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Physical observations assessment and the management of altered levels of consciousness (including NEWS 2, PEWS, Pregnancy EWS, AVPU, GCS)

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Authors details	Clinical Training Manager – Physical Health and Resuscitation

Type of document	Standard Operating Procedure
Target audience	All clinical staff
Document purpose	To provide all Clinical staff with advice and support when undertaking physical observations including NEWS 2, PEWS Pregnancy EWS, ACVPU, GCS

Approving meeting	Clinical Practice and Standards Sub Committee	21-Feb-19
Implementation date	21-Feb-19	

CWP documents to be read in conjunction with	
CP1	Admission, Discharge and Transfer Policy
CP3	Health Records Policy
CP5	Clinical Risk assessment Policy
CP12	Searching of service users and environments, including the use pf Police Dogs policy
CP35	Physical Health in Mental Health Pathway and policy
CP42	Care Planning (CPA) and Standard (care) policy)
CP59	Medical Device and Equipment Policy
GR1	Incident reporting and management policy
GR30	Decontamination of Equipment Policy
HR6	Mandatory Employee Learning (MEL) Policy
HS1	Waste management policy
IC2	Hand decontamination policy and procedure

Document change history	
What is different?	• Removal of guidance on the care and management of the Intoxicated Service User to create a standalone document. • Removal of Electrocardiogram (ECG) Guidelines to create a standalone document. • Addition of National Early warning score (NEWS 2), National guidance • Addition of the NEWS 2 chart.
Appendices / electronic forms	N/A
What is the impact of change?	This document will support the introduction and management of NEWS 2, Paediatric Early Warning Score and Pregnancy Early warning scoring systems

Training requirements	Yes - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Education CWP.

Document consultation	
Clinical Services	Consultation via online discussion forum
Corporate services	Consultation via online discussion forum
External agencies	N/A

Financial resource implications	None

External references
1. Dougherty, L & Lister,S (2011) The Royal Marsden Hospital Manual Of Clinical Nursing Procedures. 8th Ed. Blackwell Publishing. Oxford. 2. Dougherty, L & Lister,S (2015) The Royal Marsden Hospital Manual Of Clinical Nursing Procedures. 9th Ed. Blackwell Publishing. Oxford. 3. Endacott, R. Jevon, P. & Cooper, S. (2009). Clinical Nursing Skills Core and Advanced. Oxford University Press 4. Fundamentals of nursing made incredibly easy! GMD: electronic resource Format: web URL: http://ovidsp.ovid.com/athens/ovidweb.cgi?T=JS&NEWS=n&CSC=Y&PAGE=booktext&D=books&AN=01382814$&XPATH=/PG(0) 5. https://www.rcplondon.ac.uk/projects/outputs/national-early-warning-score-news-2 6. http://www.glasgowcomascale.org/recording-gcs/ 7. http://www.nice.org.uk/guidance/cg176/chapter/1-recommendations#pre-hospital-assessment-advice-and-referral-to-hospital 8. www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency). 9. http://www.nhlbi.nih.gov/health/health-topics/topics/heartattack/signs. 10. http://www.nhs.uk/Conditions/Heart-attack/Pages/Symptoms.aspx 11. https://www.rcplondon.ac.uk/sites/default/files/documents/national-early-warning-score-standardising-assessment-acute-illness-severity-nhs.pdf 12. http://www.institute.nhs.uk/safer_care/paediatric_safer_care/pews.html 13. http://patientsafety.health.org.uk/sites/default/files/resources/4.early_detection_of_maternal_deterioration_1_.pdf 14. http://www.bhsoc.org/latest-guidelines/how-to-measure-blood-pressure/

Equality Impact Assessment (EIA) - Initial assessment	**Yes/No**	**Comments**
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?		
N/A		
Is the impact of the document likely to be negative? - If so can the impact be avoided? - What alternatives are there to achieving the document without the impact? - Can we reduce the impact by taking different action?	No N/A N/A N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted.		

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Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

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Contents

Flowchart 1 – National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS) and Pregnancy Early Warning Score (Pregnancy EWS) 5
Flowchart 2 – Respirations 6
Flowchart 3 - Oxygen Saturations 7
Flowchart 4 - Obtaining a digital blood pressure 8
Flowchart 5 - Obtaining a manual blood pressure 9
Flowchart 6 – Obtaining a temperature 10
Flowchart 7 - Monitoring levels of consciousness (ACVPU) 11
Flowchart 8 - Procedure for patients with physical deterioration & no known head injury 12
Flowchart 9 - Procedure to be followed in the event of altered level of consciousness 13
Flowchart 10 - Blood glucose monitoring 14

1. Introduction 15
1.1 How to carry out physical observation 15
1.1.1 Respirations 16
1.1.2 Oxygen saturation 16
1.1.3 SpO2 Scale 2 16
1.1.4 Blood pressure 17
1.1.5 Pulse / heart rate 17
1.1.6 Temperature 18
1.1.7 How to record ACVPU (Alert, Confusion, Voice, Pain, and Unresponsive) 18
2. What are NEWS 2, PEWS and Pregnancy EWS? 19
2.1 When to use NEWS 2 / PEWS / Pregnancy EWS 20
2.1.1 How to Calculate, Score and Action NEWS 2 21
2.1.2 How to Calculate, Score and Action PEWS 25
2.1.3 How to Calculate, Score and Action Pregnancy EWS 28
3. Glasgow Coma Scale 31
4. Blood glucose 33
5. Actions required when an in-patient is suspected of being intoxicated 33

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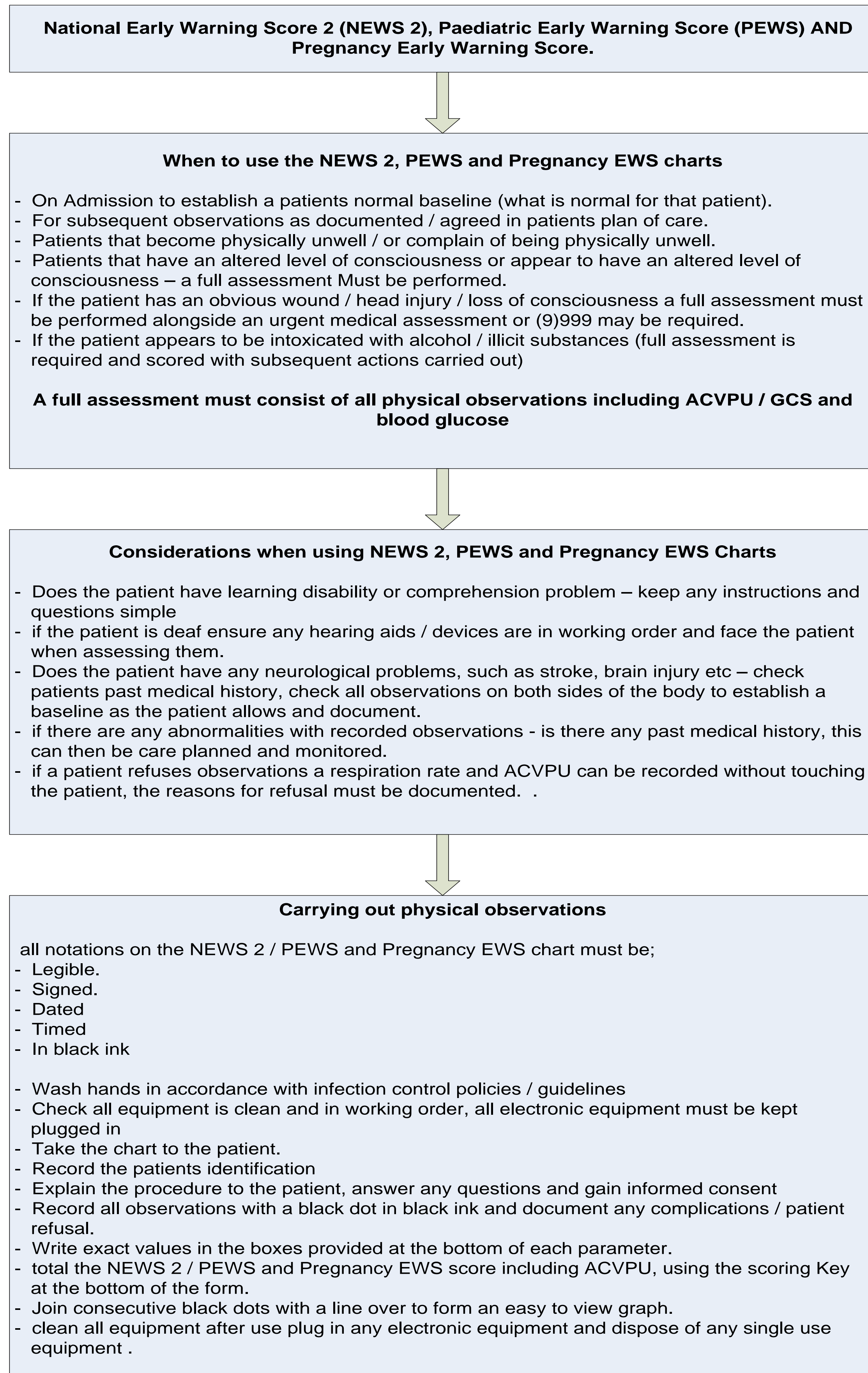
Flowchart 1 – National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS) and Pregnancy Early Warning Score (Pregnancy EWS)



National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS) AND Pregnancy Early Warning Score.

When to use the NEWS 2, PEWS and Pregnancy EWS charts

- On Admission to establish a patients normal baseline (what is normal for that patient).
- For subsequent observations as documented / agreed in patients plan of care.
- Patients that become physically unwell / or complain of being physically unwell.
- Patients that have an altered level of consciousness or appear to have an altered level of consciousness – a full assessment Must be performed.
- If the patient has an obvious wound / head injury / loss of consciousness a full assessment must be performed alongside an urgent medical assessment or (9)999 may be required.
- If the patient appears to be intoxicated with alcohol / illicit substances (full assessment is required and scored with subsequent actions carried out)

A full assessment must consist of all physical observations including ACVPU / GCS and blood glucose

Considerations when using NEWS 2, PEWS and Pregnancy EWS Charts

- Does the patient have learning disability or comprehension problem – keep any instructions and questions simple
- if the patient is deaf ensure any hearing aids / devices are in working order and face the patient when assessing them.
- Does the patient have any neurological problems, such as stroke, brain injury etc – check patients past medical history, check all observations on both sides of the body to establish a baseline as the patient allows and document.
- if there are any abnormalities with recorded observations - is there any past medical history, this can then be care planned and monitored.
- if a patient refuses observations a respiration rate and ACVPU can be recorded without touching the patient, the reasons for refusal must be documented. .

Carrying out physical observations

all notations on the NEWS 2 / PEWS and Pregnancy EWS chart must be;

- Legible.
- Signed.
- Dated
- Timed
- In black ink

- Wash hands in accordance with infection control policies / guidelines
- Check all equipment is clean and in working order, all electronic equipment must be kept plugged in
- Take the chart to the patient.
- Record the patients identification
- Explain the procedure to the patient, answer any questions and gain informed consent
- Record all observations with a black dot in black ink and document any complications / patient refusal.
- Write exact values in the boxes provided at the bottom of each parameter.
- total the NEWS 2 / PEWS and Pregnancy EWS score including ACVPU, using the scoring Key at the bottom of the form.
- Join consecutive black dots with a line over to form an easy to view graph.
- clean all equipment after use plug in any electronic equipment and dispose of any single use equipment .

