



Facilitators' Guide

Education session:

Healthcare Assistants (HCAs) Measuring, Recording & Communicating Patients' Vital Signs, incorporating the National Early Warning Score (Adult) using the National Patient Observation Chart.



The content of this HCA Education Session has been endorsed by the Irish Association of Directors of Nursing and Midwifery (IADNAM)

The National Early Warning Score Project is a work stream of the Acute Medicine Programme

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ACKNOWLEDGEMENTS

In developing this education session for Healthcare Assistants a wide consultation process was adopted. We would like to acknowledge the valuable feedback that was obtained and subsequently incorporated into the education session. We would also like to thank clinical and managerial staff for their advice, encouragement and support.

Education Session Development Team:

Celine Conroy, RGN, RNT, MSc. Nursing (CHSE), PG. Diploma Clinical Practice, Nursing & Midwifery Project Officer, National Early Warning Score (NEWS)/COMPASS, Office of the Nursing & Midwifery Services Director.

Cathriona Greene, RGN, RM, RNT, MSc. Nursing (CHSE), BSc Nursing (Hons), A/Specialist Co-ordinator, RCNME, HSE South, Carlow, Kilkenny, South Tipperary, Waterford, Wexford.

Marie Horgan, RGN, HDip. Professional Nursing Studies, CNS - Chest Pain, St. Luke's Hospital, Kilkenny.

Marie Laste, RGN, BSc (Hons) Nursing, Dip. Health Service Management, A/Nurse Practice Development Facilitator, South Tipperary General Hospital, Clonmel.

Mairead O'Sullivan, RGN, BSc (Hons) Nursing, Clinical Placement Co-ordinator, Midland Regional Hospital Portlaoise.

INTRODUCTION

The National Early Warning Score Project is a work stream of the Acute Medicine Programme, in association with other National Clinical Programmes, the Quality & Safety Directorate, the Patient Representative Groups, Nursing & Midwifery Services Director, Clinical Indemnity Scheme, the Assistant National Director, Acute Hospital Services – Integrated Services Directorate, Irish Association of Nursing & Midwifery (IADNAM) and Therapy Professionals Committee.

This education session is for Healthcare Assistants (HCAs) who currently, or will in the future measure, record and communicate to a Registered Nurse, a patients' vital signs in the acute hospital setting. This cohort of HCAs will now be required to use the National Adult Patient Observation Chart, and calculate a total early warning score. It is not the intention to introduce this as a new activity where it is not currently in existence.

The role of the HCA is to support the delivery of patient care under the supervision and direction of qualified nursing personnel (Shannon *et al.* 2001).

NICE (2007) recommends the importance of adequately trained staff undertaking vital signs assessment and the need for competency-based skills and James *et al.* (2010) highlight the RNs' responsibility for providing supervised practice at the bedside.

For HCAs who have previously undertaken the *Activities of Living Patient Care Module L22441 FETAC level 5*, or *Activities of Living Patient Care Module 5N3707 FETAC level 5*, and attended the additional education session, it is recommended that they complete a period of supervised practice and skills demonstration in their clinical area (Skills Demonstration Template Appendix 1).

RATIONALE:

Delivering safe care in a complex, pressurised and fast moving healthcare environment is one of the greatest challenges facing healthcare workers today (World Health Organisation 2011). The Commission on Patient Safety & Quality Assurance (2008) in its report *Building a Culture of Patient Safety*, states that patients are entitled to expect the highest standards of safety and quality by healthcare professionals.

There is an increasing body of evidence to show that patients who have become acutely unwell in acute hospital settings may have received suboptimal care (Smith *et al.* 2006). Studies have shown that the clinical deterioration of patients is often preceded by changes in physiological observations that are recorded by staff 6 to 24 hours prior to a serious adverse event (Megan H.W. *et al.* 2010), and delays in treatment or inadequate care often results in unanticipated admission to ICU, increased length of stay in hospital, cardiac arrest or death (Subbe *et al.* 2001). Recording a patient's physiological observations is considered part of daily ward routine however, in the UK, the National Confidential Enquiry into Patient Outcomes and Death (NCEPOD) (2005) highlighted the failure to recognise clinical deterioration in patients in the acute hospital setting which lead to delays in appropriate management. Furthermore, communication failures between teams contributed to delays in referrals and in delivering appropriate essential care.

International evidence has identified that a systematic approach to the identification and management of the deteriorating patient can improve outcomes (Steen 2010). In 2007, the National Institute for Health and Clinical Excellence (UK) (NICE) recommended that physiological track and trigger systems be used to monitor all adult patients in acute hospitals. In Ireland, the Health Information and Quality Authority (HIQA) (2011) recommended using a nationally agreed early warning score, and the Clinical Indemnity Scheme (CIS) (2011) identified the implementation of a national early warning score as a priority. The National Early Warning Score (NEWS) project was established as a work stream of the Acute Medicine Programme in 2011. The overall aim was to develop one integrated solution for a National Early Warning Score and to develop a National Clinical Guideline to support this. Endorsed by the National Clinical Effectiveness Committee (NCEC), the National Early Warning Score, National Clinical Guideline No. 1 (Department of Health 2013) identifies the essential elements required to implement the NEWS. Based on the best available international evidence the NEWS incorporates the VitalPAC™ Early Warning Score (ViEWS) parameters initially validated for medical patients by Prytherch *et al.* (2010) and subsequently validated for use on both medical and surgical patients (Bleyer *et al.* 2011 & Kellett *et al.* 2011).

