

# Transcript of the Clinical Tutorial Section Narration for the CD-ROM Presentation *Active Management of the Third Stage of Labour: A Clinical Tutorial*<sup>1</sup>

## Clinical Tutorial Section

### Active Management of the Third Stage of Labour: Clinical Tutorial

The active management of the third stage of labour is a combination of actions to speed the delivery of the placenta and prevent postpartum haemorrhage. Through these simple actions, trained providers can prevent postpartum haemorrhage and play a vital role in saving women's lives. The objective of this film is to review the key steps of the active management of the third stage of labour and demonstrate them in the context of normal labour and delivery using the skills checklist.

**First key step.** Having first palpated the uterus to check there is no other baby, give a uterotonic drug within 1 minute of delivery. Oxytocin is the drug of choice, using 10 international units given intramuscularly into the thigh.

**Second key step.** Controlled cord traction. This helps the placenta separate from the uterus and descend into the vagina. Apply pressure on the uterus in an upward direction towards the woman's head while at the same time pulling with a firm, steady tension on the cord in a downward direction. Controlled cord traction should only be done during a contraction.

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<sup>1</sup> Bishop RA, Litch JA, Tugby M. *Active Management of the Third Stage of Labor (AMTSL): A Clinical Tutorial*. Seattle: PATH; 2008.

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**Third key step.** Immediately after the delivery of the placenta and membranes, begin to massage the uterus and continue until it is firm.

Labour can be a frightening and painful experience. Explain to the woman and any support person or family present what will be happening. Throughout all phases of care it is important to keep the woman and her family informed of what is going on, give her as much information and explanation as she desires, allow her to ask questions, and give her continuous emotional and physical support.

As the second stage progresses to full dilation, it is important to prepare your equipment for the delivery.

Prepare the oxytocin 10 units in a syringe. The syringe should remain sterile. Open the syringe and needle onto the sterile tray. Using a gloved hand, connect the needle to the syringe, snap or flip open the oxytocin vial, and draw up the oxytocin until 10 units is in the syringe. To resheathe the needle, place the cap on a hard, flat surface. Hold the syringe with one hand and use the needle to scoop up the cap. When the cap covers the needle completely, check that it is securely fixed.

A full bladder may impede descent of the head. Ask the woman to empty her bladder when second stage is near. Provide a bedpan if available and catheterise only if the woman cannot urinate and the bladder is full.

For the second stage of labour there are many positions. Squatting or kneeling allows gravity to help with the descent of the head. Work with the woman to find a position she finds comfortable.

As the baby's head becomes visible, prepare yourself for delivery. Wet your hands with running water and apply soap. Rub together all surfaces of the hands, including the wrists, between the fingers, palm and back of the hands, and fingernails. Wash your hands for 15 seconds. Rinse under a stream of running water. Dry your hands in air or using a clean cloth or paper towel.

Put on a hat or hair cover if available and appropriate protective footwear such as boots or covered shoes. Put on a clean plastic or rubber apron, or a gown if available. Put on goggles and a mask, or a face shield to protect the eyes. Finally put on a pair of sterile or high-level disinfected gloves. The end of the gloves should cover the ends of the gown.

Prepare the instruments needed for delivery.

During delivery, take care to control the head to prevent perineal tears.

Immediately after the delivery, place the baby on the mother's abdomen and quickly dry from head to toe with a warm, dry cloth. Assess the baby's breathing while drying. If the

baby is not crying or not breathing at least 30 times in 30 seconds, call for help and begin resuscitation.

Place the baby in skin-to-skin contact with the mother and cover with a clean, dry cloth. Cover the head while keeping the face unobstructed.

Palpate the uterus to check that there is not a second baby.

If no second baby, give 10 units of oxytocin intramuscularly within 1 minute of delivery. Note that if the woman has an IV running it is an option to give her 5 units through the IV, but this must be given slowly.

Wait for 2 to 3 minutes after the birth before clamping and cutting the cord with a sterile instrument. This allows time for transfer of blood from the placenta to the baby, and helps prevent anaemia.

