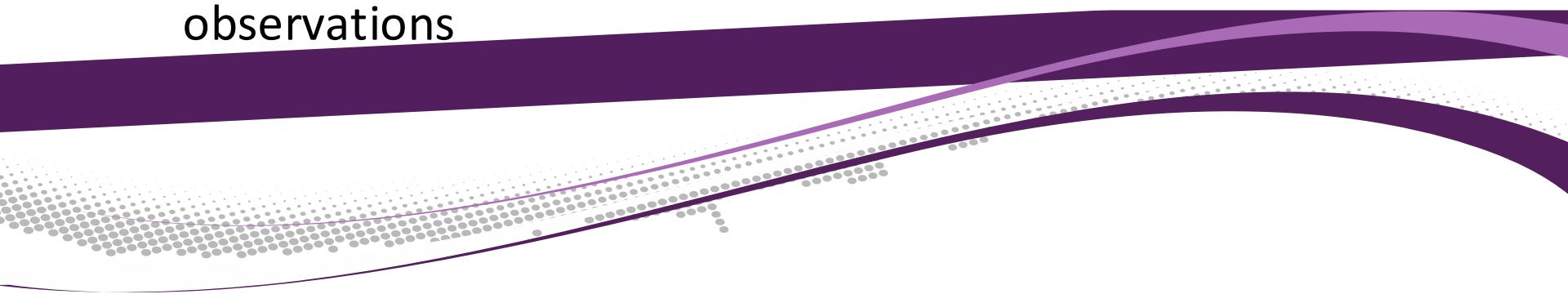


Patient assessment and the taking of observations

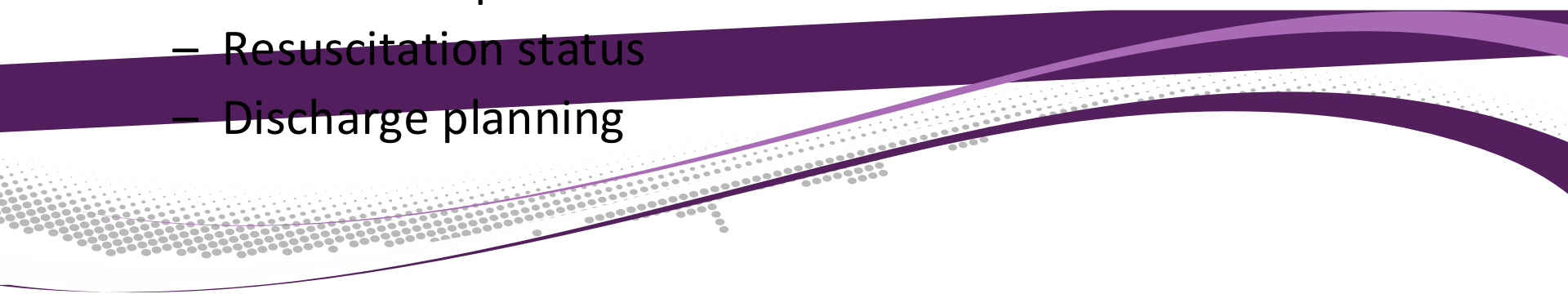


Learning Outcomes

By the end of this session:

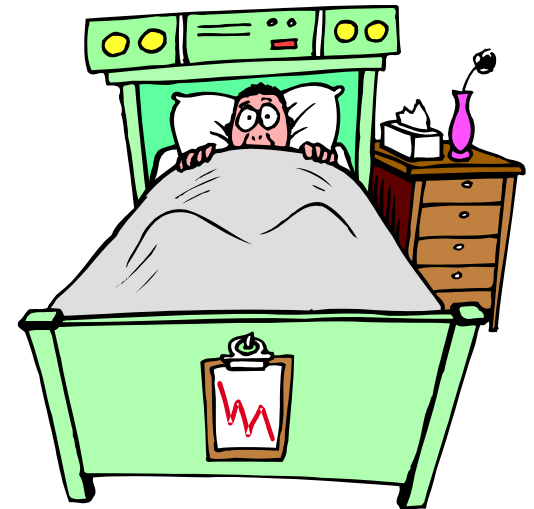
- We will have discussed
 - Basic assessment of your patient
 - The importance of observations
 - NEWS (National Early Warning Score)
 - You will be able to competently perform a full set of observations
- 

Handover

- During handover, what do you think is important to know?
 - Patient name including preferred name
 - Age
 - Diagnosis
 - Past medical history
 - Intake – diet & fluids – any restrictions or NBM?
 - Mobility
 - Hygiene needs
 - Procedures planned
 - Resuscitation status
 - Discharge planning
- 

What to do first?

