Guideline Purpose

To provide guidance and direction for the use of the British Columbia Pediatric Early Warning System (BC PEWS). The PEWS system supports the early recognition, mitigation, notification, and response to the pediatric patient identified to be at risk of deterioration.

Practice Level / Competencies

Conducting physical assessments, vital sign measurements and PEWS scoring are foundational level competencies of registered nurses (RN) and licensed practical nurses (LPN). In areas where various levels of care providers (LPN, Care Aide, student nurses, employed student nurses) are assigned to patients, care of a deteriorating patient will be assumed by the RN.

Background

The PEWS provides evidence-informed methods to assess children in different age groups, using vital signs parameters and risk indicators supported by evidence to be reliable indicators of deterioration. The system is made up of a risk score based on physiological findings, evidence based risk factors (situational awareness), escalation responses, and a communication framework. Together these system parts are designed to provide a standardized framework and language to identify potential deterioration in a child, mitigate that risk, and escalate care as needed as early as possible.

Site Applicability

This practice applies to all pediatric patient care areas that have been designated by your health authority.

Definitions

Pediatric Patient:
- Children up to their 17th birthday (16 years + 364 days) in Hospital emergency departments (EDs) and Health Authority-funded health centres;
- New patients: up to a child’s 17th birthday (16 years + 364 days); and children receiving ongoing care: up to a child’s 19th birthday (18 years + 364 days) in Hospital inpatient settings.

Pediatric Early Warning System Score: Relevant patient assessment findings such as cardiovascular, respiratory, behavioural data as well as persistent vomiting following surgery and use of bronchodilators every 20 minutes is collected, documented, and summated into a score. The score can be used to identify patient physical deterioration at a single point in time or through trend monitoring, to optimize chances for early intervention.

Situational Awareness: Awareness of the factors associated with the risk of pediatric clinical deterioration. For PEWS this consists of 5 risk factors: Patient/Family/Caregiver Concern, Watcher Patient, Communication Breakdown, Unusual Therapy, and PEWS Score 2 or higher.

Patient/Family/Caregiver Concern: a concern voiced about a change in the patient's status or condition (e.g. concern has the potential to impact immediate patient safety, family states the patients is worsening or they are not behaving as they normally would).
“Watcher” Patient: a patient that you identify as requiring increased observations (e.g. unexpected responses to treatments, child different from “normal”, surgical risk, abnormal lab results, abnormal neurovitals, aggressive patient, “certified” patient, over/under hydration, pain, oedema, “gut” feeling).

Communication Breakdown: describes clinical situations when there is lack of clarity about treatment, plan, responsibilities, conversation outcomes and language barriers.

Unusual Therapy: Unfamiliarity with a medication or protocol in the department or by the health care provider (e.g. new and/or low frequency and high risk medication or process). Applying the unusual therapy brings increased awareness to patient care, support and planning.

PEWS Score 2 or higher: A score of 2 or higher should trigger increased awareness, notification, planning, assessment, and resource review.

SBAR: The Situation-Background-Assessment-Recommendation (SBAR) technique provides a framework for communication between members of the health care team about a patient’s condition. SBAR is an easy-to-remember, concrete mechanism useful for framing any conversation, especially critical ones, requiring a clinician’s immediate attention and action. It allows for an easy and focused way to set expectations for what will be communicated and how between members of the team, which is essential for developing teamwork and fostering a culture of patient safety.

