

NATIONAL POSTPARTUM HAEMORRHAGE MANAGEMENT

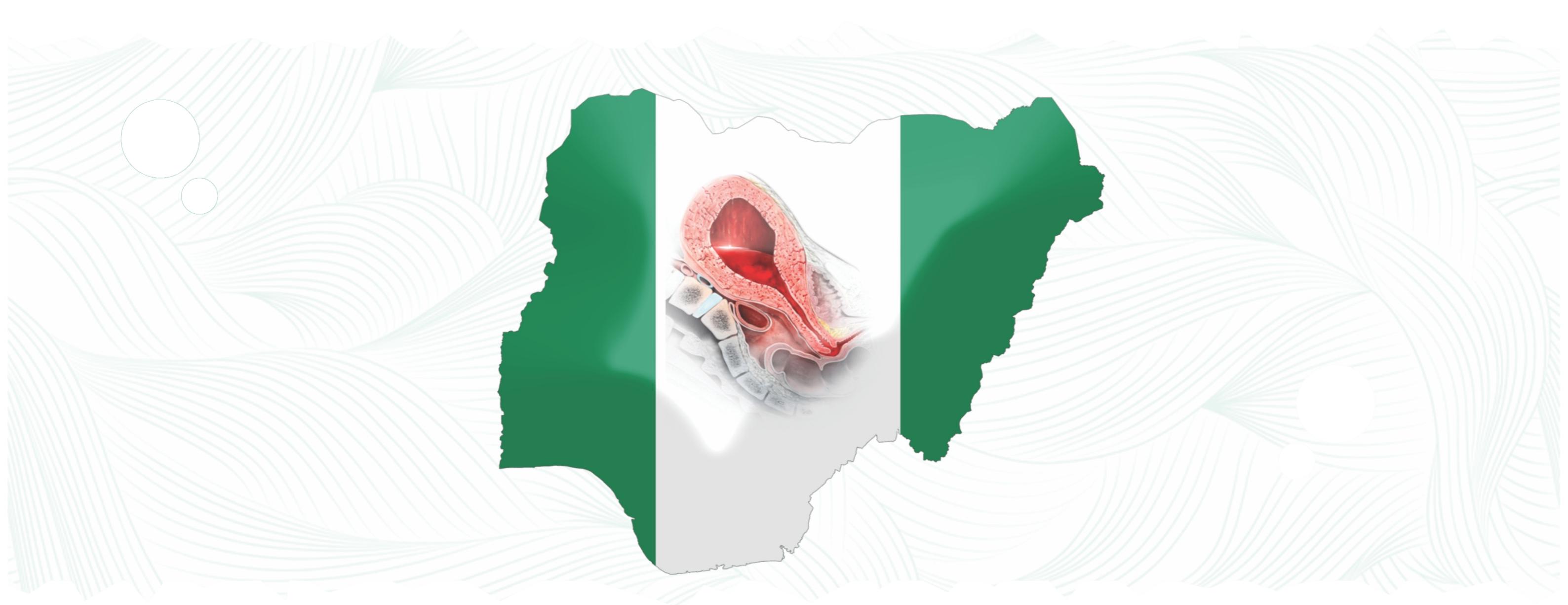
PARTICIPANT TRAINING MANUAL



FEDERAL MINISTRY OF HEALTH AND SOCIAL WELFARE

ABUJA, NIGERIA

August , 2024.



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FOREWORD

Maternal mortality is a public health problem in the Low- and Middle-Income Countries (LMIC) such as Nigeria and it is one of the strongest indicators of a country's standard of living and maternity care. Every year, an estimated 14 million cases of PPH and 70,000 related maternal deaths are recorded globally. This implies that one woman dies of PPH every four minutes.

Postpartum haemorrhage accounts for 13.4 % of maternal deaths in high-income countries. In Asia and Africa however, it is responsible for 30.8 % and 33.9 % of maternal deaths, respectively. In Nigeria, PPH accounts for one-third of all hospital admissions due to complications of obstetric haemorrhage, and 42% of maternal deaths arise from these complications.

Maternal death can be prevented through the implementation of evidence-based strategies as articulated in the National Safe Motherhood Strategy and Guidelines towards attainment of SDG target 3 on Maternal and Newborn Health (MNH). To operationalize the strategy, there is need to develop appropriate training manual in line with new approaches in the management of PPH which include E-MOTIVE to address the leading cause of maternal morbidity and mortality. This national training manual is developed to provide knowledge and skills for the management of Postpartum haemorrhage at the national and sub-national levels of health care.

I therefore recommend this training manual for health care providers, health professionals, professional associations, regulatory bodies, private sector, Non-Governmental Organizations, civil society groups, implementing partners, donor partners and other stakeholders in the Reproductive Health space at all levels of care in the country for training on Postpartum haemorrhage management.

Mohammad Ali Pate, CON
Coordinating Minister of Health and Social Welfare.
August 2024

ACKNOWLEDGEMENT

The Federal Ministry of Health recognizes and appreciates the laudable and invaluable contributions of all the stakeholders who contributed to the development of this training manual.

May I recognize the outstanding contributions of JPIEGHO, BMGF , Africa Center of Excellent for Population Health and Policy (ACEPHAP), the Departments and Agencies of Government, National Primary Health Care Development Agency (NPHCDA), National Health Insurance Authority (NHIA) , National Blood Services Commission (NBSC) Nursing and Midwifery Council of Nigeria (NMCN), Medical and Dental Council of Nigeria (MDCN) , Community Health Practitioner Board, Academia, Society of Gynaecology and Obstetrics of Nigeria (SOGON), Association of Feto-Maternal Specialists of Nigeria (AFEMSON), Association of Public Health Physicians of Nigeria, WHO, UNICEF, UNFPA, USAID, , MCGL and Engender Health for their contribution to the development of this National Training Manual for the Management of Postpartum Haemorrhage, for the improvement of maternal and newborn health in Nigeria.

Permit me to also recognize the immense support of BMGF, TA Connect and CHAI towards the actualization of this document.

My sincere appreciation goes to the officers of Safe Motherhood Branch, Reproductive Health Division of the Department of Family Health for the concerted effort demonstrated from planning to execution of the entire process. Their tremendous commitment and untiring efforts are highly commendable.

Dr. Binyerem Ukaire

Director, Family Health Department
August 2024.

Bleeding after birth

Prevention, early detection, and treatment of PPH
Acceleration of post partum hemorrhage care in Nigeria

Provider's Guide

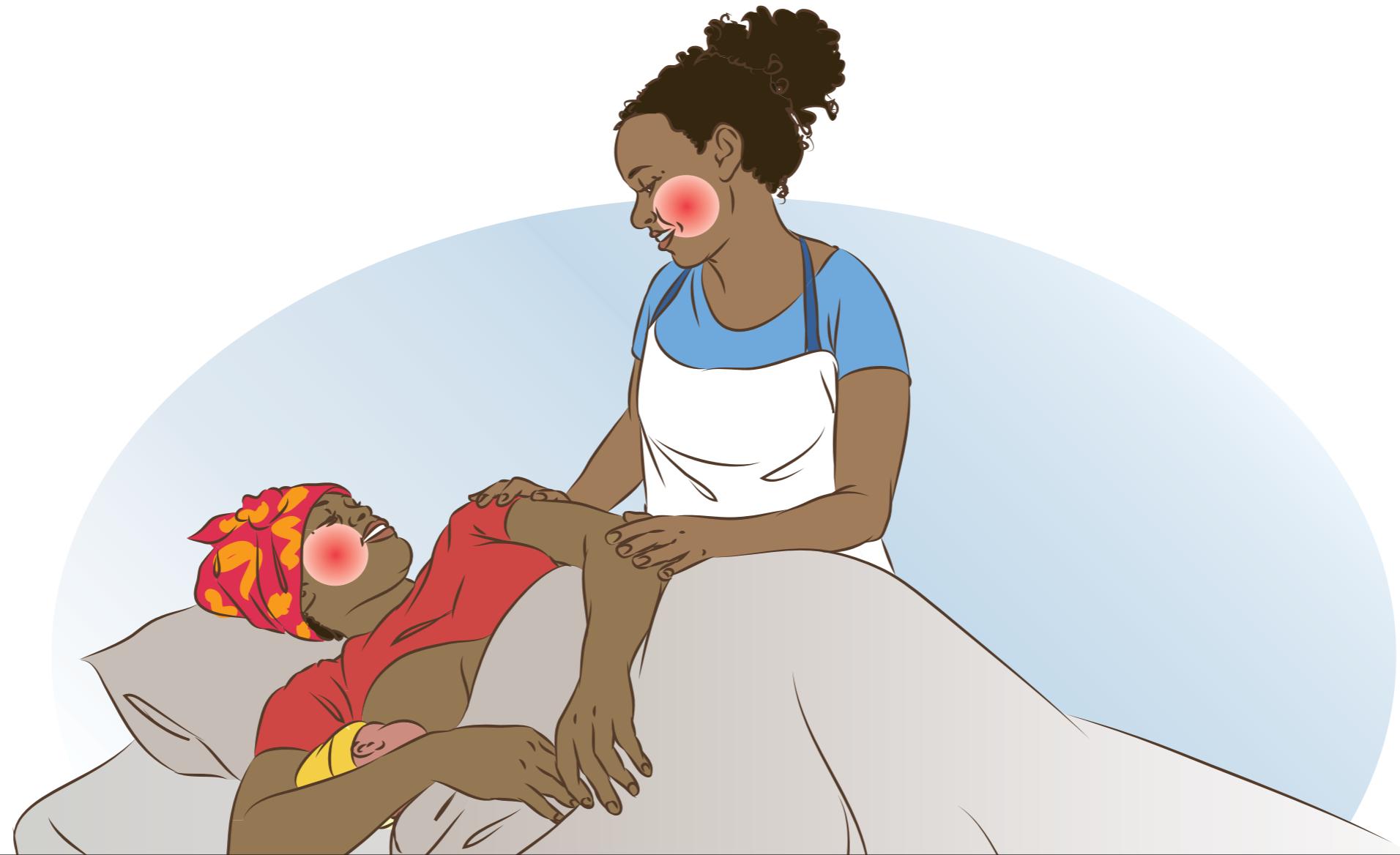


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MODULE 1

Provide respectful care and communication to women and their families

Sessional Goals:

At this session, participants would be able to provide respectful care and effectively communicate with the women, family members and team members

Learning Objectives

- To build the capacity of participants to communicate effectively and provide respectful care to women and their families
- To build the capacity of participants to communicate effectively with team members

Training Methods

- Didactic
- Brainstorming
- Demonstration and return demonstration
- Use of videos
- Role plays
- Case studies
- Questions and answers

Timeline: 25 Minutes

Provide respectful care and communication to women and their families

Performance Expectation

Communicate professionally and respectfully with women and their families.

Key points

- Every person deserves respectful care.
- Respectful care saves lives.
- Women have a right to privacy and confidentiality.



Key Knowledge

- Every woman is worthy of respect.
- Respectful care is lifesaving; women may not seek care from facilities where providers do not treat them well.
- Treat all women equally regardless of ethnic background, culture, social standing, religion, educational level, age, and marital or economic status.
- Provide a conducive environment to honor the women's right to privacy and confidentiality during counseling, physical exam, and clinical procedures, and in the handling of records.
- Respect a woman's right to a companion when receiving care. The presence of a birth companion improves outcomes and can shorten labor.
- Respect a woman's right to information about findings and options for care (including risks and benefits) so she can make informed choices about her care.
- Share decision-making with the woman and, if she desires, her companion.
- Recognize that women have the right to decline care or to seek care elsewhere.

Key Actions

- Always explain what is happening and why.
- Be gentle when giving care.
- Never leave a woman with a complication alone. If you must leave, have someone stay with her and tell that person how to get help if needed.

Counseling Note

How to demonstrate respect:

1. Introduce yourself by name, smile, and address the woman by her name
2. Look at women when speaking to them.
3. Use simple, clear words, in a language the woman understands.
4. Speak calmly.
5. Pay attention when women speak.
6. Include women and families in discussions about their care.
7. Always explain any procedure and get her permission before you begin.

Adapted from job aid by USAID/MCHIP/ACNM:

"I treat patients and their families in the way I would like to be treated!" <https://www.k4health.org/sites/default/files/RMC%20Patient%20Care.pdf>

MODULE 2

Communicate respectfully and effectively with team members

Performance Expectation
Communicate effectively with team members at all times, especially during an emergency.

Key points

- Effective communication saves lives.
- Know whom to call for help.
- Assign a role to each team member.
- Have an emergency plan in place.



Key Knowledge

- Team members include people who work at your facility, those at the referral facility, and women and their family members.
- Poor communication can result in poor outcomes for women and babies.
- Know who to call and how in case of an emergency.
- Anxiety and fear are normal in emergencies, but these responses can block good communication.

Providers must stay calm and talk to other providers, the woman, and the family in clear but reassuring tones.

Having a plan before an emergency, and simulating what to do during an emergency through practice drills, builds confidence and makes communication during emergencies easier. Drills give providers the opportunity to practice problem-solving, teamwork, and decision-making.

Key Actions

- Quickly alert others on your team to an emergency so everyone can respond quickly.
- Communicate confidently and clearly
-do not assume that others know what you are thinking.
- Speak loudly to be sure that all actions have been heard and are being done.
- Clearly establish roles for each person. Address people by name and clarify who will do what. Have each team member repeat the task he or she has been delegated to do - for example, “I will start an IV of normal saline” - to show that the instruction was understood.
- Communicate findings about the woman’s condition and what has already been done using the Situation-Background-Assessment-Recommendation with “closed loop” communication.

SBAR

S	<p>Situation: What is going on with the patient?</p> <p>My name is [your name], I am [title], working on ward [name of the unit] I am calling about [patient's name] currently hospitalized in [unit] I am calling because [very briefly / succinctly describe the main reason you are calling -- e.g. bleeding, convulsions, high BP – to orient the person you are calling to other information you will provide]</p>
B	<p>Background: What is the patient's pertinent history, clinical background, treatments received and response, additional information?</p> <p>Patient [XX] was admitted on [XX date] with [e.g., in labor, complaint XX, poor labor progress, maternal fever]</p> <p>Relevant history</p> <ul style="list-style-type: none">• Relevant medical history is: _____• Allergies: _____ <p>Treatment summary:</p> <ul style="list-style-type: none">• Since her arrival, the following tests were done [e.g., lab tests, ultrasound, x-ray]• She has received the following treatments [e.g., antibiotics, analgesics, MgSO4, antihypertensives, IV fluids, IV oxytocin, oxygen] <p>Relevant physical examination findings: Physical assessment findings relevant to her problem on her last assessment at __:__ am/pm were:</p> <ul style="list-style-type: none">• BP: ____/____, Pulse: ____ bpm, T: ____ °C, Respirations: ____ breaths/minute, FHR: ____ bpm• Contractions: ____ in 10 minutes each lasting ____ seconds, Cervical dilatation: ____ cm, Fetal descent: ____/5, Presentation/Position: _____• Other pertinent findings: _____ [e.g., estimated blood loss] <p>Clinical course summary:</p> <ul style="list-style-type: none">• Since we gave her [XX treatment], her condition has [describe how the patient has responded to the treatment]
A	<p>Assessment: What do you think is going on with the patient?</p> <ul style="list-style-type: none">• I think the problem is [XXX] and I have [e.g., stopped the infusion, given O2] OR• I am not sure what the problem is but the patient [XX] is deteriorating OR• I don't know what's wrong but I am really worried
R	<p>Recommendations: What do you think needs to be done?</p> <ul style="list-style-type: none">• I need you to....[e.g., come to see the patient as soon as possible] AND• Is there anything I need to do in the meantime (e.g., stop the fluid, repeat assessment, give a treatment)?

MODULE 3

Prepare for birth / Prepare for PPH

Sessional Goals:

At the end of this session, participants would be able to prepare for and conduct clean, safe delivery and PPH prevention

Learning Objectives

- To strengthen the capacity of participants in birth preparedness
- To strengthen the capacity of participants in PPH prevention

Training Methods

- Didactic
- Demonstration
- Questions and answers

Timeline: 15 Minutes



Prepare for birth / Prepare for PPH



Performance Expectation

Prepare for and conduct clean and safe delivery.

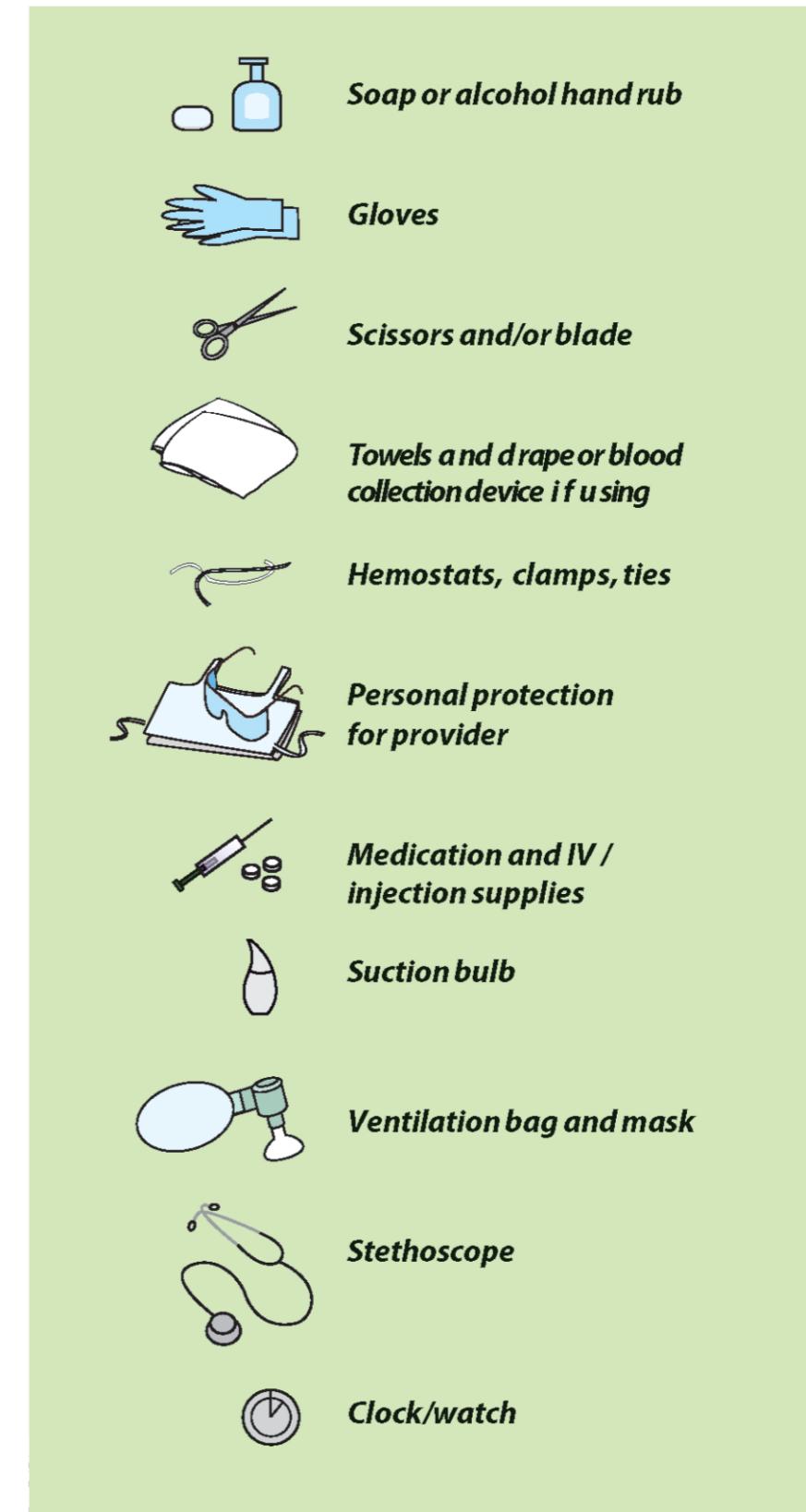
Key points

- Make the birth area clean, private, warm and well lit.
- Check that equipment for birth and newborn resuscitation is functional and clean / sterile as required.
- Before EVERY BIRTH, always draw up / prepare the uterotonic and have it ready for use.
- Check that the emergency trolley/carry case is complete and accessible using the checklist as in the annex xx.
- Wash hands frequently, use sterile gloves, and wear appropriate personal protective equipment.
- Have a clock with a second hand available to note time of birth and time the placenta delivers.
- Always keep the woman and baby

Knowledge and Skills

- Know how to use available equipment.
- Check your trolley or emergency cart to assure everything is present
- Use sterile or high-level disinfected instruments to prevent infection.
- Wear an apron, mask, and eye shield to protect you from infection.
- Objective measurement of blood loss is recommended for all births. Have the drape nearby which should be placed folded at the second stage.
- Wash your hands and wear sterile elbow length gloves , double- gloves prior to birth. This allows you to remove dirty gloves before clamping the cord, and protects the baby from infection.
- Communicate what you are going to do and why so that the woman is informed.
- After birth, keep the woman and baby together and initiate early breastfeeding.

It is very important that the injectable uterotonic is drawn up into the syringe or misoprostol is ready to give BEFORE THE BABY IS BORN. This will allow you to give the medicine quickly to prevent the mother from bleeding and will reduce delays in life saving care if the baby is not breathing.



MODULE 4

Actively make decisions for woman and baby

Sessional Goals:

At the end of this session, participants would be able to recognize problems and decisions quickly and effectively

Learning Objectives

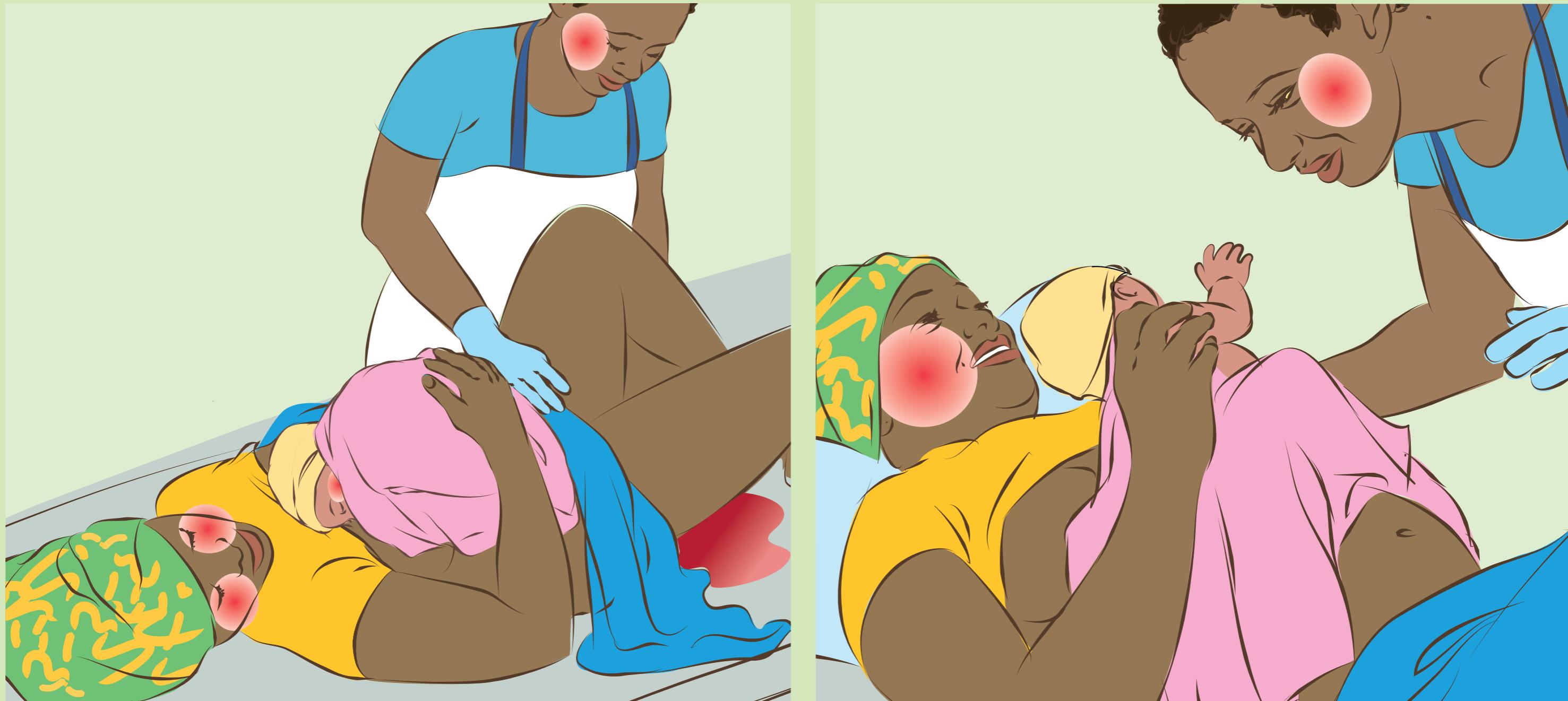
- To strengthen the capacity of participants to identify early changes in mother and baby's conditions
- To strengthen the capacity of participants make early effective decision to care for mother and baby's survival

Training Methods

- Didactic
- Discussion
- Questions and answers

Timeline: 15 Minutes

Actively make decisions for woman and baby



Performance Expectation

Recognize problems and make decisions quickly and effectively.

Key points

- Monitor signs of changing condition for women and babies.
- Use blood loss, uterine tone, and infant breathing to guide your decisions.
- Actively look for signs, make decisions, and respond quickly! This is essential to helping women and babies survive

Key Knowledge

- Actively look for heavy bleeding beginning from the moment of birth, as you await the placenta, and every 15 minutes for the first two hours after the placenta has delivered.
- Feel the top of the uterus to check if it is contracted and observe the woman for signs that she may be losing too much blood - increased pulse, dropping blood pressure, or pale, clammy skin.
- Many deaths from PPH can be prevented with prompt recognition and proper treatment.
- Visual estimation of blood loss is inaccurate and can result in underestimation and delayed action.
- A calibrated blood collection drape or device to objectively measure blood loss gives an objective measurement of blood loss and allows for a more accurate and timely diagnosis of PPH than visual assessment.
- If you suspect she is bleeding heavily, immediately call for help!!

For the baby

- The first minute is a critical time to be sure the baby is breathing well. Actively watch that the baby begins breathing and responds to your touch as you dry the baby.
- If the baby is not breathing, keep warm and follow guidelines for resuscitation.
- Continue to carefully assess the baby's breathing, color and temperature and respond immediately if there are problems.

Key Knowledge

- After birth, things can change quickly for both women and newborns.
- Monitor for signs of change and decide quickly on a course of action.
- Use what you see, feel, and hear to actively make decisions on the best next steps to provide high quality care to women and babies.

MODULE 5

Prevention and early detection of PPH

Sessional Goals:

At the end of this session, participants would be able to provide high quality routine care for woman and her baby immediately after birth

Learning Objectives

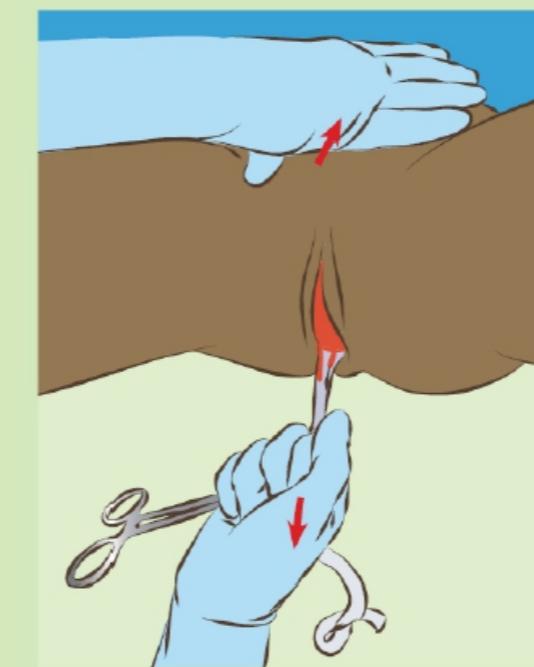
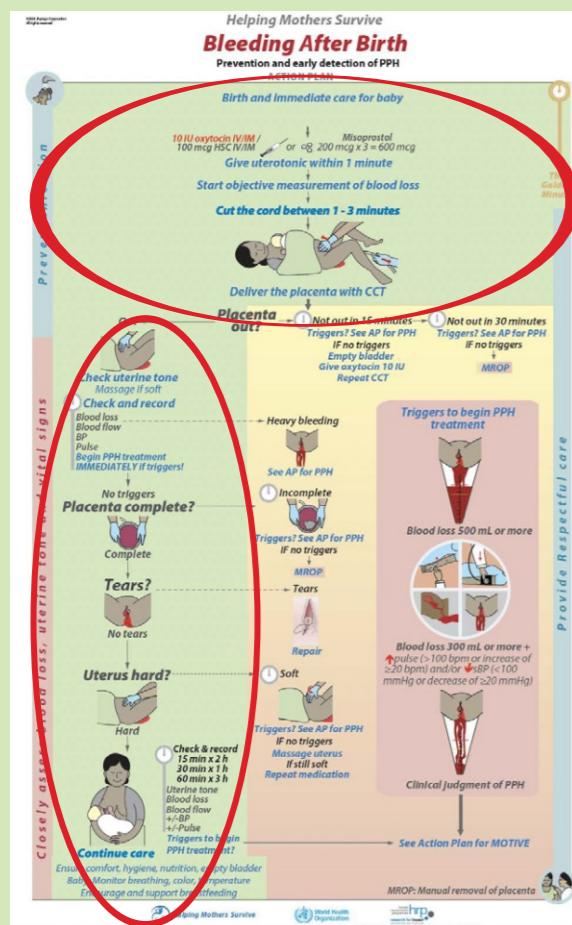
- To strengthen the capacity of participants on Active Management of Second State of Labor
- To strengthen the capacity of participants to implement the golden minutes for mother and baby

Training Methods

- Didactic
- Brainstorming
- Demonstration and return demonstration
- Discussion
- Questions and answers

Timeline: 15 Minutes

Prevention and early detection of PPH



Performance Expectation

Provide high quality routine care for the woman and her baby immediately after birth.

Key points

- The third stage of labor is the time between the birth of the baby and the placenta. This is a critical time for both woman and her baby and you need to care for both. If the baby needs resuscitating and the provider is alone, call for help, help the baby to breath within golden minute. As you attempt to prevent PPH, confirm there is no other baby, then give the uterotronics to prevent PPH in the third stage of labor, even if CCT is not possible.
- The three steps to prevent PPH in third stage of labor are: give uterotonic, provide controlled cord traction if you are a skilled birth attendant, check for uterine tone.
- Active management of this stage can speed delivery of the placenta and reduce bleeding.
- The first minute is the critical time to be sure the baby is breathing well.

Key Knowledge and Skills

- During the third stage of labor, the uterus contracts and gets smaller.
 - Contractions help the placenta separate from the uterine wall.
 - Separation and birth of the placenta usually takes 8-9 minutes, but can take up to an hour.
 - The World Health Organization recommends giving a uterotonic in the third stage of labor for all women because it reduces the risk of hemorrhage after birth by 60-70 %.
 - If the baby needs resuscitation and the provider is alone, give preference to care for the baby. If possible, at least give the uterotonic dose, preferably by the IM route, even if CCT is not possible.
 - If both women and babies are doing well, routine care for both can be done at the same time.
- While you wait for the placenta:*
- Check maternal vital signs every 15 minutes after birth
 - Assess vaginal bleeding and decide if action needs to be taken if bleeding is heavy BEFORE the placenta is delivered.
 - Make sure the baby is breathing and being kept warm.

Checklist

- Deliver baby onto mother's stomach
.....
- Dry baby thoroughly and assess for crying or breathing; cover with a dry cloth
.....
- Check for second baby; if none, proceed with third stage care while continuing to observe baby
.....
- Give a uterotonic drug within one minute of birth of the last baby.
.....
- While awaiting the placenta, remove first pair of gloves if double gloved or change gloves and clamp and cut the cord between 1-3 minutes after birth
.....
- Perform controlled cord traction during contractions
.....
- Feel the uterus once the placenta delivers and massage if soft
.....
- Check placenta for completeness
.....
- Check the amount of bleeding
.....
- Check for tears
.....
- Continue to closely observe mother and baby and provide routine care
.....

