Quality Improvement Implementation Choice 1: Early Labor Admission Screening Checklist

**Project Time Period:** 1/1/2021 – 12/31/2021

**Target population**

**Inclusion criteria:**
NTSV cases who are admitted in spontaneous labor with or without rupture of membranes

**Exclusion criteria:**
Admission for induction of labor OR Planned cesareans

**Numerator:**
- Triage visit that resulted in labor admission where cervical dilation was <4cm with documentation of checklist use
  - OR
- Triage visit for labor evaluation (that did not result in admission) within 72 hours of labor admission with documentation of checklist use

**Denominator:**
- Triage visit that resulted in labor admission where cervical dilation was <4cm meeting above inclusion/exclusion criteria
  - OR
- Triage visit for labor evaluation (that did not result in admission) within 72 hours of labor admission meeting above inclusion/exclusion criteria

**Goal**

1. Reduce the NTSV CD rate attributed to early admission in labor
2. Standardize the admission process
3. Increase use of checklist that supports outpatient management with cervical dilation <4cm and reduce the number of women admitted in early spontaneous labor without indication.
4. Review the indications for early admission to optimize strategies for labor management for these patients

**Baseline data**

In a rapid review of unadjusted 2019 OBI data*, 37% of women who presented to triage in spontaneous labor with intact membranes and had a cervical exam were admitted with less than 4cm dilation. The women who were admitted at less than 4cm dilation had a 60% increase in risk of cesarean delivery than those who were admitted at 4 cm or greater dilation.

*based on 30% sample of OBI participating hospitals 2019 NTSV delivery volume.

**Background:**
The Admission Screening Checklist is a guide to promote safe outpatient management of early labor. The California Maternal Quality Clinical Collaborative (CMQCC) published the checklist, and the Obstetrics Initiative subsequently modified and then promoted its use among its OBI member hospitals as Option A (see Appendix A). The data in the OBI Workstation is consistent with many analyses published in the literature and suggest that optimizing the timing of inpatient admission is a strategy to reduce the NTSV cesarean delivery rate.
**Project Goal:**
This work will be an ongoing process of building quality improvement activities into practice. These activities will evolve and change over time based on individual sites needs and successes, and will also extend beyond the measurement timeframes outlined in the implementation goals section below. (Many sites have asked for a goal cesarean delivery rate for which to aim. We recognize that there is no medically established ideal cesarean birth rate. Instead we have chosen to focus less on the CD rate as a goal, but data driven process measures that will ultimately lead to the right sizing of your individual hospital rate.) For those that still wish to have a number in mind as a goal, we point you to the Healthy People 2020 goal rate of 24.7%**, as well as the newly established Joint Commission public reporting hospital quality indicator reporting guidelines.

**The Healthy People 2020 goal was revised in 2019 from a goal of 23.9% to 24.7%. The goal was set to achieve a 10% reduction in NTSV cesarean births between 2010 and 2020. The baseline cesarean birth rate from 2010 was recalculated and this led to the change in the 2020 target. See https://www.healthypeople.gov/2020/topics-objectives/objective/mich-71 for more information.**

**QI Implementation Requirements:**
NTSV patients presenting in early spontaneous labor with or without rupture of membranes should be screened with the checklist to determine if they can continue outpatient management safely. Given that many patients who present to rule out labor will not be admitted; hospitals will track the use of the checklist with each triage visit within 72 hours of the delivery admission time. For patients who are admitted early in labor (spontaneous labor less than 4 cm) hospitals will also track the use of the checklist. If the checklist is not available in your EHR, then an alternative method will need to be created so that your CDA is able to track information in the workstation, as this information will be used to generate tracking reports for your site. Points for implementation of the QI program will be awarded on a prorated basis. Partial points will be awarded based upon actual performance. The maximum allowable points for each deliverable are listed in brackets.
Table 1: Admission Screening Checklist

Denominator & Numerator Flowchart

Target Population
NTSV patients presenting in spontaneous labor with or without ruptured membranes. For each patient admitted, we will consider each labor triage interaction within the 72 hours prior to admission for labor and delivery.