Healthcare Assistants (HCAs) play a significant role in the detection and monitoring of acutely ill patients by undertaking routine clinical observations (James *et al.* 2010, Thornley 2000, Hogan 2006). A study by Smith *et al.* 2008 reported that the best performing aggregate weighted track and trigger systems (AWTTS) collected data on pulse rate, respiratory rate, systolic blood pressure, AVPU, temperature, SaO₂ and inspired oxygen (F₁O₂). However, HCAs currently undertaking routine clinical observations in Ireland do not routinely measure and record all of the vital signs necessary to calculate a total early warning score (EWS).

NICE (2007) and INO (2006) support HCAs undertaking clinical observations and highlight the importance of adequately trained staff undertaking vital signs assessment. Therefore, this education session was developed to facilitate HCAs to develop and update knowledge in measuring & recording a patient's vital signs and incorporates the National Early Warning Score (NEWS).

1.0 Purpose of facilitators' guide:

The purpose of this guide is to introduce and explain the topics covered in the education session thus providing a valuable resource to facilitators in preparation for its delivery. Additional resources, such as the COMPASS programme and the reference list, will further enhance preparation for delivery of this education session.

1.1 Facilitation:

The education session will be facilitated as an *Additional Education session* for HCAs who have previously completed the *Activities of Living Patient Care Module L22441 FETAC level 5* or the *Activities of Living Patient Care Module 5N3707 FETAC level 5* and provided documentary evidence of same to their Director of Nursing.

It is recommended that the *Additional Education session* will be delivered by existing NEWS/COMPASS trainers and take approximately two hours to deliver.

1.2 Application Criteria

The HCA wishing to attend the *Additional Education session* must be approved by his/her Director of Nursing and have undertaken the Heartsaver AED programme within the previous two years or as per local policy.

It is essential that HCAs who are identified by the Director of Nursing to attend the 2 hour *Additional Education session* on undertaking measuring, recording and communicating a patient's vital signs incorporating the National Early Warning Score Adult Patient Observation Chart:

- Have completed the *Activities of Living Patient Care Module L22441 FETAC level 5* or the *Activities of Living Patient Care Module 5N3707 FETAC level 5*, as part of the Healthcare Support or Health Service Skills programme and provided documentary evidence to his/her Director of Nursing;
- Are working in an area that provides ample opportunity to maintain competence in measuring patient's vital signs, recording the findings in the National Early Warning Score Adult Patient Observation Chart, including calculating and recording a total EWS, and communicating his/her findings back to the delegating registered nurse.

1.3 Aim

The aim of this 2 hour education session is to facilitate the HCA to develop and update his/her knowledge of measuring & recording a patient's vital signs, with a focus on recording the findings in the *National Early Warning Score Adult Patient Observation Chart*, including calculating and recording a total EWS, and communicating the findings to the registered nurse.

1.4 Objectives

The objectives of this education session are to ensure that:

- A seamless patient centred approach occurs between the measuring and recording of a patient's vital signs, as delegated by the registered nurse to the HCA, and the communication of the vital signs and total early warning score (EWS) by the HCA to the registered nurse;
- The HCA is fully aware of his/her responsibility, accountability and authority in measuring and recording a patient's vital signs, calculating a total EWS and communicating this to the RN.

1.5 Learning outcomes

At the end of this education session the HCA should be able to:

- Describe the concepts of delegation, accountability, responsibility, authority and competence in undertaking the measurement, recording & reporting of vital signs delegated to him/her by the RN;
- Identify safe and effective practice in measuring and recording a patient's vital signs and communicating the total EWS and vital signs to the RN in accordance with local policy;
 - Respiration;
 - Inspired Oxygen (FiO₂);
 - SaO₂;
 - Blood Pressure;
 - Pulse;
 - Level of consciousness –utilising AVPU tool;
 - Temperature;
 - Calculating a total EWS;
 - Communicating findings to the delegating registered nurse.

2.0 Content

2.1 Background

- The National Early Warning Score (NEWS) is a bedside track and trigger scoring system used by staff to calculate a total EWS from routinely collected physiological observations;
- It aims to indicate early signs of deterioration in patients' conditions and prompts more timely medical review and treatment of patients due to the inbuilt escalation protocol;
- This NEWS does not apply to patients in Paediatric and Maternity units (local policy will identify other departments excluded);
- The NEWS does not replace clinical judgement. If you have any concern for the patient, inform the RN immediately irrespective of the total EWS.

Many research papers over the last 15 years have reported that patient deterioration in acute hospital settings has frequently been poorly recognised or detected late.

McQuillan *et al.* (1998) reviewed the quality of patient care pre-transfer from the general ward to ICU. Of the 100 patients reviewed, 54 received suboptimal care. In particular they found suboptimal management of airway, breathing, circulation, monitoring and oxygen therapy and conclude that this may be associated with increased morbidity, mortality and avoidable admissions to ICU.

