**Purpose of the tool:** Simulation provides opportunities to practice teamwork and clinical skills and strategies in a safe learning environment and, through practice and feedback, acquire teamwork skills needed for safe patient care. In situsimulation is physically integrated into the clinical environment and provides a method to enhance reliability and safety in high-risk areas. It allows participants to identify hazards and deficiencies in clinical systems, the environment, and the provider team that may hinder the provision of optimal care. The most powerful learning occurs during debriefing, when participants have a chance to review their performance with the training facilitator and identify those areas that need more work.

Who should use this tool: Simulation facilitators

How to use this tool: This tool includes the following sections and should be used in connection with one or more of the sample AHRQ Safety Program for Perinatal Care in situ simulation scenarios.

* Pre-Simulation Preparation
* Day-Before-Simulation Checklist
* Pre-Simulation Briefing
* Sample Simulations—Overview and Structure
* Simulation Assessment Guidance
* Debriefing

**Link to accompanying video:**

* <https://youtu.be/UhIuGgZB60g>
* <https://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/perinatal-care/modules/situ.html>

The accompanying video offers an example of an in situ simulation, including the briefing and debriefing process, that was conducted on an actual labor and delivery unit.

Pre-Simulation Preparation

Identify location for conducting simulation in collaboration with unit leadership. Ensure that the location is adequately equipped with the full range of supplies and equipment needed for the actual care of patients. For example, you will want to have in stock disposable blue pads, a kidney basin, simulated intravenous fluids, and medications.

If you plan to use simulated patients (“actors”) as part of simulation training on your unit, make arrangements well ahead of your first simulation, to ensure adequate time for clearing any administrative requirements (agreements, payments, background checks, etc.) and time for training the simulated patients to ensure that they are clear on their role and expectations.

* Use individuals who are not part of your department staff or are not medically trained if possible. They will add a dimension of reality for the health care team.
* Ask them to come about 45 minutes ahead of time so you can review “their story,” the basic elements of the scenario progression, and the symptoms, emotions, and distractions they need to use at critical moments to create a “reality” for the health care team.
* Reassure the person playing the role of the patient that no invasive procedures will be done to her during the scenario.
* Place the simulated patient, if possible, into the electronic health record so that staff can find out information or order labs.

Determine how you will introduce information into the simulation and whether you will need simulation equipment, such as a pelvic model or fetal monitor. Several options exist for introducing information into the simulation:

* The facilitator can verbally call out patient information.
* The facilitator can hand out cards containing information to staff to simulate the acquisition of this information. These should be prepared in advance of the simulation.

If you plan to video record the simulation, consider the purpose of recording and be prepared to explain this to participants as part of the pre-simulation briefing:

* If the recording will be used solely for debriefing the simulation with participants, assure participants that the video will be destroyed at the end of the training.
* If the video recording might be used for education of others later, seek your legal department’s guidance and obtain signed release documentation from participants.

# Day-Before-Simulation Checklist

* Confirm that location and equipment are still available and in working order.
* Confirm standardized patients (if using).
* Review scenario and cards for introducing new information into simulation (if using).
* Print Simulation Observation Assessment tool or Team Debriefing tool.
* Set up video equipment (if using).

# Pre-Simulation Briefing

Include all simulation participants in the pre-simulation briefing. This includes team members who are not directly responsible for patient care, such as the unit clerk or laboratory staff. In most cases, these staff would return to regular duties following the pre-simulation briefing but would be available to answer the phone and do tasks within his/her responsibilities if delegated by the simulation participants.

Prior to providing participants with the basic simulation instructions below, review the following:

* Ask staff to work in their normal roles during the simulation if possible.
* Explain that the primary focus is teamwork and communication skills, with a secondary focus on clinical/technical skills.
* Encourage participants to not be afraid to make mistakes.
* If there are other observers besides the facilitator, let them know that they will participate in the debriefing.
* Distribute the simulation assessment tool if observers are present.
* Explain the purpose of the video recording and obtain any necessary consent per your hospital’s policy.