Inclusion criteria: Spontaneous labor with or without rupture of membranes with or without admission
Exclusion criteria: Admission for induction of labor OR Planned cesareans
**QI Implementation Goals:**
Implement the following process measure for NTSV patients that present to your hospital in spontaneous labor as specified below:

<table>
<thead>
<tr>
<th>PROCESS MEASURE</th>
<th>HOW IT WILL BE MEASURED</th>
<th>TIME FRAME</th>
<th>POINTS AVAILABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The screening checklist is used in 80% of NTSV triage visits presenting for labor evaluation. Each labor evaluation will be counted in the denominator. (See Appendix A for minimum Checklist requirements)</td>
<td>A per case question will be added to the Workstation for patients admitted in spontaneous labor &lt;4cm and for patients with a triage visit within 72 hours of labor admission.</td>
<td>March 1, 2021 – October 31, 2021 delivery dates</td>
</tr>
<tr>
<td>B</td>
<td>Conduct quarterly multidisciplinary team meetings to discuss project progress, including data related to this measure. Two of these quarterly meetings must involve disseminating relevant OBI data and implementation progress with the maternity care team (i.e. using a grand rounds format for these meetings, early and mid-year preferred to help kick off your project and inform the full maternity care team of project progress).</td>
<td>Sites will submit agendas and rosters for a total of 4 meetings to OBI Coordinating Center by December 31, 2021.</td>
<td>January 1, 2021 – December 31, 2021</td>
</tr>
<tr>
<td>C</td>
<td>Submit program implementation progress reports quarterly. Include specific barriers to checklist uptake if target goals are not being met.</td>
<td>OBI Workstation Program Progress Reports submitted by quarterly deadlines.</td>
<td>January – December 2021 Quarterly</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TOTAL</td>
</tr>
</tbody>
</table>
Quality Improvement Implementation Choice 2: Supporting Labor Progress

<table>
<thead>
<tr>
<th>Project Time Period:</th>
<th>1/1/2021 – 12/31/2021</th>
</tr>
</thead>
</table>

**Target population**  
NTSV cases where a cesarean Delivery (CD) was performed for one of the following primary indications:
- Failed Induction  
- Latent Phase Arrest  
- Active Phase Arrest  
- Arrest of Descent  

**Exclusion criteria:**  
- Planned Cesarean Delivery without Labor  
- Cesarean Deliveries undertaken for reasons other than the primary indications outlined above  

**Numerator:**  
NTSV CDs undertaken for a primary indication of Failed Induction, Latent Phase Arrest, Active Phase Arrest, OR Arrest of Descent that were reviewed by one of the processes outlined below.  

**Denominator:**  
NTSV CDs undertaken for a primary indication of Failed Induction, Latent Phase Arrest, Active Phase Arrest, OR Arrest of Descent  

**Goal**  
Increase the number of sites that have a standardized process for team review of CD decision making for dystocia. With use of a standardized review process (criteria checklist or two provider review, or quality improvement review), there will be a decrease in the number of NTSV Cesarean Deliveries that do not meet criteria as defined by ACOG and SMFM for arrest disorders.  

**Baseline data**  
The criteria for dystocia in labor as defined by ACOG/SMFM were not met in 52% of NTSV cesarean deliveries (CD) performed in Michigan maternity hospitals in 2019 (OBI Workstation) with 62% of those not meeting criteria when performed during latent phase labor, 24% during active phase, and 65% when performed for arrest of descent. For failed induction of labor, 60% did not meet ACOG/SMFM criteria for CD.  

