1 Early Warning Score (EWS) Management Protocol

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1.2 Clinical staff responsibilities

1.3 Communication/handover requirements

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1.6 Appendix Two: Modified Early Obstetric Warning score (MEOWS) Management Protocol

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Policy Statement

EWS tools assist with the recognition and appropriate management of clinically deteriorating patients and the patient at risk of clinical deterioration and is complimentary to skilled clinical assessment and decision making.

Purpose

An Early Warning Score must be used for all patients within a hospital setting when recording observations/vital signs, to aide:

- Early detection of detrimental changes
- Safe, timely, effective management of care in response to a patient’s deteriorating condition.

The EWS is required to be communicated between staff when transferring patients between areas and with requests for clinical assistance.

Variations

- Maternity patients use the Modified Early Obstetric Warning Score (MEOWS).
- Paediatric patients up to 15 years of age, use the age appropriate Paediatric EWS (PEWS).
- The Neonatal ICU is exempt from using PEWS.

For the purposes of this policy when the term EWS is used, this encompasses the EWS, MEOWS and PEWS.
Audience/Scope

CDHB Medical, Nursing and Midwifery staff

Associated Documents

CDHB EWS Management Protocol Booklet
CDHB EWS Education packages
CDHB EWS Audit tool
CDHB EWS Lanyard Cards (in development)
CDHB Adult Observation Chart C280010
CDHB MEOWS chart (in development)
CDHB Paediatric Observation Chart (0 – 3 months) C280011A
CDHB Paediatric Observation Chart (12 months) C280011B
CDHB Paediatric Observation Chart (1-4 years) C280011C
CDHB Paediatric Observation Chart (5-11 years) C280011D
CDHB Paediatric Observation Chart (11-15 years) C280011E
CDHB PEWS Lanyard Cards (in development)
CDHB Neuroscience Observation Chart C280014
CDHB Neurology Observation Chart C180002
CDHB ISBAR Communication Policy Vol 11
CDHB ISBAR CDROM
CDHB ISBAR Lanyard Cards ref 2299
CDHB Transfer of Patients between Hospitals Vol 11
CDHB Maternity Acute Observation Chart C280090
CDHB Adult Cardiology Observation Chart C280094
CDHB Paediatric HDU Observation Chart (0 – 3 months) C280016A
CDHB Paediatric HDU Observation Chart (12 months) C280016B
CDHB Paediatric HDU Observation Chart (1-4 years) C280016C
CDHB Paediatric HDU Observation Chart (5-11 years) C280016D
CDHB Paediatric Observation Chart (11-15 years) C280016E
1.1 Education of staff

All staff within the scope of this policy must receive clinical training on the EWS Management Protocol.

Staff must be aware of their responsibilities within the protocol as part of the division and ward/unit orientation.

1.2 Clinical staff responsibilities

All patients must have a documented plan for the monitoring of observations that is clinically appropriate for the patient.

1.2.1 Nursing Observation Responsibilities

For an adult patient, the following observations/symptoms must be recorded to obtain an accurate EWS:

- Respiratory rate calculated over 1 minute
- Heart rate for at least ½ minute
- Blood pressure
- Conscious level using the AVPU
- Temperature (by a consistent method)
- Urine output

For a maternity patient, the following observations/symptoms must be recorded to obtain an accurate MEOWS:

- Respiratory rate calculated over 1 minute
- Heart rate for at least ½ minute
- Blood pressure
- Conscious level using the AVPU
- Temperature (by a consistent method)
- Urine output
- Lochia (post natal)
- Proteinura (ante and post natal)
- Reflexes (ante and post natal)
For a Paediatric patient the following observations/symptoms must be
completed on admission to obtain accurate PEWS. Subsequent
observation requirements are determined by the PEWS management
plan and/or the medical team.

- Respiratory rate calculated over 1 minute
- Respiratory distress score
- Pulse oximetry
- Heart rate for at least ½ minute
- Blood pressure
- Conscious level (using the AVPU)
- Capillary refill time

Note whilst temperature is not included in the PEWS, a baseline
temperature recording is taken on admission and four hourly thereafter
for an inpatient.

1.2.2 Protocol Management and Documentation Responsibilities

Nursing staff must calculate the EWS from the observations/symptoms
and document the score on the appropriate observation chart or in the
clinical notes.

All clinical staff must follow the appropriate EWS management
protocol according to the EWS calculation.

All clinical staff will document any variances from the EWS in the
clinical notes and update care plan/pathway.

