Recognising the Signs of a Deteriorating Resident

Housekeeping

- Fire exits
- Toilets
- Mobile phones
- Questions
- Schedule for day

Session Agreement

- Listen to one another

- Respect each other's points of view

- Maintain the confidentiality of the learning environment

- Make a commitment to get involved

Aims and Objectives

By the end of this session you will be able to:

- Describe some of the early indicators of deteriorating health and their observation

- Demonstrate the ability to effectively chart resident observations using Modified Early Warning Scores and use that to plan and make effective escalation to appropriate referral services

- Describe how to clearly and briefly communicate critical information to other health professionals to ensure prompt and appropriate intervention using SBAR technique

- Apply knowledge gained to a range of mini case studies, suggesting ways in which you could offer effective escalation and person centred care practices.

Schedule for the Day

❖ Presentation

❖ Practice Sessions to include:

  ❖ Practical taking observations and documenting

  ❖ Case studies

❖ Questions & Answer session

Why is this training essential?

New NHS figures show the number of care home residents rushed to hospital has risen by 63 per cent in four years, from 13,906 in 2010/11 to 22,682 in 2014/15.

Most of the admissions in the West Midlands have been linked to key factors: poor nutrition and hydration, acquired infections, ineffective hygiene and catheter care. The majority of these admissions could have been prevented.

This training is about spotting the signs of a deteriorating resident.

NICE (2007) published a document around: Acutely Ill patients in hospital – recognition of and response to acute illness in adults

The key priorities of this document are:

- **Physiological observations at the time of their admission**

- **An assessment and clinical management plan (to include diagnosis, co-morbidities and plan)**

- **Observations taken by staff that have been trained and understand their clinical relevance.**

* In addition if any changes occur in the resident's clinical condition, the frequency of MEWS observations must be reassessed and any changes in frequency clearly documented**.***

Modified Early Warning Score

- Used to aid recognition of deteriorating residents, and are based on physiological parameters.

- A score is calculated. Then a specific escalation pathway is then activated according to the score.

- The escalation pathway outlines actions required by staff for timely review, ensuring appropriate interventions.

Applying to practice

- Limitations to MEWS and professional judgment should be used - know your resident !!!

- Taking observations is not just generating numbers – you need to understand the clinical relevance

- Delegating needs to be appropriate

- Failure to act has significant consequence on the resident i.e. affects residents clinical management and can result in hospital admission

- Observe your resident!– not just using machines

Vital signs to assess

- Respiratory rate

- Oxygen Saturations

- Pulse

- Blood pressure

- AVPU(Alert, Voice, Pain, Unresponsive)

- GCS (Glasgow Coma Scale)

- Temperature

- Urine Output

Respiratory rate

- Relevant in a number of compensatory mechanisms within the body
- Normal rate should be between 12 and 20 over 1 minute.

- The most sensitive indicator of potential deterioration. Rising respiratory rate often early sign of deterioration.

- Using in conjunction with other evidence ie: use of accessory muscles, increased work of breathing, able to speak?, exhaustion, colour of patient.

- Position of resident is important.

Saturations

Blood pumped from Heart is rich in O2 (95%-99% saturated)

Blood pumped back to heart is low in O2 (65%-70%)