**Background:**  
The focus of this project is to provide a structure for the review of cesarean births performed for arrest disorders. This work will be an ongoing process of building quality improvement activities into practice. These activities will evolve and change over time based on individual sites needs and successes, and will also extend beyond the measurement timeframes outlined in the implementation goals section below.  

**QI Implementation Requirements:**  
All NTSV cases where decision for cesarean delivery was made, should be reviewed either before the cesarean delivery or during a retrospective peer review process. In addition to OBI core data collection, participating hospitals should develop a plan for providing OBI with evidence of this
review process. If this is not in your EHR, then an alternative method will need to be created. Points for implementation of the QI program will be awarded on a prorated basis. Partial points will be awarded based upon actual performance. The maximum allowable points for each deliverable are listed in brackets.

**QI Implementation Goals:**
Implement the following process measure for review cesarean births performed for arrest disorders for the NTSV patient population:

<table>
<thead>
<tr>
<th>PROCESS MEASURE</th>
<th>HOW IT WILL BE MEASURED</th>
<th>TIME FRAME</th>
<th>POINTS AVAILABLE</th>
</tr>
</thead>
</table>
| A  NTSV Cesarean Deliveries performed for dystocia are reviewed using a standardized process to determine if ACOG/SMFM criteria for the diagnosis are met. The review should include evidence that ACOG guidelines have been met or the indication to deviate from guidelines is documented. Select one of the review options outlined in Table 2. (Refer to Appendix B for template option and necessary review components) | The proportion of NTSV CDs for dystocia that were reviewed using the standardized process. | March 1, 2021 – October 31, 2021 delivery dates | ≥80%: 40 pts
70-79%: 30 pts
60-69%: 20 pts
50-59%: 10 pts
<50%: 0 pts |
| B  Conduct quarterly multidisciplinary team meetings to discuss project progress, including data related to this measure. Two of these quarterly meetings must involve disseminating relevant OBI data and implementation progress with the full maternity care team (i.e. using a grand rounds format for these meetings, early and mid-year preferred to help kick off your project and inform the full maternity care team of project progress). | Sites will submit agendas and rosters for a total of 4 meetings to OBI Coordinating Center by December 31, 2021. | January 1, 2021 – December 31, 2021 | 4 mtgs: 30 Pts
3 mtgs: 20 pts
2 mtgs: 10 pts |
| C  Submit program implementation progress reports quarterly. Include specific barriers to checklist uptake if target goals are not being met. | OBI Workstation Program Progress Reports submitted by quarterly deadlines. | January – December 2021 Quarterly | 4 reports: 30pts
3 reports: 20 pts
2 reports: 10 pts |

**TOTAL** 100
<table>
<thead>
<tr>
<th>Review Option (select one)</th>
<th>Reporting Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPTION 1</strong></td>
<td>Data element will be added to Workstation for collection by CDA.</td>
</tr>
<tr>
<td>Incorporate a standardized, evidence-based, pre-cesarean checklist into the EMR or make</td>
<td></td>
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<tr>
<td>available within the Medical Record to be utilized for review of labor dystocia or failed</td>
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<td>induction cases.</td>
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<tr>
<td><strong>OPTION 2</strong></td>
<td>Complete the OBI template (spreadsheet) or local version and submit to OBI. This</td>
</tr>
<tr>
<td>-Conduct regular cesarean delivery review committee meetings or similar (e.g. quality</td>
<td>report will be compared to the number of CD cases performed for an arrest disorder</td>
</tr>
<tr>
<td>improvement or peer review committee) that reviews all primary cesarean births performed</td>
<td>abstracted in the workstation to ensure a complete number of cases are reviewed.</td>
</tr>
<tr>
<td>for labor dystocia or failed induction and provides necessary feedback to the team involved</td>
<td></td>
</tr>
<tr>
<td>in care.</td>
<td></td>
</tr>
<tr>
<td>-For each meeting, document how many cases were reviewed with each case linked to the</td>
<td></td>
</tr>
<tr>
<td><strong>OBI case ID</strong>, date of meeting, opportunities or themes for improvement identified,</td>
<td></td>
</tr>
<tr>
<td>general findings, and comments. A template will be provided.</td>
<td></td>
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</tbody>
</table>
Appendix A: Minimum Required Admission Screening Checklist Elements

