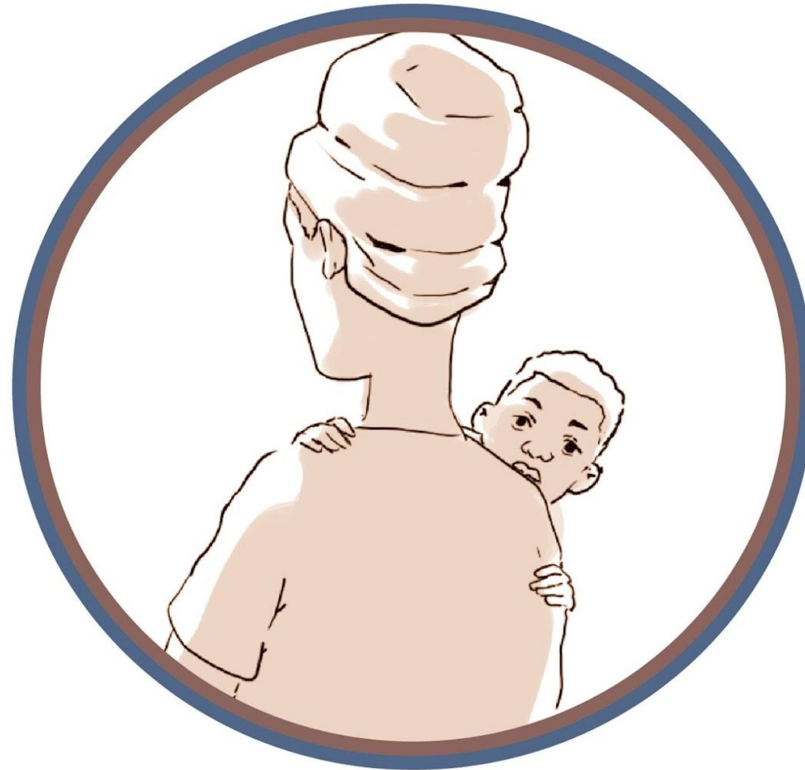
TRANING OF NEWLY RECURITED SKILLED BIRTH ATTENDANCE IN IMO STATE(JUNE,2025)



Clinical Outreach Refresher Training Module for Health Care Providers Implementing the Minimum Initial Service Package (MISP) for Sexual and Reproductive Health

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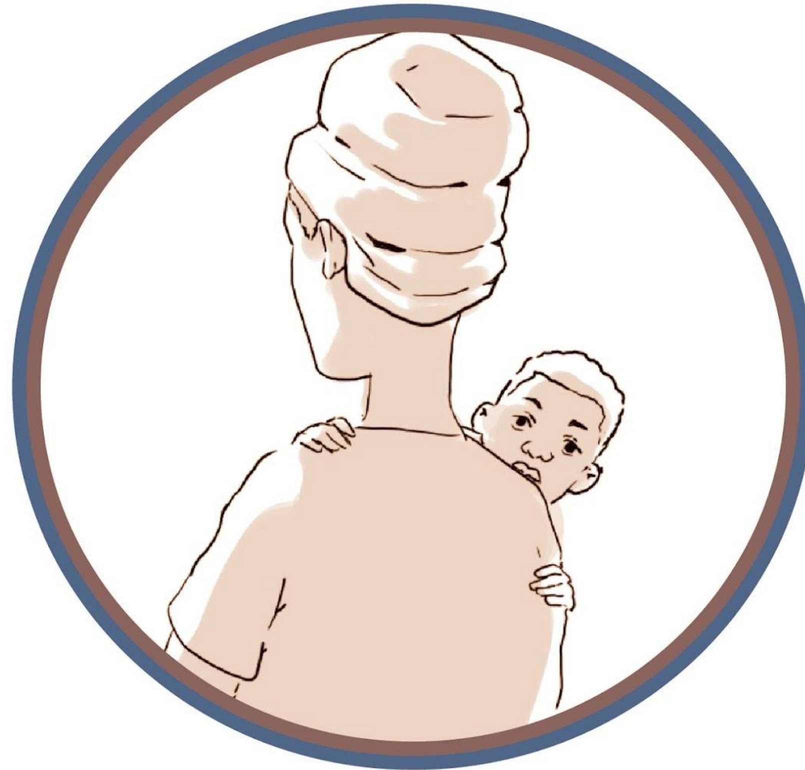
BASIC EMERGENCY OBSTETRIC AND NEWBORN CARE IN CRISIS SETTINGS: SELECT SIGNAL FUNCTIONS



Clinical Outreach Refresher Training Module for Health Care Providers Implementing the Minimum Initial Service Package (MISP) for Sexual and Reproductive Health

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UNIT 1: COURSE OVERVIEW

Basic emergency obstetric and newborn care in crisis settings

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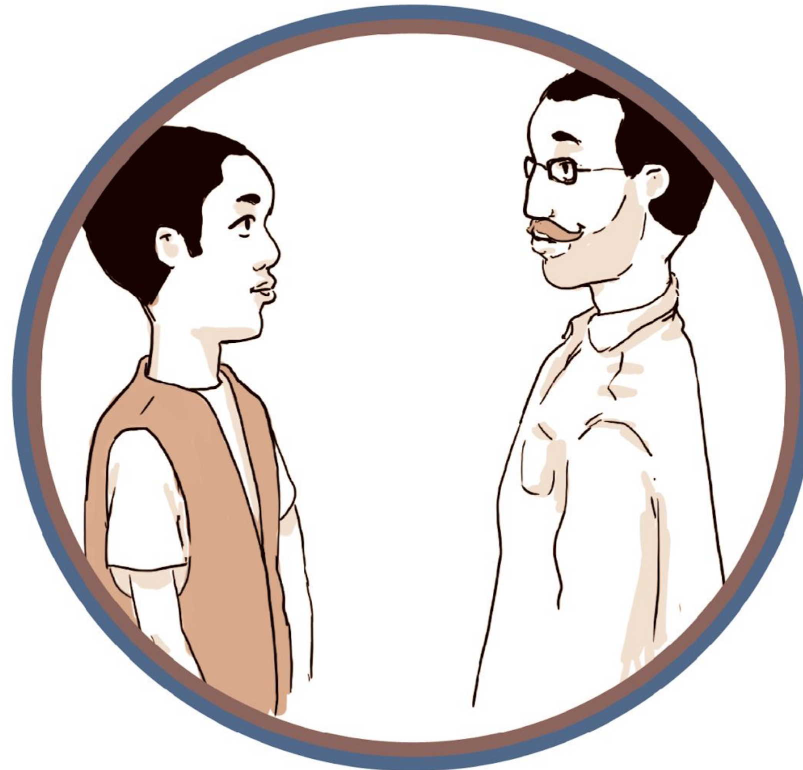
Welcome and introductions

At the end of this unit, participants will be able to:

- Introduce each other and facilitators
- Reflect on their expectations of the training
- Explain the objectives of the training
- Agree on the ground rules/norms of the training
- Describe training materials and key teaching and learning approaches, including guided reading/ self-study and assessment of training

UNIT 2: WHAT IS EmONC AND WHY IS IT NEEDED?



Basic emergency obstetric and newborn care in crisis settings

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Unit 2 objectives

By the end of this unit, participants will be able to:

- Explain the principles of preventing excess maternal and newborn mortality and morbidity in crisis settings
- Discuss how basic emergency obstetric and newborn care (BEmONC) supports the implementation of the MISP for Sexual and Reproductive Health in an emergency

Background

- **Maternal deaths:**
  295,000 (WHO 2017 estimate)
- **Lifetime risk of maternal death:**
  Sub-Saharan Africa: **1 in 37**
  Australia and NZ: **1 in 7800**
- **Direct causes of maternal death**
  - Severe bleeding
  - Infection
  - Pre-eclampsia/Eclampsia
  - Complications of abortion
  - Prolonged/Obstructed labor

Approximately 60% of maternal deaths and 45% of newborn deaths occur in countries affected by conflict, displacement, and natural disaster.

