		INSTRUCTIONS FOR USE OF PROVINCIAL PEDIATRIC PATIENT FLOWSHEET

PURPOSE

The purpose of this document is to provide clear standardized instruction for use of the Pediatric Early Warning Systems (PEWS) patient flowsheet.

ABBREVIATIONS

Use only abbreviations that are included in the legend on the document and do not use any abbreviations or symbols that are on the "DO NOT USE" list (e.g. @, <, >)

Abbreviations used in this document:

BiPAP	Bi-level Positive Airway Pressure	L	Left	N	No	RLL	Right Lower Lobe
°C	Degrees Celsius	LLL	Left Lower Lobe	N/A	Not Applicable	RLQ	Right Lower Quadrant
cm	Centimeter(s)	LLQ	Left Lower Quadrant	NG	Nasogastric	RML	Right Middle Lobe
CPAP	Continuous Positive Airway Pressure	LUL	Left Upper Lobe	NJ	Nasojejunal	RUL	Right Upper Lobe
EVD	External Ventricular Drain	LUQ	Left Upper Quadrant	NN	Nurses' Notes	RUQ	Right Upper Quadrant
GT	Gastrostomy Tube	M	Mask	NP	Nasal Prongs	Y	Yes
HFNP	High Flow Nasal Prongs	MAP	Mean Arterial Pressure	q__h	Every ___ hours	VAC	Vacuum Assisted Closure
JT	Jejunostomy tube	mL	Milliliters	R	Right		
kg	Kilograms	MRP	Most Responsible Practitioner	RA	Room Air		

Note: In **Fraser Health** follow the Clinical Abbreviations Catalogue available through the Clinical Policy Office.

FRONT SIDE OF DOCUMENT
PATIENT IDENTIFICATION

Addressograph or label flowsheet in top right corner

GRAPHIC SECTION

1. **Date: RECORD** date at top **Left** of page ensuring day, month and year are included (e.g. 12 SEP 2012 or SEP 12, 2012) spelling out the month using first 3 letters

2. **INITIAL** in the space provided below the time. Ensure that *full signature* has been recorded on the signature identification record located in the patient's chart and/or on reverse side of flowsheet.

3. **Time**: **RECORD** the actual time of the assessment or intervention in the assigned space running across the top of the page. Use 24 hour clock format e.g. 0030

4. **RESPIRATORY SECTION:**

   a. **RECORD** respiration rate using a • symbol. **PLEASE NOTE:** draw a line to connect each subsequent rate symbol to create a visual trend

   b. **RECORD** oxygen saturations percentage

   c. **RECORD** any supplemental O_2 concentration delivered in litres per minute in appropriate spaces

   d. **RECORD** supplemental O_2 mode of delivery (Room Air [RA], Nasal Prongs [NP], Mask [M], Blow By [BB], High Flow Nasal Prongs [HFNP]).

PLEASE NOTE: The use of oxygen delivery via the blow by method is not recommended, as it is difficult to determine the exact percentage of oxygen and the actual dose received by the patient. If blow by method is used please document in the nurses notes and provide clinical rationale.

RECORD using ✓ symbol to indicate level of respiratory distress per CTAS manual 2013 (p.42) definitions:

Severe: Excessive work of breathing, cyanosis; lethargy, confusion, inability to recognize caregiver, decreased response to pain; single word or no speech; tachycardia or bradycardia; tachypnea or bradypnea; apnea irregular respirations; exaggerated retractions, nasal flaring, grunting; absent or decreased breath sounds; upper airway obstruction (dysphagia, drooling, muffled voice, labored respiration's and stridor); unprotected airway (weak to absent cough or gag reflex); poor muscle tone.

Moderate: Increased work of breathing, restlessness, anxiety, or combativeness; tachypnea; hyperpnea; mild increased use of accessory muscles, retractions, flaring, speaking phrases or clipped sentences, stridor, but airway protected, prolonged expiratory phase.