Procedure

<table>
<thead>
<tr>
<th>IDENTIFICATION OF PATIENTS AT RISK FOR DETERIORATION</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Emergency/Urgent Care Setting-RN</td>
<td></td>
</tr>
<tr>
<td>1. At TRIAGE complete a full set of vital signs and calculate the PEWS and CTAS scores and complete SEPSIS SCREEN.</td>
<td>Establishes a baseline and supports the assignment of a CTAS score</td>
</tr>
<tr>
<td>Note: A patient requiring EMERGENT or RESUSITATION level of care may not have a PEWS score completed at triage. If the child responds positively to treatment, applying a PEWS score can be considered at any point. Children who continue to be in a decompensated or resuscitated state should be managed according to site procedures and physician orders. Referring to the Escalation aid (red zone) may offer useful support and recommendations in care, planning, consultation and transfer.</td>
<td>PEWS and the Escalation Aid are not a substitute for clinical judgment but rather tools to aid you in identifying patients at risk, and accessing resources to mitigate that risk as soon as possible</td>
</tr>
<tr>
<td>2. IDENTIFY any situational awareness factors present for your patient.</td>
<td>Communication for rest of health care team</td>
</tr>
<tr>
<td>3. Refer to your sites ED PEWS ESCALATION AID. VERBALLY report identified at risk patients using SBAR and document time of escalation and steps taken.</td>
<td>Establishes a baseline and trending of vital signs</td>
</tr>
<tr>
<td>4. REPORT the PEWS to the most responsible RN when the patient is moved into a care area.</td>
<td></td>
</tr>
<tr>
<td>5. RN responsible for patient to conduct a primary and secondary ASSESSMENT. Including Vital Signs and PEWS observations.</td>
<td></td>
</tr>
</tbody>
</table>
6. **DOCUMENT** your patient’s assessment at the bedside, including the PEWS Score and any identified situational awareness factors.
   **RE-ASSESS** your patient per the frequency identified in the physician orders, care plan, escalation aid for your agency and Health Authority specific guidelines.

   "Communication for rest of health care team
   Ongoing re-assessments to identify early signs of clinical deterioration and support mitigation strategies"

7. **SEPSIS SCREEN** is to be conducted using the Provincial Sepsis Screening Tool if the PEWS score increases by 2 or meets sepsis critical heart rates and/or temperature.

   "Early identification and intervention is key"

**B. Admitted Inpatient Setting -RN**

1. Prior to shift handover **REVIEW** patients and **NOTE IDENTIFIED** at risk patients. Continue to check status of identified patients throughout the day

   "Increase team awareness of unit status for at risk patients."

2. **VERBALLY** report identified at risk patients using SBAR

   "Shared communication increases awareness of where resources may be needed."

3. **BE AWARE** of other patients at risk

4. At beginning of shift, or when you assume responsibility conduct a full head-to-toe **ASSESSMENT** of your patient

   "Establishes a baseline"

5. **IDENTIFY** any situational awareness factors present for your patient

6. **DOCUMENT** your patient’s assessment at the bedside, including the PEWS Score and any identified situational awareness factors.
   **RE-ASSESS** your patient per the frequency identified in the physician orders, care plan, escalation aid for your agency and Health Authority specific guidelines.

   "Communication for rest of health care team"

7. **SEPSIS SCREEN** is to be conducted if the PEWS score increases by 2 or meets sepsis critical heart rates and/or temperature.

   "Early identification and intervention is key"

**C. Charge Nurse or RN Responsible for patient care unit**

1. **ATTEND** handover and **UPDATE** at risk patient status on facility tracking system.

   "Supports increased awareness and ongoing communication"

2. During shift report **LISTEN** to RN’s report of patients and ensure at risk patients are identified.

   "Make sure everyone is aware of at risk patients. Establish baseline"

3. **NOTIFY** site manager or delegate of at risk patients. If applicable in your facility, **ATTEND** bed meeting.

   "Contribute to system view of patients in hospital
   Notification of potential resources"
4. **CHECK-IN** every 4 hours or sooner if required; engage RNs in coaching conversation using 6 questions to determine at risk patients, plan of care, supports required and follow-up.
   a. What is going on now?
   b. What have you done already?
   c. What still needs to be done/What are the barriers to care?
   d. What are the next steps?
   e. What support do you need?
   f. When/How will we follow up?
   * If nurses do not check in then the Charge Nurse or delegate to seek them out for check-ins

| Understand areas of concern | Support plans as required | Escalate as required |

5. **UPDATE** visual cues—using your agency’s communication tool.

| Visual cues to signal all team members of at risk patients |

6. **CHECK-IN** with manager, supervisor or designate and **REPORT** at risk patients.

| Communicate areas of concern | Trouble shoot plan of care | Escalation support |

### NOTIFICATION/RESPONSE TO IDENTIFIED AT RISK PATIENTS - RN

1. **REPORT** using **SBAR** identification of patient at risk and/or progress with patient at risk to the Charge Nurse per the frequency identified in the physician orders, care plan, and escalation aid for your agency.

| Facilitates timely notification to team members |

2. **Actions** for identified risks:
   a. Follow the escalation aid for your agency which may be modified from the Provincial PEWS Escalation Aid, to reflect the resources and processes specific to your site.

