



# All-Wales Maternity Early Warning Score (MEWS)

## Standard Operational Procedure

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## **1. Background**

It has been highlighted through the Maternity and Neonatal Network Maternity Steering Group that Health Boards across Wales are using differing versions of the Modified Early Obstetric Warning Score (MEOWS) chart to monitor and act on clinical observations of women during pregnancy, labour and post-birth. It has been agreed nationally that there is a requirement for a standardised Maternity Early Warning Score (MEWS) chart, to be implemented across Wales, with the aim to reduce variation in clinical practice and the risk this poses to women.

The MBRRACE (Mother and Babies: Reducing Risk Through Audits and Confidential Enquiries) report, published in November 2022 recommended that action should be taken to ensure that a standardised MEWS chart should be used to monitor all women who attend any hospital to receive care. In order to meet this action, there is the requirement for the development of a nationally agreed and standardised MEWS chart, for use in every Health Board across Wales.

## **2. Introduction**

Unidentified acute maternal deterioration remains a contributing factor within cases of maternal death in the UK (MBRRACE 2024). Clinical observations provide an opportunity for assessment, and ongoing monitoring of maternal conditions and pathology in antepartum, intrapartum and postpartum. Early identification of deterioration may prompt improvements in care quality and ultimately in safety within maternity services. This has led to the introduction of a number of early warning scoring systems across Wales to aid in the assessment and prompt early recognition and treatment of acute deterioration.

In Maternity, early recognition of initial signs of deterioration are identified using the MEWS tool.

The MEWS tool breaks down 6 physiological parameters:

- respiratory rate
- oxygen saturations
- temperature
- pulse
- systolic blood pressure
- diastolic blood pressure

The woman's vital signs will be recorded on the chart and given a numerical score. This will give you a total MEWS for your patient each time you take observations.

The underlying principle of MEWS is that the presence of small changes in these variables will indicate a change in the clinical condition of a woman; allowing for early review and timely intervention or treatment to be undertaken.

**Respiratory rate is thought to be the most sensitive indicator of a woman's physiological wellbeing.**

Learning from incidents where there has been sub-optimal recognition and consequential inaction as a result of the mis categorisation of clinical state has aided to improve the detection of life-threatening illness. However, the detection of life-threatening illness or a deterioration in clinical condition alone is of little value. It is imperative that there is a standardised action proforma to guide clinicians to act on the changes to the clinical condition of a woman. These factors combined ensure the ongoing safety of mothers and ensure that prompt action is taken where abnormalities in physiological variables are identified.

The national MEWS is encompassed within the PIER framework. The early recognition and management of deterioration is not only about identification (I). PIER is a framework that supports clinicians to think about the prevention of deterioration (P) and standardised language supporting timely escalation (E) and the response (R) to concerns regarding deterioration.

**3. Criteria for use**

All women admitted to acute settings (Antenatal, Labour and Postnatal ward areas); Community midwifery services if the woman is presenting as unwell.

Women with no complicating factors during their pregnancy and labour are monitored using the All-Wales Pathway for Normal Labour observation chart. The All Wales MEWS chart is not an appropriate screening tool for routine care in healthy women with uncomplicated pregnancies.

SBUHB are running a phased implementation for Women being cared for in A & E, Gynaecology and other inpatient departments. Date to be confirmed for implementation of the MEWS tool in these clinical areas

**4. Frequency of observations**

Maternal observations are to be recorded based on clinical need. The required observation and the frequency must be documented within the woman's clinical records on admission. Where there are identified changes to the normal physiological parameters leading to concern which may indicate the requirement for a change to the frequency of the observations, this requires an Obstetric review and a management plan agreed and documented within the mother's records.

Admission Bundle

Date and time of admission and plan of care based on clinical presentation.

Within **two hours** of admission, all women must have a MEWS calculated, based upon a full set of observations. This MEWS reading, along with the associated frequency of ongoing observations is to be shared with all team members at every handover/safety briefing. Women who are fit and healthy with no medical concerns require 12 hourly observations whilst in hospital.

Women readmitted to hospital with their baby for neonatal care require observations only as part of their postnatal check (ie: once per day)

The plan should be recorded in the mother's maternity records with a signature and name of the clinician printed alongside.

Women admitted with any clinical concern -

The frequency of observations required must be recorded by the Obstetric team after review and should be based on clinical need

Please endeavour to use one MEWS continuously throughout current and subsequent admissions to support trend analysis over time.