MODULE 6

Preventing PPH

Sessional Goals:

At the end of this session, participants would be able to safely and effectively give uterotronics within one minute after the last baby is born to prevent PPH

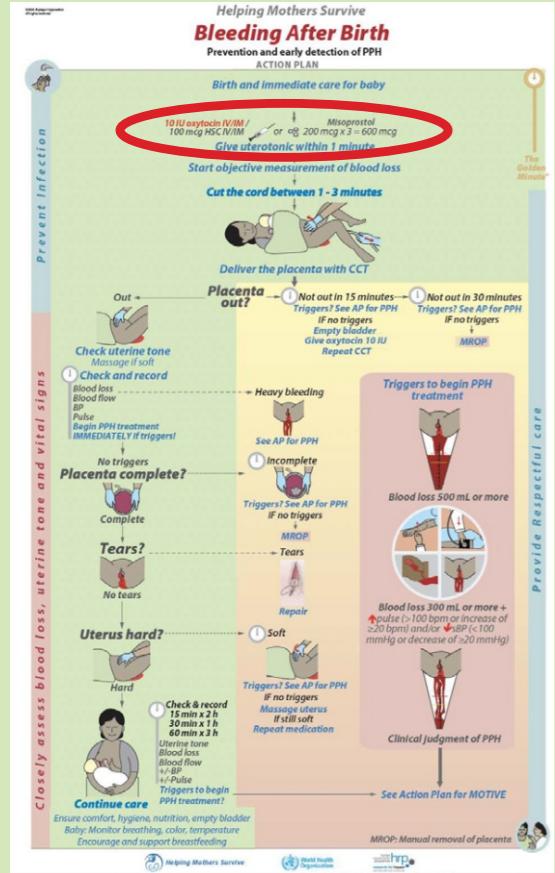
Learning Objectives

- To strengthen the capacity of participants to safely and effectively give uterotronics within one minutes of birth of the last baby to prevent bleeding after birth

Training Methods

- Didactic
- Discussion
- Questions and answers

Timeline: 20 Minutes

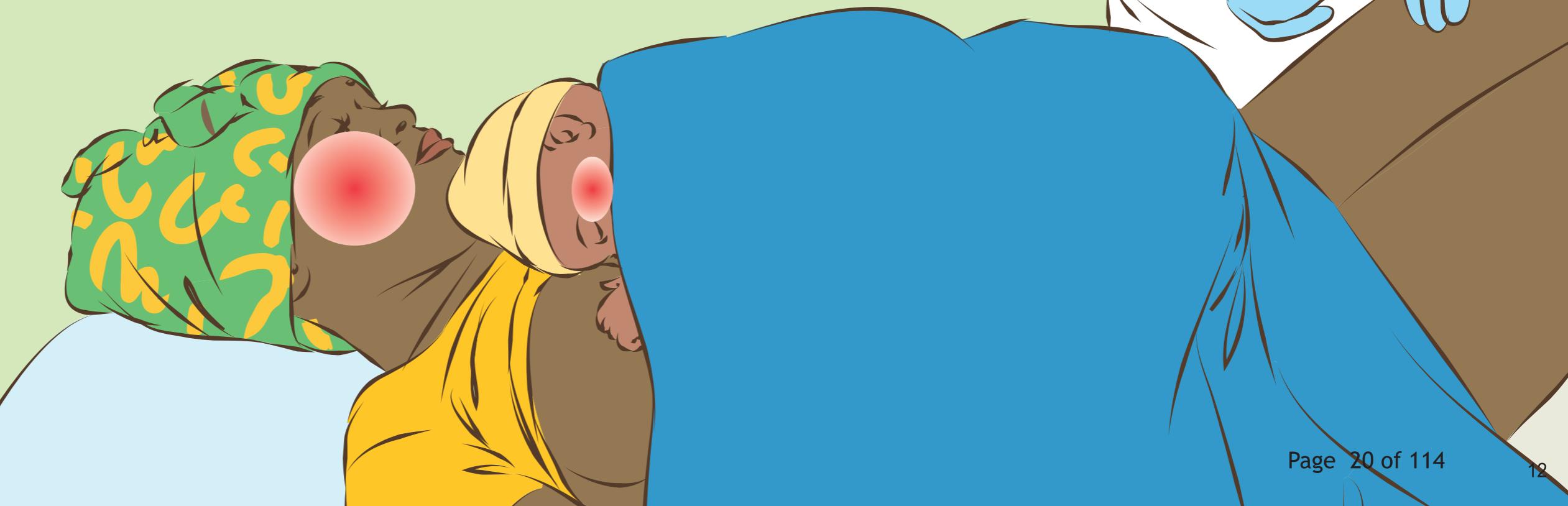


PREVENTING PPH

Immediately after birth,
check for second baby

Give a uterotonic within 1 minute

- Oxytocin
- Heat Stable Carbotocin
- Misoprostol
- Ergometrine or ergometrine/oxytocin fixed dose



OXYTOCIN

Performance Expectation

Safely and effectively give oxytocin within 1 minute after the last baby is born to prevent bleeding after birth.

Key points

- Oxytocin is an injectable uterotonic drug that causes the uterus to contract. It is recommended for actively managing the third stage of labor.
- Oxytocin is inexpensive and is associated with minimal side-effects.

Oxytocin must be kept at 2-8°C (36 to 46°F) but not frozen.

- Check for a second baby before giving oxytocin! Give oxytocin within one minute of birth of the last baby.
- Dosage: 10 IU by IM / IV bolus injection (over 1-2 minutes)

Knowledge and Skills

Show and tell how to safely give medication.

- Oxytocin is a medication that causes uterine contractions. When the uterus contracts, it separates the placenta from the uterus, then squeezes the blood vessels and stops bleeding.
- Oxytocin should be kept at 2-8°C during transport and storage to preserve drug quality. It should never be frozen. In settings where this cannot be guaranteed, another effective uterotonic should be used.
- The correct dose of oxytocin is 10 IU by IM/IV bolus injection. In situations where women already have IV access, the slow IV administration of 10 IU oxytocin (over 1-2 minutes) is recommended in preference to IM administration.
- Always check to see if there is another baby before giving 10 IU of oxytocin by IM / IV bolus injection. NEVER give this dose of oxytocin, or any oxytocic medication, before birth of the last baby.

If this dose of oxytocin is given with a baby in the uterus, it can cause the uterus to contract too strongly which can kill both the woman and her baby.

- Give oxytocin within one minute of birth of the last baby.
- Before giving any uterotonic, tell the woman that you are giving her medicine to reduce bleeding.

Be sure to have oxytocin drawn up in the syringe BEFORE THE BIRTH so you can give it easily within one minute of birth!

BEST PRACTICES:

Prior to administration of medication:

- Always confirm medication name, dose and expiry date
- Always confirm with woman if she has any allergies or previous sensitivities to the medication

Heat Stable Carbetocin (HSC)

Performance Expectation

Safely and effectively give HSC within 1 minute after birth of the last baby to prevent bleeding after birth.

Key points

- Heat-stable carbetocin (HSC) does not require refrigeration during transport and storage and remains potent in hot climates.
- When used for PPH prevention, HSC was found to be as good as oxytocin for reduction of PPH after vaginal birth.
- Check for a second baby before giving the medicine! Give medicine within one minute of birth of the last baby.
- Dosage - IM: 1 mL (100 mcg); IV: 1 mL (100 mcg). slowly over 1 minute.
- Never use for augmentation or induction! It can be lethal!
- **Only give one dose of HSC. Never give additional doses.**

Knowledge and Skills

Know how to safely give medication.

- HSC is a medication that causes uterine contractions.
- The correct dose of HSC is 100 mcg (1 mL) IV or IM slowly over 1 minute.
- Follow manufacturer's recommendations for storage of HSC: Store below 30°C; Do not freeze; Keep ampoules in the outer carton to protect from light.
- IV HSC causes sustained uterine contraction within 2 minutes lasting for 6 minutes followed by rhythmic contractions for 1 hour. IM injection causes sustained contraction for 11 minutes with rhythmic contractions for 2 hours. The sustained nature of uterine contraction is why HSC should never be used for induction or augmentation at any dose. If used during labor, these contractions can lead to rupture of the uterus or reduce oxygen reaching the fetus leading to cerebral palsy, organ damage or death.
- Remember, unlike oxytocin, HSC should NEVER be used for labor induction or augmentation. It should also not be used to treat PPH.

Always check to see if there is a second baby before giving HSC. If given before birth, the uterus may contract too strongly which can kill both the woman and the twin baby.

- Before injecting HSC, check for contraindications: Pregnancy including first and second stages of labor; serious cardiovascular disorders; epilepsy; liver or kidney disorders; previous sensitivity to HSC.
- Give HSC within one minute after birth of the last baby.
- Only give one dose of HSC. No further doses should ever be administered.
- Inform the woman about possible side- effects: nausea, abdominal pain, headache, shivering and fever.

Be sure to have oxytocin drawn up in the syringe BEFORE THE BIRTH so you can give it easily within one minute of birth!

MISOPROSTOL

Performance Expectation

Safely and effectively give misoprostol within 1 minute after birth of the last baby to prevent bleeding after birth.

Key points

- Misoprostol is a uterotonic. It does not need to be kept cold but should be protected from humidity.
- Where oxytocin or carbetocin/HSC are not available, use misoprostol.
- Check for a second baby before giving the medicine!
- Give medicine within one minute of birth of the last baby.
- Misoprostol is a tablet, and is taken by mouth. Dosage: 400-600

Knowledge and Skills

Show and tell how to safely give medication

- Misoprostol is a medication that causes uterine contractions. When the uterus contracts, it separates the placenta from the uterus, then squeezes the blood vessels and stops bleeding.
- Misoprostol can be used where oxytocin or HSC are not available, or where the provider is not able to give injections.
- Misoprostol does not need to be refrigerated but should be kept dry.
- The correct dose of misoprostol is 400-600 mcg orally - It comes in 200 mcg tablets. You must give 2-3 tablets.
- It can also be administered sublingual.
- Always check to see if there is another baby before giving misoprostol. If this dose of misoprostol is given with a baby in the uterus, it can cause the uterus to contract too strongly which can kill both the woman and her baby.
- ***Give misoprostol within one minute of birth of the last baby.***

- Misoprostol has side effects that do not last long and are not harmful, but the woman should be told what to expect. Side effects include shivering, nausea, diarrhea, and fever.
- Before giving the tablets, tell the woman that you are giving her medicine to reduce bleeding.

Be sure to have misoprostol out and ready to give BEFORE THE BIRTH so you can give it easily within one minute of birth!

Ergometrine or ergometrine/ oxytocin fixed dose

Performance Expectation

Safely and effectively give ergometrine within 1 minute after birth of the last baby to prevent bleeding after birth.

Key points

Ergometrine is available alone or in a fixed dose combination with oxytocin. Because it has some contraindications, and it can have more side effects, ergometrine or ergometrine in combination with oxytocin is ***not the first choice for AMTSL***.

Contraindications: women with preeclampsia, eclampsia or high blood pressure - it increases the risk of convulsions and stroke!

Knowledge and Skills

Show and tell how to safely give medication.

- Ergometrine is more sensitive to heat than oxytocin and is also sensitive to light. Store any products with ergometrine in a refrigerator at 2-8°C (36 to 46°F) and do not freeze.
- The correct dose is Ergometrine (0.2-0.5 mg) IM OR The fixed dose combination of oxytocin and ergometrine: 1 mL = 5 IU oxytocin + 0.5 mg ergometrine IM.
- Only use ergometrine or ergometrine / oxytocin fixed dose if oxytocin, HSC, or misoprostol are not available.
- It should never be used for induction or augmentation at any dose.
- Use only one dose, do not repeat.

- Side effects are rare but, in studies, the more commonly reported adverse effects have included hypertension, palpitations, nausea, diarrhea, and dizziness.

Be sure to have Ergometrine drawn up BEFORE THE BIRTH so you can give it easily within one minute of birth!

MODULE 7

Start Objective Measurement of blood loss

Sessional Goals:

At the end of this session, participants would be able to unfold the placed calibrated drape for measurement of blood loss right after the birth of the last baby

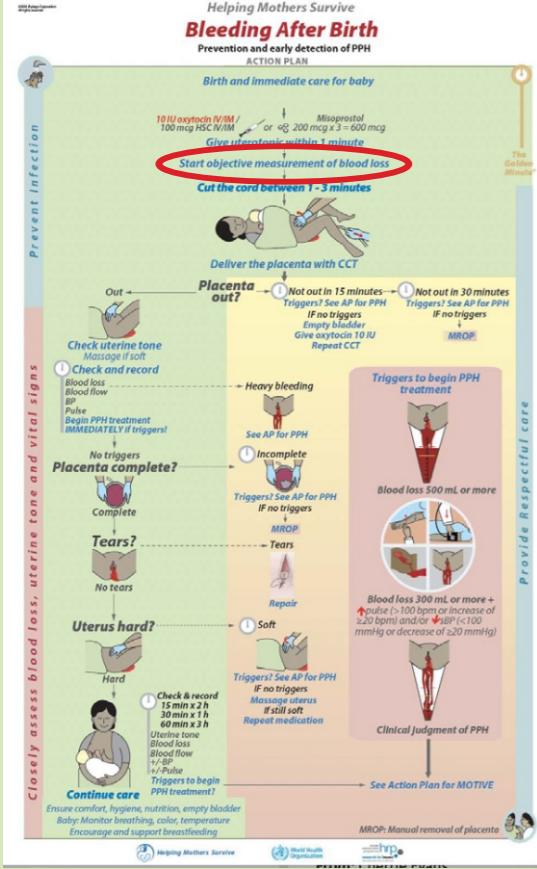
Learning Objectives

- To build the capacity of participants to correctly place the calibrated drape for objective measurement of blood loss

Training Methods

- Didactic
- Discussion
- Demonstration
- Questions and answers

Timeline: 10 Minutes



Start Objective Measurement of blood loss

Unfold the placed drape immediately after oxytotic medication to prevent PPH



Performance Expectation

Place the drape right after birth of the baby. Ensure the uterotonic medication is given within 1 minute of birth. Check amount of bleeding every time uterine tone is checked - every 15 min for first 2 hours after birth and frequently in first 24 hours.

Key points

- Bleeding can be fast or slow
- Any bleeding that is heavy or does not stop is life- threatening.
- Visual estimation of blood loss is often inaccurate
- using a drape with a calibrated pocket allows for immediate, accurate assessment of blood loss.
- You can prevent PPH if you notice bleeding is more than normal and respond quickly BEFORE it becomes a hemorrhage!

Key Knowledge and Skills

- Immediately place the drape after birth, prior to delivering the placenta.
- Ensure uterotonic is still given within 1 minute of birth.
- Blood loss measurement is particularly critical in the first few hours after birth.
- The use of a calibrated drape or other blood measurement tool for objective postpartum blood loss measurement should not interfere with the woman's customary or cultural desires including choice of birth position. In case of other birthing position, support the woman to lie, then unfold the drape
- When the blood collection drape is in place, be sure to sweep blood and clots into the funnel for accurate measurement. If the woman is lying on a flat bed, either hang the funnel over the edge of the bed to compare the blood loss to the calibration lines or lift the funnel above the level of blood so it collects in the bottom for accurate reading.
- Heavy bleeding that pours out and won't stop is obviously life-threatening.
- A smaller stream of bleeding that trickles out but doesn't stop can be life-threatening, too.
- For all women giving birth, routine objective measurement of blood loss is recommended to improve the detection and allow for prompt treatment of PPH.
- Visual estimation of postpartum blood loss is frequently inaccurate, thus PPH is often missed.
- The most common objective measurement method is use of a drape that has a calibrated "pocket" to collect blood and allow for a quick and accurate assessment of the amount of blood lost.
- ***Respond immediately if you think the woman is bleeding too much or you diagnose PPH!!***

MODULE 8

Clamp or tie and cut the umbilical cord

Sessional Goals:

At the end of this session, participants would be able to cut the cord at the right time in a manner that reduces risk of infection and anemia of the newborn

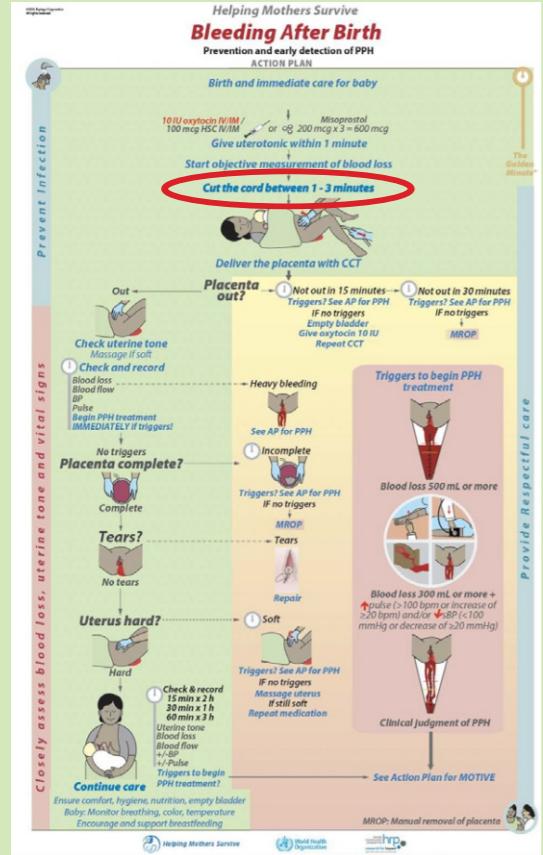
Learning Objectives

- To strengthen the capacity of participants in preventing infection through change of glove and proper infection prevention practice
- To strengthen the capacity of participants to prevent anemia through delayed cord clamping

Training Methods

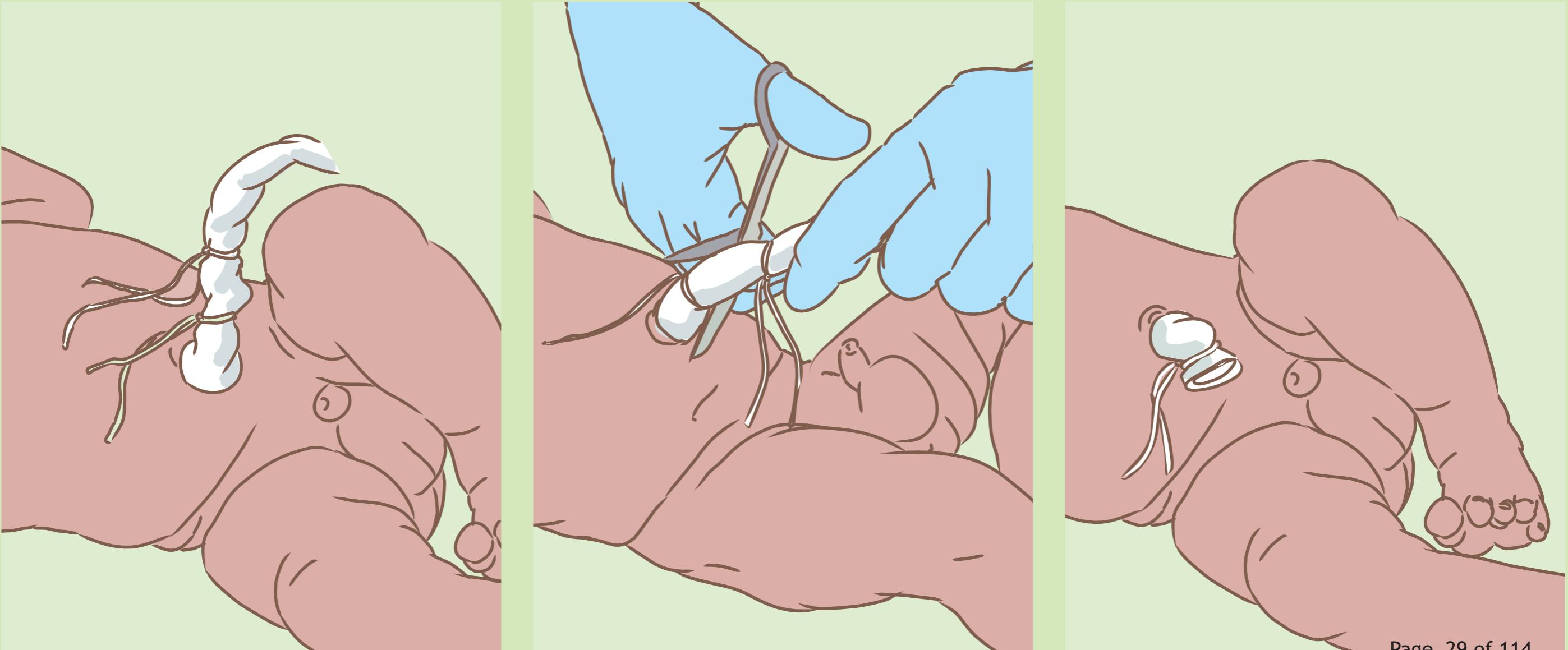
- Didactic
- Discussion
- Demonstration
- Questions and answers

Timeline: 10 Minutes



Clamp or tie and cut the umbilical cord

Between 1-3 minutes



Performance Expectation

Cut the cord at the right time in a manner that reduces risk of infection to the baby.

Key points

- If the baby is breathing well, cut the cord between 1 and 3 minutes after birth.
- Before cutting the cord, remove your first pair of gloves if doubled gloved, or change gloves.
- Place two ties or clamps and cut between them.

Knowledge and Skills

- Timing of cutting the cord depends on the condition of both woman and baby.
- If both are doing well, cut the cord between one and three minutes after birth. This delay allows time to give medication to prevent bleeding (oxytocin or misoprostol).
- Waiting at least one minute before cutting the cord helps ensure that the baby gets enough red blood cells from the placenta to prevent anemia in the first six months of life.
- If the woman is bleeding heavily or if the baby is not breathing well, cut the cord immediately and call for help.
- Cleanliness is important to prevent infection of the cord. If possible, double glove before birth so that you can remove dirty gloves before you cut the cord. All supplies should be sterile or disinfected.
- To cut the cord, place 2 clamps or ties around the cord. Place the first clamp or tie around the cord about 2 fingerbreadths from the baby's abdomen.
- Place another clamp or tie about 5 fingerbreadths from the abdomen. Cut between the clamps or ties.
- When cutting the cord, be sure to shield your face from blood splashing before cutting.

MODULE 9

Preventing PPH, Deliver the placenta with CCT while applying counter traction

Sessional Goals:

At the end of this session, participants would be able to safely provide control cord traction

Learning Objectives

- To strengthen the capacity of participants to conduct control cord traction to deliver the placenta and prevent PPH

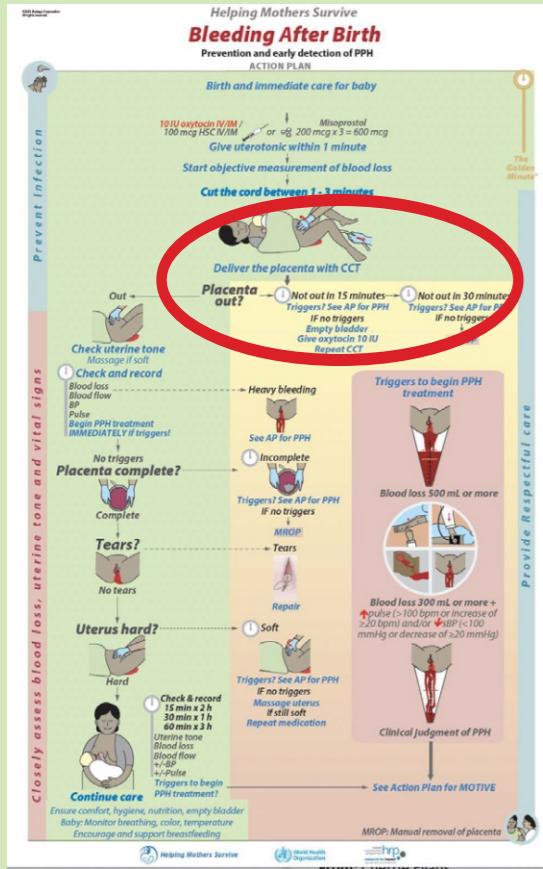
Training Methods

- Didactic
- Discussion
- Demonstration
- Questions and answers

Timeline: 15 Minutes

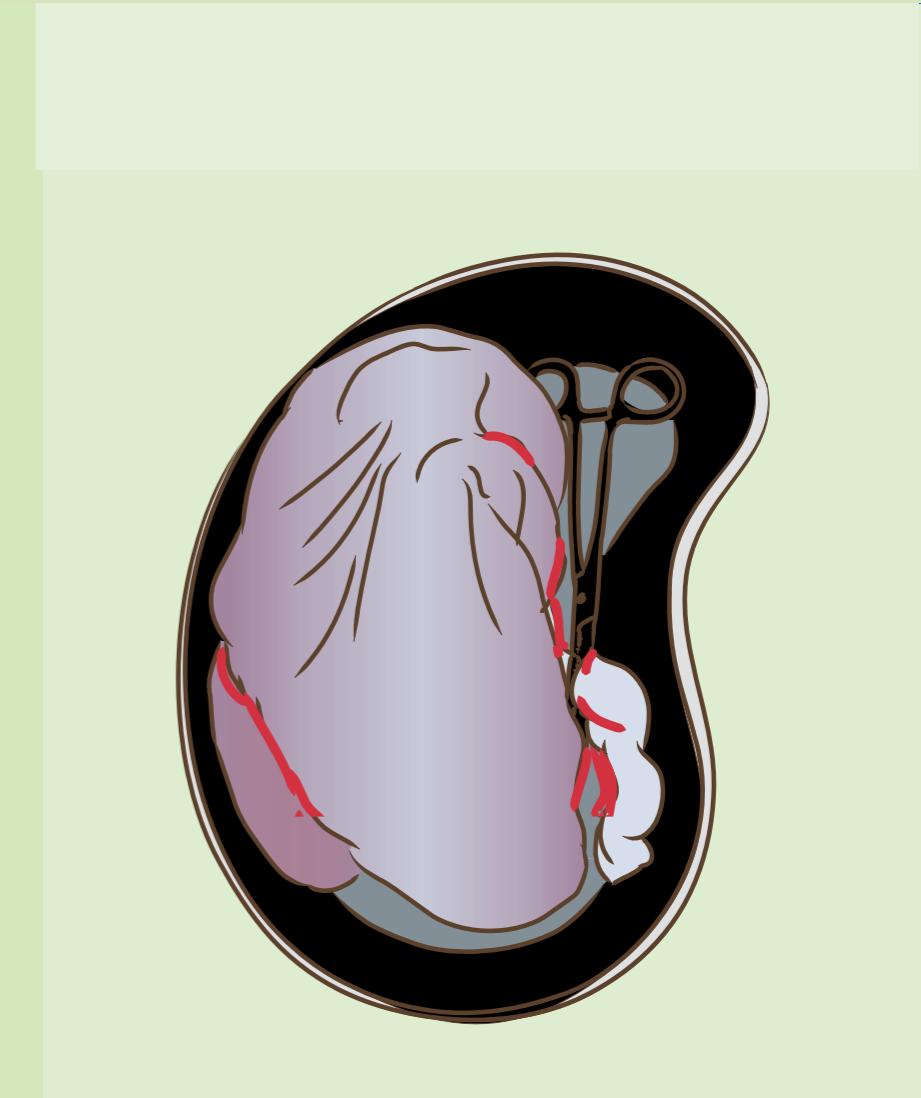
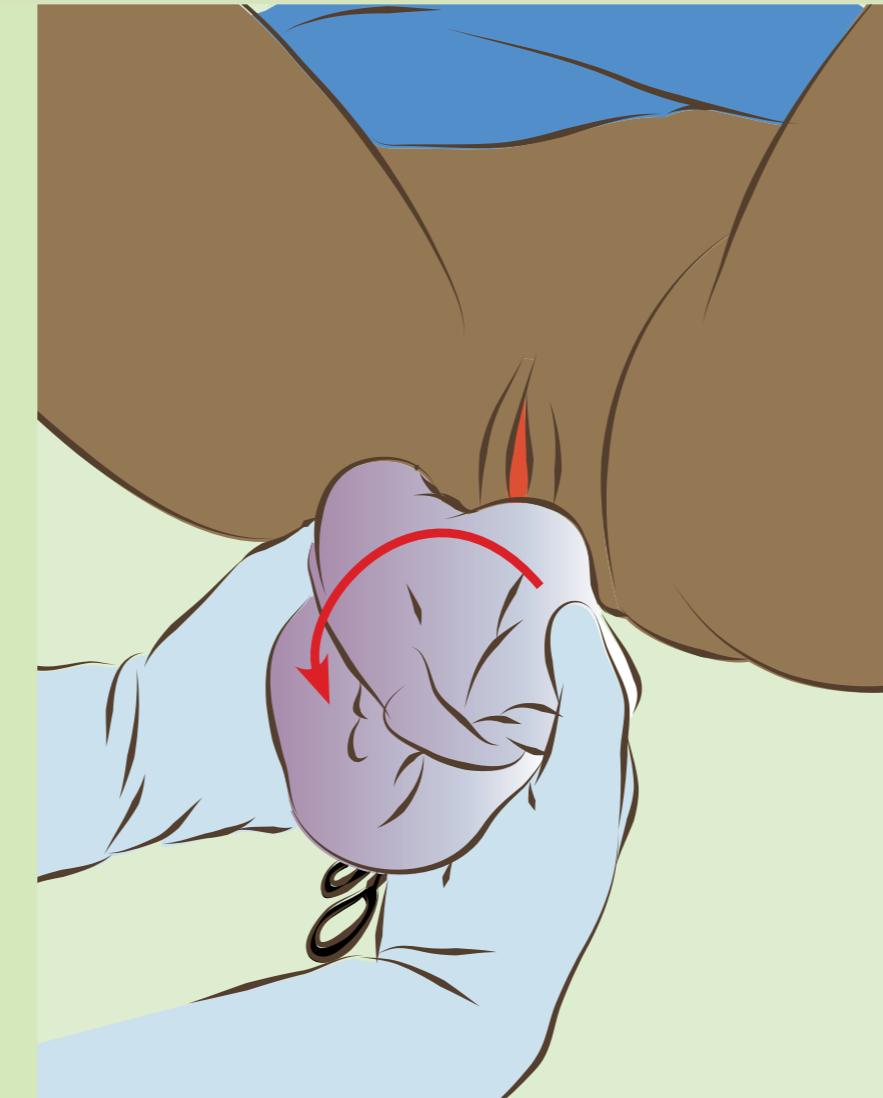
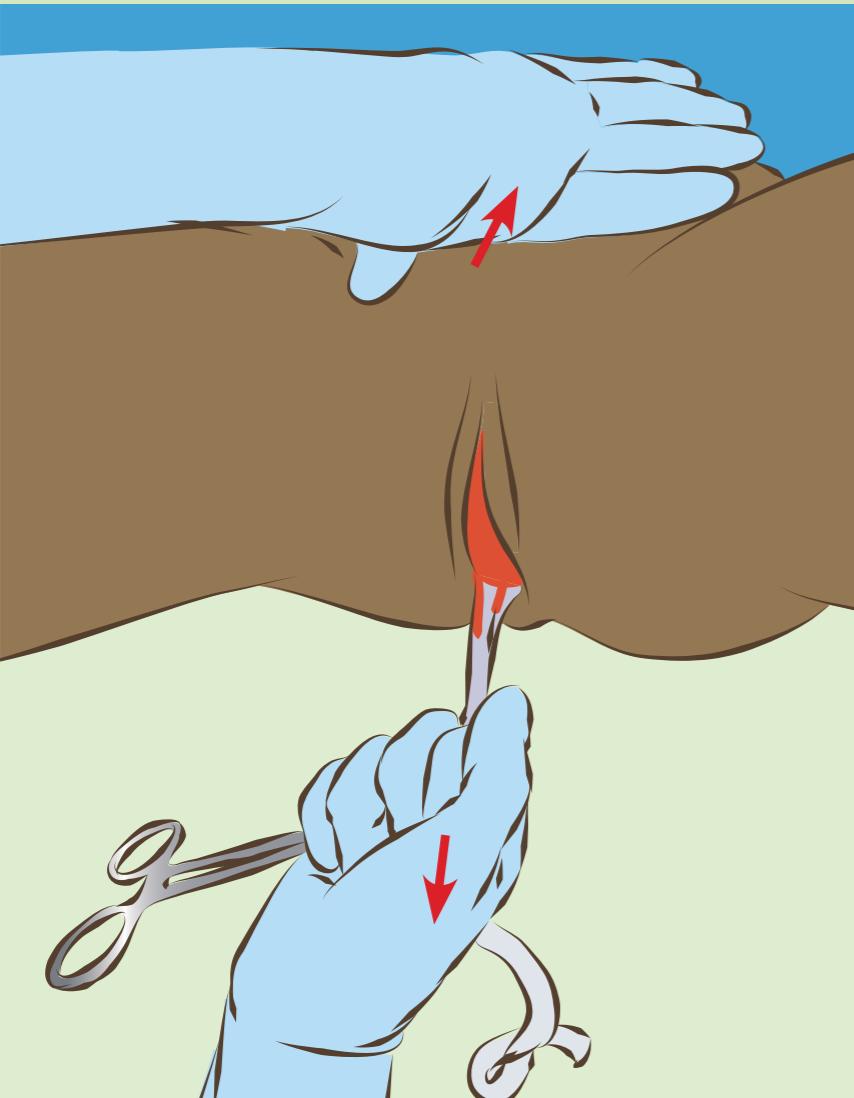
Preventing PPH

Deliver the placenta with CCT while applying counter traction



Blood loss
Blood flow
BP Pulse

If heavy bleeding:
Begin treatment
for PPH



Performance Expectation

Safely provide controlled cord traction.

Key points

- The placenta usually delivered within 10 minutes after uterotonic is given .
- After 30 minutes, you should initiate MROP
- Performing controlled cord traction to deliver the placenta is the second step to prevent PPH and should only be done by skilled birth attendants.
- Controlled cord traction speeds delivery of the placenta, however, it can be harmful if not done properly.
- Controlled cord traction must be gentle and done only during contractions.
- Always stabilize the uterus when providing controlled cord traction.
- Never pull too hard on the cord and do not pull if you feel resistance, since you can tear the cord or invert the uterus.
- Tissue left inside the uterus can cause hemorrhage and infection.

Knowledge and Skills

Safely provide controlled cord traction.

Clamp cord close to perineum and wait for contraction.

- Watch for a small gush of blood or the cord to get longer; these are signs of a contraction or of placental separation.
- Use one hand to stabilize the uterus by placing it just above the woman's pubic bone and pressing upward to provide counter pressure.
- During the contraction, use the other hand to gently pull down on the cord. Keep counter-pressure on the uterus from above the pubic bone.
- If resistance is felt, stop and try again with the next contraction. DO NOT pull when resistance is felt or when there is no contraction because you can tear the cord or pull the uterus out. This can kill the mother.
- Release traction on the cord between contractions. It may take several contractions to deliver the placenta.

