

# Standard Operating Procedure

## Recording of Vital Signs in Adults on Cerner Millennium EPR

**Policy Owner: Chief Nurse Information Office**

**Status:** Approval date: January 2024  
Ratified by: Documentation Practice Standards Group  
Review date: January 2027

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## History

Issue	Version	Date Issued	Brief Summary of Change	Author
	V0.1	May 2022	First Version Draft	Janet McAuley
	V0.2	Aug 2022	Template changes and minor updates	Suzanne Lemon
	V0.3	Oct 2022	SOP reviewed and process updated	Filipe Alves
	V0.4	Oct 2022	Section 4.1 updated following stakeholder feedback	Filipe Alves
1	V1.0	May 2023	Section 4.1 updated following DPSG feedback Approved by DPGSG	Filipe Alves
2	V1.1	Jan 2024	Sections 4.13 and 5.2 updated	Suzanne Lemon

For more information on the status of this document, please contact:	
Policy Owners	Chief Nursing Information Officer
Department/Directorate	EPR/ Digital Services
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Audience	All Trust staff

### See also:

- National Early Warning Score (NEWS22) – Standardising the assessment of acute illness severity in the NHS – report from the Royal College of Physicians
- The Trust Cleaning and Disinfection Policy
- Information Security Policy

## 1. Introduction

1.1. This Standard Operating Procedure (SOP) covers the management and recording of patient observations in Cerner Millennium (EPR). In combination with hands-on training, published and Quick Reference Guides, readers of this SOP should be able to record observations electronically and escalate deteriorating patients safely and effectively.

1.2. To ensure we optimise the system and deliver care that is high quality and safe, all inpatient areas must enter patient observations into the electronic patient record [EPR]. No observations are to be documented on paper charts or Integrated Care Pathways (ICPs). The exception to this would be during a system failure or scheduled downtime where the Business Continuity Plan has been instigated.

## 2. Scope

2.1. This Standard Operating Procedure (SOP) is relevant but not limited to:

- All Trust employed frontline clinical staff recording patients' vital signs in ED and adult inpatient ward areas.
- Clinical staff viewing patient observation.
- All temporary contracted Trust staff with a valid requirement to access Cerner Millennium
  - Bank staff
  - Agency staff
  - Locum staff
  - Subcontractors
- Staff from other organisations utilising Cerner Millennium [EPR] e.g., CSH Surrey

2.2. This SOP does not apply to Maternity, Paediatrics [ Under age of 18], NICU and Outpatients.

## 3. Purpose

The purpose of this document is to set out the procedures to follow when using Cerner Millennium for recording of vital signs so that there is continuity of observations and minimal risk to patient care.

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## 4. Process

**4.1.** Each patient in the emergency department and on an inpatient ward area should have a set of vital signs taken 2hrly in accordance with emergency care policy. The initial set of vital signs MUST be recorded within 15 minutes of the patient's initial assessment and subsequent recordings will be 4hrly at 6am, 10am, 2pm, 6pm,10pm and 2am unless otherwise indicated by the NEWS22 score or medical prescription.

4.1.1. Prior to a transfer from ED to other department (i.e. ward, theatres, etc) the patient will have a new set of vital signs recorded.

4.1.2. Following an inpatient transfer, on arrival to the new ward, the patient will have a new set of vital signs recorded.

4.1.3. These will not be expected to be set within the electronic patient record [EPR] as a task to be completed but will be expected as routine standardised vitals recordings and uploaded/recorded into the patients record accordingly and NEWS2 updated.

**4.2.** The exceptions to this are:

- Patients on blood transfusion, specific observations related to infusions, post-operative recovery or pathway and I.V antibiotics.
- Where there is a need for an immediate clinical response to record more frequent vital signs in relation to NEWS2 scoring & escalation.
- Patients in End-of-Life Pathways and/or clinical decision is justifiable.

**4.3.** When patients require more frequent recording of vital signs these will need to be **tasked** in Cerner Millennium. How to complete this in EPR [Cerner Millennium] is outlined below in Table 1.

Table1.

Process	Additional Information
Review patient's observations chart within Cerner Millennium	Registered nurses to task observations for any patient scoring 3 or more in a single parameter or a combined score of 5 when the NEWS2 is calculated or if there is clinical concern or a need to monitor more closely.
Open the patient record, checking you have the correct patient information	You will have to establish a relationship with patient first.  Check the patient details in the blue banner bar.

<p>Order "Vital Signs" from within New Order Entry</p>	<p>Select the frequency of observations, according to NEWS2 as well as the time the observations are due to start.</p> <p>If concerned about the patient, task the observations as you feel clinically needed. Even if patient not scoring.</p> <p>If the patient observations are still scoring as above, at least one set of observations must be tasked for the next nursing shift until the next Nurse in charge has reviewed the patients.</p> <p>This will need to be tasked whenever the score goes up or down because the frequency will alter.</p>
<p>Once the order is completed, sign and refresh the screen</p>	<p>The task should now be visible at the bottom of the patient worklist page within Care Compass and will trigger a task at the appropriate times to prompt the nurse to complete.</p>
<p>To alter any ordered observations, the registered nurse will need to cancel any previously ordered observations and order new frequency of observations.</p>	<p>To be altered as part of the New Order Entry section</p>