If a EWS score is explainable and acceptable for a patient based on
clinical judgement, the reason(s), acceptable observation parameters
and an alternative management plan must be clearly documented by
**medical staff** in the patient’s clinical record.

Medical staff must document the following within the clinical notes for
each patient review:

- The EWS
- Reason for review e.g. ward round, review requested, etc
- Assessment and management plan
- If an additional review is requested indicate the time frame for this
  review to prevent further patient clinical deterioration.
1.3 Communication/handover requirements

Any pathway communication/handover with other staff i.e. Medical Staff or Clinical Team Coordinators, is provided using the ISBAR communication method stating the:

- Patient’s condition/diagnosis
- Patient’s EWS
- The components of observations that drove the score
- What actions have already been taken
- Clarification of actions to take following the communication i.e. repeat EWS in set timeframe and contact medical staff again if required.

1.4 Evaluation

Regular compliance audits of the use of the EWS Management protocol will be conducted in areas using the CDHB EWS/MEOWS/PEWS Audit tool.
1.5 Appendix One: Adult Early Warning Score (EWS) Management Protocol

From the back of the Adult Observation Chart C280001

<table>
<thead>
<tr>
<th>Score</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway</td>
<td>Patent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Under threat</strong></td>
<td></td>
</tr>
<tr>
<td>Respiratory Rate /min</td>
<td>&lt;9</td>
<td>9-14</td>
<td>15-20</td>
<td>21-29</td>
<td>&gt;30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart Rate /min</td>
<td>≤40</td>
<td>41-50</td>
<td>51-100</td>
<td>101-110</td>
<td>111-120</td>
<td>&gt;120</td>
<td></td>
</tr>
<tr>
<td>Systolic BP</td>
<td>≤80</td>
<td>81-90</td>
<td>91-100</td>
<td>101-170</td>
<td>171-199</td>
<td>&gt;200</td>
<td></td>
</tr>
<tr>
<td>Conscious level / AVPU</td>
<td>New confusion/ agitation</td>
<td>Alert (A)</td>
<td>Responds to Voice (V)</td>
<td>Responds to Pain (P)</td>
<td>No Response (U)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urine Output</td>
<td>≤10</td>
<td>11-20</td>
<td>21-30</td>
<td>&gt;30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temp °C</td>
<td>≤35</td>
<td>35-38</td>
<td>38.1-39</td>
<td>&gt;39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Urine output to be averaged over 4 hours. If no IDC score zero initially and consider bladder scan IDC if concerned.

*For severe respiratory compromise activate a CLINICAL EMERGENCY

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**Early Warning Score (EWS) Management Protocol**

- **Score 1 – 2**
  - Increase frequency of observations to Q2H or more frequently if required
  - Inform nurse in charge
  - Consider medical review - contact team RM/O/Obstetric Registrar within 2 hours

- **Score 3 – 5 or one score of 3**
  - Increase frequency of observations to Q30 - 60 mins
  - Inform nurse in charge
  - Medical review within 30 minutes - contact team RM/O/Obstetric Registrar. Mandatory registrar specialist review if no improvement
  - Plan to be formulated and documented in patient’s clinical record
  - If patient not seen or not responding to treatment contact ICU Outreach Registrar pg 8155 or CNS pg 8073
  - NON CHRISTCHURCH HOSPITAL SITES
  - If patient not seen or not responding activate Clinical Emergency or 777
  - Consider transfer to Acute Admissions Unit (Ashburton) or Christchurch Hospital

- **Score ≥6**
  - Observations minimum of Q30 mins
  - Inform nurse in charge
  - Urgent medical review - Contact team RM/O/Obstetric Registrar/Appropriate Specialist Registrar
  - Contact ICU Outreach Registrar pg 8155 or CNS pg 8073 for review
  - Inform on-call Specialist for the team NON CHRISTCHURCH HOSPITAL SITE
  - Activate Clinical Emergency
  - Consider transfer to Acute Admissions Unit (Ashburton) or Christchurch Hospital

If unsure re EWS or for support with patient care call ICU Outreach CNS pg 8073 or ICU Reg 8155

If Cardiac or Respiratory Arrest is imminent call a Clinical Emergency Immediately
1.6 Appendix Two: Modified Early Obstetric Warning score (MEOWS) Management Protocol
1.7 Appendix Three: Paediatric Early Warning Score (PEWS) Management Protocol

**Calculating PEWS scores:**

Calculate a full PEWS score:
- on admission
- when patient deteriorates
- on transfer between clinical areas

For observations outside the range of the graph write as a number
SpO2 is to be written as a number.

