation Research

III. INNER SETTING DOMAIN Inner Setting: The hospital in which the innovation is implemented*	
Structural Characteristics	Physical layout, information technolody, and staffing models and general staffing levels, support functional performance of the hospital
Culture	There are shared values, beliefs, and norms around a) supporting patients and healthcare workers, and b) psychological safety, continual improvement, and using data to inform practice
Communications	There are high-quality formal and informal information-sharing practices
Relationships	There are high quality formal and informal relationships, networks, and teams

*These constructs exist in the Inner Setting regardless of implementation and/or delivery of the innovation, (i.e., they are persistent general characteristics of the hospital).

OBSTETRICS INITIATIVE

Appendix 2: The Consolidated Framework for Implementation Research

IV. INDIVIDUALS DOMAIN Individuals: The roles and characteristics of individuals	
• **Organizational Leaders** • **Quality Improvement Team** • **Frontlines Individuals** • **Patients**	The individual(s) has **needs** that will be addressed by the innovation, and the **capability** (e.g., interpersonal competence, knowledge, and skills), **opportunity** (e.g., availability and power), and **motivation** to fulfill role

V. IMPLEMENTATION PROCESS DOMAIN Implementation Process: The activities and strategies used to implement the innovation	
Teaming, Planning, & Engaging	Joining together and intentionally coordinating and collaborating to implement the innovation; specifying roles and responsibilities, specific steps, milestones, and goals; and attracting and encouraging healthcare workers and patients to adopt the innovation
Reflecting & Evaluating	Collecting, discussing, and disseminating quantitative and qualitative information about the success of your efforts

Appendix 3: Stakeholder Descriptions of Barriers & Facilitators to Safely Lowering the NTSV Cesarean Rate

INNOVATION
Perceptions and Use of Dystocia Criteria

When this was a facilitator, we observed:

- Strong knowledge of ACOG/SMFM criteria among frontlines providers & staff
- Positive perceptions of criteria as:
  - Evidence-based
  - Useful for objective decision-making
  - Beneficial to patients
- Integration of criteria into daily workflow
- High dystocia compliance rates

"If I use my gut, it can be wrong […] That's happened to me many times, where I thought she'd have a cesarean, and she goes on to have a beautiful vaginal birth. It gives us time to pause. We have this evidence-based guidance, and it helps improve our patients' outcomes."

"A former mentor, now retired, used to talk a lot about having a 'crystal ball'. He was really talking about confirmation bias. All these physicians who say, 'She's gonna get a cesarean,'––and then they call a cesarean! We try to avoid that as much as possible. We try very hard to use the objective data. Using criteria for dystocia and adher[ing] to those…"

When this was a barrier, we observed:

- Knowledge gaps re: ACOG/SMFM dystocia criteria
- Unfavorable perceptions of criteria due to
  - Lack of certainty about supporting evidence
  - Disbelief in relative advantage of guidelines for improving patient outcomes, especially over individual clinical judgment
- Active provider resistance to using criteria
- Low dystocia compliance rates, especially for certain types of dystocia

"It is really my clinical intuition and my gut. There are checklists and guidelines, and I feel like that […] disallows for critical thinking and individualized care."

"The biggest hurdle is just physicians not trusting the guidelines."

OBSTETRICS INITIATIVE

INNOVATION
Perceptions and Use of Category II Algorithm

- Strong knowledge of algorithm among frontlines providers & staff
- Positive perceptions of algorithm as
  - Evidence-based
  - Useful for objective decision-making
  - Enhancing team communication
- Integration of algorithm into daily workflow
- Standardization of Category II management
- Respect for nursing role and autonomy to initiate steps of algorithm

"When we have Category II and we can give it time, we do. And that has been a culture shift. In the past, it was 10 minutes of deep variables and 'adios, they gotta go.'"

"As it became the expectation, it got easier. Nurses now feel comfortable saying, 'We are at this point in the algorithm, we need a patient-centered huddle.'"

When this was a barrier, we observed:

- Lack of awareness of Category II algorithm
- Unfavorable perceptions of the algorithm
  - As increasing risk to patients
  - Promoting "cookbook" medicine
- Lack of shared language for interpreting and responding to Category II tracings
- Low tolerance for Category II tracings and/or waiting for resuscitative measures to work

"If the kiddo isn't looking good, I'm not waiting [...] People are people, and they don't fit in an algorithm."

