Early Recognition of the Deteriorating Patient

Paediatric COMPASS
Learning Outcomes of COMPASS

• Link physiology with vital sign measurements

• Recognise the deteriorating patient

• Initiate appropriate and timely interventions utilising PEWS escalation process

• Demonstrate effective communication (ISBAR)
Regular vital signs are necessary for all admitted paediatric patients.

A full set of Vital Signs should to be taken a minimum of every 4 hours on every patient unless documented in the notes by a medical officer.
Recognition of the Deteriorating Patient

1. Vital Signs performed

2. Interpreted by nurse

3. Communicate ISBAR

4. Timely and appropriate review

5. Vital signs interpreted by doctor

6. Timely and appropriate management

7. Reassess
   • re-escalate if required
Alice*

Alice, 16 year old student

- Admitted to Paediatric Ward with ?EBV Pneumonia Saturday Midnight

- Vital signs on admission:
  - RR 28  SaO2 93% room air
  - HR 124  BP 101/58
  - Temperature 38.1

* not her real name
Alice’s observations
(on original chart, pre EWS)
Alice’s observations transcribed on PEWS chart (note that there is no score for LOC or effort of breathing)
What happened to Alice?

- PEWS 8 on admission to Paediatric ward

- During the next 28 hour and 25 minutes

Alice had the following reviews on the ward:

- Nurse review 40
- Intern/RMO review 7
- Registrar review 10
- ICU Registrar 2
- Consultant 3
Alice was finally transferred to ICU 17 hours after first signs of vital sign derangement.
Outcome:

• Diagnosis: EBV pneumonitis

• Required ICU admission
  – NIV
  – 2 hours later intubated
  – Bilateral chest drains for pleural effusions
  – Difficulty ventilating – considered transfer for ECMO
  – ICU stay 2 weeks
  – Hospital stay 6 weeks
  – Post traumatic stress disorder
Alice’ Mother

- “I .......believe that ......someone or something failed my daughter on that weekend.

- (There was)........a seemingly total lack of clinical assessment and decision making affording early intervention in order that her deterioration was halted
What did happen:

Patient was “observed” hourly on a ward
Patient was reviewed multiple times
A diagnosis was made
A management plan was in place

What did not happen:

Failed to recognise how unwell the patient was
Failed to provide timely, appropriate management
No ICU senior clinician involved
Emergency Call not activated
Australia Council on Health Care Standards

1. Governance for Safety and Quality in Health Service Organisations
2. Partnering with Consumers
3. Preventing and Controlling Healthcare Associated Infections
4. Medication Safety
5. Patient Identification and Procedure Matching
6. Clinical Handover
7. Blood and Blood Products
8. Preventing and Managing Pressure Injuries
9. Recognising and Responding to Clinical Deterioration in Acute Health Care
10. Preventing Falls and Harm from Falls
How do we comply with Standard 9 at CHHS?

- Design of observation chart using Human Factors research
- Education
- Ongoing audit/Feedback
- Organisational Support
Vital Signs physiology
Oxygen Delivery Chain

Arterial Oxygen Content

\[ \{ \text{SaO}_2 \times \text{Hb} \} + \{ \text{PaO}_2 \} \]

Cardiac Output x Peripheral Vascular Resistance = BP

Stroke Volume x Heart Rate

BLS

Urine Output

Temp & BGL & LOC

Note: All the RED are vital sign hence vital signs are vital
Oxygen Delivery

• All cells require energy to function
• In order to produce energy the cells require oxygen
Aerobic Pathway

• Aerobic respiration
  – Turns glucose and oxygen into water and carbon dioxide
  – The energy from this reaction produces ATP (energy for cells)
  – For this to occur the cells require oxygen delivery to the cells

\[
\text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2 + 6\text{H}_2\text{O} \rightarrow 6 \text{CO}_2 + 12 \text{H}_2\text{O} + \text{Energy (in the chemical bonds of ATP)}
\]
Anaerobic Pathway