In a similar study in St. Luke's General Hospital in Kilkenny, Gallagher *et al.* (2006) reviewed the progress of patients in the preceding 24 hours pre-cardiac arrest. A decline in the patients' condition was evident in 45-75% of cases, patients frequently have recognisable changes in routine observations which may be detected late or go unnoticed and respiratory rate was infrequently recorded. They suggest that with more timely identification and appropriate management the incidence of cardiac arrest could be reduced.

2.2 Accountability, Authority, Responsibility & Delegation

2.2.1 Accountability

“the fulfilment of a formal obligation to disclose to referent others the purposes, principles, procedures, relationships, results, income and expenditures for which one has authority”

Lewis & Batey (1982)

- Means “being answerable” for the decisions made in practice;
- Requires that the best interest of the patient is foremost in every caring activity;
- Ensures that knowledge, skills and judgement are used to make decisions (Ingram & Lavery 2009);
- Requires that the RN weighs up the best interest of the patient in complex, changing situations, using his/her professional knowledge, skills and judgement to make decisions enabling them to account for their actions or omissions.

2.2.1.1 HCA is Accountable to:

- The patient via civil or criminal law;
- The public via criminal law;
- Their employer via their contract of employment;
- The RN by accepting a delegated role and subsequent communication of clinical findings.

2.2.2 Authority

Authority is *“the legitimate power to fulfil a responsibility”* (Batey & Lewis 1982). Delegation is *“the transfer of authority* by a nurse or midwife to another person to perform a particular role/function” HSE (2006). In the same report the HSE (2006) highlight the requirement for organisations to ensure that support and resources (education, training, policies, protocols and guidelines) are available to the person to whom the role/function has been delegated.

2.2.3 Delegation

Delegation is the process by which a registered nurse can allocate patient care activities to a HCA who has successfully completed the required education session(s), and provided documentary evidence of same to his/her line manager. Only activities covered the required education session(s) are appropriate for delegation; nursing care remains the preserve of professionally qualified nurses who remain accountable for their own practice and any decision to delegate (INMO 2006).

2.2.3.1 The registered nurse delegating a particular role or function is accountable for:

- The decision to delegate the patient care activities to the HCA;
- Ensuring that the delegated function is appropriate and that support and resources are available to the person to whom the activity has been delegated.

2.2.3.2 The registered nurse must:

- Ensure that the best interest of the patient is the primary motivation for delegating the measuring and recording of vital signs to HCA;
- Identify the HCA's level of experience, competence of care skills practice prior to delegating any activity;
- Not delegate activities and responsibilities to a HCA beyond his/her competence and care skill experience;
- Provide clear and concise direction to the HCA in relation to appropriate assessment, planning, implementation and evaluation;
- Ensure that the HCA is supervised if required;
- Follow up with the HCA when the delegated activity is completed.

2.2.3.3 The HCA accepting a delegated role or function is responsible and accountable for:

- Accepting the delegated role or function;
- Undertaking the delegated role or function in accordance with local policy;
- Communicating the patient's total early warning score and vital signs to the RN – this communication may occur:
 - Immediately for all scores of ≥ 2 or any new score of 1;
 - In a timely manner for a score of 0 or 1 (which is not new).

2.2.3.4 The HCA must:

- Be part of the nursing team, reporting to the nurse manager for the ward/area and working under the direction, and supervision as required, of a registered nurse;
- Identify her/his level of competency to the delegator (Ingram & Lavery 2009);
- Not undertake any delegated activity or function that he/she has not been educated, trained and deemed competent to undertake.

2.2.3.5 The Five Rights of Delegation:

- The right activity - is one that is capable of being delegated for specific patient;
- The right circumstances - appropriate patient setting, available resources and other relevant factors;
- The right person - ensure that the right person is delegating the right activity to be performed by the right person;
- The right communication – relates to clear, concise description of the activity, which must include its objectives, limitations and expectations;
- The right supervision - ensures appropriate monitoring, evaluation, intervention as needed and feedback (NCSBN 1997).

3.0 Rationale for Measuring, Recording & Communicating Patients' Vital Signs using the NEWS Adult Patient Observation Chart

3.1 Oxygen Delivery

This section can be delivered by the facilitator using simple language to convey to the HCA's present the importance of Oxygen delivery for cell function.

Oxygen Delivery = Cardiac Output x Arterial Oxygen Content.

Arterial Oxygen content includes:

- Haemoglobin Concentration (Hb);
- Haemoglobin Oxygen Saturation (SaO₂);
- Partial Pressure of Oxygen (PaO₂).

Oxygen is essential for all intracellular functions. Reduced O₂ supply leads to reduced cellular function. Organ failure may result leading to patient deterioration, cardiac arrest and possible death.

- The air we breathe contains 21% oxygen which is essential for cell life;
- Air passes through the nose, the airway and into the lungs;
 - Oxygen cannot move into the lower respiratory tract unless the airway is patent. Causes of airway obstruction can either be mechanical or functional;
 - Functional airway obstruction – may result from decreased level of consciousness, whereby the muscles relax and allow the tongue to fall back and obstruct the pharynx;
 - Mechanical airway obstruction – may be through aspiration of a foreign body or swelling/bleeding in the upper airway (e.g. trauma, allergy and infection);
 - Mechanical obstruction may also be caused by oedema or spasm of the larynx.
- In the lungs oxygen passes through the thin walls of the alveoli into the blood supply;
 - Conditions such as Asthma, COPD, scoliosis, crush injuries and burns could affect delivery of oxygen to the tissues.
- Oxygen attaches itself to haemoglobin in the blood;
 - Conditions such as Anaemia or bleeding could affect the uptake of oxygen by haemoglobin.