Mild: Dyspnea; tachypnea; shortness of breath on exertion; no obvious increased work if breathing; able to speak in sentences; stridor without obvious airway obstruction; mild shortness of breath on exertion; frequent cough.

e. **CALCULATE** RESPIRATORY CATEGORY PEWS SCORE**:**

Document assessment findings on the flowsheet for: respiratory rate, supplemental oxygen concentration delivery and respiratory distress. The Respiratory PEWS score is assigned based on the most severe score in the category. The maximum score a patient can receive for the respiratory category is 3. Always score using the highest number in each category.

PEWS Scoring Legend: | 0 | 1 | 2 | 3 |

See red circled example ⟶

f. **RECORD** PEWS score for respiratory category in the appropriate box

PLEASE NOTE: When caring for patients with Asthma a PRAM score will be calculated and recorded on the flowsheet in the **_ROUTINE NURSING CARE_** section**.**

5. **CARDIOVASCULAR SECTION:**

a. **RECORD** apical heart rate using • symbol. **PLEASE NOTE:** draw use a line to connect each subsequent rate symbol to create a visual trend

b. **RECORD** blood pressure (BP) using ∨ symbol (BP is not included in the score).

Note: Indicate limb used for BP measurement (if other than arm), and patient position using the following symbols:

○——Lying ○̆ Sitting ○̣ Standing

c. **RECORD** mean arterial pressure (MAP). Note: calculate MAP use the following equation:

$$\text{MAP} = \frac{\text{Systolic Pressure} + (2 \times \text{Diastolic Pressure})}{3}$$

d. **RECORD** capillary refill time in seconds (by pressing lightly on a peripheral site such as a nail)

e. **INDICATE** skin colour using a ✓ symbol in the appropriate box.

f. **CALCULATE** CARDIOVASCULAR CATEGORY PEWS SCORE (refer to 4. e instructions)

g. **RECORD** PEWS score for the cardiovascular section in the appropriate box

6. **BEHAVIOUR SECTION:**

a. **INDICATE** assessed patient behaviour using a ✓ symbol in the appropriate box

Behaviour is scored exactly as observed. If you are unsure about what is expected, please review the patient's behaviour with their family/caregiver and/or a more experienced health care provider

PLAYING/APPRORIATE- is the patient behaving as expected based on the current circumstances and their child's developmental level

SLEEPING- is the patient sleeping?

IRRITABLE- is the patient inconsolable, restless, or agitated?

LETHARGIC/CONFUSED- does the patient have an altered mental status? Are they confused, disoriented, or presenting with severe drowsiness?

REDUCED RESPONSE TO PAIN- does the patient have an altered mental status? Do they respond only to pain?

b. **CALCULATE** BEHAVIOUR CATEGORY PEWS SCORE (refer to 4. e instructions)

c. **RECORD** PEWS score for the behaviour section in the appropriate box

7. **OTHER PEWS INDICATORS:**

a. **INDICATE** if the patient has **unexpected** persistent vomiting following surgery using a ✓ symbol in the corresponding box

Postoperative nausea and vomiting (PONV) is defined as any nausea, retching, or vomiting occurring during the first 24–48 hours after surgery in inpatients. PONV is common complication for pediatric patients, and is often expected. Persistent Vomiting refers to ≥ 2 times per hour of more than expected episodes of emesis. If you are unsure about what is expected, please review with a more experienced health care provider (Hohne, 2014; Pierre & Whelan, 2013).

b. **INDICATE** if the patient is using an bronchodilator every 15 minutes using a ✓ symbol in the corresponding box

8. **TOTAL PEDIATRIC EARLY WARNING SYSTEM (PEWS) SCORE**:

   a. To obtain a total PEWS score, **ADD** the category scores together (respiratory + cardiovascular + behaviour + vomiting + bronchodilator = maximum achievable score of 13).