– Energy can be produced without oxygen.
– This is through anaerobic metabolism.
  • This a less efficient form of metabolism.
  • It produces waste products such as Lactic Acid
  • Some cells can not produce energy anaerobically so if oxygen delivery is compromised then the cells do not function
    – For example: the Brain.
Arterial Oxygen Content

- Arterial Oxygen content requires:
  - Patent airway
  - Functioning lung tissue
  - Gas exchange
  - Haemoglobin to carry the oxygen

- A reduction in oxygen delivery results in an increased respiratory rate
  - To get more oxygen in
  - To assist in the removal of waste products (i.e. CO₂)
Cardiac Output

= Stroke Volume (amount pumped with each beat) x Heart Rate

Requires:
• Good volume
• A functioning pump
• And is dependent on peripheral vascular resistance

A reduction in cardiac output results in:
• Increased heart rate
• & may cause a decrease in BP
Compensation

When the body detects decreased oxygen delivery at the tissues or a reduction in cardiac output compensatory mechanisms occur. These include:

– Increased respiratory rate
– Increased heart rate
De- Compensation

The result of failing/failed compensatory mechanisms is:

– Reduction in oxygen saturations
– A falling BP
• By monitoring complete sets of vital signs you can detect signs of reduced oxygen delivery through:
  – Compensation (↑HR and ↑RR)
  – Decompensation (↓SpO₂ and ↓BP)
  – Temperature assists in diagnosing the cause
  – Changes in level of consciousness indicate poor energy production and as such a reduction in level of consciousness should be accompanied by a check of the patients BGL.
Oxygen Delivery Chain

\[
\text{Arterial Oxygen Content} \times \text{Cardiac Output} \times \text{Peripheral Vascular Resistance} = \text{BP}
\]

\[
\{\text{SaO2} \times \text{Hb}\} + \{\text{PaO2}\}
\]

A \quad RR \quad B \quad C

BLS

Urine Output

Temp & BGL & LOC

\text{Note: All the RED are vital sign hence vital signs are vital}
Airway & Breathing

Decreased oxygen delivery at the tissue level

- Anaerobic metabolism
- Increases Lactate production
- Acidosis
- Stimulates respiratory drive
- Increases the Respiratory Rate
When there is a reduction in the amount of oxygen being delivered to the tissues, cells revert to anaerobic metabolism. This increases the production of lactate. The subsequent build up of lactic acid (or metabolic acidosis) stimulates an increase in respiratory rate.
**BP = Cardiac Output x Peripheral Vascular Resistance**

Decreased BP can be a result of:

- **Decreased intravascular blood volume**
  - Hypovolaemia (Gastric Losses, Trauma, Bleeding, )

- **Decreased contractility of heart**
  - Arrhythmias, Cardiogenic shock,

- **Decreased Peripheral Vascular Resistance**
  - Vasodilation, Sepsis, Anaphylaxis, Medication induced.
Conscious level

- BGL is the first thing to be checked in a patient with reduced level of consciousness
- If there is a sudden fall in consciousness or drop of GCS > 2 be concerned
- Children have reduced glycogen stores
Renal Function

- Children cannot concentrate urine as effectively as adults
- Children have a greater potential for water and temperature loss due to large surface area to volume ratio
Paediatric Urine Output

- **Newborn and infant up to 1 year**
  - 2ml/kg/hour

- **Toddler**
  - 1.5mls/kg/hour

- **Older child**
  - 1ml/kg/hour

- **Adolescent**
  - 0.5-1ml/kg/hour
HYPOTHERMIA (≤35°C)

- Can indicate:
  - Sepsis, metabolic disorders, exposure to low temperatures, medication related.
  - HR, RR, & metabolic rate decreases
  - Confusion
  - Arrhythmias
  - Cardiac arrest
Physiological differences in children
AIRWAY and BREATHING

• Increased risk of airway obstruction:
  – Large head – flexion
  – Large tongue
  – Large adenoids and tonsils
  – Loose teeth
  – Smaller airways

• Breathing
  – Diphragmatic breathers
  – Easily fatigued
CIRCULATION

• Relatively small stroke volume
  – Cardiac Output compensation is reliant on HR