"...it is difficult to get physician buy-in to change their mind once they are already in from home [...] even if [a Category II tracing] resolves, it is difficult to get buy-in to wait."

OUTER SETTING
Regional & National Context

When this was a facilitator, we observed:

- Enthusiasm for OBI efforts & opportunities to catalyze QI efforts, notably through:
  - Pay for Performance
  - Clinical Data Abstractor (CDA) funding
  - Performance data
  - Peer comparisons
  - Best practice sharing
- Efforts to align OBI initiatives with other regional & national QI efforts

"When everyone is working on things at the same time, providers can't go to another hospital and get away from this. Doesn't matter if you stay here or go up the street. Everybody is working on this–TJC, CMQCC, OBI. It takes a village, and I really appreciate what you are doing."

When this was a barrier, we observed:

- Concerns about medico-legal climate
- Funding from a payer impeding provider engagement with OBI efforts

"[W]e've had these Michigan Professional Insurance Exchange meetings, which is our catastrophic claims reinsurers, saying we're not sectioning quick enough [...] so I think there's a tendency to justify our rate when it's shared like, 'Well, we have to have it. It is what it is because we don't want to have bad outcomes,' and so I think that's a difficulty for us..."

OBSTETRICS INITIATIVE

INNER SETTING
Structural Characteristics

When this was a facilitator, we observed:

- Access to resources to support QI efforts
- Staffing models that encourage buy-in (e.g., attending available in-house 24 hours)
- Physician payment models that protect against perverse incentives
- AWHONN-recommended nurse staffing ratios
- Robust, respected midwifery program

"We are all doing 12-hour in-house calls [...] It keeps us honest, trying to do the best thing for the patient, not trying to get a delivery done in a certain timeframe so I can go home."

"... We pool our OB money, so it doesn't matter when they deliver [...] Here, you don't get compensated more if they deliver for you ...] We don't have that urgency of, 'I want to get this patient delivered, she is mine.' That can cloud your judgment."

When this was a barrier, we observed:

- Insufficient staffing and/or high turnover
- Physical separation of team members
- Staffing models that may impact decision-making (e.g., 24h call followed by next-day work)
- Limited physician accountability and protected time for QI
- Variable and/or non-evidence-based practices for induction of labor
- Lack of resources for provider training and patient education
- No strong midwifery presence

"...Only 4 or 5 [physicians] are employed, the rest are independent. If they aren't on board with improving quality, there is not a lot that you can do to compel them [...]"

"I've been on at night when we have no surgical tech. It becomes a lot more difficult to make a decision. Do I section this person earlier so it doesn't become critical and I don't have a tech to open the back? And that really should not be a factor in patient care because it leads to poor decision-making not based on any evidence but on the practicalities. "

OBSTETRICS INITIATIVE

INNER SETTING
Culture

When this was a facilitator, we observed:

- Kind, collaborative culture with mutual respect across groups
- High psychological safety, including blame-free discussions of errors
- Strong learning climate, with openness to new practices
- Constant action to promote positive culture
- Shared commitment to humanism
- Robust onboarding and training programs

"We want to do what is best for our patient, and when new data comes available, we have to change to do the best care we can for our patients. Our culture is that we are accepting of new ideas."

"Our newer nurses are learning and they've been encouraged to speak up and ask questions. It's never that you're questioning someone's practice."

"We had a list of behaviors that are acceptable and not. And then holding people accountable–if you say these things but don't have accountability, nothing will change [...] What you permit, you promote."

When this was a barrier, we observed:

- High prioritization of provider autonomy
- Hierarchical culture that challenges psychological safety and teamwork, undermines learning, and/or contributes to a culture of fear

"Our hospital has come to our unit for having a notoriously poor culture… There's a lot of 'I wouldn't do that. They're stupid.' Armchair quarterbacking. There's a lot of that… We have some strong [physician] personalities that can be tough to deal with."

INNER SETTING
Communications

When this was a facilitator, we observed:

- Routine, structured communication processes (e.g., huddles, safety rounds, debrief process, unit boards)
- Robust informal communications across groups
- Active, ongoing efforts to continually improve communication processes

"Nurse and physician communication at the bedside–'This is what I'm seeing.' Having that patient-centered huddle, that game plan, so everyone is on the same page about how we're moving forward. It is really helpful."

