**Purpose of the tool:** The Shoulder Dystocia In Situ Simulation tool provides a sample scenario for labor and delivery (L&D) staff to practice teamwork, communication, and technical skills in the unit where they work. Upon completion of the Shoulder Dystocia In Situ Simulation, participants will be able to do the following:

* Demonstrate effective communication with the patient and support person during a delivery complicated by shoulder dystocia.
* Demonstrate effective teamwork and communication with clinical team members during assessment of the patient, changes in the patient’s clinical status, and actions required for the optimum patient outcome.
* Demonstrate timely and accurate clinical intervention for a delivery complicated by shoulder dystocia.
* Demonstrate the efficient use of checklists, protocols, or similar cognitive aids for responding to shoulder dystocia.

**Who should use this tool:** Simulation facilitators

**How to use this tool:** This tool should be used in connection with the “Facilitation Instructions for Conducting In Situ Simulations” to prepare, conduct, assess, and debrief *in situ* simulations on L&D units. Simulation facilitators can adapt, modify, and further tailor this sample scenario to meet the training needs of their unit staff or resources available in their facility.

**Other resources:** Additional sample simulation scenarios or drills related to shoulder dystocia are provided below. Many of these focus on technical/clinical skills of performing maneuvers and may require a mannequin or high-fidelity birthing simulator.

Several commercially available birthing simulators are available, including the following:

* CAE Fidelis™ Maternal Fetal Simulator (CAE Healthcare): <http://www.caehealthcare.com/patient-simulators/maternal-fetal-childbirth-simulator>
* NOELLE® (Gaumard): <http://www.gaumard.com/s551>
* MamaNatalie® Birthing Simulator (Laerdal): <http://www.laerdal.com/us/mamaNatalie>
* PROMPT Birthing Simulator (Laerdal): <http://www.laerdal.com/us/doc/224/PROMPT-Birthing-Simulator>
* Various Birthing Simulators (Klinger Medical): <http://www.klingermedical.com/Simulators-Trainers/ob-gyn-simulators-teaching-manikins/birthing-simulators>

**Note:** The information presented in this document does not necessarily represent the views of AHRQ. Therefore, no statement in this document should be construed as an official position of AHRQ or of the U.S. Department of Health and Human Services. Outside resources identified do not represent an endorsement of those resources and do not reflect the position of AHRQ or the Federal Government.

Sample Scenario for Shoulder Dystocia In Situ Simulation

This document provides a sample scenario for an in situ simulation for shoulder dystocia. This document contains the following:

* Preparation Required
* Clinical Context, Triggers, Distractors, and Expected Behaviors for the Simulation
* Shoulder Dystocia Simulation Assessment Tool
* Clinical Context, Triggers, and Distractors Formatted for Printing Separately

Refer to the document titled “Facilitation Instructions for Conducting In Situ Simulations” for general guidance and instructions regarding presimulation planning, presimulation briefing, simulation assessment, and simulation debriefing.

# During the simulation, participants are encouraged to practice the use of protocols, checklists, or cognitive aids the unit has developed or adapted for evaluating and treating shoulder dystocia.

# Preparation Required

This simulation requires people to play the roles of the patient and the patient’s support person:

* The actor playing the patient should wear a patient gown, padding (to simulate a postpartum belly), and a wrist identification band and should lie in bed. The simulated patient (“actor”) should wear scrubs under the gown to ensure her privacy.
* The actor playing the support person should be briefed on his or her disposition and how to interact with others in the simulation.

In addition, the following props (i.e., simulated equipment and materials) are required:

* Pelvic model for performing maneuvers. For most *in situ* simulations, you should use the equipment available in the course of routine care. However, pelvic models may be needed to substitute for physical maneuvers on a patient. It is important to plan for transporting simulation equipment to/from the unit. If possible, equipment should be stored in the L&D unit where the simulations will take place. If not, time should be set aside for transport, setup, and dismantling.
* Simulated intravenous fluids and medications, if needed. The team should order and access simulated fluids and medication the way it would normally order these items—for example, through electronic order entry, a Pyxis machine, or a rapid response kit or cart. This allows the team to experience the normal passage of time required to order and access necessary supplies for treatment. Prior planning and coordination with the pharmacy for these simulated items will help make the simulation as realistic as possible.

Clinical Context, Triggers, Distractors, and Expected Behaviors for the Simulation

The content of this simulation is divided up in to four parts: Clinical Context, Triggers, Distractors, and Expected Behaviors. The Clinical Context is provided at the beginning of the simulation in the form of a patient handoff and introduces that simulated patient and her clinical history. The handoff is followed by a series of Triggers and Distractors, events or actions that introduce new information and shape the context of the clinical response. The simulation facilitator introduces the Triggers and Distractors throughout the course of the simulation. A set of Expected Behaviors is also provided for the Clinical Context and each set of Triggers and Distractors. The Expected Behaviors offer a list of ideal actions that the clinical team might take in response to each set of events in the simulation with particular regard to those that foster effective teamwork and communication. The Expected Behaviors can also serve as a tool to use in evaluating the performance of the simulation participants.