• Small amounts of blood volume can be critical
Points to Note

• Children have greater metabolic rate and oxygen consumption

• An increase in Respiratory Rate can occur with a normal SaO2 – note that normally well patients will compensate better

• Oxygen flow rates less than 4L/min for a Hudson mask should not be used in Paediatric patient’s

• Don’t rely on machines!
PEWS and MET

- If vital signs meets hospital criteria for MET or Code Blue then call Code Blue
- Some patients may meet the MET criteria but not trigger a high PEWS score if only an individual parameter is altered

- The PEWS protocol is activated with a score of $\geq 4$
Paediatric MET Criteria

• Health professional worried about clinical state
• Airway threat
• Hypoxaemia –
  – $\text{SaO}_2 < 90\%$ on any $\text{O}_2$
  – $\text{SaO}_2 < 60\%$ on any $\text{O}_2$ (cyanotic heart disease)
• Severe or worsening respiratory distress, exhaustion, apnoea or cyanosis
• Acute change in neurological status or function
  – Sudden fall in consciousness
  – New, repeated or prolonged seizure (>5 min)
• Cardiac or respiratory arrest
• Any observation in purple
Paediatric charts

Age specific
(in premature babies use corrected age up to 12 months)
How does the Paediatric PEWS Chart work?

• Track and trigger system
• Each observation is plotted on the chart
• Observations in the white zone score "zero"
• Observations in the coloured zones score between 1-4 (depending on the colour)
• Total score of all vital signs is calculated
• Escalation starts with a PEWS of 4
Effort of Breathing

(Advanced Paediatric Life Support Criteria for Effort of Breathing)

Stridor, accessory muscle use, recession, wheeze, nasal flaring, grunting, gasping

Normal = nil of the above criteria
Mild = 1 of the above criteria
Moderate = 2 of the above criteria
Severe = 3 or more of above criteria
Assessing EFFORT OF BREATHING

Observe for:
- Accessory muscle use (including nasal flaring in younger children)
- Recession
- Head bob

Listen for:
- Wheeze
- Stridor
- Grunting
- Gasping
Common sites of recession in respiratory distress

Suprasternal

Intercostal

Substernal

Subcostal
Examples of increased effort of breathing
OXYGEN DELIVERY is scored in paediatric patients

<table>
<thead>
<tr>
<th>RA Room Air</th>
<th>HFNP High Flow Nasal Prongs</th>
<th>NP Nasal Prongs</th>
<th>HM Hudson Mask</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Room Air</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Nasal Prongs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· Hudson Mask 4L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· HFNP ≤ 1.5L/kg or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· HFNP with FiO2 ≤ 40% or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· HM &gt; 4L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· HFNP ≥1.6L/kg or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>· HFNP with FiO2 &gt;40%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Oxygen Delivery Score

Paediatric Early Warning Scores (PEWS)

0 1 2 3 4/MET
OXYGEN SATURATION

**Oxygen Saturation (%)**

<table>
<thead>
<tr>
<th>Oxygen Saturation (%)</th>
<th>98-100</th>
<th>95-97</th>
<th>93-94</th>
<th>90-92</th>
<th>87-89</th>
<th>85-86</th>
<th>Write ≤ 84</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urgent review if</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$SpO_2 &lt; _____$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Oxygen Saturation Score**

**Paediatric Early Warning Scores (PEWS)**

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4/MET</th>
</tr>
</thead>
</table>
### Blood Pressure

<table>
<thead>
<tr>
<th>Blood Pressure (mmHg)</th>
<th>Systolic Blood Pressure Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥140</td>
<td>Write ≥140</td>
</tr>
<tr>
<td>135-139</td>
<td></td>
</tr>
<tr>
<td>130-134</td>
<td></td>
</tr>
<tr>
<td>120-129</td>
<td></td>
</tr>
<tr>
<td>110-119</td>
<td>&lt;___ or &gt; ____</td>
</tr>
<tr>
<td>100-109</td>
<td></td>
</tr>
<tr>
<td>90-99</td>
<td></td>
</tr>
<tr>
<td>80-89</td>
<td></td>
</tr>
<tr>
<td>75-79</td>
<td></td>
</tr>
<tr>
<td>70-74</td>
<td></td>
</tr>
<tr>
<td>65-69</td>
<td></td>
</tr>
<tr>
<td>≤64</td>
<td>Write ≤ 64</td>
</tr>
</tbody>
</table>