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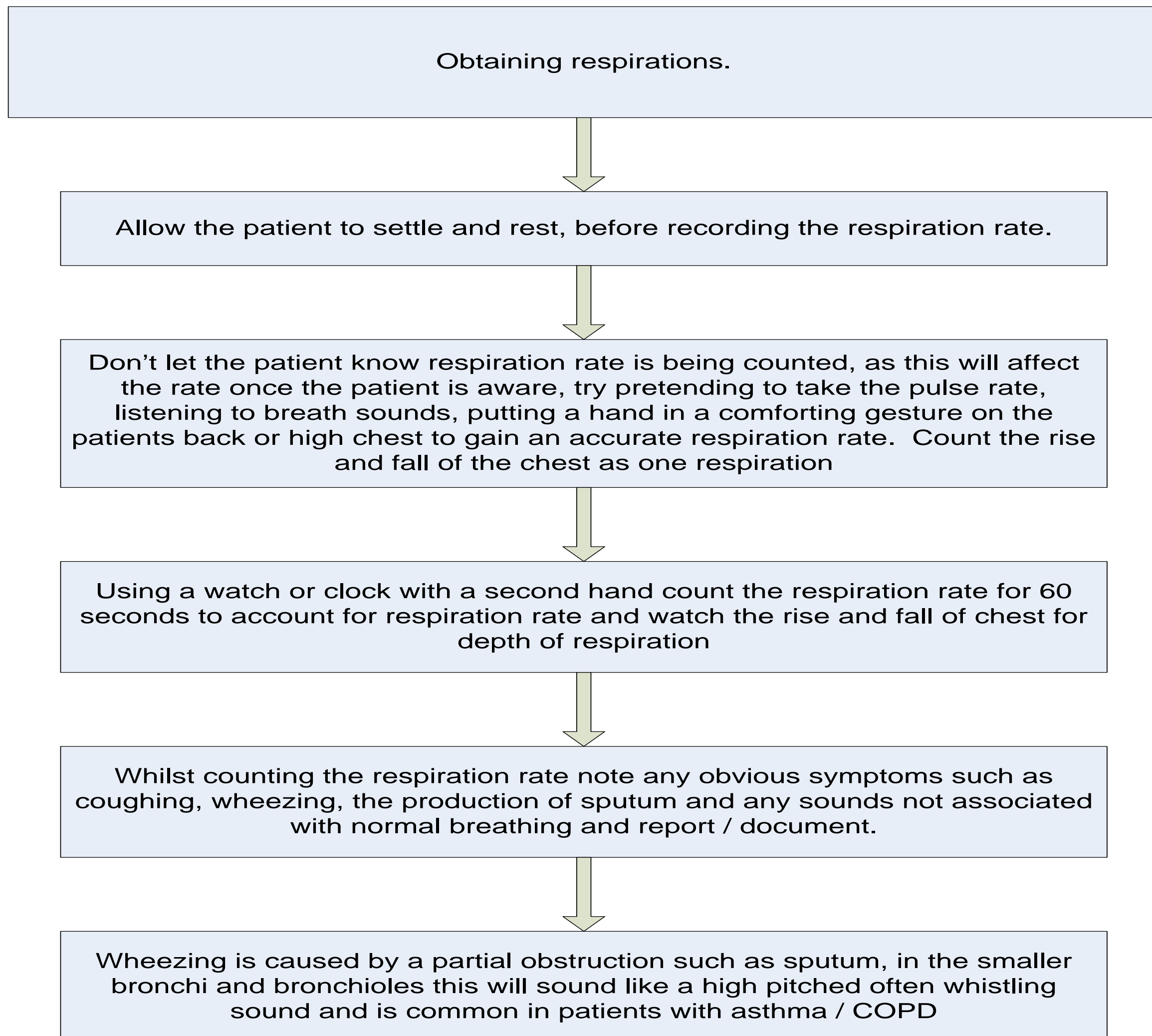
Flowchart 2 – Respirations



Considerations

- Patients with known respiratory disease (COPD, Asthma etc), May breath rapidly and shallow, this type of breathing is difficult to count and a medical review may be required and care planned
- if a patient is aware you are counting respirations, the respiration rate may become altered, this should be documented if an accurate count cannot be achieved.
- An altered respiration rate may have an affect on most other observations, so be as accurate as possible.
- Have an awareness of the patients medical history, if the patient is - known respiratory disease and can manage at an increased respiration rate, regular assessment is required and a management plan should be in place.
- Opiates and sedation can reduce a patients respiration rate, this will require regular assessment and documentation via the NEWS 2 / PEWS AND Pregnancy EWS observation chart.

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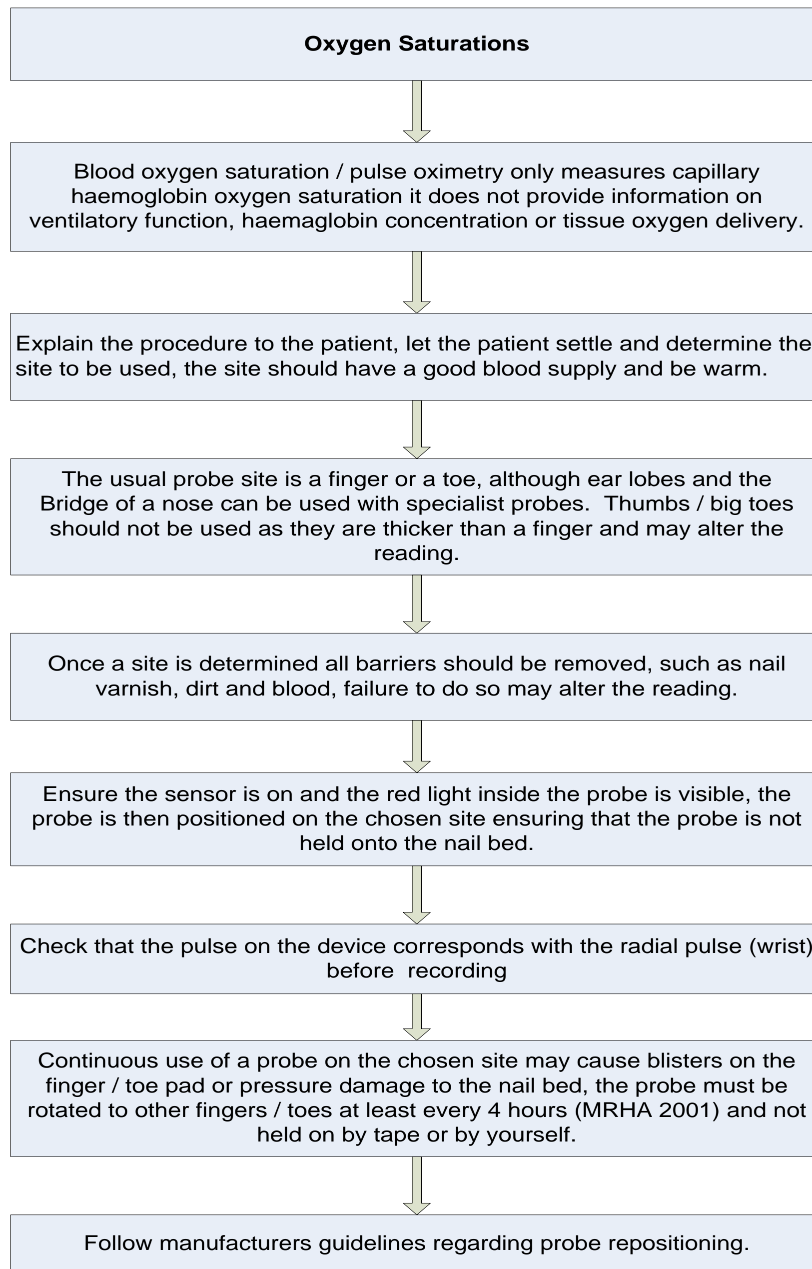
Flowchart 3 - Oxygen Saturations



Considerations

- Ensure that the site of choice is warm, as cold can have an effect on the result and lead to a reduced reading. Warm the site up by holding or rubbing the nail bed.
- Ensure that the site is clean and free from Dirt, blood, and nail varnish, shellac nail varnish is difficult to remove so toes should be used, again ensure all barriers are removed as this can lead to a reduced reading.
- Holding the probe in position can reduce blood flow to the finger and cause a reduced reading, if the spring in the probe is broken do not use, an alternative probe will need to be used.
- If the patient has a tremor the resulting reading may be altered due to the probe moving on the finger, this altered reading must be considered before action is taken, using clinical judgement.
- If a reading is lower than expected a capillary refill time (CRT) should be done to check blood flow into the nail bed – pressure should be applied to the nail bed for 6 seconds then removed a normal result is the nail bed going back to its original colour in 2 seconds or below, (if over 2 seconds the result will be altered and should be documented and repeated, in continued low CRT a medical review should be requested and the patient monitored.
- If a patient becomes Hypoxic (not enough oxygen carried in the blood to the brain) the patient will show obvious signs, such as pale skin, blue tinges to the lips, ear lobes, nail beds and in later stages cheeks (Cyanosis) alongside increased confusion (Simpson 2006), oxygen must be given and urgent medical review must be requested.

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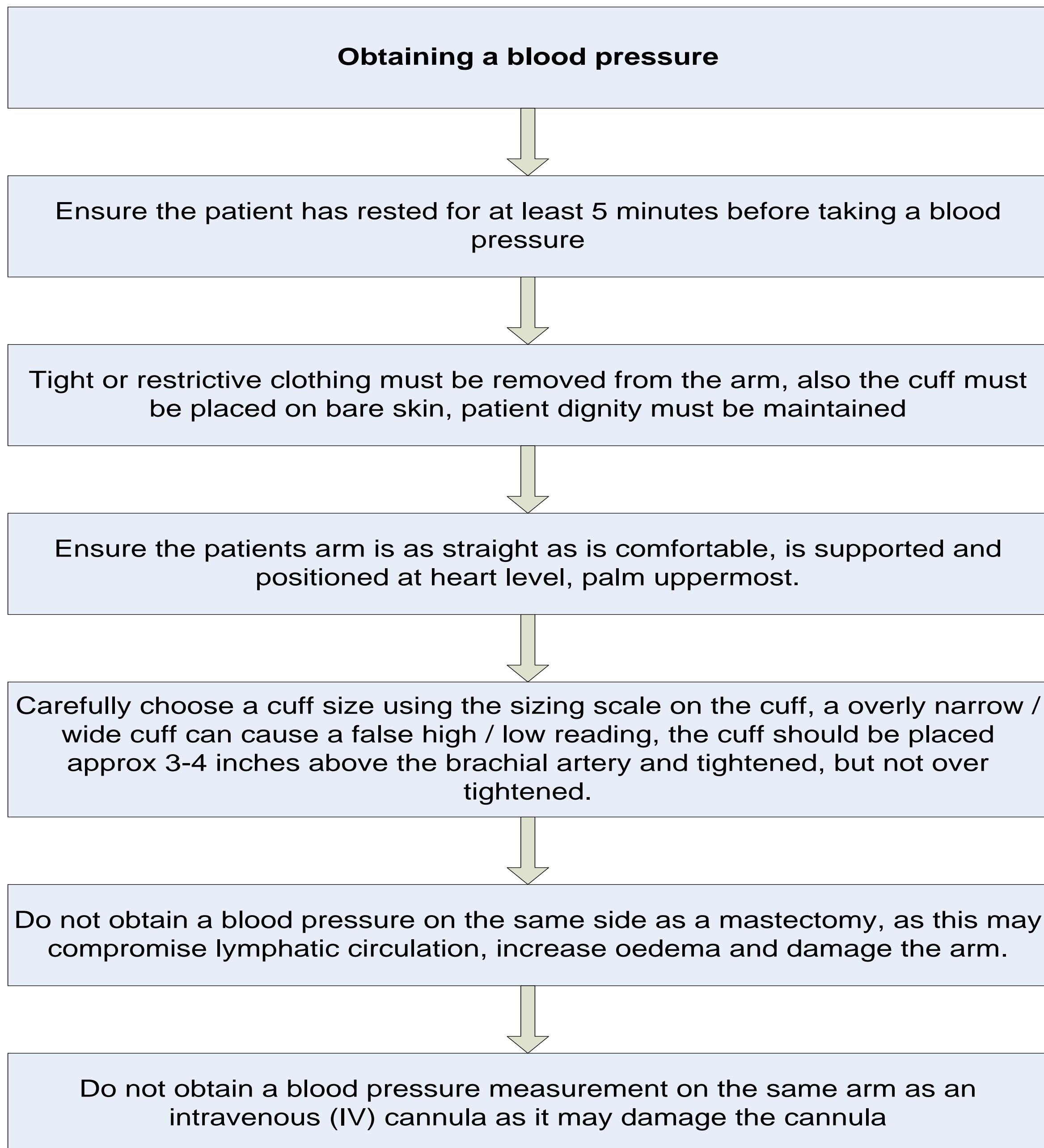
Flowchart 4 - Obtaining a digital blood pressure



