



# Obstetric Drill Program Manual

## Postpartum Hemorrhage

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## Introduction

Hemorrhage is the most significant cause of maternal death in the world. Postpartum hemorrhage is responsible for more than half of all maternal deaths occurring within 24 hours of delivery. Primary postpartum hemorrhage occurs in 4 – 6% of pregnancies and it is estimated that a woman dies every 4 minutes worldwide from postpartum hemorrhage, resulting in 140,000 deaths annually. Postpartum hemorrhage also poses other significant risks including coagulopathy, shock, respiratory distress, and can cause long term morbidity. It is critically important that medical providers are educated and are readily able to recognize, diagnose, treat, and manage this medical emergency.

Because of the risks that postpartum hemorrhage poses, the Council on Patient Safety in Women's Health Care has released a patient safety bundle to help providers address this emergency. In this bundle, they emphasize the importance of clear communication and an interprofessional team approach.

*Practicing for Patients* was developed with these concepts in mind. The Council recognizes that if all members of the labor and delivery team practice and simulate medical emergencies on their actual labor and delivery unit that they could decrease obstetric related morbidity and mortality by improving the team's communication and response in an emergency. Furthermore, through simulation the team could also identify process issues that, when addressed, could also improve care. The ideal location to practice for patients experiencing a postpartum hemorrhage is on the labor and delivery, postpartum, or postoperative recovery unit. This location allows the training team to recreate actual conditions regarding team composition, physical space, and institutional policies and procedures that cannot be replicated in a simulation laboratory.

The current lack of standardization in treatment protocols and lack of opportunities to practice can result in miscommunication and variation in care provided to patients who suffer a postpartum hemorrhage.

Imagine your favorite sports team. Now imagine them making a mistake on a critical play because they have not had enough time to practice together. Lack of structured team practice can lead to minimal connection and chemistry between team members – call this culture. Moreover, without practice, there is lack of a standardized approach (knowledge of the team's "plays"). Practice teaches the team how to anticipate each other's actions and optimize communication. Overall, practicing helps a team hone its skills for the critical times in a "game" and helps all team members focus on their goal which, in the case of a postpartum hemorrhage, is decreasing maternal morbidity and mortality and improving outcomes.

Now, continue to think of your labor and delivery team as your favorite sports team. Unlike a sports team, members of the labor and delivery team practice but are trained by different "coaches" (i.e. attend different classes) to prepare for obstetric emergencies. The basic concepts of care are the same, but the "plays" are different. In-situ drills help all members of care team practice under the same "coach". In-situ drills are the team's practice sessions and can be done at some hospitals that have and/or are willing to invest resources. This manual will help address the challenges of setting up this type of program.

There is evidence that simulation training can improve obstetric outcomes to include fewer brachial plexus injuries, a decreased time from diagnosis to delivery with umbilical cord prolapse, and improved care during neonatal resuscitation. However, despite the evidence and general recognition that in-situ



simulation training is something that should be done, the Council recognizes that there are many barriers to implementation. These include concerns about cost, lack of expertise in running simulations, and the challenge of running a drill on a busy labor and delivery unit.

The manual is written to help you overcome these barriers. The Council's goal is that every institution that performs deliveries will be able to conduct in-situ drills for postpartum hemorrhage and move towards the goal of optimum care and outcomes. It does not have to be expensive and this manual includes step-by-step instructions on how to build your implementation team, brief leadership, decide on simulators, and even contains video examples of how to run and debrief after training.

This manual has been assembled by international experts with practical clinical and simulation experience and written to align with the treatment recommendations of their respective national organizations.

Thank you for taking the time to consider utilizing *Practicing for Patients* at your hospital. It is the commitment of providers like you who constantly work to improve care that makes the difference for our patients!



## Disclaimer

Permission is hereby granted for duplication and distribution of this document, in its entirety and without modification, for solely non-commercial activities that are for educational, quality improvement, and patient safety purposes.

All other uses require written permission from ACOG. Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care disseminates patient safety bundles and toolkits to help facilitate the standardization process. This toolkit reflects emerging clinical, scientific, and patient safety advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Although the components of a particular manual may be adapted to local resources, standardization within an institution is strongly encouraged.

The Council on Patient Safety in Women's Health Care is a broad consortium of organizations across the spectrum of women's health for the promotion of safe health care for every woman.



## Acknowledgements

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# General Overview and Objectives

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## Program Goal

The *Practicing for Patients: Obstetric Drill Program Manual for Postpartum Hemorrhage* will provide every unit with the ability to run in-situ postpartum hemorrhage simulation drills to promote standardized responses which will improve the quality and safety of the care for their patients.

## Simulation Background

When thinking about running simulation drills, providers are often intimidated and concerned about the cost and time required and may have questions about how to get support necessary to make it happen. This manual will explain how in-situ simulation works and provide clear step-by-step instructions with video examples and forms to make it possible. To begin, we will answer some basic questions about simulation training in the obstetric environment.

### ▶ What is Simulation?

Simulation is a situation or environment created to allow persons to experience a representation of a real event for practice, learning, evaluation, and/or to gain understanding of systems or human actions. In obstetrics it can be used to learn surgical skills or to practice for emergencies, including postpartum hemorrhage. It can also be used to improve existing processes.

### ▶ Why Use Simulation in Obstetrics?

Simulation for obstetric emergencies is a relatively new area of focus but has a demonstrated ability to improve patient safety and outcomes. It is becoming an integral part of education and patient care. Drills for obstetric emergencies are now being recommended by the Joint Commission, which suggests that hospitals and providers can prevent maternal death using drills “to train staff in the protocols, to refine local protocols, and to identify and fix systems problems that would prevent optimal care.”<sup>1</sup> While more labor intensive than lectures, simulation is also relatively affordable as there are low-fidelity and inexpensive simulators available that are solid options for training.

### ▶ Why Does Simulation Work as an Educational Tool?

For learners, sitting and listening to lectures does not permit significant activation, which is key to learning and retaining information. Simulation not only gets the team involved but allows them to practice in a more realistic environment where there is no risk to actual patients. In an emergency, the patient is at the center; during a simulation the learner, team, and processes are at the center – a unique and privileged position.

### ▶ Why Perform In-situ Simulation?

In-situ simulation is when the event takes place where clinical care occurs. This approach allows the unit to practice technical skills, teamwork, and communication in their actual care environment. It also allows for the identification of potential facilities issues and barriers to care that cannot be replicated in a simulation center or other locations off the unit.

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<sup>1</sup> [https://www.jointcommission.org/assets/1/18/sea\\_44.pdf](https://www.jointcommission.org/assets/1/18/sea_44.pdf)



## Obstetric Hemorrhage Patient Safety Bundle

The Council on Patient Safety in Women's Health Care Patient Safety Bundle on Obstetric Hemorrhage is available on our website ([www.safehealthcareforeverywoman.org](http://www.safehealthcareforeverywoman.org)) and can be viewed and downloaded in its entirety [here](#) or by clicking the bundle graphic to the right.



## Obtaining Institutional Support

### Briefing Leadership

It is imperative to obtain support from hospital and departmental leadership when planning simulation drills. We recommend scheduling a meeting with the obstetrics department and nursing leadership to introduce your desire to conduct in-situ drills at your institution. This should include all specialties / units that will be involved (Anesthesia, Nursing, Blood Bank and potentially the Emergency Department). Plan to present a brief slide set that outlines your proposal. It is important to highlight the pros and cons of in-situ drills and be prepared to answer any questions that may arise. [A sample presentation](#) that you can use during this briefing has been provided. You can customize this slide set to meet your specific organization's needs.

When speaking with leadership it is important to highlight that simulation in obstetrics has the potential for growth and creative development through tailoring of the program to fit your institution's unique needs. There is evidence for improving clinical outcomes through education and optimizing teamwork while lowering medical liability costs. Moreover, simulation drills for obstetric emergencies are recommended by the Joint Commission.