"There's no god complex. I don't have any provider I don't feel comfortable approaching."

"it's not always an easy conversation to have. If you know that your baseline is always safety and is always respect, then that is always the driver, even if the conversation is tough."

When this was a barrier, we observed:

- Limited formal communication that includes all team members
- Variable receptivity to real-time discussions of care management for individual patients
- Examples of less respectful communication between team members
- Lack of open communication between unit leadership and frontline staff

"We are a team, we are supposed to be communicating as a team. There are providers that get that and providers that don't."

"There is another physician who, when he is my back up, I do everything I can to not call him, because I don't know if I am going to get Nice Person or 'Did you go to midwifery school?'"

INNER SETTING
Relationships

When this was a facilitator, we observed:

- Strong, trusting, & supportive relationships across the healthcare team
- Collaboration & joint problem-solving during care delivery
- Leadership investment in cultivating positive relationships across all team members
- Shared belief in teamwork being essential to patient-centered care
- Explicit recognition of nursing expertise & empowerment of nurses & midwives

"We really try hard not to have any silos [...] whoever has a concern, they feel very free to speak up. It's supported, their concerns are listened to, they're heard, they're validated, and that goes a long way..."

"I feel so supported by our physicians. They really consider us a team player. We have loud voices. We are allowed to use our expertise. They really listen to us."

When this was a barrier, we observed:

- Strained relationships, "us against them" language, & deflection of blame to other groups
- Perceived lack of respect for or trust in nurses
- Nurses operating from a place of fear

"You have, on the one side, the physician, and then you have the nurse [...] and they clash on their approach to labor, and in the end, that ends up not being good for the patient."

"One thing I've noticed here, there are silos. You have your physicians, your residents, your nurses. [...] I'll hear 'Oh, well nursing did that.' [...] And nursing will say, 'Well the resident didn't do this.' No one is really working together and owning this together."

INDIVIDUALS
Organizational Leaders

When this was a facilitator, we observed:

- Supportive leadership that promotes & values QI work across the organization
- Leadership engagement with OBI efforts (e.g., contacting providers with high levels of non-compliance, regular meetings with QI champions)

"I really believe in these CQIs. When they introduce different items on the scorecard, it is based on evidence [...] I don't see a reason why we should be missing any points on any scorecard. So yes, it is very important."

When this was a barrier, we observed:

- Lack of prioritization of either OBI or lowering NTSV cesarean rate
- Absent or inconsistent physician championing of QI initiatives
- Staff perception of leaders prioritizing provider needs over staff needs

"[T]his initiative was not anywhere near the top priorities of our executive leadership."

"With management, that has been one of our big struggles. Just feeling unsupported and when we do bring things, it is just shot down. It feels like it is us against them, and they will side with the providers, and we'll continue to get the brunt of it."

INDIVIDUALS
Leaders of QI Efforts

When this was a facilitator, we observed:

- Coalesced, multidisciplinary QI team committed to safely lowering NTSV cesarean rate
- Genuine respect, trust & camaraderie among QI team members
- Strong engagement with frontlines staff & problem-solving skills

"It was very, very, very painful for about a year. And then the pain got a little less as I had appropriate team members. But once the team really was put into place and we all knew where we were headed, and it just all evolved. So I really, really feel that having a good team in place is important."

"[... physician champion] is very, very vocal about it. And he's the guy that when we're reviewing cases, if it's one of his cases, he is like, 'I'm sorry. It's my fault. I actually used the process, but I didn't document it or I didn't document it accordingly.' So he's a good person to have as a lead because he's very open about the way he practices or if he overlooks something..."

When this was a barrier, we observed:

- Lack of a functioning, multidisciplinary QI team
- Insufficient time for QI team to complete responsibilities
- High team turnover and fatigue
- Siloed approaches to OBI work (e.g., efforts to implement with nurses only)
- QI team uncertainty about benefit of lowering NTSV rate

"We don't have a physician lead. Our current physicians don't have the time to dedicate to a lot of QI projects."