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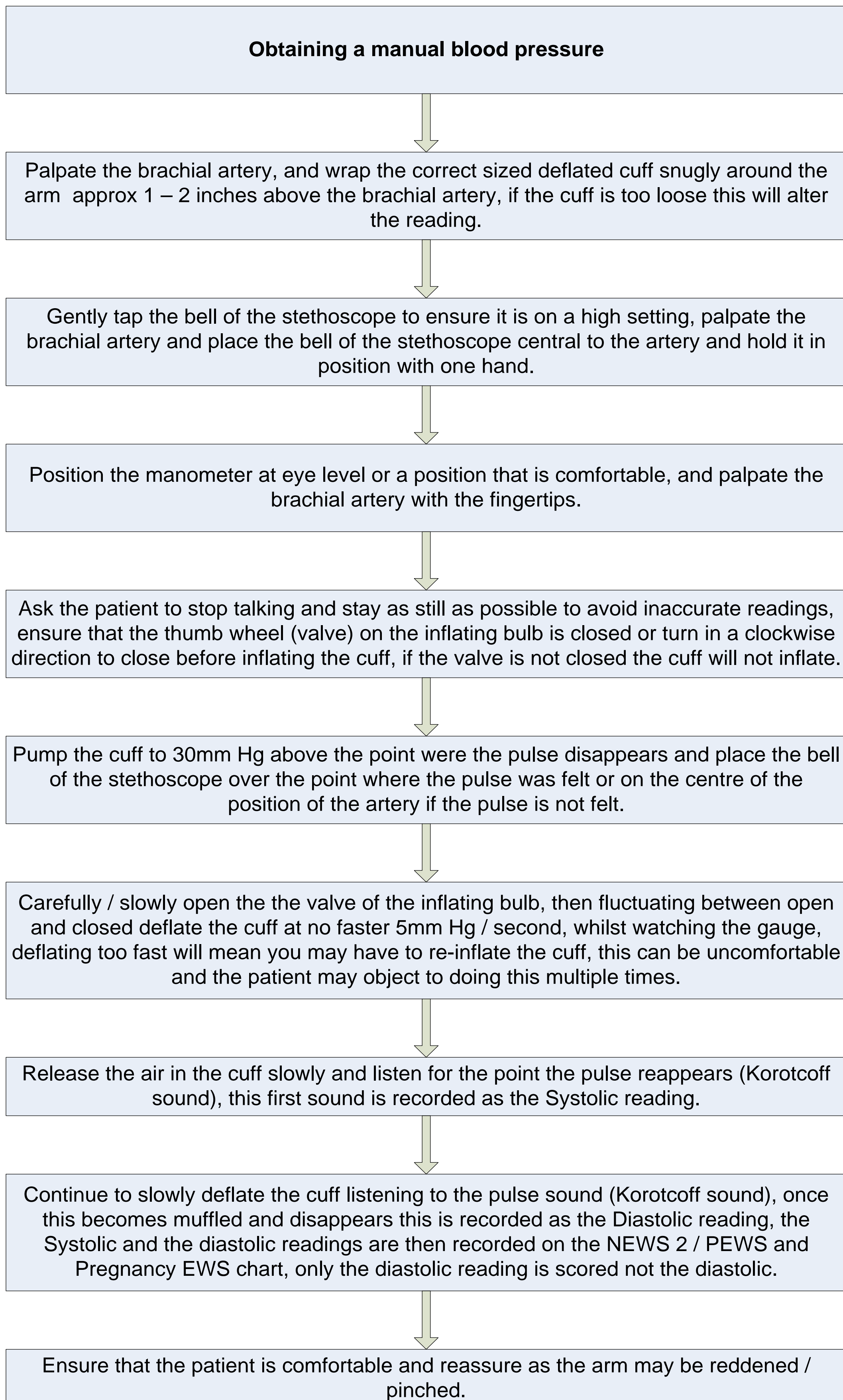
Flowchart 5 - Obtaining a manual blood pressure



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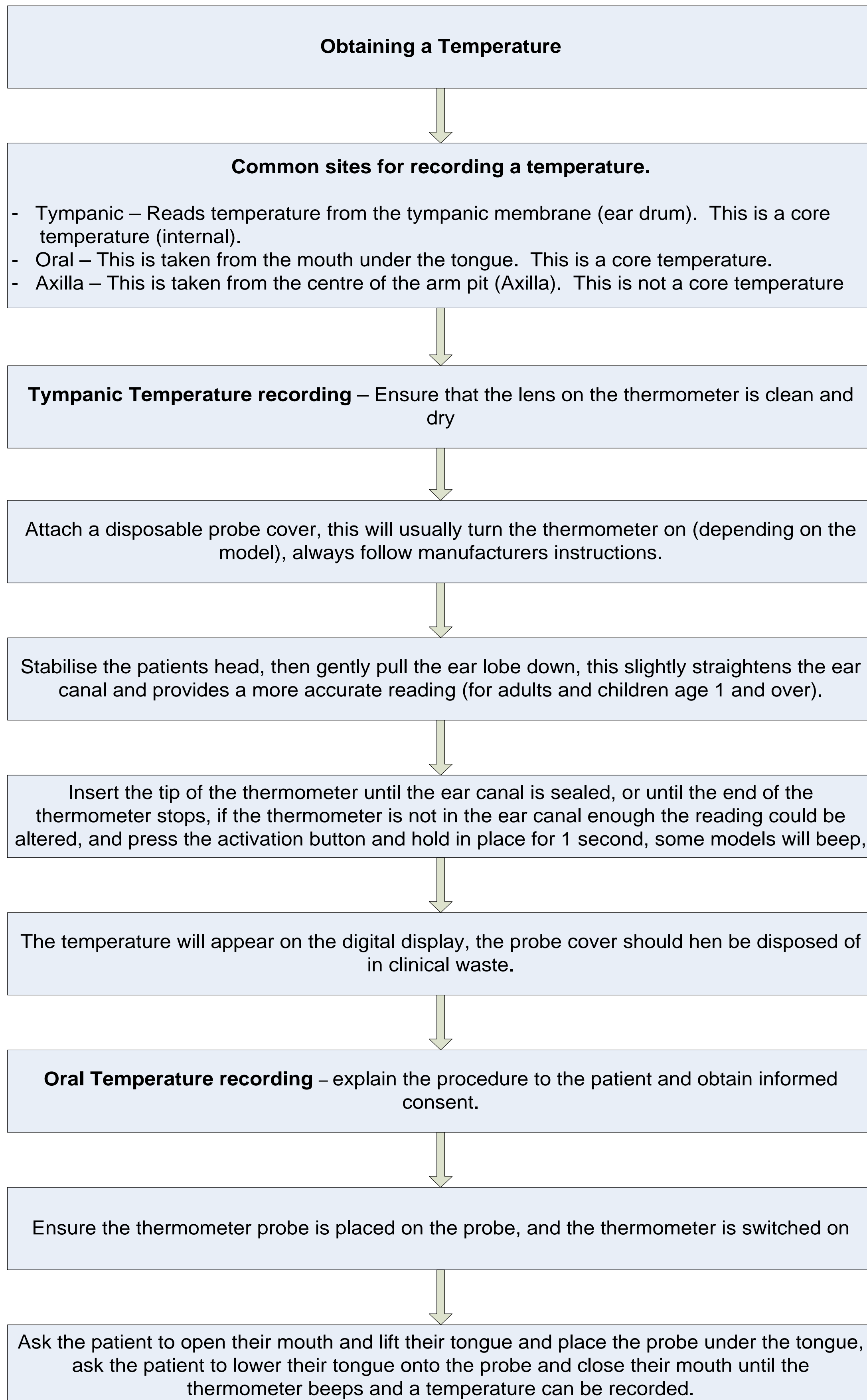
Flowchart 6 – Obtaining a temperature