- Introduce yourself
- Assess outward appearance of your patient, using your senses
 - Look
 - Listen
 - Feel
 - Smell



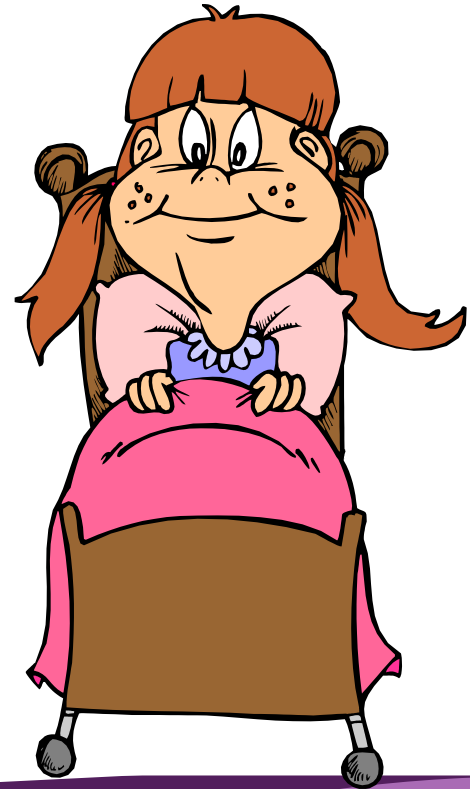
Look



- Colour
- Skin appearance
- Facial expression
- Position and movement
- Clothing fit

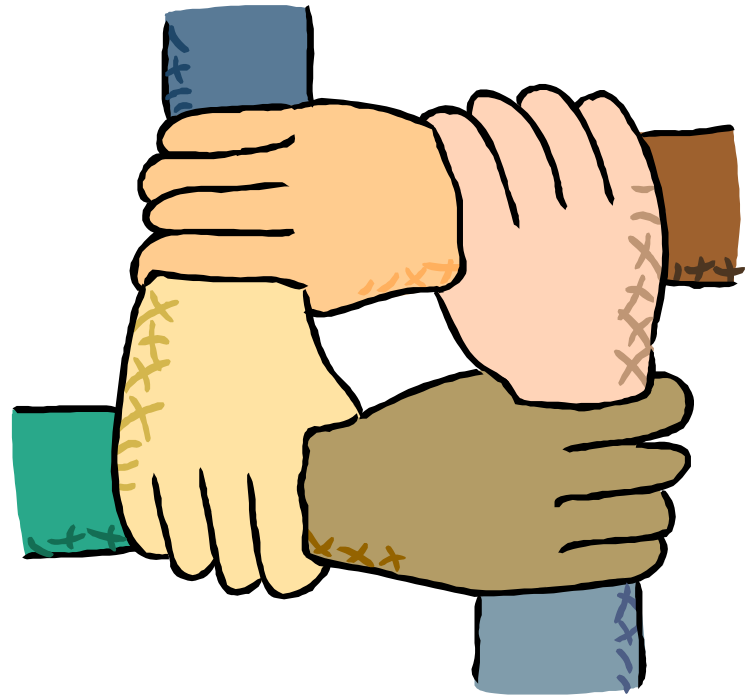
Listen

- Breathing sounds
- What is your patient saying to you?
- Can they talk in unbroken sentences?
- Do they make sense?
- Respond to what they say to you



Feel

- Temperature
 - burning hot or warm
 - cool or cold
- Skin condition
 - Dry or flaky
 - Clammy
 - Moist or sweaty
- Oedema
 - swelling, ? pitting
 - discharge
- Weight loss – any bony prominences?



Smell

- Hygiene & cleanliness – potential self-neglect
- Potential infection – urine/ wound/ stools
- Melaena (blood in stools)
- Potential disease – halitosis (dental caries, malignancy)
- Cigarette smoke/alcohol

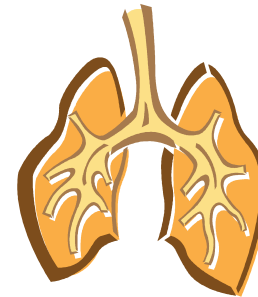


“Doing the obs”



What does this really mean?

- Respiration – rate & rhythm
- Oxygen levels - % saturations
- Heart Rate – rate and rhythm
- Blood Pressure
- Temperature
- Central Nervous System
- Urine Output

