Active Management of Third Stage of Labor

Module 7

Active Management Of Third Stage of Labor (AMTSL)

Session Objectives:

By the end of the session, participants will be able to:

- Describe the third stage of labor
- Define the steps of AMTSL
- Describe at least three advantages of using AMTSL
- State key messages for AMTSL
- Understand misoprostol and its role in prevention of PPH at community level

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Definition of the Third Stage of Labor

The third stage of labor:

- Begins with delivery of the baby and ends with expulsion of the placenta
- **Normally lasts up to 30 minutes**
- Is considered prolonged if it lasts more than 30 minutes

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What Changes Occur during the Third Stage?

Physiology of third stage of labor:

- Uterine wall thickens due to contraction of myometrium
- Placental site becomes smaller and placenta separates from uterine wall
- Clot forms at the site of placental detachment
- Subsequent contractions push placenta, membranes, and clot out of the vagina

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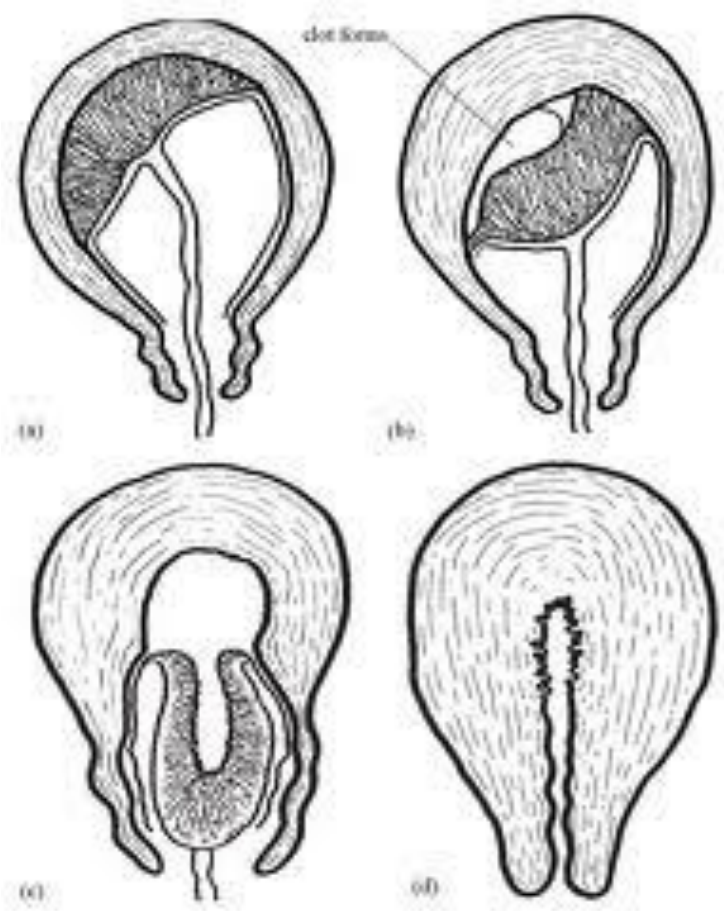
Physiology of the Third Stage of Labor



a. Placenta not yet separated (beginning of third stage)
b. Placenta begins separating and a blood clot forms behind it
c. Placenta descends through the cervix
d. Placenta completely expels as uterus contracts

Source: WHO. Midwifery Education Manual: Managing Postpartum Haemorrhage, Figures 1.5–1.7 (pages 22-23). WHO, 2008.

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Quiz: Excessive Bleeding

- How many liters of blood does an average woman have in her circulatory system?
- When would you say she is bleeding excessively?
- How long would it take her to lose all of her blood?

Excessive Bleeding

- The average woman has 5 liters of blood in her body.
- Loss of more than 500 mL of blood in the first 24 hours after delivery is called postpartum hemorrhage (PPH).
- It would take 10 minutes for a woman to lose all of her blood.
- Women with anemia or other serious conditions such as cardiac disease may deteriorate even faster.
- **Suspect PPH if one pad/cloth is soaked in less than 5 minutes.**

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What Causes Excessive Postpartum Uterine Bleeding?

Remember the Four Ts:

- Tone: Atonic uterus
- Tissue: Retained placenta or placental fragments
- Tears: Cervix, vagina, or perineum
- Thrombin: Poor clotting

Why Does the Uterus Bleed Excessively?