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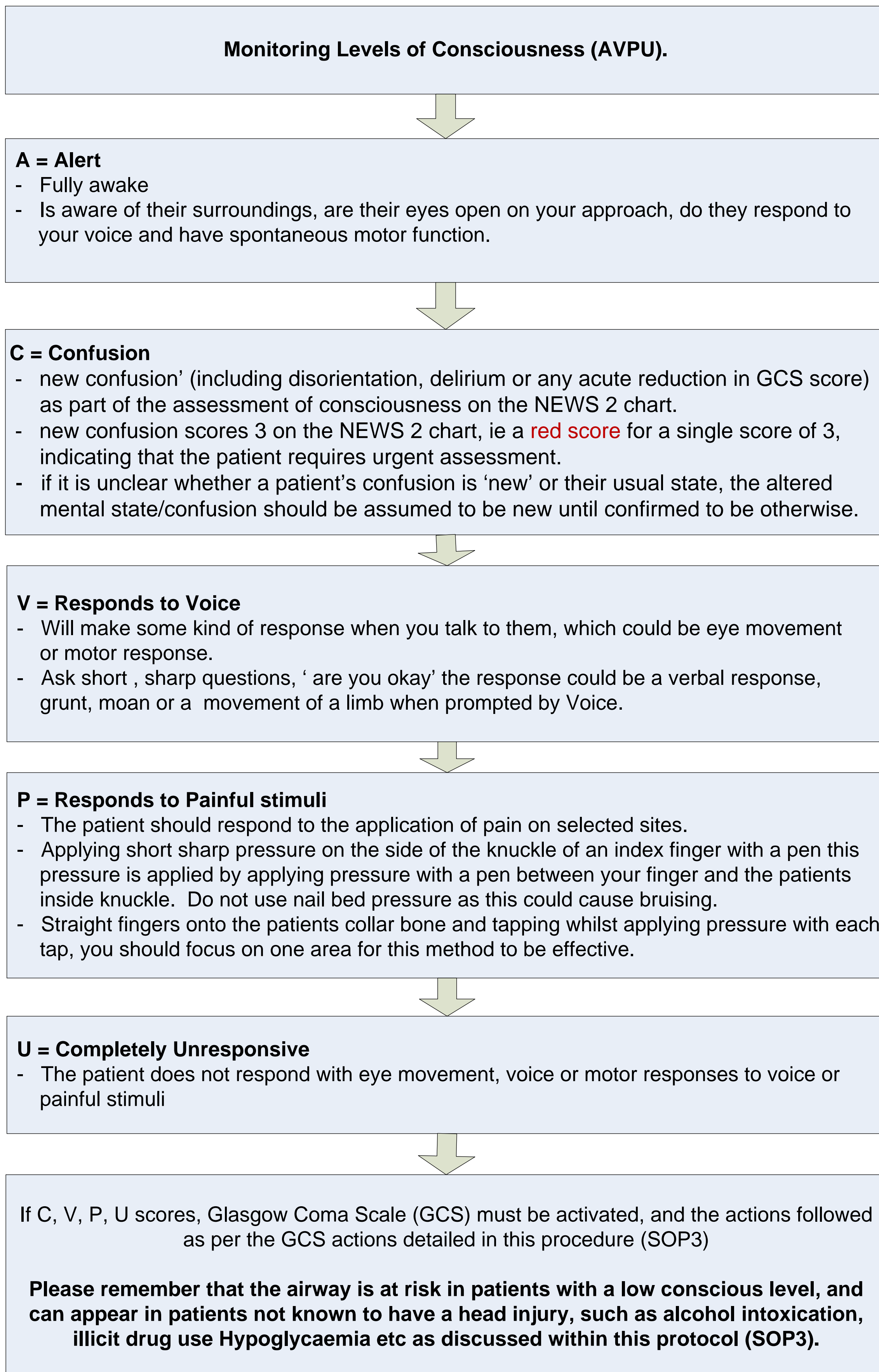
Flowchart 7 - Monitoring levels of consciousness (ACVPU)



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Flowchart 8 - Procedure to be followed for patients with physical deterioration and not known to have a head injury

Procedure to be followed in the following situations:

- On admission, then frequency as directed by care plan, a minimum of weekly;
- The patient appears to be physically unwell;
- The patient has altered level of consciousness, head injury is not suspected;
- The patient not responding to requests as expected;
- The patient is commencing new medication that may affect physical health;
- A report from patient or witness regarding any of the above.

Immediately commence Physical Observations with NEWS 2 / PEWS and apply GCS score as directed by actions below

NEWS 2 SCORE 0
PEWS SCORE 0
Continue with routine observations i.e.

- Minimum of weekly unless alternative observations are agreed as part of a care plan
- Unless patient's condition indicates change then a care plan is required.

NEWS 2 SCORE 1-4
PEWS SCORE 1-2
Maximum 2hourly
Minimum 4 hourly.

- Inform the registered nurse who must assess the patient
- Registered nurse to decide whether to increase the monitoring frequency and/or if escalation of clinical care is required, i.e. Medical review.
- Clinical judgement and clinical decision making needs to be used when deciding whether to escalate.

NEWS 2 SCORE 5-6 OR A SCORE OF 3 IN ANY ONE PARAMETER, PEWS SCORE 3-4.

(Except ACVPU, see next column). Increased frequency to a minimum of 1 hourly

- Registered nurse to urgently inform the medical team caring for the patient.
- Contact an available medic for urgent assessment within 30 minutes.
- Contact Emergency services (9)999 **or** crash team 2222, depending on clinical presentation, i.e. cardiac arrest.

NEWS 2 SCORE 7 OR MORE.
PEWS 5-8.
Increased frequency to a minimum of 15 minute intervals.

- Registered nurse to immediately inform medical team or available medic for emergency assessment.
- Contact emergency services (9)999 **or** crash team, depending on clinical presentation, i.e. cardiac arrest`.

VCPU SCORES 3 (NEWS 2 0NLY)

VCPU SCORES 1 (PEWS ONLY)

- continue with GCS and NEWS 2, PEWS scoring Minimum of 30 minute intervals for 2 hours if GCS 15
- Minimum 15 minute NEWS 2, PEWS and GCS if GCS ≤14 and below, follow actions shown in Flowchart 9.

Record blood glucose
Below 4mmol – Hypoglycaemia
Above 7mmol – Hyperglycaemia

Please Note:
Please ensure when reporting any head injury or altered level of consciousness on Datix that you include the NEWS 2 and GCS scores
NEWS 2 = Monitoring early warning score 2 GCS = Glasgow Coma Scale

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Flowchart 9 - Procedure to be followed in the event of altered level of consciousness

Procedure to be followed in the event of altered level of consciousness, including:

- Patient found on floor with suspected injury;
- Obvious head injury, lump, bump;
- Altered level of consciousness due to possible consumption of alcohol and or illicit drugs, potential /associated head injury?
- Patient not responding to requests as expected;
- Report from patient or witness.

Immediately commence physical observations with NEWS and apply GCS scores.

GCS Score = 13 or less Call an ambulance 15 minute NEWS 2 / PEWS observations and GCS Level 3 observations	**GCS ≤14 WITH head injury / suspected head injury** Call an ambulance 15 minute NEWS 2 / PEWS observations and GCS Level 3 observations	**GCS ≤ 14 WITHOUT head injury** 15 minute NEWS 2 / PEWS observations and GCS Level 3 observations	**GCS = 15** NEWS 2 / PEWS observations and GCS: • Every 30 minutes for 2 hours • Hourly for 4 hours • 2 hourly until directed by Doctor If at any time the GCS is less than 15 resume 15 minute NEWS 2 / PEWS observations and GCS
		 At 2nd recording if GCS ≤14 call an ambulance	

Please Note:

Please ensure when reporting any head injury or altered level of consciousness on Datix that you include the NEWS 2 / PEWS and GCS scores

NEWS 2 = National early warning score 2. PEWS Paediatric Early Warning Score. GCS = Glasgow Coma Scale

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Flowchart 10 - Blood glucose monitoring

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1. Introduction

There will be occasions when patients will need an increased attention paid to the assessment and management of their physical health. This document sets out the actions that staff will need to take urgently for patients who become physically unwell, have an altered level of consciousness, head injury or suspected head injury, to prevent deterioration and save lives.

To support patients during physical or neurological crisis, it is imperative that the physical and neurological assessment on admission and subsequent assessments have been completed to enable clinical and medical staff to have a base line of patient's status using the Physical observation recording chart with National Early Warning Score (NEWS 2), Paediatric Early Warning Score (PEWS) AND Pregnancy Early Warning Score, Awake, Confusion, Voice, Painful Stimulus, unresponsive (ACVPU) and Glasgow Coma Scale (GCS) for ALL service users. It is necessary for staff to have competent physical and neurological observation assessment skills in order to carry out these assessments competently.

If the patient has an obvious wound and / or loss of consciousness which require urgent medical attention they will need to go to Accident and Emergency for treatment – dial (9)999.

Patient should be nursed in the recovery position if they have an altered level of consciousness.

Monitor and record the blood glucose levels to exclude an underlying hypoglycaemia or hyperglycaemia (see section 4).

A full physical assessment of the patient should be made to assess for any injury or abnormality.

Consideration should always be given to patient's allergy status.

There are occasions when an in-patient may appear to be intoxicated with alcohol and or illicit substances. It is vital that these situations are assessed and managed to ensure the safety of the patient, staff and others. It is important a thorough assessment is made to rule out other conditions that may appear to be due to intoxication e.g. head injury and therefore physical and neurological assessment will be required. Acute intoxication is a serious condition which can result in death.

1.1 How to carry out physical observation

The NEWS 2 / PEWS and Pregnancy EWS are all incorporated into standardised Physical observation recording charts which utilise the National early Warning Score 2 (NEWS 2) parameters and Glasgow Coma Scale (GCS) for ALL patients.

Points to consider when using the physical observation recording charts with National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS), Pregnancy Early Warning Score (EWS) and Glasgow Coma Scale (GCS):

- Does the patient have a learning disability or comprehension problem? Keep the instructions and questions simple;
- Is the patient deaf? Make sure any hearing aids are in and in good working order, face the Patient when assessing them;
- Does the patient have a neurological problem e.g. Stroke? Check the patients' past medical history; assess ACVPU and GCS on both sides of the body.

Preparation:

- Wash hands before and after procedure;
- Check all equipment is clean and has been checked as fit for use.

All notations on patient's Physical observation recording chart with NEWS 2, PEWS and Pregnancy EWS) and Glasgow Coma Scale (GCS) must be:

- Legible;
- Signed;

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- Dated;
- Timed;
- In black ink.
- Take chart to patient;
- Record patient identification;
- Explain the procedure to the patient, answer any questions and gain their consent;
- Record all observations with a firm dot ● in black ink;
- Write exact values in boxes provided
- Join consecutive observations with a straight line over time.
- Clean all equipment and store safely;
- After procedure, clean and dispose of any single use items.

1.1.1 Respirations

- The best time to assess your patient's respirations is settled and at rest, immediately after taking his pulse rate;
- Keep your fingertips over his radial artery, and don't tell him that you're counting respirations; otherwise, he'll become conscious of them, and the rate may change;
- Count respirations by observing the rise and fall of the patient's chest as he breathes. Alternatively, position the patient's opposite arm across his chest, and count respirations by feeling its rise and fall. Consider one rise and one fall as one respiration;
- Using a watch or clock with a second hand, count the amount of breaths for 60 seconds to account for variations in respiratory rate and pattern;
- Observe chest movements for depth of respirations;
- As you count respirations, note and record any obvious symptoms such as coughing, wheezing, production of sputum wheezing, and expiratory grunting;
- Wheezing is caused by partial obstruction in the smaller bronchi and bronchioles. This high-pitched, musical sound is common in patient with emphysema or asthma.

1.1.2 Oxygen saturation

- Pulse oximetry only measures haemoglobin oxygen saturation, so does not provide information on ventilatory function, haemoglobin concentration or oxygen delivery to the tissues;
- Determine the site to be used for pulse oximetry; the site should have a good blood supply, check it is warm;
- Select probe site (usually finger, although ear lobes and bridge of nose can be used), assessing for barriers such as nail varnish, dirt, blood;
- Position the sensor securely;
- Turn the pulse oximeter on;
- Check that the pulse reading on the devise corresponds with their actual pulse;
- Continuous use of a finger probe may cause blisters on the finger pad or pressure damage to the skin or nail bed;
- Do not use tape to hold probe in place, and re site probe at least every 4 hours, or more frequently if stated in the manufacturers' instructions (MDA 2001).

1.1.3 SpO2 Scale 2

- It is recommend that when supplemental oxygen is being used to maintain the desired oxygen saturation, the rate of oxygen delivery (L/min) and the delivery system/device should be documented on the NEWS chart using the British Thoracic Society oxygen delivery device codes.
- For patients confirmed to have hypercapnic respiratory failure on blood gas analysis on either a prior or their current hospital admission, and requiring supplemental oxygen, it is recommend (i) a prescribed oxygen saturation target range of 88–92%, and (ii) that the dedicated SpO2 scoring scale (Scale 2) on the NEWS 2 chart should be used to record and score the oxygen saturation for the NEWS.