Oxygen binding to haemoglobin

Oxygen being released from haemoglobin
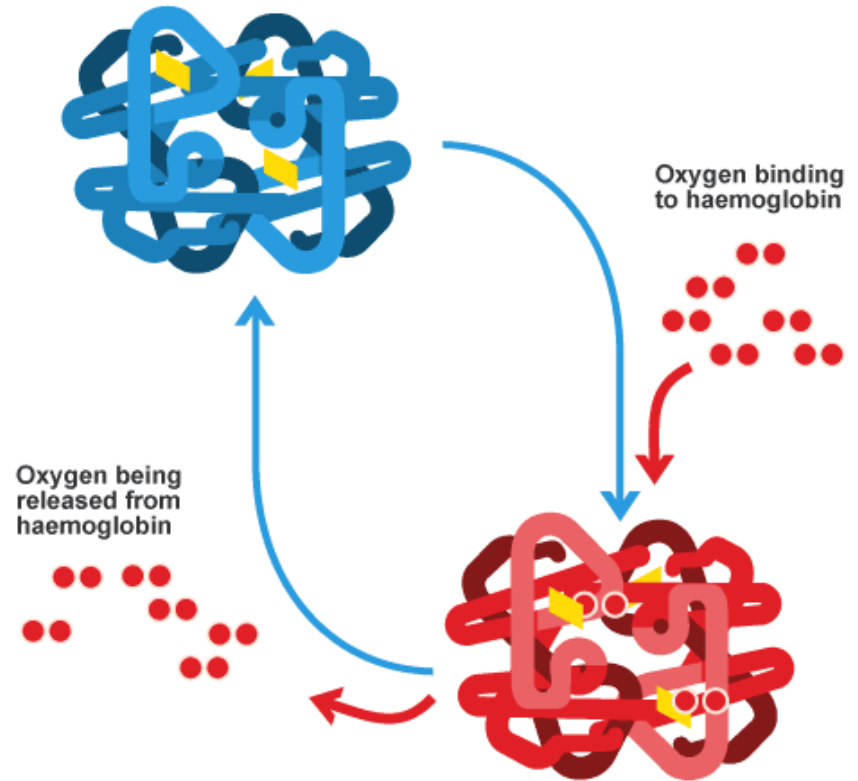
Oxygen Demand

If oxygen delivery to the body falls below what is demanded, the tissues extract more oxygen from the haemoglobin and the saturation of blood falls.
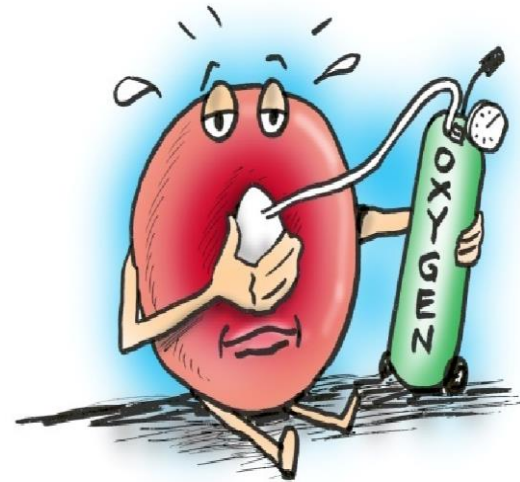
Oxygen Saturations

- All cells are dependent on an adequate constant supply of O2 as they are unable to store it. A reduction can lead to organ dysfunction and death.

- Dependent on intact respiratory and cardiovascular function – limited by other factors ie: peripherally shut down, COPD

- Be aware of patients 'target saturations' –this maybe their normal parameter – know your resident !

- Consider escalation if supplementary oxygen is required

Heart Rate

- Should be taken manually for one minute, noting the rate, volume and regularity.

- Felt at radial artery

- Normal rate can be considered 60-100bpm.

- Abnormal findings need investigating

Effects on Heart Rate

- Haemorrhage / bleeding
- Hypotension
- Sepsis
- Drugs / medications
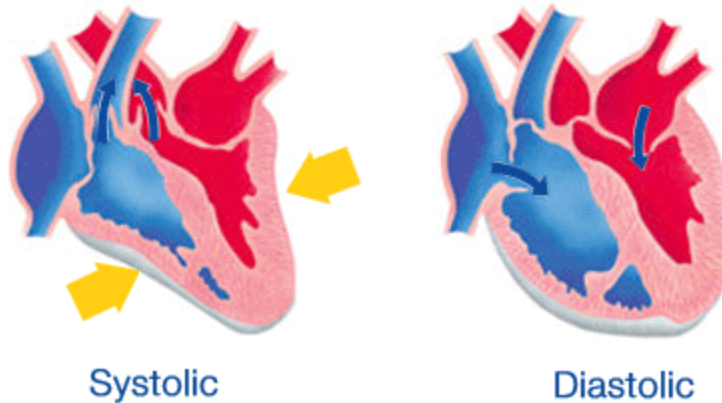- Hypoxia
- Temperature
- Injury
- Electrolytes