Source: UNFPA 2015 State of World Population Report

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MINIMUM INITIAL SERVICE PACKAGE FOR SEXUAL AND REPRODUCTIVE HEALTH

Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings

iawg.net/IAFM

OBJECTIVE 1: ENSURE THE HEALTH SECTOR/ CLUSTER IDENTIFIES AN ORGANIZATION TO LEAD IMPLEMENTATION OF THE MISP. THE LEAD SRH ORGANIZATION:

- Nominates an SRH Coordinator to provide technical and operational support to all agencies providing health services
- Hosts regular meetings with all relevant stakeholders to facilitate coordinated action to ensure implementation of the MISP
- Reports back to the health cluster, GBV sub-cluster, and/or HIV national coordination meetings on any issues related to MISP implementation
- In tandem with health/GBV/HIV coordination mechanisms ensures mapping and analysis of existing SRH services
- Shares information about the availability of SRH services and commodities
- Ensures the community is aware of the availability and location of reproductive health services

OBJECTIVE 2: PREVENT SEXUAL VIOLENCE AND RESPOND TO THE NEEDS OF SURVIVORS:

- Work with other clusters especially the protection or gender based violence sub-cluster to put in place preventative measures at community, local, and district levels including health facilities to protect affected populations, particularly women and girls, from sexual violence
- Make clinical care and referral to other supportive services available for survivors of sexual violence
- Put in place confidential and safe spaces within the health facilities to receive and provide survivors of sexual violence with appropriate clinical care and referral

OBJECTIVE 6: PLAN FOR COMPREHENSIVE SRH SERVICES, INTEGRATED INTO PRIMARY HEALTH CARE AS SOON AS POSSIBLE. WORK WITH THE HEALTH SECTOR/CLUSTER PARTNERS TO ADDRESS THE SIX HEALTH SYSTEM BUILDING BLOCKS:

- Service Delivery
- Health Workforce
- Health Information System
- Medical Commodities
- Financing
- Governance and Leadership

GOAL

PREVENT MORTALITY, MORBIDITY, AND DISABILITY IN CRISIS-AFFECTED POPULATIONS

OBJECTIVE 3: PREVENT THE TRANSMISSION OF AND REDUCE MORBIDITY AND MORTALITY DUE TO HIV AND OTHER STIS:

- Establish safe and rational use of blood transfusion
- Ensure application of standard precautions
- Guarantee the availability of free lubricated male condoms and, where applicable (e.g., already used by the population), ensure provision of female condoms
- Support the provision of antiretrovirals (ARVs) to continue treatment for people who were enrolled in an anti-retroviral therapy (ART) program prior to the emergency, including women who were enrolled in PMTCT programs
- Provide PEP to survivors of sexual violence as appropriate and for occupational exposure
- Support the provision of co-trimoxazole prophylaxis for opportunistic infections for patients found to have HIV or already diagnosed with HIV
- Ensure the availability in health facilities of syndromic diagnosis and treatment of STIs

OBJECTIVE 5: PREVENT UNINTENDED PREGNANCIES:

- Ensure availability of a range of long-acting reversible and short-acting contraceptive methods [including male and female (where already used) condoms and emergency contraception] at primary health care facilities to meet demand
- Provide information, including existing information, education, and communications (IEC) materials, and contraceptive counseling that emphasizes informed choice and consent, effectiveness, client privacy and confidentiality, equity, and non-discrimination
- Ensure the community is aware of the availability of contraceptives for women, adolescents, and men

OBJECTIVE 4: PREVENT EXCESS MATERNAL AND NEWBORN MORBIDITY AND MORTALITY:

- Ensure availability and accessibility of clean and safe delivery, essential newborn care, and lifesaving emergency obstetric and newborn care (EmONC) services including:
  - At referral hospital level: Skilled medical staff and supplies for provision of comprehensive emergency obstetric and newborn care (CEmONC) to manage
  - At health facility level: Skilled birth attendants and supplies for vaginal births and provision of basic obstetric and newborn care (BEmONC)
  - At community level: Provision of information to the community about the availability of safe delivery and EmONC services and the importance of seeking care from health facilities. Clean delivery kits should be provided to visibly pregnant women and birth attendants to promote clean home deliveries when access to a health facility is not possible
- Establish a 24 hours per day, 7 days per week referral system to facilitate transport and communication from the community to the health center and hospital
- Ensure the availability of life-saving, post-abortion care in health centers and hospitals
- Ensure availability of supplies and commodities for clean delivery and immediate newborn care where access to a health facility is not possible or unreliable

Other Priority: It is also important to ensure that safe abortion care is available, to the full extent of the law, in health centers and hospital facilities.

Prevent excess maternal and newborn morbidity and mortality

- Essential and emergency obstetric and newborn care services are available, accessible, acceptable, and utilized
- Skilled competent birth attendants
- 24/7 referral system established
- Clean birth kits provided to birth attendants and visibly pregnant women

Signal functions of emergency obstetric and newborn care (EmONC)

BASIC EmONC

1. Antibiotics IV/IM
2. Oxytocic drugs IV/IM
3. Anticonvulsants IV/IM
4. Manual removal of placenta
5. Manual vacuum aspiration of retained products of conception
6. Vacuum extraction
7. Newborn resuscitation

COMPREHENSIVE EmONC

BEmONC +

8. Surgery, including cesarean section
9. Blood transfusion

EmONC signal functions covered in this training

BASIC EmONC

1. **Antibiotics IV/IM**
2. **Oxytocic drugs IV/IM**
3. **Anticonvulsants IV/IM**
4. **Manual removal of placenta**
5. Manual vacuum aspiration of retained products of conception
6. Vacuum extraction
7. **Newborn resuscitation**

COMPREHENSIVE EmONC

BEmONC +

8. Surgery, including cesarean section
9. Blood transfusion

What lifesaving supplies do you need for BEmONC?

- Antibiotics
- Uterotonics
- Anticonvulsants
- Antihypertensives
- Newborn resuscitation supplies (simple suction device, bag, and masks)

- **BE READY 24/7!**

Ensure continuing access to emergency services during pandemics such as COVID-19

GOAL

Maintenance of essential preventive, promotive, and curative sexual and reproductive health services in fragile and humanitarian settings during the COVID-19 epidemic threat and outbreak period

OBJECTIVE

Provide programmatic guidance for decision making on sexual and reproductive health, including maternal and newborn health services, in fragile and humanitarian settings in face of threat or reality of COVID-19

FOCUS

Fragile and humanitarian settings

SCOPE

Essential routine as well as emergency sexual and reproductive health services

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UNIT 3: RESPECTFUL MATERNAL AND NEWBORN CARE IN EMERGENCIES

Basic emergency obstetric and newborn care in crisis settings

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Unit 3 objectives

By the end of this unit, participants will be able to:

- Discuss issues that contribute to the mistreatment of women and newborns
- Share examples of mistreatment
- Explain the concept of respectful maternity care as a core component of quality care

Every woman, every newborn, everywhere has the right to good quality care.

What is the problem?

1. Mistreatment acts that **I have experienced** in the health facility environment and how I felt?
2. Mistreatment acts that **I witnessed others doing** to clients. What action did I take?