   b. **CALCULATE** and **RECORD total PEWS score** with every set of vital signs. **PLEASE NOTE** if PEWS score is zero please record **0**

9. **TEMPERATURE:**

   a. **RECORD** temperature using • symbol. Indicate route: oral (O), axilla (A), rectal (R), temporal (T) and esophageal (E). **PLEASE NOTE:** draw use a line to connect each subsequent rate symbol to create a visual trend.

   b. **SCREEN** for Sepsis **Pediatric Sepsis Screening Tool**, if PEWS score increases by 2 **or** core patient temperature is greater than 38.5°C or less than 36°C.

   RECORD using a ✓ symbol to **INDICATE** the sepsis screen was completed. **DOCUMENT** in the nursing notes, **used in your agency,** the criteria identified on the sepsis screen tool:

   > **0 - No risk factors identified**

   > **A – Signs of infection**

   > **B – SIRS (systemic inflammatory response)**

   > **C – Organ dysfunction**

10. **SITUATIONAL AWARENESS FACTORS:**

   a. With each set of vital signs **ASSESS** patient for situational awareness factors. Place a ✓ symbol for the situational awareness factors that apply to the patient.

      i. **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).

      ii. **Unusual Therapy:** includes staff unfamiliar with ward or department (e.g. float nurses or break coverage), therapy or process (e.g. high risk infusion, new medication or protocol for patient or nurse).

      iii. **Watcher Patient:** a patient that you or a team member identified as requiring increased observations (e.g. unexpected responses to treatments, child different from "normal", aggressive patient, "certified" patient, over/under hydration, pain, edema, "gut" feeling).

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

      v. **PEWS Score 2 or higher:** PEWS score greater than or equal to 2 should trigger increased awareness and action.

11. If escalation process is activated, **RECORD NN** in the corresponding time slots. **FOLLOW** escalation aid prompts to access supports:

      a. **0 – 1**: continue to monitor;

b. **2 or any one of the 5 situational awareness factors**: Review with a more experienced health care provider. Escalate if further consultation required or resources do not allow. Continue to monitor as per orders/protocols.

c. **3**: Increase frequency of assessments and documentation as per plan from consultation

d. **4 and/or score increases by 2 after interventions:** Notify MRP or delegate. Consider pediatrician consult if deteriorating fast. MRP or delegate to communicate a plan of care. Increase assessments. Reassess adequacy of resources and escalate to meet deficits.

e. **5 – 13 or score of 3 in any one category:** Immediate assessment by MRP or delegate (and pediatrician if available). MRP or delegate to communicate a plan of care. Increase nursing care with increasing interventions as per plan. Consider or internal or external transfer to higher level of care.

12. **DOCUMENT** in the nursing notes **used in your agency** escalation actions taken and responses in greater detail as needed.

NEUROLOGICAL

1. **ASSESS** Neurovital signs once a shift unless ordered more frequently or clinically indicated.

2. **Pupils: RECORD** pupil size using guide located on the bottom left corner of form**. RECORD** pupillary response using the following letters to indicate **B** = Brisk, **S** = Sluggish, and/or **F** = Fixed under the corresponding time column.

3. **Glasgow Coma Scale (GCS): RECORD** using ✓ symbol to indicate the score for eye, verbal and motor response under the time column when the assessment was completed.

4. **RECORD** total score for GCS in the total score box.

5. **Muscle Strength: RECORD** numeric score in appropriate box for each limb under corresponding time column.

6. **Color, Sensation and Warmth of Extremities: RECORD** using ✓symbol to indicate Normal or **NN** to indicate that there is further documentation in the Nursing Notes section of the health record.

7. **Bladder Function: RECORD** using ✓ symbol to indicate Normal or **NN** to indicate that there is further documentation in the Nursing Notes section of the health record.