It is also important to stress that patient safety is the driving force for simulation. Simulation helps improve patient safety through providing education, enhancing communication, improving patient hand-offs, and driving system changes. Lessons learned in simulation are invaluable to patient safety. Simulation provides an opportunity to address rare, but emergent situations in a team environment where stress is high and mistakes are costly.

Simulation has been found to be an effective and innovative form of teaching clinical concepts. Learners may prefer this approach over sitting for traditional slide set lectures that are often not engaging and do not permit significant activation. Simulation provides a "no consequence" learning environment where participants can practice without their mistakes resulting in a detrimental outcome. Institutions that offer innovative educational opportunities are attractive to distinguished clinical faculty and medical students and can attract high caliber residents. Implementing simulation can also fulfill the requirements of the Accreditation Council for Graduate Medical Education (ACGME) Residency Review Committee (RRC) requirements as simulation has been added to the resident curriculum.

Initially, there may be some hesitancy to approve simulation efforts because of the cost of the simulators and the fact that this training requires time away from patient care, team effort, interdepartmental collaboration and ancillary staff support. Although materials such as obstetric simulators can be expensive, there are low-fidelity, low-cost, simulators available that are very effective. Moreover, it is important to point out that although simulation may seem expensive at the outset, the return on investment will be appreciated in many forms.



## Briefing Providers

Even if you have complete support from leadership and a motivated training team, if you do not engage the providers in the planning, your efforts will not be successful. It is imperative that providers be provided with a clear explanation of the following:

- ▶ **Why** the program is being done: to improve patient care and outcomes
  - May consider showing a patient experience video, such as our [Voices of Impact](#) to remind the team why they are doing this.
- ▶ **How** the program will be done: discuss scheduling and timing of simulation drills.
- ▶ **What** will be done with the results: explain that this is not part of their evaluations and that any systems issues identified will be fixed.

## Return on Investment

The greatest potential impact of implementing in-situ simulation is decreasing maternal and neonatal mortality and morbidity. Evidence of this continues to build and given its recommendation by major organizations, the incentive to practice simulation is obvious. Simulation improves provider readiness, teamwork, team communication, and systems which impact maternal and neonatal mortality and morbidity directly.<sup>23</sup>

Additionally, given recent studies demonstrating the decrease in incidence of brachial plexus injuries after drills for shoulder dystocia<sup>4</sup>, the absence of simulation training may leave the institution at risk of potentially expensive litigation. Also, for institutions that train residents, simulation is an effective way to train for the obstetric emergencies that teams inevitably encounter.

## Building the Implementation Team

For simulation drills to be successful, there must be a interprofessional ownership. Obstetric simulation efforts will require cooperation from and collaboration amongst departmental leadership, physicians, nursing staff, anesthesia, neonatal intensivists, ancillary staff, and opinion leaders. We recommend identifying the following members to form the core implementation team:

- ▶ Physician Lead
- ▶ Nursing Lead
- ▶ Support Staff Lead (pharmacy, blood bank)
- ▶ Change Leaders (those who can make the change and/or influence staff)
  
- ▶ Initial Team Composition:
  - Physician Lead
  - Nursing Lead
  - Support Staff Lead
  - Frontline Influencers (opinion leaders/ individuals who are highly respected and revered at the institution)

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<sup>2</sup> <https://www.ncbi.nlm.nih.gov/pubmed/22882714>

<sup>3</sup> <https://www.ncbi.nlm.nih.gov/pubmed/18310377>

<sup>4</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5245184/pdf/nihms-828218.pdf>



## Logistics

### Preparation and Scheduling

Depending on the scope of your simulation, confirm participation of the OB/GYN department, nursing, anesthesia, pediatrics/NICU, and ancillary services (i.e. laboratory, pharmacy and blood bank) and if applicable, the simulation technician. After confirmation of participation, set a date for the simulation. When beginning, we recommend blocking out half day to run the in-situ drill and conduct the debrief. As your faculty learn how to set up and run the drills, it should take approximately an hour to conduct the complete simulation. We recommend that you run your initial simulations as scheduled events that the entire team is made aware of in advance. This will help to decrease anxiety, allow the team time to become familiar with the simulator and the drills, and allow the team members time to review their knowledge, if they choose. By making it feel less like a test of individual skill and more like a test of team function and process, engagement will be much easier to obtain.

Once you have set a time, you'll need to identify the specific individuals who will participate in the simulation experience. Actual patients will still need to be taken care of during this time, so emphasize that those who will remain on the floor in their normal roles taking care of patients will have a chance to participate in future simulations. Depending on the number of participants, you may need to run the simulation multiple times. For example, if you have many participating residents, the drill may need to be run more than once so that each resident has an opportunity to have a role in the interprofessional simulation experience.

Once you have your participants identified, depending on the size, you may want to divide them into groups. By doing this you can have one group go through the drill while the other group debriefs (see figure below). At some institutions, because of time constraints or staffing issues, one group (comprised of residents, nurses, anesthesia, and pediatricians/NICU staff) may be chosen to run the drill while the remaining participants watch the drill in an auditorium setting via a live stream. The debrief is done with the entire group afterwards. We recommend that drills be run quarterly and the personnel for the drill change each quarter so that everyone gets a chance to participate.

Example of scheduling with two groups alternating between the drill and debrief:

	8:00 a.m.	8:30 a.m.	9:00 a.m.
Group A	PPH Drill	Debrief	-
Group B	-	PPH Drill	Debrief

### Collecting Equipment and Tools

Ahead of the simulation you will also need to ensure that you have access to all of the equipment and tools required to run a successful drill. Some equipment that you might consider collecting prior to conducting the drill include: hemorrhage cart or kit, [fake blood](#), simulated medications, an open uterine balloon, blood bank bags and containers, and IV tubing. We also recommend that you understand how your local rapid response team (RRT)/medical response team (MRT)/obstetric response team (OBRT) team is activated.



#### Quick Reference Steps

1. Confirm department participation.
2. Set a date.
3. Identify participating individuals.
4. If necessary, divide participants.
5. Conduct drill(s) and debrief(s).
6. Begin scheduling next quarterly drill.

## Frequency of Training

While guidance on how often to run in-situ drills varies, we have found that it is important to do them often enough that they become part of the culture. This will depend on the size of your unit. Scheduling them on at least a monthly basis is usually a good place to begin.

## Staffing Roles and Responsibilities

During the simulation, we recommend personnel assume the role that they normally would in a real-life emergent situation. For example, nurses should be nurses; OB/GYN physicians should be OB/GYN physicians during. Additionally, participants should plan to call support staff, ancillary services, and anesthesia as they would during a real-life emergency as this is the only way to identify potential process/facilities issues that may interfere with patient care.

Once your simulation program is up and running, there is value to be had in swapping roles amongst participants. This approach provides great insight into what each profession requires from others and can lead to significant growth in team performance. However, at the start we recommend that all participants assume their existing “real world” roles.

## Simulation Facilitators and Technicians

We recommend having one facilitator assigned to each group. The role of the simulation facilitator is to ensure that the simulation runs smoothly. At the beginning of each group’s simulation, the facilitator will review capabilities and limitations of the simulator with the group.

The facilitator will begin the simulation by sharing the basic assumption with the team:

***“Everyone here is intelligent, well-trained, wants to be their best, and is here to improve patient care. This is not a test of individuals, it is a test of process, a tool to identify and potentially fix gaps on our unit, in our teamwork, in our communication, and the overall reliability of the care we provide. It is also an opportunity to learn and ask questions in a safe environment.”***

Throughout the simulation the facilitator will manage the “case flow” of each scenario and prompt the team when the case points have been covered and the drill is over. The simulation facilitator may have to provide information such as physical findings on examination, lab results, vital signs, etc. Facilitators should provide a summary of the team’s actions/performance during the drill to the debriefing staff for use during the combined team debriefing. For example, during the drill if the group ordered labs, the facilitator will provide this documentation to the debriefer.