- Continue to provide controlled cord traction during contractions until the placenta appears at the opening of the vagina.

- ***Safely deliver the placenta.***

When the placenta is visible in the vagina, gently lifting the hand holding the cord upward will guide the placenta out.

- As the placenta delivers, hold it with both hands and gently turn the placenta as it delivers. Gentle twisting of the placenta as it delivers helps keep the membranes whole.
- If tissue from the placenta or membranes stays inside the uterus, the mother may bleed too much and can become infected.
- The placenta and membranes should be placed in a bowl/basin to be looked at later. Immediately check the tone of the uterus and massage if soft.

Advanced Care Note

If you have additional training and authorization to provide more advanced care, act within your scope of practice. This may include performing controlled cord traction. Additionally, if the placenta is not delivered in 30 minutes, you may initiate MROP

MODULE 10

If placenta is not out in 30 minutes - Check for heavy bleeding

Perform manual removal of placenta

Sessional Goals:

At the end of this session, participants would be able to active decision making to identify a delayed or retained placenta and respond appropriately

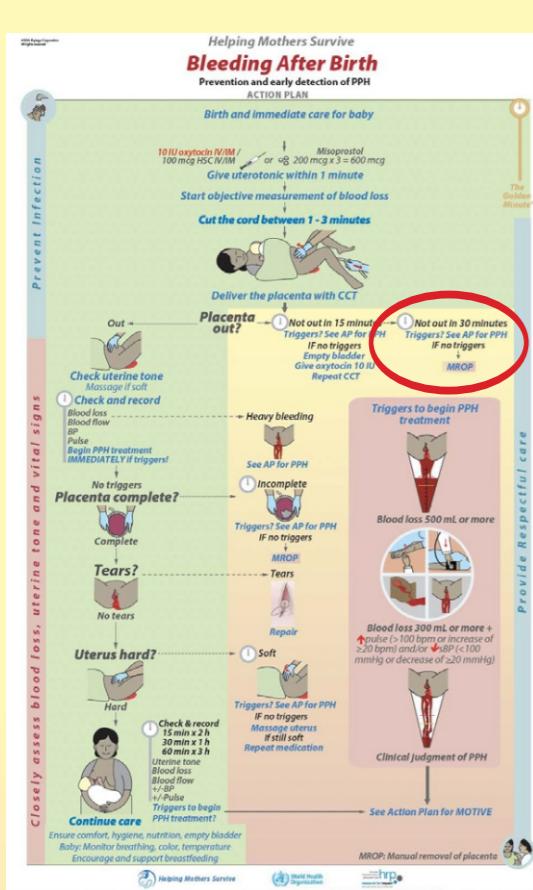
Learning Objectives

- To strengthen the capacity of participants to recognize a retained placenta either whole or in bits that prevent uterine contraction
- To strengthen the capacity of participants on the need for advanced care for manual removal of placenta

Training Methods

- Didactic
- Discussion
- Demonstration and return demonstration
- Simulated hands-on practice
- Questions and answers

Timeline: 30 Minutes

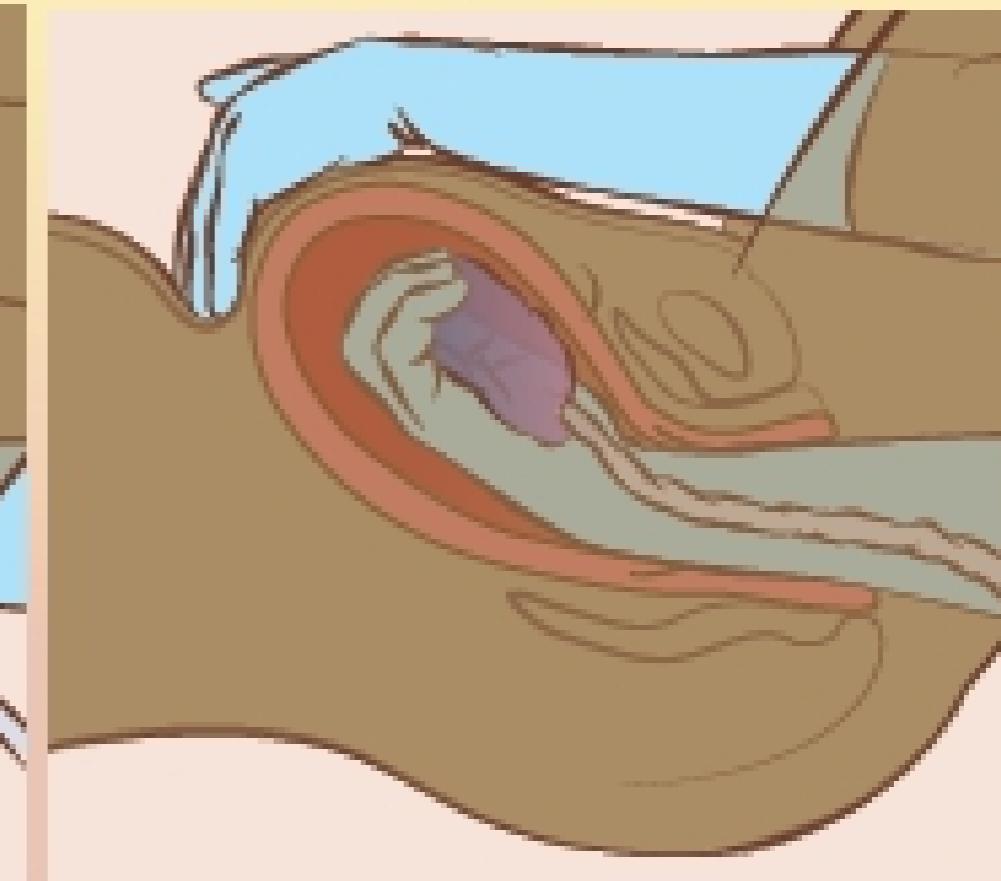
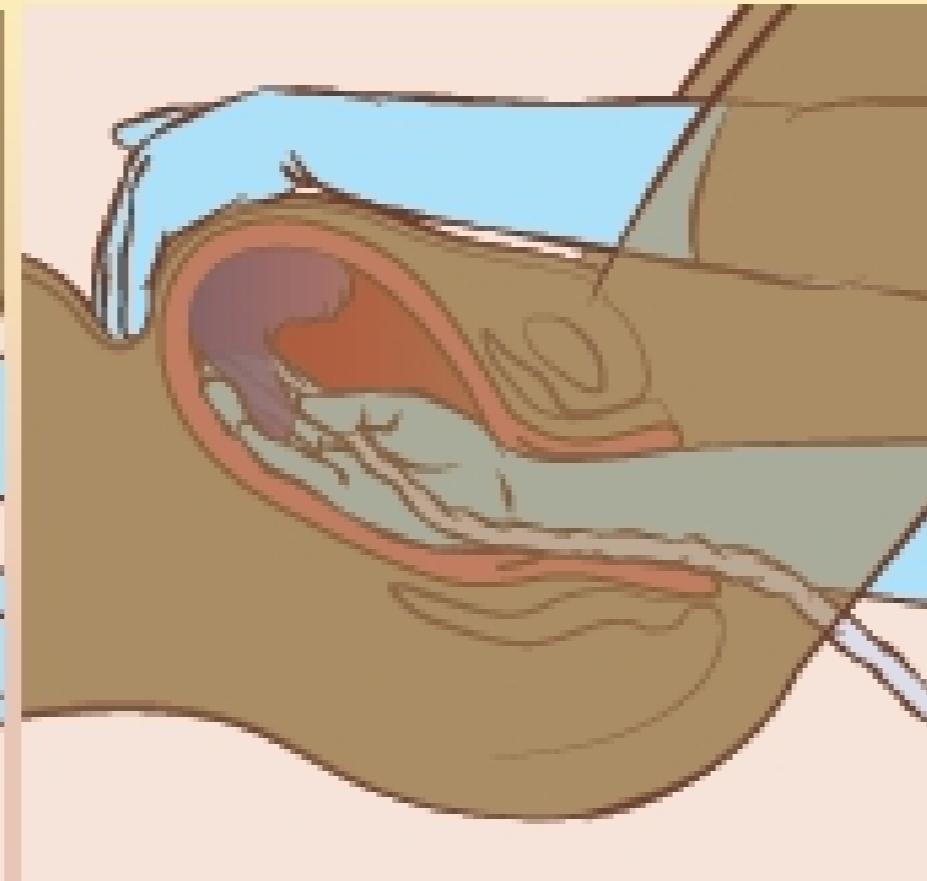
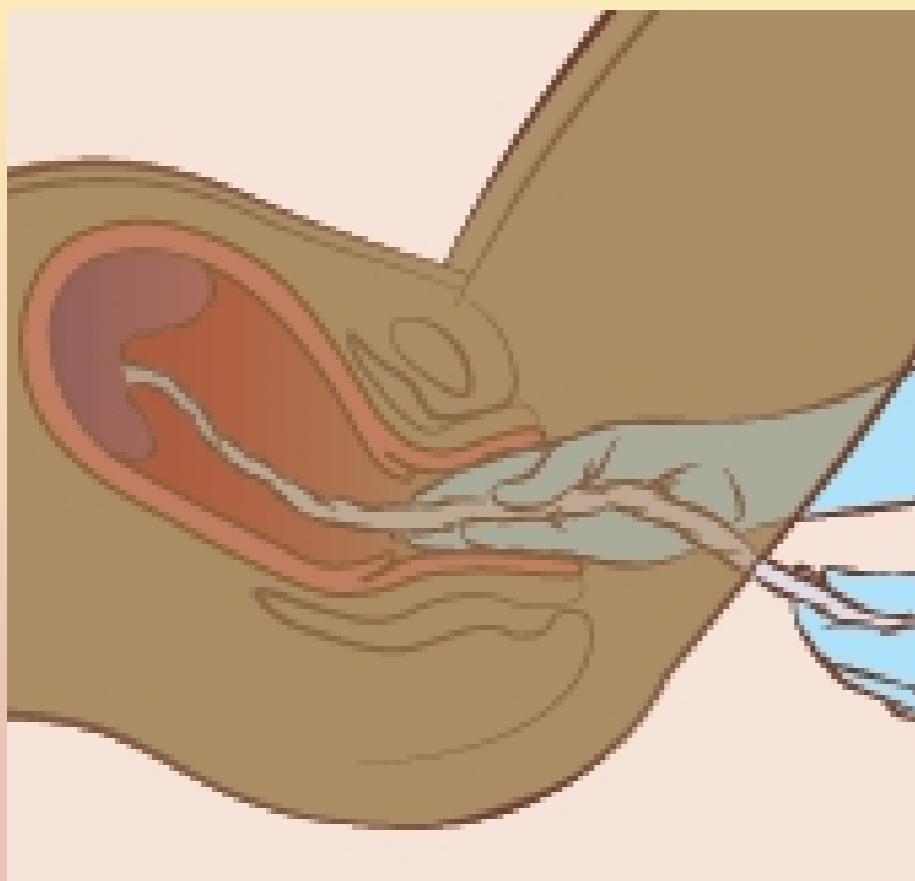


If placenta is not out in 30 minutes - Check for heavy bleeding

Perform manual removal of placenta

Blood loss
Blood flow
BP Pulse

If Heavy Bleeding: Begin treatment for PPH



Performance Expectation

Use active decision-making to identify a delayed/retained placenta and respond appropriately.

Key points

- A retained placenta or a retained piece of placenta can keep the uterus from contracting.
A woman will need advanced care and manual removal of the placenta
- and the placenta remains in the uterus IF:
 - The placenta does not deliver in 30 minutes, regardless of bleeding
 - Bleeding is heavy at any time before delivery of the placenta
 - The placenta is out but is not complete

Knowledge and Skills

Show and tell how to safely give medication.

- If the woman is bleeding heavily at any time, get advanced help/begin PPH treatment immediately whether the placenta is delivered or not.
- While waiting for the placenta to deliver, monitor the woman's pulse and blood pressure to watch for shock (pulse ≥ 100 , systolic BP $< 100\text{mmHg}$).
- If the placenta is out, inspect it for completeness.
- If the placenta does not deliver in 30 minutes, get advanced help (for MROP) regardless of bleeding.
- Get advanced help if the woman is bleeding heavily at anytime before delivery of the placenta.
- A retained placenta may not cause much obvious bleeding, but it can be very dangerous.
- Incomplete placenta can be difficult to identify. Constant, trickling or lots of bright red bleeding can mean that a piece of the placenta remains inside the uterus and is causing bleeding.
- If the uterus rises above the navel, it could mean clots are forming inside.

Advanced Care Note

- If you have additional training and are authorized to provide more advanced care, act within your scope of practice. This may include manual removal of the placenta or retained pieces.
- If you perform manual removal of placenta, the woman will require antibiotics to reduce the risk of infection.
- Manual removal is very uncomfortable for women and can be dangerous.
- Manual removal should NEVER be attempted without proper training and authorization.

MODULE 11

Check placenta for completeness

Sessional Goals:

At the end of this session, participants would be able to appropriately check uterine tone and placenta for completeness

Learning Objectives

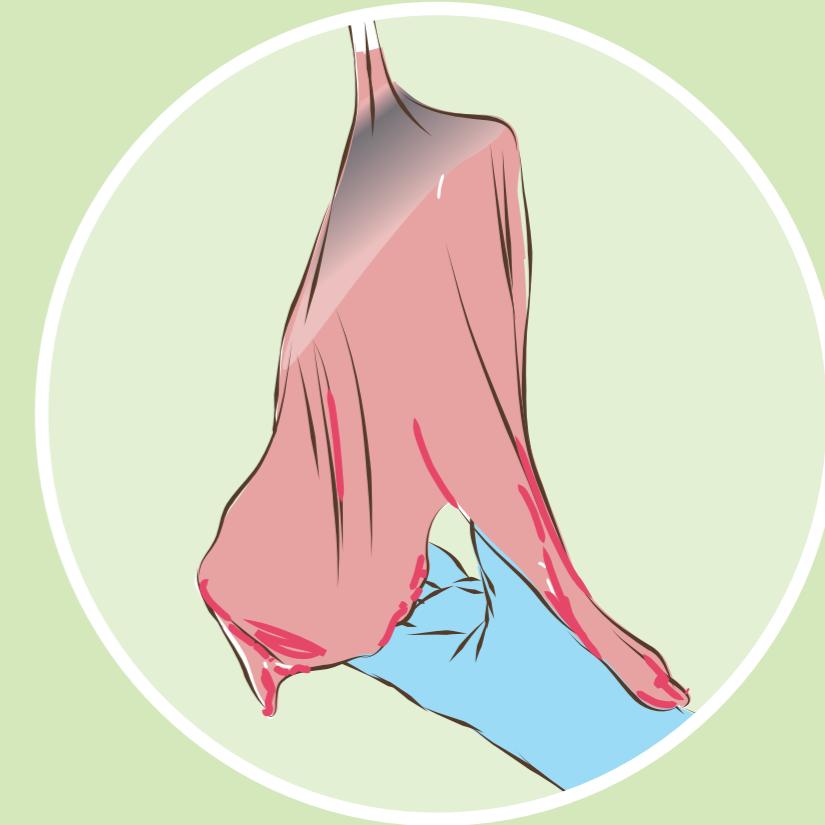
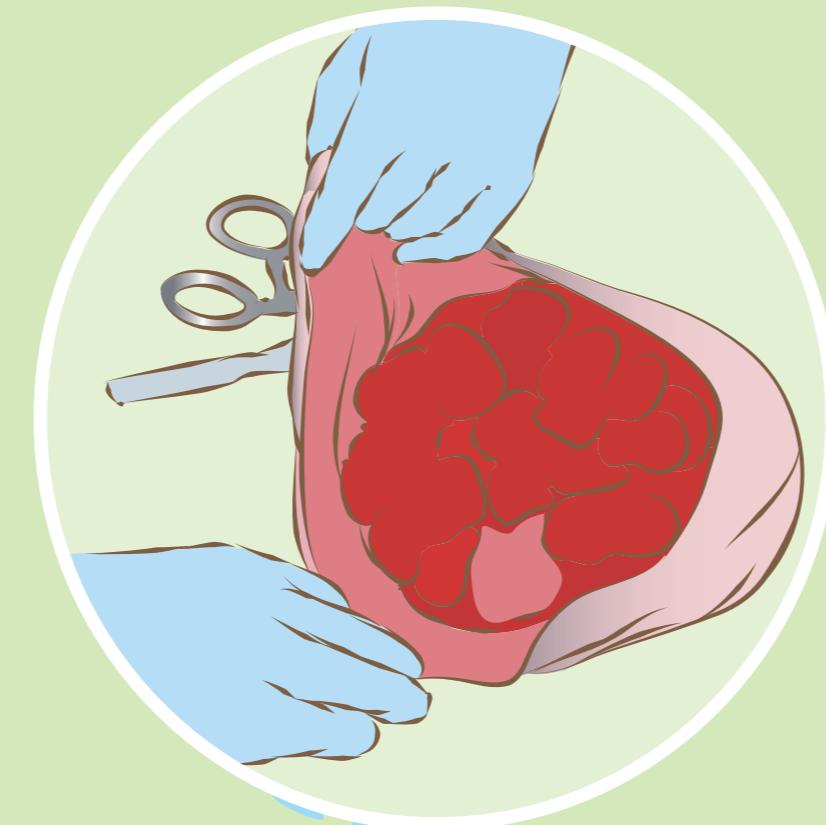
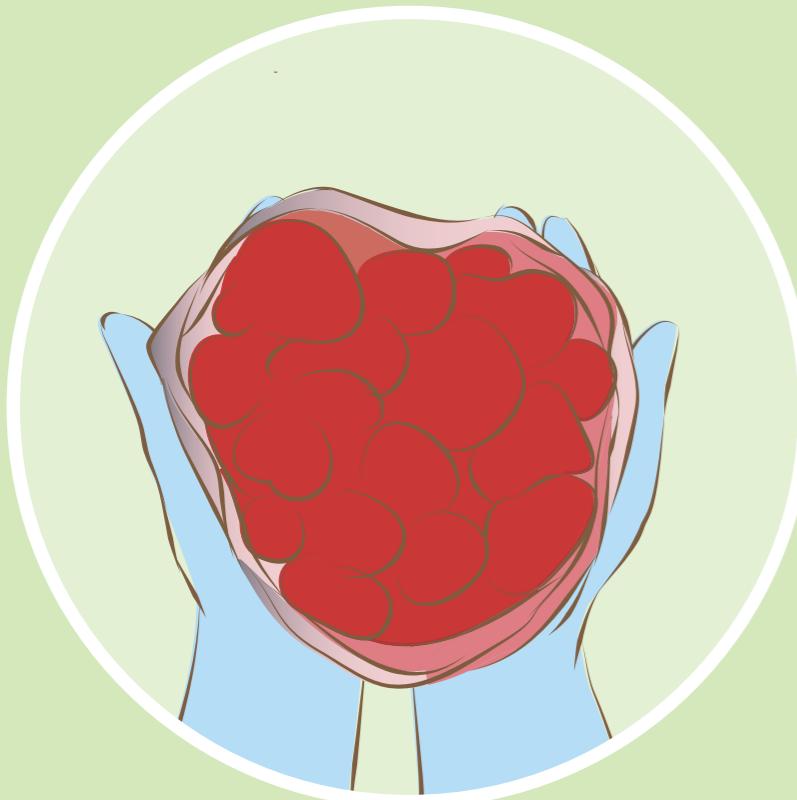
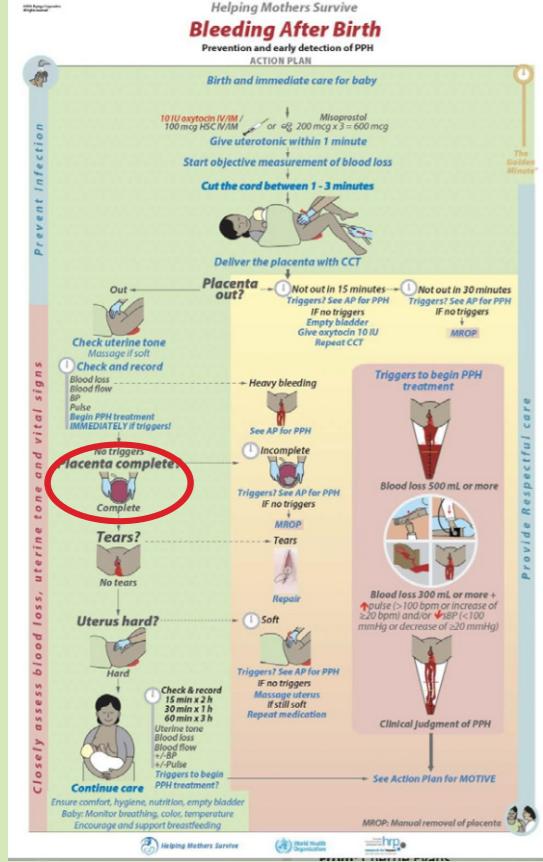
- To strengthen the capacity of participants to able to check the uterine tone and placenta for completeness within the specified timeline

Training Methods

- Didactic
- Discussion
- Demonstration and return demonstration
- video
- Questions and answers

Timeline: 30 Minutes

Check placenta for completeness



Performance Expectation

After birth, always check uterine tone and the placenta. Check uterine tone every 15 min for the first 2 hours after birth, and frequently for first 24 hours after birth

Key points

- Put your device for blood loss measurement in place now.
- Check the uterus for tone and massage if soft. This is the third step to prevent PPH.
- Uterine tone can change quickly. Check tone every 15 minutes for the first 2 hours. Look for bleeding as you check tone.
- Ask the woman to tell you if she notices a gush or constant trickle of blood.
- After you have checked her uterus, check both sides of the placenta and membranes for completeness.
- Tissue left in the uterus can cause hemorrhage and infection.
- If the uterus rises above the navel, it could mean clots are forming inside.

Key Knowledge and Skills

Assess the uterus for tone and massage it if it is soft.

- Know the difference between a soft and firm uterus to determine when massage is needed. A firm uterus feels like your forehead. A soft uterus feels like the tip of your nose and needs massage.
- Uterine massage is important, but may be uncomfortable to the woman. Tell her why you are massaging her uterus.
- Check the bladder for fullness if the uterus is not contracting or is displaced from midline. A full bladder can cause the uterus to soften even if it was hard before.
- If the uterus rises above the navel, it could mean clots are forming inside.
- Actively monitor uterine tone and bleeding every 15 minutes for the first two hours after birth.
- Teach the woman how to check and massage her own uterus and alert you if she notices a gush of blood or a trickle that does not stop.

- When complete, the lobes of the placenta fit together like a puzzle. Cup the placenta in your hands, maternal side up, to see if the lobes fit together and none are missing.
- The membranes should also be checked for missing pieces. Hold the placenta upside down by the cord and look at the hanging membranes to be sure large pieces are not missing.
- Check for blood vessels trailing off the edge of the placenta as they may indicate that a lobe is still inside.
- When tissue from the placenta or the membranes is left in the uterus, the uterus cannot contract well and the woman may bleed too much.
- If it looks like pieces are missing, check for bleeding and fundal tone and get advanced help.
- If everything is normal, check the perineum for tears.

Advanced Care Note

If you have additional training and are authorized to provide more advanced care, act within your scope of practice. This may include catheterizing the mother's bladder if she is unable to empty it.

Blended Learning

If you can watch videos, watch:

► [Examining the Placenta.](#)

MODULE 12

When placenta is out - Check for heavy bleeding

***Check & record: tone - massage if soft,
blood loss and flow, BP, and pulse***

Sessional Goals:

At the end of this session, participants would be able to timely assess uterine tone, blood loss, blood flow and vital signs

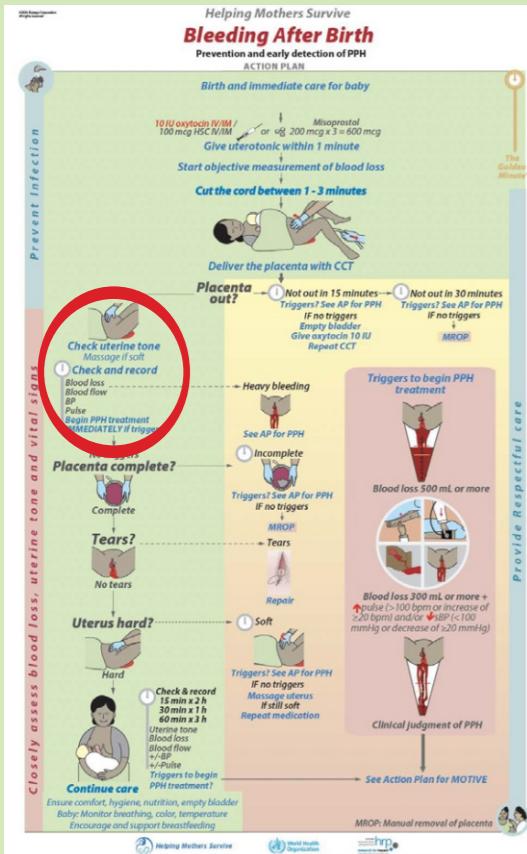
Learning Objectives

- To strengthen the capacity of participants to identify abnormal bleeding that could be life threatening and initiate timely bundle response

Training Methods

- Didactic
- Discussion
- Demonstration and return demonstration
- Simulated hands-on practice
- Questions and answers

Timeline: 30 Minutes

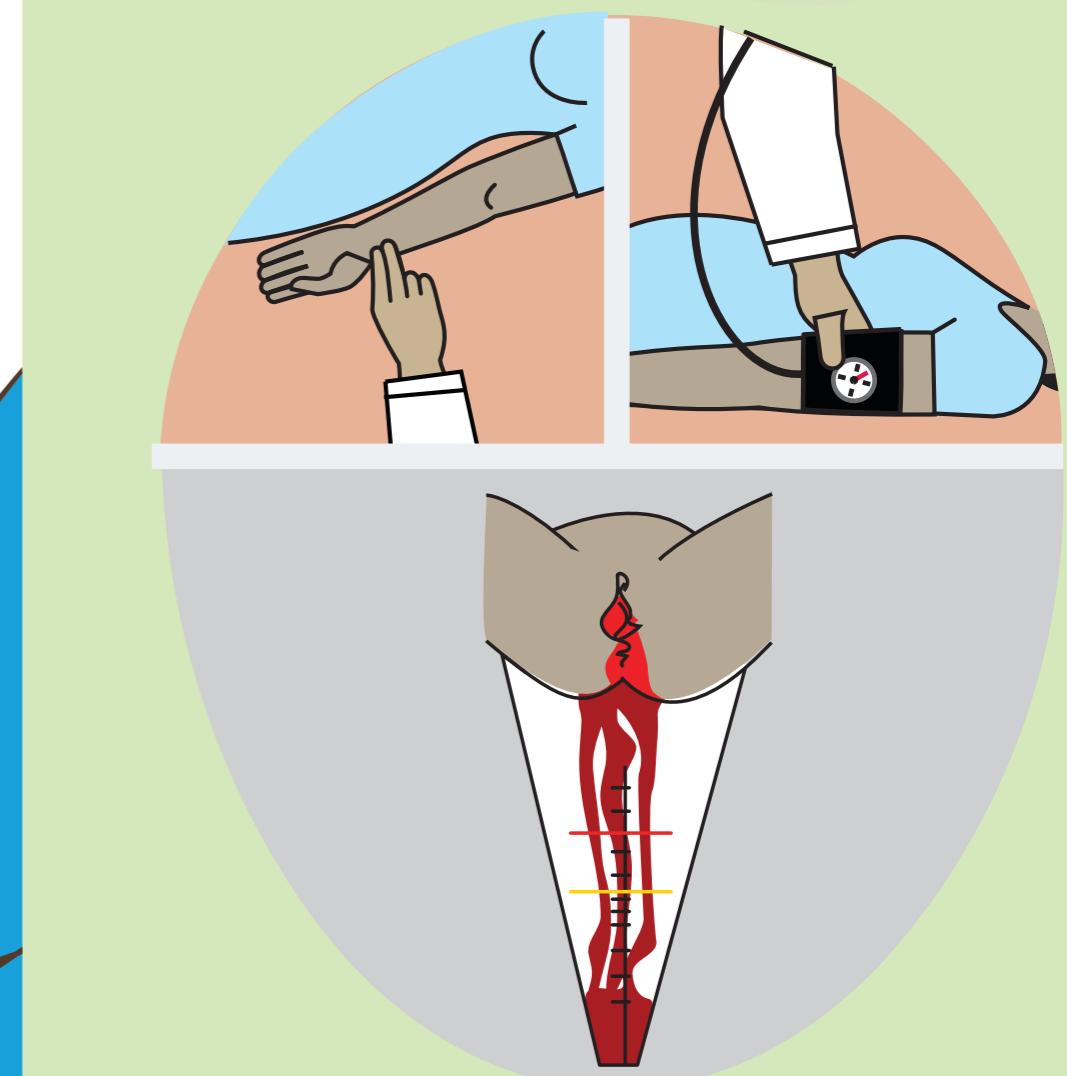


When placenta is out - Check for heavy bleeding

Check placenta for completeness

Uterine tone
Blood loss
Blood flow
BP Pulse

If heavy bleeding:
Begin treatment
for PPH



Performance Expectation

Check bleeding, uterine tone, BP, and pulse - every 15 min for first 2 hours after birth and frequently in first 24 hours

Key points

- Bleeding can be slow or fast.
- Any bleeding that is heavy or does not stop is life- threatening.
- Checking and rechecking uterine tone and blood loss are critical for the first two hours.
- Have the woman alert you if she notices a gush of blood or a trickle that does not stop or if her uterus is soft.
- You can prevent PPH if you notice bleeding is more than normal and respond quickly BEFORE it becomes a hemorrhage!

Knowledge and Skills

Constantly watch for bleeding after birth.

- Actively assess the amount of bleeding. Look at the bleeding while checking uterine tone. Look for blood on the bed, the woman's clothes, and the floor.
- If a blood collection drape is in place, be sure to sweep blood and clots into the funnel for accurate measurement. If the woman is lying on a flat bed, either hang the funnel over the edge of the bed to compare the blood loss to the calibration lines or lift the funnel above the level of blood so it collects in the bottom for accurate reading.
- Heavy bleeding that pours out and won't stop is obviously life-threatening.
- A smaller stream of bleeding that trickles out but doesn't stop can be life-threatening, too.
- Check for a full bladder; make sure she keeps her bladder empty.
- If bleeding is more than normal, check uterine tone, check for a full bladder, recheck the placenta for completeness, check that there are no genital tears, and check BP and pulse.

- Teach the woman how to check the uterus and massage it
- Teach the woman to call for the provider immediately if she feels she is bleeding.
- If the uterus is soft, massage the uterus and decide if more care is needed.
- Check to see if the bladder is full. If distended, help her to empty her bladder; catheterize only if she is unable to void.
- Carefully check for genital tears and decide on how to respond based on bleeding and extent of the tears.
- If the placenta is not complete, **she needs advanced care!**

Respond immediately if you think the woman is bleeding too much or you diagnose PPH!!

