**Purpose of the tool:** The Postoperative Cesarean Section Complication 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 Postoperative Cesarean Section Complication In Situ Simulation, participants will be able to do the following:

* Demonstrate effective communication with the patient and support person before, during, and after a postoperative cesarean section complication.
* 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 acute symptoms after cesarean section.
* Demonstrate the efficient use of checklists, protocols, or similar cognitive aids related to the clinical response.

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

**How to use this tool:** This tool should be used in connection with “Facilitation Instructions for Conducting In Situ Simulations” to prepare, conduct, and debrief in situ simulations in 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.

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 Postoperative Cesarean Section Complication In Situ Simulation

This document provides a sample scenario for an in situ simulation for responding to acute symptoms after cesarean section. This document contains the following:

* Preparation Required
* Clinical Context, Triggers, Distractors, and Expected Behaviors for the Simulation
* Postoperative Cesarean Section Complication 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 use in managing acute symptoms after cesarean section.

# 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:

* Simulated intravenous (IV) fluids and medications. The team should order and access simulated fluids and medication the way it normally would 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.
* Oxygen mask and oxygen (O2) saturation probe and any other related equipment for simulating use of oxygen.
* Simulated urine in a Foley catheter bag.
*

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

The content of this simulation is divided into 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 during change of shift.*

“Ms. Morrison is a 27-year-old G3P3 who is post-op from a repeat cesarean at 38 weeks for preeclampsia. She had regional anesthesia and just came from the OR about 10 minutes ago.

"I haven’t quite finished her assessment, but she has a mild headache. Magnesium sulfate was started yesterday, and continues at 2 gm/hour. Her fluids are infusing at 150 mL/hour, and she has a PCA [patient controlled analgesia] pump. Her urine output has been 30–50 mL/hour. I was just about to get vitals on her. Dad is at the bedside with the baby.”

## Expected behavior/performance (not in any particular order):

* Nurse introduces self to the patient and finishes assessment.

**Trigger #1**

*Patient volunteers information during nursing assessment:*

“My headache is coming back really bad, and I feel like I can’t catch my breath.”

*Patient requests pain medications for her headache.*

**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 115

BP 160/94

Temp 37.2

Resp Rate 28

Deep tendon reflex (DTR) 3+, no clonus

Lung exam is limited due to noise level in room, but some crackles can be heard at the bases

O2 Saturation 95% on room air

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

**Distractors**

Partner appears anxious.

Partner asks questions, does not hear answers, does not understand medical jargon, and interferes with nurse’s ability to perform assessment.

Baby is crying.

## Expected behavior/performance (not in any particular order):

* Nurse reassures patient and partner.
* Nurse reassesses maternal status, checks vitals, oxygen saturation, listens to breath sounds.
* Nurse calls for additional help, provider, or rapid response team.
* 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.

**Trigger #2**

Patient is increasingly short of breath and is now becoming anxious. She asks to sit up in bed in order to catch her breath. She has a productive-sounding cough.

**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 120

BP 158/93

Resp Rate 36

Temp 37.6 C

O2 Saturation 89%

Lung exam: diffuse crackles; absent breath sounds at bases

*The facilitator may provide answers to team as needed to help maintain the flow of the simulation. Symptoms and low oxygen saturation should continue while the team attempts any and all diagnostic or therapeutic actions.*

## Expected behavior/performance (not in any particular order):

* Nurse calls for additional help, provider, or rapid response team.
* 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 speaks to patient and support person or delegates to another team member to inform and answer questions.
* 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.
* Leader may call team huddle.

Team initiates appropriate clinical response.

**Trigger #3**

*When appropriate during the flow of the simulation, the facilitator provides card to provider or nurse.*

O2 Saturation is now 84%.

**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 124

BP 160/98

Resp Rate 40

Temp 37.5 C

Patient begins coughing frothy sputum, and breathing becomes significantly more labored.