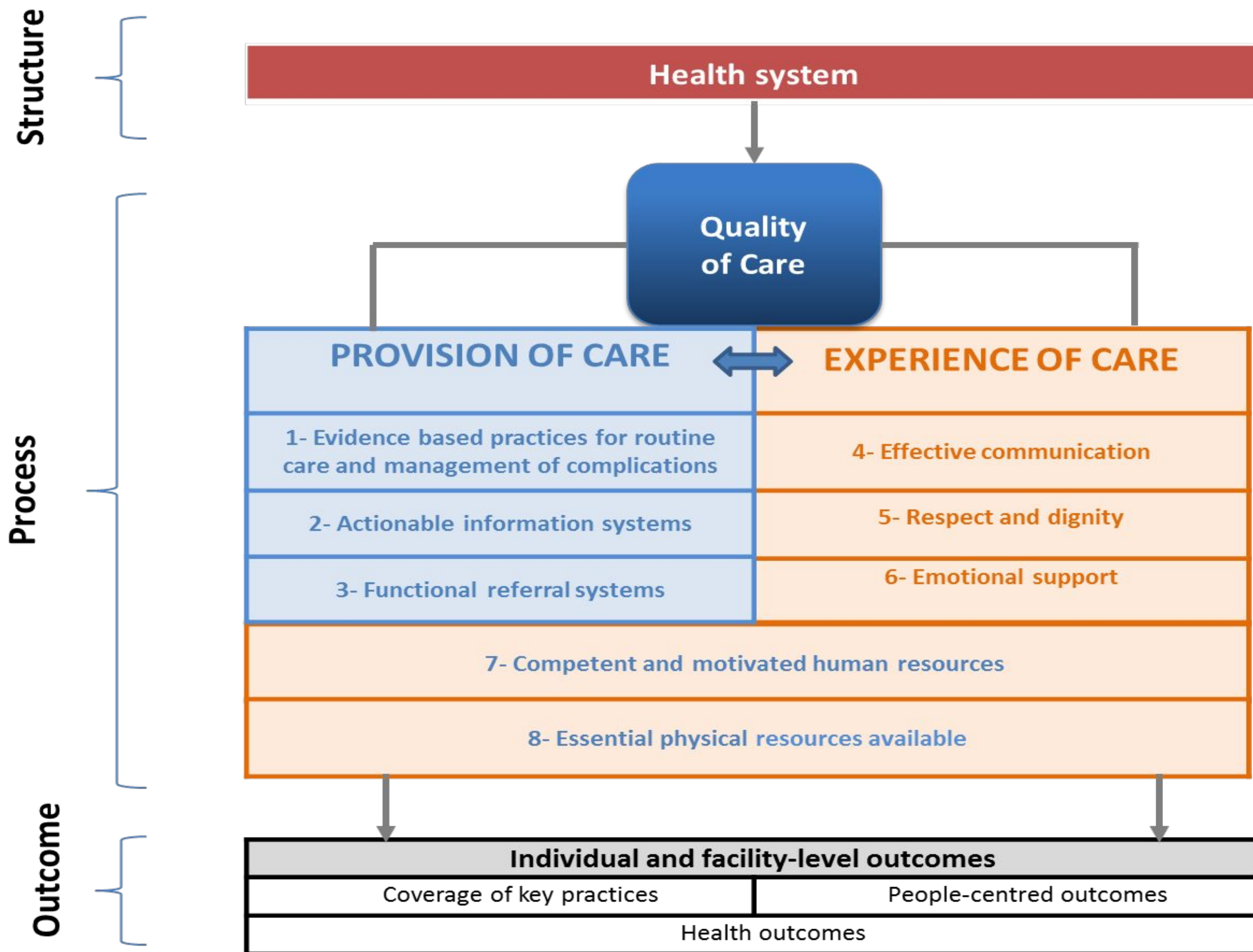
Background

- Respectful dignified maternity care is a **universal human right and an important part of quality care**
- **Disrespect and mistreatment exist everywhere** -> creates negative experiences -> deters facility births
- Mistreatment is **underpinned by gender inequalities and unequal power structures**, which affect women and providers
- **Respectful maternity care is even more important in crisis settings** where:
  - weakened and fragile health systems struggle to provide quality care
  - providers may be chronically stressed and under supported

Categories of mistreatment:

- Physical abuse
- Sexual abuse
- Verbal abuse
- Stigma and discrimination
- Failure to meet professional standards of care
- Poor rapport between women and providers

(Bohren 2015)



Source: World Health Organization. *Standards for Improving Quality of Maternal and Newborn Care in Health Facilities*. "WHO framework for the quality of maternal and newborn health care," p. 16. 2016.

Universal Rights of Women and Newborns (WRA 2019)

- Charter embeds the rights of women and newborns within the context of human rights
- The White Ribbon Alliance (WRA) has worked with other organizations to develop a charter updated in 2019 to include newborns

KNOW YOUR RIGHTS, DEMAND YOUR RIGHTS

RESPECTFUL MATERNITY CARE CHARTER

THE UNIVERSAL RIGHTS OF WOMEN & NEWBORNS

I Everyone has the right to **freedom** from harm & ill-treatment

II Everyone has the right to **information**, informed **consent**, & respect for their choices & preferences, including companion of choice during maternity care & refusal of medical procedures

III Everyone has the right to **privacy** & **confidentiality**

IV Everyone is their own person from the moment of birth & has the right to be treated with **dignity** & **respect**

V Everyone has the right to equality, freedom from discrimination & **equitable care**

VI Everyone has the right to **healthcare** & to the highest attainable level of health

VII Everyone has the right to **liberty**, **autonomy**, self-determination & freedom from arbitrary detention

VIII Every child has the right to be **with their parents** or guardians

IX Every child has the right to an **identity** & **nationality** from birth

X Everyone has the right to adequate **nutrition** & **clean water**

RESPECTFUL MATERNITY CARE

Find out more at whiteribbonalliance.org/rmcresources

Respectful care: A tool for healthcare workers

Show the White Ribbon Alliance animation video

https://www.youtube.com/watch?v=aStnrRu_VrQ&t=30s

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UNIT 4: INITIAL RAPID ASSESSMENT AND MANAGEMENT

Basic emergency obstetric and newborn care in crisis settings

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Unit 4 objectives

By the end of this unit, participants will be able to:

- Quickly identify and treat an obstetric emergency
- Initiate treatment of shock

Rapid assessment and management (RAM)

- Assess the general condition of the woman immediately on arrival
- Quickly identify an emergency
- Prepare to rapidly treat and refer to a higher level of care, as needed

Source: Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice – 3rd ed. World Health Organization. 2015.

A woman presents to the maternity ward / health center:

Check:

1. Is she in shock?
2. Is there vaginal bleeding?
3. Are there convulsions? Is she unconscious?
4. Is there severe abdominal pain?
5. Is there a dangerous fever?
6. Is she having difficulty breathing?
7. Are there other danger signs present?

Signs of shock

Early shock	Late shock
Awake, aware, anxious	Confused or unconscious
Fast pulse	Very fast and weak pulse, rate of 110 per minute or more
Slightly fast breathing	Fast and shallow breathing (rate of 30 per minute or more)
Pale	Marked pallor, especially of inner eyelid, palms or around mouth
Sweatiness	Cold, clammy skin
Low blood pressure	Very low blood pressure
Urine output of 30 ml per hour or more	Urine output of less than 30 ml per hour

Treat shock

- Place the woman on her left side with her legs elevated
- Insert an IV line and start fluids – rapid rate
- Cover with a blanket for warmth
- Use NASG, if available (Unit 7)
- If no IV access – give sips of oral rehydration solution
- Initiate hospital transfer

Stay or go?

- Speed is crucial when handling emergencies
- Work together as a team to start emergency care and initiate the transfer process
  - Communicate clearly with each other and keep accurate records of all care given
- Know the resources at your facility
- Know the referral process and to where the woman can go for a higher level of care

UNIT 5: PREVENTION AND MANAGEMENT OF POSTPARTUM HEMORRHAGE (PPH)

Basic emergency obstetric and newborn care in crisis settings

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Unit 5 objectives

By the end of this unit, participants will be able to:

- Demonstrate active management of the third stage of labor
- Accurately identify normal and abnormal postpartum blood loss
- Identify and manage the most common causes of PPH following normal vaginal birth
- Utilize supplies available, including those in the Inter-Agency Emergency Reproductive Health (IARH) Kits, to prevent and treat PPH
- Identify and appropriately refer women and newborns requiring a higher level of care

All women are at risk of PPH:
Be prepared at every birth

- **Assume anemia and malnourishment**
- **Ensure supplies are available 24/7 – and they are easy to access**
- **Call for help**
- **Know your supplies and how to use them**
  - How to start an IV and give fluids
  - Medication storage and administration

PPH prevention – *all births*

- Active management of the third stage of labor (AMTSL) helps prevents atonic PPH
- Includes:
  1. Administration of uterotonic as soon as the baby is born
  2. Delivery of placenta using controlled cord traction
  3. Checking uterine tone and massaging if soft

Watch *Bleeding After Birth*

(13 minutes)

https://globalhealthmedia.org/portfolio-items/bleeding-after-birth/?portfolioCats=191%2C94%2C13%2C23%2C65

Is bleeding normal?

350 mL

500 mL

Causes

Remember the four **T**s:

- **T**one
- **T**rauma
- **T**issue
- **T**hrombin

Uterine atony is the most common cause of PPH.