MODULE 13

Check for tears and repair

Sessional Goals:

At the end of this session, participants would be able to identify, repair tears or refers as necessary

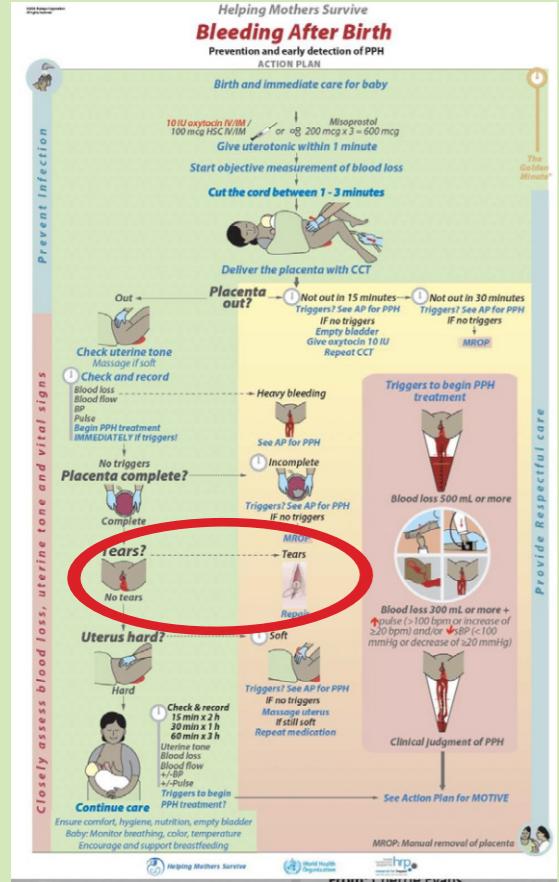
Learning Objectives

- To strengthen the capacity of participants to identify lacerations

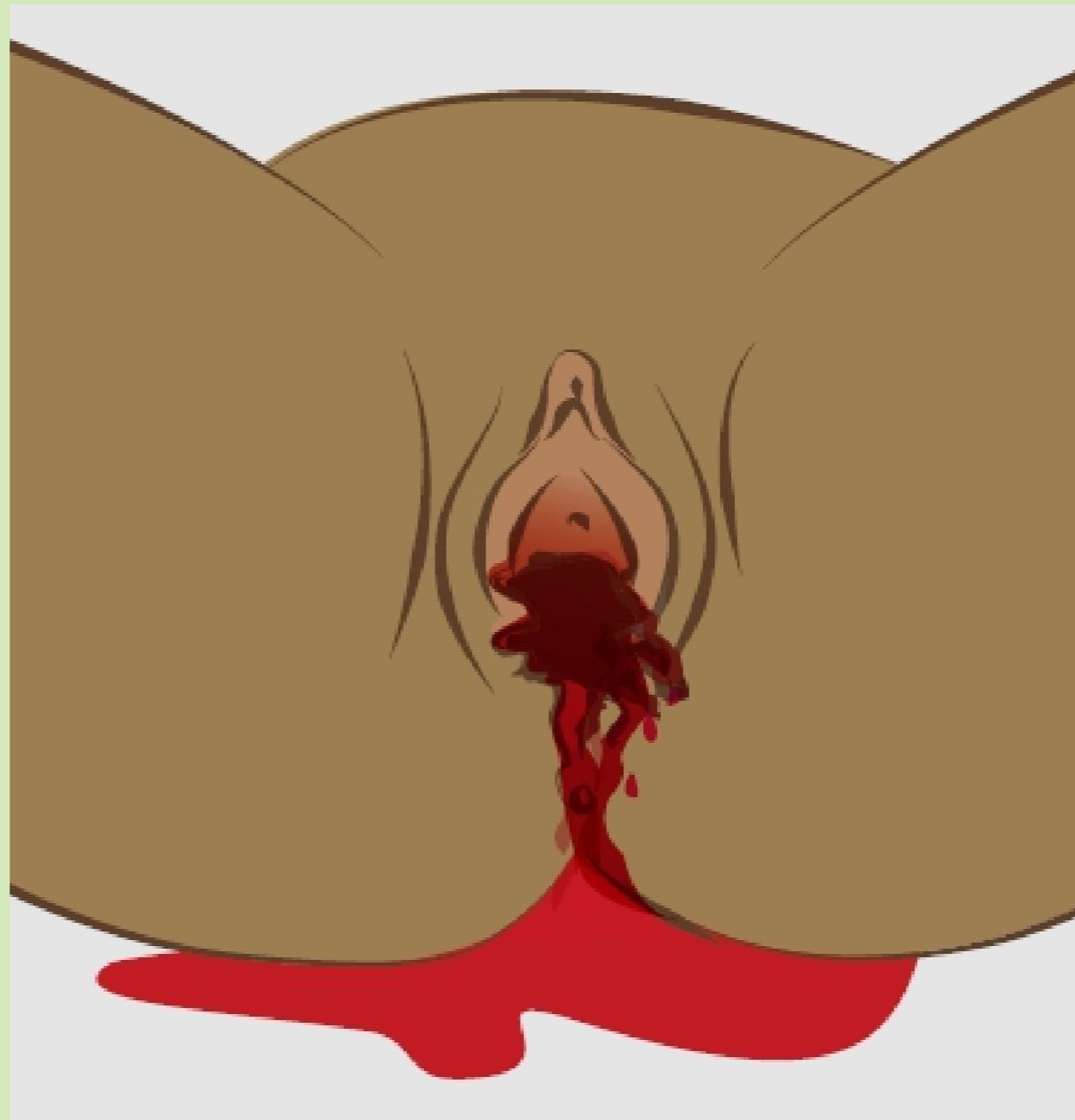
Training Methods

- Didactic
- Discussion
- Demonstration and return demonstration
- Simulated hands-on practice
- Questions and answers

Timeline: 30 Minutes



Deliver the placenta with CCT



Performance Expectation

Identify and repair tears. If repair of tears is beyond your scope of practice, refer.

Key points

- Lacerations or tears are the second most common cause of bleeding after birth.
- If the uterus is firm and the woman is still bleeding, tears are likely even if they cannot be seen.
- A woman who has had female genital cutting or an episiotomy is at increased risk for bleeding from tears. Only perform episiotomy when there are clear indications!
- A woman can have significant vaginal tears without having tears of the perineum.
- If the tear is high in the vagina or in the cervix, you may not be able to see it.
- Lacerations or tears increase the risk of infection for the woman. To reduce risk of infection, maintain clean or sterile technique while checking the woman for tears.

Knowledge and Skills

To check for tears:

- If you not able to check for tears, consult a senior provider.
- Explain to the woman what you are about to do and obtain her verbal consent.
- Ensure good lighting and privacy.

Before checking for tears, you may need to remove clots from the vagina and cervix as you massage the uterus. This may decrease active bleeding and improve your ability to see tears.
- Gently wipe away blood so you can see tears.
- Assess the extent of the trauma to include the structures involved, the apex of the injury and any bleeding.
- Decide on how to respond based on amount of bleeding and extent of the trauma (follow local protocols).

Advanced Care Note

If you have additional training and are authorized to provide more advanced care, act within your scope of practice. This may include repairing 3rd or 4th degree and cervical lacerations

To manage tears:

If you are not able to repair tears:

- Apply firm, steady pressure to tears that are bleeding with a clean or sterile cloth to slow bleeding.
- Continue to apply pressure to tears until the bleeding stops or advanced care has arrived.
- Do not remove soaked cloths, but add additional cloths on top and seek advanced care.

If you are able to repair tears, now is the time to do so. If she has tears that are not within your scope of practice to repair, seek advanced care.

If the uterus is firm and the placenta is complete but the woman continues to bleed, but you can't see any tears, call for help, seek advanced care or refer.

If you think the woman is bleeding too much, call for help, and respond immediately!!

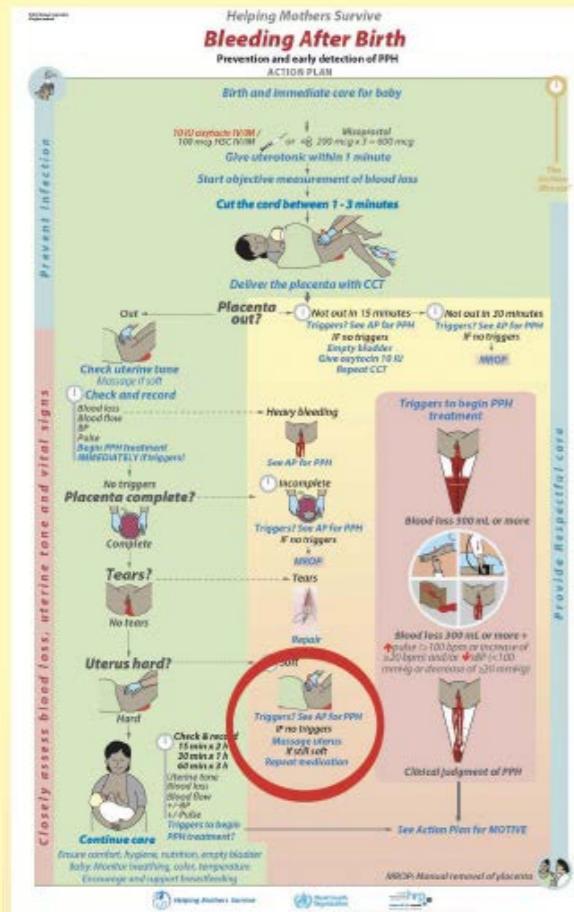
MODULE 14

If placenta is out and uterus is soft, and no heavy bleeding

Massage uterus

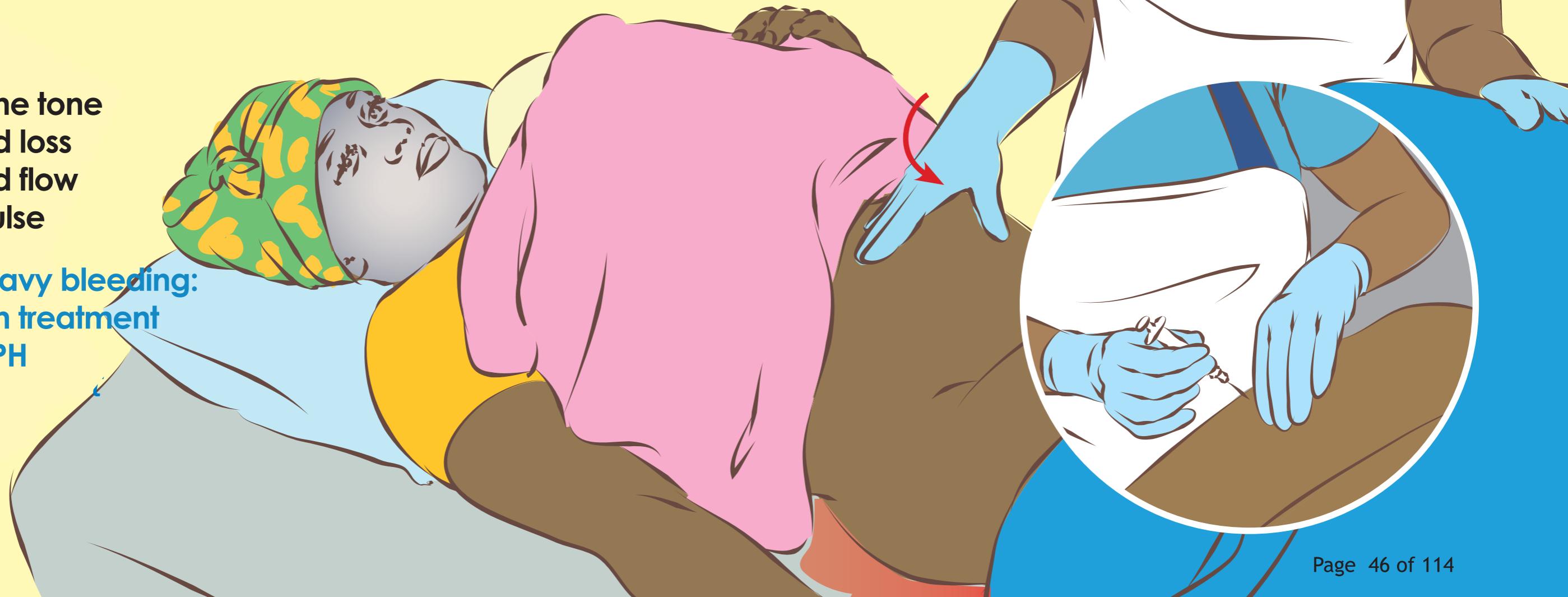
Massage uterus

Repeat medication



Uterine tone
Blood loss
Blood flow
BP Pulse

If heavy bleeding:
Begin treatment
for PPH



Performance Expectation

If the uterus is soft after delivery of placenta, massage uterus and repeat medication.

Key points

- A soft uterus or atony is the leading cause of hemorrhage.
- Massaging the uterus helps it contract.
- The uterus may be contracted, but then get soft. Checking and re-checking is important.
- Remember, a full bladder can make the uterus soft.
- If uterine massage alone does not help the uterus contract, give a treatment dose of 10 IU oxytocin IM/IV OR 800 mcg misoprostol under the tongue. Do NOT give another dose of HSC.
- If the uterus does not contract with massage and medication, immediate action is needed - call for help and manage as PPH.

Knowledge and Skills

- A uterus that does not stay contracted after the placenta delivers causes the majority of PPH.
 - Be sure to check uterine tone and bleeding every 15 minutes for the first two hours after birth, every 30 minutes for 4 hours, then regularly for the first 24 hours.
 - If the uterus is soft, massage the fundus until it contracts. Massaging the uterus can also express blood clots which will help the uterus contract and can prevent PPH.
 - **Massage the Uterus:** place your cupped hand on the fundus of the uterus and with circular movement, massage the uterus firmly pushing downward and inward until the uterus is firmly contracted
 - Watch the woman's bleeding while massaging the uterus to see if the bleeding slows as the uterus contracts.
 - Assess how much blood she has lost.
 - Feel the bladder to assess if it is distended. Remember a full bladder can prevent the uterus from contracting. If the woman's bladder is distended and she cannot void on a bedpan, catheterize the bladder (Follow local protocols).
 - After the bladder is empty, recheck uterine tone and massage if soft.
 - If the uterus is still soft, give a treatment dose of 10 units oxytocin by IM/IV OR 800 mcg misoprostol under the tongue to help it contract and slow or stop bleeding. DO NOT give HSC.
 - Monitor for signs of shock (pulse \geq 100, Systolic BP $<$ 100mmHg).
 - Continue to massage the uterus and watch bleeding to determine if treatment is working.
- If you think the woman is bleeding too much and/or not responding to treatment for uterine atony, call for help, and manage as PPH!!**

Advanced Care Note

If learners have additional training and authorization, they should act within their scope of practice.

MODULE 15

bleeding is normal and uterus is hard - Check for heavy bleeding

Continue care for the woman and baby

Sessional Goals:

At the end of this session, participants would be able to continue quality care for mother and baby

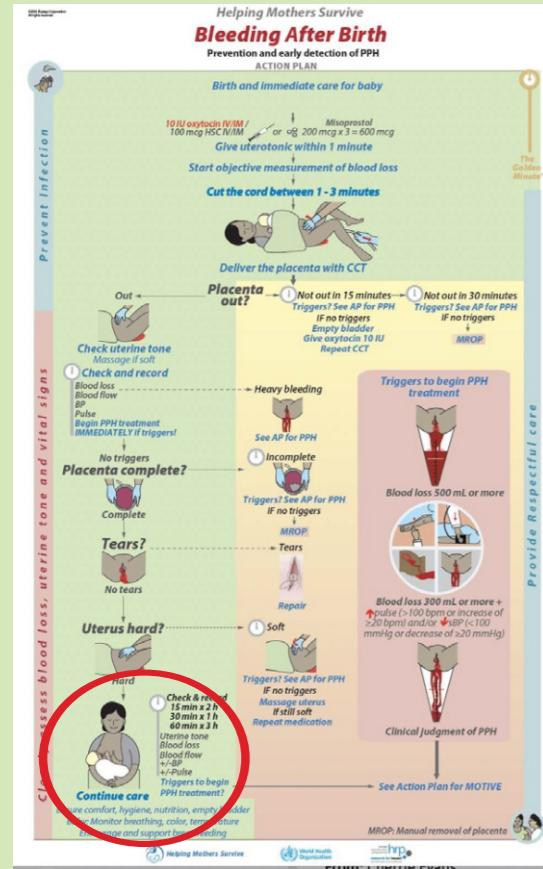
Learning Objectives

- To strengthen the capacity of participants to identify uterine atony and begin treatment
- To strengthen the capacity of participants to continue routine observation for the mother and baby

Training Methods

- Didactic
- Discussion
- Demonstration and return demonstration
- Simulated hands-on practice
- Questions and answers

Timeline: 30 Minutes



Continue care for the woman and baby



*Uterine tone
Blood loss
Blood flow
BP
Pulse*

**If heavy
bleeding:
Begin treatment
for PPH!**

Performance Expectation

If the woman is not bleeding and uterus is contracted, provide high-quality care for her and her baby for 24 hours after birth.

Key points

- Always keep mother and baby together.
- Encourage women to start breastfeeding as soon as possible within the first hour.
- Check and re-check the woman and her baby during this important time. This also includes checking the baby's color, breathing and activity .
- Assess the mother's uterine tone, bleeding, BP, and pulse AND the baby's breathing, heart rate, temperature and cord, every 15 minutes for the first two hours after birth.

Key Knowledge and Skills

- Routine care means continued monitoring of both the woman and her baby.
- Keep them both warm and together. If the baby is crying and breathing normally, place the baby against her mother's skin as soon as possible.
- If the woman and baby are healthy, encourage the woman to start breastfeeding as soon as possible within the first hour after birth.
- Encourage the woman to empty her bladder.
- If the woman is not bleeding at one hour after the placenta delivers, you can remove the blood collection device or drape. If she is actively bleeding, keep the device in place until bleeding has stopped.
- Active decision-making does not end here. A woman and baby who are fine now might have trouble a few minutes later.
- Use the skills you learn here to actively monitor your clients and provide high-quality care.
- Women and babies should remain in facilities for 24 hours following a normal vaginal birth so they can be monitored,
- *If there is heavy bleeding, begin treatment for PPH immediately.*
- Prior to discharge, counsel women about the amount of bleeding to expect, as well as warning signs of excessive bleeding (i.e. bleeding that soaks a pad in less than five minutes).

Blended Learning

If you can watch videos, watch:

► [Managing the third stage of labor.](#)

MODULE 16

Main causes of bleeding after birth

Sessional Goals:

At the end of this session, participants would be able to identify the courses of heavy bleeding and manage each correctly

Learning Objectives

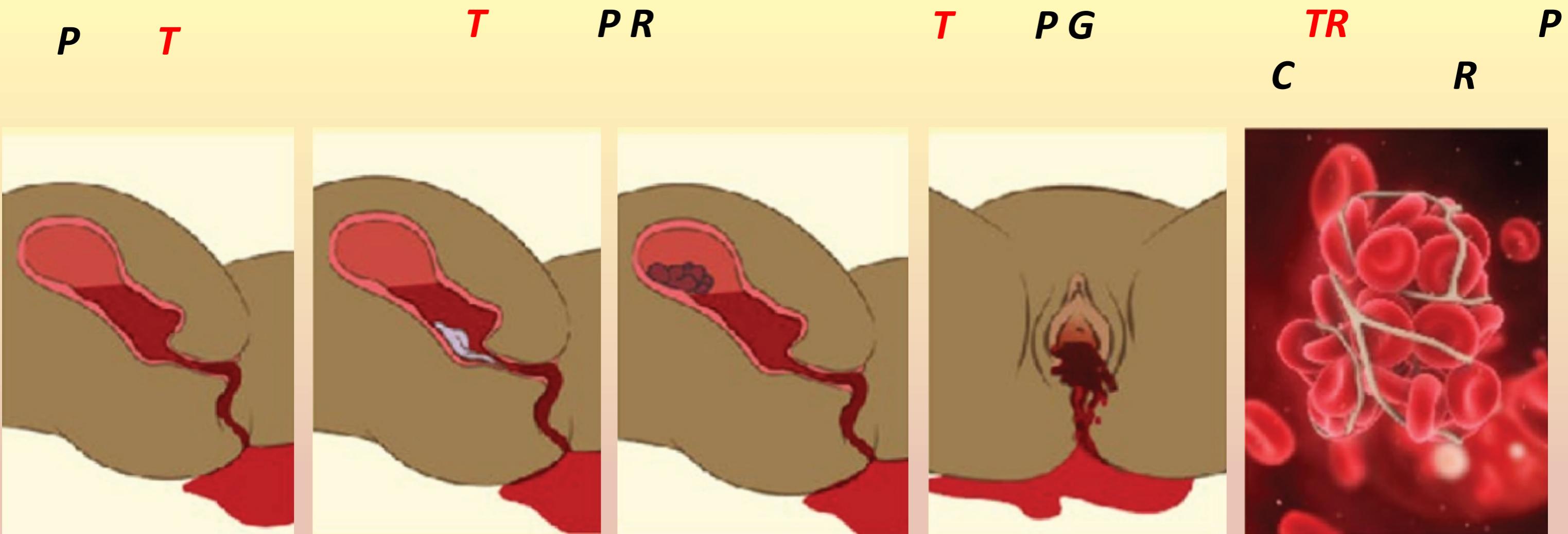
- To strengthen the capacity of participants to identify and manage the four main courses of bleeding after birth (four Ts)

Training Methods

- Didactic
- Discussion
- Questions and answers

Timeline: 20 Minutes

Main causes of bleeding after birth



Performance Expectation

Identify the causes of heavy bleeding and manage each one correctly.

Key points

- Anyone can bleed too much after birth.
- All bleeding can be life-threatening.
- Poor tone, tears, retained tissue, and coagulopathy are the most common causes of bleeding after birth.
- Most bleeding after birth is caused by a uterus that will not contract (poor tone).
- Tissue from the placenta or membranes that stay inside the uterus can also cause bleeding. Tears can also cause PPH.

Episiotomies and female genital cutting increase the risk for tearing

Knowledge and Skills

There are four main causes of bleeding after birth: poor uterine tone (or atony), tears, retained tissue, and coagulopathy.

Knowledge and Skills

Constantly watch for bleeding after birth.

- Bleeding can be a slow, constant trickle, or a large gush. Both can be dangerous.
- It is important to respond quickly if a woman is bleeding heavily, has bleeding that trickles slowly but does not stop, or passes clots bigger than an overaged sized orange

Losing more than 500 mL is considered a hemorrhage, although some women can lose less than 500 mL and still die.

Poor tone

- The vast majority of bleeding is due to an atonic uterus.
- If the uterus does not contract, blood vessels continue to pump blood into the empty uterus. Causes include:
 - A full bladder
 - Anything in or distending the uterus: During pregnancy/labor: large baby, polyhydramnios, multiple pregnancy, or fibroids.
 - After birth: retained placenta, membranes, or placental fragments.
 - Anything exhausting the uterus: prolonged labors, multiparity

Retained placental tissue

- Inspect the placenta after it is delivered to be sure it is complete.
- Retained tissue from the placenta or membranes can also cause PPH.
- If a piece of the placenta (or membranes) is left behind, the uterus may not contract and the woman may bleed too much or she may get infected.

Tears

- Another common source of bleeding is tears caused by trauma.
- Tears can be big or small, inside or outside the vagina.
- Episiotomies can cause increased tearing and bleeding; they should not be done routinely.
- Female genital cutting increases the likelihood of tearing.

Coagulopathy

- Another common source of bleeding is tears caused by trauma.
- Tears can be big or small, inside or outside the vagina.
- Episiotomies can cause increased tearing and bleeding; they should not be done routinely.
- Female genital cutting increases the likelihood of tearing.

MODULE 17

3 Triggers to begin the WHO 1st response bundle for PPH (MOTIVE)

Sessional Goals:

At the end of this session, participants would be able to identify the courses of heavy bleeding and manage each correctly

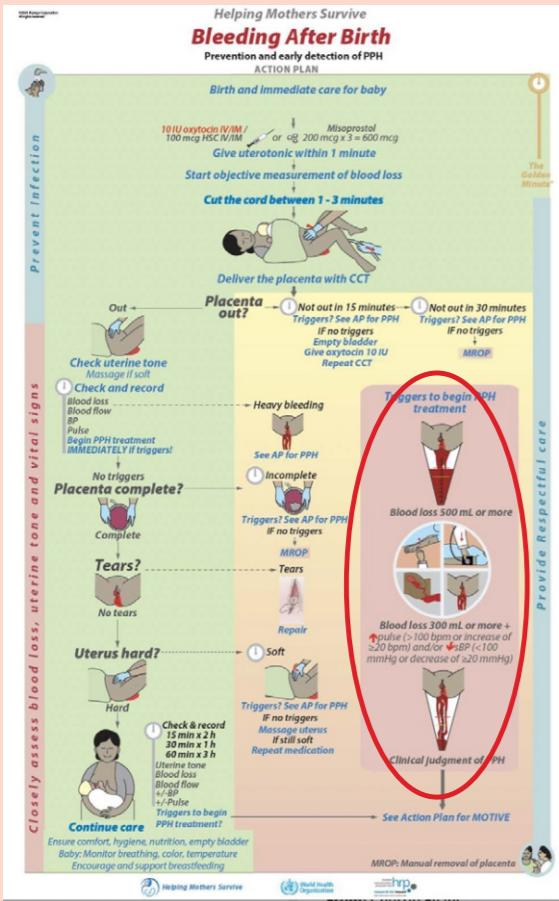
Learning Objectives

- To strengthen the capacity of participants to identify and manage the four main courses of bleeding after birth (four Ts)

Training Methods

- Didactic
- Discussion
- Questions and answers

Timeline: 20 Minutes

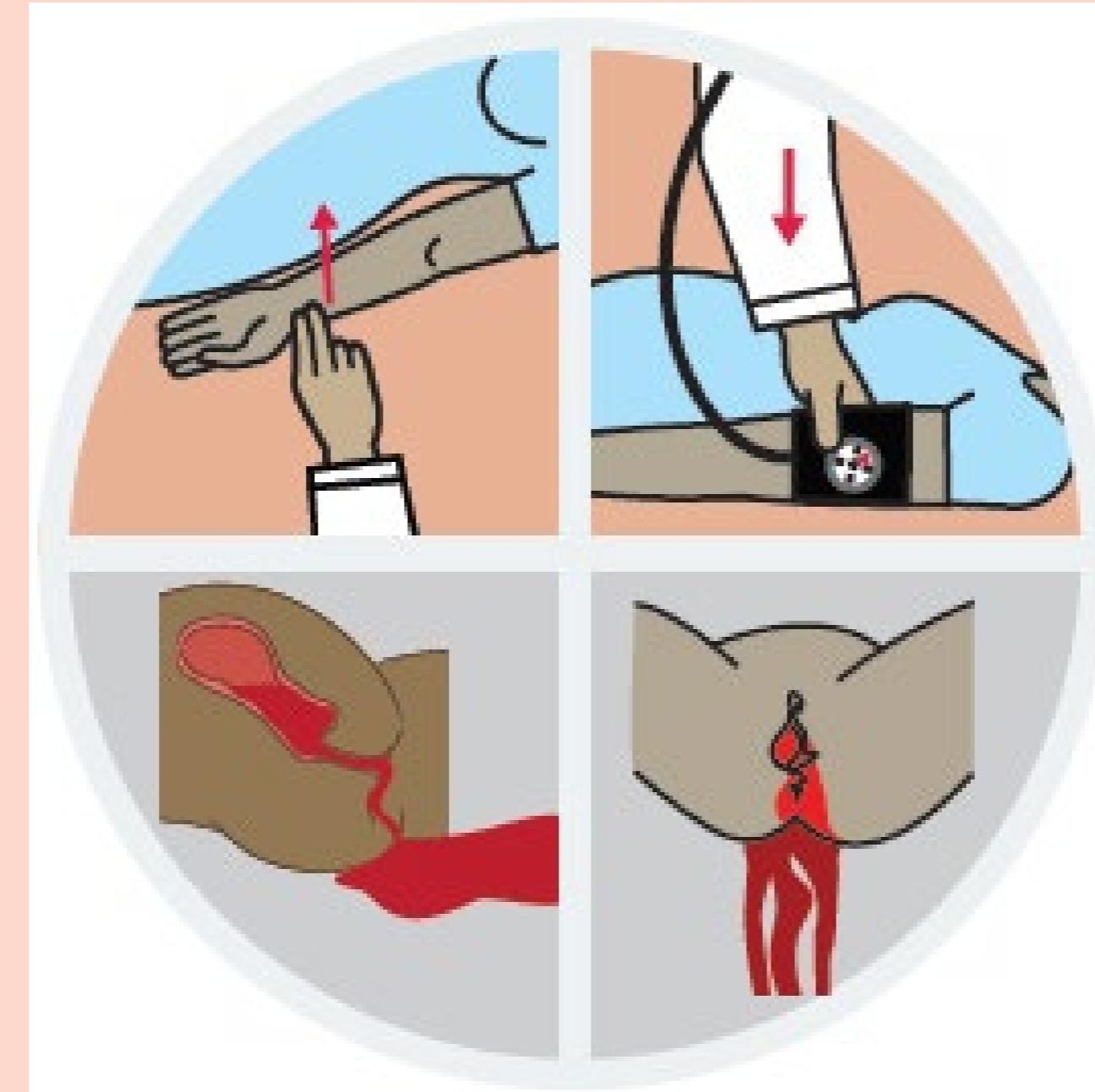


3 Triggers to begin the WHO 1st response bundle for PPH (MOTIVE)



P B

L



P B

L



P C

PPH

Performance Expectation

Identify PPH in a timely manner.

Key points

- Remember: A woman with anemia could drop her blood pressure or become tachycardic with very little blood loss.
- The timely decision to begin the MOTIVE intervention can make the difference between the woman surviving or dying from PPH.

There are three triggers to begin the first response bundle of interventions for PPH:

- Your clinical judgment that she is having PPH
- 300mL or more of blood loss + one additional concerning sign
- 500mL or more of blood loss

Knowledge and Skills

To save lives, ACT QUICKLY to begin the MOTIVE bundle as soon as PPH is diagnosed! There are three ways that will alert you to diagnose PPH and “trigger” the MOTIVE bundle.

- 1 **The first way to diagnose PPH and trigger the bundle is if 500 mL of blood has been lost. This is the definition of PPH following vaginal birth.**
 - a Regardless of a woman’s vital signs or the rate of blood flow, if the blood loss reaches the red line, begin MOTIVE!
2. **A second way to diagnose PPH and trigger the bundle is if 300 mL of blood has been lost AND you note one or more of the following:**
 - a Atonic uterus
 - b Heavy blood flow or large clots or constant trickle of blood
 - c History of severe anemia
 - d Changes in vital signs:
 - i Increasing pulse rate (>100 bpm or an increase of 20 bpm)
 - ii Decreasing systolic BP (<100 mmHg or a decrease of 20 mmHg)

3 **The third way to diagnose PPH is clinical judgment. Clinical judgment is very important! If you suspect PPH for any reason as you have done in the past, begin the bundle. Your clinical judgment may include risk factors for PPH. Some signs that might alert you to PPH could be:**

- Atonic uterus
- Heavy blood flow or large clots or constant trickle of blood
- Changes in vital signs:
 - *Increasing pulse rate (>100 bpm or an increase of 20 bpm)*
 - *Decreasing systolic BP (<100 mmHg or a decrease of 20 mmHg)*
- Concern that some women are at high risk for PPH (previous PPH, known anemia, twins, prolonged labor, pre-eclampsia, breech, infection, retained placenta and others)

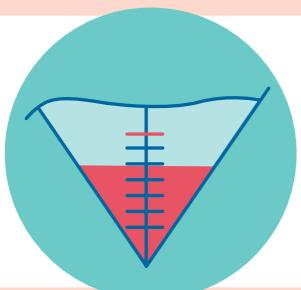
Use a tool to measure blood loss such as a drape. For all women giving birth, routine objective measurement of blood loss is recommended to improve the detection and allow for prompt treatment of PPH.

NOTE: The most important point to remember is that it is better to give the MOTIVE bundle as soon as your clinical judgement makes you suspect PPH rather than waiting and risking that the woman loses more blood and goes into shock.

MODULE 18

DETECT AND TREAT PPH EARLY

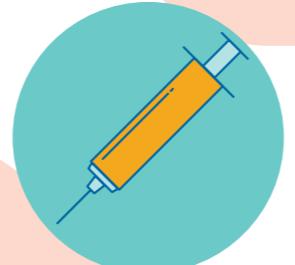
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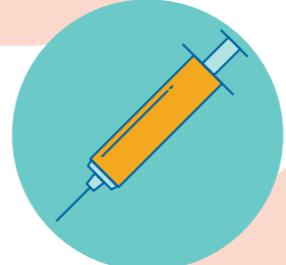
M



O



T



IV



E



Early
detection

Massage
of uterus

Oxytocic
drugs

Tranexamic
acid

IV fluids

Examination
and
Escalation

Performance Expectation

Apply the bundle approach to managing PPH.

Key points

- Early identification of PPH is the key to reducing morbidity and mortality from PPH.
- In the bundle approach to managing PPH, once a diagnosis of PPH is made,
- regardless of the cause:
 - ALL the 5 interventions in the bundle
 - should be performed "simultaneously" **WITHIN 15 MINUTES!**
 - ALL the interventions must be
 - performed, regardless of whether it appears that there is improvement after any of the interventions.
 - The mnemonic M-O-T-IV-E helps providers remember the five interventions but should not be
 - considered the recommended order in which the interventions must be given.

Knowledge and Skills

- **Early detection** - this depends on accurate and early identification of women with PPH. This requires monitoring blood loss with an objective measure such as a blood collection drape. A woman's survival depends on early identification and initiation of treatment for PPH.
- Act fast! Once PPH is diagnosed, ALL women should receive the 5 interventions within 15 minutes
 - If you are alone, you will have to do all the interventions by yourself.
 - If you have assistants, assign interventions to team members and make sure all the interventions are done.
- **Massage the uterus** - Atony is the most common cause of PPH and massaging the uterus will stimulate a contraction. It may also expell clots that remain in the uterus, preventing it from contracting.
- **Oxytocic drugs** - Uterotonic drugs will stimulate uterine contractions reducing blood loss from atony.
- **Tranexamic acid** - An antifibrinolytic drug that has been shown to be effective for reducing maternal death due to PPH.

- **IV fluids** - To replace blood loss. IV access is also essential for giving medications - e.g. IV oxytocic drugs and TXA.

- **Examine to find the cause of bleeding.** Check:
 - *the bladder to see if it is distended*
 - *the perineum and vagina for tears*
 - *for clots to evacuate (the height of the fundus and clots in the vagina)*
 - *the placenta and membranes for completeness*

- **Escalate!** if needed. Escalate if:
 - She is still bleeding and you cannot identify a cause OR you are unable to manage the cause

OR

- You have identified and managed the cause and she continues to bleed.

The concept of a bundle was developed to help providers more reliably deliver the best possible care to save lives.

All components of a bundle are given in the shortest possible time, without waiting for a response to individual interventions.

The mnemonic "MOTIVE" helps providers remember the five interventions but should not be considered the recommended order in which the interventions must be given.

MODULE 19

If triggers, treat PPH !