In institutions with a simulator that needs to be managed by a technician, simulation technicians will run the actual simulators and equipment/monitors. They should work closely with the simulation facilitators to keep the simulation running smoothly. They are also responsible for troubleshooting any technical issues and for case scenario moulage or setting the stage for the simulation. Please note that a high-tech simulator is not necessary for the objectives of this program.

## Nurses

We recommend that scenarios include actual nurses who assist and assume their normal daily roles in the simulation. Nurses should be trained on the simulation and assist the providers where necessary in finding medication and equipment and administering medication as they would during a real-life emergency. Trainers should pay special attention to the teamwork, communication, and the process improvement scenarios.



## Family Members

You may consider having simulated family members as part of your simulation. Although not mandatory, family members help make for a real-life situation. For each simulation, we recommend having at least one person assigned to play a family member. This is a critical in ensuring that the scenario is as real as possible. It also helps keep the team engaged and helps them remember to communicate with the family.

As the simulation evolves and you become more comfortable with the simulation process, you may consider using members of your institution's patient advisory board for these roles. The participation of non-clinical individuals enhances simulations and creates real-life scenarios. Additionally, you may consider asking the hospital or health system CEO play to role of the patient. We have found that doing this helps the team feel supported and helps the CEO engage with the work of the team.

## Debriefers

There should be one debriefer assigned for each simulation group. You may assign a co-debriefer in situations where the group is large. The role of the debriefer is to monitor and observe the simulation. They may observe from an observation room (if applicable) or from a corner of the room. Once the drill/simulation is completed, they will debrief the group following the processes outlined in the Team Review and Debriefing section of this manual. They should use the checklist and notes that they and the simulation facilitator took throughout the simulation. The debriefer may also choose to provide feedback to the Council on Patient Safety in Women's Health Care using the online [Practicing for Patients Feedback Form](#). Feedback received in this form will be utilized to revise this manual and the accompany resources to better fit your needs.

## Providers

All providers should assume their normal daily roles.

## Equipment Options

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### Fidelity

Fidelity speaks to realism, which refer to the simulator, to emotions felt by a team member, or to the story of the patient or the unit. There is ambiguity about which aspect of fidelity is referred to, as a result it is better to speak of the realism intended.

### Low-Tech

This option refers to inexpensive equipment that is unlikely to have any electronic components. This equipment could even be homemade, created/assembled using instructions found on the Internet. It is more likely to be light, easy to store, as such many hospitals can be convinced to leave these simulators out for use at any time. This manual focuses on simulations using low-tech equipment. This could also be a live person playing the role.

### High-Tech

This option typically refers expensive equipment, usually electronic, and usually heavier and more cumbersome than the low-tech alternatives (although advances in miniaturization have made these units much more portable). Because of cost, complexity, and size, the equipment is not likely to be left out or made easily accessible to a single learner or small group of learners - on their schedule - who want to use it to review a process. These units can be set up in a simulation laboratory.

In choosing the type of equipment, the team is in part deciding on the approach it will take: using low-tech materials, one should plan to allow teams to run simulations at all times: day or night. After all, if we are to work



towards providing reliable care from shift-to-shift-to-shift, the only way to do so is to uncover the process issues that prevent us from doing so.

## Choice of Mannequin

The choice of mannequin is specific to the institution and the team. We have developed an [overview of obstetric simulator options](#) to aid you in your decision-making process but please keep in mind that this is not meant to be an exhaustive list. Be that as it may, we recommend that you decide what your purpose is for simulation, and then make your decision about the mannequin after.

For example, if your organization was trying to implement a new process for measuring blood loss in a postpartum hemorrhage, then perhaps a higher-tech mannequin would be better. However, we remind the reader that the top two issues consistently causing safety concerns are based on communication and teamwork. A high-tech mannequin is not necessary to work on these issues.

In the end, cost should never be the barrier that keeps your organization from beginning its own simulation program. Be innovative, and any model will allow you to reach your goals.

## Team Review and Debriefing

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### General Team Review

As previously described, the individual assigned to the role of debriefer will observe the group during the simulation. You may also consider assigning an associate debriefer to help with the review and discussion following the simulation.

While there are many ways to debrief, to make this as simple as possible we have developed a basic [Team Review and Debriefing Form for Postpartum Hemorrhage Management](#) that the debriefer can use to note key points as well as critical actions and interventions that are done during the simulation. We have also created a [Facility Protocol Change Form](#) that can be used to follow up on any facilities/systems issues identified so they can be addressed. As you become more comfortable with debriefing you may adjust the forms as necessary to best fit your institution.

### Debriefing Instructions

The debrief session should take place in a setting that can fit the entire team comfortably. A conference room or a setting with a blackboard or dry erase board is ideal, although you may need to utilize a delivery room to save time and keep all participants together.

The session should begin with the debriefer once again reviewing the basic assumption: “Everyone here is intelligent, well-trained, wants to be their best, and is here to improve patient care. This is not a test of individuals, it is a test of process, a tool to identify and potentially fix gaps on our unit, in our teamwork, in our communication, and the overall reliability of the care we provide. It is also an opportunity to learn and ask questions in a safe environment.” This is done to set the tone that it is not a test but a way to practice and improve.

The debriefer should then review the learning objectives for the simulation and ask the team how they believe the simulation went. This will help release any performance anxiety that the team may have. Next, the team should review the performance of critical actions and teamwork/communication during the in-situ drill utilizing





### Quick Reference Steps

1. Review the basic assumption.
2. Review learning objectives.
3. Ask how it went.
4. Review case notes.
5. Discuss key takeaways.
6. Develop list of potential system changes.
7. Present system changes to leadership.
8. Submit Practicing for Patients feedback form.
9. Set date to repeat drill.

the checklists and case specific notes that the debriefer took during the simulation. The debriefer will then lead the team in a discussion of what they think they did well and what they will take away from the simulation. It is important to remember to conclude on a high-note – the debriefer may consider having each member share something positive about his or her team members. Of note, it is essential that recommendations for change be implemented quickly after the simulation, otherwise the engagement of your team will suffer.

In conclusion, the team should make a list of potential system changes that could be made to help improve the identification and response to postpartum hemorrhage. Following the simulation, the debriefer should meet with the obstetrics and gynecology leadership to finalize a list of changes to be made to their institution’s postpartum hemorrhage protocol. The [Facility Protocol Change Form](#) should be completed to document the proposed changes or items that need to be corrected.

To assist other institutions, we ask that all users submit the fully online [Practicing for Patients Feedback Form](#). Please note that there is not specific information about your institution collected on this form and that feedback is anonymous. The goal is to obtain feedback on the simulation program, scenarios, and identify any common issues that are occurring related to care during a postpartum hemorrhage.

Finally, a date should be set to repeat the postpartum hemorrhage in-situ drill after the identified facility changes have been implemented.

## Simulation Scenarios

We have developed three case scenarios that you can utilize to begin the simulation experience within your institution. When beginning your program, we recommend that you begin with these scenarios. Once the team has completed these case scenarios you may want to change some of the details, but the overall flow can remain the same. For each case scenario we have also included a patient chart, a case flow diagram, and family member instructions.

Include case scenarios and endpoints:

General Scenario	Treatment End Point
Uterine Atony	Fundal Massage and Uterotonics
Uterine Atony	Decision for Operative Management
Retained Products of Conception (POC)	Removal of Products of Conception (POC)



To assist with each of the scenarios, we have created a catalogue of [video examples](#) that show both general setup as well as examples of the simulations being run.

## General Simulation Instructions

### ▶ General Principles

During the simulation, we recommend that the team run the scenario as if they were addressing the care of a real patient. This means obtaining all adjunct supplies and calling ancillary services as they would in a real-life emergent situation. If medications are needed, those should be retrieved – but not opened – to prevent waste. The team should assign a member to write down the desired orders as if they were ordering them in the electronic medical record (if applicable). Using this approach provides an opportunity to both observe the teamwork and communication and identify any potential facilities or systems issues that arise.