Atonic uterus: Initial action

- Uterus bleeds excessively until it contracts
- Check uterine tone and massage if soft
- A contracted uterus feels hard and small like a grapefruit or coconut

Oxytocin

Available in IARH Kits 6 & 11

Oxytocin as 10 IU/mL in 1 mL ampoule

Initial dose	Continuing dose	Maximum dose
10 international units (IU) IM or IV	repeat 10 IU IM or IV if heavy bleeding persists	
20 international units (IU) in 1 liter IV infusion at 60 drops/min	10 IU in 1 liter IV infusion at 30 drops/min	Not more than 3 liters of IV fluids with oxytocin

Misoprostol

Available in IARH Kit 8

- Used where oxytocin is not available
- Also causes the uterus to contract
- Tablet – 200 micrograms (mcg)
- Dose = 800 mcg (4 tablets) under the tongue (sublingual)

Ergometrine

Available in IARH Kit 11

- IM or IV 0.2 mg ergometrine injection
  - Max 5 doses at 15-minute intervals
- Use only after placenta is out
- Only use if oxytocin or misoprostol does not stop bleeding
- Associated with increased blood pressure, nausea and vomiting
- Do not use if eclampsia, pre-eclampsia, hypertension or retained placenta

Tranexamic acid (TXA)

Available in IARH Kit 11B

WHO recommends early use of intravenous TXA within 3 hours of birth in addition to standard care for women with clinically diagnosed PPH following vaginal birth or cesarean section.	**TXA should be administered at a fixed dose of 1g in 10 mL (100 mg/mL) IV at 1 mL per minute (e.g., administered over 10 minutes), with a second dose of 1g IV if bleeding continues after 30 minutes.**

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Bimanual compression of uterus

Left hand placed on abdomen

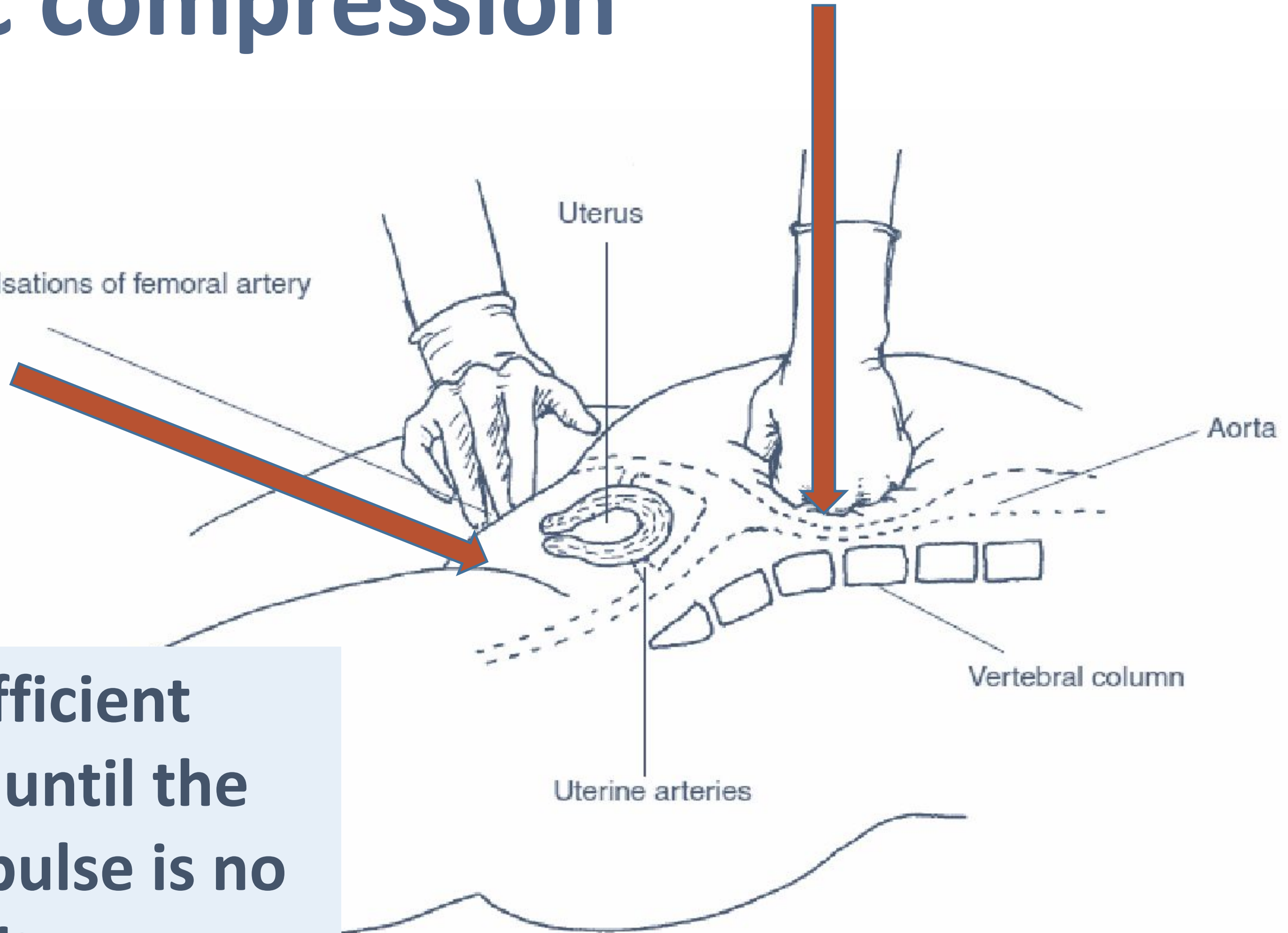
Uterus is pressed between hands

Bladder empty

Right hand placed in vagina

Source: Education Material for Teachers of Midwifery: Midwifery Education Modules. World Health Organization, 2008.

Aortic compression



Apply sufficient pressure until the femoral pulse is no longer felt

Source: Education Material for Teachers of Midwifery: Midwifery Education Modules. World Health Organization, 2008.

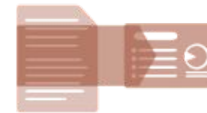
Uterine Balloon Tamponade (UBT)

NEW WHO UBT RECOMMENDATION (2021)

UBT is recommended for the treatment of PPH due to uterine atony after vaginal birth in women who do not respond to standard first-line treatment, provided the following conditions are met:

- Immediate recourse to surgical intervention and access to blood products is possible if needed
- A primary PPH first-line treatment protocol (including the use of uterotonics, tranexamic acid, intravenous fluids) is available and routinely implemented
- Other causes of PPH (retained placental tissue, trauma) can be reasonably excluded
- The procedure is performed by health personnel who are trained and skilled in the management of PPH including the use of uterine balloon tamponade
- Maternal condition can be regularly and adequately monitored for prompt identification of any signs of deterioration. (Context-specific recommendation)

Implementation considerations



Update clinical guidance

Equip health facilities

Ensure skilled personnel and support behavior change

Ensure effective communication with women and analgesia available

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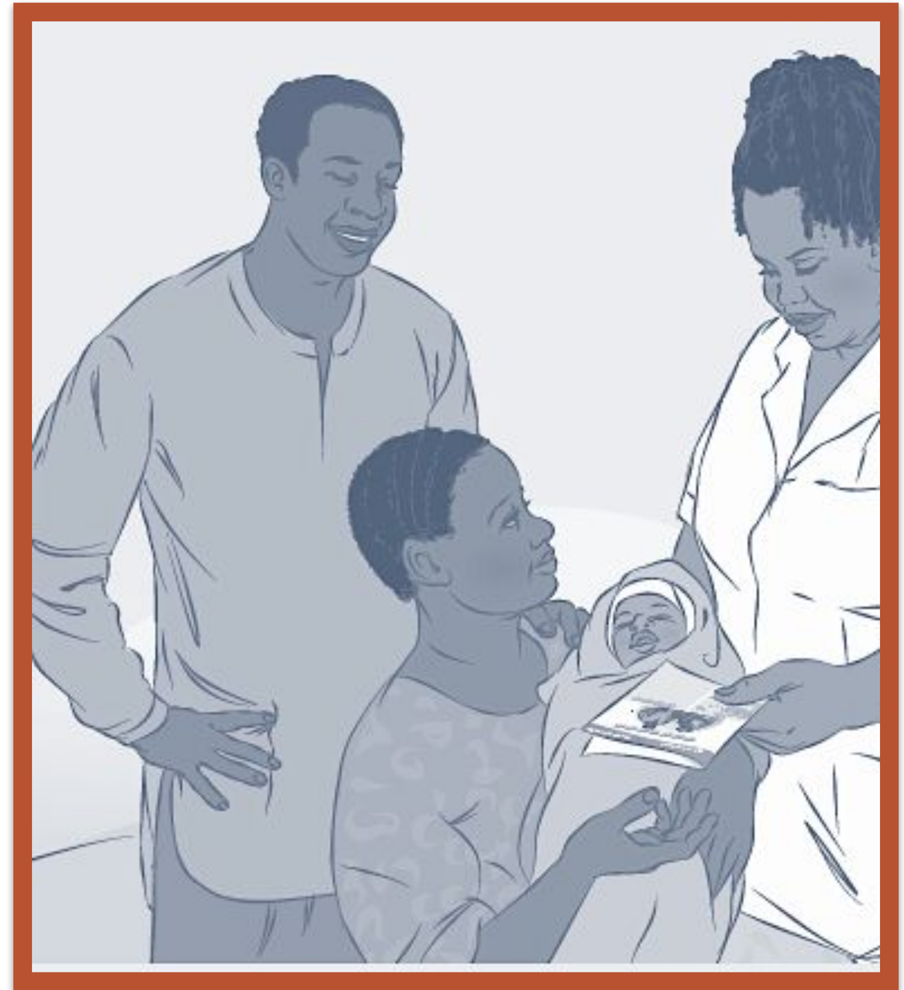
Care after PPH

