Recognising the Sick Child

Based on ETAT+, Kenyan MoH

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MBBS, MRCPCH, EADTMH
By the end of this session

- Understand Triage. Do Triage!
- Act promptly to emergencies
- How to approach paediatric emergencies

HOW?

- A bit of ETAT+
- A few cases
Case Scenario 1

• Maria, a 2 year old girl, presents to your busy OPD with cough (1500).

• There are 8 more patients in front of her waiting to be seen and has been told by the receptionist to wait in line.

• The watchman notices that she is breathing very quickly and her chest is moving up and down a lot. She looks tired (1505).
Case Scenario 1

• (1600) Maria gets to the front of the queue
• The nurse notes that Maria’s RR is 70, she has nasal flaring, sub-costal recessions. Her hands are cool and she is only responsive to pain.
• The nurse asks for assistance from the COI, who is busy writing discharge summaries from the busy ward.
• When the COI joins the nurse 20 minutes later, Maria stops breathing. They try to resuscitate her for 20 minutes but are unsuccessful. Maria is pronounced dead at 1640
Learning points

- Did Maria have signs of a very unwell child?
- What could the staff have done differently?
Why early recognition matters

• Most children who die in hospital, do so in the first 24 hours
• Late presentation to hospital
• Late recognition of danger signs/severity
• Prompt recognition and emergency treatment SAVES LIVES.
Emergency Signs

Airway & Breathing
- ✔ Obstructed breathing
- ✔ Central Cyanosis
- ✔ Severe respiratory distress

Weak / absent breathing
- ✔ Cold Hands with any of:
  - ✔ Capillary refill > 3 seconds
  - ✔ Weak + fast pulse
  - ✔ Slow (<60bpm) or absent pulse

Immediate transfer to emergency area:
- Start Life support procedures
- Give oxygen
  - ✔ Weigh if possible

Circulation

Coma / convulsing / confusion: AVPU = ‘P or U’ or Convulsions

Diarrhoea with sunken eyes → assessment / treatment for severe dehydration
Emergency Management

• Get Help! (immediately)
• Give Oxygen (immediately)

IF INDICATED
• Give antibiotics (Surviving Sepsis)
• Give Fluids (ASAP)
• Give Glucose (ASAP)

Get this done within the first hour (ASAP) of the patient arriving. These are simple but effective measures for saving lives.
Priority Signs

• Front of the queue
• Need review as soon as possible
• Close observation in case it evolves into emergency
• 3xTPRMOB
Priority Signs

If the patient has no emergency signs then screen for Priority Signs (3TPRMOB)

- Tiny - Sick infant aged < 2 months
- Temperature – very high > 39.5\(^\circ\)C
- Trauma – major trauma
- Pain – child in severe pain
- Poisoning – mother reports poisoning
- Pallor – severe palmar pallor
- Restless / Irritable / Floppy
- Respiratory distress
- Referral – has an urgent referral letter
- Malnutrition - Visible severe wasting
- Oedema of both feet

Burns – severe burns

Front of the Queue - Clinical review as soon as possible:

- Weigh
- Baseline observations
Non - Urgent

• No emergency or priority signs
• Wait in the queue
• Baseline vital signs (Temp, Pulse, Resps)
• Weight/MUAC
ABCDEF

• A = airway

• Was Maria’s airway ok? What kind of signs indicate an emergency airway situation?
AIRWAY

• Noisy breathing: STRIDOR
• Unconscious: cannot keep airway clear

• GCS of 8 (or less) -> INTUBATE
• B = breathing

• Was Maria breathing normally?

• What signs of abnormal breathing are there? (see video)
Breathing

LOOK

• Respiratory Rate: too fast, too slow
• Lower chest wall in-drawing
• Tracheal tug, nasal flare, head nodding
• Acidotic (deep) breathing
• Central cyanosis
Breathing

LISTEN

• Grunting
• Wheeze
• Crackles
• No air entry
ABCD

• C = circulation

• Was Maria’s circulation normal?