### ▶ Simulation Setup

The overall simulation setup is very similar in each scenario. The delivery room should be stocked and in the same condition as it would for actual patients at your institution. The simulator or simulated patient should be in bed and prepared to bleed. It is helpful to already have blood on the perineum and linens at the beginning of the scenario. If desired, place an infant mannequin on the warmer or in the arms of the patient, so the team will have to address this as well during the simulation. An IV should be in place (taped to the arm) with a bag of IV fluids hanging. After you complete your simulation, make sure to inform your housekeeping staff so that the room can be properly cleaned.

### ▶ Pre-Simulation Briefing/Orientation

Prior to the simulation, the facilitator should brief the team on the logistics and rules of the simulation. They should make sure the team is aware of the following:

- They are simulating an obstetric emergency and that they should treat the simulator as a real patient.
- If additional supplies or instruments are needed, a team member should physically go and obtain them.
- If assistance and/or other providers (anesthesia, etc.) are needed, they should be contacted as in a real emergency.
- If they feel they need to take the patient to the operating room, they should physically move the patient.
- If medications are needed they should be obtained in the normal manner, but not opened or used during the drill.
- The type of simulator being used (if applicable) and the capabilities and limitations that it has.
- How hemorrhage is demonstrated during the simulation (actual bleeding vs. dried faux blood on pads, etc.).

### ▶ Beginning the Simulation

- After you have conducted the Pre-Simulation Briefing/Orientation, have the primary OB nurse come with you to the simulated patient's room.
- To begin a scenario, read the scenario to the nurse and then have the team enter the room. At this point, the person playing the role of the patient/family member should tell the nurse about the continued bleeding.

### ▶ Simulators to Be Used

The simulator to be used will depend on your institution.



## ▶ Demonstrating Maternal Vital Signs

You will need a way to show the patient's changing vital signs to the team throughout the simulation; if your simulator can show maternal vital signs on a monitor, you can use this during the scenario. If not, you can use vital signs cards ([vital signs](#), [blood products](#)) to report the values during the case or employ one of the many available web-based applications.



You can develop your own vital sign simulator cards that simulate a patient monitor [here](#).

## ▶ Simulating Hemorrhage

You will need a method to show the blood loss associated with the hemorrhage to the team during the simulation. There are multiple methods for doing this based on the resources available to you, we have discussed some options below:

- Fake Blood: There are various recipes available for the creation of fake blood. This method will require cleanup, based on the recipe you select you should be aware of the potential for staining.

We have included a few recipe options below:

- [Health Simulation](#)
- [The Simulation Specialist](#)
- Red Fabric: Blood-red colored fabric can be used in lieu of fake blood. This method requires no clean up.
- Dried "blood" on disposable bed pad: You can fill a disposable bed pad with fake blood for use during the simulation.
- Suction Canister Cards: Pre-printed cards denoting various volumes (300 cc, 500 cc, 700 cc, 1000 cc) can be used to represent blood loss amounts. This method requires no clean up.
- These scenarios are good opportunities for your delivery team to practice measuring cumulative blood loss (formal, as quantitative as possible).

## ▶ Basic Scenario Tips

We have provided the following answers to common questions received from simulation participants:

- Emphasize to the team that the uterus is atonic as it is not often obvious from the simulator.
- The team should not place an actual IV on the patient, instead they should ask to have IV placed and act as if it were administered.
- The team can order labs during the simulation, but they will not come back during the simulation.
- For blood bank simulation, can bring the cooler (without blood) or team member can go to the blood bank and retrieve a card representing blood.

# Case 1: Postpartum Hemorrhage Secondary to Uterine Atony

## Learning Objectives

By the end of this scenario, each care team member should be able to successfully do the following:

- Recognize risk factors for postpartum hemorrhage.
- Identify postpartum hemorrhage due to uterine atony and be able to treat with appropriate medical management.
- Demonstrate teamwork and communication skills during a simulated postpartum hemorrhage.

## Planned Completion Points

To successfully complete this scenario, the care team should successfully do the following:

- Recognize uterine atony as the etiology for postpartum hemorrhage.
- Perform uterine massage.
- Administer two different uterotonic medications.
- Call for blood (*e.g.* 2 units of PRBCs).

OR

- If 10 minutes has elapsed after recognition of hemorrhage and the team has not corrected the hemorrhage or called for blood.

## Expected Duration

Approximately 60 minutes (30 minutes for simulation / 30 minutes for debriefing).

## Case Scenario

### ▶ Patient: Marla Smith

Mrs. Marla Smith is a 38-year-old G3P2012 who was admitted in active labor at 39+3 weeks and had a spontaneous vaginal delivery 30 minutes ago. Her delivery was uncomplicated. She had a first-degree laceration that did not require repair. She is approximately 30 minutes postpartum and has just called out because she feels dizzy and has more bleeding.

### ▶ Patient Information

- She has no significant past medical history.
- She has no known drug allergies.
- Her pregnancy was uncomplicated except for an elevated 1-hour glucose screen with a normal 3-hour glucose tolerance test.

### ▶ Laboratory Data (On Admission):

- Hemoglobin: 12.2
- Hematocrit: 36.6
- WBC: 12,000
- Platelets: 218,000



▶ **Delivery Information**

- Measurement of cumulative blood loss (as quantitative as possible) from the delivery was 300cc.
- The placenta was inspected at the time of delivery and appeared to be intact per the delivery note.
- There was only a first-degree laceration that did not require repair.
- The infant weighed 4120 grams.
- The patient has an IV line in place with oxytocin running.

▶ **Family Member/Patient Instructions**

- **Standardized Patient:** If a person is playing the role of the patient during the scenario, she should emphasize that this is much more bleeding than the last delivery. As the bleeding continues the patient can also state that she is feeling faint and dizzy.
- **Family Member/Friend:** If someone plays the role of the patient's family member or friend, he or she may be the patient's partner, mom, other relative, or friend. This person should continue to ask questions during the scenario including things like, "Why is she bleeding so much?" or "She looks like she is kind of pale."

As the patient's vital signs continue to decline, this person should occasionally ask, "Is she going to die?" This person should be anxious with any mention of going to the OR and asks for clarification as to why that is necessary. This person should continue to voice that the patient wants to have more children and should initially refuse to, but reluctantly, leave the patient's bedside when/if asked to.