Call for the emergency trolley or case

Sessional Goals:

At the end of this session, participants would be able to recognize the need to call for help, get the emergency trolley and conduct a rapid

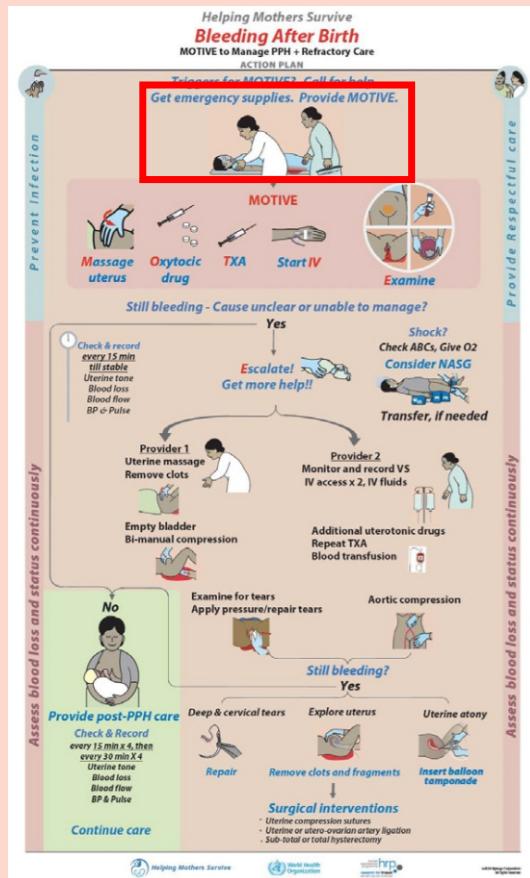
Learning Objectives

- To strengthen the capacity of participants to put in place a coordinated team work in the management of PPH and save lives

Training Methods

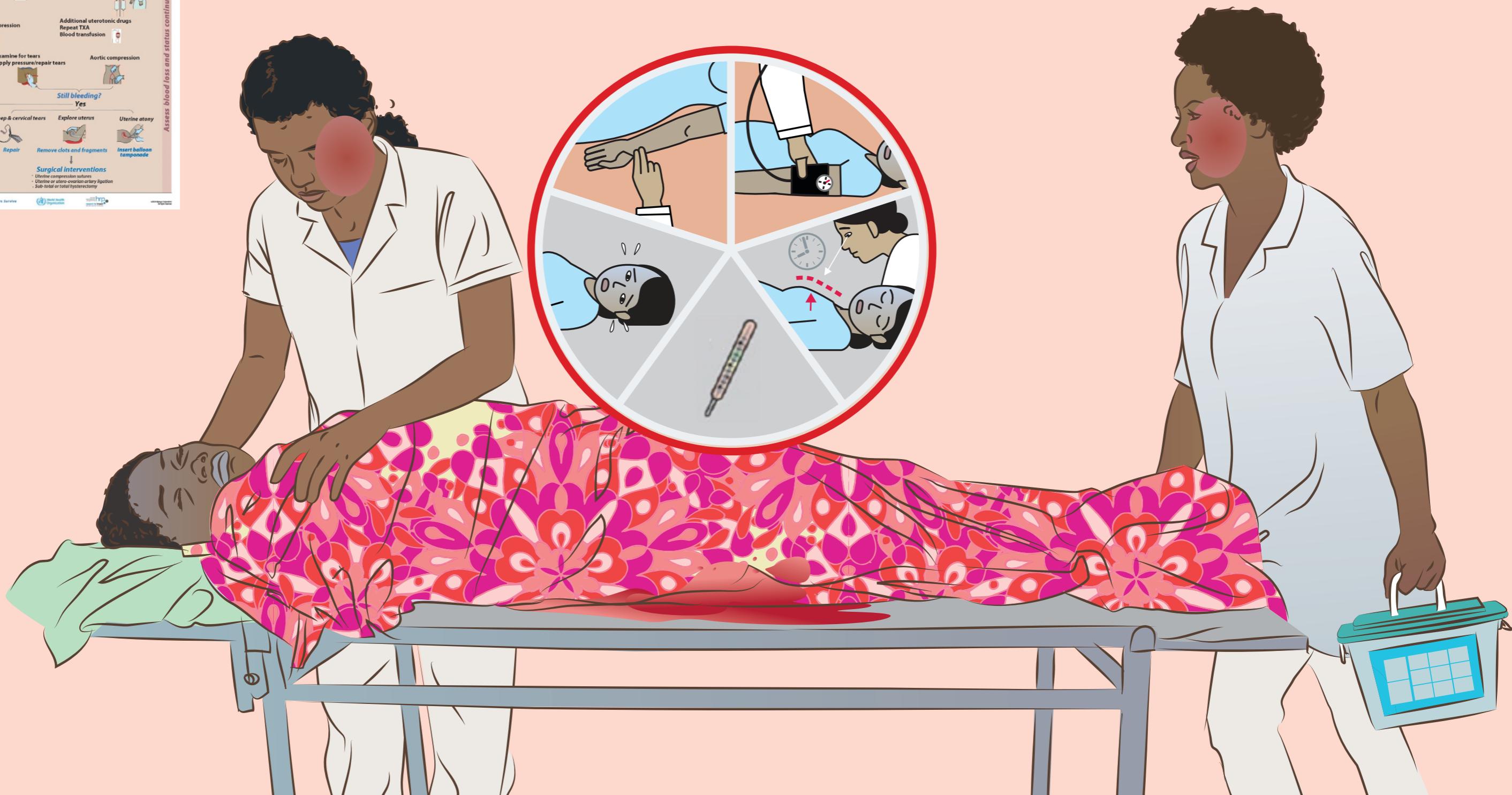
- Didactic
- Discussion
- Demonstrations
- Coordinated drills
- Questions and answers

Timeline: 20 Minutes



If triggers, treat PPH

Call for help Call for the emergency trolley or carry case



Performance Expectation

Call for help and get the emergency Trolley. Conduct a rapid assessment.

Key points

- PPH is a life-threatening emergency. Act fast!
- Coordinated teamwork is essential to manage PPH and save lives
- A baseline assessment of the woman will help to identify her clinical condition when PPH is diagnosed and how the woman is responding to care.
- A woman may present with heavy bleeding in one of 3 situations: immediately after you've assisted her birth, some time after birth when you assume responsibility for her care, or she may arrive from home bleeding heavily. These assessment and further management steps apply in all cases.

Blended Learning

If you can watch videos, watch:

▷ [Managing the third stage of labor.](#)

Key Knowledge and Skills

Regardless of how she came to you, shout for help, do a rapid assessment and begin treatment for PPH if any of the triggers is present:

- Your clinical judgment that she is having PPH
 - 300mL or more of blood loss + one additional concerning sign
 - 500mL or more of blood loss
- Also check the woman's general condition, level of consciousness, presence of anxiety and/or confusion, blood loss, color, and temperature of skin.
Take a "quick pulse": count the heartbeat for 6 seconds and multiply by 10 to get the pulse rate.

Signs of shock include:

Fast, weak pulse (≥ 100 beats per minute), OR

Low blood pressure (systolic BP < 100 mmHg).

A woman with shock may also have:

Rapid breathing (over 30 breaths per minute or more)

Pale skin, especially around the inner eyelids, mouth, or palms

- Sweating, or cold and clammy skin
- Changes in mental state: anxiety, confusion, or unconsciousness
 - Scanty urine output (less than 30 ml per hour)

Agitation, confusion or unconsciousness, weak pulse, and very low BP are signs of late shock.

Communicate with the woman and reassure her. Tell her what you are doing and why. Anticipate shock if a woman has experienced heavy bleeding, whether she delivered at home or in a facility. Ensure airway is open and woman is breathing. If not breathing, start resuscitation. If breathing, start oxygen at 6 - 8 L/minute.

Continuously assess for shock. Check and record BP, pulse and blood loss at least every 15 minutes until the woman is stable as indicated by:

- Pulse 90 beats/minute or less
- Systolic BP 100 mmHg or higher
- Urine output 30 ml/hour or more
- Less confusion or anxiety

MODULE 20

Start 1st response bundle for PPH

Sessional Goals:

At the end of this session, participants would be able to perform all intervention of the first response bundle when PPH is diagnose

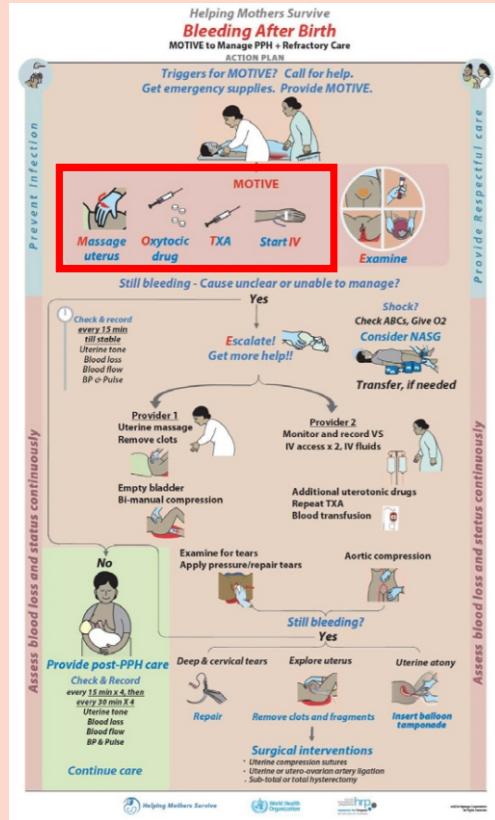
Learning Objectives

- To strengthen the capacity of participants to implement all the first response bundle interventions within 15 minutes

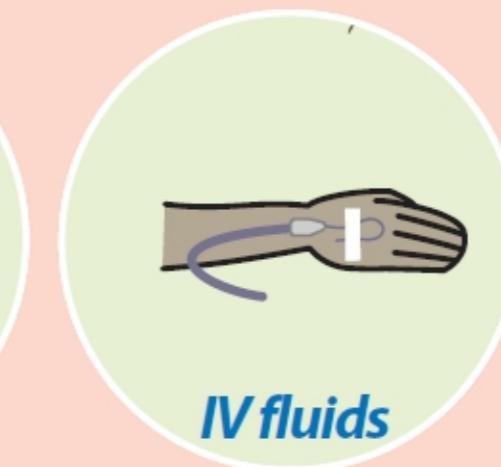
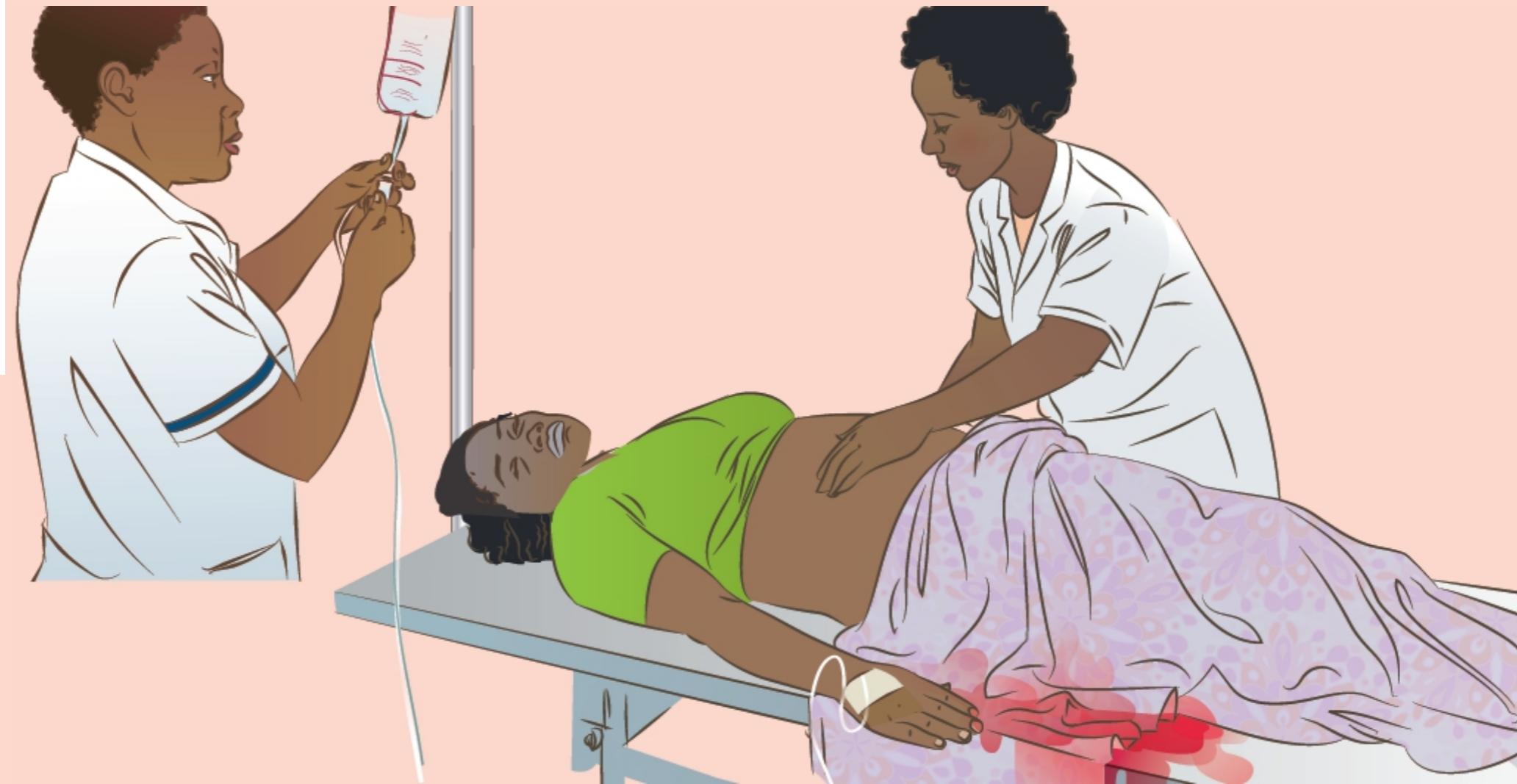
Training Methods

- Didactic
- Discussion
- Demonstrations
- Coordinated drills
- Questions and answers

Timeline: 20 Minutes



Start 1st response bundle for PPH



Performance Expectation

Perform all interventions of the 1st response bundle when PPH is diagnosed.

Key points

- ALL women with PPH should receive ALL interventions of the 1st response bundle within 15 minutes.
- IV oxytocin alone is the uterotonic drug of choice for the treatment of PPH. If IV oxytocin is unavailable, or if the bleeding does not respond to oxytocin, use IV/IM ergometrine or misoprostol.
- Fluid replacement is an important component of resuscitation for women with PPH.
- If within 3 hours of birth, TXA should be used in all cases of PPH, regardless of whether the bleeding is due to genital tract trauma or other causes.
- It is important to identify and manage the cause after having delivered the MOTIVE interventions.

Knowledge and Skills

Start the 1st response bundle

regardless of the cause of PPH.

Team members can perform several tasks at once as directed by the team leader.

If you are alone, you will need to perform all the interventions. If you have help, assign the other interventions to the providers who have come to help you., including checking the woman's vital signs at least every 15 minutes.

To manage PPH:

- Shout again for help if team members have not come.
- **Massage the uterus to get it to contract and to expel blood and clots.**
- Watch the woman's bleeding while you massage to see if bleeding slows as the uterus contracts.
- While doing massage, this is a good time to notice if the bladder looks or feels distended. A full bladder may prevent the uterus from contracting.
- Continue massaging the uterus until it is well contracted. **When you are providing care alone, if you have given massage for 1 minute, quickly move to giving a uterotonic drug.**

Oxytocic drugs - Uterotonic drugs will stimulate uterine contractions.

- **Begin oxytocin IV infusion: Infuse 10 IU in 500 mL over 10 minutes or at fastest flow rate possible.**
- o If an infusion is already running, replace with a new bag of crystalloid IV fluids with oxytocin 10 IU/500 mL and infuse as rapidly as possible.
- o When the first 500mL with 10 IU oxytocin has infused, add 20 IU oxytocin to 1L of crystalloid and infuse over 4 hrs.

If there is a delay in starting the IV infusion, give oxytocin 10 IU by IM injection OR 800 mcg of misoprostol sublingually until the oxytocin IV infusion can be started.

Give 1g TXA in 10 mL by IV over 10 minutes. Faster administration can cause hypotension. TXA can be given in the same line where oxytocin is being infused.

Give a second dose of TXA 1g IV over 10 minutes if: bleeding continues 30 minutes after the first dose OR bleeding restarts within 24 hours of completing the first dose.

- Do not begin TXA if the birth was more than 3 hours ago.
- Do NOT give TXA to women with a contraindication to antifibrinolytic drugs. This includes a known thromboembolic event during any pregnancy, labor, or birth, renal failure, history of convulsions or hypersensitivity to TXA.
- Adverse events are rare, but could include nausea, diarrhea, or deep vein thrombosis (DVT).

Once you have given TXA, document this together with type of IV fluids and rate, and oxytocic drug and dose.

IV fluids - To replace blood loss. IV access is also essential for giving medications - e.g. IV oxytocic drugs and TXA.

If an IV access is not in place, start at least one IV using a 18-gauge cannula or the largest available.

- Before infusing fluids, collect blood for hemoglobin and cross- match if you can readily do this.

Note: Getting the blood samples should not prevent or delay initiating the MOTIVE interventions. If you are alone or there are difficulties getting the samples before beginning the IV infusion, collect the blood samples as soon as you are able while performing the MOTIVE interventions.

- Consider a second IV line for additional IV crystalloid fluids (NS or LR) depending on clinical condition and local protocols.

REMEMBER:

The mnemonic "MOTIVE" helps providers remember the five interventions but should not be considered the recommended order in which the interventions must be given.

For example, if no IV access is present, placing one quickly will speed up delivery of oxytocic drugs. And if you have assistance, multiple steps can be done at the same time.

MODULE 21

Examine

Ensure the bladder is empty, evacuate clots, check for tears and check the placenta for completeness

Sessional Goals:

At the end of this session, participants would be able to perform all intervention of the first response bundle when PPH is diagnose

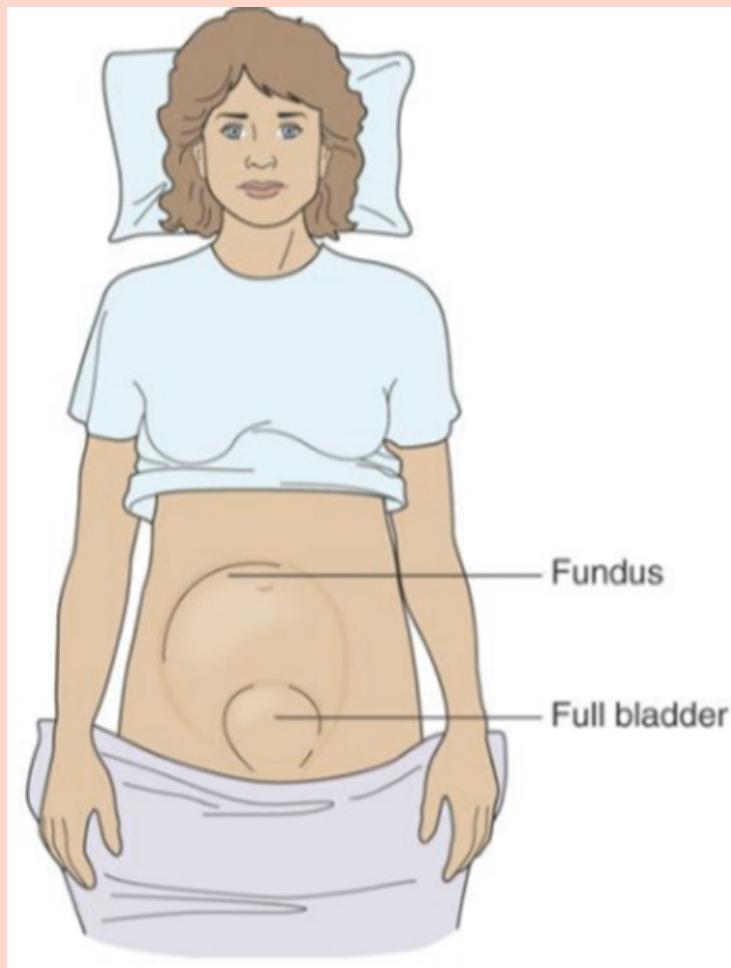
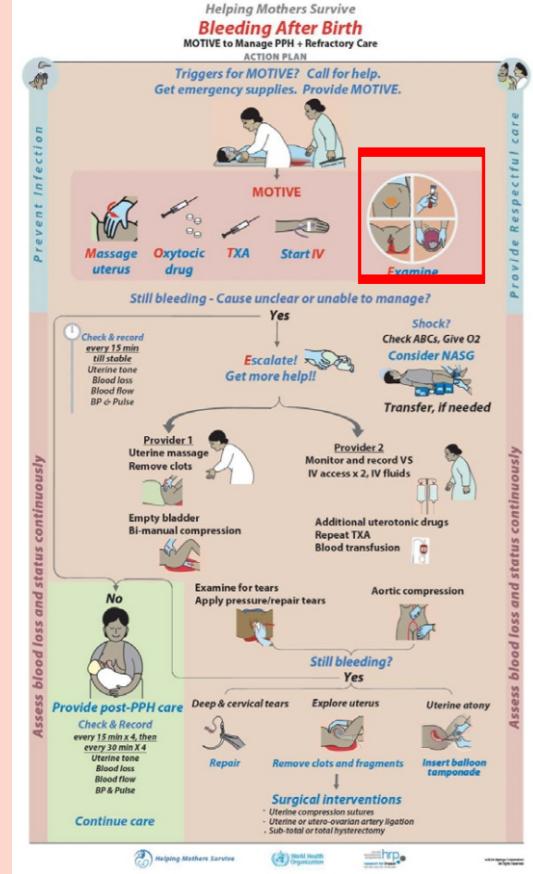
Learning Objectives

- To strengthen the capacity of participants to implement all the first response bundle interventions within 15 minutes

Training Methods

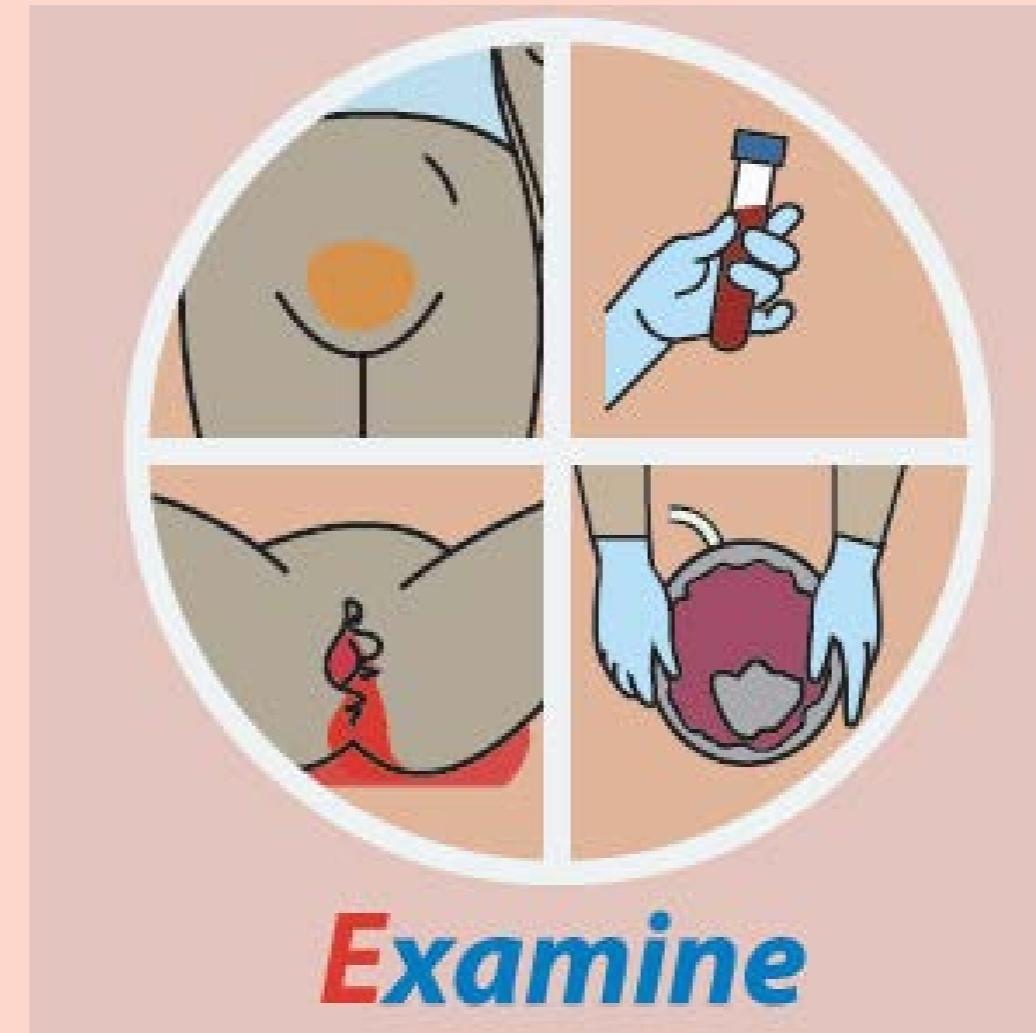
- Discussion
- Demonstrations
- Coordinated drills
- Questions and answers

Timeline: 20 Minutes



Examine

Ensure the bladder is empty, evacuate clots, check for tears and check the placenta for completeness



Performance Expectation

Apply the bundle approach to managing PPH.

Key points

- Early identification of PPH is the key to reducing morbidity and mortality from PPH.
- In the bundle approach to managing PPH, once a diagnosis of PPH is made, • regardless of the cause:
 - ALL the 5 interventions in the bundle
 - should be performed "simultaneously" **WITHIN 15 MINUTES!**
 - ALL the interventions must be
 - performed, regardless of whether it appears that there is improvement after any of the interventions.
 - The mnemonic M-O-T-IV-E helps providers remember the five interventions but should not be considered the recommended order in which the interventions must be given.

Knowledge and Skills

- **Early detection** - this depends on accurate and early identification of women with PPH. This requires monitoring blood loss with an objective measure such as a blood collection drape. A woman's survival depends on early identification and initiation of treatment for PPH.
- Act fast! Once PPH is diagnosed, ALL women should receive the 5 interventions within 15 minutes
 - If you are alone, you will have to do all the interventions by yourself.
 - If you have assistants, assign interventions to team members and make sure all the interventions are done.
- **Massage the uterus** - Atony is the most common cause of PPH and massaging the uterus will stimulate a contraction. It may also expell clots that remain in the uterus, preventing it from contracting.
- **Oxytocic drugs** - Uterotonic drugs will stimulate uterine contractions reducing blood loss from atony.
- **Tranexamic acid** - An antifibrinolytic drug that has been shown to be effective for reducing maternal death due to PPH.

- **IV fluids** - To replace blood loss. IV access is also essential for giving medications - e.g. IV oxytocic drugs and TXA.

- **Examine** to find the cause of bleeding. Check:
 - *the bladder to see if it is distended*
 - *the perineum and vagina for tears*
 - *for clots to evacuate (the height of the fundus and clots in the vagina)*
 - *the placenta and membranes for completeness*

- **Escalate!** if needed. Escalate if:
 - She is still bleeding and you cannot identify a cause OR you are unable to manage the cause

OR

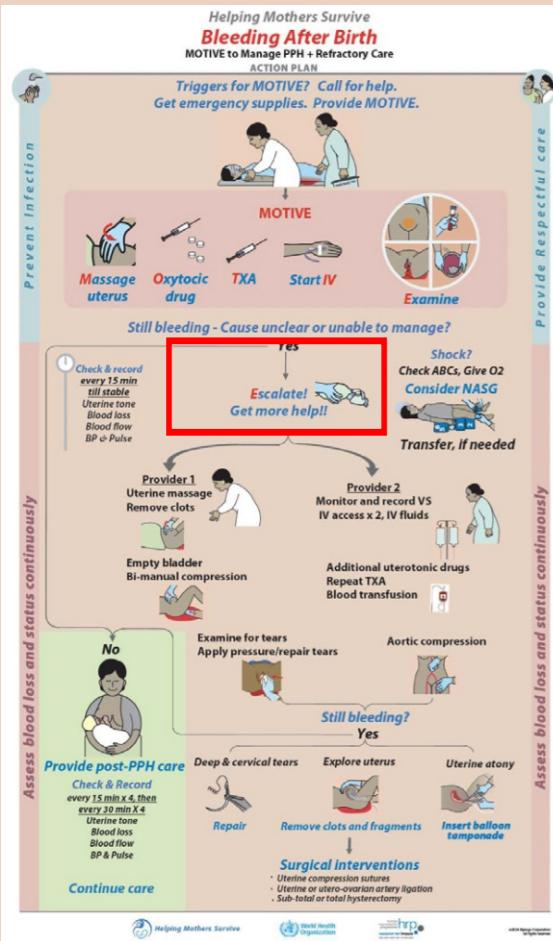
- You have identified and managed the cause and she continues to bleed.

The concept of a bundle was developed to help providers more reliably deliver the best possible care to save lives. All components of a bundle are given in the shortest possible time, without waiting for a response to individual interventions.

The mnemonic "MOTIVE" helps providers remember the five interventions but should not be considered the recommended order in which the interventions must be given.

MODULE 22

Still bleeding - Cause unclear or unable to manage
Escalate – get more help!



Check & record at least every 15 min

Uterine tone
 Blood loss
 Blood flow
 +/- BP
 +/- Pulse



Performance Expectation

Escalate care if:

Bleeding persists after you have performed all interventions in the MOTIVE bundle and in spite of additional specific management for the cause of PPH

OR

Bleeding continues after all interventions in the MOTIVE bundle and you are either unclear about the cause or unable to manage the cause of PPH.

Key points

- When PPH proves to be refractory to the MOTIVE bundle and measures to manage the cause of bleeding, advanced care is essential to save the woman's life.
- PPH that does not respond to the MOTIVE bundle and specific management of the cause is usually due to atony or trauma and may require surgical management.
- If blood clotting abnormality is suspected, correct with FFP or other blood products as necessary.

Communicate with team members using the S-B-A-R communication

- Assign a team leader, usually the most senior provider
- Make sure that someone is assigned to record findings

Knowledge and Skills

- If you have implemented all of the steps of the MOTIVE bundle and you identify a cause that you cannot manage or the woman is still bleeding or showing signs of shock or worsening vital signs, escalate immediately! Call for additional help.
- If the non-pneumatic anti-shock garment (NASG) is available, and you have not used it yet, quickly put it on the woman.
- Transport to a higher facility if needed.
- If bleeding continues □ implement local protocols which may include bi-manual uterine compression, uterine balloon tamponade, additional and/or different uterotronics and surgical management. If it has been more than 30 minutes since TXA was administered, give a second dose!
- If the woman is bleeding but the uterus is well contracted, the placenta is complete, and there are no visible tears, check for cervical lacerations. If this is not in your scope of practice, seek help from a provider who can.
- While you wait for additional help, continue supportive care of the woman. This includes close monitoring, IV fluid resuscitation, and shock management as per local protocols.
- Ensure the ABCs of airway, breathing, and circulation and resuscitate as needed. If you are using the NASG, be sure you monitor the woman's response per local guidance.

Advanced Care Note

Seek advanced care immediately If:

The last E in MOTIVE also stands for escalate. You need to ESCALATE immediately if:

- You have delivered all elements of the bundle and the woman is still bleeding

OR

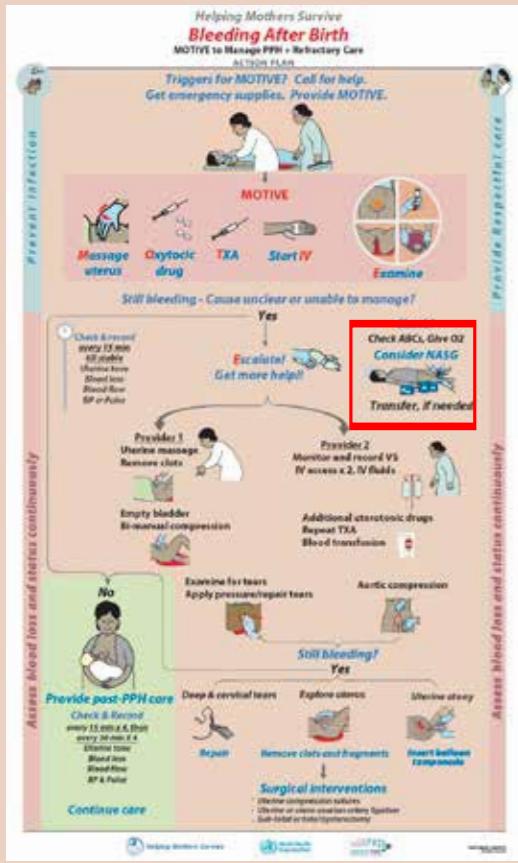
- You have delivered all elements of the bundle, were unable to identify or manage the cause OR the woman is still bleeding

Escalate response immediately and **DO NOT WAIT** for bundle to be completed if:

1. There is brisk, uncontrollable bleeding
2. Objective blood loss is > 1000ml in calibrated drape
3. If the patient has become hypotensive or collapsed
4. Extensive genital tract trauma, including 3rd or 4th degree tear with bleeding. Suture lacerations by skilled provider without delay!
5. Uterine inversion
6. Retained placenta with increased bleeding (MROP by skilled provider without delay!)