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- The decision to use SpO2 scale 2 should be made by a competent clinical decision maker and should be recorded in the patient's clinical notes.
- In all other circumstances, the regular NEWS SpO2 scale 1 should be used.
- For the avoidance of doubt, the SpO2 scoring scale not being used should be clearly crossed out across the chart.

1.1.4 Blood pressure

- Ask the patient to rest for 5 minutes before taking their blood pressure;
- Ensure tight or restrictive clothing is removed from the arm;
- Ensure arm is comfortably straight, supported and positioned at heart level, palm face up;
- Carefully choose a cuff of appropriate size for the patient: an excessively narrow cuff may cause a false-high reading; an excessively wide one, a false-low reading;
- Do not take a blood pressure measurement on the same side as a mastectomy because it may compromise lymphatic circulation, worsen oedema, and damage the arm;
- Do not take blood pressure on the same arm as a cannula because it may damage the device.

Using a digital sphygmomanometer:

- The patient can lie in a supine position or sit erect while you measure their blood pressure;
- The patient's arm should be extended at heart level and needs to be well supported with a pillow;
- If the artery is below heart level, you may get a false-high reading;
- Make sure the patient's is relaxed and comfortable when you measure his blood pressure so it stays at its normal level;
- Follow the manufacturers' instructions.

Using a manual sphygmomanometer:

- Palpate the brachial artery. Centre the bell of the stethoscope over the part of the artery where you detect the strongest beats, and hold it in place with one hand;
- Wrap the deflated cuff snugly around the patient's upper arm 1'' (2.5cm) above the brachial pulse;
- Position the manometer at your eye level;
- Instruct the patient to stop eating, talking and to stay still during the procedure as this can cause inaccurate readings;
- Palpate the brachial pulse with your fingertips while inflating the cuff;
- Using the thumb and index finger of your other hand, turn the thumbscrew on the rubber bulb of the air pump clockwise to close the valve;
- Inflate the cuff to 30mm Hg above the point where the pulse disappears;
- Place the bell of your stethoscope over the point where you felt the brachial pulse;
- Carefully open the valve of the air pump. Then deflate the cuff no faster than 5 mm Hg/second, while watching the gauge;
- Release the valve slowly and note the point at which you hear the pulse reappear, the start of the pulse sound indicates the systolic pressure (Korotkoff sounds);
- The sounds will become muffled and then disappear. The last Korotkoff sound you hear is the diastolic pressure.

1.1.5 Pulse / heart rate

Common areas to take the Pulse:

- Radial Artery – Located on the wrist just below the thumb;
- Brachial Artery – Located on the opposite side of the elbow diagonally opposite to the Radial artery;
- Carotid Artery – Located at the side of the neck between the edge of the jaw bone and the middle of the throat.

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Taking a pulse:

- Make sure the patient is comfortable and relaxed because an awkward, uncomfortable position may affect his heart rate;
- Ensure the patient is comfortable; in a sitting or supine position, with his arms at his side or across his chest;
- Gently press your index, middle, and ring fingers on the artery and apply light pressure until the pulse is felt;
- You should feel a pulse with only moderate pressure; excessive pressure may obstruct blood flow distal to the pulse site;
- Don't use your thumb to take the patient pulse; the thumb has a strong pulse of its own and may be easily confused with the patient's pulse;
- After locating the pulse, count the beats for 60 seconds to get the number of beats per minute. Counting for a full minute provides a more accurate picture of irregularities;
- While counting the rate, assess pulse rhythm and volume by noting the pattern and strength of the beats. If you detect an irregularity, repeat the count and note whether the irregularity occurs in a pattern or randomly.

1.1.6 Temperature

- Make sure the lens under the probe is clean and dry;
- Attach a disposable probe cover following manufacturer' instructions;
- Stabilise the patient's head; then gently pull his ear up and back (for adults and children older than age 1);
- Insert the thermometer until the entire ear canal is sealed;
- Press the activation button, and hold for in place for 1 second;
- The temperature will appear on the display.

1.1.7 How to record ACVPU (Alert, Confusion, Voice, Pain, and Unresponsive)

Assessing conscious level involves examining simple but key components of a person's neurological function, such as response to voice and pain. This enables an estimation of level of wakefulness and awareness at a particular time.

If patient has a head injury, altered level of consciousness, including possible consumption of alcohol and / or illicit drugs, see Flowchart 8 or Flowchart 9.

A = Alert

- Fully awake;
- Note whether the patient has their eyes open when you approach them, will respond to voice and have spontaneous motor function.

C = Confusion

- New confusion' (including disorientation, delirium or any acute reduction in GCS score) as part of the assessment of consciousness on the NEWS 2 chart.
- new confusion scores 3 on the NEWS chart, i.e. a red score for a single score of 3, indicating that the patient requires urgent assessment
- if it is unclear whether a patient's confusion is 'new' or their usual state, the altered mental state/confusion should be assumed to be new until confirmed to be otherwise.

V = responds to Voice

- Makes some kind of response when you talk to them; which could be in Eyes, Voice or Motor;
- Ask 'Are you ok?' The response could be a verbal response, grunt, moan or slight movement of a limb when prompted by voice.

P = responds to Pain

- The person makes a response on any of the components when pain is used on them;

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- Apply incremental pressure to the side of the patient's little finger by pressing their finger between your own finger and a pen;
- Using your own straight fingers, vigorously tap the patients Collar bone (Clavicle), focusing on one area.
- Do not press the nail bed as this can cause bruising.

U = completely Unresponsive

- This is recorded when the person does not give any Eye, Voice or Motor response to voice or pain.

Remember that the airway is at risk in people with a low conscious level.

There may be time when the patient has physically deteriorated and not known to have a head injury (Flowchart 8)

2. What are NEWS 2, PEWS and Pregnancy EWS?

The National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS) and Pregnancy Early Warning Score (Pregnancy EWS) are standardised trigger scoring systems. The triggers are based on routine physical observations, Alert, Confusion, Voice, Pain, Unresponsive (ACVPU) and subsequently Glasgow Coma Scale (GCS), are sensitive enough to detect changes in a patient's physiology, which will be reflected in a change of score should the patient's physical health be improving or deteriorating.

All patients must have their physical observations and AVPU measured and these are converted into a score. The higher the score the more abnormal the physical observations and ACVPU signs are. If the scores reach a certain threshold for example:

- **NEWS 2 score** of 2 or more the senior nurse must be informed and clinical decision making should be utilised; if NEWS 2 score of 5 or more the senior nurse must be informed and a doctor must be contacted to further assess the patient and clinical decision making utilised (see section 2.1.1).

- **PEWS Score** of 1 – 2 or more the senior nurse must be informed and clinical decision making should be utilised; if PEWS scores 5 and above the senior nurse must be informed and a doctor must be contacted to further assess the patient and clinical decision making utilised (see section 2.1.2).

- **Pregnancy EWS** score of 0 – 2, Routine monitoring and scoring, Unless patient's physical condition indicates change – then care plan required, Score of 3 – 8, registered nurse to urgently inform the medical team / Consultant, caring for the patient or an available medic for urgent assessment within 30mins and a score of 9 and above, registered nurse to immediately inform medical team for emergency assessment, or contact crash team (2222) or Emergency Services (999) (see section 2.1.3).

Early warning scoring systems were originally developed with two specific aims: to facilitate timely recognition of the patients with established or impending critical illness: and to empower nurses and medical staff to secure experienced help through the operation of a trigger threshold which, if reached, required mandatory attendance by a more senior member of staff within a set period of time.

Use of NEWS 2 / PEWS AND Pregnancy EWS can also:

- Improve the quality of patient's observation and monitoring;
- Improve communication within the multidisciplinary team;
- Allow for timely transfer to acute assessment units;
- Support good medical judgement;
- Aid in securing appropriate assistance for the clinically deteriorating patient;
- Give a good indication of physiological trends;
- Be a sensitive indicator of abnormal physiology.

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NEWS 2 / PEWS / Pregnancy EWS are not:

- A predictor of outcome;
- A comprehensive clinical assessment tool;
- A replacement for clinical judgement.

NEWS 2 Cannot:

- Be used on patients under 16 (PEWS) must be used on patients aged 13 – 18;
- Be used on any patient who is pregnant Pregnancy Early Warning Score must be used.

2.1 When to use NEWS 2 / PEWS / Pregnancy EWS

NEWS 2 / PEWS rely on the routine assessment and charting of the physical observations and ACVPU status of the patient. These are simple observations that can be performed by a nurse, doctor or other trained staff familiar with the process.

All patients must have a physical assessment and ACVPU within 6 hours of admission and a NEWS 2 / PEWS score must be calculated and recorded as a benchmark. If completion of assessment has not taken place within 6 hours you must document and date each attempt, and reasons why the assessment was not completed within the time period.

These physical observations and ACVPU observations are:

- Doctor / Nurse / Family concerns (PEWS);
- Respiratory rate;
- Respiratory Distress (PEWS);
- Oxygen saturation;
- Oxygen saturation scale 2 – Only to be used under the direction of a clinician.
- Blood pressure (Recorded, but not scored in (PEWS);
- Pulse / heart rate;
- Temperature;
- ACVPU;
- GCS;
- Blood Glucose.

The outcome for each observation is combined to provide a NEWS 2 / PEWS / Pregnancy EWS score

All sections of the Physical observations recording chart with National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS) and Glasgow Coma Score (GCS) chart must be completed and scored, and actions taken as described on the reverse of the chart. The frequency and specifications of all observations must be prescribed in the nursing care plan; and must be a minimum of weekly for all patients following admission.

NEWS 2 / PEWS assessment must be recommenced immediately in the following situations:

- The patient appears to be physically unwell;
- The patient has fallen;
- The patient has altered level of consciousness e.g. head injury;
- The patient is intoxicated with alcohol or drugs;
- The patient not responding to requests as expected;
- The patient is commencing new medication that may affect physical health;
- A report from patient or witness regarding any of the above.

NEWS 2 / PEWS score must be updated and scored prior to any transfer / discharge to other Services or external healthcare provision.

Where the patient's multidisciplinary team decide that a full physical NEWS 2 / PEWS assessment and scoring is not appropriate then this should be clearly documented both on the patient's physical

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observation chart, with an annotation in the patients' the electronic patient record, recording why the decision was made not to use NEWS 2 / PEWS. This may include the following patient's:

- The patient on palliative care pathways;
- The patient for whom escalation of care is inappropriate.

2.1.1 How to Calculate, Score and Action NEWS 2

Please note: ≥ is greater than; ≤ is less than.

Taking into account the results of the physical and AVPU observations:

- Total the NEWS 2 score using 0-3 guide on chart.
- Observation recorded in White sections score = 0
- Observation recorded in Yellow sections score = 1
- Observation recorded in Orange sections score = 2
- Observation recorded in Red sections score = 3
- Add the total observation scores and record total NEWS 2 score in the box for calculate NEWS 2 score.

NEWS / 2 observations should then be continued at the frequency identified on physical observation chart with NEWS 2 pathway and must reflect the needs of the patient.

- A NEWS 2 of 0 - Minimum of weekly NEWS 2, routine monitoring and scoring, unless alternative observations are agreed as part of a care plan and if a patient's physical condition indicates change – then a care plan is required, the care plan should be discussed with and agreed by the patient's medical team.

- A NEWS 2 of 1 – 4 - Maximum - 2 hourly, Minimum - 4 hourly, a registered nurse **must** be informed and the patient **must** be assessed, the registered nurse will then decide whether to increase the frequency of monitoring and if an escalation of clinical care is required, such as medical escalation.