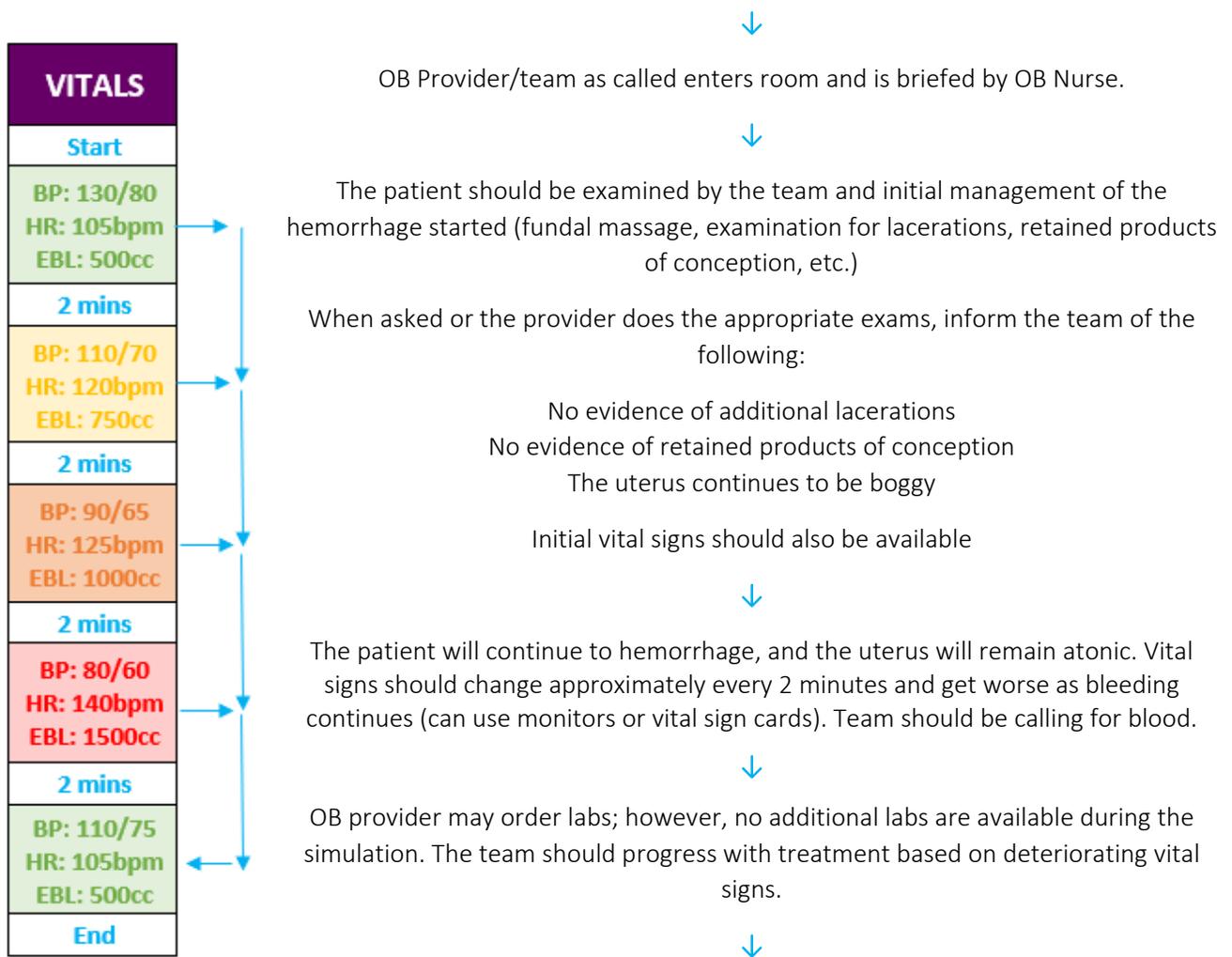
▶ **Answers to Common Questions for this Scenario**

- The patient does not have a history of asthma or hypertension in this case.
- The patient does not have any known allergies to medications.
- If asked additional questions, try to redirect and not answer specifics so as not to introduce things that might complicate the scenario (i.e. don't say that she has a relative with an unknown bleeding disorder).



## Case 1: Case Flow/Algorithm with Branch Point and Completion Criteria

Simulation facilitator will introduce the scenario to the team outside the room and then bring OB Nurse to the patient's room to review the patient scenario. The OB Nurse should then enter the room, assess the patient and then call for assistance.



Providers should recognize hemorrhage and call for additional help and administer medications (may also use Intrauterine balloon tamponade or pack uterus).

### Scenario ends when the team has done the following:

- Performed uterine massage
- Examined for lacerations
- Evaluated for retained products of conception
- Administered two medications to correct uterine atony (correct dose and route)
- Called for blood

OR

The team fails to correct the hemorrhage within 10 minutes or fails to call for blood.



## Case 2: Postpartum Hemorrhage Secondary to Uterine Atony Requiring Intrauterine Tamponade with a Balloon or Uterine Packing

### Learning Objectives

By the end of this scenario, each care team member should be able to successfully do the following:

- Recognize risk factors for postpartum hemorrhage.
- Identify postpartum hemorrhage due to uterine atony and be able to treat with appropriate medical management.
- Recognize persistent hemorrhage requiring additional management with intrauterine tamponade with a balloon or packing.
- Demonstrate teamwork and communication skills during a simulated postpartum hemorrhage.

### Planned Completion Points

To successfully complete this scenario, the care team should do the following:

- Recognize uterine atony as the etiology for postpartum hemorrhage.
- Perform uterine massage.
- Administer two different uterotonic medications correctly.
- Recognize the need for intrauterine tamponade with a balloon or packing.
- Call for blood (*e.g.* 2 units of PRBCs).

OR

- If 10 minutes has elapsed after recognition of hemorrhage and the team has not corrected the hemorrhage or called for blood.

### Expected Duration

Approximately 60 minutes (30 minutes for simulation / 30 minutes for debriefing).

### Case Scenario

#### ▶ Patient: Patty Noble

Mrs. Patty Noble is a 42-year-old G5P4014 who was admitted in active labor at 38+2 weeks and just had a spontaneous vaginal delivery 30 minutes ago. The delivery was uncomplicated, and she had no lacerations. She is approximately 30 minutes postpartum and has just called out because she feels dizzy and has noticed more bleeding.

#### ▶ Patient Information:

- The patient has no significant past medical history.
- She has no known drug allergies.
- Her pregnancy was uncomplicated except for asymptomatic anemia with an H/H=10/30.3 and was on iron BID during her prenatal course.

#### ▶ Laboratory Data (On Admission):

- Hemoglobin: 10.5
- Hematocrit: 31.1
- WBC: 12,000
- Platelets: 218,000



▶ **Delivery Information:**

- Measurement of cumulative blood loss (as quantitative as possible) from the delivery was 400cc.
- The placenta was inspected at the time of delivery and appeared to be intact per the delivery note.
- The vaginal vault and perineum was inspected; no lacerations were found
- The infant weighed 4220 grams.
- The patient has an IV line in place with oxytocin running.

▶ **Family Member/Patient Instructions**

- **Standardized Patient:** If a person plays the role of the patient during the scenario, she should emphasize that this is a lot of bleeding, similar to what she had last delivery. As the bleeding continues she can also state that she is feeling faint and dizzy.
- **Family Member/Friend:** Someone can play the role of the patient's family or friend. This person may be the patient's partner, mom, other relative, or a friend and should continue to ask questions during the scenario including things like, "Why is she bleeding so much?" "Is this normal for her?" "Do we need to be worried?" or "She looks like she is kind of pale" or "Does she need blood?"

As the patient's vital signs continue to decline, this person can occasionally ask, "Is she going to die?" This person should be anxious with any mention of going to the OR and ask for clarification as to why that is necessary. This person should continue to voice that the patient wants to have more children and should initially refuse to, but reluctantly, leave the patient's bedside when/if asked to.

