Recognition of a Sick Child or Infant
Objectives

- To introduce a structured approach to the assessment of an ill or injured child
- To recognise the child at risk of deterioration
- To enhance the understanding of anatomical, physiological and developmental differences in children and the impact of differences on illness or injury
- To present principles of clinical interventions to manage deterioration in the paediatric population
- To recognise the important role of family and carers in the recognition and management of the sick or injured child
Emphasise the significance of respiratory illness in the paediatric population.
Deterioration in children may be subtle and non specific.
They may deteriorate slowly but crash quickly. Early recognition and intervention is vital to avert respiratory or cardiac arrest.
Primary Survey & Reassessment Aims

- Does the child require immediate resuscitation?
- Does the child require immediate interventions?
- Recognition of deterioration
- Recognition of parental concerns
Discuss the importance of early assessment of general appearance, posture and interactivity prior to physical examination.

Emphasize the importance of regular visual ‘scanning’ of patients and ‘across the room’ assessments.

Discuss how pain and fever may influence breathing pattern, perfusion and observations.

Discuss briefly how some rashes may influence ABCD in particular meningococcal sepsis and anaphylaxis – covered in greater detail later in red flags presentation.

Discuss potential risk for rapid deterioration in a well looking child who has sustained a significant mechanism of injury especially in regards to occult injuries such as head injury/falls, chest and abdominal injury. Reinforce the importance of clear history and regular reassessment. Mechanism of injury discussed in more detail in the red flags presentation.
Discuss : What makes you think this child looks sick?
A - open mouth, neck extension, general appearance, anxious looking. Moving eyes not head
B – Work of breathing, flared nostrils, cyanosis
Consider other non visible signs e.g. noises such as inspiratory sounds - stridor, stertor or expiratory sounds – wheeze, cough, grunt
Beware agitation or lethargy/hypotonia may indicate hypoxia
C – Perfusion/ central cap refill, peripheral cap refill, pulses, diaphoresis/sweaty hair, sunken eyes
D- alertness, activity, mentation, responsiveness to carers and strangers. Age appropriateness
Discuss risks associated with invasive procedures, laying flat, separation from carers and delay in Mx whilst undertaking investigations in possible acute airway obstruction.
Epiglottitis – rare due to HIB immunisation.
However discuss other possible presentations with similar ‘toxic’ appearance such as bacterial tracheitis, acute severe tonsillitis or peritonsillar abscess
Clinical Indicators – ‘A’

- **Airway** – actual or potential obstruction. Look, listen, feel
- **Appearance, Alertness & Activity** - movement, posture, engagement, drowsiness, weak cry, ‘glassy’ eyes, not fixing & following
- **Arousal** – difficult to wake, floppy & weak, agitated, irritable, non-resistive to stimulation
Acute airway obstruction - inhaled FB. Lug off a toy. Carried through front door and into resus, unconscious, not breathing

Discuss aspects of airway Mx-

Recovery position
Airway opening manoeuvres
Airway adjuncts
Oxygen delivery – BVM vs NRB

Ongoing airway risk and need for high dependency care and monitoring
History of apnoea particularly in infants is a red flag - even if child well looking, requires close monitoring

Discuss:
Effort – recession, accessory muscles, sounds, grunt, gasp, flaring, bobbing, posture
Efficacy – chest expansion/abdominal excursion, breath sounds/air entry, symmetry
Effects – heart rate, colour, skin temp, moisture – diaphoresis, mental status/eyes, tone
Discuss aspects of breathing - physiology
Alertness/activity
Recession: inter costal, sub costal, sternal, tracheal tug
Nasal flaring, incapacity for mouth breathing in young infants
Positioning to maximise respiration
Effect of feeding /full stomach on respiration especially in infants.
Appropriate monitoring
Severe Respiratory Distress

Beware the ‘silent’ chest

A pre-terminal sign
Beware: Absent or Decreased Effort

1. Fatigue – exhaustion is a pre-terminal sign
2. Cerebral depression
3. Neuromuscular disease

Raised ICP, poisoning, encephalopathy

Cerebral palsy, spinal injury, muscular dystrophy, metabolic disorders
Pulse – peripheral and central
Pallor, cyanosis, flush
CR – peripheral, central
Describe the need to depress for a count of 5 seconds and then release recommencing count in seconds
Reinforce the importance of central CR as indicator of central circulation
Discuss when use of peripheral CR most appropriate: limb injury
Discuss aspects of Circulatory failure:
Pallor
Glassy eyes
Anxious
Activity
Perfusion
Rash – note fine petechial rash over trunk
Oedema – limb and facial
Monitoring – cardiac, saturation and regular BP, invasive
Discuss AVPU and relevance in rapid reassessment
Discuss recognition of incoherence, drowsiness or disorientation as possible head injury
Emphasise the need to assess/reassess pain and objective vs subjective paediatric pain tools
Discuss pain relief, analgesia and non pharmacological strategies
Discuss issues related to mental health and substance abuse/misuse
Discuss the influence of medications on disability especially analgesics/antipyretic agents and OTC meds
Discuss stress response in relation to BSL in acute illness/ injury and shock
Discuss what a child with hypoglycaemia may look like and who is at risk
Treatment: IVI 10% dextrose 2-5ml/kg/dose push
Discuss TPR, BP, Sats, Pain, Neuro, limb/circulation checks as appropriate to presentation

SPOC-Standardised Paediatric Observation Charts
Discuss hydration:
How long, of what, frequency and volume of intake
Dry lips, membranes, sunken eyes, no tears, dry skin, reduced skin turgor, reduced urine output
Tachycardia, lethargy, pallor,
Pain related to intake
How long, Type of loss – vomit /loose stool, frequency and volume
Blood, mucous, bile
weight loss as key indicator and weighing of nappies to monitor
Pain associated with losses
Discuss:
Appearance and activity
Colour
Compliance with testing skin turgor by a stranger given young age
Tears, dry lips, moist membranes, fontanelle
Correlation with vital signs
Reinforce the need to listen to parents and respond appropriately to their concerns – they know their child best and generally will note subtle changes early.
Lack of concern, untimely presentation, disengagement from child, or refusal to allow full assessment may be red flags.
Discuss NAI / domestic violence risk assessment
Discuss empowerment of parents through validation and supportive strategies
Offer a plan of management within local protocols and scope of practice whilst waiting:
- may include but not limited to
  Trial oral fluids
Medications
Investigations
First aid measures
Definitive procedural interventions e.g. Pulled elbow reduction, minor wound care, immunisation
Education regarding the presenting problem and management strategies. Fact sheets
Regular reassessment
Activities to keep child settled or entertained where feasible and appropriate
Discuss – What is instinct and what informs instinct
References and Acknowledgements

References

• Recognition of a Sick Child or Infant, 2nd edition, Clinical Practice Guidelines, NSW Health 2011
• Advanced Paediatric Life Support, 4th Edition, BMJ, 2005,
• Emergency Triage Education Toolkit – Commonwealth Department of Health and Aging, 2007
• Images: downloaded from ‘Google Images’ and Sydney Children’s Hospital photo library

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