At a minimum the checklist must include the following criteria, but additional site specific items may be added:

- Reassuring fetal testing
- Normal Blood Pressure
- Gestational age ≥ 37 weeks**
- Vertex
- No prior uterine scars (myomectomy or cesarean delivery) **
- Intact membranes
- No significant maternal or fetal disease
- Cervical dilation < 4 cm* and effacement < 80%
- Labor Partnership Reviewed if available
- Support person available
  If no support person or inadequate support, attempt to identify support for labor (Doula, extra support from labor nurse, social worker, volunteer, etc.)
- Coping with contractions

* Note: special circumstances such as severe fatigue, multiple triage visits, prolonged latent phase, and difficulty coping may warrant admission before 4cm.

** Women with gestations >41 weeks or prior cesarean delivery may require additional assessment and evaluation. These are not absolute contraindications and require individualized clinical decision making.
Appendix B: Pre-cesarean Checklist for Labor Dystocia or Failed Induction*

Indication for Primary Cesarean Delivery:

☐ Failed Induction (must have both criteria if cervix unfavorable, Bishop Score < 8 for nullips and <6 for multips)

☐ Cervical Ripening used (when starting with unfavorable Bishop scores as noted above). Ripening agent used: __________________________
Reason ripening not used if cervix unfavorable: __________________________

AND

☐ Unable to generate regular contractions (every 3 minutes) and cervical change after oxytocin administered for at least 12-18 hours after membrane rupture.
**Note: at least 24 hours of oxytocin administration after membrane rupture is preferable if maternal and fetal statuses permit

☐ Latent Phase Arrest <6 cm dilation (must fulfill one of the two criteria)

☐ Moderate or strong contractions palpated for > 12 hours without cervical change

OR

☐ IUPC > 200 MVU for > 12 hours without cervical change

**As long as cervical progress is being made, a slow but progressive latent phase e.g. greater than 20 hours in nulliparous women and greater than 14 hours in multiparous women is not an indication for cesarean delivery as long as fetal and maternal statuses remain reassuring. Please exercise caution when diagnosing latent phase arrest and allow for sufficient time to enter the active phase.

☐ Active Phase Arrest ≥6 cm dilation (must fulfill one of the two criteria)

Membranes ruptured (if possible), then:

☐ Adequate uterine contractions (e.g. moderate or strong to palpation, or ≥ 200 MVU, for ≥ 4 hours) without improvement in dilation, effacement, station or position

OR

☐ Inadequate uterine contractions (e.g. <200 MVU) for ≥ 6 hours of oxytocin administration without improvement in dilation, effacement, station or position
☐ Second Stage Arrest (must fulfill any one of four criteria)

☐ Nullipara with epidural pushing for at least 4 hours

OR

☐ Nullipara without epidural pushing for at least 3 hours

OR

☐ Multipara with epidural pushing for at least 3 hours

OR

☐ Multipara without epidural pushing for at least 2 hours

☐ Although not fulfilling contemporary criteria for labor dystocia as described above, my clinical judgment deems this cesarean delivery indicated

☐ Failed Induction: Duration in hours: ____________________

☐ Latent-Phase Arrest: Duration in hours: __________________

☐ Active-Phase Arrest: Duration in hours: ________________

☐ Second-Stage Arrest: Duration in hours: ________________

*Adapted from California Maternal Quality Care Collaborative (CMQCC) Pre-cesarean Checklist for Labor Dystocia or Failed Induction (Appendix J in the Toolkit to Support Vaginal Birth and Reduce Primary Cesareans; A Quality Improvement Toolkit, 2016)