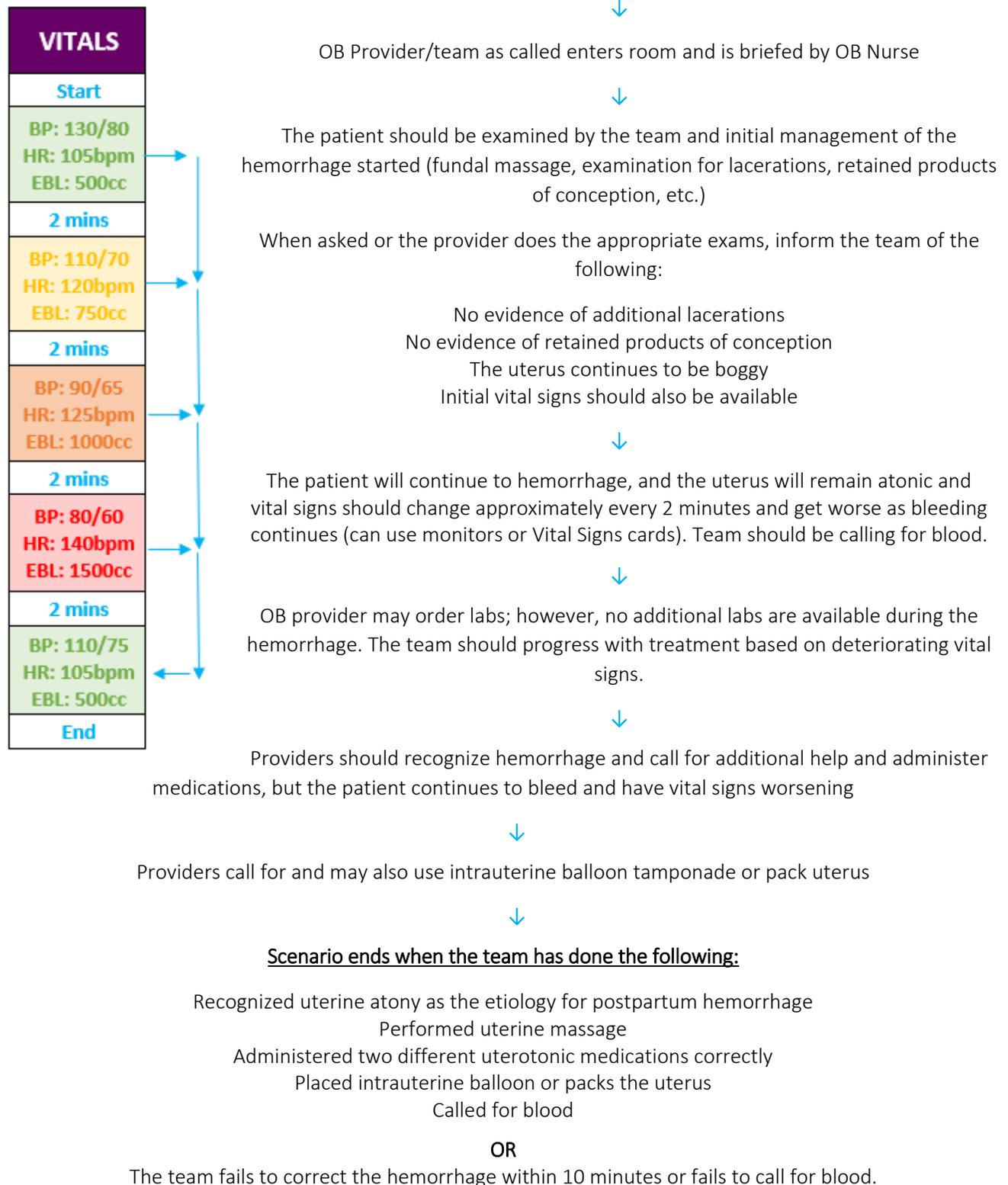
▶ **Answers to Common Questions for the Scenario**

- The patient does not have a history of asthma or hypertension in this case.
- The patient does not have any known allergies to medications.
- If asked additional questions, try and redirect and not answer specifics so as not to introduce things that might complicate the scenario (i.e. don't say that she has a relative with an unknown bleeding disorder).



## Case 2: Case Flow/Algorithm with Branch Point and Completion Criteria

Simulation facilitator will introduce the scenario to the team outside the room and then bring OB Nurse to the patient's room and then read them the patient scenario. The OB Nurse should then enter the room, assess the patient and then call for assistance



## Case 3: Postpartum Hemorrhage Secondary to Retained Products of Conception and is Responsive to a Single Medication

### Learning Objectives

By the end of this scenario, each care team member should be able to successfully do the following:

- Recognize risk factors for postpartum hemorrhage.
- Identify postpartum hemorrhage due to retained products of conception and be able to treat with appropriate medical management.
- Demonstrate teamwork and communication skills during a simulated postpartum hemorrhage.

### Planned Completion Points

To successfully complete this scenario, the care team should do the following:

- Recognize retained products of conception as the etiology for postpartum hemorrhage.
- Perform uterine massage.
- Perform a vaginal exam and examine lower uterine segment.
- Examine the delivered placenta.
- Administer at least one uterotonic medication correctly.
- Call for blood (*e.g.* 2 units of PRBCs).

OR

- If 10 minutes has elapsed after recognition of hemorrhage and the team has not corrected the bleeding or called for blood.

### Expected Duration of Exercise

Approximately 60 minutes (30 minutes for simulation / 30 minutes for debriefing).

### Case Scenario

#### ▶ Patient: Jennifer Patton

Mrs. Jennifer Patton is a 32-year-old G5P0040 who was admitted in active labor at 41+2 weeks. History is significant for 4 surgical terminations. She progressed in labor and has an uncomplicated delivery of a live female infant with Apgars 9<sup>1</sup>9<sup>5</sup> and a weight of 3755 grams. Immediately after delivery, she had some brisk bleeding. The placenta took about 20 minutes to deliver and required a bit more traction than normal. After the delivery of the placenta she continues to have bleeding that is more than normal. She had no lacerations. She is now approximately 30 minutes postpartum and is still having some bleeding.

#### ▶ Patient Information

- She has no significant past medical history.
- She has no known drug allergies.
- Her pregnancy was uncomplicated except for an elevated 1-hour glucose screen with a normal 3-hour glucose tolerance test.



▶ **Laboratory Data (On Admission)**

- Hemoglobin: 12.2
- Hematocrit: 36.6
- WBC: 12,000
- Platelets: 218,000

▶ **Delivery Information**

- Measurement of cumulative blood loss (as quantitative as possible) from the delivery thus far is 400cc.
- The vaginal vault and perineum was inspected; no lacerations were found.
- The infant weighed 3755 grams.
- The patient has an IV line in place with oxytocin running.
- Placental inspection shows missing portions of the placental bed.

▶ **Family Member/Patient Instructions**

- **Standardized Patient:** If you have a person playing the role of the patient during the scenario, she should emphasize that this is a lot of bleeding and she is worried if that is normal. As the bleeding continues she can also state that she is feeling faint and dizzy.
- **Family Member:** You can also have someone play the role of the patient's family or friend. This person may be the patient's partner, mom, other relative, or a friend. This person should continue to ask questions during the scenario including things like "Why is she bleeding so much?" "Is this normal?" "Do we need to be worried?" "Why is she bleeding so much" or "She looks like she is kind of pale" or "Does she need blood?"

As the patient's vital signs continue to decline, this person can occasionally ask, "Is she going to die?" The person should be anxious with any mention of going to the OR and ask for clarification as to why that is necessary. This person should continue to voice that the patient wants to have more children. This person should initially refuse to, but reluctantly, leave the patient's bedside when/if asked to.