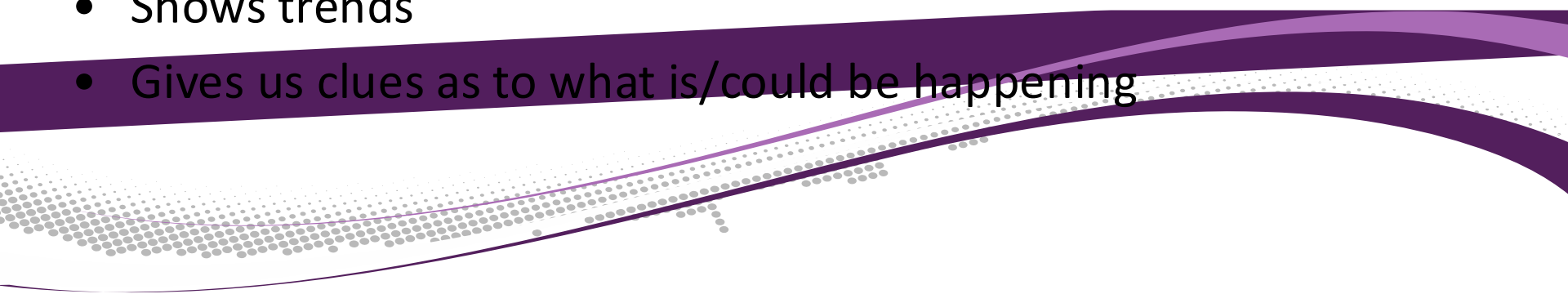


“Doing the obs”

QDS/TDS/BD/OD

- QDS: quater die sumendum (to be taken four times daily)
- TDS: ter die sumendum (to be taken three times daily)
- BD= bis die (twice daily)
- OD= omni die (every day)

Reason for ‘obs’

- Gives a baseline
 - Shows the norm (depends on situation)
 - Shows trends
 - Gives us clues as to what is/could be happening
- 

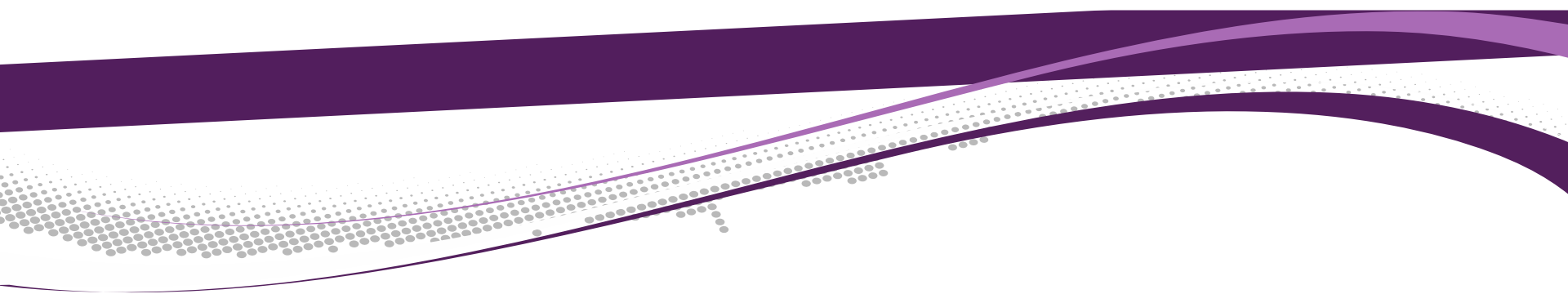
“Doing the obs”

- On admission to a ward pre-operatively, as an emergency in A&E departments or when a patient is transferred to a ward setting from ITU/HDU
- At least once every 12 hours whilst in hospital, but generally qds
- For patients at risk of or with known infections
- To assess response to interventions
- Critically ill or acutely ill patients to monitor for deterioration
- Patients receiving blood transfusions
- Any patient showing signs of shock
- Any patient receiving medications that could lower their blood pressure



NEWS 2

- To be used in all adult patients (aged 16 years or more)
- Should be used **as an aid** to clinical judgement
- System not used in children (PEWS) / pregnant women
- Does not score urine output (but this must still be monitored)



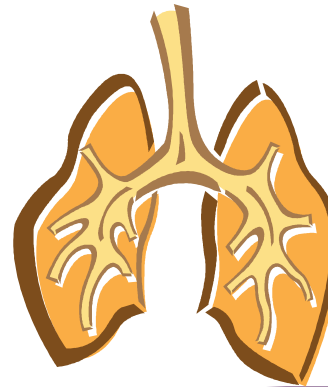
NEWS 2

- National Early Warning Score (NEWS2)

Physiological parameter	Score						
	3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO ₂ Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO ₂ Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