Place a clamp on the cord close to the perineum. If no clamp is available, hold the cord close to the perineum. Place the other hand just above the woman's pubic bone.

When a contraction comes, pull with a firm, steady tension on the cord in a downward direction (follow the direction of the birth canal). It is important to avoid jerky or forceful pulling. With your other hand above the pubic bone, apply pressure on the uterus in an upward direction towards the woman's head. After 30 to 40 seconds, relax the tension and wait for the next contraction to repeat the maneuver.

Do not release pressure on the uterus until the placenta is visible at the vulva. Support the placenta with both hands, using a gentle up and downward movement or a twisting action to slowly deliver the membranes. Place the placenta in a bowl. If the membranes tear, gently examine the upper vagina and cervix for remnants and extract them.

Immediately after the placenta delivers, massage the uterus through the abdomen until firm. Sometimes blood and clots may be expelled while you are doing this. Check that the uterus does not become relaxed after stopping uterine massage. Teach the mother how the uterus should feel when firm, and how to massage it.

Inspect the lower vagina and perineum for lacerations or tears and repair them if necessary. Repair an episiotomy if one was performed.

Examine the maternal surface of the placenta and membranes for completeness and abnormalities. If they are not complete, take action immediately. If the placenta is complete, dispose of it appropriately.

Remove soiled bedding and make the woman comfortable. Estimate the blood loss.

Before removing your gloves, dispose of gauze swabs and other waste materials in a leak-proof container or plastic bag. Dispose of needles and sharps in a sharps disposal container. Place instruments in 0.5% chlorine solution. Decontaminate and dispose of gloves. Clean your apron with decontamination solution or put your gown in linen waste. Wash hands and dry them.

Encourage the mother and baby to rest, skin to skin. Help the woman and baby to initiate feeding within the first hour of birth. During this time, avoid any routine procedures that would disturb them.

Check the woman at least every 15 minutes for the first two hours after birth. Check blood pressure, vaginal bleeding, and uterine tone.

Check the baby at the same time you check the mother, every 15 minutes for the first two hours after birth.

Check the baby's breathing and colour, the warmth of the baby's feet, and inspect the cord for bleeding. If a problem is detected, take action immediately.

Record the relevant details on the woman's record. Include the time of the delivery, duration of the third stage, and performance of active management, including name, route, and dosage of uterotonic drug.

In summary, the three key steps of active management of the third stage of labour are:

First key step. Having first palpated the uterus to check there is no other baby, give a uterotonic drug within 1 minute of delivery. Oxytocin is the drug of choice and is given intramuscularly into the thigh.

Second key step. Controlled cord traction. Apply pressure on the uterus in an upward direction towards the woman's head while at the same time pulling with a firm, steady tension on the cord in a downward direction.

Third key step. Immediately after the delivery of the placenta and membranes, begin to massage the uterus and continue until it is firm.

Remembering these steps with every delivery will save women's lives.

# Transcript of the Supporting Resources Core Topics Narration for the CD-ROM Presentation *Active Management of the Third Stage of Labour: A Clinical Tutorial*<sup>1</sup>

## Supporting Resources Core Topics Section

### Core Topic One: Evidence and Review of AMTSL

Every year there are 14 million cases of excessive bleeding after delivery or postpartum haemorrhage that result in over 150,000 deaths annually. Aside from death, additional morbidity comes from maternal anaemia, prolonged hospital stays, and the resulting financial burden to the family.

The third stage of labour begins with the birth of the newborn and ends with the delivery of the placenta and its attached membranes.

Once the baby is born, the muscles of the uterus contract, helping the placenta separate from the uterine wall. The amount of blood lost depends on how quickly this happens. If the uterus does not contract normally, the blood vessels at the placental site stay open and haemorrhage results.

There are two approaches to the management of the third stage of labour.

The physiologic approach is an expectant approach. No medications are given to help the uterus contract, the provider waits for signs of separation of the placenta, a gush of blood and lengthening of the cord, and then the placenta is delivered by gravity assisted by maternal effort.