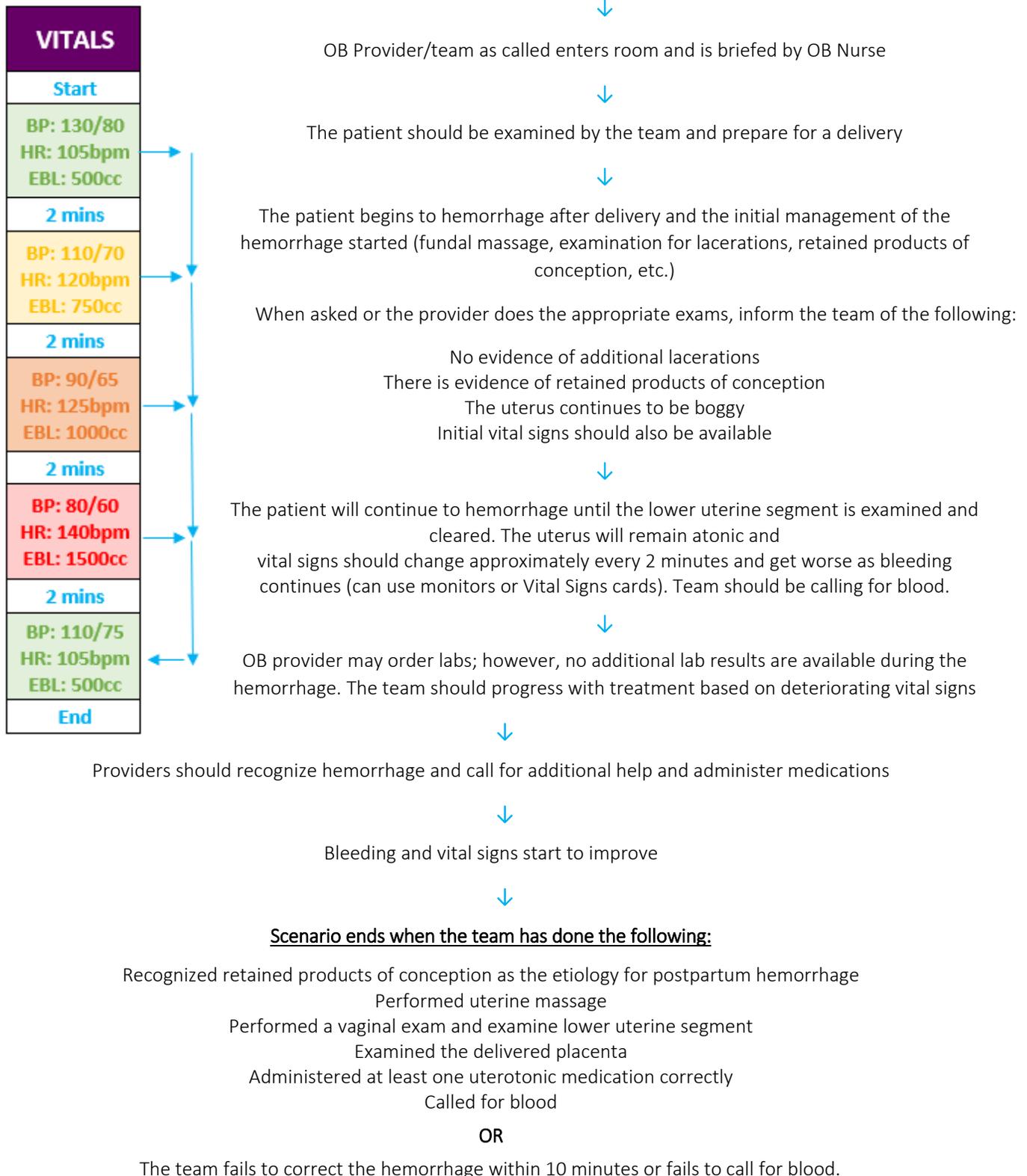
▶ **Answers to Common Questions for the Scenario**

- The patient does not have a history of asthma or hypertension in this case.
- The patient does not have any known allergies to medications.
- If asked additional questions, try and redirect and not answer specifics so as not to introduce things that might complicate the scenario (i.e. don't say that she has a relative with an unknown bleeding disorder).



## Case 3: Case Flow/Algorithm with Branch Point and Completion Criteria

Simulation facilitator will introduce the scenario to the team outside the room and then bring OB Nurse to the patient's room and then read them the patient scenario. The OB Nurse should then enter the room, assess the patient and then call for assistance



## Additional Case Scenarios

### ▶ Low Risk Scenario: Emily Mendez

Mrs. Mendez is a 30-year-old who has had 3 pregnancies and 3 babies (G3P3). She has just delivered a 4,210-gram male infant by spontaneous vaginal delivery. The third stage of labor was managed actively, and the placenta was delivered spontaneously and intact, but I am concerned with the amount of bleeding we are still seeing. She did not have an episiotomy and she received an Oxytocin bolus immediately after the placenta was delivered. She does have an IV in place with oxytocin infusion running currently. The cumulative blood loss (as quantitative as possible) at the time of delivery was 500 mL. We are still concerned about her as she has continued to bleed over the past hour. Her bladder has been emptied, manual exploration and bimanual compression have been completed. Upon which we have found the fundus of the uterus to be boggy and suspect uterine atony.

Vital Signs: Pulse Rate: 75; Blood Pressure: 115/72; Respiratory Rate: 17; Oxygen Saturation 97%; Temperature 37°; Lungs clear; no electrocardiogram. Her quantitative blood loss is now 750 mL.

### ▶ Medium Risk Scenario: Julie Chen

Ms. Chen is a 26-year-old who has had 1 pregnancy and 1 baby. The third stage of labor was managed actively. She had a vacuum assisted vaginal delivery approximately 1 hour ago for a non-reassuring Fetal Heart Rate (FHRT). She was in labor for over 20 hours and pushed for an hour before the vacuum cup was placed. Her prenatal course was uncomplicated and has no significant medical history. After delivery, a second-degree laceration was repaired, and the placenta delivered spontaneously and appeared intact. Genital tract examination revealed no evidence of vaginal wall tears or surgical lacerations. Her cumulative blood loss (as quantitative as possible) at the time of delivery was 600ml. Over the past 5 minutes, she has soaked an entire pad. Her bladder has been emptied, manual exploration and bimanual compression has been completed. Upon which we have found the fundus of the uterus to be boggy and suspect uterine atony.

Vital Signs: Pulse Rate: 85; Blood Pressure: 110/64; Respiratory Rate: 20; Oxygen Saturation 97%; Temperature 37.4°; Lungs clear; no electrocardiogram. Her blood loss is now 850 mL.

### ▶ High Risk Scenario 1: Rhonda Hill

Mrs. Hill is 32 years old with two previous pregnancies and 1 baby. She was 38 weeks of gestation. Her obstetric history is remarkable for one previous cesarean section and a low-lying placenta (placenta previa). A cesarean section was performed without complication and there was minimal difficulty removing the placenta, which was determined to be intact. Her baseline lab results are within normal limits except her hematocrit blood test result was low, at 24. She delivered 30 minutes ago and her cumulative blood loss (as quantitative as possible) at the time of caesarean section was 900mL. In the recovery room upon observation she was complaining of lightheadedness and nausea. Prior to moving her to the OR, it was noted that her pad was completely soaked, and blood was continuously trickling from her vagina.

Vital Signs: Pulse Rate: 97; Blood Pressure: 110/54; Respiratory Rate: 22; Oxygen Saturation 94%; Temperature 37.4°; Lungs clear; electrocardiogram normal. Her blood loss is now 1,200mL.

### ▶ High Risk Scenario 2: Elizabeth Williams

Ms. Elizabeth Williams is 23 years old with a previous pregnancy and 1 baby. She is 32 weeks of gestation and was admitted as a result of a low-speed motor vehicle accident, when the airbags deployed. She was



rushed by ambulance to labor and delivery with abdominal pain and vaginal bleeding. The fetal heart rate tracing was non-reassuring and upon ultrasound, the patient was diagnosed with a large retroplacental clot and fetal bradycardia was noted. She was also found to have 450 mL of blood loss on the absorbent pad after the ultrasound. She was brought to OR for immediate cesarean section in which she lost a further 750 mL of blood. After a successful delivery and closure of the skin incision her uterus was noted to be boggy and unresponsive to massage. Her cumulative blood loss (as quantitative as possible) was 1,200 mL.

Vital Signs: Pulse Rate: 120; Blood Pressure: 82/45; Respiratory Rate: 26; Oxygen Saturation 90%; Temperature 37.6°; Lungs clear; electrocardiogram is normal. Her blood loss is now 1,500cc.



## Appendices

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The following resources are provided as appendices to this manual. They are also available for download from our [website](#). Should this manual be printed, we encourage you to check our website often to ensure that you are referencing the most up-to-date information.

- A. In-Situ Drill Facility Protocol Change Form
- B. In-Situ Drill Preparation Checklist: Postpartum Hemorrhage
- C. Obstetric Hemorrhage Patient Safety Bundle
- D. Team Review and Debriefing Form: Postpartum Hemorrhage Management
- E. Teamwork and Communication in Obstetrical Emergencies





Date of In-situ Drill: \_\_\_ / \_\_\_ / \_\_\_\_\_

**IDENTIFIED ISSUES**

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**POTENTIAL SOLUTIONS**

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Individual Assigned to Complete this Project: \_\_\_\_\_

Date Solution Implemented: \_\_\_ / \_\_\_ / \_\_\_\_\_

Date of Repeat Drill to Evaluate Solution(s): \_\_\_ / \_\_\_ / \_\_\_\_\_

Note: publicize finding, publicize solution with dates

**In-Situ Drills Facility  
Protocol Change Form**

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Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care disseminates patient safety tools to help facilitate the standardization process. This tool reflects emerging clinical, scientific, and patient safety advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Although the components of a particular tool may be adapted to local resources, standardization within an institution is strongly encouraged.  
The Council on Patient Safety in Women's Health Care is a broad consortium of organizations across the spectrum of women's health for the promotion of safe health care for every woman.