**Urgent review if**

- Systolic BP < ___
- or > ___
When to measure blood pressure

• Blood pressure is to be recorded as per existing Paediatric policy and scored for PEWS.
  – All children with an appropriate sized cuff:
    • on admission
    • pre-operatively
    • on return to ward post-operatively
    • in the following circumstances:
      – In neonates and infants, blood pressure should be measured if renal disease or co-arctation of the aorta are suspected or if there are signs of hypotension.
      – For a child/adolescent of any age with symptoms of hypotension, hypertension, renal, cardiac disease, diabetes or adrenal disorders, head injury or trauma, blood pressure should be measured 4 - 8 hourly or more frequently if indicated

• Blood pressure must also be recorded if the PEWS is ≥ 6
<table>
<thead>
<tr>
<th>Level of Consciousness (AVPU)</th>
<th>Alert</th>
<th>Voice</th>
<th>Pain</th>
<th>Unresponsive</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVPU Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Guide for assessing Level of Consciousness using AVPU tool**

- **Alert**: Awake and alert OR asleep with no clinical indication to wake for assessment
- **Voice**: Responds to verbal stimuli
- **Pain**: Responds to painful stimuli
- **Unresponsive**: No response to stimuli
Capillary Refill

- Central cap refill should be done with each set of vital signs and documented on the obs chart

- Hold for 5 seconds, then release
TOTAL PEWS SCORE
Remember

Connect the dots
Graphical representation of vital signs.
Human Factors
(Melany Christofidis, 2013)
Note:

There will be times when the PEWS does not score enough to trigger a medical review, but clinical assessment indicates that the patient would benefit from a medical review.
Alteration to calling criteria

<table>
<thead>
<tr>
<th>Date/Time:</th>
<th>23/8/17 0800hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for Alteration:</td>
<td>Bronchiolitis</td>
</tr>
<tr>
<td>Next review date/time:</td>
<td>23/8/2017 2000hrs</td>
</tr>
<tr>
<td>Observation frequency:</td>
<td>hourly</td>
</tr>
<tr>
<td>Alteration to calling criteria documented over page?</td>
<td>Yes</td>
</tr>
<tr>
<td>Additional instructions and/or comments:</td>
<td>if increasing oxygen requirement or decreased level of consciousness call for urgent review</td>
</tr>
<tr>
<td>RMO/Registrar name (print):</td>
<td>Doogie Howser</td>
</tr>
<tr>
<td>RMO/Registrar signature:</td>
<td>DHowser</td>
</tr>
<tr>
<td>Consultant name (print):</td>
<td>D StrangeLove</td>
</tr>
<tr>
<td>Consultant signature:</td>
<td>D StrangeLove</td>
</tr>
</tbody>
</table>

A child with a consistently high PEWS due to their illness
Alteration to calling criteria

<table>
<thead>
<tr>
<th>Age: 28 days</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3 Months</td>
<td></td>
<td>Write ≥ 81</td>
</tr>
<tr>
<td>Respiratory Rate (breaths/minute)</td>
<td>75-80</td>
<td>70-74</td>
</tr>
<tr>
<td>Urgent review if RR is &lt; 20 or &gt; 70</td>
<td>65-69</td>
<td>60-64</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>40-49</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>25-29</td>
</tr>
<tr>
<td></td>
<td>20-24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Write ≤ 19</td>
<td></td>
</tr>
</tbody>
</table>