- A NEWS 2 of 5 – 6 or a score of 3 in any one parameter - increased frequency to a minimum of 1 hourly, Registered nurse **must** urgently inform the available medical team for assessment within 30 minutes or contact emergency services (9)999 or the crash team (2222 via the locality switch board).

- CVPU scores 3 in one parameter – continue with GCS and NEWS 2 scoring, at a minimum 30 minutes for 2 hours if GCS is 15 with a head injury or suspected head injury, IF GCS ≤ 14 increase to 15 minutes observations and mews scoring and follow the actions for GCS in Flowchart 9.

- A NEWS 2 of 7 or more - increase frequency to 5 minutes and therapeutic observations to level 3-4. Registered nurse **must** immediately inform medical team for emergency assessment or contact emergency services (9)999 or 2222 for the crash team. Failure of medical review or 999 to attend to a NEWS 2 call within the acceptable timescale (i.e. within 30 minutes) the nurse in charge must complete a Datix form and inform immediate manager.

- If a patient is scoring high and a reason for this is known / suspected, this may not be deterioration, a high score may be due to patient Anxieties, pre-existing health issues, equipment etc. Clinical judgement / decision making should be utilised, this decision **must** be documented and discussed with the medical staff.

- If a patient is scoring high and deterioration is suspected then the actions for that score **must** be followed as below.

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- If patient has a head injury, altered level of consciousness, including possible consumption of alcohol and / or illicit drugs, or has an ACVPU score of 3 or more, commence Glasgow Coma score (GCS) assessment, and follow the actions outlined in Flowchart 9.

- If a patient's systolic blood pressure is recorded within the grey shaded area the nurse in charge must be informed and then discussed with the patient's medical team, this may then require regular observations and intervention.

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National Early Warning Score 2 (NEWS 2)

Ward:		NHS Number:	
Name:		DOB:	

Date															
Time															
Respiration Rate	≥25														
	21-24														
	12-20														
	9-11														
	≤8														
	Record respiration rate														
Oxygen Saturation	≥96														
	94-95														
	92-93														
	≤91														
SpO2 Scale 2	≥97 on O2														
Oxygen Saturation (%)	95-96 on O2														
Use Scale 2 if target range is	93-94 on O2														
88 – 92%, e.g. hypercapnic	≥93 on air														
Respiratory failure	88-92														
	86-87														
Only use scale 2 under the	84-85														
Direction of a clinician	≤83%														
Air or Oxygen (O2)	A=Air														
	O2 L/min														
	Device														
	Record oxygen saturation %														
Blood Pressure	≥220														
Record systolic & diastolic	201-219														
	181-200														
	161-180														
	141-160														
Inform nurse in charge if Systolic is above this line	121-140														
	111-120														
	101-110														
	91-100														
Score systolic BP only for NEWS	81-90														
	71-80														
	61-70														
	51-60														
	≤50														
	Record blood pressure														
Pulse	≥131														
Beats per Minute (BPM)	121-130														
	111-120														
	101-110														
	91-100														
	81-90														
	71-80														
	61-70														
	51-60														
	41-50														
	31-40														
	≤30														
	Record pulse / heart rate														
Temperature	≥39.1														
	38.1-39°														
	37.1-38°														
	36.1-37°														
	35.1- 36°														
	≤35°														
	Record temperature														
Levels of Consciousness (AVPU)	Alert														
Score for NEW onset of confusion (no score if chronic)	Confusion														
	Voice														
	Pain														
	Unresponsive														
Blood Sugar *															
Calculate NEWS 2 score using guide below* and see overleaf for actions															
Staff Initials															

***Only record blood sugar if the patient deteriorates, or if VCPU scores 3 and GCS is activated.**

*** NEWS 2 key colour code for scoring**	0	1	2	3	See overleaf for actions and GCS

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How to calculate NEWS 2 Score

- Record all observations overleaf;
- Note whether observation falls in shaded ‘At Risk Zone’. Score as per NEWS 2 key;
- Add points scored and record total ‘NEWS 2 Score’ in bottom row of chart.

How to use the physical observation chart

<table>
<tr><th rowspan="2">Start up</th><th rowspan="2">Observations</th><th rowspan="2">NEWS scores</th><th colspan="3">Action</th></tr>
<tr><th>NEWS Score</th><th>Frequency of monitoring</th><th>Clinical response</th></tr>
<tr><td rowspan="4">1. This chart does not override clinical judgement.

2. This chart cannot be used for patients under the age of 16.

3. This chart cannot be used for patients who are pregnant.

4. Take chart to patient.

5. Record patient identification.</td><td rowspan="4">1. Record ALL observations with a ‘firm’ dot ● in black ink.

2. Write exact values of observations in boxes provided.

3. Join consecutive observations with a straight line over time.

4. If Systolic Blood pressure is recorded in the grey shaded box, please inform the nurse in charge.</td><td rowspan="4">1. Total the NEWS 2 score including ACVPU using 0 – 3 key scoring guide on the chart.

2. Record the total NEWS 2 score in the box for NEWS 2.</td><td>0</td><td>Minimum of weekly NEWS 2 unless alternative observations are agreed as part of a care plan.</td><td>- Routine monitoring and scoring;
- Unless patient’s physical condition indicates change – then care plan required.</td></tr>
<tr><td>Total:
1-4

Score of 3 in any one parameter see box below</td><td>Maximum - 2 Hourly
Minimum - 4 hourly</td><td>- Inform registered nurse who must assess the patient;
- Registered nurse to decide if increased frequency of monitoring and/or escalation of clinical care required, i.e. medical review.</td></tr>
<tr><td>Total:
5-6

Or

A score of 3 in any one parameter</td><td>Increased frequency to a minimum of 1 hourly.
<u>If CVPU scores 3 continue with GCS and NEWS 2 scoring</u>
- Minimum of every 30mins for 2hours if GCS 15.
- 15 minute NEWS and GCS if GCS ≤ 14. Follow actions as directed in SOP3.</td><td>- Registered nurse to urgently inform the medical team caring for the patient or an available medic for urgent assessment within 30mins, if the patients’ medical team is not available.
- Contact crash team (2222) or Emergency Services (999)</td></tr>
<tr><td>Total:
7

Or

MORE</td><td>Increased frequency to 5 minutes and Therapeutic Observations (level 3/4)</td><td>- Registered nurse to immediately inform medical team for emergency assessment;
- Contact crash team (2222) or Emergency Services (999)</td></tr>
</table>

How to calculate and action GCS 15 point score:

The GCS is a simple but effective way of assessing a patient’s neurological condition. It categorises the patient’s responses to certain stimuli and gives that response an overall score. It is divided into 3 main categories of response that are totalled to give an overall score.

- Score best motor, verbal and eye opening scores in the boxes provided following chart above;
- Add points score and record total ‘Overall GCS score’ in the box provided.

Score and Motor Response	Score and Verbal Response	Score and Eye Opening
6 - Obeys commands 5 - Localises pain 4 - Withdrawal to pain 3 - Flexion 2 - Extension 1 - No response to pain	5 - Oriented 4 - Confused conversation 3 - Inappropriate words 2 - Incomprehensible sounds 1 - No verbal response	4 - Spontaneous 3 - Open to speech 2 - Open to pain 1 - No eye opening

Date												
Time												
Motor Response Score												
Verbal Response Score												
Eye Opening Score												
Overall GCS Score												
Staffs Initials												

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2.1.2 How to Calculate, Score and Action PEWS

Please note: ≥ is greater than; ≤ is less than.

Taking into account the results of the physical and AVPU observations:

- Total the PEWS score using the guide on chart;
- Observation recorded in White sections score = 0;
- Observations in the shaded areas score 1 point each;
- Add the total observation scores and record total PEWS score in the box for Calculate PEWS score using guide and follow the scoring actions;
- Blood pressure is not scored as part of PEWS, but must be recorded.

PEWS observations should then be continued at the frequency identified on physical observation chart with PEWS pathway and must reflect the needs of the patient.

- A PEWS of 0 - Minimum of weekly PEWS, Routine monitoring and scoring, Unless alternative observations are agreed as part of a care plan and if a patient's physical condition indicates change – then a care plan is required, the care plan should be discussed with and agreed by the patient's medical team;

- A PEWS of 1 - 2 - Minimum - 2 hourly, Maximum - 4 hourly, a registered nurse **must** be informed and the patient **must** be assessed, the registered nurse will then decide whether to increase the frequency of monitoring and if an escalation of clinical care is required, such as medical escalation;

- A PEWS of 3 – 4 - increased frequency to a minimum of 1 hourly, Registered nurse must urgently inform the available medical team for assessment within 30 minutes or contact emergency services (9)999 or the crash team (2222 via the locality switch board);

- VPU scores 1 – continue with GCS and PEWS scoring, at a minimum 30 minutes for 2 hours if GCS is 15 with a head injury or suspected head injury, IF GCS < 14 increase to 15 minutes observations and mews scoring and follow the actions for GCS in Flowchart 9;

- A PEWS of 5 - 8 - increase frequency to 5 minutes and therapeutic observations to level 3 - 4. Registered nurse must immediately inform medical team for emergency assessment or contact emergency services (9)999 or 2222 for the crash team (only). Failure of medical review or 999 to attend to a PEWS call within the acceptable timescale (i.e. within 30 minutes) the nurse in charge must complete a Datix form and inform immediate manager;

- If a patient is scoring high and a reason for this is known / suspected, this may not be deterioration, a high score may be due to patient Anxieties, pre-existing health issues, equipment etc. Clinical judgement / decision making should be utilised, this decision **must** be documented and discussed with the medical staff;

- If a patient is scoring high and deterioration is suspected then the actions for that score **must** be followed as above;

- If patient has a head injury, altered level of consciousness, including possible consumption of alcohol and / or illicit drugs, or has an AVPU score of 3, commence Glasgow Coma score (GCS) assessment, and follow the actions outlined in this SOP Flowchart 9.

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Paediatric Early Warning score (PEWS) for 13 – 18 Years

Ward		NHS Number	
Name		DOB	

Doctor / Nurse / Family concern

Parameter	Sub-parameter	Range
Date		
Time		
Respiratory rate (over 1 minute)		≥ 50
		40 - 50
		30 - 40
		20 - 30
		10 - 20
		0 - 10
		Record respiration rate
Respiratory Distress		Moderate - Severe
		None - Mild
Oxygen Saturation		93
		≤92
		Receiving Oxygen L/Min
		Record oxygen saturation

Parameter	Sub-parameter	Range
Heart Rate & Blood Pressure	Systolic BP ≥ 160 inform N.I.C.	≥181
		171 - 180
		161 - 170
		151 - 160
		141 - 150
BP not used to calculate PEWS, but MUST be recorded.		131 - 140
		121 - 130
		111- 120
	Systolic BP ≤ 100 inform N.I.C.	101 - 110
		91 - 100
		81 - 90
Score pulse only.		71 - 80
		61 - 70
		51 - 60
		41 - 50
		36 - 40
		≤ 35
		Record pulse / heart rate
		Record blood pressure

Parameter	Range
Temperature °c	≥ 39.1°
	38.1 - 39°
	37.1 - 38°
	36.1 - 37°
	35.1 - 36°
	≤35.9°
	Record temperature

Parameter	Response
Neuro Response (AVPU)	Alert
	Verbal
	Pain
	Unresponsive

Calculate PEWS score using guide below* and see overleaf for actions
Staff Initials

Total PEWS	0	1 - 2	3 - 4	5 - 8	PTO for Action: Total PEWS = Number of Entries in Shaded Boxes

How to calculate PEWS Score

- Record all observations above with a firm black ● in black ink
- Note whether observation falls in shaded 'At Risk Zone as one point'. Score as per PEWS key;
- Add points scored and record total 'PEWS Score' in bottom row of chart

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How to use the physical observation chart

<table>
<tr><th>Start up</th><th>Observations</th><th>PEWS scores</th><th colspan="3">Action</th></tr>
<tr><td rowspan="5">1. This chart does not override clinical judgement. If the patient scores 3 and above and a reason for this is known this reason must be documented / careplanned and medical advice sought.