*The facilitator may provide answers to team as needed to help maintain the flow of the simulation. This may include providing interval maternal assessments in response to team actions. The facilitator**allows the patient to continue have respiratory decompensation while the team attempts various measures to address.*

*Facilitator ends the simulation after handoff to a team qualified to perform advanced airway management.*

**Distractors**

*Partner is continually asking what is happening.*

“What is going on? Why aren’t you helping her?”

## Expected behavior/performance (not in any particular order):

* Provider speaks to patient and support person 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.
* Leader may call team huddle.
* All team members call out critical patient information.
* All team members use closed-loop communication and provide mutual support to one another.
* Team initiates appropriate clinical response for postoperative respiratory distress.

# Postoperative Cesarean Section Complication 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 Headache

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Nurse reassures patient and partner.  |  |  |  |
| Nurse reassesses maternal status, checks vitals, oxygen saturation, listens to breath sounds. |  |  |  |
| Nurse calls for additional help, provider, or rapid response team.  |  |  |  |
| SBAR is used to inform others of the situation when they arrive. |  |  |  |

Trigger 2: Increasing Respiratory Symptoms

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Nurse calls for additional help, provider, or rapid response team. |  |  |  |
| SBAR is used to inform others of the situation when they arrive. |  |  |  |
| Provider speaks to patient and support person or delegates to another team member to inform and answer questions. |  |  |  |
| Provider clearly demonstrates leadership role. |  |  |  |
| All team members use closed-loop communication and provide mutual support.  |  |  |  |
| All team members call out critical patient information. |  |  |  |

Trigger 2: Increasing Respiratory Symptoms (cont'd)

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Leader may call team huddle. |  |  |  |
| Team initiates appropriate clinical response. |  |  |  |

Trigger 3: Significant Oxygen Desaturation

| Targeted Behavioral Response | Observed | Not Observed | Notes |
| --- | --- | --- | --- |
| Provider speaks to patient and support person or delegates to another team member to inform and answer questions. |  |  |  |
| SBAR is used to inform others of the situation when they arrive. |  |  |  |
| Leader may call team huddle. |  |  |  |
| All team members call out critical patient information. |  |  |  |
| All team members use closed-loop communication and provide mutual support.  |  |  |  |
| Team initiates appropriate clinical response.  |  |  |  |

# 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:

“Ms. Morrison is a 27-year-old G3P3 who is post-op from a repeat cesarean at 38 weeks for preeclampsia. She had regional anesthesia and just came from the OR [operating room] about 10 minutes ago.

"I haven’t quite finished her assessment, but she has a mild headache. Magnesium sulfate was started yesterday and continues at 2 gm/hour. Her fluids are infusing at 150 mL/hour and she has a PCA [patient-controlled analgesia] pump. Her urine output has been 30–50 mL/hour. I was just about to get vitals on her. Dad is at the bedside with the baby.”

Trigger #1

* “My headache is coming back really bad, and I feel like I can’t catch my breath.”
* Patient requests pain medications for her headache.

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

Pulse 115

BP 160/94

Temp 37.2

Resp Rate 28

DTR [deep tendon reflex] 3+, no clonus

Lung exam is limited due to noise level in room, but some crackles can be heard at the bases

O2 Saturation 95% on room air

Distractors (trigger #1)

* Partner appears anxious.
* Partner asks questions, does not hear answers, does not understand medical jargon, and interferes with nurse’s ability to perform assessment.
* Baby is crying.

Trigger #2

* Patient is increasingly short of breath and is now becoming anxious. She asks to sit up in bed in order to catch her breath. She has a productive-sounding cough.

Clinical information to be provided to team in response to their assessment after trigger #2

Pulse 120

BP 158/93

Resp Rate 36

Temp 37.6 C

O2 Saturation 89% on room air

Lung exam: diffuse crackles; absent breath sounds at bases

Trigger #3

O2 Saturation is now 84%.

Clinical information to be provided to team in response to their assessment after trigger #3

Pulse 124

BP 160/98

Resp Rate 40

Temp 37.5 C

Patient begins coughing frothy sputum, and breathing becomes significantly more labored.

Distractors (trigger #3)

* Partner is continually asking what is happening.
* “What is going on? Why aren’t you helping her?”

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