Cardiac Output = Stroke Volume x Heart rate

Stroke volume = the amount of blood pumped by the ventricles with each heartbeat;

Heart rate = the number of heart beats per minute;

- Conditions such as bleeding, vomiting & diarrhoea causing fluid loss can affect stroke volume and heart disease or medication may affect heart rate.

Therefore to monitor oxygen delivery in the body we record physiological observations or ‘Vital Signs’.

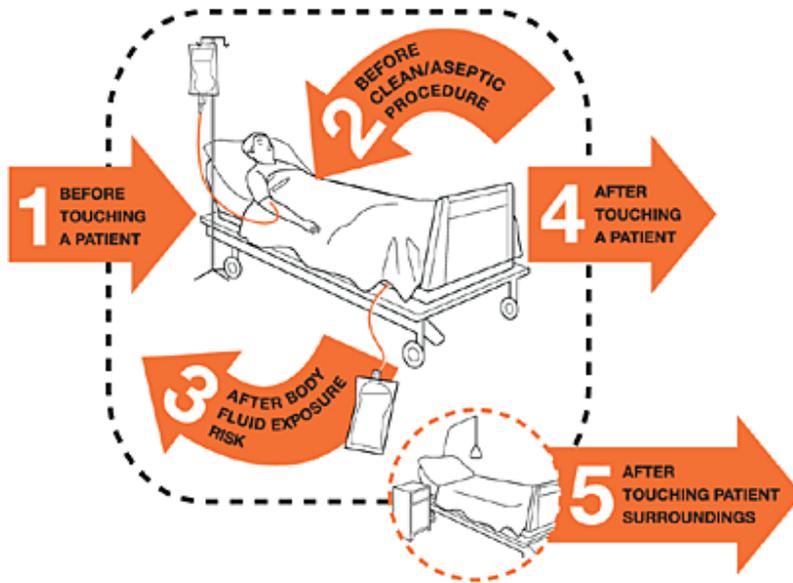
3.2 Vital Sign: pertains to life, without which life would not exist including Respiratory rate, Pulse rate, Blood Pressure (BP), and Temperature.

- **Respiratory rate:** important indicator – often the first sign of deteriorating patient. Respiratory rate may increase before SaO₂ drops;
- **Oxygen saturation (SaO₂):** A pulse oximeter probe measures the amount of oxygen being carried by haemoglobin;
 - Normal SaO₂ ≥ 96% (may be lower if COPD) – parameters set by medical team;
 - If the saturation probe is incorrectly fitted or the patient has dark nail varnish on or cold hands the reading could be affected;
- **Heart rate & Blood pressure:** a decrease in cardiac output (e.g. bleeding) will lead to a decrease in blood pressure and a reduction in oxygen getting to the tissues. To compensate the heart rate (pulse) will increase initially. Therefore: **High pulse and low blood pressure may reflect inadequate oxygen delivery to the tissues.**
- **Temperature:** a rise in body temperature may increase heart rate. A high temperature may indicate infection which will increase the body’s need for oxygen. A very low temperature can be a sign of shock and needs to be reported to the RN.
- **Level of Consciousness/AVPU:** Decreased oxygen delivery to the brain may cause deterioration in the patient’s LOC such as confusion, agitation, unconsciousness. Loss of consciousness can affect a person’s ability to protect their airway which could lead to inadequate oxygen supply (stroke).
- **Partial Pressure of Oxygen (PaO₂):** determines the free oxygen molecules dissolved in plasma. An arterial blood gas reading is required to measure PaO₂.

4.0 Procedure for Measuring, Recording & Communicating patients' Vital Signs using the NEWS Adult Patient Observation chart

4.1 Before undertaking patient care - Highlight here that prior to undertaking any activity observe the 5 moments for hand hygiene.

5 Moments for Hand Hygiene



- Confirm patient identity;
- Ensure all equipment is in safe working order, is appropriate for use and is maintained at regular intervals. Inform the RN if faulty equipment;
- Decontaminate hands as per Infection Prevention & Control Policy;
- Explain the procedure to the patient gaining verbal consent.