2. Take chart to patient.

3. Record patient identification.</td><td rowspan="5">1. Record ALL observations with a ‘firm’ dot ● in black ink.

2. Write exact values of observations in boxes provided.

3. Join consecutive observations with a straight line over time.

4. If systolic and diastolic blood pressure are above 140 or below 100 (the two black lines) – inform the Nurse in charge.</td><td rowspan="5">1. Total the PEWS score including AVPU using 0 – 3 key scoring guide on the chart.

2. Record the total PEWS score in the box for PEWS.</td><th>PEWS Score</th><th>Frequency of monitoring</th><th>Clinical response</th></tr>
<tr><td>0</td><td>Minimum of weekly PEWS unless alternative observations are agreed as part of a care plan.</td><td>- Routine monitoring and scoring;
- Unless patient’s physical condition indicates change – then care plan required.</td></tr>
<tr><td>Total:
1 - 2</td><td>Minimum - 2 Hourly
Maximum - 4 hourly</td><td>- Inform registered nurse who must assess the patient;
- Registered nurse to decide if increased frequency of monitoring and/or escalation of clinical care required, i.e. medical review.</td></tr>
<tr><td>Total:
3 - 4</td><td>Increased frequency to a minimum of 1 hourly.
If VPU scores in the shaded area continue with GCS and PEWS scoring
- Minimum of every 30mins for 2hours if GCS 15.
- 15 minute PEWS and GCS if GCS ≤ 14. Follow actions as directed in SOP3.</td><td>- Registered nurse to urgently inform the medical team / Consultant, caring for the patient or an available medic for urgent assessment within 30mins, if the patients’ medical team is not available, call
- Emergency Services (999) or ring (2222)</td></tr>
<tr><td>Total:
5 - 8</td><td>Increased frequency to 5 minutes and Therapeutic Observations (level 3/4)</td><td>- Registered nurse to immediately inform medical team / Consultant for emergency assessment, or
- Contact Emergency Services (999) or (2222)</td></tr>
</table>

How to calculate and action GCS 15 point score:

The Glasgow Coma Scale is a simple but effective way of assessing a patient’s neurological condition. It categorises the patient’s responses to certain stimuli and gives that response an overall score. It is divided into 3 main categories of response that are totalled to give an overall score.

- Score best motor, verbal and eye opening scores in the boxes provided following chart above;
- Add points score and record total ‘Overall GCS score’ in the box provided.

Score and Motor Response	**Score and Verbal Response**	**Score and Eye Opening**
6 - Obeys commands 5 - Localises pain 4 - Withdrawal to pain 3 - Flexion 2 - Extension 1 - No response to pain	5 - Oriented 4 - Confused conversation 3 - Inappropriate words 2 - Incomprehensible sounds 1 - No verbal response	4 - Spontaneous 3 - Open to speech 2 - Open to pain 1 - No eye opening

Date												
Time												
Motor Response Score												
Verbal Response Score												
Eye Opening Score												
Overall GCS Score												
Staffs Initials												

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2.1.3 How to Calculate, Score and Action Pregnancy EWS

Please note: ≥ is greater than; ≤ is less than.

Taking into account the results of the physical and AVPU observations:

- Total the Pregnancy EWS score using the guide on chart;
- Observation recorded in White sections score = 0;
- Observations in the Red or Yellow shaded areas score 1 point each;
- If the patient scores **1 or more point in the red** or **2 or more in the yellow** the medics should be contacted for early intervention – unless otherwise documented;
- Add the total observation scores and record total Pregnancy EWS score in the box for total score using guide and follow the scoring actions.

Pregnancy EWS observations should then be continued at the frequency identified on physical observation chart with Pregnancy EWS pathway and must reflect the needs of the patient.

- A Pregnancy EWS of 0 - 2 = Minimum of 12 hourly, Routine monitoring and scoring, unless the patients physical condition indicates change – then a care plan is required, that should include maternity services input, the care plan should be discussed with and agreed by the patient's medical team;

- A Pregnancy EWS of 3 - 5 = 1 - 4 hourly, a registered nurse **must** be informed and the patient **must** be assessed, the registered nurse will then urgently inform the patient's medical team or an available medic for urgent assessment within 30 minutes, or contact the crash team (2222) or (9)999, unless a plan of care has been formulated and agreed by the patients care team;

- A Pregnancy EWS of 6 – 8, a registered nurse **must** be informed and the patient **must** be assessed, the registered nurse will then urgently inform the patient's medical team or an available medic for urgent assessment within 30 minutes, or contact the crash team or (9)999, unless a plan of care has been formulated and agreed by the patients care team;

- A Pregnancy EWS score 0f 9 and above, Registered nurse to immediately inform the medical team for emergency assessment OR contact the crash team (2222) or Emergency services (9)999;

- AVPU scores in red or yellow – continue with GCS and Pregnancy EWS scoring, at a minimum 30 minutes for 2 hours if GCS is 15 with a head injury or suspected head injury, IF GCS < 14 increase to 15 minutes observations and mews scoring and follow the actions for GCS in Flowchart 9;

- If a patient is scoring high and a reason for this is known / suspected, this may not be deterioration, a high score may be due to patient Anxieties, pre-existing health issues, equipment etc. Clinical judgement / decision making should be utilised, this decision **Must** be documented and discussed with the medical staff;

- If a patient is scoring high and deterioration is suspected then the actions for that score **Must** be followed as above;

- If patient has a head injury, altered level of consciousness, including possible consumption of alcohol and / or illicit drugs, or has an AVPU score of 3, commence Glasgow Coma score (GCS) assessment, and follow the actions outlined in Flowchart 9.

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Pregnancy Early Warning Score Chart

Ward		NHS Number	
Name		DOB	

Date															
Time															
Respirations (over I minute)	≥30														
	21 - 30														
	11 - 20														
	0 - 10														
	Record respiration rate														
	95 – 100%														
	≤95%														
	Record oxygen saturation %														
Oxygen administered L/min															
Blood Pressure	≥191														
	181-190														
Record systolic & diastolic	171-180														
	161-170														
	151-160														
	141-150														
	131-140														
	121-130														
	111-120														
	101-110														
Score systolic BP only for Pregnancy EWS	91-100														
	81-90														
	71-80														
	61-70														
	≤60														
	Record blood pressure														
Pulse / Heart Rate	≥141														
	131-140														
	121-130														
	111-120														
	101-110														
	91-100														
	81-90														
	71-80														
	61-70														
	51-60														
	41-50														
	31-40														
	≤30														
	Record pulse / heart rate														
Temperature	≥39.1°														
	38.6 - 39°														
	38.1- 38.5°														
	37.6 - 38°														
	37.1- 37.5°														
	36.6 - 37°														
	36.1- 36.5°														
	35.6 - 36°														
	35.1- 35.5°														
	34.6 - 35°														
	34.1- 34.5°														
	≤34°														
	Record temperature														
Neuro Response (AVPU)	Alert														
	Verbal														
	Pain														
	Unresponsive														
Total Yellow Score															
Total Red Score															
Total score – see actions overleaf															
Staff Signature															

Contact medics for early intervention if patient scores One or more in Red or Two or more Yellow at any one time - unless otherwise documented.

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How to calculate Pregnancy EWS Score

- Record all observations overleaf;
- Note whether observation falls in the Red or yellow boxes, Score one point per box.
- Add points scored – in red and yellow boxes and record total if patient scores **one point in red** or **two points in yellow** contact the medical team unless this has already been discussed and care planned.
- **AVPU** - If a point is scored in red or yellow **– commence GCS.**

How to use the physical observation chart

<table>
<tr><th>Start up</th><th>Observations</th><th>P - EWS scores</th><th colspan="3">Action</th></tr>
<tr><td rowspan="5">1. This chart does not override clinical judgement.

2. Record patient identification

3. This chart is to be used on pregnant patients only

4. Take chart to patient.</td><td rowspan="5">1. Record ALL observations with a ‘firm’ dot ● in black ink.

2. Write exact values of observations in boxes provided.

3. Join consecutive observations with a straight line over time.</td><td rowspan="5">1. Total the P - EWS score including AVPU using

2. Record the total P- EWS score in the box for total score.</td><td>P -EWS Score</td><td>Frequency of monitoring</td><td>Clinical response</td></tr>
<tr><td>0 - 2</td><td>12 Hourly - unless alternative observations are agreed as part of a care plan.</td><td>- Routine monitoring and scoring;
- Unless patient’s physical condition indicates change – then care plan required.</td></tr>
<tr><td>Total:
3 - 5</td><td>1 – 4 Hourly</td><td rowspan="2">- Inform registered nurse who must assess the
- Registered nurse to urgently inform the medical team caring for the patient or an available medic for urgent assessment within 30mins, if the patients’ medical team is not available.
- Contact crash team (2222) or Emergency Services (999)</td></tr>
<tr><td>Total:
6 - 8</td><td>Increased frequency to a minimum of 1 – 2 hourly.
<u>If VPU scores continue with GCS and P - EWS scoring</u>
- Minimum of every 30mins for 2hours if GCS 15.
- 15 minute P - EWS and GCS if GCS $\leq$ 14. Follow actions as directed in SOP3.</td></tr>
<tr><td>Total:
$\geq$9</td><td>Increased frequency to 30 minutes
and
Therapeutic Observations (level 3/4)</td><td>- Registered nurse to immediately inform medical team for emergency assessment;
- Contact crash team (2222) or Emergency Services (999)</td></tr>
</table>

How to calculate and action GCS 15 point score:

The Glasgow Coma Scale is a simple but effective way of assessing a patient’s neurological condition. It categorises the patient’s responses to certain stimuli and gives that response an overall score. It is divided into 3 main categories of response that are totalled to give an overall score.

- Score best motor, verbal and eye opening scores in the boxes provided following chart above;
- Add points score and record total ‘Overall GCS score’ in the box provided.

Score and Motor Response	Score and Verbal Response	Score and Eye Opening
6 - Obeys commands	5 - Oriented	4 - Spontaneous
5 - Localises pain	4 - Confused conversation	3 - Open to speech
4 - Withdrawal to pain	3 - Inappropriate words	2 - Open to pain
3 - Flexion	2 - Incomprehensible sounds	1 - No eye opening
2 - Extension	1 - No verbal response	
1 - No response to pain		

Date												
Time												
Motor Response Score												
Verbal Response Score												
Eye Opening Score												
Overall GCS Score												
Staffs Initials												

Action: For actions refer to Clinical Practice policy CP35 / SOP3 which incorporates the ‘Procedure to be followed in the event of altered level of consciousnesses’

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3. Glasgow Coma Scale

The Glasgow Coma Scale (GCS) is the most commonly used tool for evaluating conscious level. The GCS evaluates conscious level in three areas: motor response; verbal response and eye opening.