- Provide supportive respectful care to the woman and newborn
- Continue monitoring
- Debrief on what happened
- Routine postnatal counseling - maternal & newborn danger signs, self-care, breastfeeding, hygiene, postpartum contraceptive options
- Give iron tablets for 3 months



UNIT 6: MANUAL REMOVAL OF THE PLACENTA

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Unit 6 objectives

By the end of this unit, participants will be able to:

- Recognize indications for manual removal of the placenta at multiple levels of care
- Perform manual removal of the placenta

Third stage of labor if AMSTL not done:

- **Signs of placenta separation**
  - Small gush of blood
  - Lengthening of the cord
  - Change in position of uterus
- **If after 30 minutes the placenta is not expelled:**
  - Maintain skin-to-skin, breastfeeding
  - Empty bladder
  - Give 10 iu oxytocin
  - Change the woman's position
- **If no signs after 60 minutes:**
  - Transfer to a higher level of care

If bleeding heavily before placenta has separated/delivered

- Breastfeed, empty bladder
- Check abdomen for a second baby
- Oxytocin 10 units in side of thigh muscle <u>OR</u>
  600 mcg misoprostol by mouth
- Gentle controlled cord traction with contraction
- Prepare for transport and to treat for shock

Manual removal of the placenta

- Do in an emergency to save a woman's life
- If placenta retained after 60 minutes and if not bleeding heavily, transfer to a higher level of care
- Give antibiotics if transport to hospital will take more than 1 hour
  - Amoxicillin 1 g by mouth, once (250 mg x 4)
  - Metronidazole 1 g by mouth, once (250 mg x 4)

After manual removal

- Repeat 10 units oxytocin IM or IV
- Massage uterine fundus
- Give fluids slowly for 1 hour after removal (if bleeding stops)
- If bleeding continues -> **urgent referral**, +20 units oxytocin per liter of IV fluids rapidly
- Uterine balloon tamponade may be inserted prior to transfer by competent staff

UNIT 7: TRANSPORT AND REFERRAL

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Unit 7 objectives

By the end of this unit, participants will be able to:

- Safely stabilize and prepare a woman for transport after postpartum hemorrhage
- Practice IV access and fluid administration
- Practice use of non-pneumatic anti-shock garment *(optional)*

Referral

- **Organize reliable transportation**
- **Communicate with the receiving facility**
  - Explain her diagnosis and condition
  - Describe care provided, including medication
  - Estimate her time of arrival
- **Accompany by a provider and companion**
  - Monitor fetus/newborn
  - Fundal massage **if needed**
  - Maintain IV fluids

Transfer record example

Patient Transfer Record

Date: ______________________

Patient name: ____ Date of Birth: _________________

Reason for transfer: ____

____

____

Date and time of delivery: ____

Medications given and time: ____

Time transfer initiated: ____________ Vital signs at transfer: ________________________________

Contact information of transferring provider: ____

Provider name: ________________________________ Signature: ________________________________

IV fluids

- **Use a 16 or 18 g needle**
- **Run normal saline or Ringer's lactate solution**
- **Rapidly infuse fluids if in shock**
  - 1 liter as fast as possible (15-20 minutes)
  - 1 liter at 30 mL/min (30 min)
    - Monitor BP and pulse every 15 min
    - Watch for shortness of breath
  - Reduce to 3 mL/min (6-8 hours) when pulse is <100 bpm or systolic BP >100 mmHg

IV fluids

<u>Slowly</u> **infuse fluids if pre-eclampsia/eclampsia**

- Infuse 1 liter in 6-8 hours (3 mL/min)

<u>Moderately</u> **infuse fluids if dehydration/fever or severe pain**

- Infuse 1 liter in 2-3 hours

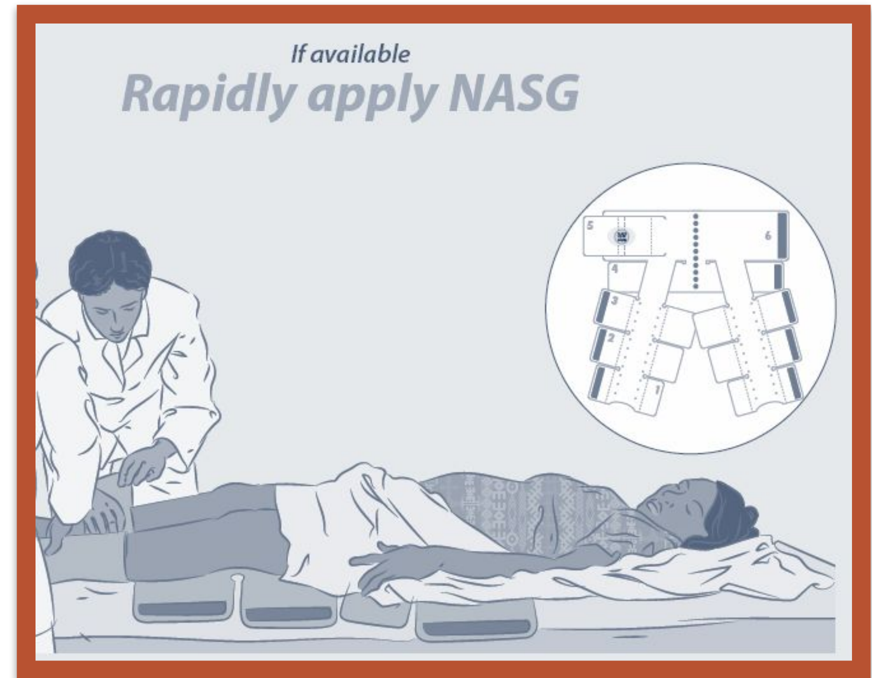
Oral rehydration solution if no IV available

- 300-500 mL/hour

Monitor input/output accurately – ensure the woman catheterized

Apply non-pneumatic anti-shock garment (NASG)

- If you have access to a non-pneumatic anti-shock garment (NASG) consider using this prior to referral
- **Available in IARH Kit 6A**



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UNIT 8: PREVENTION AND MANAGEMENT OF PERIPARTUM INFECTIONS

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Unit 8 objectives

By the end of this unit, participants will be able to:

- Review and apply prevention, assessment, diagnosis, treatment, and evaluation of peripartum infection
- Identify and refer women to a higher level of care for severe infection (sepsis)

Safe and clean birth

- Standard precautions in health facilities
- Clean birth practices in health facilities
- Clean delivery kit distribution if delivery occurs outside of a health facility

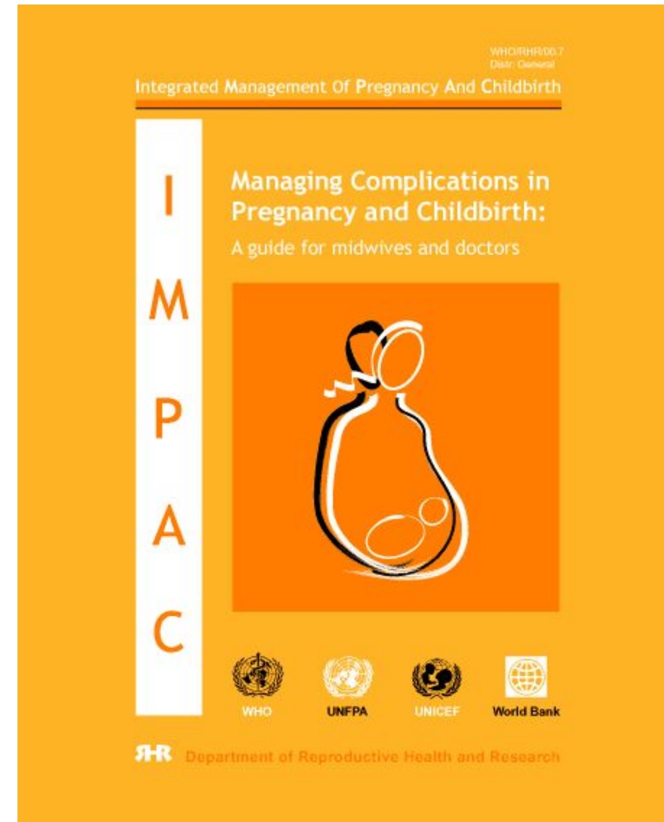
Peripartum infection: Contributing factors

Contributing Factors

- Prolonged labor
- Multiple vaginal exams during labor
- Prolonged rupture of membranes
- Unhygienic labor practices

