PEWS - ABCDEFG

A	**A**irway	Is the airway patent/maintainable/compromised? Is there difficulty breathing/speaking? Are there associated breath sounds?
B	**B**reathing	Look, Listen, Feel: Look - count RR; assess respiratory effort (i.e. use of accessory muscles, nasal flaring, abnormal rhythm, etc.); body position; colour. Listen - noisy breathing = upper airway secretions; stridor/wheeze = partial airway obstruction; grunting/gasping/apnoea. Feel - for deformities (i.e. surgical emphysema, crepitus).
C	**C**irculation	Record HR, measure CRT, BP.
D	**D**isability	Asses neurological status - alert/voice/pain/unresponsive; pupil size; glucose; Glasgow Coma Scale (older children).
E	**E**xposure	Temperature (consider core/peripheries); rash; pain; skin integrity (blood loss, lesions, wounds, drains); consider fluid balance
DEFG	**D**on't **E**ver **F**orget **G**lucose	

According to PEWS chart. RR = respiratory rate. HR = heart rate. BP= blood pressure. CRT = cap refill time.

Signs of Deterioration

Abnormal RR/effort	Outside usual parameters for age group.
Recession/accessory muscle use	Subcostal/intercostal recession; tracheal tug.
Abnormal breath sounds	Stridor/wheeze
Pulse Oximetry	Value below 96%.
Oxygen Therapy	Need for inspired oxygen.

Call for help if **head bobbing/grunting/gasping/apnoea/central cyanosis** noted

RR = respiratory rate.

Respiratory Failure

Initial stages	Physiological cause:	Attempt to compensate O2 deficit & airway obstruction; beginning hypoxia
	Signs	Restlessness; tachypnoea; tachycardia; diaphoresis
Imminent respiratory failure	Physiological cause:	Attempt to use accessory muscles to assist intake O2; persistent hypoxia; use up more O2 than obtained
	Signs	Tachypnoea, dyspnoea & tachycardia; nasal flaring; retractions; grunting/head bobbing; wheezing; hypoxia (<92%); difficulty speaking; anxiety/irritability; mood changes; headache; confusion

Respiratory Failure (cont)

Ominous imminent respiratory arrest	Physiological cause:	Overwhelming O2 deficit; cerebral oxygenation affected (CNS changes ominous imminent respiratory arrest)
	Signs	Severe hypoxia (pO2 <60%); dyspnoea/bradypnoea/silent chest/apnoea; bradycardia ; cyanosis; stupor/coma

pO2 = oxygen saturations.

Other Diagnostic Tests

SaO2 saturations	Arterial blood gas
Bloods	FBC - WCC slightly raised
Blood gases	pH 7.35-7.45; pO2 75-100mmHg (10-13.3kPa); pCO2 36-46mmHg (4.8-6.1kPa); Bicarbonate HCO^3 22-30mmol/L^{-1}; Base excess -2.3 - +2.3mmol/L
Chest x-ray	
Spirometry	PEF; FEV1
Common abnormalities	Respiratory acidosis: pCO2 and HCO^3 increased, pH and pO2 decreased.

SaO2 = oxygen saturations. FBC = full blood count. WCC = white cell count. pO2 = partial pressure oxygen. pCO2 = partial pressure carbon dioxide. PEF = peak expiratory flow. FEV1 = forced expiratory volume in 1 second.

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