National Early Warning Score Adult Patient Observation Chart

HF Healthcare Foundation
 Patient Name: _____
 Date of Birth: _____
 Healthcare Record No: _____
 Addressograph: _____

NATIONAL EARLY WARNING SCORE ADULT PATIENT OBSERVATION CHART

Escalation Protocol Flow Chart

Total Score	Minimum Observation Frequency	ALERT	RESPONSE
0	1 Hourly	Nurse in charge / Team/On call SMC	Nurse in charge to review if new action
1	1 Hourly	Nurse in charge / Team/On call SMC	Nurse in charge to review within 1 hour
2	4 Hourly	Nurse in charge / Team/On call SMC	1. SMC to review within 1 hour 2. Review for sepsis 3. If no response to treatment within 1 hour contact Registrar 4. Consider continuous patient monitoring 5. Consider transfer to higher level of care 6. Register to review immediately
4-6	1 Hourly	Nurse in charge / Team/On call SMC	1. SMC to review immediately 2. Continuous patient monitoring recommended 3. Plan to transfer to higher level of care 4. Advise Emergency Response Support (ERS) (as appropriate in Hospital model)
≥7	1 Hourly	Nurse in charge / Team/On call Registrar where Team/On call consultant	1. Register to review immediately 2. Consider patient monitoring 3. Plan to transfer to higher level of care 4. Advise Emergency Response Support (ERS) (as appropriate in Hospital model)

Note: Single Score Triggers

Score of 2 (at least 2)	1 Hourly	Nurse in charge / Team/On call SMC	1. SMC to review immediately
Score of 3 (at least 3) <th>1 Hourly or at 4 hourly stage parameter</th> <th>Nurse in charge / Team/On call SMC</th> <th>1. SMC to review immediately 2. If no response to treatment or still concerned contact Registrar 3. Consider activating ERS</th>	1 Hourly or at 4 hourly stage parameter	Nurse in charge / Team/On call SMC	1. SMC to review immediately 2. If no response to treatment or still concerned contact Registrar 3. Consider activating ERS

IMPORTANT:

- If a score of 2 or 3 is not carried out as above OR a Nurse in charge must contact the Registrar or Consultant.
- If you are concerned about a patient's acute care register the score.

National Early Warning Score (NEWS) Key

Score	1	2	3	4	5	6	7	8	9
Respiratory Rate (per min)	10-20	21-24	25-30	31-34	35-40	41-50	51-60	61-70	71-80
Oxygen Sat (SpO2)	96-100	94-95	92-93	90-91	88-89	86-87	84-85	82-83	80-81
Respiratory Effort (RR)	0-1	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17
Heart Rate (bpm)	50-100	101-110	111-130	131-150	151-170	171-190	191-210	211-230	231-250
Mean Arterial Pressure (MAP)	70-93	66-69	60-65	55-59	50-54	45-49	40-44	35-39	30-34
Urea (mmol/L)	0-7	8-10	11-13	14-17	18-21	22-27	28-33	34-40	41-50
Consciousness (GCS)	15	14	13	12	11	10	9	8	7

Early Warning Score System

AB, C, D, E

Grid for recording patient scores over time.

Sepsis Screening Pathway

Are any 2 or more modified Systemic Inflammatory Response Syndrome (SIRS) criteria present?

- Respiratory rate > 20/min
- WBC < 4 or > 12 x 10⁹/L
- Temperature > 38.0 or < 36.0°C
- Heart rate > 90/min
- Active altered mental status
- Positive lactate > 2 mmol/L

OR Patient unwell and at risk of deterioration

INFECTION SUSPECTED +

Are there any signs of infection? (Check for signs of infection and other biomarkers such as C-reactive protein (CRP))

NO Following a history and examination, and if available a range of lab tests, staff may proceed with using the NEWS protocol.

YES - THIS IS SEPSIS

Sepsis Six Regimen must be completed **within 1 hour**

NO (no sepsis) **YES** (sepsis)

SEPSIS SIX - aim to complete within 1 hour

- 1. Oxygen (SpO2) or Pulse Oximetry
- 2. Fluids (at least 30ml/kg over 1 hour if fluid resuscitation is indicated)
- 3. Lactate (at least 2 mmol/L)
- 4. Urine output measurement
- 5. Blood cultures (if indicated)
- 6. Antimicrobials according to local guidelines

Look for signs of organ dysfunction:

- Sepsis 6P (or 6M) or Mean Arterial Pressure
- GCS < 15 (or 14 in the elderly)
- New need for organ to achieve saturation > 96%
- Lactate > 2 mmol/L (unless previously elevated)
- Urine output < 0.5 ml/kg for 2 hours - despite adequate fluid resuscitation
- Active altered mental status
- Creatinine > 2 mmol/L (or the absence of dialysis)
- Coagulation > 177 mmol/L
- Bleeding > 3ml dependent
- PFR < 1.5 or SFT < 40%
- Glasgow < 9 or 8

Look for signs of septic shock:

- Lactate > 4 mmol/L
- Hypotension (MAP < 65)
- If either present, **THIS IS SEPTIC SHOCK** Critical care consult required

Any organ dysfunction - THIS IS SEVERE SEPSIS

Register or Consultant to review immediately

Resuscitate promptly by Sepsis 6P

Consider other **sepsis** (e.g. Sepsis 6M)

4.2 Respiratory Rate

Preparation & Equipment:

- Fob watch with a second hand;
- Patient should be relaxed & resting prior to observing rate;
- Do not inform the patient you will be assessing breathing (Explain why).
- Note: Normal respiratory rates may be highlighted here- Adult male 14-18, Adult female 16-20

Procedure:

- Observe the movement of the chest wall and count the respiratory cycles for 60 seconds;
- Observe the rhythm and depth of respirations;
- Observe the patients colour;
- Observe for the following:
 - Dyspnoea (difficulty in breathing);
 - Pain on breathing and its location;
 - Noisy respirations;
 - Any cough and/or sputum;
 - Record the respiratory rate, allocate & record the appropriate score and report to RN when total early warning score recorded.