- Observations undertaken for Epidural monitoring should be hourly during labour in the absence of other clinical concerns.
- Minimum monitoring intervals for post-operative spinal, epidural top-up and general anaesthesia are documented in 'Guideline for the Post Operative Management of Women who have received Intrathecal or Epidural Opioid Analgesia for Caesarean Section' These are minimum intervals, the anaesthetist may request more frequent monitoring depending on the clinical situation.

During the daily Obstetric review, the assessment of the clinical observations using the MEWS chart should be undertaken.

### **Additional concerns**

In addition to maternal observations the MEWS takes into consideration 'additional concerns'.

These concerns are to be considered when performing a set of observations and if present, escalated appropriately.

Additional concerns	
<p><b>If one or more of these additional concerns are present, consider:</b></p> <ol style="list-style-type: none"> <li>1. Increasing the frequency of observations to a minimum of every 30 minutes</li> <li>2. Escalate in line with a low-medium level of concern even if MEWS less than 2</li> <li>3. Where MEWS is greater than 2 raising the level of concern to the next category.</li> </ol>	<ul style="list-style-type: none"> <li>Healthcare professional concerned</li> <li>Woman/family concerned</li> <li>Significant additional therapies (e.g. Oxygen)</li> <li>Increased pain (+/-or analgesic requirement)</li> <li>Significant vaginal bleeding</li> <li>Reduced urine output</li> <li>Decreased level of consciousness/responsiveness</li> </ul>

If any of these additional concerns are present, along with an elevated MEWS score, it's important to consider increasing the level of concern. If no physiological abnormality is present, but any of these additional concerns are present, then escalation should still occur.

These features have not been quantified deliberately as the degree of concern is likely to be context specific and these features are a guide to multi-professional staff.

'Significant additional therapies' is included within the additional concerns to ensure the therapy is highlighted. These may include oxygen, magnesium sulphate, intravenous antibiotics and uterotonics.

## 5. Escalating concerns

The Midwife remains the accountable professional for the escalation to the Obstetric Team for review. Where observations have been delegated to a MCA, or appropriately trained HCSW, feedback must be obtained regarding the findings to ensure prompt action is taken where variation is identified.

A MEWS score of 2 or more must be escalated to the midwife in charge of the ward to ensure they are aware of the potential concerns and escalation plan

Labour ward coordinator - Labour ward

Band 6 midwife in charge – ward 19/AAU/Ward 20

They must also be escalated for an Obstetric review, with a full assessment undertaken and plan of care communicated and documented within the maternity records.

Where escalation is required, this should be communicated using the standardised acronyms:

AID (Advice, Inform, Do)

**OR**

SBAR (Situation, Background, Action, Recommendation)

Please refer to the triggers and thresholds for Obstetric/Medical review.

When there is escalation to the On-Call appropriate clinician on duty and they are unable to, or fail to attend within the given time threshold for the level of clinical

concern then escalation to the secondary contact is required. The Midwife must ensure she records all escalation contacts within the maternity records, and appropriately refer to the senior Obstetric/Medical teams where a review of clinical triggers is required.

Thresholds and triggers				
<ul style="list-style-type: none"> <li>The grade of medical team member indicated as the primary contact for each level of clinical concern is a guide and may need to be adapted depending on the local skill mix within that care setting or organisation</li> </ul>				
Level of concern	Low	Low-medium	Medium	High
MEWS	0-1	2-4	5-7	8 or more
Primary escalation & response (Use SBAR framework)		Review by midwife in charge	Urgent review by midwife in charge	Immediate review by midwife in charge
		Request review by ST1/2 or equivalent	Urgent review by ST3+ or equivalent and consultant made aware of plan Consider anaesthetic review	Immediate review by ST3+ or equivalent, consultant and anaesthetic team Consider review by outreach team
Medical review timing		Within 30 minutes	Within 15 minutes	Immediate
Minimal vital signs recording until medical review/ongoing plan	Continue with current observation frequency	Reassess observations within 30 minutes & document ongoing plan	Reassess observations within 15 minutes & document ongoing plan	Continuous observations
Secondary contact		ST3+ or equivalent	Consultant or equivalent	Clinical outreach team or equivalent
<ul style="list-style-type: none"> <li>When the primary team member(s) contacted is unable to attend or fails to attend within the expected time for the level of clinical concern, escalation to the secondary contact is required</li> <li>The secondary contact would be expected to attend within the initial medical review timing, calculated from the documented time of primary escalation</li> <li>The section <b>pulse (from 48 hours after birth)</b> cut-offs should be used for all women from 48 hours after birth. The time and date from which these values should be used should be entered on the front of the chart.</li> </ul>				

## 6. Auditable standards

- Compliance with completion of the MEWS
- Compliance with escalation based on triggers

Audit compliance through AMaT and National MEWS Audit tool

