Triage and the “ABCD” Concept

ETAT Module 1

Adapted from Emergency Triage Assessment and Treatment (ETAT): Manual for Participants, World Health Organization, 2005
Learning Objectives

• Understand the importance of continually assessing the medical needs of all children from arrival at the healthcare facility until discharge
• Recognize emergency (ABCD) and priority signs
• Assign children triage categories, based on emergency and priority signs
• Identify the appropriate immediate response for children in each triage category
Target Audience

• All centre staff who have contact with patients

• Assessment and immediate response to emergency and priority patients will vary depending on whether or not you are a healthcare provider
Overview

• What is triage?
• Performing a rapid assessment
• The ETAT tool
• Emergency signs
• Priority signs
Triage: what and why

• **What**: Sorting patients into priority groups according to their needs and the resources available

• **Why**: Identify and treat seriously ill children as soon as possible to prevent deterioration in their conditions
Triage process

• **When**: as soon as the child arrives at the healthcare facility and periodically throughout the visit

• **Where**: at various locations, depending on the facility (outpatient queue, waiting room, designated triage area)

• **Who**: all clinical staff

• **How**: rapid assessment performed within 15-20 seconds, without using equipment or taking vital signs
How to perform a rapid assessment

• Look and listen

• What is the overall appearance of the child?
  – Is he playful and interactive?
  – Is she quiet or poorly responsive?

• For children who are ill appearing, systematically look for the presence of emergency and priority signs
ETAT: Emergency Triage Assessment Treatment Tool

- Reliably sorts children into the following treatment categories:
  - immediate emergency treatment (E)
  - rapid assessment and treatment (P)
  - with non-urgent conditions (N)

Adapted from ETAT manual for participants, Chart 2 page 67
Emergency Signs

Airway
Breathing (severe)
Circulation
Coma
Convulsion
Dehydration (severe)

Priority Signs

3TPR
T: tiny baby,
temperature, trauma
P: pallor, poisoning, pain
R: respiratory distress,
restless, referral

MOB
M: malnutrition
O: oedema
B: burn
Emergency signs

- Airway
- Breathing
- Circulation
- Coma
- Convulsion
- Dehydration (severe)
Airway

- Is the airway obstructed?
- Signs of airway obstruction
  - Complete obstruction: no air movement
  - Partial airway obstruction: noisy breathing during inspiration
Case # 1

You are at the registration desk. You notice a child with a small toy in her mouth. Suddenly, she begins to choke.

What should you do?
She is in severe distress and choking but she is not making any sound.

What is her triage category?
What should you do next?
Emergency

Call the triage nurse.
Breathing (1)

- What is the child’s color?
  - Pink
  - Pale
  - Grey
  - Blue

- Is the child breathing? Does the chest wall move with inspiration and expiration?
Breathing (2)

- Is there increased work of breathing?
  - Can the child nurse or talk?
  - Is there severe indrawing of the chest?
- What is the rate and pattern of breathing?
  - Too fast
  - Too slow
  - Agonal breathing: irregular, slow
  - Abnormal patterns
    - Deep, slow (as with acidosis)
    - Irregular (as with brain abnormalities)
Increased Work of Breathing

- Anxious
- Nasal flaring
- Indrawing of chest
  - Between the ribs
  - Below the breast bone
Case # 2

A caretaker calls you to the waiting room because she is concerned about the child sitting next to her. The infant is pale and appears anxious and uncomfortable.

Is this baby sick or well?
He is sick.

What should you do next?
Assess airway and breathing.

There is no noisy breathing. The respiratory rate is rapid and there is marked indrawing of the chest.

Describe his respiratory status.
The airway is patent. He has increased work of breathing.

What is his triage status?

What should you do?
Emergency (respiratory distress)

Call for help.
Circulation

- If the child’s hands are warm, circulation is OK.
- For children with cold hands, assess the capillary refill
Prolonged Capillary Refill

• Press an area on the patient’s extremity with your finger until it is pale.

• Color should return to the skin within 3 seconds after you remove your finger.

PALS: Rapid Cardiopulmonary Assessment, American Heart Association 2001
Coma (mental status)

- A (alert)
- V (responds to voice): lethargic
- P (responds to pain): coma
- U (unresponsive): coma
Coma (mental status)

- A
- V
- P (responds to pain): coma
- U (unresponsive): coma
Case # 3

A mother comes to the registration desk with her infant wrapped in a blanket.

What should you do in order to assess the baby?
Ask the mother to unwrap the baby.

She is limp and unresponsive.

What is her triage category?
What should you do?
Emergency (U = coma)

Call for help.
Convulsions

- Sudden loss of consciousness
- Uncontrolled jerking of arms and/or legs
- Twitching of face and/or eyes

Dehydration (with severe diarrhea)

- Lethargy
- Sunken eyes
- Skin pinch goes back very slowly (longer than 2 seconds)
Case # 4

As you walk through the waiting room, you notice a lethargic small child lying in his mother’s lap. His eyes are sunken. His mother says that he has had diarrhea for 3 days.