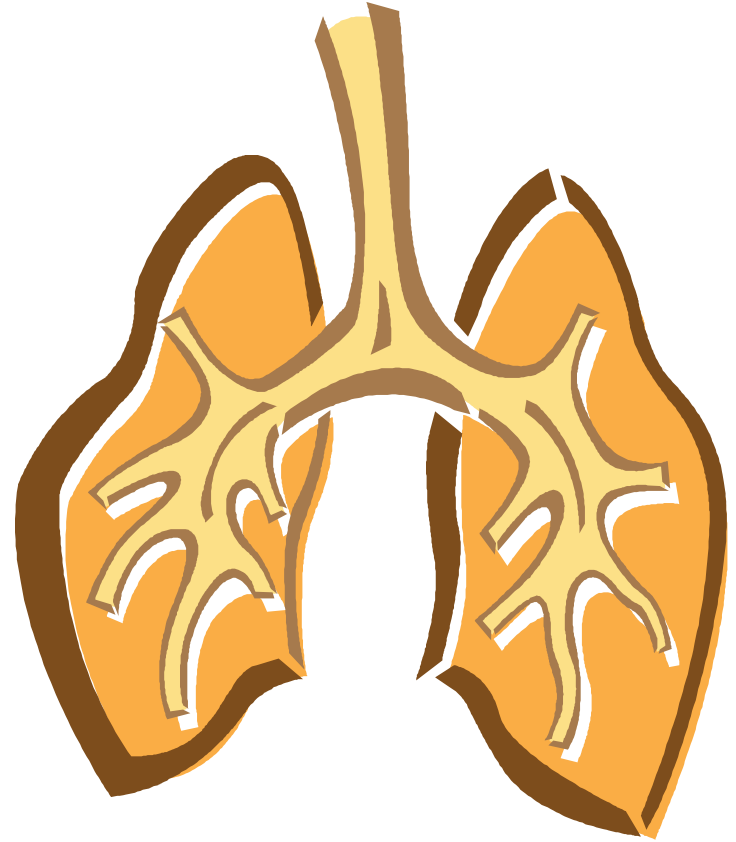
Basic Assessment

- D - Danger
- A – Airway
- B – Breathing
- C – Circulation
- D – Disability
- E – Exposure

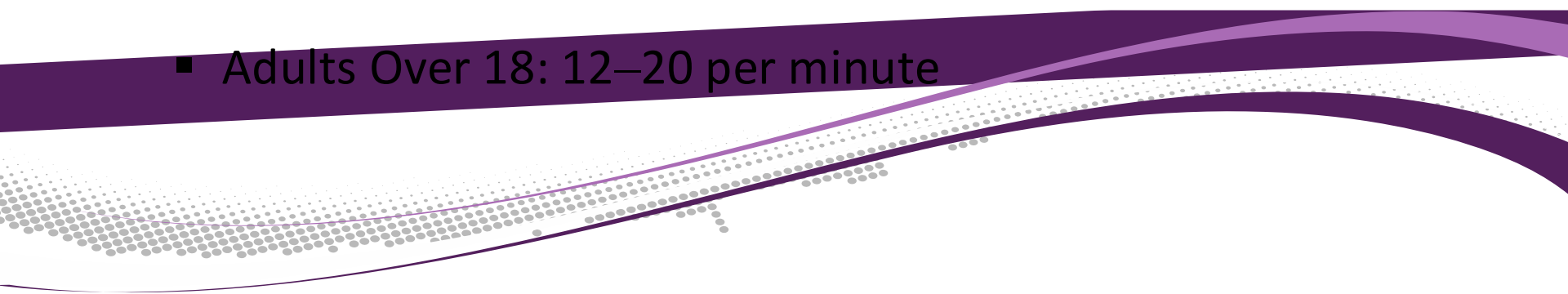


Respirations

- How do you measure them?
- How long do you measure them for?
- What do they sound like?
- Think about patient assessment?
 - Effort
 - Rate
 - Movement
- What has the patient been doing?



What is normal?

- Normal respiratory rates vary according to age:
 - Newborns: 30-40 per minute
 - Less Than 1 Year: 30-40 per minute
 - 1-3 Years: 23-35 per minute
 - 3-6 Years: 20-30 per minute
 - 6-12 Years: 18-26 per minute
 - 12-17 Years: 12-20 per minute
 - Adults Over 18: 12–20 per minute
- 