Respiratory Rate Score: 0 1 2 1 1
# PEWS escalation table

<table>
<thead>
<tr>
<th>PEWS</th>
<th>Notify</th>
<th>Escalate</th>
<th>Intra hospital escort</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEWS 4-5</td>
<td>Team Leader RMO review within 30 minutes</td>
<td>After 60 minutes if no review and/or no improvement escalate per PEWS 6-7</td>
<td>RN</td>
</tr>
<tr>
<td>PEWS 6-7</td>
<td>Team Leader Registrar review within 30 minutes</td>
<td>After 60 minutes if no review and/or no improvement escalate per PEWS ≥ 8</td>
<td>RN and RMO</td>
</tr>
<tr>
<td>PEWS ≥ 8</td>
<td>Team Leader Registrar review immediately Contact Consultant</td>
<td>Consider MET if no review and/or no improvement</td>
<td>RN and Registrar</td>
</tr>
</tbody>
</table>

## Alteration to calling criteria
- Pt meeting urgent review criteria
- Registrar review within 15 minutes

## Vital sign frequency and actions for PEWS ≥4:
- ½ hourly for 1 hour
- Commence fluid balance chart
- If PEWS ≥ 6 BP must be measured with each set of vital signs

If pt. improves decrease frequency of vital signs to:
- Hourly for 4 hours
- 4 hourly for 24 hours
If PEWS 4 or more:

- Notify the team leader or CNC
- Commence Fluid Balance Chart
- Escort off ward
  - PEWS ≥ 4 Registered Nurse
  - PEWS ≥ 6 Registered Nurse & JMO
  - PEWS ≥ 8 Registered Nurse & Registrar

Increase frequency of observations to a minimum of:
- ½ hourly x 1 hour
- 1/24 x 4 hours
- 4/24 for 24 hours
When to do vital signs?

• A full set of vital signs should be documented on all patients at the following times:
  – On admission and at time of initial assessment
  – Postoperatively as per policy
  – Post procedure as ordered
  – 4/24 if transferred from a critical care area (e.g. ICU, CCU, ED) or following an inter-hospital transfer
  – In addition as prescribed by a medical officer
  – If the patient’s condition deteriorates
How do you communicate deterioration?
“ISBAR” method of Communication

- **IDENTIFY**
  - Yourself, the Doctor, and the Patient.

- **SITUATION**
  - What are you calling about? State this!

- **BACKGROUND**
  - Further detail about the patient; may include
    - Procedures; medical history; current therapy etc.

- **ASSESSMENT**
  - What do YOU think the problem is!

- **RECOMMENDATION**
  - What would you like the Doctor to do.
Communication Exercise
Management Plans

Gather Information

Where?
Management plans

- What????
Documenting

- Document any decisions/actions taken as a result of the observations
- Helps the flow of information,
- Medico legal requirement
- Remember if you didn’t write it you didn’t do it!!
Call and Respond Early (CARE) for Patient Safety

TELL US IF YOU, OR THE PATIENT YOU ARE VISITING IS GETTING SICKER

GETTING SICKER MAY INCLUDE, BUT IS NOT LIMITED TO:
- finding it harder to breathe than normal
- feeling of heart racing
- feeling dizzy or lightheaded
- new or worse confusion
- pain that is worse despite medication
- any new symptoms

STEP 1
PRESS YOUR BUZZER
Tell your nurse/midwife or doctor why you are worried

STEP 2
IF YOU ARE STILL WORRIED...
Ask to speak with the nurse or midwife in charge

STEP 3
IF AFTER THIS YOU FEEL YOU REQUIRE URGENT ASSISTANCE...
Call (02) 6244 3337 a senior nurse will review and assist as required
Australia Council on Health Care Standards

- Standard 1 - Governance for Safety and Quality In Health Service Organisations
- Standard 2 - Partnering with Consumers
- Standard 3 - Preventing and Controlling Healthcare Associated Infections
- Standard 4 - Medication Safety
- Standard 5 - Patient Identification and Procedure Matching
- Standard 6 - Clinical Handover
- Standard 7 - Blood and Blood Products
- Standard 8 - Preventing and Managing Pressure Injuries
- Standard 9 - Recognising and Responding to Clinical Deterioration In Acute Health Care
- Standard 10 - Preventing Falls and Harm from Falls
Families and carers are ideally placed to identify signs of clinical deterioration because:

• The patient is well known to them, allowing subtle changes or signs of clinical deterioration to be identified by the family before being identified by the healthcare team

• They spend time with the patient, providing additional surveillance to that provided by the healthcare team
Why?