Preventive Strategies

- Infection prevention practices at all times
- Rational use of antibiotics
- Vaginal examinations only per the standard

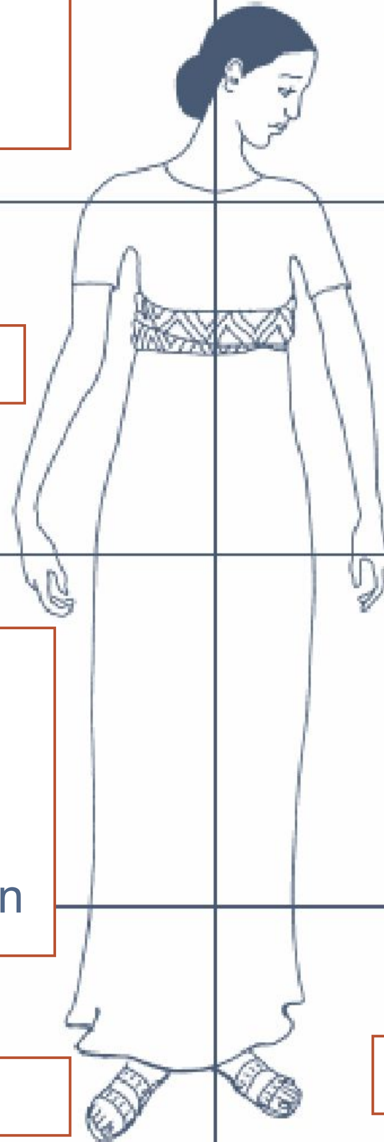


MCPC 2017 has updates on:

- **Pre-labor Rupture of Membranes (PROM) S-159**
- **Peripartum Maternal Infection and Sepsis S-114/5**

After checking for danger signs take the woman's history:

- Chills? Fever? Pain? Bleeding?
- Place of birth? Long labor?
- Premature rupture of membranes (PROM) >18 hours? Manual removal of placenta? Cesarean section? PPH? Traditional practices?
- Malaria? HIV? Anemia?



Chills and general malaise

May have light vaginal bleeding

Fever 38°C or more

Lochia: purulent and foul-smelling

Uterus:

- Sub-involuted
- Fundal height stationary
- Feels soft and bulky
- Feels tender on palpation

May have signs of shock

Lower abdominal pain

May have pulmonary edema

World Health Organization. 2008. Education material for teachers of midwifery : midwifery education modules. – 2nd ed. *Managing Puerperal Sepsis.* Module 4. France.

Differential diagnoses

- Urinary tract infection
- Wound infection
- Mastitis or breast abscess
- Thromboembolic disorder
- Pneumonia
- Malaria or typhoid
- HIV/other viral infections, such as COVID-19

Treatment

- **Stabilize and refer**
- **Give first dose of antibiotic prior to referral**
- **IV antibiotic therapy until 48 hours fever free**
  - Clindamycin 150 mg every 6-8 hours
  - Gentamicin 80 mg IM every 8 hours
- **Send blood cultures if laboratory facilities are available**

Treatment

- Reduce temperature (e.g., paracetamol)
- Uterine evacuation if needed
- Review status of tetanus toxoid injections
- Bed rest and perineal hygiene
- Keep newborn with mother – monitor closely and support breastfeeding
- Ensure the woman and her family are fully informed of her condition and all care given

Referral

- **Organize reliable transportation**
- **Communicate with the receiving facility**
  - Explain woman's diagnosis and condition
  - Describe care provided including medication
  - Estimate her time of arrival
  - Send a referral letter/completed form with her
- **Accompany by a provider and companion**
  - Monitor newborn
  - Maintain IV fluids

Antimicrobial resistance: A global public health issue

- Failure to cure infections that were previously managed successfully due to pathogens (microbes) developing resistance to the antimicrobials
- Remember antibiotics need to be used rationally in women and newborns

Recommendations for prophylactic antibiotics (MCPC WHO 2017):

- Cesarean birth (elective & emergency)—administer prophylactic antibiotics before procedure, not *after* clamping / cutting cord
- Manual removal of the placenta
- Placement of uterine balloon tamponade
- Repair of third and fourth degree lacerations
- Preterm pre-labor rupture of membranes

UNIT 9: PREVENTION AND MANAGEMENT OF PRE-ECLAMPSIA / ECLAMPSIA

Basic emergency obstetric and newborn care in crisis settings

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Unit 9 objectives

By the end of this unit, participants will be able to:

- Explain the classification of hypertensive disorders in pregnancy
- Demonstrate ability to accurately measure and record blood pressure
- Demonstrate ability to assess for severe pre-eclampsia and eclampsia in limited resource settings
- Demonstrate ability to safely prepare and administer magnesium sulfate for intramuscular (IM) and IV administration
- Discuss treatment protocols for anti-hypertensive medication administration

Overview of hypertensive disorders in pregnancy/postnatal

- Chronic hypertension
- Gestational hypertension
- Pre-eclampsia (mild to severe)
- Chronic hypertension with superimposed pre-eclampsia
- Eclampsia

IAWG

Assessment

- Gestational age > 20 weeks
- Accurate blood pressure reading
- Presence of protein in urine (≥ 2+ dipstick)
- Presence of danger signs
  - Severe headache
  - Difficulty breathing
  - Visual changes
  - Right upper quadrant pain

Accurate blood pressure

- Explain what will be done
- Feet flat on floor
- Arm at level of heart
- Cuff firmly on upper arm – 2 cm above elbow
- Appropriately sized cuff should be used – the cuff should encircle at least 80% of arm
- Needle at zero

- Stethoscope positioned
- Quickly inflate cuff to 180 mmHg
- Slowly release the air
- sBP at first sound
- dBP when sound stops
- Do not round the number
- Document what you hear and share with the woman

Classification

Disorder	Onset	Criteria
Mild to moderate Pre-eclampsia	20 + weeks	New onset high BP at 2 readings at least 4 hours apart: sBP ≥ 140 mmHg OR dBP ≥ 90 mmHg PLUS Proteinuria 2+ on dipstick
Severe pre-eclampsia	20 + weeks	New onset high BP of sBP ≥160 mmHg OR dBP ≥ 110 mmHg with proteinuria as above OR any one of danger signs
Eclampsia	20 + weeks	Pre-eclampsia as defined above plus convulsions or unconsciousness

At 37+ weeks, stabilize the woman and refer for birth. Induction of labor is recommended at term.

Treatment: Severe pre-eclampsia

1. Urgent referral to hospital unless birth imminent
2. If birth imminent, support childbirth before referral
3. Magnesium sulfate to prevent convulsions – ensure loading dose pre-departure
4. Antihypertensives to lower blood pressure
5. Teamwork and effective communication to facilitate referral
6. Plan for birth within 24 hours of onset symptoms

Treatment: During a convulsion

- Left lateral position, protect from fall and injury
- Ensure airway clear
- Give available emergency drugs:
  - Give loading dose magnesium sulfate
  - Give antihypertensives
- Start an IV infusion
- Perform bladder catheterization

Treatment: After a convulsion

- Stabilize and refer urgently to a hospital unless birth is imminent
  - Keep the woman on a left side position and ensure her airway is clear
  - Repeat magnesium sulfate and antihypertensives during transport, if needed
- Birth should take place within 12 hours of convulsion

ROLE-PLAY

Magnesium sulfate ($MgSO_4$)

- **Drug of choice in severe pre-eclampsia and eclampsia for prevention and treatment of convulsions**
- **Safe administration via IV and/or IM**
  - Slow IV infusion only
  - Ongoing monitoring for respiratory and other neuromuscular depression
  - **Only 50% $MgSO_4$ can be given IM**
- **Side effects**
  - Warmth during injection
  - Flushing, thirst, headache, nausea, or vomiting

Monitoring

- **Closely monitor for potential serious side effects**
  - *Urine output* – minimum 100 mL/4 hours
  - *Respiratory rate* – minimum 16 per min
  - *Deep tendon reflexes* – knee jerk present?
- **HOLD next dose until all signs are normal**

