BC Pediatric Early Warning System (PEWS) ED

What is PEWS?

Child Health BC has been working with Health Authorities to research and develop a 5-part Pediatric Early Warning System (PEWS) for implementation in emergent/urgent care settings in BC. Early warning systems are used internationally to support front line nurses and physicians with improved recognition and response to pediatric deterioration. PEWS promotes:

- Timely Identification of patients who are at risk of deterioration
- Mitigation of the risk (through clinical and procedural response)
- Escalation to a higher level of care if required

BC PEWS for ED includes 5-parts:

1. Standardized Pediatric Emergency Nursing Assessment Record (ENAR)
2. PEWS score: Scoring corresponds to the CTAS 2013 vital signs norms in 6 age groups (0-3 months, 4-11 months, 1-3 years, 4-6 years, 7-11 years, >12 years)
3. Tools and procedures to promote Situational Awareness
4. Escalation Aid
5. SBAR Communication Tool

What is the PEWS score?

The score is calculated based on assessment and scoring of multiple systems with primary focus on cardiovascular, respiratory and behaviour. It provides a quick picture of physiologic status. The PEWS score can range between 0 and 13 (with 0-1 being normal).

Brighton Pediatric Early Warning Score					
	0	***1***	***2***	***3***	***SCORE***
Behaviour	*Playing* *Appropriate*	*Sleeping*	*Irritable*	*Lethargic* ***&/OR*** *Confused* ***&/OR*** *Reduced response to pain*	
Respiratory	*Within normal parameters* *No recession or tracheal tug*	*10 above normal parameters, Using accessory muscles,* ***&/OR*** *30+% FiO2 or 4+ liters/min*	*>20 above normal parameters recessing/retractions, tracheal tug* ***&/OR*** *40+% FiO2 or 6+liters/min*	*5 below normal parameters with sternal recession/retractions, tracheal tug or grunting* ***&/OR*** *50% FiO2 or 8+liters/min*	
Cardiovascular	*Pink* ***&/OR****capillary refill 1-2 seconds*	*Pale* ***&/OR*** *capillary refill 3 seconds*	*Grey* ***&/OR*** *capillary refill 4 seconds* *Tachycardia of 20 above normal rate.*	*Grey and mottled or capillary refill 5 seconds or above* ***OR*** *Tachycardia of 30 above normal rate or bradycardia*	
Q20 minutes bronchodilators &/OR persistent vomiting following surgery (2 points each)					
TOTAL PEWS SCORE					

What is the Escalation Aid?

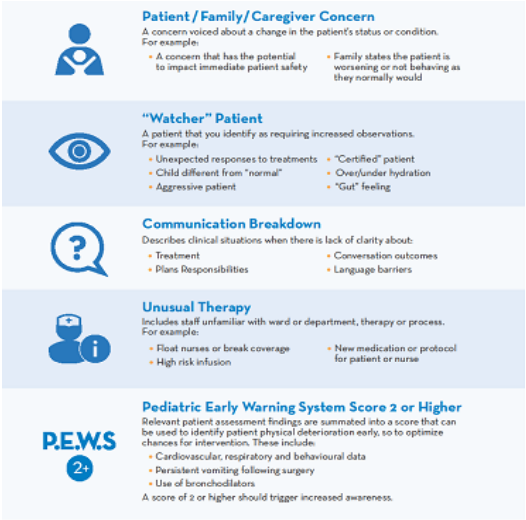
CHBC Provincial PEWS Escalation Aid - Emergency Departments

PEDIATRIC EARLY WARNING SYSTEM SCORE	0 – 1	2	3 * For a score of "3" in any one category consider higher escalation	4 &/or score increases by 2 after interventions	5 – 13 or score of "3" in one category
Notify		• RN reviews patient with the ED senior nurse (e.g. charge nurse, PCC) and identifies if escalation is required. If so notify MRP.	• As per PEWS Score 2	• RN notifies most responsible physician (MRP) or physician delegate. • Based on rate of deterioration, Emergency Physician (EP) to consider consulting a pediatrician	• MRP to assess patient immediately (& pediatrician if available) • If MRP unable to attend, RN calls EP for a STAT physician review. • Appropriate "senior" review
Plan				• MRP or delegate communicate a plan of care to mitigate contributing factors of deterioration	• As per PEWS Score 4
Assessment	• Nurse (RN) continues assessments and monitors. • RN documents VS and PEWS score as per unit/Health Authority guideline.	• 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 and documentation of VS and PEWS score.	• As per PEWS Score 4
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.	• 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.
SITUATIONAL AWARENESS	If patient is assessed with one or more of the following situational awareness factors: ☐ Parent concern ☐ Watcher patient ☐ Unusual therapy ☐ Breakdown in communication → Follow PEWS Score 2 actions				

Brighton PEWS Score Escalation Aid (Draft 05/09/17)

What is Situational Awareness?

- Situational awareness is an approach to identifying, predicting and addressing risk for patients.
- Five factors were shown to be 100% sensitive predictors of serious clinical deterioration in a study by Cincinnati Children's Hospital (i.e. all children with serious adverse event had one or more of these factors).
- The situational awareness factors are not included in the total PEWS score; but elevate a child's risk profile and influence the escalation of care process.



How will PEWS support best practice?

- Promotes a consistent standard of care for pediatric patients across BC
- Provides a common language and benchmark for pediatric care
- Facilitates safe transitions of pediatric patients to higher levels of care within/between hospitals

Where can I get further information?

A Child Health BC Coordinator will answer your questions and assist your site with implementation: Contact Child Health BC at 604-877-6410.

To access PEWS resources such as training videos and guidelines, visit the Child Health BC Website:
http://www.childhealthbc.ca/initiatives/pediatric-early-warning-system-pews