• What other things would you like to know to assess circulation
Circulation

- Pulse: too fast, too slow
- Capillary refilling
- Pallor
- Sunken Eyes/mucosa
- Skin Pinch –see video
• D = Disability

• Compare each child’s level of consciousness
Disability

- AVPU
- In Infants
- Ability to Drink
- Bulging Fontanelle
- Stiff Neck
- Reduced tone/movement (Floppy)
ABC – DEFG (don’t EVER forget glucose)
ABCD-E

- E = everything else! Nutritional status/general condition
- Jaundice
- Weight
- MUAC
- Visible severe wasting
- Oedema
Case 2

• On your busy ward round, a worried mother tells one of the student nurses that her 4 month baby today is not feeding well and is having difficulty breathing.

• She was admitted two days ago with poor feeding, coryza and cough. She has managed on NG feeds and was given IV penicilllin and gentamicin for “pneumonia”. She had been breathing normally.
What should the student nurse do?
Case 2

- On arrival, the student nurse notices the baby is alert but has slight head nodding.
- The RR is 60 and there is moderate lower chest in-drawing. The baby is not grunting.
- The baby has warm hands, looks pink and capillary refill is less than 2 seconds. He feels a strong brachial pulse and it is 140 bpm.
• Is this an emergency, priority or non urgent?
• What should the nurse do now?
• The COI arrives within 5 minutes
• There is no stridor
• She auscultates the chest which has good air entry bilaterally. There is prolonged expiratory phase with generalised crackles and wheeze.
• What diagnosis fits with this picture?
• What is the differential diagnosis?
• What should the COIs action be at this stage?

• If there was only right sided air entry, left sided hyperresonant note to percuss with no air entry. What is the diagnosis and what is the immediate action?
Case 2

- Viral Bronchiolitis
- Bacterial Pneumonia
- Aspiration pneumonia
- General Sepsis
- Cardiac failure

- ALWAYS approach in an ABCDE order. Correct each component as you go along.
Case 3

• A father carries in a 7 year old child to the outpatient general area (Karatina).
• The support staff see that the child is sleepy and breathing heavily. They are worried so they run and get a nurse.
Case 3

• The nurse puts the child in the resuscitation room in OPD.
• She notes that the boy has A = no stridor
• B = RR 36 with slight lower chest indrawing
• C = CRT 2 second, HR 130. The palms look VERY pale.
• D = responsive to voice
• Temperature 39.0 celsius
Questions

• What is the triage category?
• What immediate action should the nurse take?
• What other things can she do while waiting for the intern to arrive?
MOI within 15 minutes

- Notes that the boy has slightly swollen and tender fingers when attempting to cannulate.
- Conjunctiva are VERY pale

- What is the diagnosis?
- What is the differential diagnosis?
- What action for this particular condition should the MOI take?
Case 3

- Sick cell anaemia – specifically acute chest crisis – EMERGENCY
- Other Haemolytic anaemia
- Chronic anaemia with sepsis/pneumonia
- Leukaemia

- -> request a blood film with the FHG
Sickle cell crisis

- Warmth
- Morphine/Diamorphine and paracetamol
- Hyperhydration
- Ivabx if febrile
- Blood transfusion if chest crisis or HB falls below baseline
- Exchange transfusion V. severe
Case 4

• Kenneth a 3 year old boy presents with 1 day hx. coryza and cough.
• The cough has got alarmingly louder and “barking” over the course of the day and now Kenneth cannot even drink.
• At the triage desk the nurse notes Kenneth has noisy inspiratory breath, RR 70 with marked lower chest indrawing
Case 4

• What is the triage category?
• What should the nurse do?
• What is the differential diagnosis?
• What should the intern/MO do?
Case 4

- EMERGENCY! – get HELP, give O2
- Croup, Anaphylaxis, inhaled foreign body, Epiglotitis, Bacterial Tracheitis
- Protect the AIRWAY – buy time
- Nebulised Adrenaline 1:1,000 (1mg/ml) – give 0.4mg/kg (max 5mg). Dilute into saline. Repeat after 30 mins if necessary. Effects last 2-3 hours
- Dexamethasone PO (0.15mg/kg) or budesonide neb 2mg
- Monitor Vitals closely
So, why is early recognition of the sick child important?

Because it WILL make a difference.

The DELAYS stop with YOU
Emergency Signs

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