# *Basic Instructions To Convey to Simulation Participants*

1. As much as possible, act as if the scenario is real; in other words, do what you would normally do. For example, use the phone to call for help if needed, and use personal protection equipment (such as gloves) as needed. This is important because these activities all take time, and we want you to experience the passage of time and the ways that affects requests for help and other communication.
2. (If using simulated patients) The patients will respond to requests but will not initiate actions.
3. (If using cards) I will hand you information on cards that you should read to yourself first, and then you will share the information as you normally would share new information with the team.
4. (If facilitator will be calling out clinical information) I will be calling out changes in the patient’s condition. Use this information as if it were information you would obtain from assessment, observation, or experience of patient care.
5. I might at times provide information to the entire team at once to help keep the simulation moving along.
6. I might respond or interject comments as if I am the patient (will be necessary if not using simulated patients).
7. (If using a pelvic model) Please do not cut the perineum; instead, verbally indicate actions requiring cutting of the perineum.
8. You may request to move the patient to the operating room or intensive care unit if you feel this is necessary.
9. Let’s now confirm the roles of all participants in this simulation today: patient’s primary labor and delivery nurse, resident, attending physician, midwife, charge nurse, pediatric provider, anesthesiology provider, patient, and family member.

# Sample Simulations—Overview and Structure

The sample scenarios available through the AHRQ Safety Program for Perinatal Care have a similar format and structure. Each is designed to run for between 15 and 20 minutes. The nine available sample scenarios are as follows:

* Postpartum hemorrhage
* Shoulder dystocia
* Umbilical cord prolapse
* Uterine tachysytole
* Antepartum hemorrhage
* Preeclampsia/seizure
* Severe abdominal pain/VBAC
* Postoperative cesarean section complication
* Magnesium toxicity

Each scenario includes a clinical context for the scenario and three to four event sets. Each event set includes at least one trigger, corresponding clinical information, as well as a set of distractors. Targeted responses (i.e., expected staff behaviors) are also identified.

These sample scenarios should be considered more like “improvisation” than a tightly scripted play. Keep your interactions with the team to a minimum during the simulation, intervening only to keep the scenario running by providing new clinical information, or to defuse interpersonal conflicts that have escalated to the point of interfering with the ability of the team to finish the simulation.

# Simulation Assessment Guidance

The purpose of simulation assessment is to evaluate the team’s performance. Assessments should diagnose both individual and team performance and provide information about why things did or did not go well. The simulation assessment tool, available for each sample scenario, can be used by observers of the simulation experience. If the simulation experience was video recorded, the participants can use it to evaluate themselves as they watch the video. The assessment tool can also be used as a guide for the facilitator during the debriefing.

# Debriefing

The purpose of the debriefing is to help participants understand the complex team skills and knowledge required for high-reliability patient care. The debriefing will be team centered, and all team members are expected to participate. If you have a video recording of the simulation, you can show that before the debriefing of the simulation. Plan for 3 to 5 minutes of debriefing for every minute of simulation.

During the debriefing, each team member objectively shares his or her perspective on events that unfolded during the scenario. This helps team members gain insight into one another's perspective, helps the team to reach consensus on what happened during the scenario, and helps ensure that everyone takes away similar lessons from the experience. The assessment tool can help during the debriefing because it describes human behavior in concrete terms, providing a structure for understanding the scenario. Teams can also use it to assess themselves during video playback. During the debriefing, focus the discussion on critical aspects of performance related to the learning objectives. Remind participants that the focus is primarily team performance, with a secondary focus on clinical/technical performance. An in-depth discussion and debate of clinical issues should not be part of the debriefing.

# *Tips for Debriefing*

* Structure the debriefing to first ask team members to talk about what went well, next ask them to talk about what could be improved, and finally ask them to talk about how it could be improved.
* Encourage team members to discuss what they were thinking during the simulation.
* Encourage team members to discuss the factors that enabled or impeded the team's success.
* Push the team to go beyond just describing what happened. Ask followup questions that require in-depth analysis, such as asking team members to analyze what led them to the decisions they made.
* Give your analysis and evaluation only after the team being debriefed has completed its own analysis and evaluation.
* If observers were using the assessment tool, ask them to contribute to the debriefing after the team has completed its own analysis and evaluation.
* Ask standardized patients to contribute to the debriefing based on their perspective.

# *Application/Generalization*

This part of the debriefing can help the team assess what they learned in the simulation and apply or generalize it to their daily practice. Ask team members to discuss specific ways they can apply what they learned in the simulation exercise to their care of patients. It is helpful in this debrief phase to generate a list of lessons learned and action items—that is, what went wrong and how it can be corrected.

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