If in doubt report to the RN

4.3 Saturation of Oxygen (SaO₂)

Preparation & Equipment:

- Pulse oximeter;
- Ensure the skin is clean and dry;
- If using a finger sensor remove any false nails or nail polish.
- Sensor appropriate to patient's size and condition. The limitations of pulse oximeter equipment may be mentioned here. Oximeters can be unreliable in certain circumstances, e.g. if peripheral circulation is poor, the environment is cold, arrhythmias, or if the patient is convulsing or shivering. Advise that if the pulse oximeter does not give a reading do not assume it is broken and inform the nurse immediately.

Procedure:

- Plug the cable of the sensor into the pulse oximeter and turn on the machine;
- Attach the sensor to the appropriate area-most commonly the patient's finger or ear;
- Observe the waveform fluctuations to ensure that the pulse waveform is registering;
- If continuous oxygen saturations are required, ensure sensor site is changed every 4 hours to prevent tissue damage or irritation;
- If intermittent oxygen saturations are being measured, remove the sensor;
- Record and report measurement to RN when total early warning score recorded. Allocate and record appropriate score.

***If in doubt report to the RN ***

4.4 Oxygen Therapy

The HCA observes whether the patient is on oxygen therapy or not and records appropriately.

Procedure:

- Observe for the presence of oxygen nasal cannula or oxygen face mask;
Note: If you are unsure about the position of the oxygen delivery device notify the RN immediately
- Allocate and record a score of 0 if no oxygen therapy in progress. Allocate and record score of 3 if oxygen therapy in progress;
- Report to RN when total EWS calculated.

***If in doubt report to the RN ***

4.5 Blood Pressure

Preparation & Equipment:

- Sphygmomanometer-manual or electronic with appropriate size cuff. The bladder inside the cuff must cover at least 80% of the circumference of the upper arm;
- Stethoscope and detergent wipe if manual recording;
- Importance of appropriate size cuff may be highlighted here.

Procedure:

- Explain procedure to patient;
- Ensure patient is resting in a comfortable position;
- Remove any constrictive clothing from arm;
- Rest arm at level of heart;
- Ensure sphygmomanometer is on a firm surface, with the dial clearly visible;
- Locate the brachial artery by palpation;
- Apply the cuff so that the centre of the bladder is over the brachial artery, 2-3 cm above the ante-cubital fossa;
- Assess the maximum level of inflation by inflating the cuff while simultaneously palpating the radial pulse. Observe the dial and note when the radial pulse can no longer be felt. (The maximum level of inflation will be 20-30 mmHg above this level) Open the valve fully to quickly release the pressure in the cuff;
- If using communal stethoscope, clean the earpieces with a detergent wipe. Place the earpieces in your ear;
- Palpate the brachial artery and place the diaphragm of the stethoscope over the artery, hold it in place with your thumb;
- Ensure valve on the sphygmomanometer is closed and inflate the cuff to the pre-identified maximum level;
- Open the valve gently to allow the needle to drop slowly;
- While observing the needle as it falls listen for Korotkoff sounds;
- Systolic reading is the level where these are first heard;
- Diastolic reading is the level where the sounds disappear;
- Once the sounds have disappeared open the valve fully and remove the cuff from the arm;
- Record the measurement accurately on the National Early Warning Score Adult Patient Observation Chart;
- Allocate and record appropriate score;
- Dispose of/decontaminate all used/contaminated equipment as per local Infection Prevention &

Control Policy;

- If lying and standing BP required do not remove the cuff. Ask the patient to stand, allow the patient to stand for 1 minute before recording the BP;
- Report findings to RN when total EWS calculated.

***If in doubt report to the RN ***

4.6 Pulse Rate

Preparation & Equipment:

- Fob watch with a second hand;
- Patient should be resting - either lying or sitting. Allow time to rest after physical activity, emotional upset or smoking.

Procedure:

- Explain the procedure to the patient;
- Ensure patient comfort;
- Measure where possible under the same conditions each time;
- Choose the site to record the pulse. The radial pulse is most commonly used;
- Using your first and second fingers to feel the pulse, lightly but firmly compress the artery;
- Count the number of beats for 1 minute;
- Record the pulse rate and allocate and record the appropriate early warning score.
- Report findings to RN when total EWS calculated.

***If in doubt report to the RN ***

4.7 Level of Consciousness

The patient's level of consciousness is assessed using **AVPU**:

- **A**lert-awake and responsive;
- **V**oice-responds appropriately (e.g. opening eyes, speaking or moving) to voice prompts;
- **P**ain-responds to painful stimulus with verbal response, eye opening or movement. Pain response can be tested either centrally or peripherally;
- **U**nresponsive-not awake, does not respond to voice or pain;

***If the patient is not Alert or responsive to Voice, level of consciousness must be assessed by the RN.**

*** If there is any change in the patient's neurological status e.g. new confusion, inform the RN immediately.**

***If in doubt report to the RN ***

4.8 Temperature

Preparation:

- Appropriate thermometer

Procedure: Oral

- Ask patient to open mouth, insert thermometer gently under tongue next to the frenulum;
- Ask patient to close the lips;
- Leave in position for recommended length of time;
- Remove the thermometer and in accordance with manufacturer's instructions read the temperature;
- Record accurately identifying site and thermometer type;
- Allocate and record appropriate score for temperature;

- Report findings to RN when total EWS calculated.