What is his triage category?
Emergency (Severe dehydration)

Call for help.
## Triage process to identify emergency signs

<table>
<thead>
<tr>
<th>Triage steps</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess Airway</td>
<td>Positive: <strong>Stop. Call for help</strong></td>
</tr>
<tr>
<td></td>
<td>Negative: assess Breathing</td>
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<td></td>
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</tr>
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<td>Assess Dehydration</td>
<td>Positive: <strong>Stop. Call for help</strong></td>
</tr>
<tr>
<td></td>
<td>Negative: assess Priority signs</td>
</tr>
</tbody>
</table>

Adapted from ETAT manual for participants, page 8

Stop
Assess Airway

Positive

Stop. Call for help

Negative

Assess Breathing

Positive

Stop. Call for help

Negative

Assess Circulation, Coma, and Convulsion

Positive

Stop. Call for help

Negative

Assess Dehydration (with diarrhea)

Positive

Stop. Call for help

Negative

Assess for Priority Signs
If any sign is positive, call for help!!

<table>
<thead>
<tr>
<th>EMERGENCY SIGNS</th>
<th>If any sign positive: give treatment(s), call for help, draw emergency labs (glucose, malaria smear, Hgb) TREAT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. ASSESS:</strong></td>
<td><strong>AIRWAY AND BREATHING</strong></td>
</tr>
</tbody>
</table>
|                 | • Obstructed breathing or Central cyanosis or Severe respiratory distress | > Manage airway  
|                 |                                                          | > Give oxygen  
|                 |                                                          | > Make sure child is warm  |
| **2. ASSESS:**  | **CIRCULATION** | ANY SIGN POSITIVE* |
|                 | Cold hand with: Capillary refill longer than 3 seconds, or Weak and fast pulse | > Stop any bleeding  
|                 |                                                          | > Give oxygen  
|                 |                                                          | > Make sure child is warm  |
|                 | IF NO SEVERE MALNUTRITION: Insert IV and begin giving fluids rapidly if not able to insert peripheral IV, insert an external jugular or intraosseous line  |
|                 | IF SEVERE MALNUTRITION: Give IV glucose  
|                 | Proceed immediately to full assessment and treatment |
| **COMA CONVULSING** | ANY SIGN POSITIVE* |
|                 | • Coma or Convulsing (now) | IF COMA OR CONVULSING* |
|                 | > Manage airway  
|                 | > If convulsing, give diazepam rectally  
|                 | > Position child (if neck or head trauma suspected, stabilize neck first)  
|                 | > Give IV glucose |
| **SEVERE DEHYDRATION (ONLY IN CHILD WITH DIARRHOEA)** | ANY SIGN POSITIVE* |
|                 | • Diarrhoea plus any two of these: Lethargy Sunken eyes Very slow skin pinch | CHECK FOR SEVERE MALNUTRITION |
|                 | > Make sure child is warm  |
|                 | IF NO SEVERE MALNUTRITION: Insert IV line and begin giving fluids rapidly following plan C in hospital  |
|                 | IF SEVERE MALNUTRITION, do not insert IV—proceed immediately to assessment and treatment |

* Check for head/neck trauma before treating child—do not move neck if cervical spine injury possible

Adapted from ETAT manual for participants, Chart 2 page 67
Priority Signs

• 3TPR
  – T: tiny baby, temperature, trauma
  – P: pallor, poisoning, pain
  – R: respiratory distress, restless, referral

• MOB
  – M: malnutrition
  – O: oedema
  – B: burn
Priority signs: 3TPR

- **T**
  - Tiny baby
  - Temperature
  - Trauma (or other surgical condition)

- **P**
  - Pallor (severe)
  - Poisoning
  - Pain (severe)

- **R**
  - Respiratory distress
  - Restless, continuously irritable, or lethargic
  - Referral (urgent)
Tiny Baby: under two months of age

- More difficult to assess properly
- More likely to get serious infections
- More likely to deteriorate quickly
Temperature

• Hot to touch: fever is a sign of infection
• Cold to touch: may be a sign of poor circulation or serious infection
Trauma
(or other urgent surgical condition)

• Head injury
• Fracture
• Acute abdomen
Poisoning

• Ask caretaker if this is the reason for visit
• Child’s condition can deteriorate rapidly
• Specific treatments may be required
Pain

- Pain may be due to serious conditions (meningitis, acute abdomen, sickle cell painful crisis)
- Patient should receive treatment for pain relief
Pallor

- Unusual paleness of skin
- Compare the child’s palm to your palm
- Indication of anemia
Respiratory Distress

• Signs of respiratory distress that are not severe
• Rapid breathing
• Indrawing of chest
• Noisy breathing
  – inspiratory: stridor (upper airway obstruction)
  – expiratory: wheezing (lower airway obstruction)
Restlessness

• Restlessness, continuous irritability, and/or lethargy may be due to serious conditions (meningitis, acute abdomen, sickle cell painful crisis)
Referral (from another centre)

• Look carefully at patients who are referred from another centre. The patient has already been evaluated by another healthcare provider who has determined that he is very sick.

