SECTION 2: Principles of managing emergencies (IMEESC 10.2, 3.2 and 16.3 and WHO pregnancy C15 and C3)

Approach to emergencies

Training

Members of the clinical team must know their roles and ideally will have trained together in:

- Clinical situations and their diagnoses and treatments. Practice drills can be very useful
- Drugs and their use, administration and side effects
- Emergency equipment and how it functions

The ability of a facility to deal with emergencies should be assessed and reinforced by the frequent practice of emergency drills.

Initial management

- Stay calm.
- **Do not leave the patient unattended.**
- Have one person in charge to avoid confusion.
- **SHOUT FOR HELP.** Have one person go for help and another to get emergency equipment and supplies for example oxygen cylinder, emergency kit.
- Assess **Airway, Breathing, Circulation** and **Disability.**
- If patient is conscious, ask what happened and what symptoms he/she has.

Triage *Seeing the sickest first*

Rapid initial assessment

When a woman of childbearing age, baby or child presents with a problem, rapidly assess and determine how urgently the patient should be seen. This requires the ability to recognise patients who need urgent treatment, and to act quickly and appropriately.

This can be done by:

• training all staff—including clerks, guards, door-keepers or switchboard operators— to get help when a patient arrives as an emergency.

• practicing clinical and emergency drills with staff.

• ensuring that access is not blocked, door keys are available, equipment is in working order (requires daily checks and logbooks) and staff are properly trained to use it.

• having protocols (and knowing how to use them) to recognize a genuine emergency and know how to react immediately.

- having pathways of emergency care laminated and on the walls in areas where emergencies are managed

• clearly identifying which patient in the waiting room needs urgent attention from the health worker and should therefore pass to the front of the queue: that is symptoms/signs noted in **Table** 2 for pregnant women or symptoms/signs outlined in **Table** 3 for babies and children

• agreeing on schemes by which patients with emergencies can be exempted from payment, at least temporarily (local insurance schemes, health committee emergency funds).

Table 2 Rapid initial assessment of a mother who may be pregnant

Assess	Danger signs	Consider
Airway and breathing	**LOOK FOR** • cyanosis (blueness) • respiratory distress **EXAMINE:** • skin: pallor • lungs: wheezing or creps	• severe asthma • pneumonia • heart failure • severe anaemia • malaria • diabetic ketoacidosis • anaphylaxis • pulmonary embolus • amniotic fluid embolus See **Difficulty in breathing**
Circulation (signs of shock)	**EXAMINE:** • skin: cool and clammy • pulse: fast (110 or more) and weak (pulse may be bounding in septic shock) • blood pressure: low (systolic less than 90 mm Hg) • urine output absent	• Haemorrhage-revealed or concealed • Severe gastroenteritis • Septicaemia • Anaphylaxis • Trauma See: **Shock** and trauma
Vaginal bleeding (early or late pregnancy or after childbirth)	**ASK IF:** • pregnant, length of gestation • recently given birth • placenta delivered **EXAMINE:** • vulva: amount of bleeding, placenta retained, obvious tears • uterus: atony • bladder: full **DO NOT DO A VAGINAL EXAM IF THERE IS A RISK OF PLACENTA PRAEVIA**	• abortion • ectopic pregnancy • molar pregnancy See **Vaginal bleeding in early pregancy** abruptio placentae placenta praevia ruptured uterus See **Vaginal bleeding in later pregnancy and labour** • atonic uterus • tears of cervix and vagina • retained placenta • inverted uterus See **Vaginal bleeding after childbirth**
Unconscious or convulsing	**ASK IF:** • pregnant, length of gestation **EXAMINE:**	• Eclampsia • Malaria • Epilepsy • Tetanus

Assess	Danger signs	Consider
	• blood pressure: high (diastolic 90 mm Hg or more) • temperature: 38°C or more (may be normal in eclampsia)	• Meningitis • Poisoning See **Convulsions or loss of consciousness**
Dangerous fever	**ASK IF:** • weak, lethargic • frequent, painful urination **EXAMINE:** • temperature: 38°C or more • unconscious • neck: stiffness • lungs: shallow breathing, consolidation • abdomen: severe tenderness • vulva: purulent discharge • breasts: tender	• Septicaemia • urinary tract infection • malaria See **Fever during pregnancy and labour** • metritis • pelvic abscess • peritonitis • breast infection See **Fever after childbirth** • complications of abortion See **Vaginal bleeding in early pregnancy** • pneumonia See **Difficulty in breathing**
Severe abdominal pain	**ASK IF** • pregnant, length of gestation **EXAMINE** • blood pressure: low (systolic less than 90 mm Hg) • pulse: fast (110 or more) • temperature: 38°C or more • uterus: state of pregnancy	• ovarian cyst • appendicitis • ectopic pregnancy See **Abdominal pain in early pregnancy** • possible term or preterm labour • amnionitis • abruptio placenta • ruptured uterus See **Abdominal pain in later pregnancy and after childbirth**

The mother also needs **prompt attention** if she has any of the following signs:

• BLEEDING with palpable contractions;
• ruptured membranes;
• pallor;
• weakness;
• fainting;
• severe headaches;
• blurred vision;
• vomiting;
• fever;
• respiratory distress. The mother should be sent to the front of the queue and promptly treated.