***If in doubt report to the RN ***

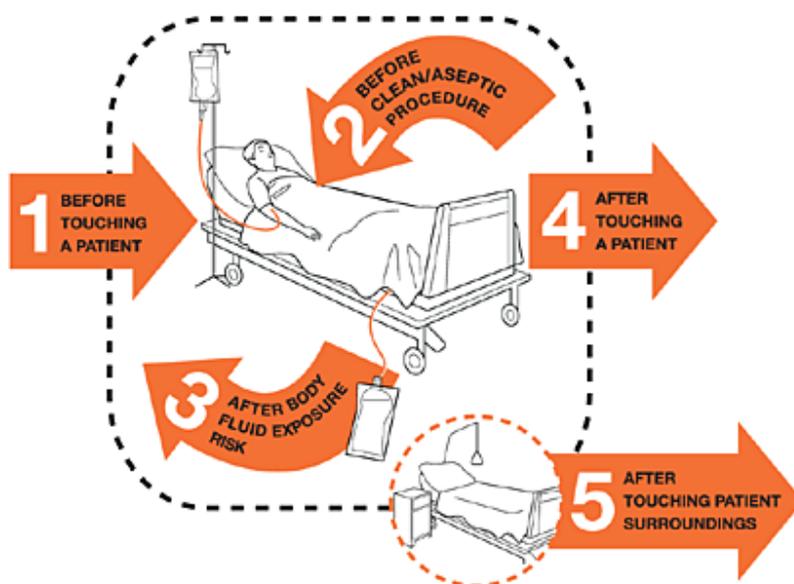
Procedure: Tympanic:

- Explain the procedure to the patient;
- Attach the disposable cover to the probe as per manufacturers instructions;
- Insert the probe into the outer ear, adjacent to but not touching the tympanic membrane;
- An audible signal indicates when the reading is complete;
- Record appropriately identifying the site and thermometer type;
- Allocate and record appropriate score for temperature;
- Report findings to RN when total EWS calculated.

***If in doubt report to the RN ***

4.9 After undertaking all patient care - Highlight here that after undertaking any activity observe the 5 moments for hand hygiene.

5 Moments for Hand Hygiene



- Dispose of/decontaminate all used/contaminated equipment/materials as per Local Infection Prevention & Control Policy;

4.10 Calculate total EWS

- Add all 7 scores to calculate total EWS and record the calculation in appropriate space;
- Report total EWS to RN;
- Remember always report to RN any concern for patient irrespective of total EWS.

4.11 Practice with NEWS (Adult) Patient Observation chart

Patient is breathing in room air

- T – 37⁰C, P - 65, RR - 22, SpO₂ – 96%, BP 130/60 patient is alert.
- T – 38⁰C, P - 86, RR - 30, SpO₂ - 92%, BP 110/60 patient is alert.
- T – 38⁰C, P112, RR – 32, SpO₂ – 92% BP 100/60, patient is alert.

National Early Warning Score and associated Education Programme

ISBAR

Communication Tool

I Identify	<p>Identify: You, Doctor, Patient Is this Dr. _____? This is _____ <i>(e.g. Mary, I am team leader on 7A)</i> I am calling about _____ <i>(e.g. Mr David Jones)</i></p>
S Situation	<p>Situation: Why are you calling? I am calling because _____ <i>(e.g. Total EWS of 6 or 3 in a single parameter)</i> Resp Rate _____ Sats _____ O₂ Delivery _____ Temp _____ Heart Rate _____ BP _____ Urinary Output _____ LOC _____ <i>(only use abnormal reading initially)</i></p>
B Background	<p>Background: What is relevant background? They are _____ years old Admitted for _____ Recent surgery or procedures _____ Relevant past medical/surgical history _____ They currently have _____ <i>(e.g. IV fluids, Urinary Catheter, PCA)</i></p>
A Assessment	<p>Assessment: What do you think is the problem? I think _____ <i>(e.g. they are hypovolaemic)</i> <i>(you can skip this if they don't know what is wrong)</i></p>
R Recommendation	<p>Recommendation: What do you want them to do? I would like you to _____ <i>(e.g. come and review him please)</i> Is there anything you would like me to do before you get here?</p>

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Useful links

<http://www.hse.ie/go/nationalearlywarningscore/>

<http://www.hse.ie/>

http://www.dohc.ie/publications/building_culture_patient_safety.html"Report

<http://www.patientsafetyfirst.ie/images/stories/docs/guidelines.pdf>

Contact

Celine.conroy@hse.ie

APPENDIX 1

Healthcare Assistants' Measuring, Recording and Communicating Patients' Vital Signs, incorporating the National Early Warning Score (Adult), using the Patient Observation Chart.

Skill Demonstration Record Template

Name _____ **Work Location** (full details) _____

Date of Attendance at Additional Education Session _____

This is to certify that _____ has successfully measured, recorded and communicated a patient's SpO₂ under my supervision, in accordance with the (insert title of Policy/Procedure here).

