MEWS example policy

This policy is simply an example of a maternity early warning system (MEWS) policy. You will need to adapt it to reflect expectations for local practice and processes through your established maternity service, in line with the maternity facility access agreement.[1] Many maternity services will have vital sign and escalation policies in place already, which they will need to update to reflect and incorporate the national maternity vital signs chart, maternity early warning score and escalation pathways. Related policies and guidelines will also need updating, for example, communication, assessment and ongoing monitoring requirements for particular procedures, medications or interventions; and referral or discharge guidelines.

Purpose

The purpose of this policy is to define minimum standards for measuring and recording vital signs, calculating the MEWS score and using the escalation pathway. The purpose of these processes is to ensure timely recognition of, and response to, physiological deterioration.

Scope

This policy applies to midwifery, nursing and medical staff caring for pregnant, or recently pregnant (up to and including 42 days later), women in hospital who require repeat observation of vital signs.

Begin using the maternity vital signs chart (MVSC) for any pregnant woman, or recently pregnant woman, who is assessed as needing or admitted requiring repeat observation of vital signs. Do not use the MVSC for routine intrapartum care. In the rare circumstance that a woman is identified with pre-existing or emerging concerns during labour (eg, known cardiac condition or emerging sepsis), you may use the chart to supplement the partogram.

Women who require care in a post-anaesthetic care unit, intensive care unit or high-dependency unit do not require the MVSC. However, before a woman leaves any of these units, you should chart her final vital signs on the MVSC. You can modify the MVSC as necessary to address any agreed deviation in vital sign parameters and MEWS scoring before transferring the woman to the ward (see 'Frequency' section below).

Definitions

Maternity vital signs

The MVSC contains a core of eight vital sign parameters to calculate a total MEWS score. These parameters are respiratory rate (RR), documentation of supplemental oxygen administration, oxygen saturation determined by pulse oximetry (SpO_2), body temperature (Temp), systolic blood pressure (SBP), diastolic blood pressure (DBP), heart rate (HR) and level of consciousness (LOC). Note that this approach includes both systolic and diastolic blood pressure in calculating the score.

[1] Ministry of Health. 2007. Maternity Services Notice Pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000. Wellington: Department of Internal Affairs.

Additional observations to inform assessment of a woman's wellbeing may include pain score and acute fetal concern.

MEWS score

Early warning scores help to identify acute illness and deterioration. You calculate the total MEWS score based on a total of the eight core vital signs. The score increases as the woman's vital signs deviate from the normal anticipated range. Higher scores are associated with increased morbidity and mortality.

A maternity-specific early warning score is needed because of the physiological changes in pregnancy and importance of both systolic and diastolic blood pressure parameters. In particular, it is needed for women who are pregnant, or have been recently pregnant (up to and including 42 days later), and who are assessed as requiring repeat vital signs observations.

Possible scores for each core vital sign range from 0 (normal range) to 3 (grossly abnormal). Add the individual scores for each vital sign together to calculate the total MEWS score. This is the score you use to trigger escalation of clinical care and review.

The scoring system also allows for a single vital sign parameter to trigger escalation. If any single vital sign falls into a pink- or blue-coloured zone, you must take the associated action. For example, if the score deviates extremely from normal (for any single vital sign in the blue zone), you must escalate care to the rapid response team.

Exemption to calculating a total MEWS score

You do not need to calculate a total MEWS score when a woman does not require all vital signs to be taken. In this instance, please annotate 'EX' for 'exemption' in the total score box. This exemption is only to be used in the maternity wards and is acceptable for:

- regular repeated blood pressure recordings, such as every 15 minutes following antihypertensive administration
- women who are post-operative with intrathecal analgesia
- women who have a patient-controlled analgesia pump
- women requiring an iron infusion.

It is important to record all vital signs on the same chart to visualise any changes and when it is necessary to initiate a full set of observations and appropriate assessment and escalation.

Escalation pathway

The escalation pathway outlines the actions to take when a calculated total MEWS score or single vital sign indicates deviation from the normal range. The escalation pathway outlines a tiered clinical response to an increasingly abnormal total MEWS score or single vital sign score. The escalation pathway can also be followed when a nurse or midwife, the woman or her family or whānau are worried, regardless of the total MEWS score.

Frequency of observations

Document a plan on the woman's clinical notes to specify the frequency of vital sign monitoring and any observations to make in addition to the core observation set. The lead care provider and/or clinical team with overall accountability for the woman's care should agree to this plan, which you should document in the woman's clinical record.

Rapid response team

The rapid response team includes doctors and nurses with skills in critical care. They attend when critical physiological deterioration is recognised and provide immediate bedside clinical support 24 hours a day, 7 days a week. For maternity patients, this support may also include consulting with midwifery and relevant medical (obstetric, physician, anaesthetic) staff or involving them in the care.