Providing a process for patients and carers to escalate care provides an additional layer of safety and recognises the role of patients and carers as part of the wider healthcare team.
Nine-year-old Leila in South Australia suffered a perforated bowel and peritonitis in a playground accident which was undetected by 2 SA hospitals and a GP. Leila died in October 2014.
Her parents wrote "On the day before and the morning of Leila's death we felt helpless, did not know where to get help and the health professionals we took Leila to misdiagnosed, dismissed our concerns and 're-assured' us that Leila was fine. We felt like no-one cared and no-one was listening. We also were given no information on what to do if she got worse or any possible diagnosis."
In 2007, three-year-old Ryan Saunders developed swollen glands and was misdiagnosed with mumps. When Ryan’s parents were worried he was getting worse they didn’t feel their concerns were acted upon in time.
Despite their pleas for action, Ryan died 30 hours after being admitted. He had a bacterial infection that had developed into toxic shock. It could have been detected and treated.

Ryan's family campaigned for a change to the ways parents can advocate for their children in healthcare and in 2013 Ryan's Rule was introduced in Qld, giving every parent the right to access a clinical review of their child's treatment in a timely and simple way.
How does the hospital comply?

9.9.1 Mechanisms are in place for a patient, family member or carer to initiate an escalation of care response

9.9.2 Information about the system for family escalation of care is provided to patients, families and carers
Patients, families and carers are informed of recognition and response systems and can contribute to the processes of escalating care.
CARE for Patient Safety

Information is provided to patients, families and carers including:

• The importance of communicating signs and symptoms of deterioration relevant to their condition

**GETTING SICKER MAY INCLUDE, BUT IS NOT LIMITED TO:**

- finding it harder to breathe than normal
- feeling of heart racing
- feeling dizzy or lightheaded
- new or worse confusion
- pain that is worse despite medication
- any new symptoms
CARE for Patient Safety

And how they can raise concerns about potential deterioration

Three step process:

**STEP 1**

PRESS YOUR BUZZER

Tell your nurse/midwife or doctor why you are worried
CARE for Patient Safety

STEP 2

IF YOU ARE STILL WORRIED...

Ask to speak with the nurse or midwife in charge
STEP 3

IF AFTER THIS YOU FEEL YOU REQUIRE URGENT ASSISTANCE...

Call (02) 6244 3337 a senior nurse will review and assist as required
What happens next?

Call goes to Switch

Vetted by Switch to check

• caller is TCH inpatient/or calling about TCH inpatient

• matter concerns clinical deterioration

Call directed to MET (business hours Monday – Friday) OR after hours CNC – outside business hours
What do you need to do?

• Give a verbal explanation of the CARE program to patients and their carers
• Ensure that there are posters for each bed space
Has CARE changed at TCH?

CARE is now available to ALL inpatients at TCH
Examples of areas now covered by CARE include:
• NICU
• ICU
• ED
• Birthing suite
Has CARE changed at TCH?

• Redesign of CARE posters including extensive testing with consumers to guide the final product
• Focus on posters instead of brochures. Results of ward audits indicate more consumers learn about the program by seeing the poster than reading the brochure
Has CARE changed at TCH?

CARE calls now go through switchboard. This ensures that no calls are missed and that only relevant calls are transferred to the CARE Responder.

Switch can also follow up if the CARE Responder has not answered call to ensure that the call is answered appropriately.
Learning outcomes from this session.
You should be able to:

• Explain the link between the PEWS chart and Standard 9

• Identify signs of deterioration and recall that changes in vital signs are reflecting changes in your patient’s condition

• Locate and implement the escalation process

• Use ISBAR when communicating
Recognition of the Deteriorating Patient

PATHOPHYSIOLOGY

DETERIORATING PATIENT
COFFEE BREAK

CASE STUDIES