Blood pressure = pressure on wall of artery

Systolic = pumping pressure
Diastolic = resting pressure

Systolic and diastolic blood pressure

Systolic   Diastolic

Blood Pressure

- A LATE sign of deterioration – residents will compensate

- Adequate BP is essential for delivery of O2 and

   nutrients to the rest of the body.

- Be aware of what is normal for each resident

- Organs are very dependent on adequate pressures

   to ensure perfusion.

- Manual Blood pressure recording may be appropriate.

- Issues with cuffs and position on arms.

Temperature

Can have a significant effect on the residents condition.

- High or low can indicate sepsis

What should you do next ?

- Consider : *Re-check temperature   *Encourage fluids

  *Light clothing –remove heavy clothing ,bedding

  *Anti pyrexia medication e.g Paracetamol as prescribed

- >38 degrees consider escalating and discussing with appropriate clinician i.e. senior nurse/ manager, care home nurse practitioner ,GP,GP OOH management plan

- Document !

- Low can be as important as high-Why? Informed discussion

- Tympanic temperature and accuracy with hearing aid users!

Urine output

- Sensitive indicator of hydration status

- Should be 0.5ml/kg/hr

- Due to high demand for blood supply to the kidneys, urine output is a useful indicator of cardiovascular status.

- Generally is a poorly recorded observation.

- Monitoring of fluid balance should be appropriate depending on resident condition.

- Acute Kidney Injury - ↓ urine output, ↑ toxic waste. Needs urgent attention

Neurological Assessment

Common Causes:

- Head injuries, falls, cerebral oedema, tumours, abscesses, high or low blood sugars, substance misuse/ Korsakoffs, new confusional state (NC) possible causes?

- Common presenting complaints-headache, nausea/vomiting, dizziness, loss of concentration, disorientation, irritability, memory loss.

- Changes in neurological state can be rapid and dramatic or subtle, developing over minutes, hours days, weeks or even longer.

Neurological assessment must always include (Adam and Osbourne 2005):

- Assessment of level of consciousness

- Pupil size and reaction to light

- Limb assessments (including both motor and sensory function)

- Glasgow Coma Scale; GCS

- Vital signs (MEWS)

AVPU SCALE

- The AVPU scale is a simple, rapid and effective method to assess consciousness. It is particularly useful during rapid assessment of an acutely unwell resident

 (RCUK 2015)

- Alert: fully awake (although not always orientated)

- Voice: the resident makes some kind of response when you talk to them

- Pain: the resident makes a response to a pain stimulus

- Unresponsive: this is also commonly referred to as **unconscious.** This outcome is recorded if the resident does not give any eye, voice or motor response to voice or pain

(Royal College of Physicians 2012)

GCS

Eye response (E)

There are four grades starting with the most severe:

1. No eye opening
2. Eye opening in response to pain stimulus. (a peripheral pain stimulus, such as squeezing the lunula area of the resident's fingernail is more effective than a central stimulus such as a trapezius squeeze, due to a grimacing effect).[3]
3. Eye opening to speech. (Not to be confused with the awakening of a sleeping person; such resident's receive a score of 4, not 3.)
4. Eyes opening spontaneously

Verbal response (V)

There are five grades starting with the most severe:

1. No verbal response
2. Incomprehensible sounds. (Moaning but no words.)
3. Inappropriate words. (Random or exclamatory articulated speech, but no conversational exchange. Speaks words but no sentences.)
4. Confused. (The resident responds to questions coherently but there is some disorientation and confusion.)
5. Oriented. (Resident responds coherently and appropriately to questions such as the patient's name and age, where they are and why, the year, month, etc.)