## PREPARATION

- Identify a date and time to conduct simulation
- Identify the specific individuals for participation:
  - Assign facilitator(s)
  - Assign debriefer(s)
  - Ob/Gyn Department Staff
    - Ob Nursing Staff
    - Rapid Response Team (if applicable)
    - Anesthesia Staff
    - NICU/Pediatrics
    - Ancillary services:
      - Laboratory
      - Blood bank
    - Simulation technician (if applicable)
  - 2 - 4 weeks prior: confirm participation of identified departments and individuals
  - 1 week prior: schedule meeting with participants to discuss logistics/case flow/debrief flow
  - 1 day prior: call/remind ancillary staff of potential calls day before drill
  - 1 day prior: assign participants into groups and develop alternation schedule (if applicable)
  - 1 day prior: set up simulator with simulation technician (if applicable)

## DAY OF SIMULATION

- Run simulation drill(s)
- Conduct debrief
- Debriefers schedule post-drill meeting with Ob/Gyn leadership
- Debriefers complete and return:
  - Facility Protocol Change Form
  - In-situ Drill Feedback Form

# In-situ Drills Preparation Checklist: Postpartum Hemorrhage

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## READINESS

### *Every unit*

- Hemorrhage cart with supplies, checklist, and instruction cards for intrauterine balloons and compressions stitches
- Immediate access to hemorrhage medications (kit or equivalent)
- Establish a response team - who to call when help is needed (blood bank, advanced gynecologic surgery, other support and tertiary services)
- Establish massive and emergency release transfusion protocols (type-O negative/uncrossmatched)
- Unit education on protocols, unit-based drills (with post-drill debriefs)

## RECOGNITION & PREVENTION

### *Every patient*

- Assessment of hemorrhage risk (prenatal, on admission, and at other appropriate times)
- Measurement of cumulative blood loss (formal, as quantitative as possible)
- Active management of the 3rd stage of labor (department-wide protocol)

## RESPONSE

### *Every hemorrhage*

- Unit-standard, stage-based, obstetric hemorrhage emergency management plan with checklists
- Support program for patients, families, and staff for all significant hemorrhages

## REPORTING/SYSTEMS LEARNING

### *Every unit*

- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of serious hemorrhages for systems issues
- Monitor outcomes and process metrics in perinatal quality improvement (QI) committee

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## Team Review and Debriefing Form: Postpartum Hemorrhage

### READINESS

	Yes/No	Opportunity for Improvement
Hemorrhage cart stocked with all needed supplies		
Hemorrhage medications immediately available		
Emergency response team established		
Massive transfusion protocol available		
Emergency blood release protocol available		

### RECOGNITION & PREVENTION

Review risk factors for hemorrhage in this patient: (list factors)

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### RESPONSE

ASSESSMENT/ACTION	EVALUATION			Notes
	Done	Not Done	Improvement Opportunity	
Provider/Team recognizes PPH in timely manner				
Team calls for hemorrhage cart				
Provider/Team calls for additional assistance				
Team inspects for lacerations				
Provider checks for retained products of conception				
Team diagnoses etiology of hemorrhage accurately				
Team administers uterotronics				
Team communicates about ongoing blood loss				
Team places second IV				
Team orders labs (CBC/PR/PTT)				
Team considers placements of Foley catheter to monitor urine output				
Team considers administering TXA				
Team places uterine balloon or uterine packing				
Team recognizes need for operative management of PPH in timely manner				
Team counsels the patient/family on the need for operative management, including potential need for hysterectomy				
Team considers transfer to other facility				



## TEAM REVIEW AND DEBRIEFING NOTES

Common medications for postpartum hemorrhage (including contraindications)

MEDICATION	DOSE	CONTRAINDICATIONS
Oxytocin	10-40 units per 500-1000mL as continuous infusion or 1M 10 units	Hypersensitivity to oxytocin (rare)
Methylergonovine (Methergine)	0.2mg 1M OR into myometrium Q2-4 hours	Hypertension, preeclampsia, asthma, Raynaud's syndrome
Prostaglandin F-2 alpha (Hemabate)	250 mcg 1M OR into myometrium Q 15 minutes (up to 8 doses)	Asthma, renal disorders, pulmonary hypertension
Misoprostol (Cytotec, PGE-1)	600 mcg – 1,000 mcg oral, per rectum -or- sublingual x 1 dose	Known hypersensitivity to NSAIDs, active GI bleeding
Tranexamic acid (TXA)	1 gram IV over 10 minutes, 2nd dose can be given if continued bleeding w/in 24hrs	Subarachnoid hemorrhage, acute intravascular clotting, hypersensitivity to TXA

- Emphasize that treatment of the patient is directed by symptoms and vital signs and should not be delayed while waiting for laboratory values.
- Additional treatment options: i.e. intrauterine balloon tamponade/ uterine packing should be pursued if initial interventions failed.
- Review transfusion management and local massive transfusion protocols.
- If medical management is not successful, then operative management should be pursued.
- It is important to counsel and keep the patient and family informed during the hemorrhage.

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Teamwork and communication are essential to quality healthcare and patient safety. TeamSTEPS® (Team Strategies and Tools to Enhance Performance and Patient Safety) is an evidence-based teamwork system aimed at optimizing patient outcomes by improving communication and other teamwork skills among healthcare professionals.

## KEY TeamSTEPS® CONCEPTS AND TOOLS RELATED TO POSTPARTUM HEMORRHAGE EVENTS

### READINESS

- **Brief:** a short planning session prior to an event or shift.  
*Ex: patient has risk factors for PPH, let's be prepared with equipment/medications.*
- **Huddle:** a quick meeting to share information and regain situation awareness.  
*Ex: team discusses causes for PPH, uterotonics given, plans for going to the OR.*

### RECOGNITION & PREVENTION

- **Situation Awareness:** state of mindfulness and knowing external factors that may affect care.
- **Cross Monitoring:** watching each other's back and speaking up if you notice something.

### RESPONSE

- **SBAR:** brief summary of Situation-Background-Assessment-Recommendation that is critical information provided to team members as they arrive to an event.  
*Ex: "We are having a postpartum hemorrhage with uterine atony. Patient is a 42y/o G5P5 s/p NSVD 1 hour ago. QBL is 1200cc, BP 95/60. I have given oxytocin and called for methergine."*
- **Call-Out:** critical information that is relayed clear, concise and timely to team  
*Ex: "The patient's blood pressure has dropped to 90/60 and she is tachycardic to 120 bpm. "*  
*"The blood bank has been called and is activating the massive transfusion protocol."*

# Teamwork and Communication in Obstetrical Emergencies

- **Check Back:** closed-loop communication to ensure that information conveyed by the sender is understood by the receiver and acknowledged  
*Ex: Doctor "Give 0.2mg Methergine IM"  
Nurse "0.2mg Methergine IM given"*
- **Psychological Safety:** team members are encouraged to speak up for patient safety.
- **Role Clarity:** assign specific tasks to team members.
- **Shared Mental Model:** team members have a common goal which is communicated.
- **Handoff:** transfer of information during transitions in care.

## REPORTING

- **Debrief:** a nonjudgmental team meeting after an event discussing lessons learned and reinforcing positive behaviors, essential to process improvement.  
*Ex: all team members after PPH, what went well, what should we change*

# Teamwork and Communication in Obstetrical Emergencies

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Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care disseminates patient safety tools to help facilitate the standardization process. This tool reflects emerging clinical, scientific, and patient safety advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Although the components of a particular tool may be adapted to local resources, standardization within an institution is strongly encouraged.

The Council on Patient Safety in Women's Health Care is a broad consortium of organizations across the spectrum of women's health for the promotion of safe health care for every woman.