MODULE 23

Transfer, if needed



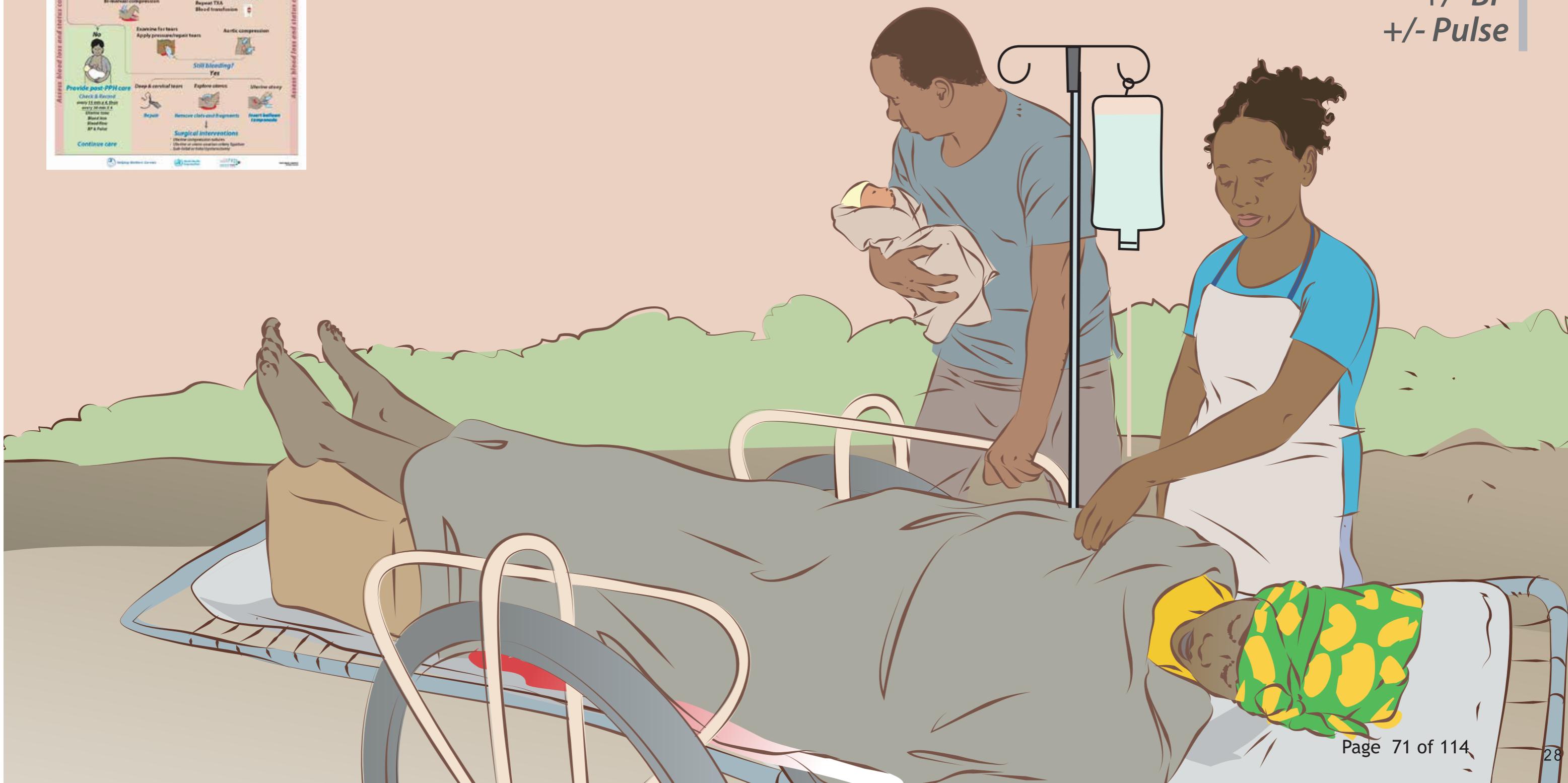
**Check & record at
least every 15 min**

**Uterine tone Blood
loss**

Blood flow

+/- BP

+/- Pulse



Performance Expectation

Promptly seek advanced care anytime the condition worsens for the woman or baby beyond your ability to manage it.

Key points

- **Act fast! If the woman continues to bleed, she may go into shock and die. If you are not in an advanced care facility with access to blood and surgery, emergency transport is necessary.**
- **Delay in getting advanced care is one of the most common reasons women die from PPH.**
- **If bimanual compression was needed to slow bleeding, advanced care is needed even if bleeding has slowed or stopped!**
- **It is better to get help from a senior provider or to transport the woman while she is stable than to wait until it is an emergency!!**
- **Always keep the woman and her baby together and keep them warm during transport.**

Knowledge and Skills

When advanced care is needed:

- Immediately call for help!
- Send staff or family to get advanced care, if available at your facility.
- If advanced care is not immediately available at your facility, the woman and her baby should be transported together to a higher level of care.
 - All providers should be able to describe site-specific transportation plans for the next level of care.
 - Make contact with the hospital or clinic in advance to reduce waiting when the woman arrives.
 - In case of broken vehicles or challenges with roads, have and use a back up plan.
- NEVER leave the woman alone.
- Always keep the woman and her baby together and keep them warm.
- Monitor for any changes in vital signs or bleeding while awaiting a senior provider or during transport.
- Continue to massage uterus as needed.

Continue the IV infusion:

- Maintenance dose of 20 IU IV oxytocin diluted in 1000mL NS/RL over 4 hours
 - IV crystalloid fluids (NS/LR) in addition to the oxytocin infusion if clinically indicated for resuscitation
- Make sure the woman has received the first dose of 1g TXA in 10 mL over 10 minutes, **only if within the first three hours of birth. Give a second dose of TXA if bleeding continues 30 minutes after the first dose OR if bleeding restarts within 24 hours.**

Advanced Care Note

If learners have additional training and authorization to provide more advanced care, they should consider doing so prior or during transport. This may include:

- Suturing 3rd, 4th degree and deep vaginal tears, and cervical tears
- Manual removal of the placenta
- UBT
- Surgical intervention

SEE Resource section for details

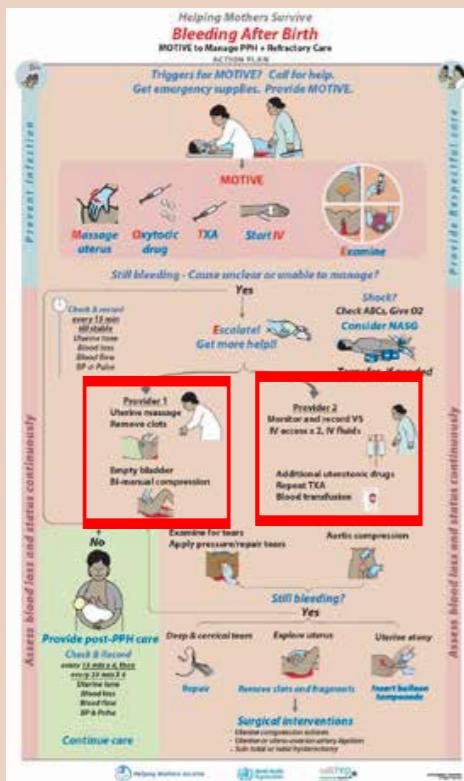
MODULE 24

Check & record at least every 15 min
 Uterine tone
 Blood loss
 Blood flow
 BP
 Pulse

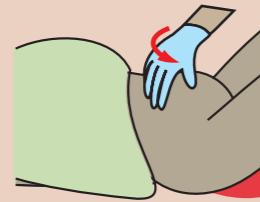


Get more help!!

Assign roles for immediate care



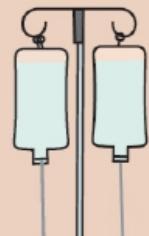
uterine massage
 Remove clots



Empty bladder
 Bimanual compression



Monitor B record S
 I access 2, I fluids



Additional medications
 Blood transfusion



Performance Expectation

Promptly seek advanced care anytime the condition worsens for the woman or baby beyond your ability to manage it.

Key points

- **Act fast!** If the woman continues to bleed she may go into shock and die.
- **Delay in getting advanced care is one of the most common reasons women die from PPH.**
- **Do what you can where you are.** Prioritize managing atony as this is the most common cause.
- **Do not delay care while help is coming.**
- **Always keep the woman and her baby together if at all possible.**

Care must NOT be delayed while help is coming. As help arrives, assign roles. Ideally you should have at least 2 providers; one providing medications, placing IV access, collecting vital signs, while the other provider stays vigilant at the perineum, providing hands on treatment. The most senior provider will lead the team and clinical decision making.

Provider 1:

This is the provider who most likely assisted the birth so is already there. She will be responsible for assessing bleeding, uterine tone and report any response to medication. In addition she will:

- **Remove clots:** Clots, placental fragments, or amniotic sac that remains in the uterus will prevent it from contracting.
- **Massage the uterus:** Anytime the uterus feels soft, and after assessing and removing any clots, the uterus should be massaged. Communicate with the woman what you are doing and why. Let her know that it will hurt so she is ready.
- **Examine for tears:** While assessing for bleeding, examine the perineum and vagina for bleeding tears.
- **Catheterize the bladder:** A full bladder prevents the uterus from contracting. Catheterizing the bladder will help the uterus contract.

Provider 2: The first person to arrive to help will manage the medications.

- **Place a second IV line:** This provides access for crystalloid fluids and additional medications from the 1st IV line.
- **Provide additional uterotonic drugs**
 - If >30 minutes since first does of TXA, repeat TXA 1 gm IV.
 - Maintenance dose of oxytocin 20 IU in 1000cc saline over 4 hours.
 - Misoprostol 800 mcg under the tongue
 - Do NOT give another dose of HSC.

Advanced Care Note

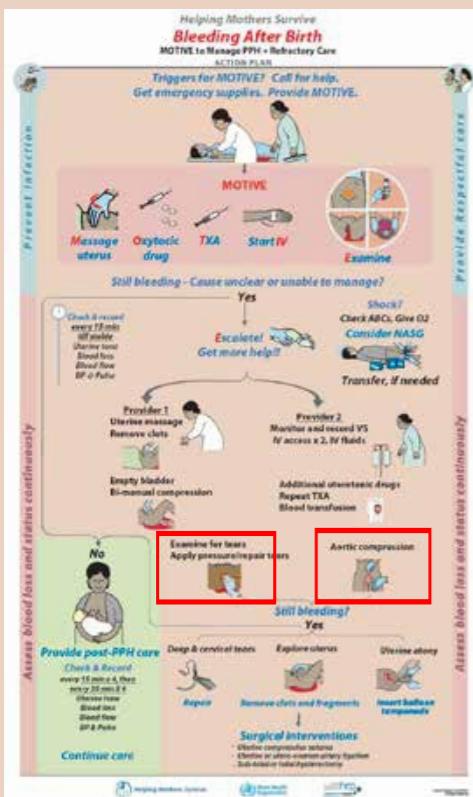
In an emergency, **clear roles and communication** is of the utmost importance as the situation becomes more urgent and complicated. **Remember to use closed loop communication.**

Continue to monitor and record uterine tone, blood flow and loss, BP, and pulse.

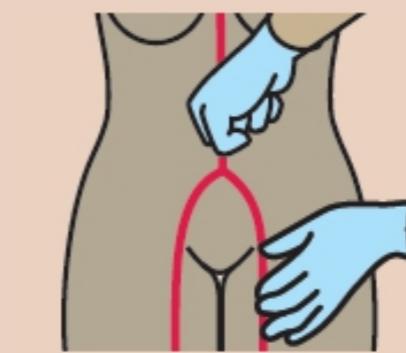
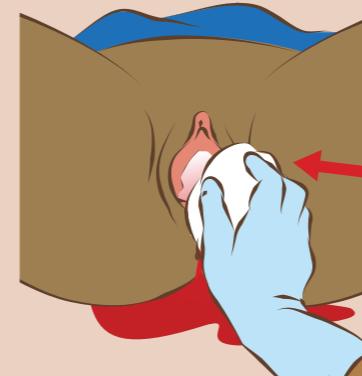
MODULE 25

Assign roles for additional care, as needed

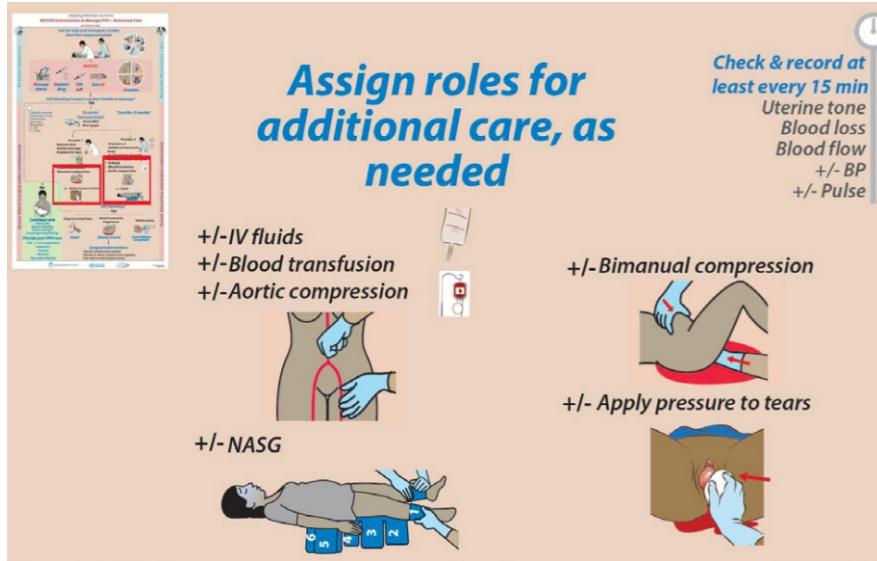
Check & record at least every 15 min
Uterine tone
Blood loss
Blood flow
BP
Pulse



Examine for tears
Apply pressure/repair tears



Assign roles for additional care as needed



Coordinating care and good communication are vital, especially during an emergency. Every team member needs to remember to communicate what they are doing and any effect it may have on the care that others are providing. **Closed loop communication confirms everyone understands.**

Additionally communicate with the woman. Tell her what you are doing and why. Escalated care continues....

Act fast! If the woman continues to bleed, she may go into shock and die. A delay in getting the right care is one of the most common reasons women die from PPH.

Provider 1:

- Bimanual Compression:** With bimanual compression you squeeze the uterus, which compresses the vessels in the uterus, decreasing blood flow. This may express clots. We will review compression techniques later today.
 - Apply pressure to tears:** If tears were identified and you cannot repair them immediately, apply pressure to all bleeding areas.
 - Ongoing: Assess uterine tone and monitor blood loss**
- Continue to **monitor and record** uterine tone, blood flow and loss, BP, and pulse.

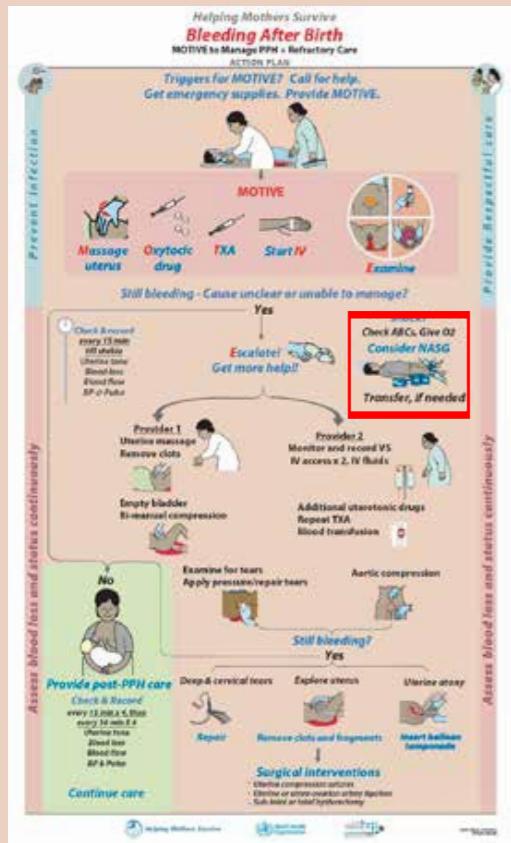
Provider 2:

- Additional IV fluids:** If clinically indicated for additional medications or resuscitation per local protocols.
- Blood transfusion:** If blood is needed, transfuse early
 - If a woman is severely anemic with hemoglobin below 7 g/dl or hematocrit below 20%, arrange a transfusion.
 - Transfusion should take place as soon as the need for blood is identified, and resources are available.
- Consider Aortic compression** When bleeding continues, you can limit blood flow to the uterus by compressing the aorta. This can also support blood flow to the brain by diverting it from the lower parts of the body. We will review compression techniques later.
- Apply NASG** if your facility has one.
- Insert uterine balloon tamponade** if used in your facility.

MODULE 26

If available

Rapidly apply NASG



Performance Expectation

Rapidly apply NASG to women with PPH who are at risk for OR are in shock.

Key points

- The non pneumatic anti-shock garment (NASG) is a wrap that applies pressure to the lower body and abdomen. It forces blood to the heart, lungs, and brain to stabilize a woman in shock.
- Check uterine tone and vital signs; then apply NASG to women with PPH.
- Women can then receive ongoing management, be transported, and survive delays in receiving blood and surgery.
- The NASG does not treat the source of PPH, but buys time to seek treatment.

Blended Learning

If you can watch videos, watch:

► [Using an anti-shock garment.](#)

Knowledge and Skills

Always wear gloves when applying, removing, and cleaning the NASG!

To apply:

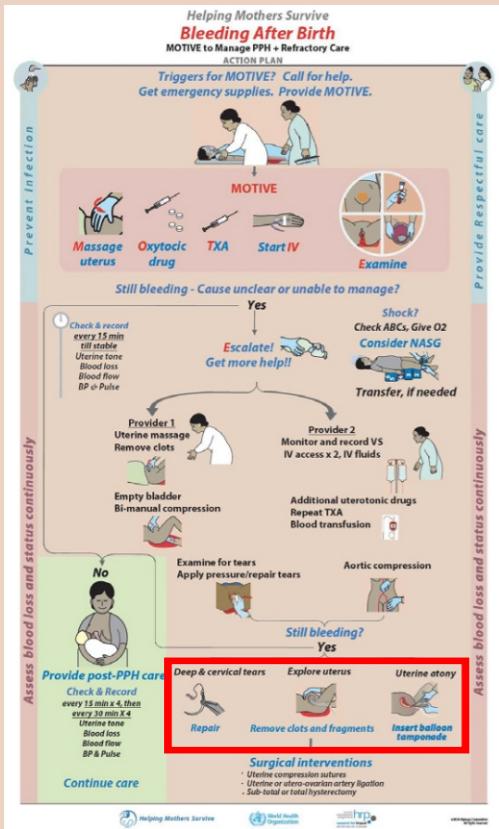
- As you explain what you are doing and why, place the woman on laid open NASG with the top of NASG is at lowest rib and pressure ball over umbilicus.
- Close each segment pair beginning at ankles and ending with 6th segment using 1 OR 2 people. Use as much strength as possible, while ensuring woman can breathe normally.
- To ensure proper fit, place 1-2 fingers under top of each closed segment. Pull up on fabric and let go. You should hear a snapping sound. If no snapping sound is heard, tighten segment.
- Start an IV now (if not already in place) with Ringers lactate or normal saline using a 16 or 18 guage needle.
- **The NASG should remain in place during all procedures (including surgery), and must stay on until the source of bleeding is found and corrected, no matter how long this takes.**

- Monitor for shortness of breath and decreased urine output; signs that the NASG may be too tight. If either occur, loosen 5th & 6th segments.

NOTE: If you suspect shock when a woman arrives in your care, apply the NASG immediately.

To remove:

- Remove NASG if for at least 2 hours :
 - Pulse is 100 bpm or less.
 - Systolic BP is 100mmHg or greater.
 - Bleeding has reduced to normal postpartum rate.
 - Confirm pulse and BP immediately before removal.
- Keep IV running.
- Begin at ankle segments. Open both segments, wait 15 minutes, retake BP and pulse.
- If pulse does not increase more than 20 beats per minute and sBP does not decrease more than 20 mmHg, continue opening each segment pair, waiting 15 minutes and checking vitals before opening next segment.
- If at any time BP or pulse change more than outlined above, rapidly reclose the NASG starting with the last segment that was opened and continue from top to bottom. Look for source of bleeding.



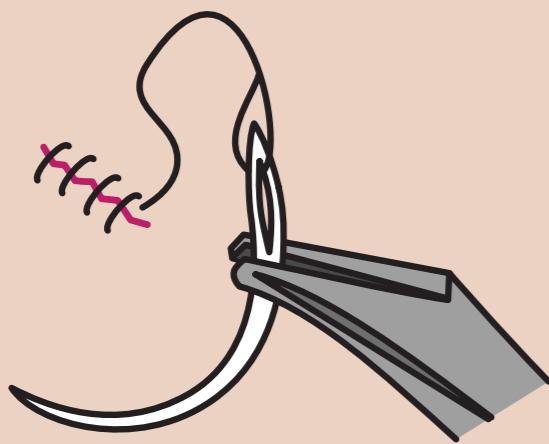
MODULE 27

Still bleeding

Check & record at least every 15 min

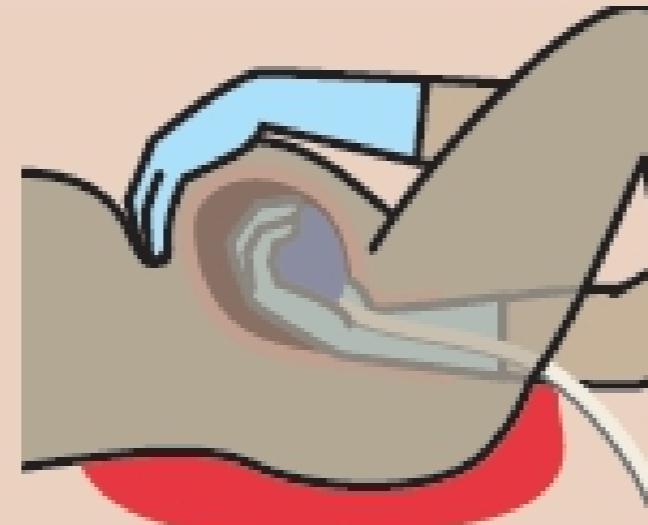
Uterine tone
Blood loss
Blood flow
BP
Pulse

Deep tears & cervical lacerations



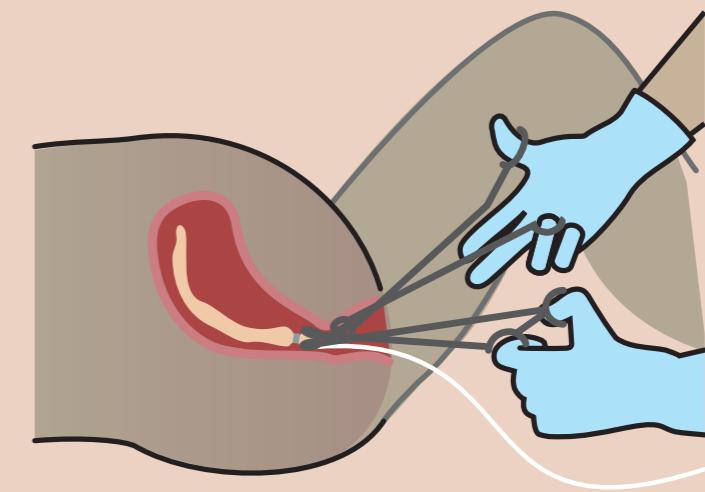
Repair

Remove placental fragments & clots



Manual removal

Uterine atony



Insert balloon

Performance Expectation

Escalate care if:

Bleeding persists after you have performed all interventions in the MOTIVE bundle and in spite of additional specific management for the cause of PPH

OR

Bleeding continues after all interventions in the MOTIVE bundle and you are either unclear about the cause or unable to manage the cause of PPH.

Key points

- When PPH proves to be refractory to the MOTIVE bundle and measures to manage the cause of bleeding, advanced care is essential to save the woman's life.
- PPH that does not respond to the MOTIVE bundle and specific management of the cause is usually due to atony or trauma and may require surgical management.

Knowledge and Skills

- If you have implemented all of the steps of the MOTIVE bundle and you identify a cause you cannot manage or the woman is still bleeding or showing signs of shock or worsening vital signs, **escalate immediately!** Call for additional help.
- If the non-pneumatic anti-shock garment (NASG) is available, and you have not used it yet, quickly put it on the woman.
- Transport if needed.
- If atony continues □ implement local protocols which may include **bimanual uterine compression, uterine balloon tamponade, additional and/or different uterotronics and surgical management.**
- If it has been more than 30 minutes since TXA was administered, give a second dose!
- If the woman is bleeding but the uterus is well contracted, the placenta is complete, and there are no visible tears, check for cervical lacerations. If this is not in your scope of practice, seek help from a provider who can.
- While you wait for additional help, continue supportive care of the woman. This includes close monitoring, IV fluid resuscitation, and shock management per local protocols. Ensure the ABCs of airway, breathing, and circulation and resuscitate as needed. If you are using the NASG, be sure you to monitor the woman's response per local guidance.

Advanced Care Note

Seek advanced care immediately If:

- The woman is still bleeding after all interventions of the MOTIVE bundle have been performed and you cannot identify a clear cause for the PPH.

OR

- The woman is still bleeding after all interventions of the MOTIVE bundle have been performed and you cannot manage the cause of PPH.

OR

- The woman is still bleeding after all interventions of the MOTIVE bundle and specific management for the cause of PPH have been performed.

Advanced Care Provider Note

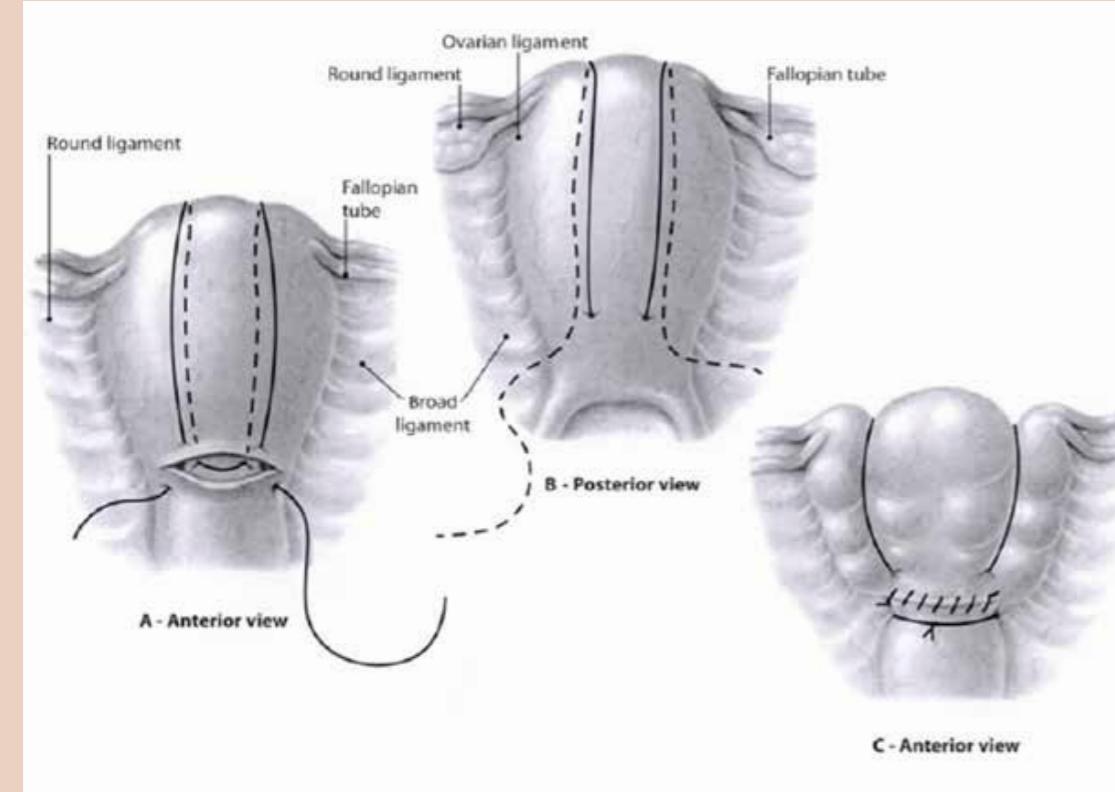
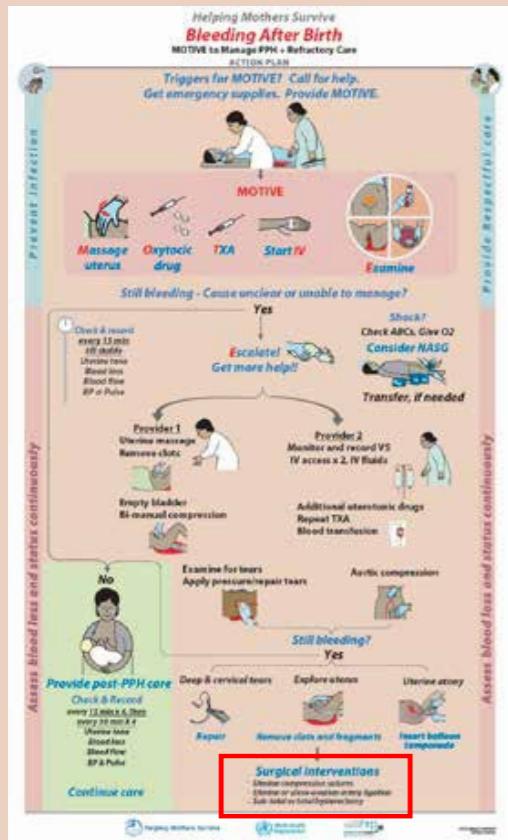
If you have additional training and are authorization to provide more advanced care, you should consider doing so. This may include:

- Suturing 3rd and 4th degree and cervical tears
- Manual removal of the placenta
- UBT

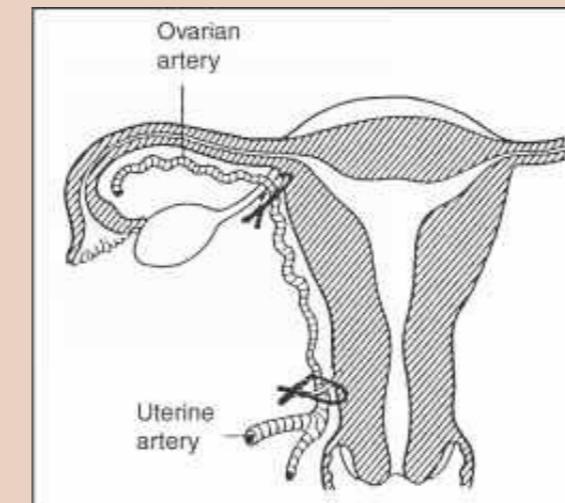
See Resource section for details

MODULE 28

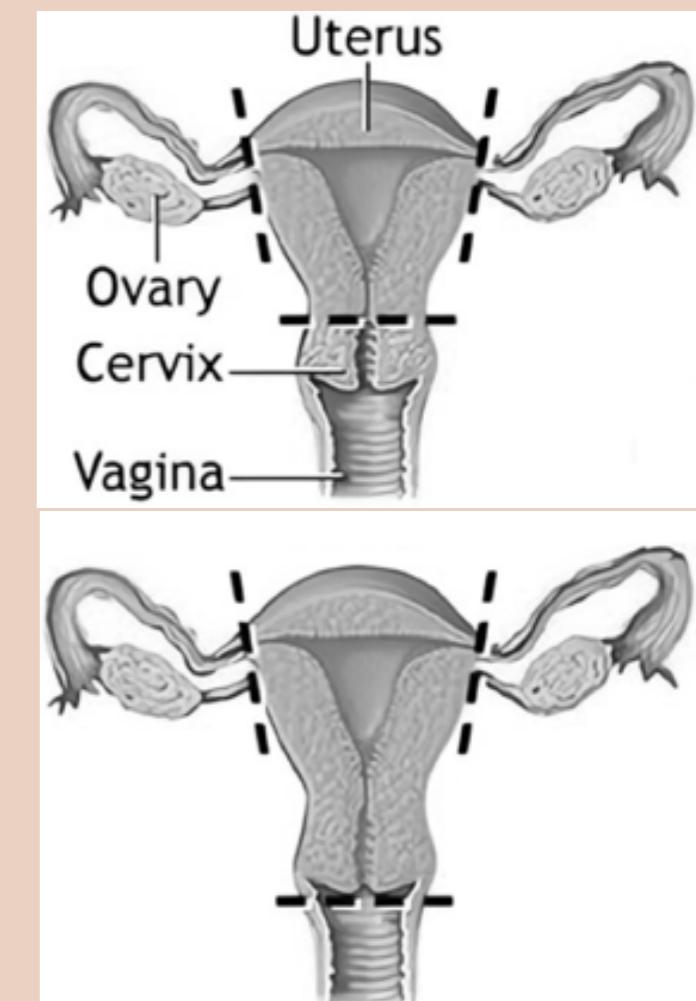
Surgical interventions for uterine atony



Uterine compression sutures



Uterine or utero-ovarian artery ligation

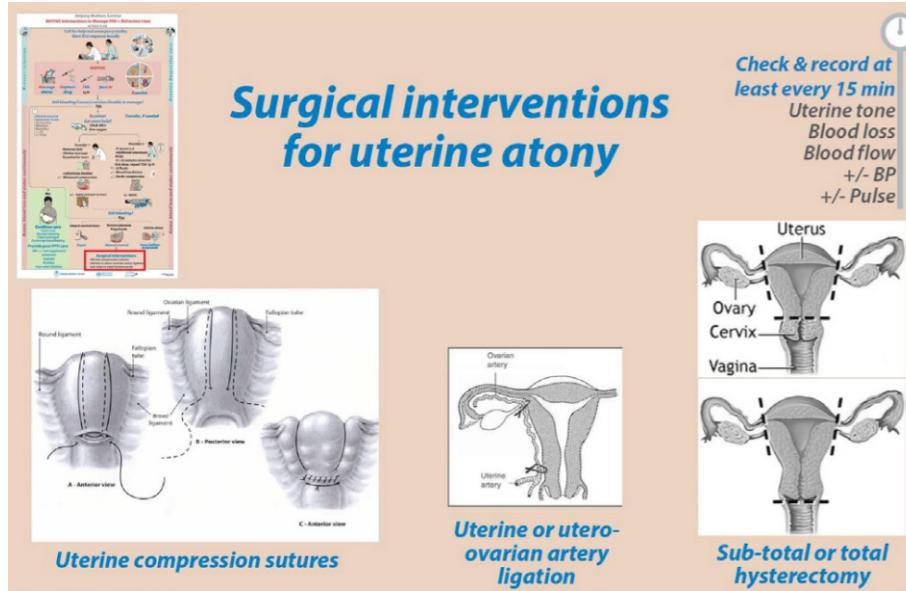


Sub-total or total hysterectomy

Check & record at least every 15 min

Uterine tone
Blood loss
Blood flow
+/- BP
+/- Pulse

Surgical Interventions for uterine atony



Surgical interventions for uterine atony are required when other methods fail. They are crucial to effectively manage refractory PPH and prevent death.