GCS (Cont'd)

Motor response (M) There are six grades

1. No motor response

2. Decerebrate posturing accentuated by pain (extensor response: adduction of arm, internal rotation of shoulder, pronation of forearm and extension at elbow, flexion of wrist and fingers, leg extension, plantarflexion of foot)

3. Decorticate posturing accentuated by pain (flexor response: internal rotation of shoulder, flexion of forearm and wrist with clenched fist, leg extension, plantarflexion of foot)

4. Withdrawal from pain (Absence of abnormal posturing; unable to lift hand past chin with supra-orbital pain but does pull away when nailbed is pinched)

5. Localizes to pain (Purposeful movements towards painful stimuli; e.g., brings hand up beyond chin when supra-orbital pressure applied.)

6. Obeys commands (The resident does simple things as asked.)

Level of Consciousness

- Use AVPU or GCS for more in depth assessment.

- Consider at what point do you need help?

- REMEMBER look for: drowsiness, agitation, new changes.

- Assess pupils – key indicator

- Consider reversible causes ie: blood sugar

- If only responding to pain or unresponsive – airway is at risk

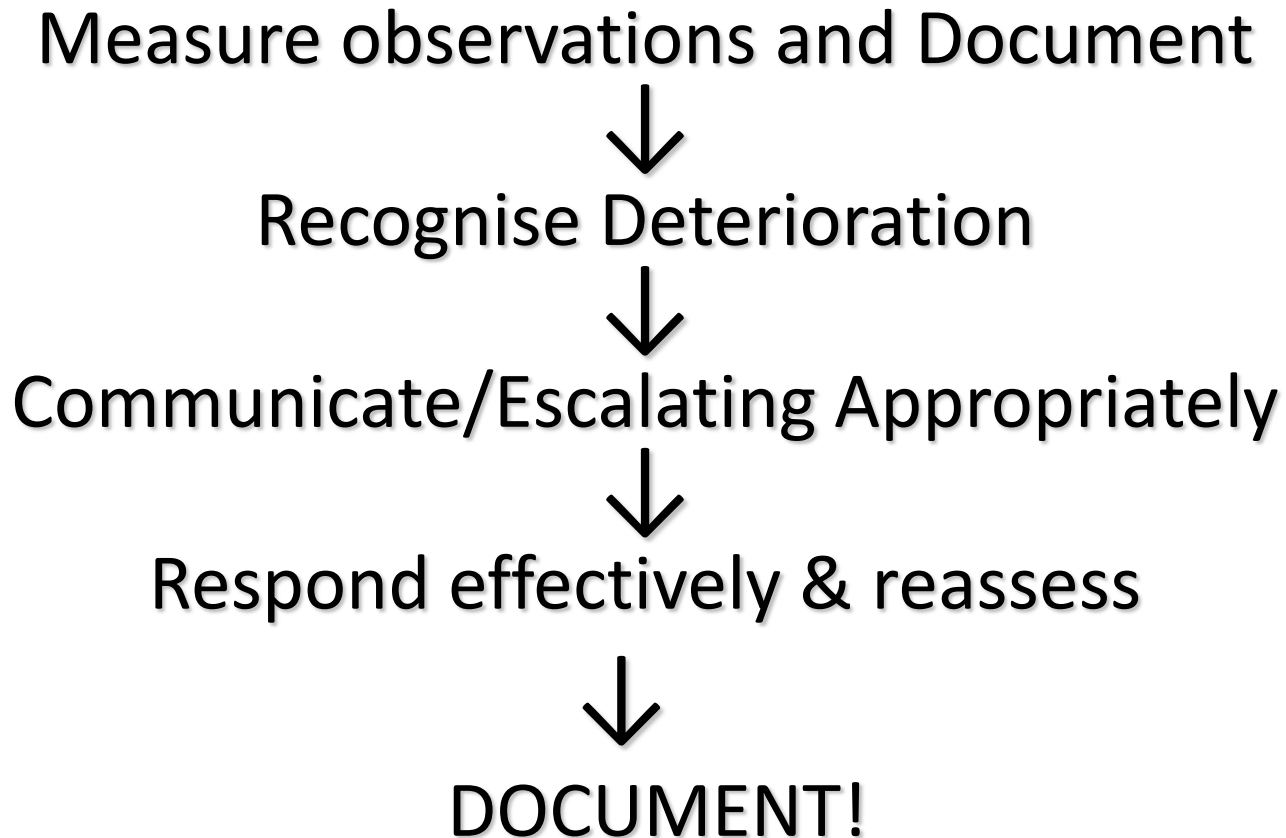# Who is at risk?