ROUTINE NURSING CARE

1. **Time**: **RECORD** the actual time of the assessment or intervention in the assigned space running across the top of the page. Use 24 hour clock format e.g. 0030

2. **RECORD** the pain score, tool used and location of pain under the time column when pain was assessed. Pain score will be recorded as a numeric value. Name of tool and location of pain to be written in space provided. If more space is required document NN and record observations in the nurses notes.   Pain is to be assessed every 4 hours and PRN. If patient is on a continuous opioid infusion, epidural analgesia or PCA, refer to your agency specific documentation guidelines.

3. **RECORD** the patient's level of arousal score every hour if awake and if the patient is receiving

continuous opioid infusion or patient controlled continuous analgesia (PCA) infusion or when sleeping and respirations are below norm for patient's age.

4. **RECORD** Enteral/Gastric Tube site to source check using a ✓symbol to indicate the time it was completed. Document this hourly or **per your agency guidelines**. Use NN to indicate that there is further documentation in the Nursing Notes section of the health record.

5. **RECORD** using a ✓ symbol to indicate the **IV** site to source checks, including rate & solution, was completed. This ✓ also indicates that the IV Touch, Look, & Compare check was completed. Document this hourly or **per your agency guidelines**. Use NN to indicate further documentation in the Nursing Notes section of the health record.

6. **RECORD** using a ✓ symbol to indicate a patient safety check was completed in the space provided. Document this hourly or **per your agency guidelines**. Please use this for patients that do not have an IV.

7. **RECORD** PRAM Score **if used in your agency** once a shift and prn for those patients with reactive airway disease/asthma receiving therapy under appropriate time column when assessed.

8. **RECORD** using a ✓ symbol to indicate you have checked the phototherapy module and eye shield placement. Document this hourly or **per your agency guidelines**.

9. **RECORD** using a ✓ symbol for routine nursing care under the time it was provided.

10. **RECORD** using a ✓ symbol to indicate the time the oximeter probe site was changed (q4h & PRN)

REVERSE SIDE OF DOCUMENT
INTAKE AND OUTPUT

The purpose of this section is to keep an accurate account of all intake and output for the patient.

1. **RECORD** all parenteral, enteral, and oral intake. **DESCRIBE** each type of intake on a separate line including any additives.

2. **RECORD** the time at the top of the column and **RECORD** the volume infused *during* that hour below. **Note**: If any infusion, medication or oral intake is complete at any time other than on the hour it is included in that hour's intake.

3. **CALCULATE** the total volume of intake for hourly and if required, cumulative volumes. Cumulative volumes can be indicated by writing the hourly total over the cumulative total. (Refer to output example below).

4. **CIRCLE** the total volume infused at the completion of any infusion if the infusion completes before the end of the shift as a reminder to add this volume to the total for shift.

5. **CALCULATE** all total volumes infused during the shift to obtain a final 12-hour total. **RECORD** this amount at the end of the last column and **circle.**

6. **RECORD** all types of output including urine, stool, blood loss, emesis and drainage. **DESCRIBE** each type of output on a separate line.

7. **RECORD** under the appropriate hour the volume of any type of output. **Note**: If output occurs at any time other than on the hour it is included in that hour's intake.

8. **RECORD** Bristol stool score (type 1 – 7) for all stool output under appropriate time column.

9. **CALCULATE** the total volume of output for hourly and if required, cumulative volumes. Cumulative volumes can be indicated by writing the hourly total over the cumulative total. (Refer to example below).

10. E.g.:

		05			08	
urine		120 / 120			100 / 220	

11. **CALCULATE** all total volumes of output recorded during shift to obtain a 12-hour total; **RECORD** this amount at the end of the last column and circle.

12. **SUBTRACT** intake from output to obtain a 12-hour fluid balance; **RECORD** this as either a positive (+) or negative (-) amount in the appropriate box.