Triage of Children

Emergency Triage Assessment and Treatment (ETAT)

Triage is the process of rapidly screening sick children and infants when they first arrive at the health facility and placing them in one of 3 groups:

- **Emergency signs- patients** who require immediate treatment to avert death. This group includes those with IMCI "Danger signs"
- **Priority signs -patients** who should be given priority within the queue so that they can be assessed and treated without delay
- **Non-urgent cases-patients** who have neither emergency or priority signs

Check for Neck / Head Trauma before treating child – do not move neck if cervical spine injury is possible

EMERGENCY SIGNS

Always assess in the following order

- **Airway**
- **Breathing**
- **Circulation**
- **Disability**

If any emergency signs present:

- give treatment(s)
- call for help
- take blood for emergency laboratory investigations (Blood glucose, Malaria screen, Hb, Blood culture if possible etc)

TABLE 3 Rapid initial assessment of a child

Assess	Emergency signs	Treatment
1. AIRWAY AND BREATHING	Obstructed breathing **or** Central Cyanosis **or** Severe Respiratory Distress **or** Oxygen Saturations <92% if available	IF FOREIGN BODY ASPIRATION *See BLS Choking Protocol* IF NO FOREIGN BODY ASPIRATION Manage airway ie: Head tilt/chin lift unless neck trauma (jaw thrust) Neutral position (infant); Sniffing (child) Oro-pharyngeal airway Give Oxygen Ensure Child is warm

2. **CIRCULATION**	Cold Hands with Capillary Refill Time longer than 3 seconds AND Weak and fast pulse Low Blood pressure Check state of nutrition	Stop any bleeding Give Oxygen Ensure child is not hypothermic **IF NOT SEVERLY MALNOURISHED** Insert IV and begin giving fluids rapidly (20mls/kg) If not able to gain peripheral access use intraosseous or other method IF SEVERLY MALNOURISHED (visible severe wasting especially buttocks and bilateral pedal oedema) **If lethargic or unconscious** Give IV glucose (5mls/kg 10% glucose) Insert IV line and give fluids (15mls/kg over 1 hour – 0.9% Saline and 5% Dextrose wait 2 hrs for response) **If not lethargic or unconscious** Give Glucose orally or per NG tube Proceed immediately to full assessment and treatment
3. **DISABILITY**	Coma (**U** on AVPU) Convulsing (now)	Manage airway IF CONVULSING Give diazepam or other appropriate anticonvulsant IF UNCONSCIOUS If trauma suspected stabilise neck If trauma not suspected position child in left lateral position Give IV 5ml/Kg 10% glucose Make sure child is warm
4. **HYDRATION** (child with diarrhea-)	**Diarrhea plus any 2 of:** • Lethargy • Sunken eyes • Very Slow capillary refill (skin pinch) (>3 secs) **IMCI "Danger signs" of:** Vomiting continuously Unable to drink	**IF NO SEVERE MALNUTRITION** Insert IV line and begin giving fluids rapidly – according to WHO Plan C **IF SEVERE MALNUTRITION** Do not insert IV Proceed immediately to full assessment and treatment

PRIORITY SIGNS - these children need prompt assessment and treatment

- Visible severe wasting
- Oedema of both feet
- Severe palmar pallor
- Any sick young infant (<2 months of age)
- Lethargy
- Continually irritable and restless
- Major burn
- Any Respiratory Distress
- An Urgent Referral Note from another facility

Note: If a child has trauma or other surgical problems, get surgical help – follow trauma guidelines.

NON-URGENT CASES – proceed with assessment and further treatment according to the child's priority

Triage decision making

Triage decisions are based on

- Initial assessment for emergency signs
  - ABCD and hydration
- Reassessment
  - Looking for priority signs
  - If patients condition changes

Triage categories change with the patient's condition. Patients should be reassessed and their triage category changed if necessary. Categories can be classed as:

1. Immediate
2. Very urgent
3. Urgent
4. Standard

Life threat	Threat to vital functions (ABC) means that the patient is in the **immediate** group. Thus the presence of an insecure airway, inspiratory or expiratory stridor, absent or inadequate breathing and with a rapid weak pulse are significant.
Pain	Pain is a major factor in determining priority. Patients with severe pain should be allocated to the **very urgent** category, those with moderate pain to the **urgent** category, and those with a lesser degree of pain to the **standard** category.
Haemorrhage	Haemorrhage is a feature of many presentations, particularly those during pregnancy or following trauma. For example, haemorrhage that is not rapidly controlled by the application of sustained direct pressure, and which continues to bleed heavily or soak through large dressings quickly, should be treated **very urgently**.
Conscious level	Unresponsive patients must be an **immediate** priority, those who respond to voice or pain only are categorized as **very urgent**, and those with a history of unconsciousness should be allocated to the **urgent** category. Those fitting are **immediate**.
Temperature	Fever > 38.5ºC or < 35ºC are always seen **very urgently**.

Section 2 – Self Assess (1)

1) ***In the initial management of an emergency the following are true:***
(a) do not leave patient alone
(b) assess Airway, Breathing, Circulation and Disability
(c) have a number of different persons in charge

2) ***In undertaking triage in pregnancy:***
(a) do ABC first
(b) Vaginal bleeding is important
(c) Cyanosis is a danger sign
(d) Vomiting is a danger sign

3) ***In undertaking triage in children (ETAT)***
(a) Obstructed breathing is a priority not an emergency sign
(b) The presence of severe malnutrition is important in determining treatment
(c) Severe dehydration is an emergency sign

ANSWERS
1) a b 2) a b c 3) b c