**Clinical Context**

*The facilitator provides the clinical context to person in the role of nurse. This can be done using a verbal report and handoff from one nurse to another nurse.*

“Elisabeth Reddy is a 36-year-old G2P1 who has been admitted to L&D at 39 weeks after her membranes ruptured at home. Her first baby was born vaginally 2 years ago. She was diagnosed with gestational diabetes at 28 weeks and has been on insulin during the last trimester.

"Her vaginal exam 30 minutes ago was Complete/100/0, and she has been pushing for about 15 minutes. FHR [fetal heart rate] has been 120–140 with moderate variability and no decelerations. Her contractions are every 2–3 min, lasting 60 seconds, moderate to palpation. Her blood sugars have all been less than 90, so her insulin drip has been on hold for the last couple of hours.

"Her most recent vital signs 15 minutes ago were as follows: BP [blood pressure] 106/62, Pulse 68, Resp Rate 20, Temp 37.1. Dr. Jacobs is her attending and is finishing a cesarean section in the OR [operating room].”

## Expected behavior/performance:

* Nurse introduces self to the patient and begins assessment.
* Nurse continues to assist patient with pushing.

**Trigger #1**

*Patient simulates contractions and pushing every 2–3 minutes. After a couple of cycles of pushing, she states between contractions:*

“I need to push really bad. I have this really strong urge. I need to push NOW!”

**Clinical information provided on cards (one at a time) in response to assessment actions taken by team. For example, after team measures BP, the BP value is provided to team on a card.**

Pulse 100

BP 100/76

Resp Rate 22

O2 Saturation 97% on room air

FHR 135 with moderate variability, no decelerations

Vaginal exam: fetal head is crowning

*The facilitator may provide answers to team as needed to help maintain the flow of the simulation.*

## Expected behavior/performance:

* Nurse calls for provider and other assistance for routine vaginal delivery as per unit protocol.
* Situation-Background-Assessment-Recommendation (SBAR) is used to inform others of the situation when they arrive. Additional help might be attending physician, anesthesiology, nursing, or rapid response team.
* Nurse clearly demonstrates leadership role until other team members arrive.
* Provider clearly demonstrates leadership role.
* Provider speaks to patient and support person or delegates to another team member to inform and answer questions.
* All team members use closed-loop communication and provide mutual support to one another.
* All team members call out critical patient information.

**Trigger #2**

*When appropriate during the unfolding scenario after delivery of the fetal head, facilitator gives card to delivering provider.*

The fetal head has retracted onto the perineum after delivery. The rest of the body is not able to be delivered.

*The facilitator may provide answers to team as needed to help maintain the flow of the simulation. If using a pelvic model, a facilitator can exert varying levels of resistance on the fetal model to simulate a failed maneuver. This may require explaining to supplement the limitations of a low-tech model. If no model, facilitator can announce success or lack of success at specific intervals or upon questioning by provider. Maternal and fetal assessment can also be provided at intervals in response to team’s assessment during the simulation. The information provided to the team may vary to include different FHR patterns, physical assessments, etc.*

**Distractors**

*Patient and partner are upset and anxious, asking lots of questions:*

“When is the baby going to be born?”

“What’s going on?”

“Why can’t you get the baby out?”

## Expected behavior/performance:

* Provider informs everyone of suspected shoulder dystocia and calls for additional help.
* SBAR is used to inform others of the situation when they arrive. Additional help might be attending physician, anesthesiology, nursing, or rapid response team.
* Provider clearly demonstrates leadership role.
* Provider delegates callout of time and documentation of maneuvers.
* Provider speaks to patient and partner or delegates to another team member to inform and answer questions.
* All team members use closed-loop communication and provide mutual support to one another.
* All team members call out critical patient information.
* Provider performs primary maneuvers to relieve dystocia.

**Trigger #3**

All primary maneuvers have failed to effect vaginal delivery.

*Facilitator provides answers to team as needed to help maintain the flow of the simulation for up to 10 to 15 minutes. Maternal and fetal assessment can be provided in response to team’s request or actions. They may vary to include different FHR patterns, physical assessments, etc.*

## Expected behavior/performance:

* Leader calls team huddle.
* A second obstetric provider reattempts primary maneuvers while team huddles.
* Provider speaks to patient and partner or delegates to another team member to inform and answer questions.
* SBAR is used to inform others of the situation when they arrive. Additional help might be attending physician, anesthesiology, nursing, or rapid response team.
* Provider clearly demonstrates leadership role.
* All team members use closed-loop communication and provide mutual support to one another.
* All team members call out critical patient information.
* Team mobilizes additional help (e.g., OR staff, anesthesia staff, pediatrics).

**Trigger #4**

*When appropriate during the unfolding scenario (after plan is discussed for secondary maneuvers and a secondary obstetric provider has arrived and has begun reattempting primary maneuvers), facilitator calls out or gives card to provider.*

The posterior shoulder has been delivered.