- The vast majority or postpartum hemorrhage is due to the uterus not contracting after delivery (atony).
- When the uterus does not contract, blood vessels will continue to pump blood into the uterine cavity.
- Large babies, multiple pregnancies, or prolonged labors make it more difficult for the uterus to contract.
- A full urinary bladder can also prevent the uterus from contracting.

Every woman is at risk for uterine atony!

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Components of Active Management of the Third Stage of Labor (AMTSL)

Uterotonics:

- The use of uterotonics for the prevention of postpartum hemorrhage (PPH) during the third stage of labor is recommended for all births and is the most critical component of active management of the third stage of labor.

Reference: WHO Recommendations for Active Management of the Third Stage of Labour (AMTSL), 2012

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Choice of Uterotonic Drug

Oxytocin (preferred)

- Fast-acting, inexpensive; no contraindications for use in the third stage of labor; relatively few side effects
- Requires refrigeration to maintain potency
- Requires injection (safety)

Misoprostol

- Does not require refrigeration or injection; no contraindications for use in the third stage of labor
- Common side effects include shivering and elevated temperature; less effective than oxytocin

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Role of Misoprostol in Prevention of Post-Partum Hemorrhage

Misoprostol is:

- A synthetic prostaglandin E1(PGE1) analogue with dual action capacity in obstetrics: promotes uterine contractions and cervical ripening
- Reportedly more stable than oxytocin and has been administered by oral, sublingual and rectal routes in several studies
- An alternative drug for AMTSL for women delivering in low-resource settings where oxytocin and a skilled birth attendant may not be available and for PPH treatment when used in combination with other uterotonics

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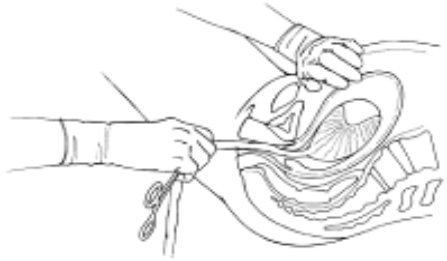
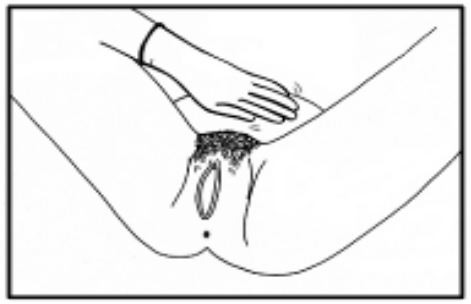
Components of Active Management of the Third Stage of Labor (AMTSL) – New Approach





1. Administration of a **uterotonic** agent within 1 minute after the baby is born (oxytocin is the uterotonic of choice)
2. **Delayed cord clamping** of 1–3 minutes while starting essential newborn care
   - +/- controlled cord traction
3. **Postpartum vigilance** to ensure uterine tone and no bleeding
   - +/- uterine massage after delivery of the placenta

Source: AMTSL: A Demonstration. Jhpiego, 2005.

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Active Management of the Third Stage of Labor (AMTSL) Steps to Follow

1. Prepare oxytocin in a syringe before the second stage.
2. Do not massage the uterus before the placenta is delivered.
3. Do not ask the mother to push.
4. Do not push on the fundus.
5. Check that there are no other babies in the uterus before giving oxytocin.
6. Administer oxytocin (10 IU, IV/IM) within one minute of delivery of the baby.
7. Immediately assess uterine tone to ensure a contracted uterus.

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AMTSL Steps to Follow (cont'd)

8. When there is a contraction, with one hand above the pubic bone, apply pressure on the uterus in an upward direction. At the same time, with the other hand, pull with a firm, steady tension on the cord in a downward direction (controlled cord traction).
9. Continue to check uterine tone every 15 minutes for two hours.
10. In the case of an atonic uterus, perform uterine massage and monitor closely.
11. Ensure a continuous supply of high-quality oxytocin. Maintain the cool chain for oxytocin.

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WHO Recommendations, 2012

CONTROLLED CORD TRACTION (CCT)

AMTSL by skilled birth attendant:

- CCT recommended if the skilled birth attendant sees little reduction in amount of blood and duration of third stage of labor

AMTSL by non-skilled birth attendant:

- CCT not recommended if no skilled birth attendant is present at time of delivery

Source: WHO Recommendations for Active Management of the Third Stage of Labour (AMTSL), 2012.