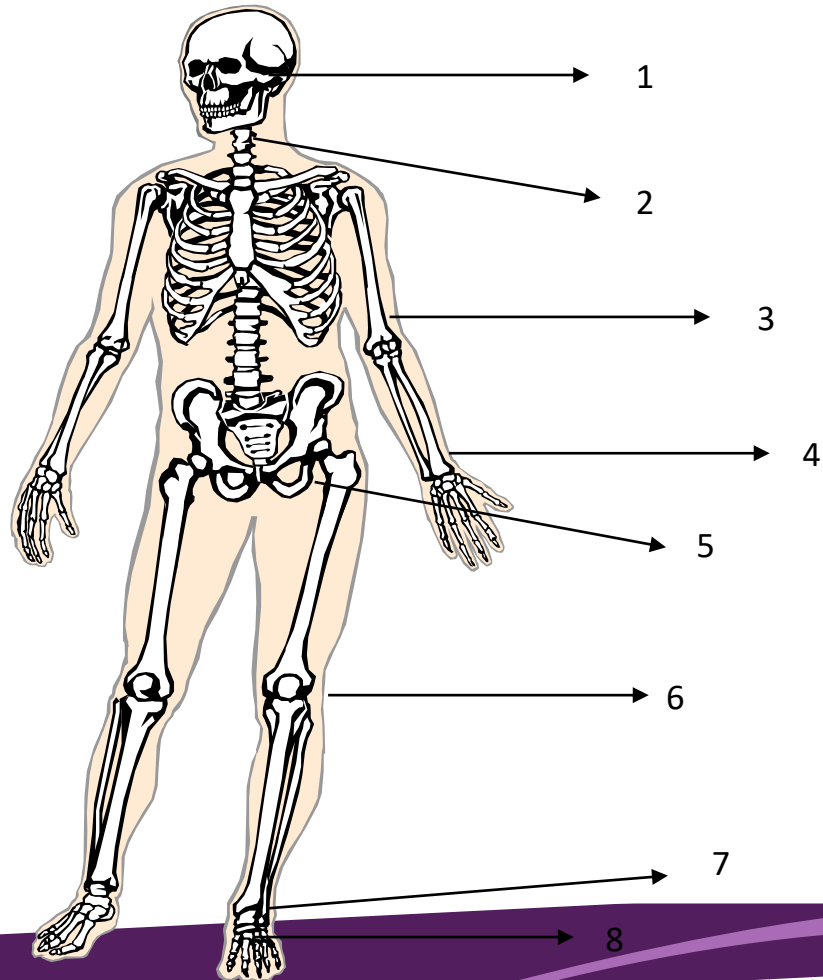
Heart rate



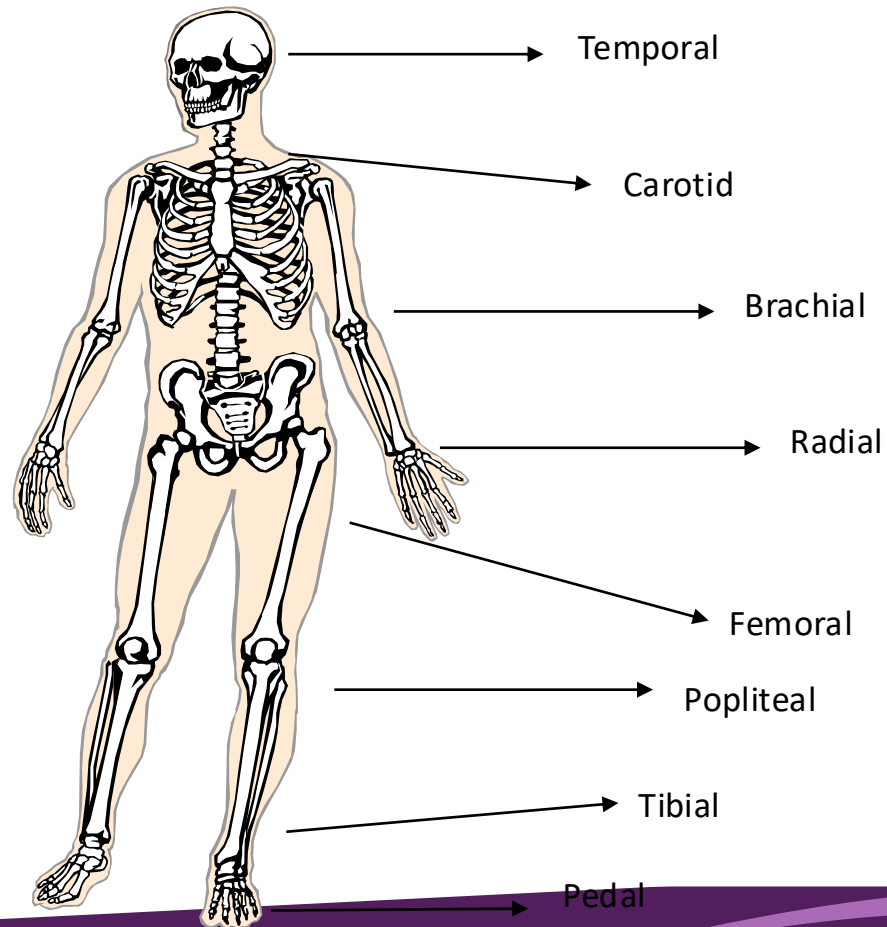
- How is it taken?
- What does it feel like?
 - Rate
 - Rhythm
 - Strength
- Where can you measure it?
- Look at the trends
- Consistency

Pulses

Can you name the pulses?



Pulses



What are normal pulse / heart rates?