**Variance to PEWS**

If abnormal ranges are expected for a child’s clinical condition, please specify accepted parameters:
- Respiratory Rate
- Heart Rate
- Systolic Blood Pressure

Minimum standards for observations as per Vol. Q to be followed. Variation away from this standard or the PEWS management plan is required to be documented in the nursing care plan or medical management plan.

**Respiratory Distress Score**

Score as nil, mild, moderate or severe depending on the degree of increased respiratory effort. Clinical indicators that describe increased effort include:
- chest recession, accessory muscle use, head bobbing, nasal flaring, tracheal tug, sternal recession, grunting.

Indicators will vary with each patient.

**Visual Phlebitis Score**

<table>
<thead>
<tr>
<th>Score</th>
<th>V Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No symptoms</td>
</tr>
<tr>
<td>1</td>
<td>Erythema at insertion site with or without pain</td>
</tr>
<tr>
<td>2</td>
<td>All of the above plus oedema</td>
</tr>
<tr>
<td>3</td>
<td>All of the above plus streak formation/palpable cord</td>
</tr>
<tr>
<td>4</td>
<td>All of the above plus palpable venous cord + fever and discharge</td>
</tr>
</tbody>
</table>

**Oxygen Delivery Method**

NP = Nasal Prong (Low flow O2)
HF = High Flow Nasal Oxygen (record % O2)
M = Face Mask
AC = Adult/Mask CPAP (record % O2)
IR = Non- rebreather Mask
FD = EME Flow Driver CPAP (record % O2)

**Paediatric Early Warning Score (PEWS) Management Plan**

PEWS is a tool and does not replace sound clinical judgement – IF CONCERNED AT ANY TIME seek medical review even if patient’s score does not trigger management plan. Use ISBAR format to communicate with medical staff re change in patients condition.

**Score 1 – 3**
- Notification
  - Consider informing Nurse in charge
- Actions
  - Optimize appropriate treatment as prescribed
  - Manage anxiety
  - Observations at least QHP or more frequently if required
  - Review oxygen requirement

**Score 4 – 5**
- Notification
  - Notify nurse in charge
  - Notify RMD and discuss patient’s condition
- Actions
  - Calculate full PEWS score
  - Optimize treatment
  - Plan to be formulated and documented including timeframe and criteria for review and frequency of observations
  - Reevaluate PEWS after interventions

**Score 6 – 7**
- **CHRISTCHURCH**
  - Notification
    - Notify nurse in charge
    - Request register review within 15 mins
  - Actions
    - Calculate full PEWS score
    - Observations minimum of 2 hrs
    - Document plan which includes time frame & criteria for review
    - Reevaluate PEWS after interventions
    - Consider PHGU

- **ASHBURY WEST COAST/RURAL**
  - Notification
    - Notify nurse in charge
    - Request RMDMO review within 15 mins
  - Actions
    - Calculate full PEWS score
    - Observations minimum of 2 hrs
    - Document plan which includes time frame & criteria for review
    - Reevaluate PEWS after interventions
    - Discuss with senior clinician covering paediatrics

**Score 8 +**
- **CHRISTCHURCH**
  - Notification
    - Request urgent register review
    - Notify nurse in charge
    - Request to notify consultant
    - Consider ICU outreach – CNS pg 8073, Ref pg B155
  - Actions
    - Observation minimum of 2Q0 min
    - Transfer to PHGU
    - Document plan which includes time frame and criteria for review
    - Reevaluate PEWS after interventions

- **ASHBURY WEST COAST/RURAL**
  - Notification
    - Request MORMO review within 15 mins
    - MORMO contacts senior clinician covering paediatrics
    - Notify nurse in charge
  - Actions
    - Observation minimum of 2Q0 min
    - Reevaluate PEWS after interventions
    - Senior clinician to discuss with Chh Paediatrics
    - Consider transfer to Chh Hospital

**FLACC Scale (Children < 5y)**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No particular expression</td>
</tr>
<tr>
<td>1</td>
<td>Grimace of pain</td>
</tr>
<tr>
<td>2</td>
<td>Unhappy, demoralized</td>
</tr>
<tr>
<td>3</td>
<td>Frequent to constant</td>
</tr>
<tr>
<td>4</td>
<td>Dunghill</td>
</tr>
</tbody>
</table>

| 0     | Content, relaxed |
| 1     | Measured or occasional |
| 2     | Difficult to comfort |

**Policy Owner**
Department of Nursing, Christchurch Hospital

**Date of Authorisation**
June 2013