- Anyone in the home

- Those with co-existing disease

- All admissions

- Specific acute illness (sepsis, pancreatitis)

- Those with altered level of consciousness

Causes of deterioration

- Palliative / end of life

- Infections e.g. Chest infection/UTI

- Sepsis

- Chronic disease process

- Co-morbidities

- Failure to manage complications
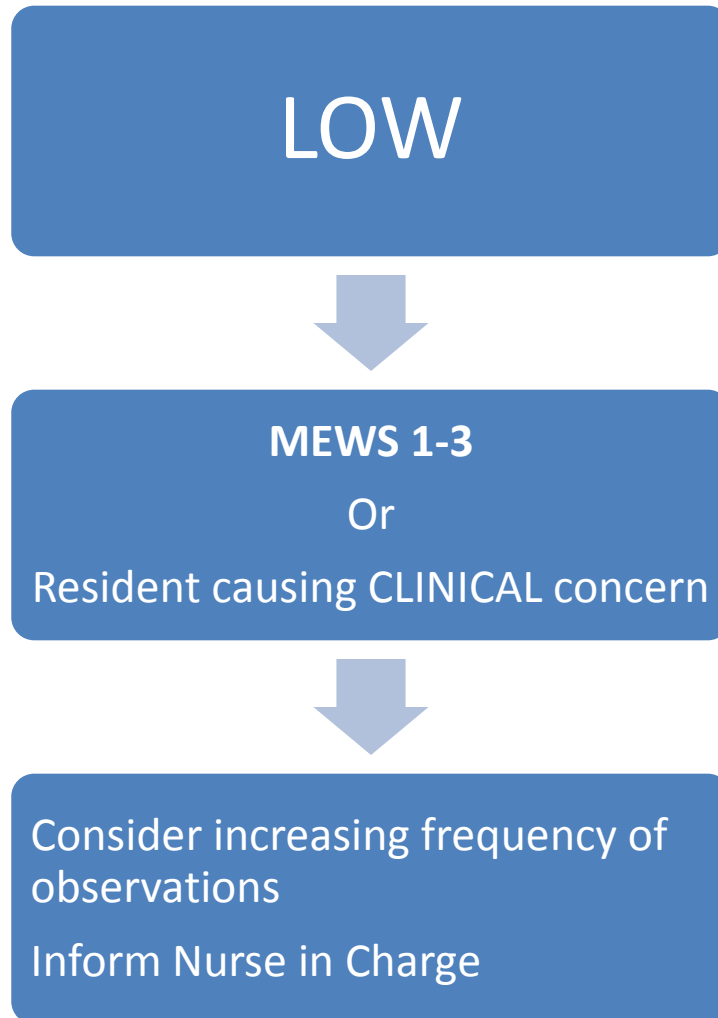
- Unavoidable complications

Chain of safety

Measure observations and Document

↓

Recognise Deterioration

↓

Communicate/Escalating Appropriately

↓

Respond effectively & reassess

↓

DOCUMENT!