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The active management of the third stage of labour involves:

Administration of a uterotonic drug within one minute after the birth of the baby, controlled cord traction during contractions, and uterine massage immediately after the delivery of the placenta.

Two large trials in the UK have consistently shown that active rather than physiologic management reduces the length of the third stage of labour, the incidence of postpartum haemorrhage, and the need for blood transfusion. For every 12 women receiving active management, one postpartum haemorrhage is prevented.

### **Core Topic Two: Causes and Prevention of Postpartum Haemorrhage**

The most common cause of excessive bleeding in the first 24 hours after birth is uterine atony, or inadequate contraction of the uterus.

Other causes include retained placenta and cervical, vaginal, or perineal lacerations arising from episiotomy, or poorly controlled or instrumental deliveries. Uterine rupture and inversion, and maternal clotting disorders are also causes, but are rare. Postpartum haemorrhage is unpredictable, so every woman is at risk.

At all stages of pregnancy and delivery, steps can be taken to reduce the impact of postpartum haemorrhage.

In the antenatal period, screen for and treat anaemia. Plan for the birth, including a birth attendant skilled in the active management of the third stage of labour. Be prepared for the complications of delivery, including logistics of emergency transportation.

During labour and the second stage use a partograph to monitor and guide the management of labour, recognise and refer potential problems early, and prevent prolonged labour. Do not encourage the woman to push until the cervix is fully dilated. Consider episiotomy only in situations where indications for it are met, and assist the woman in the controlled delivery of the baby's head and shoulders.

During the third stage of labour provide all steps of active management—use of uterotonic drug within 1 minute of delivery, controlled cord traction, and uterine massage.

In the immediate postpartum period, up to 6 hours after childbirth, check blood pressure and pulse, check for vaginal and perineal bleeding, and massage the uterus until firm every 15 minutes for the first 2 hours, 30 minutes for next hour, and then hourly for 3

hours. Ask the woman to call for help if bleeding increases or her uterus gets soft, and if bleeding occurs, take action immediately.

### **Core Topic Three: Uterotonic Drugs**

A uterotonic drug is a substance that stimulates uterine contractions or increases uterine tone by acting on the smooth muscle fibres of the uterus. There are several uterotonic drugs available, and the most commonly used is oxytocin.

Oxytocin is produced naturally in the body by the posterior pituitary gland during later pregnancy, labour, and when a baby breastfeeds. In moderate doses it produces slow, generalised contractions of the muscles of the uterus, with full relaxation between contractions. The dose of oxytocin for the active management of the third stage of labour is 10 units given intramuscularly or 5 units given slowly through an intravenous drip. It is available in single-dose vial, multidose vials, and is also available as a Uniject™ device, which is a prefilled, single-use device containing 10u of oxytocin. Oxytocin acts within 2 to 3 minutes, has no known contraindications for postpartum use, and has minimal side effects. Although best kept refrigerated, it is relatively light and temperature stable. Oxytocin is recommended by the World Health Organisation as the drug of choice for the active management of the third stage of labour.

Methergine and ergometrine are also uterotonic agents; however, these cause tetanic or continuous contractions of the uterus, which may increase the risk of retained placenta. They act within 6 to 7 minutes when given intramuscularly and the effect may last 2 to 4 hours. They increase blood pressure and their use is contraindicated in women with elevated blood pressure, preeclampsia or eclampsia, and heart disease. Side effects also include nausea, vomiting, and headaches. Ergometrine is not light and temperature stable; it needs to be kept in the dark and kept cool. The cost of oxytocin and ergometrine is comparable.

Syntometrine is a product containing a mixture of 0.5mg of ergometrine and 5 IU of oxytocin. It has the same side effects, light and heat instability, and contraindications as ergometrine.