*Facilitator allows the baby to be delivered without further incident. Facilitator ends the simulation after no further opportunities for teamwork and communication are apparent, but aims to keep things going for some time postdelivery to allow the team to debrief the relevant maneuvers used and their timing to ensure an accurate delivery note.*

## Expected behavior/performance:

* Provider announces baby has been delivered and calls out time.
* Team provides normal postdelivery care and tasks.
* All team members use closed-loop communication and provide mutual support to one another.
* All team members call out critical patient information. Team debriefs timing and sequence of maneuvers used and ensures that delivery note captures all relevant information.

# Shoulder Dystocia Simulation Assessment Tool (Optional)

This tool provides a list of expected behaviors in response to the Clinical Context and each set of Triggers and Distractors in the simulation and can be used as a tool in evaluating the performance of the simulation participants.

Trigger 1: Patient Has Strong Urge To Push

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Nurse calls for provider and other assistance for routine vaginal delivery as per unit protocol. |  |  |  |
| SBAR is used to inform others of the situation when they arrive. |  |  |  |
| Provider clearly demonstrates leadership role. |  |  |  |
| Provider speaks to patient and support person or delegates someone to inform and answer questions. |  |  |  |
| All team members use closed-loop communication and provide mutual support. |  |  |  |
| All team members call out critical patient information. |  |  |  |

Trigger 2: Shoulder Dystocia Identified

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Provider informs everyone of suspected shoulder dystocia and calls for additional help. |  |  |  |
| SBAR is used to inform others of the situation when they arrive. |  |  |  |
| Provider clearly demonstrates leadership role. |  |  |  |
| Provider delegates callout of time and documentation of maneuvers. |  |  |  |
| Provider speaks to patient and support person or delegates someone to inform and answer questions. |  |  |  |
| All team members use closed-loop communication and provide mutual support. |  |  |  |

Trigger 2: Shoulder Dystocia Identified (cont'd)

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| All team members call out critical patient information. |  |  |  |
| Provider performs primary maneuvers to relieve dystocia. |  |  |  |

Trigger 3: All Primary Maneuvers Have Failed To Effect Vaginal Delivery

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Leader calls team huddle. |  |  |  |
| A second obstetric provider reattempts primary maneuvers while team huddles. |  |  |  |
| SBAR is used to inform others of the situation when they arrive. |  |  |  |
| Provider speaks to patient and support person or delegates someone to inform and answer questions. |  |  |  |
| All team members use closed-loop communication and provide mutual support. |  |  |  |
| All team members call out critical patient information. |  |  |  |
| Team mobilizes additional help (e.g., OR staff). |  |  |  |

Trigger 4: Baby Is Delivered

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Provider announces baby has been delivered and calls out time. |  |  |  |
| Team provides normal postdelivery care and tasks. |  |  |  |
| All team members use closed-loop communication and provide mutual support. |  |  |  |
| Team debriefs timing and sequence of maneuvers used, ensures delivery note captures all relevant information. |  |  |  |

# Clinical Context, Triggers, and Distractors Formatted for Printing Separately

The Clinical Context, Triggers, and Distractors used in this simulation scenario are provided on the next several pages in a format suitable for printing on cardstock in preparation for facilitating this in situ simulation using printed cards. The printed cards can be handed to the simulated patient or participating staff members at appropriate intervals during the simulation.

Clinical Context

“Elisabeth Reddy is a 36-year-old G2P1 who has been admitted to L&D [labor and delivery] at 39 weeks after her membranes ruptured at home. Her first baby was born vaginally 2 years ago. She was diagnosed with gestational diabetes at 28 weeks and has been on insulin during the last trimester.

"Her vaginal exam 30 minutes ago was Complete/100/0, and she has been pushing for about 15 minutes. FHR [fetal heart rate] has been 120-140 with moderate variability and no decelerations. Her contractions are every 2–3 min, lasting 60 seconds, moderate to palpation. Her blood sugars have all been less than 90, so her insulin drip has been on hold for the last couple of hours.

"Her most recent vital signs 15 minutes ago were as follows: BP [blood pressure] 106/62, Pulse 68, Resp Rate 20, Temp 37.1. Dr. Jacobs is her attending and is finishing a cesarean section in the OR [operating room].”

Trigger #1

Patient: “I need to push really bad. I have this really strong urge. I need to push NOW!”

Clinical information to be provided to team in response to their assessment after Trigger #1

Pulse 100

BP 100/76

Resp Rate 22

O2 Saturation 97% on room air

FHR 135 with moderate variability, no decelerations

Vaginal exam: fetal head is crowning

Trigger #2

The fetal head has retracted onto the perineum after delivery. The rest of the body is not able to be delivered.

Distractors (Trigger #2)

Patient and Partner:

* “When is the baby going to be born?”
* “What’s going on?”
* “Why can’t you get the baby out?”

Trigger #3

All primary maneuvers have failed to effect vaginal delivery.

Trigger #4

The posterior shoulder has been delivered.

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