**NOTE:** Provincial PEWS and the Escalation Aid are not a substitute for clinical judgment but rather tools to aid you in identifying patients at risk, and accessing resources to mitigate that risk as soon as possible. For any patient with a life-threatening condition escalate care immediately as per your health authority code.

### BC PEWS Inpatient/Admitted Provincial Escalation Aid

<table>
<thead>
<tr>
<th>PEDIATRIC EARLY WARNING SYSTEM SCORE</th>
<th>0-1</th>
<th>2</th>
<th>3</th>
<th>4 and/or score increases by 2 after interventions</th>
<th>5-13 or score of “3” in one category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Notify</strong></td>
<td><strong>0-1</strong></td>
<td><strong>2</strong></td>
<td><strong>3</strong></td>
<td>As per PEWS score 2 AND notify most responsible Physician (MRP) or delegate</td>
<td>As per PEWS score 4 AND MRP to assess patient immediately (&amp; pediatrician if available)</td>
</tr>
<tr>
<td></td>
<td><strong>Review patient with a more experienced healthcare provider</strong></td>
<td><strong>Escalate if deemed further consultation required OR resources do not allow to meet care needs</strong></td>
<td><strong>As per PEWS score 2</strong></td>
<td><strong>If MRP unable to attend call for STAT physician review as per MRP’s directions</strong></td>
<td><strong>Appropriate “senior” review</strong></td>
</tr>
<tr>
<td></td>
<td><strong>MRP or delegate to communicate a plan of care to mitigate contributing factors of deterioration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Plan</strong></td>
<td></td>
<td></td>
<td></td>
<td>As per PEWS Score 4</td>
<td></td>
</tr>
</tbody>
</table>
## BC PEWS Clinical Decision Support Tool

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Resources</th>
<th>SITUATIONAL AWARENESS</th>
</tr>
</thead>
</table>
| Continue monitoring & documentation as per orders & routine protocols | Increase frequency of assessments & documentation as per plan from consultation with more experienced healthcare provider | If patient is assessed with one or more of the following situational awareness factors;  
- Parent concern about child’s condition  
- Watcher patient  
- Unusual therapy  
- Breakdown in communication |

### PEWS Score 1
- Increase frequency of assessments & documentation as per PEWS Score 1
- As per PEWS Score 1
- Reassess adequacy of resources available and escalate to meet deficits
- Consider internal or external transfer to higher level of care

### PEWS Score 4
- Increase frequency of assessments & documentation as per plan from consultation with more experienced healthcare provider
- As per PEWS Score 4
- Increased nursing (1:1) care with increasing interventions as per plan
- Reassess care location – consider internal or external transfer to higher level of care

### Resources
- RN reviews patient with the ED senior nurse (e.g. charge nurse, PCC) and identifies if escalation is required. If so, notify MRP
- RN increases frequency of assessments & documentation of VS and PEWS score

### Plan
- RN notifies the most responsible physician (MRP) or physician delegate. Based on rate of deterioration Emergency Physician (EP) to consider consulting a physician
- MRP or delegate to communicate a plan of care to mitigate contributing factors of deterioration

### Assessment
- Nurse (RN) continues assessments and monitors
- RN documents VS and PEWS score as per unit/Health Authority guideline

### SITUATIONAL AWARENESS
- As per PEWS Score 1
- Increase frequency of assessments & documentation as per plan from consultation with more experienced healthcare provider
- RN increases frequency of assessments & documentation of VS and PEWS score

### Resources
- ED senior nurse will assess the RN to patient ratio and make changes as needed
- ED senior nurse assesses care location to ensure the appropriate level of skill mix, equipment, medication and resources available
- Senior nurse and MRP or physician delegate considers internal or external transfer to higher level of care

### SITUATIONAL AWARENESS
- Follow PEWS Score 2 actions
- Follow PEWS Score 2 actions
- As per PEWS Score 4
- As per PEWS Score 4
- Senior nurse arranges increased nursing care (1:1) with increasing interventions as per plan
- Patient will be moved to an acute care space within the ED
- Senior nurse and MRP or physician delegate considers external transfer to higher level of care