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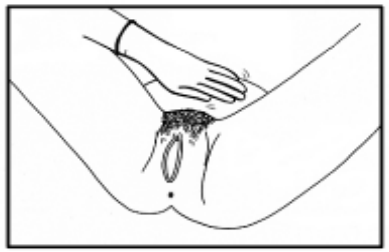
WHO Recommendations, 2012

Uterine Massage

- Sustained uterine massage is not recommended as an intervention to prevent postpartum hemorrhage in women who have received prophylactic oxytocin.
- Postpartum abdominal uterine tonus assessment is recommended for all women for early identification of uterine atony.



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AMTSL: Key Messages

- **Ensure that every woman is offered a uterotonic immediately.** Oxytocin is the preferred drug to prevent postpartum hemorrhage.
- **Store oxytocin in cool place.**
- **Delayed cord clamping:** Delay clamping the cord for at least 1–3 minutes to reduce rates of infant anemia.
- **Controlled cord traction (CCT):** Perform CCT, if required.
- Continue **postpartum vigilance** to control any persistent bleeding and prevent unrecognized PPH.

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Advantages of AMTSL

Postpartum hemorrhage (PPH) is the leading cause of maternal deaths worldwide.

AMTSL reduces:

- PPH from uterine atony, by 70–90%
- The need for blood transfusion and a hospital stay
- The number of deaths from PPH

The Results of Bristol Trials

	ACTIVE MANAGEMENT (N=846)	PHYSIOLOGICAL MANAGEMENT (N=849)	OR AND 95% CI
Postpartum hemorrhage	5.9%	17.9%	3.13 (2.3-4.2)
Duration of third stage (median)	5 minutes	15 minutes	
Third stage > 30 minutes	2.9%	26%	6.42 (4.9-8.41)
Blood transfusion	2.1%	5.6%	2.56 (1.57-4.19)
Therapeutic oxytocics	6.4%	29.7%	

Source: Prendiville W, Harding J, Elbourne D, Stirrat G. The Bristol third stage trial: Active versus physiological management of the third stage of labour. *BMJ* 1988; 297: 1295–1300.

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Disadvantages of AMTSL

There are no disadvantages of AMTSL.

- AMTSL requires a skilled birth attendant, oxytocin, and items needed for injection.
- If there is no skilled birth attendant, use of misoprostol 600 mcg sublingually can prevent postpartum hemorrhage.

AMTSL: A Lifesaving Intervention

AMTSL should be offered to:

- Every woman
- At every birth
- By every skilled provider

Advanced Distribution of Misoprostol for PPH Prevention

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What is “advanced distribution of misoprostol”?

- Advanced distribution of misoprostol allows mothers who deliver in community settings to be protected from PPH (remember: use of uterotonic is THE MOST IMPORTANT component of AMTSL)
- Advanced distribution of misoprostol saves lives
- Facility-based providers can help extend uterotonic coverage by prescribing a single dose of misoprostol (600 mcg) to all mothers in the 8th month of pregnancy and advising the mother to take three 200 mcg tablets orally within 1 minutes of birth (after excluding the presence of a second twin.)

Community Based Prevention of PPH

- Advantages of misoprostol:
  - Oral administration
  - Stable at room temperature
  - No serious adverse effects
    - Majority of complications are related to the use of misoprostol are for indications other than PPH and this should be avoided at all costs
  - Suitable for community use
  - Patient acceptability
  - Low cost
  - Widely available

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Distribution of Misoprostol for PPH prevention

- Recent RCTs in several South Asian countries (including India, Pakistan, and Bangladesh) demonstrated that community distribution and use of misoprostol for prevention of PPH was effective in preventing maternal mortality and morbidity
- Trained TBAs, who were mostly illiterate, were able to safely and correctly follow instructions regarding the administration of misoprostol after delivery of the baby, estimate blood loss, and manage referrals in a timely manner.
- Studies have shown that the skills of TBAs improve significantly with constant supervision.