Signature _____ **Print Name** _____ **Date** _____

Position _____ **Nursing and Midwifery Board of Ireland (NMBI) PIN** _____

This is to certify that _____ has successfully measured, recorded and communicated a patient's oxygen delivery status (F₁O₂) under my supervision, in accordance with the (insert title of Policy/Procedure here).

Signature _____ **Print Name** _____ **Date** _____

Position _____ **NMBI PIN** _____

This is to certify that _____ has successfully measured, recorded and communicated a patient's Level of Consciousness under my supervision, in accordance with the (insert title of Policy/Procedure here).

Signature _____ **Print Name** _____ **Date** _____

Position _____ **NMBI PIN** _____

SKILLS DEMONSTRATION PROCESS

Healthcare Assistants' (HCAs) will be observed and assessed in measuring, recording and communicating patients' SaO₂, Inspired Oxygen status (F₁O₂) and Level of Consciousness.

HCAs will be required to demonstrate the following skills:

- Organisation and preparation of the tasks, paying particular attention to meeting the needs of patients;
- Ability to competently carry out each task;
- Communication with the patient and any other appropriate person throughout the tasks, including the demonstration of consultation with the patient and displays of encouragement and empathy;
- Use of appropriate safety and health practices.

The assessor will:

- Be a Registered Nurse actively registered with the Nursing and Midwifery Bord of Ireland (NMBI);

The Healthcare Assistant is responsible for ensuring that this skills demonstration record is completed and maintained safely.

SKILLS DEMONSTRATION RECORD (1-5) (SaO₂)

NAME : _____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x	√/x	√/x	√/x	√/x
1. Demonstrates knowledge of the (insert the title of the local PPG here)					
2. Identifies and prepares appropriate equipment for measuring SaO ₂					
3. Demonstrates knowledge and understanding of equipment used to measure SaO ₂					
4. Explains the procedure and rationale to the patient and obtains informed consent verbally					
5. Demonstrates the ability to manage fears/anxieties the patient may have in relation to this procedure					
6. Demonstrates correct procedures for preventing infection, including hand washing					
7. Attaches the sensor to the appropriate area e.g. finger or ear					
8. Observes waveform fluctuations to ensure waveform is registering					
9. Observes and records the measured SaO ₂ on the NEWS Adult Patient Observation Chart					
10. Allocates the appropriate score					
11. Reports to the Registered Nurse immediately if score ≥ 2 or if a new score > 0 (or as agreed locally)					
12. Reports to the Registered Nurse in a timely manner if score 0 or 1 which is not a new score (or as agreed locally)					
Registered Nurse's Signature					
Date					

SKILLS DEMONSTRATION RECORD (1-5) (Inspired Oxygen Status) (F₁O₂)

NAME : _____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x	√/x	√/x	√/x	√/x
1. Demonstrates knowledge of the (insert the title of the local PPG here if applicable)					
2. Demonstrates knowledge of equipment used to deliver oxygen					
3. Observes for the presence of oxygen nasal cannula or oxygen face mask					
4. Allocates a score of 0 on the NEWS Adult Patient Observation Chart if no oxygen therapy in progress					
5. Allocates a score of 3 on the NEWS Adult Patient Observation Chart if oxygen therapy in progress					
6. Notifies the Registered Nurse immediately if equipment not properly placed					
7. Reports to the Registered Nurse immediately if score new score of 3 (or as agreed locally)					
8. Reports to the Registered Nurse in a timely manner if score 0 or 3 which is not a new score (or as agreed locally)					
Registered Nurse's Signature					
Date					

SKILLS DEMONSTRATION RECORD (1-5) (Level of Consciousness)

NAME : _____

The Registered Nurse must indicate (√) achieved or (x) not achieved for each identified criteria

Criteria	√/x	√/x	√/x	√/x	√/x
1. Demonstrates knowledge of the (insert the title of the local PPG here)					
2. Demonstrates knowledge of the AVPU score used to measure a patient's level of consciousness (LOC)					
3. Demonstrates the ability to manage fears/anxieties the patient may have					
4. Allocates a score of 0 for all patients who are Alert					
5. Allocates a score of 0 for patient who is asleep but responding to Voice					
6. Alerts the Registered Nurse immediately if patient not responding to Voice					
7. Reports to the Registered Nurse in a timely manner if score 0 (or as agreed locally)					
Registered Nurse's Signature					
Date					

APPENDIX 2
Certificate of Attendance Record Template

Certificate of Attendance

This Certificate is awarded to

for attendance at

Healthcare Assistants' (HCAs) Measuring, Recording & Communicating Patients' Vital Signs, Incorporating the National Early Warning Score (Adult) Patient Observation Chart, Train the Trainer 1 hour education session,

Signed: _____
Session Facilitator

Date: _____

Venue: _____

Appendix 3
Attendance Record

Programme Title: Healthcare Assistants' (HCAs) Measuring, Recording & Communicating Patients' Vital Signs, Incorporating the National Early Warning Score (Adult) Patient Observation Chart.

Venue: _____

Date: _____

Name (Please Print)	Signature	Hospital
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
Programme Facilitator's Signature		

Name (Please Print)	Signature	Hospital
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
Programme Facilitator's Signature		