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*This document is based on scientific evidence current as of the date of issue.*  
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### Related Documents

1. Provincial PEWS Flowsheets/ENARs  
   1.1. 0-3 months  
   1.2. 4-11 months  
   1.3. 1-3 years  
   1.4. 4-6 years  
   1.5. 7-11 years  
   1.6. 12 + years  
2. Instructions for use of the Provincial Pediatric Patient Flowsheet  
3. Instructions for the use of the Provincial Emergency Nursing Record (ENAR)  
4. Situational Awareness Poster  
5. Sepsis Screening Tool  

### Document Creation / Review

Adapted from BC Children’s Hospital by Child Health BC  
Create Date: July 11, 2014  
Revision Date: January 24, 2018

### Appendices

- A. Brighton PEWS Scoring Tool  
- B. Situational Awareness Poster  
- C. SBAR Tool  
- D. Disclaimer
References


## Appendix A: Brighton PEWS Scoring Tool

<table>
<thead>
<tr>
<th>Brighton Pediatric Early Warning Score</th>
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</thead>
<tbody>
<tr>
<td><strong>SCORE</strong></td>
</tr>
<tr>
<td>Behaviour</td>
</tr>
<tr>
<td>Wildlife</td>
</tr>
<tr>
<td>Respiratory</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Cardiovascular</td>
</tr>
</tbody>
</table>

Total PEWS Score

(Monaghan, 2005)
Appendix B: Situational Awareness

Situational Awareness
There are five risk factors that contribute to pediatric clinical deterioration:

**Patient / Family / Caregiver Concern**
A concern voiced about a change in the patient’s status or condition.
- A concern that has the potential to impact immediate patient safety
- Family states the patient is worsening or not behaving as they normally would

**“Watcher” Patient**
A patient that you identify as requiring increased observations.
- Unexpected responses to treatments
- Child different from “normal”
- Aggressive patient
- “Certified” patient
- Over/under hydration
- “Gut” feeling

**Communication Breakdown**
Describes clinical situations when there is lack of clarity about:
- Treatment
- Plans Responsibilities
- Conversation outcomes
- Language barriers

**Unusual Therapy**
Includes staff unfamiliar with ward or department, therapy or process.
- Float nurses or break coverage
- High risk infusion
- New medication or protocol for patient or nurse

** Pediatric Early Warning System Score 2 or Higher**
Relevant patient assessment findings are summed into a score that can be used to identify patient physical deterioration early, so to optimize chances for intervention. These include:
- Cardiovascular, respiratory and behavioural data
- Persistent vomiting following surgery
- Use of bronchodilators
- A score of 2 or higher should trigger increased awareness.
### Appendix C: SBAR Tool

#### S
**Situation: What is the situation you are calling about?**

I am (name), a nurse on ward (X)
I am calling about (patient X)
I am calling because I am concerned that…
(e.g. BP is low/high, pulse is XX, temperature is XX, PEWS score is X)

#### B
**Background: Pertinent Information & Relevant History**

Patient (X) was admitted on (XX date) with…(e.g. respiratory infection)
They have had (X procedure/investigation/operation)
Patient (X)’s condition has changed in the last (XX mins)
Their last set of vital signs were (XXX)

#### A
**Assessment: What do you think the problem is?**

I think the problem is (XXX) and I have…(e.g. applied oxygen/given analgesia, stopped the infusion)
OR
I am not sure what the problem is but the patient (X) is deteriorating
OR
I don’t know what’s wrong but I am really worried

#### R
**Recommendation: What do you want to happen?**

I need you to…
Come to see the child in the next (XX mins)
AND
Is there anything I need to do in the meantime? (give a normal saline bolus/repeat vitals/start antibiotics)

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Ask receiver to repeat key information to ensure understanding
Appendix D: Disclaimer

Child Health BC develops evidence-based clinical support documents that include recommendations for the care of children and youth across British Columbia. These documents are intended to give an understanding of a clinical problem, and outline one or more preferred approaches to the investigation and management of the problem. These documents are for guidance only and not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of a clinical problem. Healthcare professionals should continue to use their own judgment and take into consideration context, resources and other relevant factors. Neither Provincial Health Services Authority nor Child Health BC assume any responsibility or liability from reliance on or use of the documents.