**Table 2. NEWS22 scoring system.**

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

**Table 3. Clinical response to the NEWS22 trigger thresholds**

NEW score	Frequency of monitoring	Clinical response
0	Minimum 12 hourly	<ul style="list-style-type: none"> <li>Continue routine NEWS monitoring</li> </ul>
Total 1-4	Minimum 4-6 hourly	<ul style="list-style-type: none"> <li>Inform registered nurse, who must assess the patient</li> <li>Registered nurse decides whether increased frequency of monitoring and/or escalation of care is required</li> </ul>
3 in single parameter	Minimum 1 hourly	<ul style="list-style-type: none"> <li>Registered nurse to inform medical team caring for the patient, who will review and decide whether escalation of care is necessary</li> </ul>
Total 5 or more Urgent response threshold	Minimum 1 hourly	<ul style="list-style-type: none"> <li>Registered nurse to immediately inform the medical team caring for the patient</li> <li>Registered nurse to request urgent assessment by a clinician or team with core competencies in the care of acutely ill patients</li> <li>Provide clinical care in an environment with monitoring facilities</li> </ul>
Total 7 or more Emergency response threshold	Continuous monitoring of vital signs	<ul style="list-style-type: none"> <li>Registered nurse to immediately inform the medical team caring for the patient – this should be at least at specialist registrar level</li> <li>Emergency assessment by a team with critical care competencies, including practitioner(s) with advanced airway management skills</li> <li>Consider transfer of care to a level 2 or 3 clinical care facility, ie higher-dependency unit or ICU</li> <li>Clinical care in an environment with monitoring facilities</li> </ul>

**4.4.** Observations must be recorded in accordance with the NMC Code of Conduct and the Trust Records Management Policy, which states “*all entries are full, factual, consistent, contemporaneous, accurate and legible*”.<sup>1</sup>

**4.5.** Cerner Millennium will generate a discern alert informing the User of the NEWS2 and Risk Category and the recommended clinical response.

**4.6.** When clinically justified, a registered clinician can task the observations interval differently on Cerner Millennium, such deviations must be clearly documented, with a rationale, in the EPR and the medical team informed. For example, after an assessment the observation interval can be shortened as dictated by the patient’s condition. Equally, where deemed clinically appropriate, less frequent observations, such as 12hrly for patients due to be discharged.

<sup>1</sup> [Records Management Policy – Policies \(asph.nhs.uk\)](https://www.asph.nhs.uk/records-management-policy)

4.7. EPR [Cerner Millennium] vital observations have mandated blue fields which are required to be completed for a NEWS2 score to be generated.

4.7.1. If the essential mandated vitals are not completed in the Mindray observations monitors, the device will not send the information to the patient's electronic record. [The saturation prob must stay on until patient data has been sent successfully, on the summary page]

4.7.2. When vital signs are being uploaded automatically from Mindray devices directly to the patients electronic record it is necessary for the registered nurse responsible for the patient's care to ensure they record as accepted and reviewed. It is important to remember the source of truth of the NEWS2 score is in the electronic patient record not on the device.

4.8. This SOP does not negate clinical experience and patient observation, if it is suspected there are inaccurate EWS2 calculations in Cerner Millennium or difficulties uploading results electronically, clinical staff can manually upload vital signs and calculate EWS score manually to cross reference.

4.9. Any concerns must be escalated to senior clinical teams. Non-registered staff (i.e., Healthcare Assistants) are NOT allowed to change the observations interval.

4.10. Non-registered staff must have Observations results endorsed by a qualified registered nurse.

## Scale 2 for Chronic Respiratory Patients

4.11. This observations model is specifically designed for patients with lung disease and therefore its use should be limited to specific respiratory patients.

4.12. The use of Scale 2 should be discussed and agreed by the patient's clinical team.

4.13. The change from the standard observations model scale 1 to Scale 2 is carried out in EPR [Cerner Millennium] by the Clinician using New Order Entry, Oxygen Therapy Care Plan, Oxygen Prescription.

4.14. Inappropriate use of Scale 2 will put patients at risk as they will have an inaccurate EWS2 and therefore will not be escalated appropriately.

## 5. Duties and Responsibilities

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Duties and responsibilities in relation to recording of patients' vital signs in Cerner Millennium and its use are outlined in the list below:

- 5.1. Responsibility for the equipment inventory and its care on the wards resides with the Ward Managers (i.e., charging and cleaning devices and notifying I.T. Helpdesk via Horn Bill for Patient Data Issues, or connect ability).
- 5.2. EBME via the Novade App reporting Service for damage and faults with the Medical Devices.
- 5.3. Responsibility for the configuration of the ward devices and the system software resides with the Senior Medical Engineering Technician.
- 5.4. Responsibility for the configuration of Cerner Millennium vitals resides with the Digital Matron in collaboration with the Senior Medical Engineering Technician.
- 5.5. Responsibility for additional clinical training in the use of Cerner Millennium and vitals recording resides with the Ward Managers and the Clinical Practice Educators (CPEs).
  - 5.5.1. eLearning material for the Mindray VS9 can be found [here](#).

## 6. Dissemination and Implementation

This SOP will be disseminated through Trust Aspire and published on the Trust intranet.

## 7. Review and Revision Arrangements

- 7.1 This SOP will be reviewed every three years.
- 7.2 This SOP will be reviewed following any incident and/or following a change in process.

## 8. Document Control and Archiving

This document will be shared with the communication department for publishing on the Trust intranet and archive as required.

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