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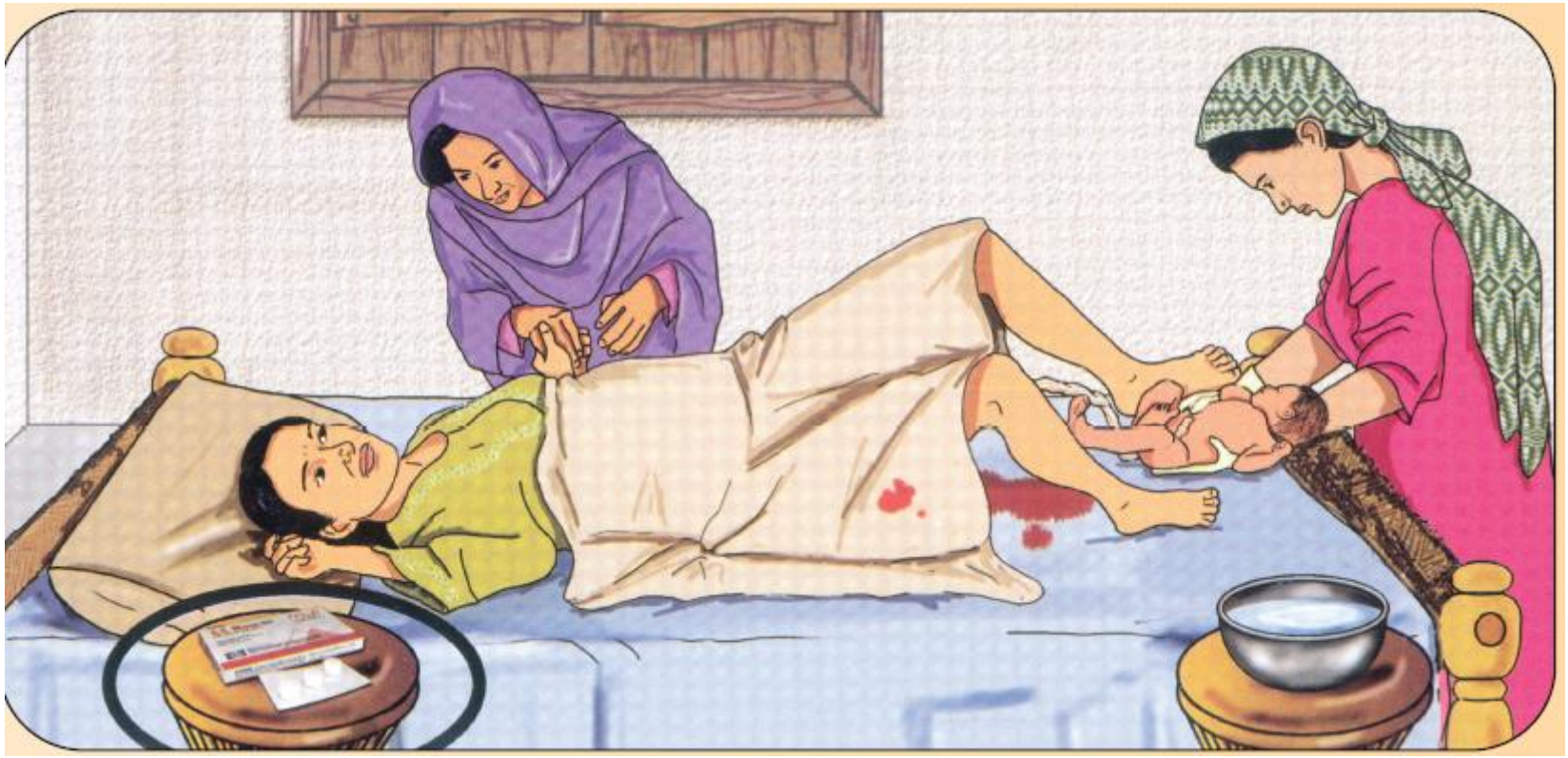
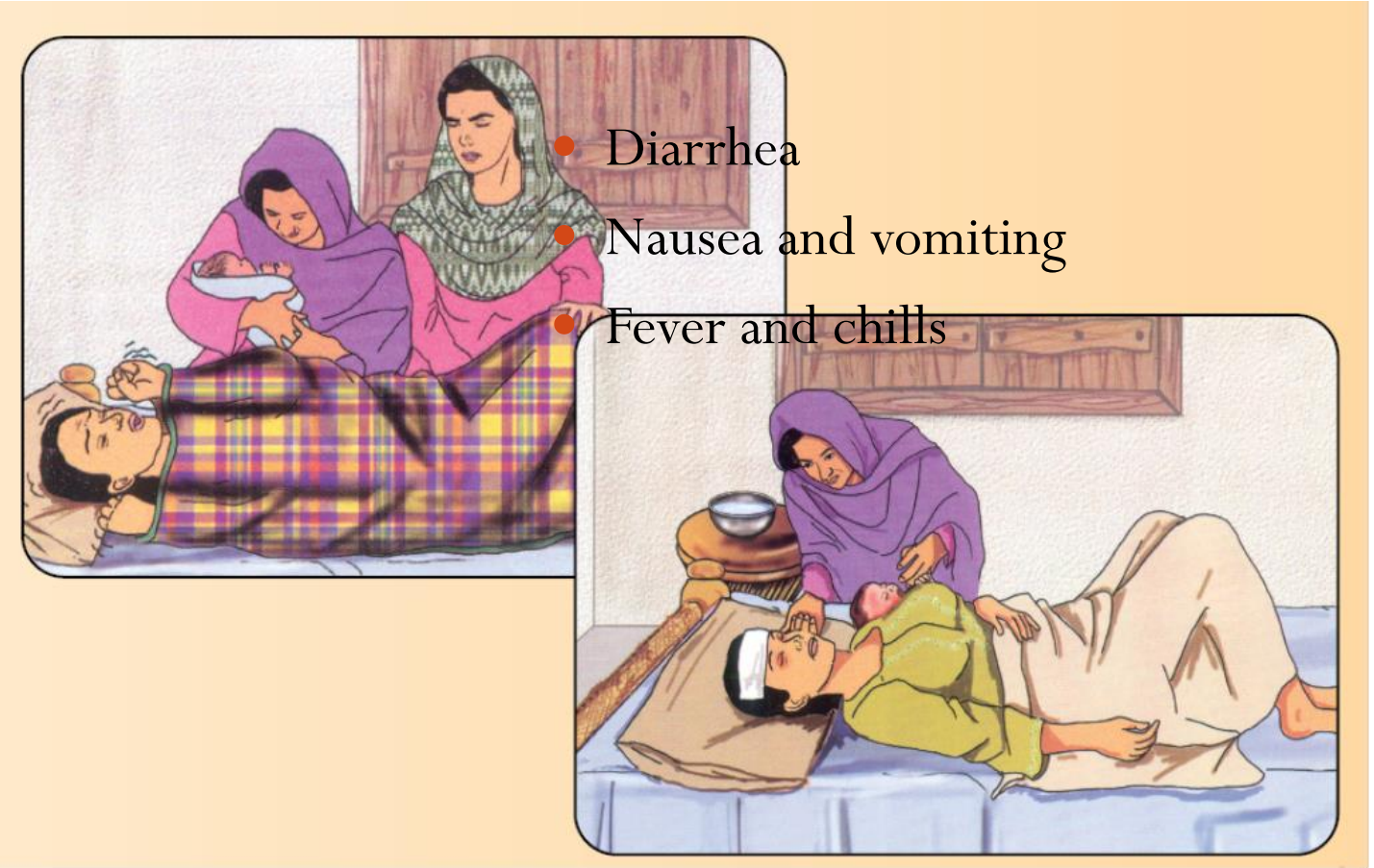
misoprostol near to you at time of delivery



Guidance to mother: Common side effects

- Diarrhea
- Nausea and vomiting
- Fever and chills



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Guidance to mother: Do not give misoprostol to pregnant mother before delivery!

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Referral

- Misoprostol is a highly safe drug, however the birth attendants (skilled/ unskilled) and the patients should be told about the importance of continued monitoring for PPH, especially in the hour following delivery
- For community level use of misoprostol, estimation of blood loss should be a norm (both conventional and unconventional methods)
- If bleeding is found to be even slightly more than average the instruction should be to refer immediately, not to wait!

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Misoprostol for PPH Prevention in Sindh: Key Messages for Providers

- Give/prescribe misoprostol to all pregnant clients in 3rd trimester of pregnancy (38 weeks)
- Advise women to:
  - In the event of a homebirth, take misoprostol immediately after delivery
  - Store misoprostol in a clean, dry place out of reach of small children
  - Bring misoprostol to the facility at the time of delivery
  - Never take misoprostol prior to delivery
- **Record on antenatal register when you prescribe misoprostol**

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Thanks!