[*insert details of local rapid response team – team members, contact details, availability*]

Policy

General principles and procedure

At all times, maternity care providers should use their clinical judgement about the frequency and interpretation of vital signs. Women who are acutely ill or post-procedure may need continual monitoring of vital signs until they are stable or transferred to a higher-acuity clinical area.

At each time of measuring vital signs, measure the complete core set and document your findings on the MVSC at the time of measurement (unless the woman meets the criteria for exemption). Calculate the total MEWS score based on the assessment and take the relevant escalation actions (or else immediately document a clear rationale for not taking action in the clinical record).

It is important to record all vital signs on the same chart to visualise any changes and when it is necessary to initiate a full set of observations and appropriate assessment and escalation.

Frequency

For women with acute illness, we recommend a minimum frequency of taking vital sign measurement every four hours. You may need to take more frequent measurement depending on the clinical status of the woman, treatment provided, or procedure performed. If at any time the total MEWS score is increasing or there are concerns about the woman's clinical condition, increase the frequency of vital sign measurement.

If other relevant clinical guidelines or directives require more frequent vital sign measurement (eg, blood transfusion, epidural, post-anaesthetic or post-procedure recovery, medication infusion), that frequency takes precedence over the required frequency of monitoring in this policy.

Women who are well and healthy (ie, not acutely unwell and are not covered by other guidelines or directives) do not require vital sign measurements every four hours. The lead maternity carer should identify an appropriate frequency of vital sign measurement following birth. They must document this information clearly in the woman's postnatal care plan in her clinical record.

High-acuity areas that do not routinely record vital signs on the MVSC (eg, intensive care, the emergency department, post-anaesthetic unit or coronary care) should measure and document the core set of vital signs on the MVSC and calculate the total MEWS score within an hour of planned transfer to ward areas. If the vital signs indicate that the woman needs an escalation of care, you must resolve the issue before transfer (either through beginning appropriate treatment or by documenting a modification on the MVSC if this is clinically appropriate).

Agreed frequency of vital sign measurement should be supported where possible. If there are concerns related to the woman's health, do not withhold or delay assessment to avoid disturbing a woman who is asleep.

Measuring and documenting vital signs and total MEWS score

Document all vital signs directly onto the MVSC at the time of measurement.

The core set of vital signs to measure and document every time are:

- respiratory rate (breaths per minute)
- presence or absence of supplemental oxygen administration (litres per minute if applicable)
- oxygen saturation determined by pulse oximetry (percentage as determined by pulse oximetry)
- body temperature (degrees Celsius)
- systolic and diastolic blood pressure (millimetres of mercury)
- heart rate (beats per minute)
- level of consciousness (normal or abnormal).

For routine vital sign measurement, the woman should be settled and at rest. Unless there is clinical concern about the woman, wait 20 minutes following physical activity before measuring vital signs.

Document the size of blood pressure cuff and the arm (right or left) that the blood pressure is recorded on, and the route of obtaining the temperature, to ensure consistency of measurement.

In most instances, the midwife or nurse caring for the woman is responsible for measuring and documenting the vital signs. Document vital signs according to the instructions on the chart and in the MVSC user guide.

Modifying MEWS score triggers

A small number of clinically stable but unwell women, or women with chronic disease, may have abnormal vital signs that are ‘normal’ for them. To accommodate this situation and prevent over-triggering of the response system, you can modify the score associated with an individual vital sign parameter. For example, where a woman has a normal resting heart rate of 55, a modification may be to indicate a score of 0 for heart rate in the 50s.

Any modification must be made in discussion with a registrar or senior doctor and reviewed regularly by the consultant with overall accountability for the woman’s care. To remain valid, you should re-document modifications when you begin a new MVSC. Never use modification to the score associated with a vital sign parameter to normalise abnormal vital signs in clinically unstable women or to prevent appropriate escalation of care.

All modifications must be signed and dated. If a modification is not signed and dated, apply the usual MEWS scoring. A time-limited modification should revert to usual MEWS scoring when the specified duration has passed.

Escalating care

The escalation pathway is important and mandatory. Follow it for a woman with a total MEWS score of 1 or more. Take action at the time of documenting the triggering score. If the mandated response does not occur within the timeframe specified, or if new acute concern occurs, escalate care to the action specified in the next coloured escalation zone. Document details of actions taken to escalate care in the woman’s clinical record.

Anyone may place a rapid response call if they are seriously concerned about a woman, regardless of vital signs or total MEWS score.

Rapid response calls: documentation and communication

When a rapid response call is triggered, you must:

- record clinical documentation (which may be via a sticker) with details of the reason for the call, any investigations or interventions provided, and the plan for ongoing follow-up are documented in the woman's clinical notes
- inform the woman, whānau, lead maternity carer and team with primary accountability for the woman's care as soon as practicable.