Misoprostol is a synthetic form of a prostaglandin found in the uterus. Given orally it causes uterine contraction, acting within 6 minutes with a duration of action of 75 minutes. Shivering and elevated temperature are common side effects. The dose is 600mcg given as three 200mcg tablets orally, sublingually or rectally. It is stable from light and temperature but needs protecting from humidity. Never give oxytocin for at least 6 hours after misoprostol. As misoprostol's use is still not common, following local guidelines is recommended.

## **Core Topic Four: Infection Prevention**

Infection prevention practices should follow five standard principles:

- Every person, client or staff is considered potentially infectious.
- Hand-washing is the single most important practice for preventing cross-contamination.
- Wear gloves before touching anything wet such as broken skin, mucous membranes, blood, or other body fluids, or handling anything soiled.
- Use other protective items including apron or gown if splashes or spills of any body fluids are expected.
- Follow safe work practices and guidelines for care with sharps, cleaning of instruments, and disposal of waste.

To correctly wash your hands, wet your hands with running water and apply soap. Rub together all surfaces of the hands, including wrists, between the fingers, palm and back of the hands and fingernails. Wash for 15 seconds. Rinse under a stream of running water. Dry hands in the air or using a clean cloth or paper towel. Always wash hands when arriving and leaving a health facility, before and after examining a woman or baby, and after removing gloves.

A gown or apron, gloves, mask and goggles or face shield help protect you from splashes of contaminated fluid. Also consider your footwear, so feet are not at risk from splashes or accidents from sharp instruments.

Single-use or disposable gloves should not be used more than three times. Do not use gloves with cracks, tears, or holes.

## **Core Topic Five: Essential Newborn Care**

Newborn deaths represent 40 percent of all deaths among children under the age of 5. Each year, 4 million babies die within 30 days of birth. Two thirds of neonatal deaths occur in the first week of life, and two thirds of those deaths occur within the first 24 hours of life.

All babies need basic care to ensure their survival and wellbeing. This basic care is called essential newborn care.

Essential newborn care can be divided into the immediate care at birth, care during the first day or 24 hours, and care up to 28 days. The main purpose is to keep every baby healthy and is focused on helping the mother to meet the baby's basic needs: warmth, normal breathing, feeding, and infection prevention. Here we will focus only on the immediate care at birth.



It is important to prepare the environment, equipment, and supplies that are needed for the care of a newborn at birth.

Prevent infection by washing your hands, ensuring equipment and supplies are clean, and wearing gloves and other clothing to protect yourself from splashes and spills.

Be sure the birthing area is clean and well lit. Most importantly, the room should be warm, as newborns lose heat rapidly at birth.

There are seven key steps for immediate care at birth:

- Dry the baby, including the head, immediately using a clean, warm cloth.
- As you dry the baby, check to see if the baby is breathing, having trouble breathing, or not breathing at all. The tongue and lips should be pink, not grey or blue.
- If the baby is not breathing, or is breathing less than 30 breaths per minute, or is gasping, he needs resuscitation. Begin resuscitation immediately.
- Two to three minutes after delivery, tie the cord securely in two places and cut the cord between the two ties using sterile instrument. You may use a small piece of cloth or gauze to cover the part of the cord you are cutting so no blood splashes on you or others.
- The warmth of the mother passes easily to the baby and helps stabilise the baby's temperature. Put the baby on the mother's chest for skin-to-skin warmth. Cover the mother and baby together with a warm cloth or blanket.
- If everything is normal, do not separate the mother and baby for weighing or other routine procedures until feeding has started. Initiate feeding within the first hour of birth. For mothers who are HIV-negative or do not know their HIV status, encourage and support exclusive breastfeeding. For mothers who are HIV positive, initiate breastfeeding or replacement feeding per mother's informed choice and continue that form of feeding exclusively.
- Provide immediate prophylactic eye care.
- Teach the mother to check the baby's breathing, colour, and warmth by feeling the baby's feet, and the cord for bleeding. Discuss the danger signs with her. Tell her to call for help if she has concerns. Continue to monitor the baby each time you check the mother, every 15 minutes for the first 2 hours, 30 minutes for the next hour, and then hourly for 3 hours.