Formulation MgSO4

IARH Kits 6 and 11 contain 500 mg/mL in 10 mL vials

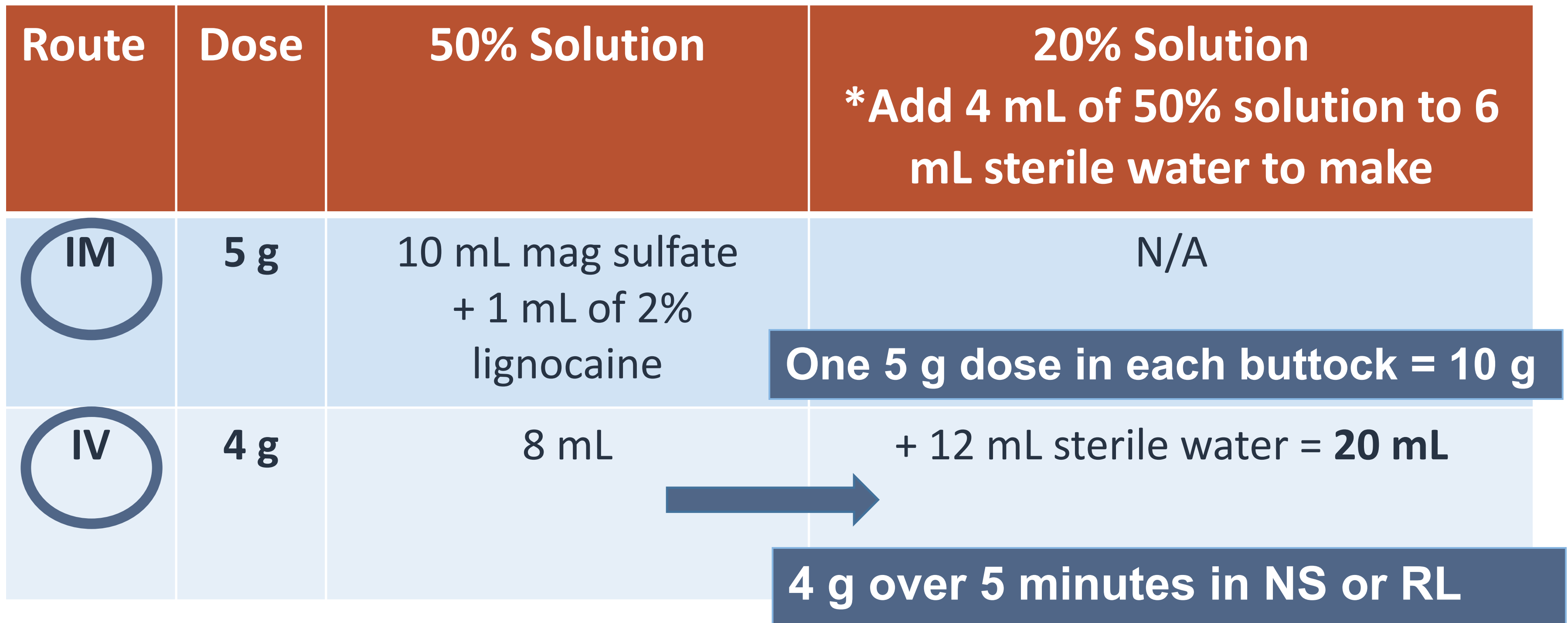
- One vial contains 10 ml of 50% MgSO4 = 5 g
- One vial contains 5 g MgSO4 = 50% solution

Route	Dose	50% Solution	20% Solution *Add 4 mL of 50% solution to 6 mL sterile water to make
IM	**5 g**	10 mL mag sulfate + 1 mL of 2% lignocaine	N/A
IV	**4 g**	**8 mL**	**+ 12 mL sterile water = 20 mL**
	2 g	4 mL	+ 6 mL sterile water = 10 mL

Never give 50% solution magnesium sulfate intravenously (IV)

Loading dose administration

- Start IV fluids (NS or LR) 1 liter in 6-8 hours (3 mL/min)
- Loading dose is 4 g $MgSO_4$ IV *plus* 10g $MgSO_4$ IM=14 g
- If IV is not possible, give IM only
- Use correct formulation for route of administration



Route	Dose	50% Solution	20% Solution *Add 4 mL of 50% solution to 6 mL sterile water to make
IM	5 g	10 mL mag sulfate + 1 mL of 2% lignocaine	N/A
IV	4 g	8 mL	+ 12 mL sterile water = **20 mL**

Continued treatment

If referral delayed, if in active labor, or if convulsions during transport:

- 5g IM of MgSO4 every 4 hours, alternating side of administration each time
- Continue MgSO4 until 24 hours after birth or last convulsion

Route	Dose	50% Solution	20% Solution
IM	**5 g**	10 mL mag sulfate + 1 mL of 2% lignocaine	**N/A**

<u>DO NOT</u> give the next dose if :

- Knee jerk reflex is absent
- Urine output less than 100 mL in 4 hours
- Respiratory rate less than 16 breaths/minute

For recurrent convulsions

After 15 minutes, more IV medication can be given if fits continue

Route	Dose	50% Solution	20% Solution *Add 4 mL of 50% solution to 6 mL sterile water to make
IV	**2 g**	4 mL →	+ 6 mL sterile water = **10 mL**

2 g over 5 minutes in NS or RL

<u>Never</u> give 50% solution magnesium sulfate intravenously (IV)

If respiratory arrest occurs:

- Calcium gluconate is the antidote to magnesium sulfate
- **Kit 6 and 11** – calcium gluconate 100 mg/mL x 10 mL (1 g)
- Give IV: 1 g (10 mL of 10% solution) over 10 minutes
- Assist ventilation using bag and mask

Antihypertensive medications

IARH Kit 11

Given if systolic BP is ≥ 160 mmHg and /or diastolic BP is ≥ 110 mmHg

- Hydralazine 5 mg, given IM or IV (3-4 min)
- Repeat in 30 min if diastolic BP ≥ 90 mmHg
- Maximum dose 20 mg/24 hours (4 doses)
- Other anti hypertensives can be used as available such as Nifedipene, Labetalol, and Methyldopa

(Reference: MCPC WHO 2017)

Referral

- **Organize reliable transportation**
- **Communicate with receiving facility**
  - Explain diagnosis and condition
  - Describe care provided including medications
  - Estimate time of arrival
- **Accompany by a provider and companion**
  - Monitor fetus/newborn
  - Maintenance dose
  - IV access maintained

UNIT 10: ESSENTIAL NEWBORN CARE / NEWBORN RESUCITATION

IAWG

Basic emergency obstetric and newborn care in crisis settings

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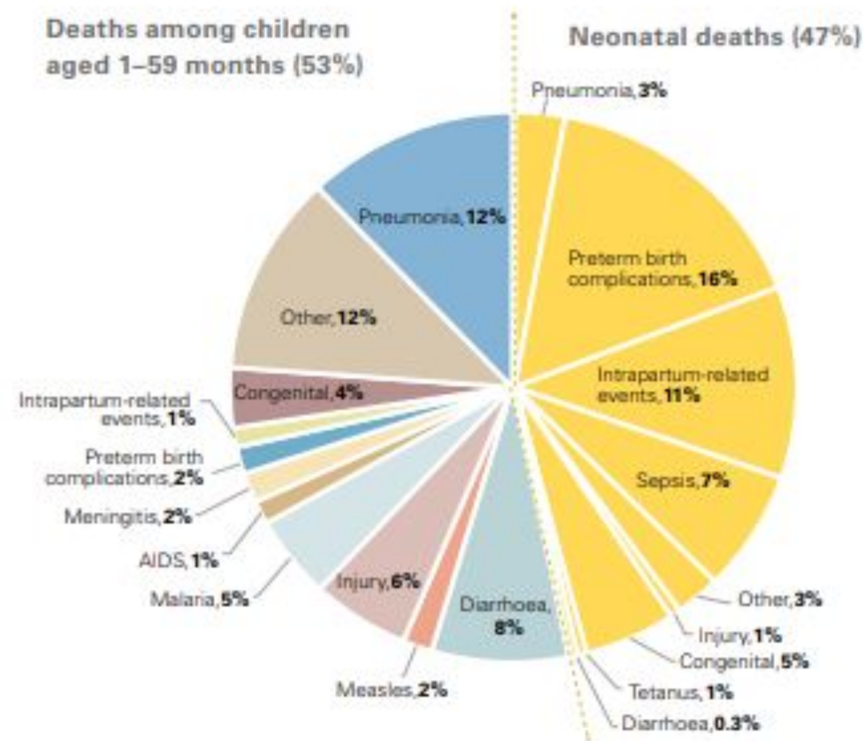
Unit 10 objectives

By the end of this unit, participants will be able to:

- Discuss the main causes of newborn deaths and challenges for newborn care in crisis-affected settings
- Explain essential newborn care
- Perform newborn resuscitation using a bag and mask