Surgical interventions, like all prior interventions, attempt to address the underlying causes of PPH directly to provide an immediate halt to bleeding and save the woman's life.

Uterine compression sutures

Sutures are placed around the uterus to compress and reduce bleeding from the blood vessels. This helps stabilize the uterus and prevents further blood loss.

Uterine or uteroovarian artery ligation

The surgeon ties off or seals the uterine or uteroovarian arteries, which are major blood vessels supplying the uterus and ovaries. Restricting blood flow to these vessels helps reduce bleeding and stabilize the woman's condition.

Sub-total or total hysterectomy

If other surgical interventions fail, the uterus is partially or completely removed to stop the bleeding. This may be necessary if all other methods to control bleeding have failed or if there are complications such as uterine rupture. While sub-total hysterectomy removes only a portion of the uterus, total hysterectomy removes the entire uterus, effectively stopping further bleeding from the source.

Advanced Care Note

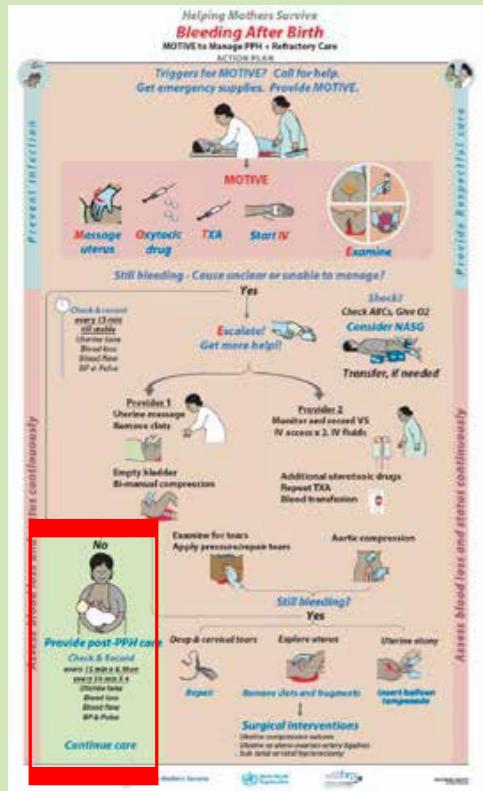
If learners have additional training and authorization to provide more advanced care, they should consider doing so. This may include:

- Surgical intervention

SEE Resource section for details

MODULE 29

Continue care after PPH



Performance Expectation

Give ongoing care for women recovering from PPH, and offer appropriate counseling.

Key points

- Monitor a woman recovering from PPH closely until her condition improves.
- Respectful maternal and newborn care and counseling are essential.
- Women recovering from PPH may need extra support to initiate and continue breastfeeding.

Respectful communication and care:

A PPH can be traumatic for all.

- Make sure you review with the woman and her family what happened.
- Counsel them regarding her next pregnancy- increase risk of PPH and need for facility birth.
- Offer counseling if needed for trauma based care.

Knowledge and Skills

Watch woman closely until she is stable:

- Closely monitor her condition: take vital signs every 15 minutes until she stabilizes.

Once she is stable:

- Adjust IV infusion rate to 1 L in 6 hours.
- Begin decreasing oxygen per local protocol.
- Perform laboratory tests including repeat hemoglobin.

To decide if woman can return home:

- The woman's vital signs, urine output, and mental state must return to normal.
- She must be able to walk around without dizziness and care for herself and her baby.
- If the woman had manual removal of her placenta OR bimanual compression or insertion of UBT, watch closely for infection. Continue or begin antibiotics per local protocol and do not send home if she has symptoms of infection.

Discharge instructions after PPH:

- Explain to the woman and her family that she needs rest as she recovers. Teach the warning signs of anemia, increased bleeding, and infection. Tell her to seek care if she has any of these signs.

- If hemoglobin was less than 7 g/dl, she received a blood transfusion. At discharge iron provide: ferrous sulfate 200mg or ferrous fumarate 300 mg plus folic acid tablets by mouth, 5mg once daily for 9 months.
- If hemoglobin is 7-11 g/dl: Give ferrous sulfate 200mg or ferrous fumarate 300 mg plus folic acid 5mg by mouth once daily for 6 months.
- Provide all other routine postpartum care instructions and family planning counseling.
- Advise her about her diet. It should include iron-rich foods such as meat/poultry/fish, groundnuts, legumes, soy beans, eggs, dark green, moringa and leafy vegetables.
- Have woman follow up for care in 48 hours, 10 days and again in 6 weeks.
- If woman has tears, teach her to wash her perineum at least twice a day (always after bowel movements), change pad frequently, and wash hands after self care.

PEER PRACTICE:

Instructions for practice and quality improvement activities after training

What is □continued□practice□and why is it important?

Training alone is not enough to improve care. We need to add regular practice and other activities to reinforce new knowledge and skills. Practice also develops skills and improves teamwork and clinical decision-making.

Who helps you practice?

One or two people from your facility will be asked to coordinate practice sessions. The coordinator will remind you to practice and will guide the sessions. She/he is a colleague who has learned how to support these activities. Remember though, you and your peers can practice without a coordinator if you don□t have one or they are not available.

Skills practice objectives

The objectives of each session link to key learning objectives. Skills practice will help you refine your skills, especially for skills that are not used often. During all

sessions, demonstrate respectful care, good teamwork, and communication.

Session preparation

Each session plan includes preparation and a list of items needed. Please review the session plans and answer section (page 66) in advance. The answer section includes additional important facilitation guidance. Practice coordinators are responsible for ensuring that everything is ready. Session plans also include instruction about how to run the session. You will need at least two Provider□sGuides (PG) for reference and the Action Plans. Coordinators will coach as needed in a friendly, helpful manner.

Simulating care with skills practice, role plays, and drills

To help practice skills and clinical decision making, skills practice, role plays and drills are used. When conducting these activities, coordinators will:

- Establish a safe learning environment
- Run the activity
- Conduct organized debrief
- Support discussion to improve learning
- Identify and explore gaps
- Help providers transfer what they learned into clinical practice

Debrief

During debrief, coordinators guide providers to analyze how they performed individually and as a team. This gives everyone the chance to learn by carefully reviewing what happened. Coordinators and providers should be constructive and avoid embarrassing each other. The goal is self-reflection and team improvement.

Session 1

Preventing PPH in Third Stage of Labor Role play

20 minutes per provider

Read objectives aloud:

- Perform AMSTL to standard.
- Communicate completely, effectively, and respectfully.
- Ensure referral plan is posted.

Preparation:

- Set out everything in advance.
- Have the referral transport plan and contact information available
- Download the BABC Video Chapter Book onto the computer.

Materials:

- Action Plan
- Computer and projector / BABC Chapter Book.
- Open to PG page 7 and gather all supplies in the equipment list.

Activity: Watch the video ◎ [Managing the third stage of labor](#). Coordinator should explain that only oxytocin and misoprostol are discussed but HSC, ergometrine, and ergometrine/oxytocin fixed dose can also be used.

Activity: Role play with 1 or 2 providers and 1 coordinator.

Coordinator should:

- Wear simulator with baby on stomach and cord still attached. Start with blood tank off.
- Coordinator acts as □client□ and says, □You have just delivered this baby. When I say begin, care for me as you would a woman who has just given birth under your care.□
- When you tell them to begin, have the baby □cry□ and open blood tank to normal once placenta delivers. Turn blood tank off once provider has given appropriate assessment of uterine tone.
- Assess providers and debrief after each provider has practiced (assessment and debrief guidance in □Answers□ section, PG page 66)

Referral planning:

For facilities that refer to another facility for complications, review the referral plan. Be sure the plan is posted in a visible place (near patient care) with contact numbers for the referral hospital and transportation. Consider programming contact numbers into staff and/or facility mobile phones. Ensure staff document all communications made. If there is no transportation plan posted, schedule a meeting to draft and post it.

Session 2

Placenta not delivered after 30 minutes

Role play

10 minutes per provider

Read objectives aloud:

- Correctly manage a placenta not delivered 30 minutes after birth
- **Materials & Preparation:**
- Same as session 1

Activity: Watch video ◎ [Examining the Placenta](#). Coordinator should explain the importance of carefully examining the placenta immediately after birth and any time the woman is bleeding too much.

Activity: Role play with 1 or 2 providers and 1 coordinator.

Coordinator should:

- Wear simulator with baby on the chest and the placenta not delivered but bleeding is normal.
- Coordinator acts as □client□ and says, □You have delivered my healthy baby girl and given me 100 mcg HSC or 10 IU oxytocin IM within one minute and cut the cord at 2 minutes. Please care for me as you normally would. □

- Allow providers to care for you and perform CCT for two simulated contractions. Say, □it has been 30 minutes▫. Keep bleeding normal.
- Assess providers and debrief after each provider has practiced (assessment and debrief guidance in □Answers▫ section, PG page 66)

Session 3

Uterus soft

Role play

10 minutes per provider

Read objectives aloud:

- Correctly manage uterine atony.

Materials & Preparation:

- Same as session 1

Activity: Role play with 1 or 2 providers and 1 coordinator.

Coordinator should:

- Wear simulator with baby on the chest, the placenta delivered, the uterus is soft, and bleeding is moderate. If drape is used have nothing in the drape.

- Coordinator acts as □client▫ and says, □You have delivered my healthy baby girl 5 minutes ago, the complete placenta was delivered with CCT after receiving 100 mcg HSC or 10 IU oxytocin IM within one minute, the baby is doing well, I have no tears. When you check my uterus, it is soft. Please care for me as you normally would."
- Make the uterus hard and reduce bleeding after all interventions were done to manage atony.
- Assess providers and debrief after role play (assessment and debrief guidance in □Answers▫ section, PG page 67)

Session 4

PPH 1st response Practice

15-25 minutes for the team

Read objectives aloud:

- Correctly manage PPH from atony.

Materials & Preparation:

- Simulator
- Delivery supplies from PG page 9
Note: ensure materials are available but do not set them up in advance

Preparation:

Practice with 1 coordinator in teams that mirror typical staffing. Materials available during the drill should be those typically found in facility.

Activity:

Coordinator should:

- Wear simulator with baby and placenta delivered and uterus soft. Have 300 ML blood in receptacle or drape if using.
- Coordinator acts as □client▫ and says, *“I am Mrs. D who delivered normally and received 100 mcg HSC/10 IU oxytocin within 1 minute of birth. Now, 10 minutes later, you have delivered my placenta. Begin to care for me as you normally would.”* When the provider begins, open the blood tank.
- Assess providers and debrief after drill (assessment and debrief guidance in □Answers▫ section, PG page 69.)

Session 5

Skills Practice, Manual Removal of Placenta

10 minutes per learner

Read objectives aloud:

- Identify retained placenta
- Perform manual removal of the placenta.

Materials:

- Computer and projector / BABC Chapter Book
- Action Plans
- Simulator
- Soap or alcohol hand rub, gloves, long gloves, PPE for provider
- IV infusion equipment
- Medication (diazepam, ampicillin and metronidazole), Syringes and vials
- Urinary catheter and bag

Preparation:

- Set out everything in advance of activity. Have the Action Plans, Flipbook, and Provider's Guide available for reference.

Activity: Watch the video ◎

[Manual removal of the placenta.](#)

Activity: Manual removal of the placenta

- Practice with up to 4 providers and 1 coordinator. Activity should be conducted in pairs.

Coordinator should:

- Wear the simulator with the baby delivered, and placenta undelivered.
- Coordinator acts as the □client□ and says, □Today we are going to simulate how to perform manual removal of placenta.□ Do not tell learners how the activity will proceed.
- Then say, □I received 10 IU of oxytocin within 1 minute of delivery. At 30 min, I emptied my bladder and received another 100 mcg of HSC/ 10 IU of oxytocin. CCT failed to deliver my placenta. It is now 60 minutes after delivery. Begin to care for me as you normally would.□
- Providers take turns demonstrating. Stop and coach as needed so they do not continue incorrect actions.
- Assess providers and debrief after each provider has practiced (assessment and debrief guidance in □Answers□ section, PG page 68).

Session 6

Integrated Drill

20 □ 25 minutes per team

Read objectives aloud:

- Provide quality care for women in shock
- Reinforce team roles during an emergency

Preparation:

This is a □surprise□ drill that coordinator will plan in advance with facility management. Practice with 1 coordinator in teams that mirror typical staffing. Materials available during the drill should be those typically found in facility.

Activity:

- Coordinator wears simulator and acts as a □client□. Set up simulator without baby or placenta. Start with blood tank open, and cervical ribbon closed around the cervix. If using drape, have 300mL in the funnel.
- Coordinator acts as the □client□ and says, □I am 21 years old. I just had my second baby at home so quickly that I wasn't able to have anyone with me but my mother. Everything seemed normal until the placenta delivered about 2 hours ago and I started to bleed heavily. I now feel weak and confused. My mother brought me here because the bleeding will not stop. Please help me!□

- Assess providers and debrief after drill (assessment and debrief guidance in □Answers□ section, PG pages 68-69.)

Session 7

Integrated Drill

20 □ 25 minutes per team

Read objectives aloud:

- Provide quality care for women with PPH.
- Reinforce team roles during an emergency

Preparation:

This can be a □surprise□ drill or regular practice session. Practice with 1 coordinator in teams that mirror typical staffing. Materials available during the drill should be those typically found in facility.

Activity:

Activity:

- Coordinator wears simulator and acts as a □client□. Set up simulator without placenta attached and be holding the newborn. Start with blood tank open.
- Coordinator acts as the □client□ and says, ***"I gave birth 4 hours ago and just called you because I am passing large clots the size of a lemon, am soaking a pad every 5-10 minutes. Please help me!"***
- Assess providers and debrief after drill (assessment and debrief guidance in □Answers□ section, PG pages 69.-70)

Session 8

Integrated Drill

20 □ 25 minutes per team

Read objectives aloud:

- Provide quality care for women with PPH
- Reinforce team roles during an emergency

Preparation:

Practice with 1 coordinator in teams that mirror typical staffing. Materials available during the drill should be those typically found in facility.

Activity:

- Coordinator wears simulator with baby and placenta delivered, blood collection drape with just less than 500 mL of blood.
- Acts the □woman□ and says, ***"I am Mrs. T who had a spontaneous vaginal birth and received 10 IU oxytocin within 1 minute of birth. You delivered the placenta 30 minutes later. I have an IV line."***
- Open the blood tank.
- Say, ***"Show me how you will care for me"***.
- Assess providers and debrief after drill (assessment and debrief guidance in □Answers□ section, PG page 70.)

SESSION ANSWERS

Coordinator guidance during activity:

Results for assessments and instructions for the PPC are in blue. The PPC should only share the results if the provider□ conducts the related assessment during a role play/drill.

Session 1: Preventing PPH

Notice whether each provider:

- Dries and assesses baby for breathing (*baby is crying*)
- Checks for second baby (*no 2nd baby*)
- Gives uterotonic within 1 minute of birth of the last baby.
- While awaiting delivery of the placenta, removes first pair of gloves if double gloved, or changes gloves
- Cuts cord between 1-3 minutes after birth
- Correctly performs controlled cord traction with counter traction (only during contractions)
- After placenta delivers, checks uterine tone and massages if needed (*uterus is hard*)
- If using blood measurement tool, place now.
- Checks placenta for completeness (*placenta is complete*)
- Checks bleeding (*bleeding is normal*)
- Checks for tears (*no tears*)

- Rechecks uterine tone (*uterus is well contracted*)

- Teaches the woman how to check uterus, massage if soft. Tells her to call if uterus is soft or bleeding too much.
- Communicates respectfully throughout

Coordinator should ask during debrief:

- How do you think it went? How did you feel?
- Regarding assessment, what information did you gather and what else might you ask/assess?
- What did you do? Why?
- Do we routinely attempt to prevent PPH as we learned in BABC? If not, why? How can we encourage actions to prevent PPH at all births?
- What is something you learned that you might use with a real client? What could be improved?
- Is our oxytocin supply kept cool to preserve drug quality?

Session 2: Placenta not delivered after 30 minutes

Coordinator guidance during activity:

Release placenta only if providers check the bladder, repeat oxytocin, and continue CCT. Keep blood tank off.

Notice whether provider:

- Does not need advanced care yet because woman is not bleeding, only 30 minutes have passed

- Encourages woman to empty her bladder (*bladder is not distended*)

- Gives/repeats oxytocin 10 IU IM (not misoprostol or any other uterotonic)

- Repeats CCT

- Delivers placenta appropriately

- Checks uterine tone and massages if soft (*uterus is well contracted*)

- Checks placenta for completeness (*placenta is complete*)

- Checks bleeding (*bleeding is normal*)

- Checks for tears (*no tears*)

- Rechecks uterine tone (*uterus is well contracted*)

- Teaches the woman how to check uterus, massage if soft. Tells her to call if uterus is soft or bleeding too much.

- Communicates respectfully throughout

Coordinator should ask during debrief:

- How do you think it went? How did you feel?
- Regarding assessment, what information did you gather and what else might you ask/assess?
- What did you do? Why?
- What is something you learned that you might use with a real client?
- What could be improved?

Session 3: Uterus soft

Coordinator guidance during activity:

Make the uterus soft. Open the blood tank for heavy blood loss. Firm uterus and slow bleeding only when uterotonic is repeated.

Notice whether providers perform the following:

- Massage soft uterus and assesses bleeding (*uterus stays soft and bleeding is moderate*)
- Checks bladder (*bladder is full*)
- Helps the woman empty her bladder (*woman is able to void*)
- Rechecks uterine tone (*uterus is soft*)
- Continues massage
- Gives a treatment dose of 10 units oxytocin by IM/IV OR 800 mcg misoprostol under the tongue. DOES NOT give carbetocin/HSC.
- Checks BP and pulse (*BP 132/78 mmHg, pulse 82 bpm*)
- Rechecks uterus (*uterus is now hard*) and bleeding (*turn off blood tank*)
- Explains what has happened to the woman.
- Teaches the woman how to check uterus, massage if soft. Tells her to call if uterus is soft or bleeding too much.
- Communicates respectfully throughout

Coordinator should ask during debrief:

- How do you think it went? How did you feel?
- How did communication with both the team and the woman look?
- What did you do and why?
- What is something you learned that you might use with a real client? What could be improved?
- Who is authorized to perform bimanual compression in your facility?

Session 4: PPH Drill

Coordinator guidance during activity:

Close blood tank and contract uterus only after MOTIVE interventions have been performed. Only give information if a parameter is checked.

Notice whether providers perform the following:

- Massages soft uterus and assesses bleeding (*uterus stays soft and bleeding is moderate*)
- Checks bladder (*bladder is not distended*)
- Rechecks uterine tone and assesses bleeding (*uterus is soft and bleeding is heavy*)
- Continues massage
- Calls for help
- Gives oxygen if available

- Does a rapid assessment (*BP 102/64 mmHg, pulse 108 bpm, respirations 24/min, alert and oriented*)
- Organizes support staff, communicates with SBAR and gives tasks to the team members.
- Explains what is happening to the woman.
- Massages the uterus (*uterus is still soft*)
- Starts IV infusion with 10 IU/500 mL NS/LR and infuses as quickly as possible (does not need an additional IV line given vital signs)
- Collects blood for hemoglobin, and cross-matching.
- Gives 1g TXA in 10 mL IV over 10 minutes.
- Examines placenta (*placenta is complete*), checks for tears (*no tears*), and rechecks uterus (*uterus is now well contracted and bleeding is now normal*)
- Checks vital signs (*BP 110/68 mmHg, pulse 92 bpm, respirations 20/min, alert and oriented*)
- Hangs maintenance dose of oxytocin 20 IU/1000 mL NS/LR to run over 4 hours
- Explains what has happened to the woman.
- Teaches the woman how to check uterus, massage if soft. Tells her to call if uterus is soft or bleeding too much.
- Communicates respectfully throughout

Coordinator should ask during debrief:

- How do you think it went? How did you feel?
- How did communication with both the team and the woman look?
- What did you do and why?
- What is something you learned that you might use with a real client?
What could be improved?

Session 5: Manual Removal of Placenta Practice

Notice whether providers:

- Informs woman about what will be done and why.
- Starts IV. Gives diazepam 5 g IV.
- Gives ampicillin with clavulanic acid 625mg IV or 1 g cefazolin IV.
- Puts on PPE, washes hands, puts on long, sterile gloves or improvise with two pairs of regular sterile gloves.
- Holds umbilical cord with a clamp and pulls gently, using the cord to guide hand into the uterus.
- Places fingers of one hand into uterus to find edge of placenta. Moves lateral aspect of hand back and forth in a smooth □sweeping□ motion until placenta separates from uterine wall.

- Withdraws hand, bringing placenta with it. Provides counter-traction abdominally.
 - Gives 20 IU IV in 1 L normal saline over 4 hours.
 - Checks uterine tone and massages if soft (*uterus is well contracted*)
 - Examines placenta for completeness (*placenta is complete*)
 - Checks bleeding (*bleeding is normal*)
 - Checks for tears (*2nd degree tear*)
 - Repairs the tear
 - Rechecks the uterus (*uterus is well contracted*)
 - Explains what has happened to the woman.
 - Teaches the woman how to check uterus, massage if soft. Tells her to call if uterus is soft or bleeding too much.
 - Plans to monitor uterine tone and vital signs every 15 minutes for 2 hours, and then every 30 minutes for the next 4 hours.
 - Communicates respectfully throughout
- Coordinator should ask during debrief:**
- What is something you learned that you might use with a real client?
 - Who is authorized to perform manual removal of retained placenta at this facility?
 - Are necessary medications routinely available and accessible at this facility?

Session 6: Integrated Drill

Notice whether providers perform the following:

- Calls for help
- Does a rapid assessment (*BP 84/58 mmHg, pulse 116 bpm, respirations 32/min, confused, anxious, skin clammy and cool*)
- Organizes support staff, communicates with SBAR and gives tasks to the team members.
- Explains what is happening to the woman.
- Gives oxygen, if available
- Massages the uterus (*uterus is still soft*)
- Starts IV infusion with 10 IU/500 mL NS/LR and infuses as quickly as possible
- Starts an additional IV line of NS/LR given vital signs
- Collects blood for hemoglobin, and cross-matching.
- Gives 1g TXA in 10 mL IV over 10 minutes.
- Examines placenta (*placenta is complete*), checks for tears (*no tears*), checks the bladder (bladder is not distended) and rechecks uterus (*uterus is still soft and bleeding is still heavy*)

- ESCALATES care and begins coordination of emergency transport plan.
- Checks vital signs (**BP 92/60 mmHg, pulse 108 bpm, respirations 28/min,**)
- Continues to massage uterus (**uterus is still soft and bleeding is still heavy**)
- Hangs maintenance dose of oxytocin 20 IU/1000 mL NS/LR to run over 4 hours
- Continues uterine massage
- Initiates bimanual compression explaining to the woman what is happening and what needs to be done.
- Washes hands (or use hand rub) and puts on sterile gloves that reach to the elbow.
- Gently inserts hand into vagina. Moves hand to back of vagina in front of uterus. Places other hand on woman's abdomen and squeezes uterus between hand and fist
- After 5 min▫ slowly releases pressure from abdominal hand and releases fist to see if bleeding has slowed/ stopped. (**stop blood during bimanual, but reopen blood tank when pressure is released to show that bleeding has not stopped**).
- Initiates aortic compression.
- Checks vital signs (**BP 94/62 mmHg, pulse 102 bpm, respirations 26/min**)
- Say, "**It's been 30 minutes since the first dose of TXA.**"

- Gives a second dose of TXA 1g IV over 10 minutes
- Puts on personal protective equipment, washes hands, and puts on sterile gloves.
- Ensures the woman is on a firm surface.
- Applies downward pressure with a fist just above and to the left of the umbilicus.
- With the other hand, palpates the femoral pulse to check effectiveness of compression.
- After 5 min▫ slowly releases aortic compression to see if bleeding has slowed/ stopped (**stop blood**).
- Checks uterine tone and massages if soft (**Contract uterus**)
- Checks vital signs (**BP 98/62 mmHg, pulse 98 bpm, respirations 24/min**)
- Explains what was done and need for close monitoring and evaluation for need for further care and possible transfusion.
- Plans to monitor uterine tone and vital signs every 15 minutes for 2 hours, and then every 30 minutes for the next 4 hours.
- Teaches the woman how to check uterus, massage if soft. Tells her to call if uterus is soft or bleeding too much.
- Communicates respectfully throughout

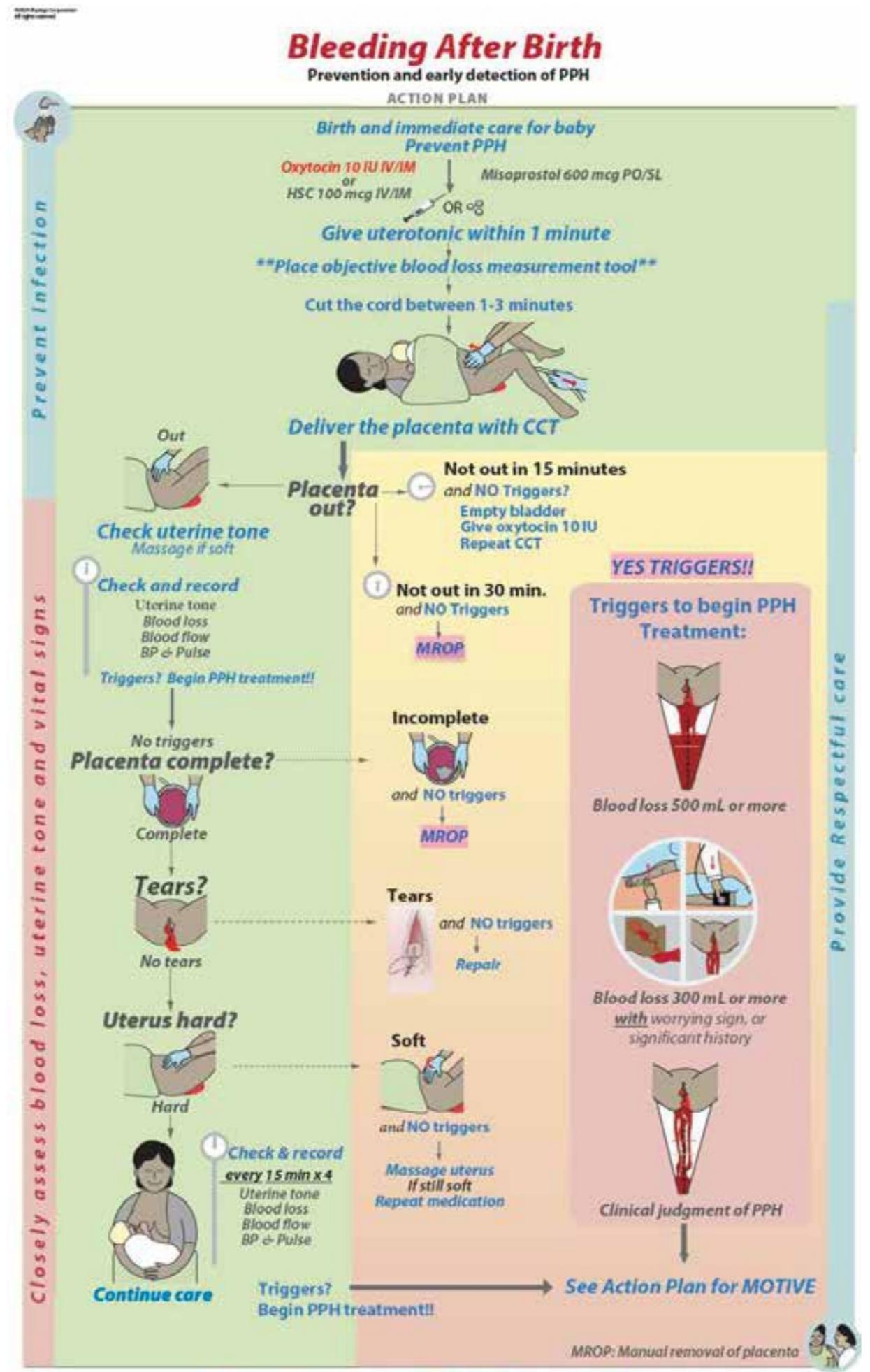
Coordinator should ask during debrief:

- How do you think it went? How did you feel?
- How did communication with both the team and the woman look?
- What did you do and why?
- What is something you learned that you might use with a real client?
What could be improved?

Session 7: Integrated Drill

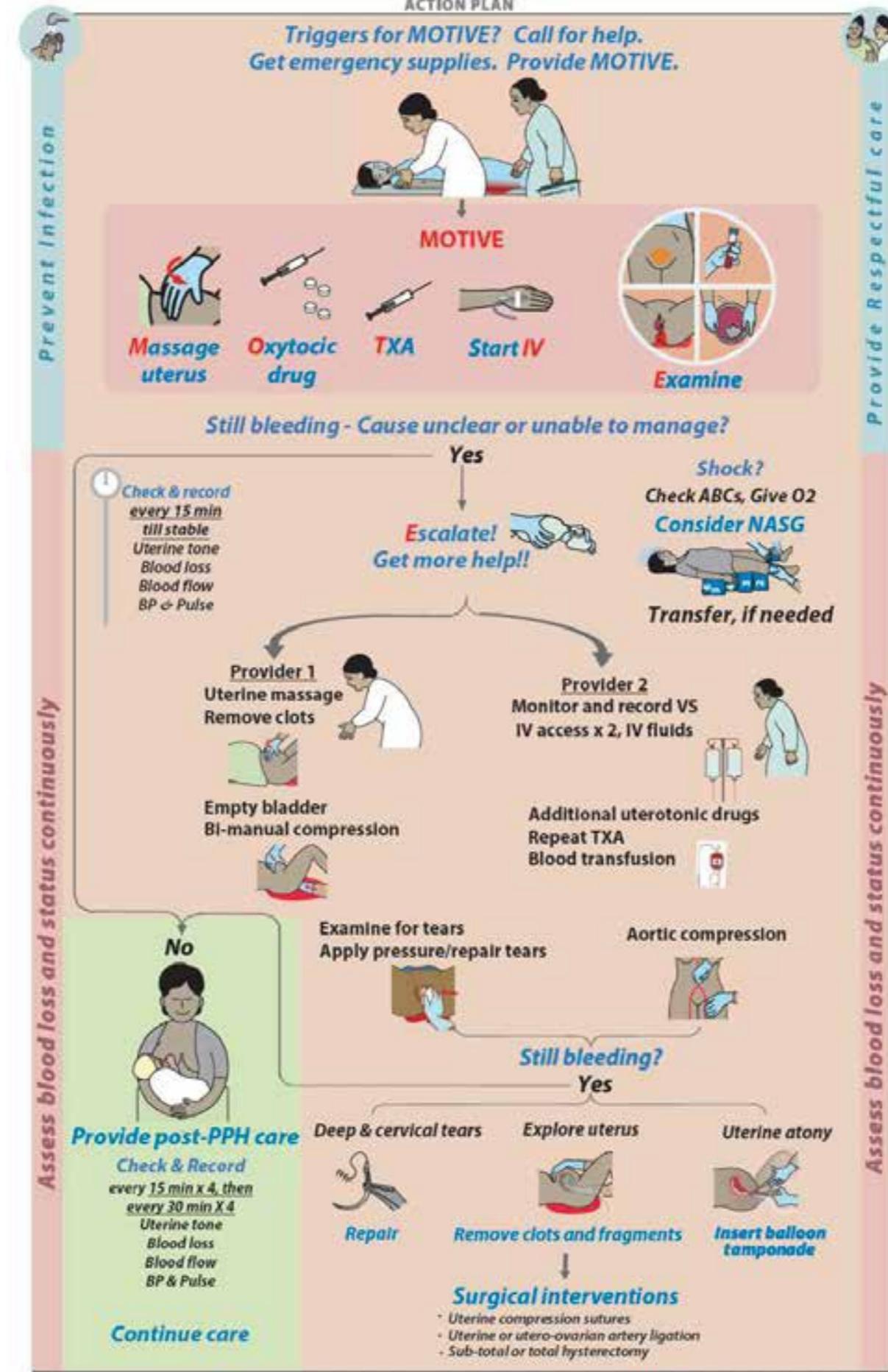
Notice whether providers perform the following:

- Calls for help
- Does a rapid assessment (**BP 112/72 mmHg, pulse 96 bpm, respirations 18/min, alert and oriented, skin warm**)
- Explains what is happening to the woman.
- Gives oxygen, if available
- Massages the uterus (**uterus is soft**) and checks bladder (**bladder is distended**) and bleeding (**bleeding heavily**)
- Organizes support staff, communicates with SBAR and gives tasks to the team members.
- Helps the woman empty her bladder. Say, "**I am unable to void.**" Places catheter



Helping Mothers Survive
Bleeding After Birth
 MOTIVE to Manage PPH + Refractory Care

ACTION PLAN



Exercise Preparing for “LDHF” Taking Action !

LDHF
Ongoing practice and quality improvement activities
Taking Action with S.M.A.R.T. Goals

Specific

The Emergency Trolley is regularly checked and ready to deliver the 1st bundle at every birth

Measurable

A fully stocked Emergency Trolley is available at 100% of births

Achievable

We have staff who will be assigned to check that the Emergency Trolley has all supplies and drugs that are not expired every day or week

Relevant

A well-stocked Emergency Trolley will ensure we can deliver the 1st response bundle when needed

Time Limited

We can begin this today!