13. **CALCULATE** your 24 hour fluid balance by adding the two 12-hour balances together**. For example: if the 0700-1900 hr balance is +300 mL and the 1900-0700 hr balance is -200 mL the 24 hour fluid balance would be +300 mL + -200 mL = +100mL.**

14. **CALCULATE** the maintenance fluid requirement for the patient in mL/hr and record it here. NOTE: Calculate at the start of each shift. For example: if the patients weight is 6 kg the calculated maintenance would be 25 mL/hr (6x100= 600/24= 25).

15. **CALCULATE** the actual total fluid the patient received in mL/kg/hr and record it here. This is to be done as part of the 12-hour balance.

16. **CALCULATE** urine output in milliliters per kilogram per hour (mL/kg/hr).

17. **RECORD** in the space provided any measurements taken such as abdominal girth, head circumference, height

18. **RECORD** admission weight, previous 24 hr weight, current weight and previous 24-hour fluid balance in the spaces provided. Two spaces have been provided for current weight for documentation of BID weights when ordered.

19. **RECORD** any intravenous access initiated using space provided. Include signature of initiator.

INITIAL ASSESSMENT – DAY/NIGHT

1. **RECORD** time and initials of health care provider in spaces provided.

2. **RECORD** initial patient assessment for day or night shift using a ✓ symbol to indicate assessment findings *ticking* the appropriate descriptors; *filling in the blank* spaces provided to indicate details of assessment findings. Strike a line through any assessment data to indicate that it does not apply. Using a ✓ symbol indicate *See Nursing Notes* if additional assessment findings need to be recorded in the narrative nursing notes.

3. **RECORD** using a ✓ symbol to indicate a mental health status exam was complete, **if used in your agency.**

4. **COMPLETE** peripheral pulse assessment using ✓ to record assessment findings.

5. **COMPLETE** quality checks and scores by using ✓ to indicate completion and/or record the actual score in space provided.

6. **RECORD** using a ✓ symbol to indicate any **PERSONAL SAFETY PRECAUTIONS** identified- when identified communicate findings with the MRP for further evaluation. Develop a Plan of Care with Observation Level as required.

7. **RECORD** in the nursing notes **used in your agency** any assessment findings or changes noted during shift in greater detail. Record time of entry and use variance charting including data, action and response (DAR) or problem, intervention, evaluation (PIE) formats.

8. **RECORD** full signature and initials in space provided.

DOCUMENT CREATION / REVIEW

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REFERNCES

American Heart Association. (2012). *Pediatric emergency assessment, recognition, and stabilization (PEARS), provider manual.* South Deerfield, MA: Author.

BC Children's Hospital. (2013, December 31). *Instructions for use of BCCH inpatient flowsheet.* Retrieved from http://bccwhcms.medworxx.com/Site_Published/bcc/document_render.aspx?documentRender.IdType=32&documentRender.GenericField=1&documentRender.Id=12739

Brady, P.W. et al. (2013). Improving situational awareness to reduce unrecognized clinical deterioration and serious safety events. *Pediatrics, 131*(1), e298-e308.

Canadian Association of Emergency Physicians. (2013, November). *Canadian triage and acuity scale (CTAS) participant manual* (version 2.5b).

Heart & Stroke Foundation of Canada. (2011). *Pediatric advanced life support provider manual.* Ottawa, ON: Author.

Hohne, C. (2014). Postoperative nausea and vomiting in pediatric anesthesia. *Current Opinion in Anesthesiology, 27*(3), 303-308.

Monaghan, A. (2005). Detecting and managing deterioration in children. *Paediatric Nursing, 17*(1), 32–35.

National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and. Adolescents. (2004). The fourth report on the diagnosis, evaluation, and treatment of high blood pressure in children and adolescents. *Pediatrics*, *114* (Issue 2 Suppl), 555-576.

Pierre, S., & Whelan, R. (2013). Nausea and vomiting after surgery. *Continuing Education* in *Anaesthesia*, *Critical Care & Pain, 13*(1), 28-32.