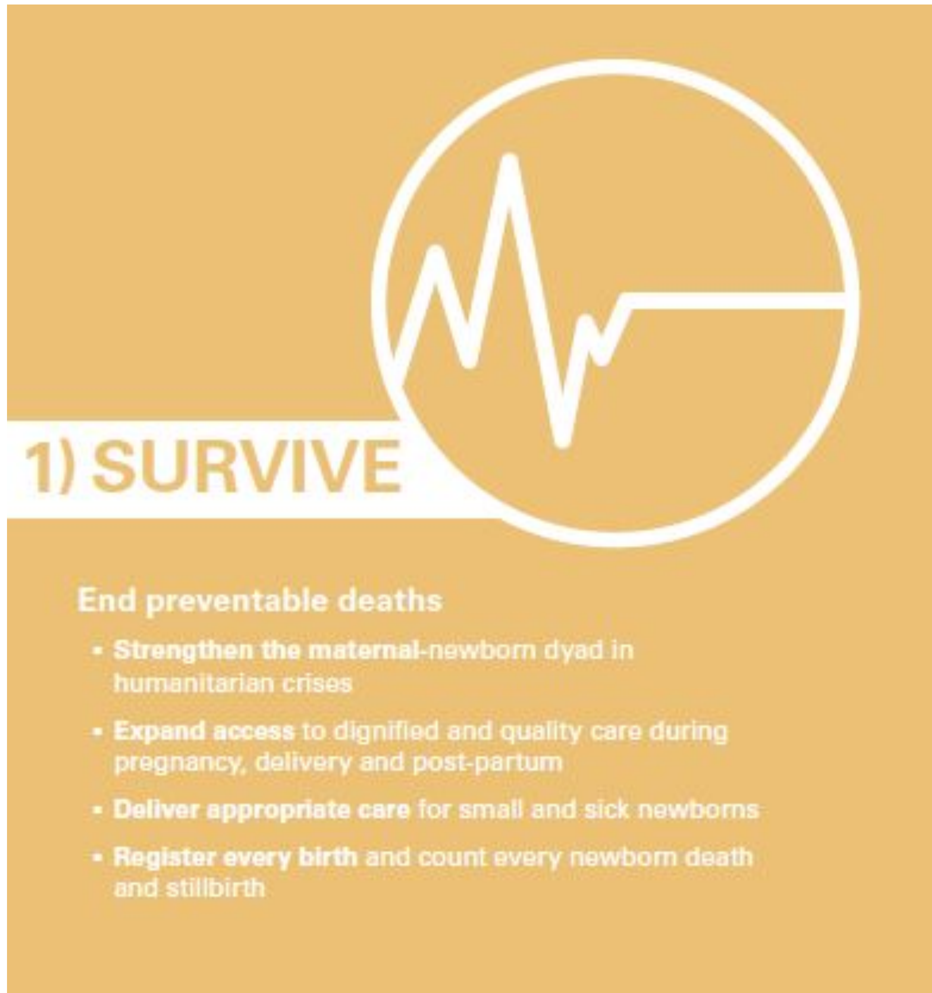
Newborn Mortality (NMR)

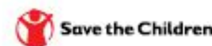


- High burden of NMR and stillbirths in crisis-affected settings
- Prematurity is the main cause of under 5 deaths, followed by birth asphyxia and sepsis
- Approx. 9-15% of newborns will need emergency care
- About 70% of newborn deaths are preventable

UN-IGME-Child-Mortality-Report-2019

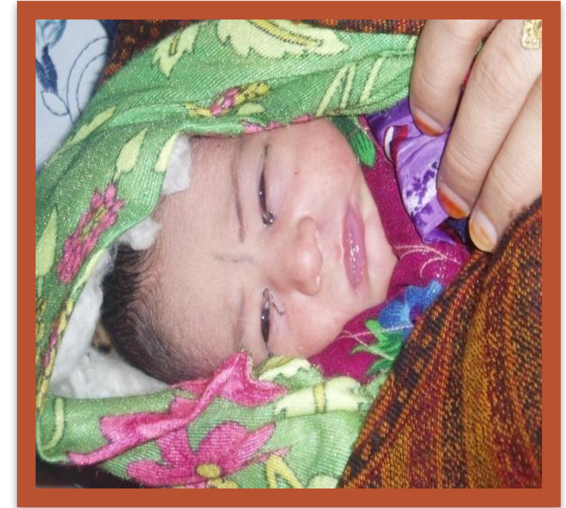
Newborn care in humanitarian settings





Companion to the Inter agency field manual (IAFM) and MISP

Essential newborn care



All babies should receive the following:

- thermal protection (e.g., skin-to-skin
- contact)
- hygienic umbilical cord and skin care
- early and exclusive breastfeeding
- assessment for signs of serious health problems or need of additional care (e.g., low birth weight, sick, or have an HIV positive mother)
  - preventive treatment (e.g., immunization BCG and hepatitis B, vitamin K, and ocular prophylaxis
  - nurturing care

Newborn Resuscitation

- Be prepared to resuscitate at every birth – *help the baby to breathe*
- The goal of resuscitation is the newborn is breathing **within ONE MINUTE**
- Ensure uninterrupted ventilation until the baby is breathing spontaneously
- Newborn bag and masks are available in IARH Kit 6A and UNICEF Newborn Care Kits

ACTION PLAN

Second Edition

Helping Babies Breathe

Prepare for birth*

See HMS Action Plans for mother

Birth

Dry thoroughly

Crying?

Crying

Not crying

Keep warm

Clear airway if needed

Stimulate

Breathing?

Breathing well

Keep warm

Check breathing

Not breathing

Ventilate

Cut cord

Breathing

Cut cord

Not breathing

No chest movement

Call for help

Monitor with mother

Essential Care for Every Baby (See ECEB Action Plan)

Breathing

Improve ventilation

Not breathing

Heart rate?

Normal

Slow

Continue ventilation

Decide on advanced care

Not breathing

The Golden Minute®

60 sec

*Equipment to help a baby breathe

Gloves

Suction device

Cloths

Ventilation bag-mask

Head covering

Stethoscope

Scissors

Timer (clock, watch)

Ties/Clamps

Disinfect equipment immediately after use

Helping Babies Breathe

American Academy of Pediatrics

Source: American Academy of Pediatrics, and Helping Babies Breathe. “Prepare for Birth: Action Plan,” 2016.

UNIT 11: NEXT STEPS AND CLOSING

Basic emergency obstetric and newborn care in crisis settings

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Unit 11 objectives

By the end of this unit, participants will be able to:

- Complete a knowledge assessment
- Discuss options for ongoing skills practice and post training activities (such as peer to peer, clinical drills, low dose high frequency, mentorship)
- Explain training resources and job aids
- Develop a simple action plan for improving facility readiness for BEmONC
- Explain how the training met their expectations and course objectives

Ongoing skills practice is essential

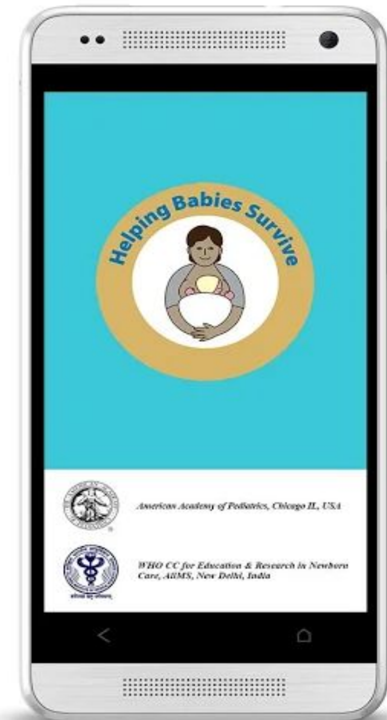
- Practice is needed to build confidence, support the transfer of learning, and help with skills retention
- Training combined with quality improvement efforts and coaching or supervision achieves a significantly greater effect than training alone
- Mentorship and/or on the job training is recommended

Additional trainings: Examples

- **Helping Mothers Survive**
  - Bleeding after Birth Complete
  - Pre-eclampsia/Eclampsia

  http://hms.jhpiego.org
- **Helping Babies Survive**
  - Helping Babies Breathe after Birth
  - Essential Care Every Baby
  - Essential Care Small Babies

  https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/helping-babies-survive/Pages/default.aspx
- **Apps**
  - https://www.maternity.dk/safe-delivery-app/
  - Essential Care for Every Baby – Google Play, App Store



Additional resources: Suggestions

IAWG

- https://iawg.net/resources

Global Health Media have many good videos free to view and download

- https://globalhealthmedia.org/videos/

Healthy Newborn Network is great knowledge hub and free to join

- https://www.healthynewbornnetwork.org/
- https://www.healthynewbornnetwork.org/resource/newborn-health-resources-trainings-and-tools-for-improving-newborn-health-in-humanitarian-settings

Thank you!