INDIVIDUALS
Patients

When this was a facilitator, we observed:

- Anticipatory, patient-centered education about labor
- Intentional efforts to involve patients in care decisions
- Strong desire to avoid potential additive risk of cesareans for patients with medical and social risk factors
- Provider and staff response to patient medical and social complexity includes compassion and heightened care (e.g., case management, care coordination, resources)

"I have an up front conversation with [patients:] 'Do you want some more time? Do you want some more education on this?' [...] Sometimes I ask, 'It looks like you have some questions about that?'"

"Helping them keep their positivity. Finding those small wins along the way [...] We do this with all patients, but really being more at the bedside with patients that are sick."

We have a lot of high risk patients here. We see the consequences. We've had numerous placenta accretas that we've delivered. We know how risky that is for a woman's health. A safe vaginal delivery is our goal."

When this was a barrier, we observed:

- Assumptions of higher medical complexity justifying higher cesarean rates, undermining clinician self-efficacy & engagement with QI efforts
- Lack of standardized processes and/or norms for patient education and shared decision-making
- Failures to respect patient preferences
- Lack of patient-centered community advocates for physiologic birth
- Perceptions that patients know and accept a hospital's high cesarean rate
- Language that others, blames, and/or demeans patients

"Our patient population is going to keep our rate here."

"A lot of times when we are out of compliance, it is the patient. 'I'm really hungry. I have to go 2.5 more hours?!'"

"People see our cesarean rate as just another statistic. We have good patient satisfaction, good rapport. I've seen the same patient come through multiple times for deliveries - they love all of our providers. The patients are fine with the number."

"Our patients are so uneducated. They just have no idea on even pushing even."

IMPLEMENTATION PROCESS
Teaming & Engaging

When this was a facilitator, we observed:

- Effective, robust training programs for dystocia criteria & Category II algorithm use for all clinicians
- Robust patient education about QI initiative
- Frequent communication between QI team & frontlines clinicians
- Iterative, user-centered approaches to QI, including standardization of resources (e.g., EHR templates)
- Personalized outreach to providers with outlier performance
- Team's engaging activities resulting in frontline clinicians feeling deep sense of ownership of the initiative

"There is continual reinforcement by virtue of emails monthly, discussions, dedicated time at meetings [...] That continually reinforces it."

"Yes, this process change will be difficult, but how can we get all the roadblocks out of the way and make it as easy as possible?"

"You have to gain that relationship and hear them. Sometimes the reasons they are resistant are valid. The biggest thing is just developing that relationship."

When this was a barrier, we observed:

- Lack of robust training
- Intermittent communications from QI team or communications lacking specific guidance about needed behavior change
- Lack of ownership of initiative and/or lack of understanding individual contributions to outcomes

"I don't think staff are even aware that we participate in OBI."

" I don't think we've been very good at communicating to staff the import. We just thought we had to report data to OBI. [...] Getting people to buy into the need for this and selling it from that perspective vs. this is just something we have to do."

OBSTETRICS INITIATIVE

IMPLEMENTATION PROCESS
Reflecting & Evaluating

When this was a facilitator, we observed:

- Robust, regular (e.g., monthly) NTSV case review with team dialogue and reflection, identification of opportunities, and feedback to frontlines
- Data inclusive of physicians, midwives, & nurses
- Regular dissemination of data to all clinicians
- Leveraging peer comparison and/or unblinded data to demonstrate how individual clinicians contribute to hospital outcomes & motivate clinician ownership of QI

"We look at why it didn't meet criteria, review the provider and resident documentation and the strip. Sometimes you look and say 'Yeah, I totally get it' [...] Then there are others where pit was on for 3 hours, and it just didn't make sense. Someone else pushed only for 90 minutes. We follow up with those providers [...] Our Medical Director meets with them to ask, 'Is there something we aren't seeing? What happened here?'"

"It has been eye-opening to give people individual data. It has caused some pause and reflection. Some have been surprised and asked to look at specific cases for self-reflection. I think a lot are thankful and happy to receive that information."

When this was a barrier, we observed:

- No or limited data sharing or data sharing focused on "blame/shame" instead of improvement
- Lack of open discussions using data to identify QI opportunities

"We have not been disciplined at our department meetings where this data gets pushed out to people."

"We haven't figured out a way to relay that information so that it doesn't feel punitive or aggressive. We haven't individually identified or contacted or emailed an individual provider."