Heart rate by age (normal ranges):

Age (years)	Heart rate (beats per minute)
<1	110-160
1-2	100-150
2-5	95-140
5-12	80-120
>12	60-100



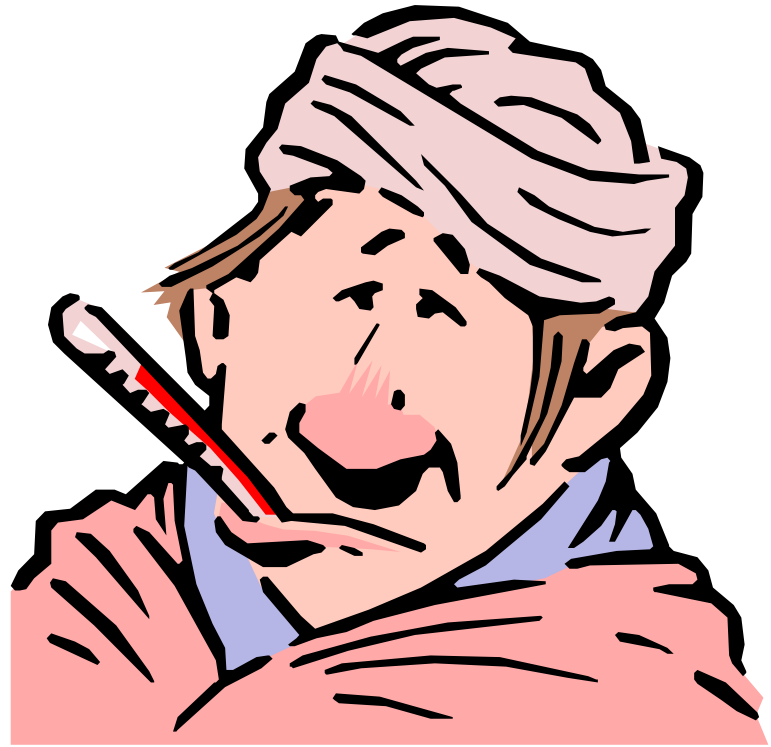
Reference:
Paediatric Assessment. University of Southampton NHS Hospitals Trust

Variations in pulse / heart rate

- Heart rate can rise during or following physical exertion and also during digestion
 - Heart rate is normally more rapid in females
 - Post-operative patients need close monitoring of heart rate due to the risk of hypovolaemic shock
 - Patients with local or systemic infections will have a rapid heart rate
 - A patient should have rested for at least 20 minutes prior to recording their heart rate
- 

Temperature

- How is it taken?
 - Oral / Axilla / Tympanic
- Is it normal?
- Look at the trends
- Think about your patient assessment
 - Does the patient feel hot / cold to touch?
- Consistency with method





Temperature Facts to know

Oral

- Normal temperature is 36.5°C – 37.5°C
- Should be placed in the pocket at the base of tongue not the front as there may be 1.7°C difference
- Has your patient just had a cup of tea or lunch?
 - Leave it 15 mins
- No talking! (Your patient not you....great time to count respirations)

Axillary

- Around 0.5°C lower than oral
- Inaccurate if excess sweating or in air pocket
- Leave for at least 5 mins
- Record which arm was used

More facts



Tympanic

- Poor technique will lead to inaccurate temperatures
- Most accurate as tympanic membrane lies close to the hypothalamus
- Record which ear is used
- Ensure that there is a seal to prevent a false low temperature

Rectal

- More accurate than oral or axillary
- Often found to be higher as it is protected from environmental factors
- Needs to be inserted 4cm

Variations in temperature: feeling hot, hot, hot!



Temp	Clinical Consequence
36 – 37.5°C (99° F)	Normal temp
38 °C (100 ° F)	Sweating, feeling very uncomfortable, slightly hungry
39 °C (102 ° F)	Severe sweating, flushed and very red. Fast heart rate and breathlessness.
40 °C (104 ° F)	Fainting, dehydration, weakness, vomiting, headache and dizziness may occur as well as profuse sweating. Starts to be life- threatening.
41 °C (106 ° F)	(Medical Emergency) - Fainting, vomiting, severe headache, dizziness, confusion, hallucinations, delirium and drowsiness can occur
42 °C (108 ° F)	Subject may turn pale or remain flushed and red. They may become comatose, be in severe delirium, vomiting, and convulsions can occur. Blood pressure may be high or low and heart rate will be very fast.
43 °C (109 ° F)	Normally death, or there may be serious brain damage, continuous convulsions and shock. Cardio-respiratory collapse will likely occur.
44 °C (111 ° F) or more	Almost certainly death will occur; however, patients have been known to survive up to 46.5 °

Variations in temperature: is it cold in here?