MEWS Parameters NICE (2007)

Score Categories	3	2	1	0	1	2	3
Respirations		8 or less		9-16	17-20	21-29	30 or more
Oxygen Saturation				94% or more	90-93%	85-89%	84% or less
Systolic BP	70 or less	71-80	81-100	101-199		200 or more	
Pulse				51-100	101-110	111-129	130 or more
Temperature (°C)		35 or less	35.1-36	36.1-37.5	37.6-38.1	38.2 or more	
AVPU			New confusion/agitation	Alert	Voice	Pain	Unresponsive
Urine				No concerns	21-35	1-20	Nil

Escalation pathway

LOW

↓

MEWS 1-3

Or

Resident causing CLINICAL concern

↓

Consider increasing frequency of observations

Inform Nurse in Charge

Escalation pathway

MEDIUM

**MEWS 4 or 5**

Or

Resident causing CLINICAL concern

Inform Nurse in Charge

Continue to monitor observations every 30 minutes until MEWS below 4

Document all MEWS scores and any action taken

If no improvement in MEWS score seek medical review

Escalation pathway

HIGH

MEWS 6 or more or Resident causing CLINICAL concern

Seek medical advice

Continue to monitor observations every 30 minutes until MEWS below 4

Document all MEWS scores and any actions taken
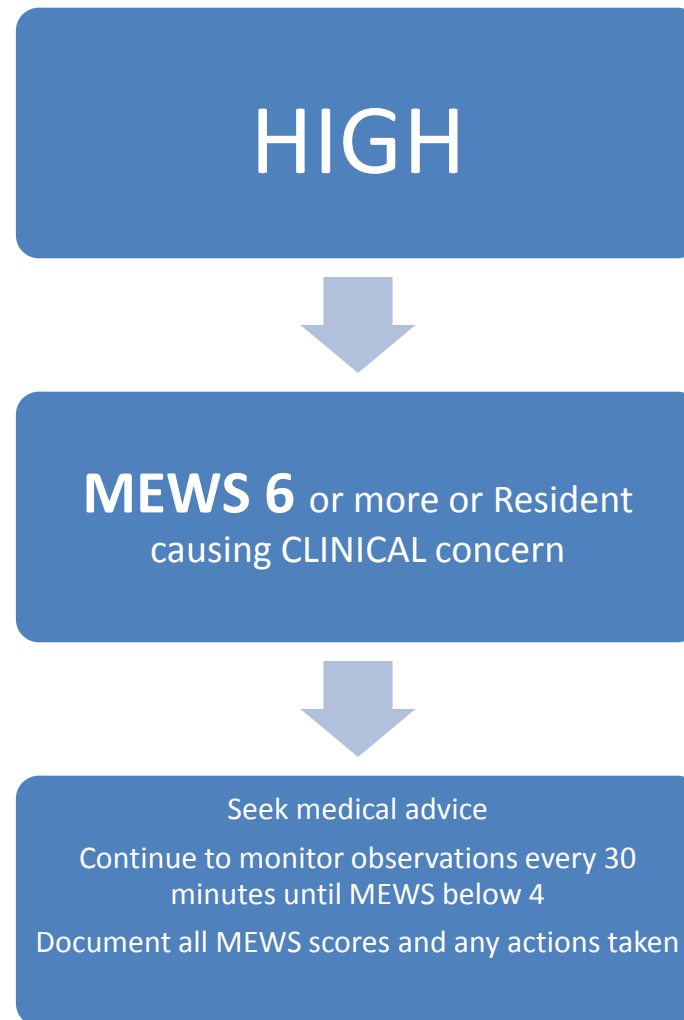
Barriers to escalation

- Anxious about escalating?

- Frequency / exposure to deterioration?

- Knowledge and Skills?

- Prioritising workload?

- Difference of opinion?