• Use information from the referring centre and your assessment to determine if the child has an urgent condition.
Priority signs: MOB

- Malnutrition (visible wasting)
- Oedema of both feet
- Burn (major)
When management resources are limited

• Use guidelines from Integrated Management of Childhood Illness (IMCI).
• IMCI chartbook uses the same assessment and classification principles as ETAT.
• Management recommendations emphasize recognizing patients that should be stabilized and transferred.
Assessment and classification: IMCI under 2 months

**ABCD**
- Severe disease OR
- Local bacterial infection

**Positive sign**
- Not feeding well OR
- Convulsion OR
- Rapid breathing OR
- Severe chest indrawing OR
- Fever OR low temperature
- Poorly responsive

**Manage**
- Keep patient warm (skin to skin)
- Give first dose of antibiotic
- Refer urgently to hospital
IMCI Danger signs for ≥2 months-5 years

**Danger signs**
- Any positive sign OR
- Chest indrawing OR
- Stridor in a calm child OR

**Severe pneumonia OR Very severe disease**

**Manage**
- Keep patient warm (skin to skin)
- Give first dose of antibiotic
- Refer urgently to hospital
Any general danger sign
OR
Stiff neck

Very severe febrile disease

Manage
• Keep patient warm (skin to skin)
• In areas endemic for malaria, give first dose of quinine for severe malaria
• Give first dose of antibiotic
• Treat to prevent low blood sugar
• Give one dose of paracetamol for high fever (> 38.5)
• Refer urgently to hospital
Visible wasting OR edema of both feet

Severe malnutrition

Manage

- Keep patient warm (skin to skin)
- Treat to prevent low blood sugar
- Refer urgently to hospital
Severe palmar pallor

Severe anemia

Manage
Refer urgently to hospital

IMCI: Severe anemia ≥2 months-5 years
## Summary

### Emergency Signs
- Airway
- Breathing (severe)
- Circulation
- Coma
- Convulsion
- Dehydration (severe)

### Priority Signs
- **3TPR**
  - T: tiny baby, temperature, trauma
  - P: pallor, poisoning, pain
  - R: respiratory distress, restless, referral

- **MOB**
  - M: malnutrition
  - O: oedema
  - B: burn
ETAT categories: Emergency

- Rapid assessment performed within 15-20 seconds
- Identify emergency signs (ABCCCD)
- Call for help
- Initiate appropriate emergency treatment
EMERGENCY SIGNS

1. ASSESS: AIRWAY AND BREATHING
   - Obstructed breathing or
   - Central cyanosis or
   - Severe respiratory distress

   ANY SIGN POSITIVE*
   - Manage airway
   - Give oxygen
   - Make sure child is warm

2. ASSESS: CIRCULATION
   - Cold hand with:
     - Capillary refill longer than 3 seconds, or
     - Weak and fast pulse

   ANY SIGN POSITIVE*
   - Stop any bleeding
   - Give oxygen
   - Make sure child is warm

   IF NO SEVERE MALNUTRITION:
     - Insert IV and begin giving fluids rapidly
     - If not able to insert peripheral IV, insert an external jugular or intraosseous line

   IF SEVERE MALNUTRITION:
     - Give IV glucose
     - Proceed immediately to full assessment and treatment

   IF COMA OR CONVULSING*
     - Manage airway
     - If convulsing, give diazepam rectally
     - Position child (if neck or head trauma suspected, stabilize neck first)
     - Give IV glucose

   > Make sure child is warm

   SEVERE DEHYDRATION (ONLY IN CHILD WITH DIARRHOEA)
   - Diarrhoea plus any two of these:
     - Lethargy
     - Sunken eyes
     - Very slow skin pinch

   DIARRHOEA plus TWO SIGNS POSITIVE*
   - Check for severe malnutrition

   IF NO SEVERE MALNUTRITION:
     - Insert IV line and begin giving fluids rapidly following plan C in hospital
   IF SEVERE MALNUTRITION, do not insert IV—proceed immediately to assessment and treatment

* Check for head/neck trauma before treating child—do not move neck if cervical spine injury possible

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ETAT categories: Priority

- No emergency signs
- Identify priority signs (3 TPR-MOB)
- Child needs prompt, but not emergency assessment and treatment
- Notify triage nurse who will complete triage evaluation
- Move to front of queue
ETAT categories: Non-urgent

- No emergency signs
- No priority signs
- Child may be seen in queue