The GCS categorises the person's responses to stimuli and gives the responses a score; these scores are then added up to give an overall score; the total sum gives a score out of 15.

A score of 15 indicates a fully alert and responsive person, whereas a score of 3 (the lowest possible score) indicates unconsciousness and critical state.

The GCS and NEWS 2 / PEWS and Pregnancy EWS observations procedure must be commenced immediately in the event of:

- The patient appears to be physically unwell;
- The patient has fallen;
- The patient has altered level of consciousness e.g. head injury;
- The patient is intoxicated with alcohol or drugs;
- The patient not responding to requests as expected;
- The patient is commencing new medication that may affect physical health;
- A report from patient or witness regarding any of the above.

In all cases of head injury or suspected head injury or altered level of consciousness NEWS 2 / PEWS and Pregnancy EWS and GCS observations must be assessed, recorded and actioned at the frequency identified on NEWS 2 / PEWS and Pregnancy EWS pathway for a minimum of 4 hours.

A GCS of 8 or less indicates severe head injury, a GCS of 9-12 moderate head injury, and a GCS score of 13-15 is obtained when the head injury is minor.

How to Calculate and Score the Glasgow Coma Scale:

- Explain the procedure to the patient, whether conscious or not, answer any questions and gain their consent;
- Talk to the patient. Note whether they are alert and giving full attention or restless, lethargic and drowsy;
- Ask the patient to perform a simple tasks e.g. raise your arm (include both sides of the body), stick out your tongue;
- If the patient does not respond apply painful stimuli (i.e. Apply incremental pressure to the side of the patient's little finger by pressing their finger between your own finger and a pen;
- Score each category as per chart below;
- Add up category scores to give a total score out of 15;
- Record total GCS score on the GCS chart i.e.15/15.

Assessment of score motor response

Score and motor response		
Number	**Response**	**Explanation**
6	Obeys commands	The person does simple things you ask e.g. raise your arm, stick out your tongue
5	Localises pain	A purposeful movement towards changing painful stimuli is a localizing response.
4	Withdrawal to pain	Abnormally pulls limb away from painful stimulus.
3	Flexion	Stimulus causes abnormal flexion of limbs (adduction of arm, internal rotation of shoulder, pronation of forearm, wrist flexion - decorticate posture.
2	Extension	The stimulus causes limb extension (abduction, internal rotation of shoulder, pronation of forearm, wrist extension) - decerebrate posture.
1	No response to pain	No response, flaccid limbs

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Assessment of score and verbal response

Score and verbal response		
Number	**Response**	**Explanation**
5	Orientated	Patient 'knows who he is, where he is and why, the year, season, and month.
4	Confused conversation	Patient responds to questions in a conversational manner but some disorientation and confusion.
3	Inappropriate words	Random or exclamatory articulated speech, but no conversational exchange.
2	Incomprehensible sounds	Moaning but no words.
1	No verbal response	No verbal response despite verbal or other stimuli

Assessment of score and eye opening

Score and eye opening		
Number	**Response**	**Explanation**
4	Spontaneous	Eyes open spontaneously without stimulation
3	Open to speech	Eye opening in response any speech (or shout, not necessarily request to open eyes);
2	Open to Pain	Eyes open with painful stimulus.
1	No eye opening	No eye opening regardless of stimulation

Procedures to be followed in the event of a head injury or altered level of consciousness see

- Flowchart 9
- www.glasgowcomascale.org/recording-gcs/

Patients who have sustained a head injury must be referred to a hospital Accident and Emergency department if any of the Risk factors listed below are present:

Risk factors:

- GCS less than 15 on initial assessment;
- Any loss of consciousness as a result of the injury;
- Any focal neurological deficit since the injury (examples include problems understanding, speaking, reading or writing; decreased sensation; loss of balance; general weakness; visual changes; abnormal reflexes; and problems walking);
- Any suspicion of a skull fracture or penetrating head injury since the injury (for example, clear fluid running from the ears or nose, black eye with no associated damage around the eyes, bleeding from one or both ears, new deafness in one or both ears, bruising behind one or both ears, penetrating injury signs, visible trauma to the scalp or skull of concern to the professional);
- Amnesia for events before or after the injury. The assessment of amnesia will not be possible in pre-verbal children and is unlikely to be possible in any child aged under 5 years;
- Persistent headache since the injury;
- Any vomiting episodes since the injury;
- Any seizure since the injury;
- Any previous cranial neurosurgical interventions;
- A high-energy head injury (for example, pedestrian struck by motor vehicle, occupant ejected from motor vehicle, fall from a height of greater than 1 m or more than five stairs, diving accident, high-speed motor vehicle collision, rollover motor accident, accident involving motorized recreational vehicles, bicycle collision, or any other potentially high-energy mechanism);
- History of bleeding or clotting disorder;

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- Current anticoagulant therapy such as warfarin;
- Current drug or alcohol intoxication;
- Age 65 years or older.

(NICE guidelines CG176; https://www.nice.org.uk/guidance/cg176)

4. Blood glucose

Normal blood glucose levels – In a healthy individual, the body regulates the blood glucose to be maintained between 4 and 7 mmols (Nice 2008). Blood glucose levels outside of the normal range may cause altered levels of consciousness; for this reason if a patient falls into one of the following categories a peripheral blood glucose sample must be obtained and using a BM machine, obtain a blood glucose level, and recorded:

- The patient appears to be physically unwell;
- The patient has altered level of consciousness e.g. head injury;
- The patient is intoxicated with alcohol or drugs;
- The patient not responding to requests as expected;
- AVPU score 3;
- A report from patient or witness regarding any of the above.

Blood Glucose Monitoring

- Explain the procedure to the patient and gain verbal consent;
- Encourage patient, assisting where necessary, to wash their hands with soap and water drying them thoroughly afterwards if skin is contaminated;
- Ensure patient is sitting/lying down and is comfortable;
- Decontaminate hands as per the CWP hand decontamination policy and procedure and don disposable plastic apron and non-sterile gloves;
- Select site of piercing**. Ensure the site used is rotated to reduce the risk of infection from multiple stabbing;
- Using a disposable lancet pierce the skin at the side of the finger;
- Encourage bleeding by use of gravity or by 'milking' to form a droplet of blood;
- Dispose of lancet immediately after use in sharps disposal box;
- Apply blood to test strip ensuring required coverage of pad;
- Proceed as per device instructions;
- Apply gauze if necessary to punctured area to stop bleeding;
- Obtain result and record immediately;
- Correctly dispose of waste as per the CWP waste management policy;
- Remove and dispose of gloves and apron as per the CWP waste management policy. Decontaminate hands as per the CWP hand decontamination policy and procedure;
- Assess patient for any adverse reactions or bleeding;
- Report any abnormal results immediately to the nurse in charge and/or duty doctor;
- Document results in the patient's notes;
- The skin at the sample site should be clean and dry, otherwise results can be affected. Avoid use of alcohol wipes / rub as they can affect the result, however if used, allow skin to dry before proceeding.

(The Royal Marsden 2015)

5. Actions required when an in-patient is suspected of being intoxicated with drugs and or Alcohol

The priorities for patient care are:

- Airway management;
- Physical and neurological assessments and;
- Protection from cold.

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If it is suspected that a patient might be intoxicated, the actions below must be followed and recorded in the patient's health records.

No	Action required	Rationale
1	Conduct assessment of patients' physical and neurological observations using the Physical observation recording chart with National Early Warning Score 2 (NEWS 2), Paediatric Early Warning Score (PEWS), Pregnancy EWS, AVPU and Glasgow Coma Score (GCS) for ALL patients.	**Pulse** May be full and bounding, but become weak and rapid. **Respirations** May have deep, noisy respirations which become less frequent and shallow **Temperature** It is likely that body temperature falls in response to alcohol intoxication. The skin appears cold and clammy. A head injury can be missed if a patient appears intoxicated with alcohol.
2	Establish what substance the patient has consumed, in what amounts and over what span of time	To ensure appropriate monitoring and treatment is implemented. The larger the amount of alcohol consumed and the shorter span of time might indicate that the patient's condition could deteriorate rapidly as blood alcohol levels increase.
3	A qualified nurse (where possible, who knows the patient) will be responsible for assessment and monitoring of the patients physical condition	To ensure that any changes in the patients physical condition are monitored and acted upon in a timely manner.
	Do not use an Alco meter to assess levels of intoxication	They are only recommended to show that alcohol has been consumed and not the level of intoxication.
4	Increase level of observation to a minimum of level 2 15 minute intermittent	To ensure patient is observed so that any deterioration in health can be acted upon immediately.
	Where it is necessary to put a patient to bed level 3 observations must be conducted and the patient must be nursed in the recovery position	To ensure that the risk of vomiting and/or inhalation of gastric content or obstructed airway are rapidly recognised and medical staff alerted if required.
5	If there are any changes to patients physical observations, ACVPU or GCS the duty doctor must be contacted to conduct a physical assessment	To ensure a full physical examination is conducted and to asses level of intoxication and if any intervention in an acute trust is required.
6	Note - Snoring should be regarded as a warning sign of possible respiratory difficulty (Stridor) If snoring is heard the nurse in charge should be informed immediately. They will assess the need for further actions that could include different levels of observations, nursing the patient in the recovery position and requesting a medical assessment	Snoring is an indication of restricted respiration and needs immediate assessment and (possible) medical intervention
7	If patient is conscious and swallowing normally encourage extra fluids (preferably water) Note - Lack of vomiting is not an indication that the	To prevent the patient from becoming dehydrated.

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No	Action required	Rationale
	patient has only consumed small amounts of alcohol	
8	Do not increase fluids if patient's level of consciousness is impaired according GCS score	To reduce the change of patient vomiting or inhaling gastric contents
9	Do not administer any medication without consulting medical staff	To prevent overdose or interaction with alcohol
10	Observe for signs of hypoglycaemia	This can be a result of alcohol intoxication and can cause coma
11	If the patient requires transfer to acute trust they must be accompanied by a member of ward staff and would need to be transported by ambulance	To ensure the acute trust can assess level of intoxication with additional information provided by ward staff.

Physical and neurological assessment and scores is essential for responding appropriately to their deteriorating physical and / or neurological health.

All escalation of NEWS 2, PEWS and Pregnancy EWS action must be communicated to Senior Clinicians / GP using the SBAR communication / handover tool in the admission, discharge and transfer policy:

- Situation;
- Background;
- Assessment;
- Recommendation.

This can be recorded using the SBAR documentation – this can be accessed via the trusts admission, discharge and transfer policy or Via the electronic patient record under assessments.

CWP recognises that the effective recognition and appropriate early management of the deteriorating patient is a key objective for the safety and wellbeing of patients and will take all reasonable steps to achieve this:

- Training in the use of NEWS 2 / PEWS / Pregnancy EWS for all nursing staff using the documentation;
- Establishing algorithms for each clinical area / virtual ward that recognise individual clinical circumstances encountered on these sites;
- The use of SBAR as a communication template in handover, and care escalation situations throughout CWP;
- The establishment of robust mechanisms for accessing emergency assistance either on site or externally;
- The development of transfer protocols agreed with the ambulance service and receiving hospital;
- The audit of all NEWS 2 / PEWS / Pregnancy EWS activations and emergency transfer against current clinical standards.

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