What is LDHF?

LDHF means, ‘low-dose, high-frequency’. It is an approach to training where we do small amounts of learning and practice at our facilities and with our colleagues to make it easier to use what we have learned.”

All staff who care for women on the labour ward should be included in these sessions even if they were not part of the training today.

Taking Action!

MODULE 30

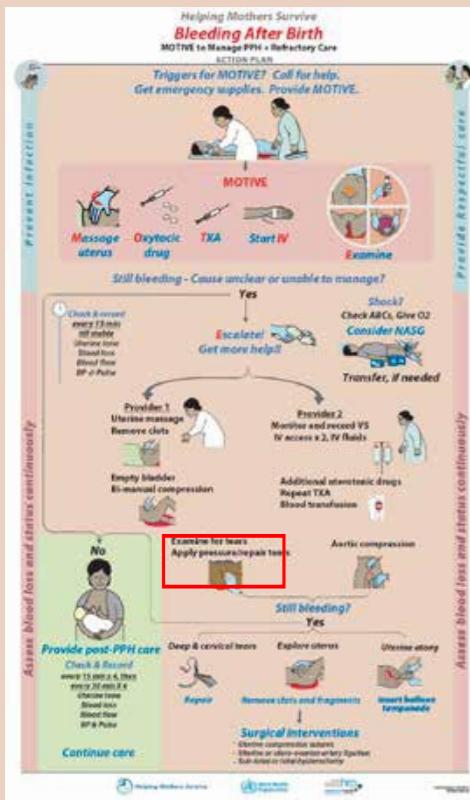
Resources

- *Bimanual compression of the uterus*
- *Aortic compression*
- *Bleeding deep and cervical lacerations*
- *Manual removal of placenta, fragments and clots*
- *Uterine balloon tamponade (UBT)*

MODULE 31

If bleeding and uterus is
soft after MOTIVE interventions

Bi-manual compression of the uterus



Performance Expectation

If MOTIVE interventions have been performed but the uterus is still soft and she is bleeding heavily, perform bimanual uterine compression.

Key points

- If the uterus does not contract after emptying a full bladder, massage, repeating a uterotonic, and performing the MOTIVE interventions, squeezing the uterus between your hands - or bimanual uterine compression - may help stop the bleeding. **Act fast - she needs advanced care!** You do not need to wait until the woman is in shock to compress the uterus.
- Compression may buy time to allow the medication to work until the woman can receive advanced care.
- Continue the IV infusion with oxytocin.
- **Do NOT do vaginal packing.** Putting anything into the vagina after birth can cause an infection. Care must be taken to clean hands thoroughly and wear sterile gloves.

Knowledge and Skills

- Bimanual uterine compression applies pressure to the vessels and may help the uterus contract and stop bleeding.
- Make sure the woman has received the MOTIVE interventions.
 - Continue the IV infusion with oxytocin.
 - Give a second dose of TXA 1g IV over 10 minutes if: bleeding continues 30 minutes after the first dose OR bleeding restarts within 24 hours of completing the first dose. **Remember, the first dose of TXA should only be given within the first three hours of birth.**
- Bimanual uterine compression can increase the risk of infection. Practice careful hand hygiene and wear sterile, elbow length gloves if available to prevent an infection.
- Women who need this intervention have already lost a lot of blood and are more likely to bleed again. They need to be watched even more closely until they are stable.
- If you are not at a facility that can supply blood transfusion and/or advanced care, you must transfer the woman.

To perform bimanual compression of the uterus:

- If you are alone, shout for help!
- This is a painful but life saving measure: it is important to tell the woman what you are about to do and why and that it will hurt.
- Quickly but thoroughly wash hands and put on sterile, elbow length gloves if available, or improvise to use regular gloves to make long gloves.
- Insert a flattened hand in the upper vagina and then make a fist. Put the other hand on the abdomen at the fundus.
- Squeeze the uterus between your two hands for at least 5 minutes OR until the bleeding stops and the uterus is firm OR advanced care is available (e.g. uterine balloon tamponade [UBT], surgical intervention).

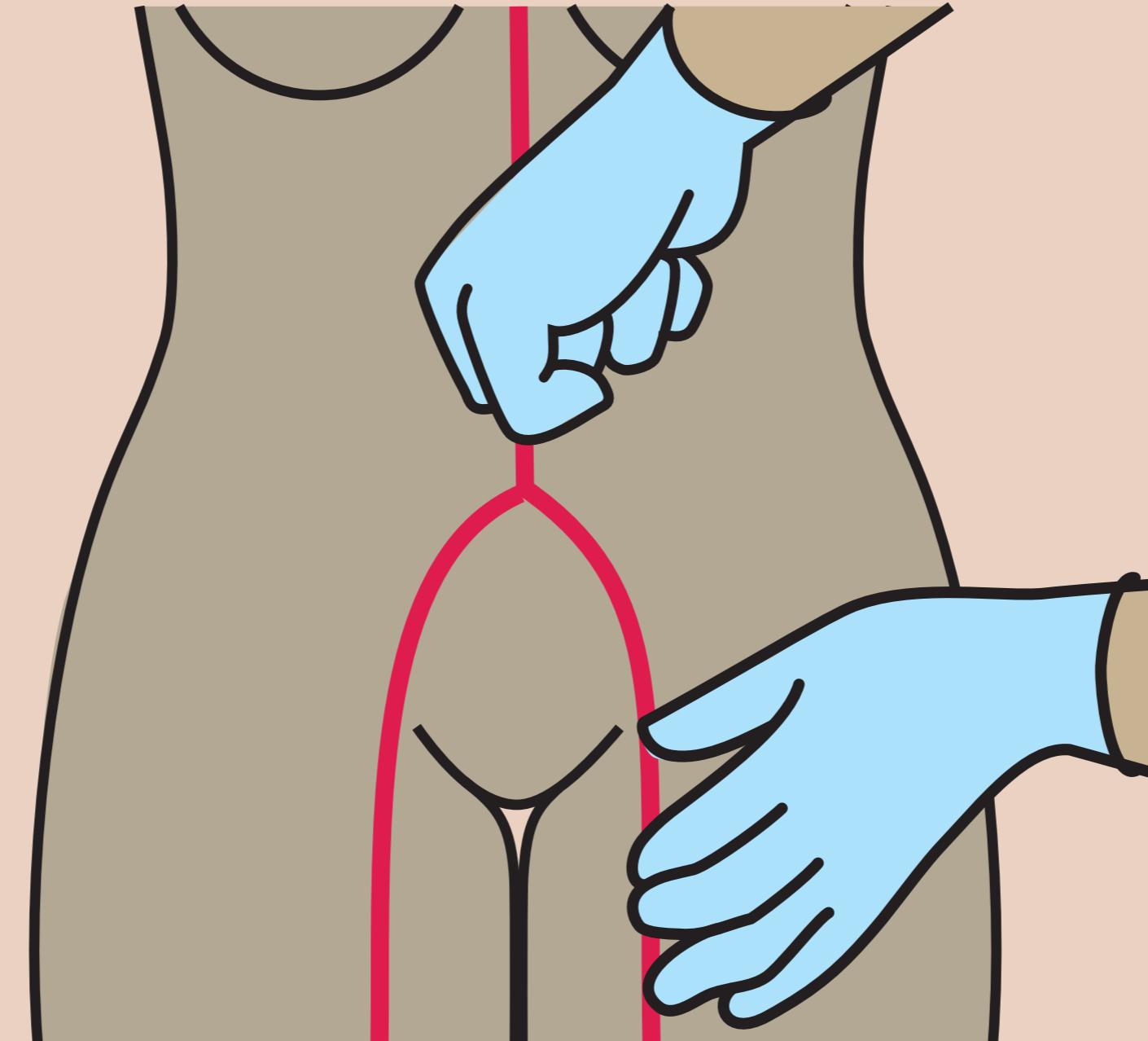
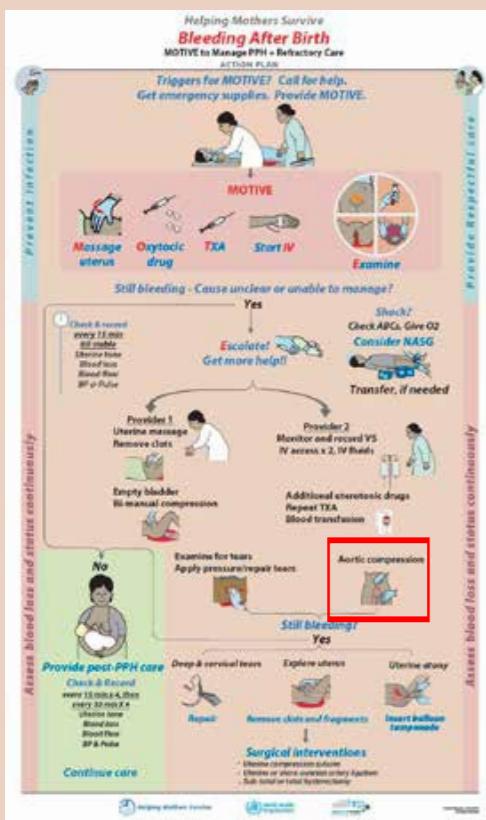
Advanced Care Note

If you have additional training and are authorized to provide more advanced care, act within your scope of practice.

MODULE 32

If still bleeding heavily

Aortic Compression



Performance Expectation

If heavy bleeding and atony persist despite massage, uterotronics, TXA, and bimanual compression, compress the aorta as a temporizing measure until appropriate care is available.

Key points

- *Aortic compression is a lifesaving practice to control postpartum hemorrhage. It shuts off the blood flow to the uterus by compressing the aorta between a closed fist and the spine.*
- *Aortic compression is a temporizing measure that can save lives until the woman can receive advanced care.*
- *Packing the uterus is ineffective and wastes precious time.*

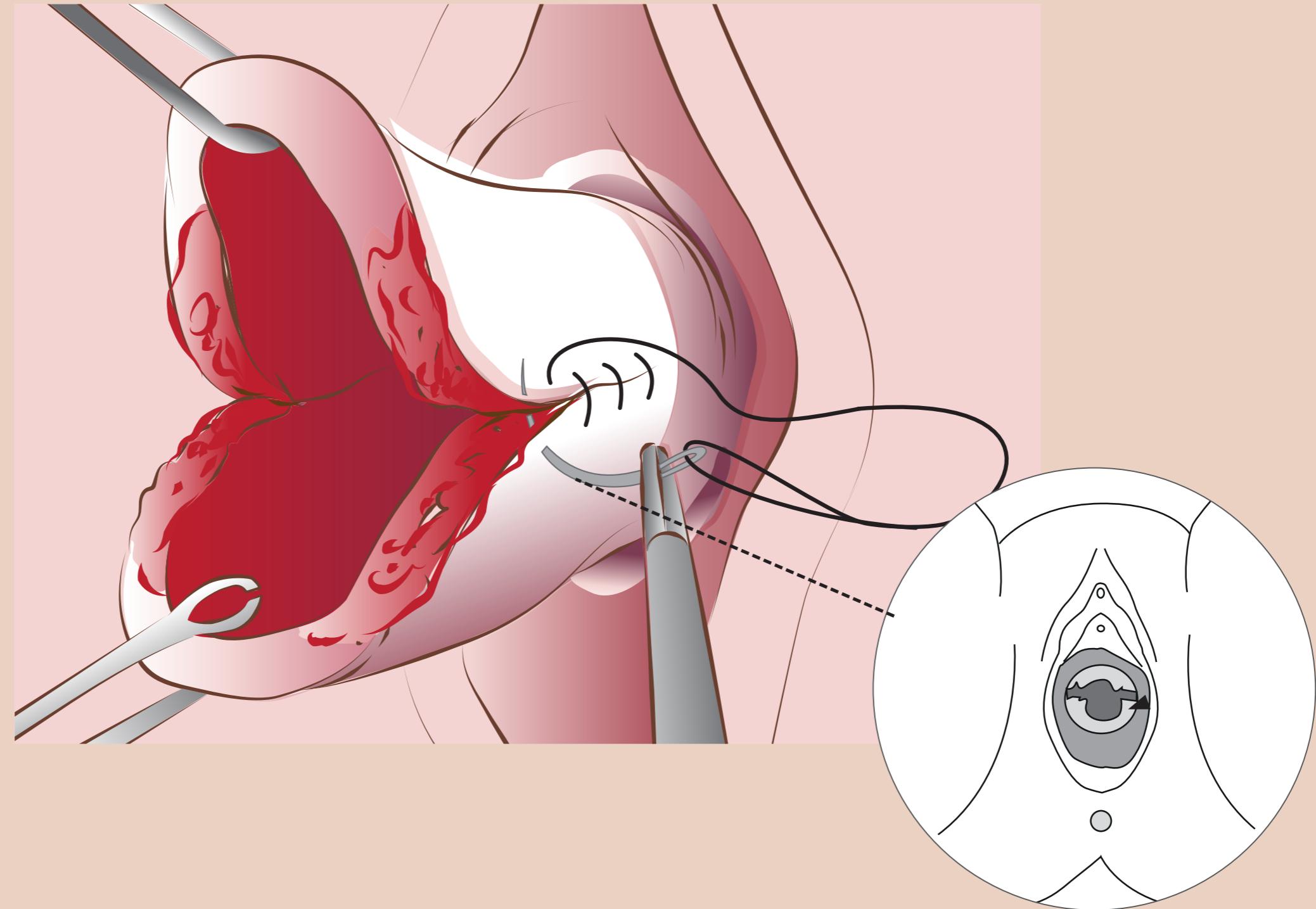
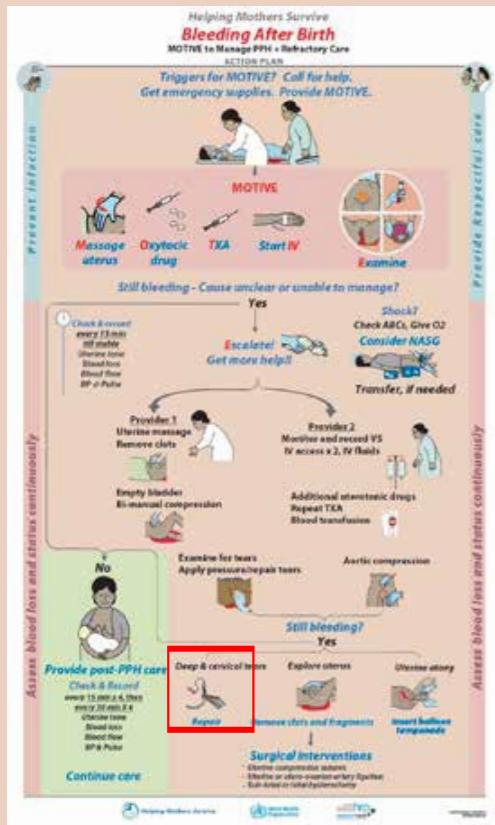
Knowledge and Skills

If heavy bleeding due to atony persists despite uterotronics, TXA, massage, and bimanual compression, compress the aorta:

- Ensure privacy. Tell woman what you will do and why.
 - Ensure her bladder is empty.
 - Put on personal protective equipment, wash hands, and put on sterile gloves.
 - Continue the IV infusion with oxytocin.
 - If you have not done so already, give a second dose of TXA 1g IV over 10 minutes if: bleeding continues 30 minutes after the first dose OR bleeding restarts within 24 hours of completing the first dose.
 - Ensure the woman is on a firm surface. A soft mattress may not be firm enough.
 - Tell the woman what you need to do and why.
 - Apply downward pressure with a fist on the abdominal aorta through the abdominal wall. Compress just above and to the left of the umbilicus.
- With the other hand, palpate the femoral pulse to check effectiveness of compression.
 - If the pulse is palpable during compression, the pressure exerted by the fist is inadequate.
 - If the femoral pulse is not palpable, the pressure exerted is adequate.
 - Maintain compression until bleeding is controlled or alternative measures can be taken.

MODULE 33

BLEEDING DEEP VAGINAL & CERVICAL TEARS *Inspect, identify and repair*



Performance Expectation

I identify tears as the cause of PPH and inspect, identify, and repair deep vaginal and cervical tears.

Key points

- Tears that cause PPH are most often deep vaginal or cervical tears.
- Only tears that are large and bleed persistently need to be repaired.
- Bleeding from a tear may ooze slowly, bleed heavily, or spray from an artery.

Knowledge and Skills

Cervical tears usually occur at 3 and 9 o'clock, using a clock as the reference for the cervix.

Identify and repair tears:

- Ensure privacy and good lighting. Tell the woman what you are doing.
- Ensure the bladder is empty, or catheterize.
- Give IV pethidine and diazepam, or ketamine, if tears are high and extensive (Do not give if woman is in shock).
- Wash hands. Put on sterile gloves.
- Clean perineum, vulva, and vagina with antiseptic solution.
- With gloved hand, separate the labia and examine peri-urethral area, perineum, and vaginal opening. Wrap fingers in a gauze and press on the back wall of the vagina to look deep into the vagina.
- Press against the vaginal wall and move gauze-wrapped fingers up the side wall. Repeat on other side. Move up the vaginal wall to the cervix.
- Have assistant massage uterus and provide fundal pressure to visualize cervix.
- Use sponge forceps to grasp the cervix at 12 o'clock position, and another to grasp the cervix at 3 o'clock. Inspect between the forceps for any tears.

- Then move the first forceps to 6 o'clock and inspect the area between the forceps again for any tears. Continue rotating forceps and inspecting in this manner until the full cervix is inspected and tears are identified.

Repair cervical tears:

- After identifying cervical tear, put both forceps in one hand.
- Use size 0 chromic or polyglycolic sutures. Place first suture 1cm above the tear. Close tear with continuous suture.

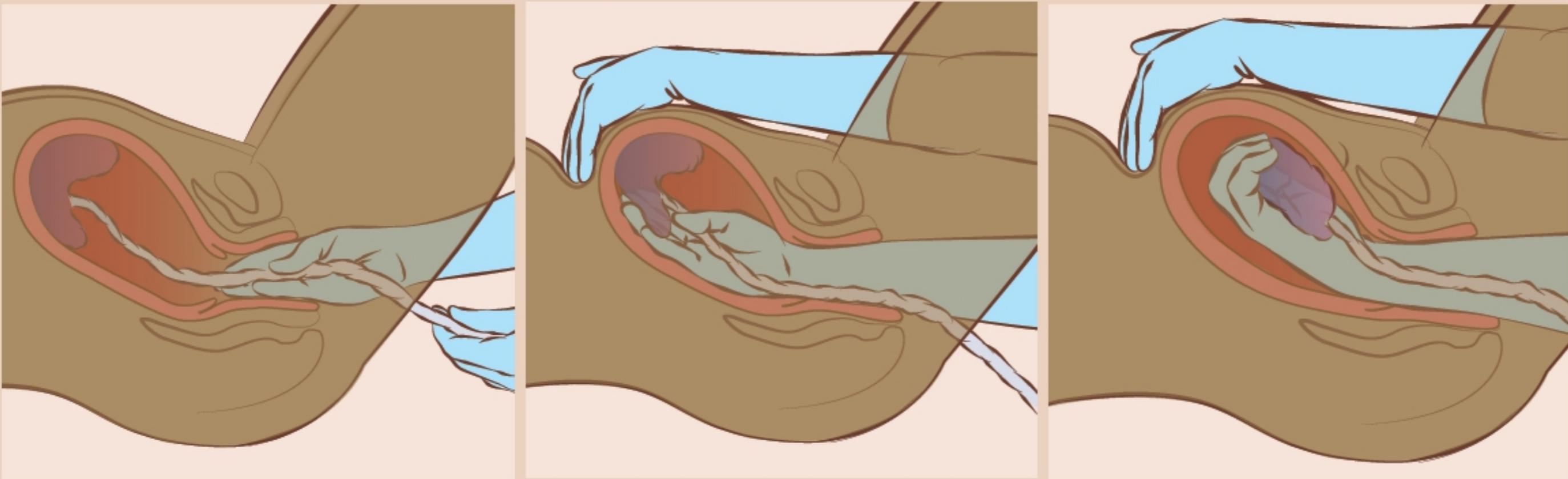
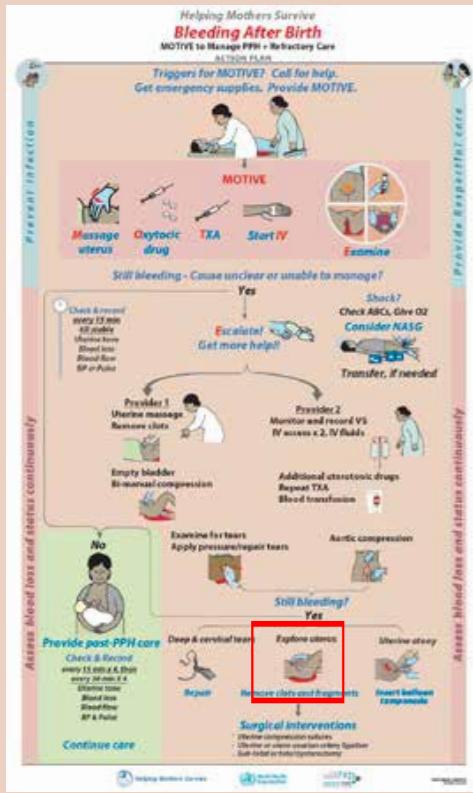
Repair deep vaginal tears:

- Draw 10 ml of 0.5% lignocaine into syringe. Insert the needle from the bottom and to the side of the tear to the top of the tear. Withdraw plunger to ensure needle is not in a blood vessel. Inject as needle is withdrawn. Wait 2 minutes for effect.
- Place continuous 2-0 chromic or polyglycolic sutures for length of tear., starting just beyond the apex. Close deep space first, then reapproximate vaginal epithelium. Repair in 2 layers if tear is deep.
- Review wound care and hygiene measures.

MODULE 34

RETAINED PLACENTA OR PARTS

Manual removal of placenta, fragments and clots



Performance Expectation

Identify retained placenta or fragments and perform manual removal of the placenta or fragments.

Key points

- *Retained placenta or fragments can cause bleeding and infection.*
 - *The uterus cannot contract if it contains the placenta, fragments, or clots.*
 - *If the placenta fails to deliver after administration of oxytocic medication, and 30 min has passed, OR the woman is bleeding heavily, remove placenta manually.*
- Do not delay!***
- *If you cannot remove the placenta or parts, surgery may be needed.*

Knowledge and Skills

If the placenta is not delivered in 30 minutes **and the woman is not bleeding**, ensure that she has an empty bladder, repeat 10 IU oxytocin IM, continue controlled cord traction during contractions, and encourage her to bear down, squat, or breastfeed. **Do NOT repeat misoprostol!**

If the woman is bleeding heavily, OR if the placenta is not complete OR treatment fails to work, remove placenta and fragments manually.

To perform manual removal of placenta:

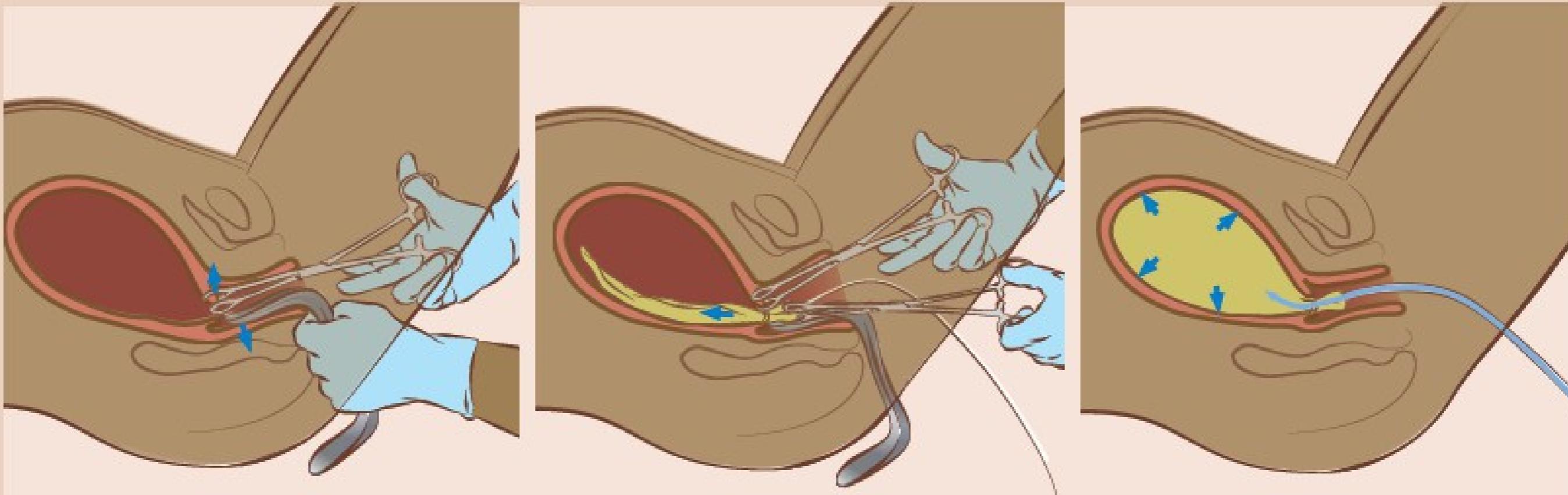
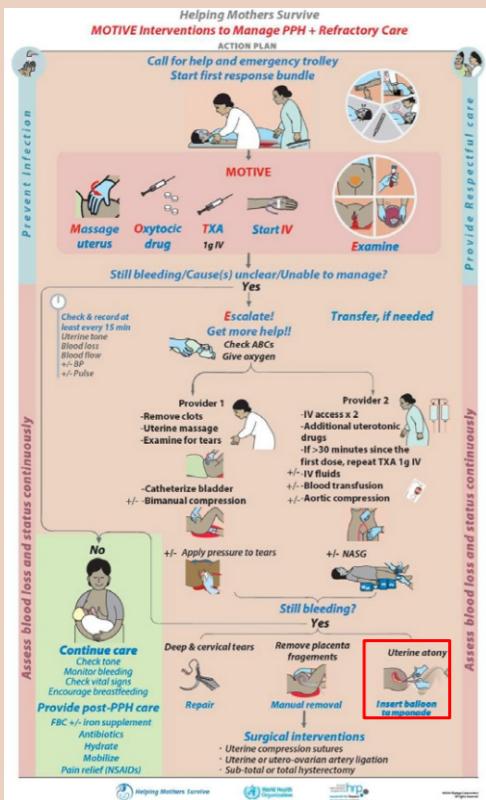
- Ensure privacy. Tell her what you will do and why.
- Ask the woman to urinate or catheterize bladder.
- Start IV infusion.
- Give diazepam 10 mg IM/IV (if woman is not in shock). Depending on local preference and clinical situation, you may use pethidine or ketamine.
- Give a single dose of antibiotics: either ampicillin with clavulanic acid 625mg IV or 1 g cefazolin IV.

- Put on personal protective equipment, wash hands, and put on long, sterile gloves.
- Hold umbilical cord with a clamp. Gently pull, using the cord to guide your other hand into uterus.
- Place fingers into uterus following cord to locate placenta. Identify the rough surface behind the placenta and carefully separate it from the uterine wall by smoothly sweeping fingers back and forth.
- Withdraw hand, bringing placenta with it and provide counter-traction abdominally.
- Check uterine tone. Massage if soft.
- Give oxytocin 20 IU IV in 1 L normal saline over 4 hours.
- Examine placenta for completeness.
- Remove gloves and discard. Wash hands.
- Monitor bleeding, take vital signs, and ensure the uterus is well-contracted (every 15 minutes for two hours, and then every 30 minutes for the next 4 hours).

MODULE 35

If still bleeding heavily

Insert balloon tamponade



Performance Expectation

- Determine if uterine balloon tamponade (UBT) is right treatment
- Properly insert and inflate the tamponade
- Closely monitor women with UBTs
- Properly remove UBT

Key points

- Intrauterine balloon tamponade (UBT) treats PPH due to atony.
- UBT reduces the need for surgery and blood transfusion. It can be used during transfer.
- Supplies for UBT are low-cost and available and should be in the PPH emergency kit.
- Ensure no retained placental pieces or bleeding lacerations before inserting UBT.

NOTE: Only insert UBT if its use is within local guidance and standards of care and you are in a setting with immediate access to surgery and blood and where first line treatment includes uterotronics, TXA and IV fluids.

Knowledge and Skills

Use these supplies to practice making and inserting UBT and add them to the PPH emergency kit:

- Sterile gloves
- IV infusion bag with saline & IV giving set
- 2 ring forceps & scissors
- Condoms
- Sims speculum
- Foley catheter
- Suture (black silk suture or cord tie)

If heavy bleeding due to atony persists despite uterotronics, TXA, massage, and bimanual compression, insert UBT:

- Before inserting the UBT, ensure no retained placental pieces or bleeding lacerations.
- Prepare UBT: tie condom to foley catheter. Do not inflate catheter balloon.
- Ensure privacy. Tell woman what you will do and why.
- Give a single dose of antibiotics; either ampicillin with clavulanic acid 625mg IV OR 1 g cefazolin 1V.
- Ensure her bladder is empty.
- Put on personal protective equipment, wash hands, and put on sterile gloves.
- If a helper is providing bimanual uterine compression, have them move to abdominal

aortic compression until UBT is placed.

Expose cervix with Sims speculum. Hold cervix with forceps. Insert condom and catheter \\ through cervix and high into uterine cavity.

- Inflate UBT: Connect catheter to IV giving set and IV bag. Inflate condom with IV solution (300-500 mL) until bleeding stops.
- Fold and tie the catheter to retain fluid.
- If bleeding is not controlled 15 minutes after insertion, seek advanced surgical care immediately!
- Record insertion time and amount of fluid used.
- Keep UBT in uterus for 12-24 hours once bleeding is controlled and woman is stable.
- When she is stable and at least 12 hours have passed, deflate condom by 200 ml of fluid every hour. Re-inflate if bleeding starts again.
- After removal, monitor closely for the next 6 hours. Record BP, pulse, urine output, pallor, amount of bleeding, and check tone:
 - every 15 minutes for the first 2 hours
 - every 30 minutes for the next 2 hours
 - every hour for the next 2 hours.
- Do not use UBT in case of arterial bleeding, cervical or uterine cancer, danger of uterine rupture, infections, uterine anomalies, or disseminated intravascular coagulation.

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Prevention, early detection, and treatment of PPH



Helping Mothers Survive
Prevention, early detection, and treatment of PPH
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The **Prevention, early detection, and treatment of PPH** module was adapted from the **Bleeding after Birth Complete 3.0** module developed by the **Helping Mothers Survive** program. This adaptation was created in response to new WHO recommendations and research around interventions to improve survival and reduce morbidity and mortality due to PPH.

Acknowledgments



Helping Mothers Survive Bleeding after Birth Complete

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Jhpiego is an international, nonprofit health organization affiliated with Johns Hopkins University. For more than 40 years, Jhpiego has empowered frontline health workers by designing and implementing effective, low-cost, hands-on solutions to strengthen the delivery of health care services for women and their families. By putting evidenced-based health innovations into everyday practice, Jhpiego works to break down barriers to high-quality health care for the world's most vulnerable populations.

The Helping Mothers Survive Bleeding after Birth Complete module was conceived and developed by a team in the Technical Leadership Office of Jhpiego and uses the module design created for Helping Babies Breathe (HBB), a module developed by the American Academy of Pediatrics. The module was further expanded in 2023 to include early detection of PPH and the WHO 1st response bundle for PPH from the E-MOTIVE trial conducted by University of Birmingham and partners.

This adaptation was led by Susheela Engelbrecht.

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*Jhpiego is an international, nonprofit health organization affiliated with The Johns Hopkins University.
For 40 years, Jhpiego has empowered frontline health workers by designing and implementing effective, low-cost, hands-on solutions to strengthen health care services for women and their families.*



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Acronyms

ACOG –	American College of Obstetricians and Gynecologists
aOR-	Adjusted Odd Ratio
AMTSL-	Active Management of Third Stage of Labour
APH -	Antepartum Haemorrhage
APTT -	Activated Partial Thromboplastin Time
CCT -	Control Cord Traction
DIC –	Disseminated Intravascular Coagulopathy
E-MOTIVE-	Early detection, Uterine Massage, Oxytocics, Tranexamic acid, Intravenous fluids, Examination and Escalation
EBL -	Estimated Blood Loss
FIGO -	International Federation of Gynaecology and Obstetrics
HELLP -	Haemolysis, Elevated Liver Enzymes, Low Platelets
ICM -	International Confederation of Midwives
LMICs -	Low- and Middle-Income Countries
MDGs -	Millennium Development Goals
MMEIG-	Maternal Mortality Estimation Inter-Agency Group
MMR-	Maternal Mortality Ratio
NDHS -	Nigeria Demographic and Health Survey
ICPD -	International Conference on Population and Development
INR –	International Normalized Ratio
NASG -	Non-Pneumatic Antishock Garment
OR-	Odds Ratio
PAS -	Placenta Accreta Spectrum
PPH -	Postpartum Haemorrhage
PT-	Prothrombin Time
PTTK -	Partial Thromboplastin Time with Kaolin
RCOG -	Royal College of Obstetricians and Gynaecologists
RR -	Relative Risk
RCT-	Randomised Controlled Trial
SBA -	Skilled Birth Attendant
SDGs –	Sustainable Development Goals
SOGON -	Society of Gynaecology and Obstetrics of Nigeria
UNICEF -	United Nations Children's Fund
UNFPA -	United Nations Population Fund
UNDESA -	United Nations Department of Economic and Social Affairs
WHO –	World Health Organization



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