Temp	Clinical Consequence
36 – 37.5 °C (99 ° F)	Normal temp
36 °C (97 ° F)	Mild to moderate shivering (temperature may drop this low during sleep).
35 °C (95 ° F)	(Hypothermia) is less than 35 °C - Intense shivering, numbness and bluish/grayness of the skin
34 °C (93 ° F)	Severe shivering, loss of movement of fingers, blueness and confusion. Some behavioural changes may take place
33 °C (91 ° F)	Moderate to severe confusion, sleepiness, depressed reflexes, progressive loss of shivering, slow heart beat, shallow breathing. Shivering may stop.
32 °C (90 ° F)	(Medical emergency) Hallucinations, delirium, complete confusion, extreme sleepiness that is progressively becoming comatose. Shivering is absent (subject may even think they are hot).
31 °C (88 ° F)	Comatose, very rarely conscious. No or slight reflexes. Very shallow breathing and slow heart rate. Possibility of serious heart rhythm problems
28 °C (82 ° F)	Severe heart rhythm disturbances are likely and breathing may stop at any time. Patient may appear to be dead
24–26 °C (75–79 ° F) or less	Death usually occurs due to irregular heart beat or respiratory arrest; however, a woman named Anna Bågenholm was recorded to have survived with body temperatures as low as 13.7 °C

Central Nervous System

- A Alert
- C (New) confusion
- V Voice
- P Pain
- U Unresponsive



How do you assess?



- Speak to your patient
- Do they wake up normally and stay awake whilst you do their observations?
- No response to voice, then squeeze their trapezius muscle
- If concerned alert the nurse in charge to assess the patient.

What is blood pressure?

- Blood pressure can be defined as the force of blood inside the blood vessels against the vessel walls
- Systolic pressure is the peak pressure from the left ventricle contracting and the blood enters the aorta
- Diastolic pressure is when the blood flows from the aorta into the smaller vessels and the aorta recoils back



Blood pressure



Blood pressure is recorded with two numbers:

- The systolic pressure (higher number) is the force at which your heart pumps blood around your body.
- The diastolic pressure (lower number) is the resistance to the blood flow in the blood vessels.
- They're both measured in millimetres of mercury (mmHg).

Blood Pressure

- How is it taken?
 - Manual
 - Dynamap
- Is it normal?
 - Hypotensive
 - Hypertensive
- Look at the trends
- How does your patient feel?
- Consistency



Variations



- What is normal / abnormal?
- Hypotension is generally defined in adults as a systolic blood pressure below 100mmHg
- Hypertension is defined as sustained blood pressure greater than 140/90 mmHg. If it is sustained then the heart will have increased workload to maintain circulation

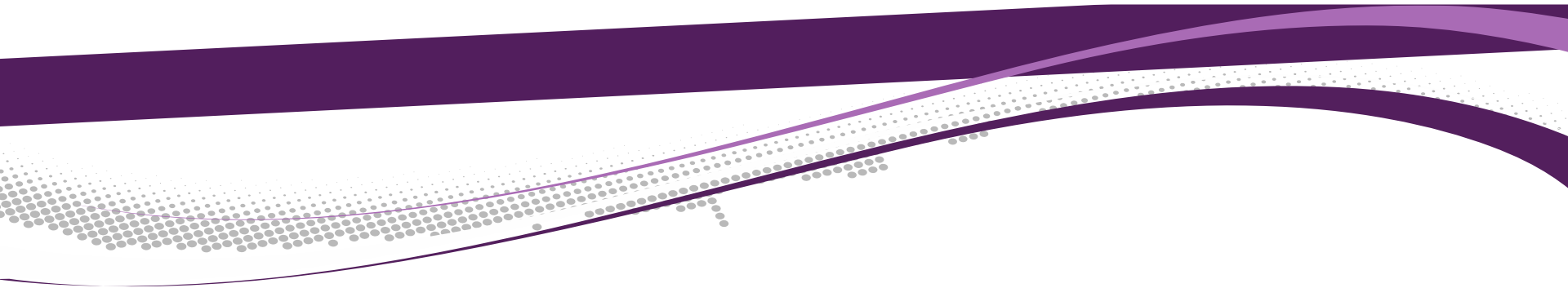
Low Blood Pressure

- Hypotension is a late sign of poor circulation
- Results in poor perfusion of the major organs
- New hypotension should be assessed by the medical team



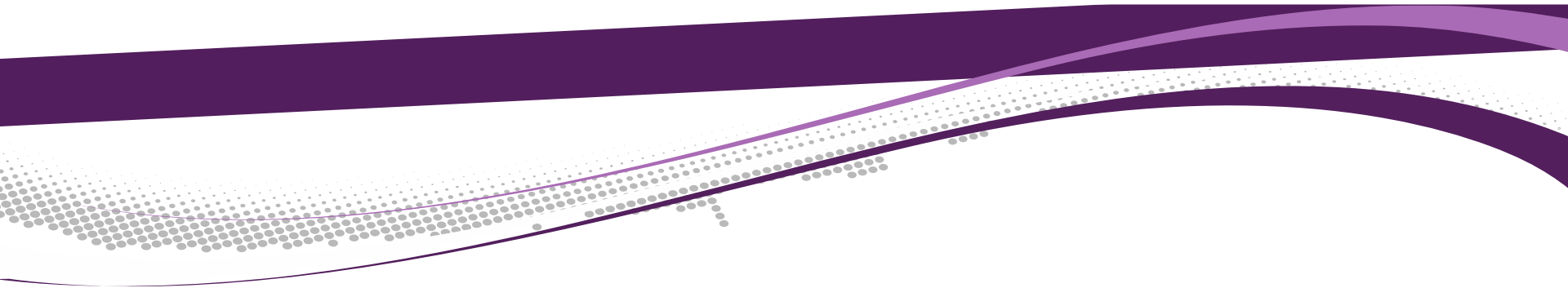
Adverse Effects

- Poor urine output (oliguria)
- Decreased CNS
- Reduced blood flow to major organs
- Decreased skin perfusion
- Reduced gut perfusion