SBAR

A tool used to

communicate

critical information CLEARLY and briefly

It is intended for use by healthcare
professionals in situations

where deterioration of a resident needs
to be quickly

communicated to another

health care professional to ensure
prompt and appropriate
intervention.

CONSISTENT

CLEAR

PRECISE

Situation:
I am (X), a nurse on ward (X)
I am calling about (patient X)
I am calling because I am concerned that the
patient's...
e.g. MEWS is XX, Resp rate is XX,
BP is low/high, pulse is XX,
temp is XX, Urine Output is low/dark in colour

S

Background:
Patient (X) was admitted on (XX),
With (XX)...e.g. MI/chest infection/?CVA
They have had...(X operation/procedure/investigation)
Their condition has changed in the last (XX mins)
Their last set of obs were (XX)
Patient (X)'s normal condition is...
e.g. alert/drowsy/confused, pain free, mobile

B

Assessment:
I think the problem is... (XXX) and I have...
e.g. given O₂ /analgesia/encouraged oral fluids
or
I am not sure what the problem is but patient
(X) is deteriorating or
I don't know what's wrong; but I am really
concerned

A

Recommendation:
Be specific; I need you to...
Come to see the patient...
Immediately or in the next (XX mins)
and
Is there anything I need to do in the meantime?
e.g. commence an IVI/reposition/O₂

R

University Hospital of North Staffordshire **NHS**
NHS Trust

Ask receiver to repeat key information to ensure understanding

The SBAR tool originated from the US Navy and was adapted for use in healthcare by
Dr M Leonard and colleagues from Kaiser Permanente, Colorado, USA

Practical assessment

- Complete action plan for scenarios given

- Discuss rationale for taking observations and increase/decrease frequency

- Correctly taking a full set of observations

- Correct documentation and calculation of scores using home observation charts where appropriate

- Demonstrate awareness of escalation procedures

Practical assessment

- **Resident A** has a suspected chest infection, her observations are as following:
- *Temp -37.4 c*
- *Resp rate -20*
- *Heart rate -88bpm*
- *BP -138/62mmHg*
- *Response -Alert*
- *Oxygen sats –97%*

- Passing urine.

- *Pain 0 at rest/ 1 on movement*

- **What is the Mews Score? What else would you ask?**
- **What action would you be taking ?**

Practical assessment

- **2 hours later resident A appears more breathless and agitated**
- *Temp -37.4 c*
- *Resp rate -26 (SOB)*
- *Heart rate -101 bpm*
- *BP -121/52mmHg*
- *Response -Agitated*
- *Oxygen sats –92%*

- *Pain 1 at rest/ 2 on movement*

- **What is the Mews Score?**
- **What action would you be taking?**

Practical assessment

- **Resident B appears confused ?? cause, his observations are as following:**
- *Temp -37.4 c*
- *Resp rate -14*
- *Heart rate -121 bpm*
- *BP -98/58mmHg*
- *Response -Agitated*
- *Oxygen sats –94%*
- *Pain ? at rest/ ? on movement*
- Alert.
- **What else would you need to know? Urinalysis?**
- **What is the Mews Score?**
- What action would you be taking ?

Practical assessment

- **You repeat resident B's observations in an hour as his consciousness levels appear to have deteriorated, his observations are as following:**
- *Temp -37.8 c*
- *Resp rate -8*
- *Heart rate -64 bpm*
- *BP -92/54mmHg*
- *Response -unresponsive*
- *Oxygen sats –89%, urine output ?*
- *Pain ? at rest/ ? on movement*

- What is the Mews Score?
- What action would you be taking?

Case Studies

Apply the knowledge learned in this session to the case studies given.

Areas to consider:

- Advance care plans

- DNARs

- Use of Care Home Clinical Decision Tools –available from your Care Home Practitioner in Worcestershire Health and Care Trust

- NICE Guidelines to inform best practice

Question Time?

Summary