Risks of high blood pressure

- heart disease
- heart attacks
- strokes
- heart failure
- peripheral arterial disease
- aortic aneurysms
- kidney disease
- vascular dementia



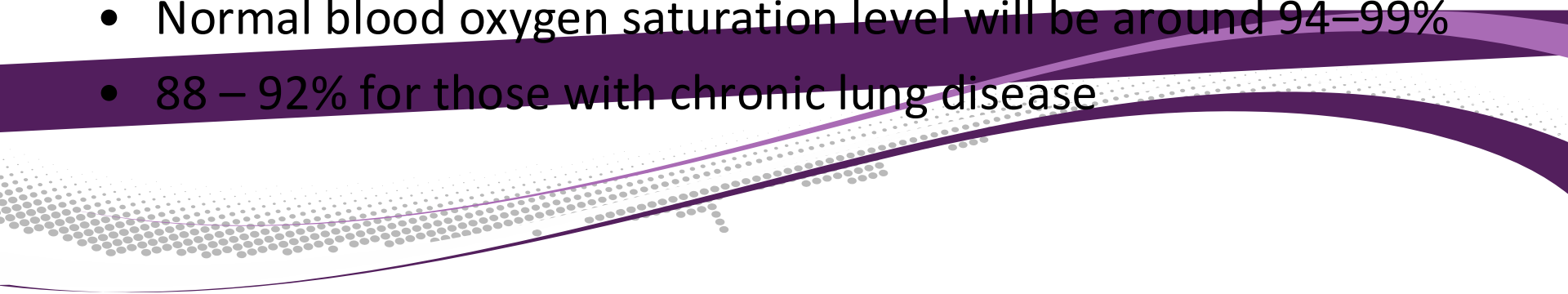
Urine Output

Urine output aims to be 0.5ml/kg/hr

- Low urine output
 - $<0.5\text{ml/kg/hr}$
- Oliguria
 - 100-400ml urine per day
- Anuria
 - $<100\text{mls}$ urine per day

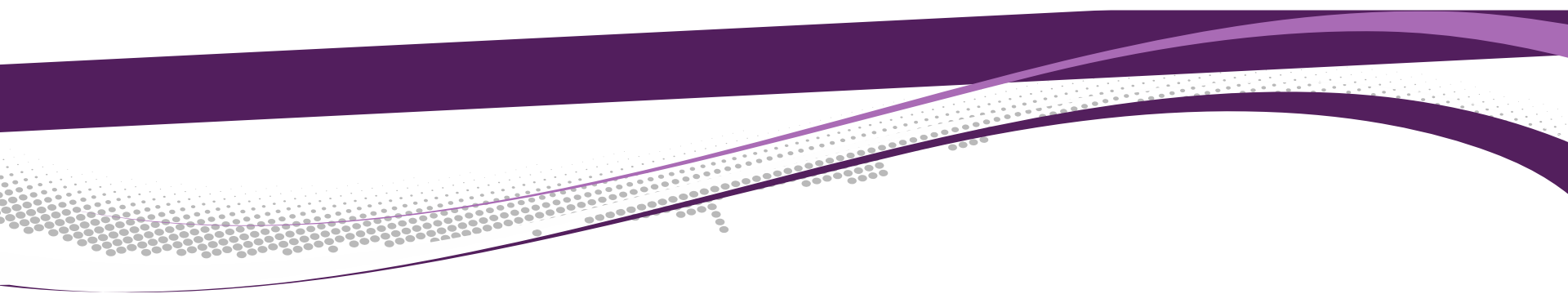


Pulse oximetry

- “Sats” = oxygen saturations
 - The probe is placed on the finger, toe or ear lobe,
 - The device is called a pulse oximeter
 - This gadget shines light through the fingertip, toe or earlobe and measures how red the blood is (blood cells with haemoglobin carrying oxygen are red – if they’re not, they are bluer)
 - If there is nail varnish, this can block the light and affect the reading
 - The reading is the percentage of oxygen in the blood.
 - Normal blood oxygen saturation level will be around 94–99%
 - 88 – 92% for those with chronic lung disease
- 

Early Signs of deterioration

- Change in respiratory rate
- Change in heart rate
- Reduced level of consciousness or new confusion/agitation



Any questions?

