BC Provincial
Pediatric Early Warning System
PEWS
Regional Workshop

CHILD HEALTH BC

LEAD BENEFACTOR

save on foods

- Explain The Provincial Pediatric Early Warning System (PEWS)
  - PEWS score
  - Situational Awareness Factors
  - Provincial Escalation Aid
  - SBAR Communication Tool

- Describe & review the Provincial PEWS flowsheet
- Demonstrate how to calculate a PEWS score
- Identify supports & resources available to assist you in using PEWS
- Provide an opportunity for you to apply the components of PEWS using case scenarios

What is PEWS?

- ✓ A clinical tool for frontline staff
- ✓ An evidence informed system to support improved recognition and response to pediatric deterioration
- ✓ A system we can and are implementing across BC's hospitals that provide care to children

PEWS is:

- For all patients regardless of acuity
- A complete system-not just a score
- A support for clinical decision making
- Provides a common language to support effective communication

PEWS is not a substitute for clinical judgment

Why do we need earlier warning of a child's compromise?

✓**~63 to 89% of children do not survive** cardiac arrest

✓**Morbidity in survivors remains high** despite advances in resuscitation training, technology and treatment

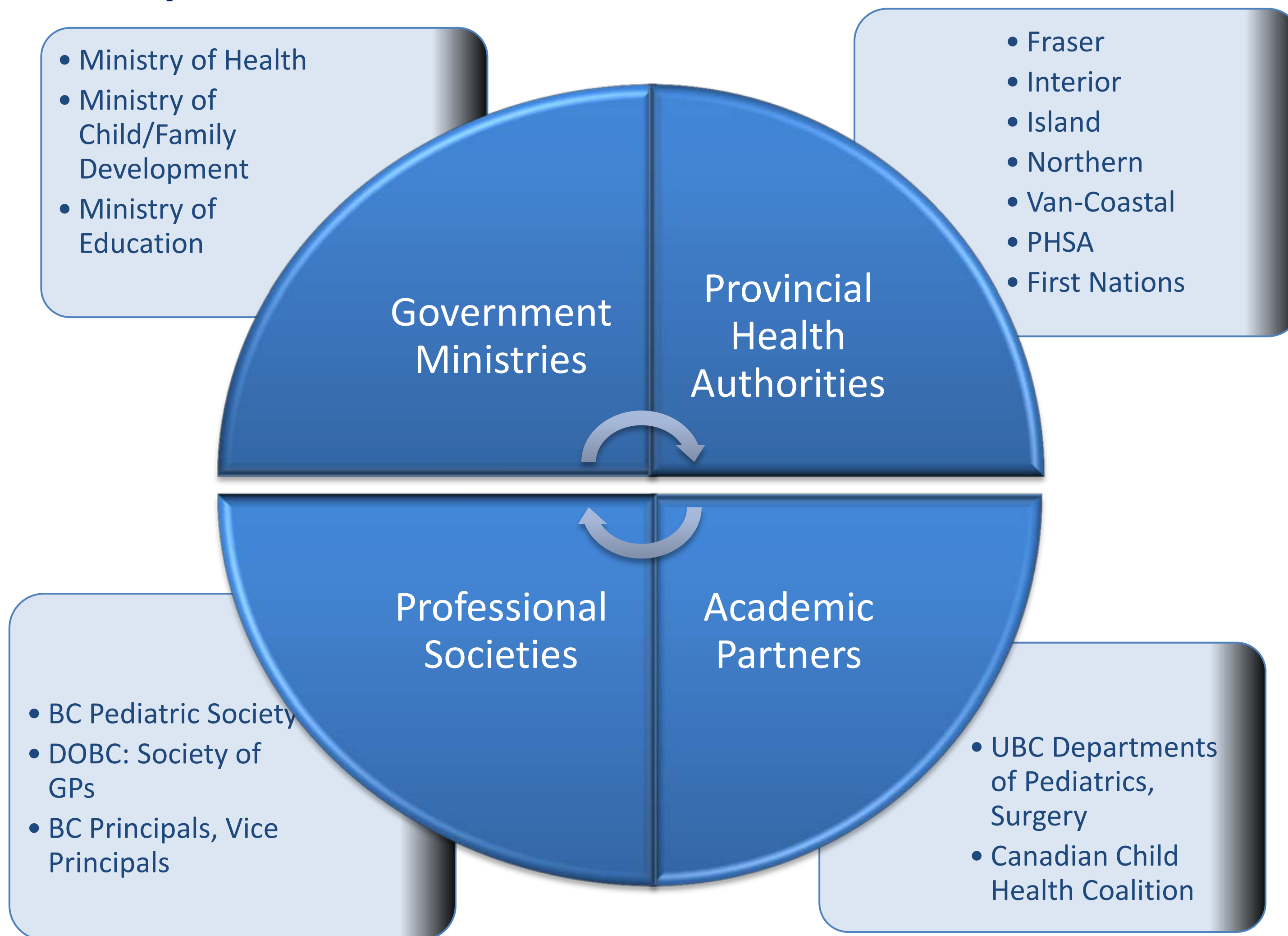
✓Evidence indicates **prevention is possible**

✓Pediatric patients may demonstrate physiologic and behavioral symptom deterioration up to 24 hours prior to cardiopulmonary arrest

- A variety of PEWS tools are in use internationally
- Child Health BC worked with Provincial Health Authority Planners to develop a PEWS that will work across the province
- The provincial approach includes the Brighton Scoring Tool and the Cincinnati Situational Awareness Model

Who is Child Health BC?

A provincial network- working to build an integrated, accessible system of health services for children.



The Purpose of the PEW System

- ✓ ***Identify*** pediatric patients who are at risk of deterioration
- ✓ ***Mitigate*** the risk (through clinical and procedural response)
- ✓ ***Escalate*** to a higher level of care if mitigation is unsuccessful

… and do it all sooner!

What is the BC PEW system?

A standardized, evidence-based system for recognition and response to deterioration…

1. PEWS Score

(in a bedside flow sheet)

2. Situational awareness bundle

3. PEWS escalation aid

4. Communication framework (SBAR)

1. PEWS Score

The Brighton PEWS score can **range between 0 and 13**

Higher PEWS scores are associated with higher risk of clinical deterioration

There are 6 flowsheets:

0-3 months	4 - 11 months	1 - 3 years
4 - 6 years	7 - 11 years	12+ years

Brighton PEWS Scoring Table

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/Normal **&/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	
Q 20 minutes bronchodilators &/OR persistent vomiting following surgery (2 points each)					
TOTAL PEWS SCORE					

Monaghan A. Detecting and managing deterioration in children. *Paediatr Nurs*. 2005; 17:32–5.

Flow Sheet & PEWS Score

PEWS Scoring Legend

PEWS Scoring Legend
0
1
2
3

Respiratory

Respiratory Rate (1 minute)
Resp: *
80 70 60 50 40 30 20

O_2 Saturation (%)

O_2 Concentration
<3L or 30%
≥3L or 30%
≥6L or 40%
≥8L or 50%

Mode of Delivery

Respiratory Distress
None
Mild
Moderate
Severe

PEWS Score for Respiratory
(record most severe score)

Cardiovascular

Heart Rate & Blood Pressure
Systolic: V
Diastolic: Λ
(Do not score blood pressure)
Systolic (mmHg): 60 – 103)
Diastolic (mmHg): 30 – 65)
Apex: •
190 180 170 160 150 140 130 120 110 100 90 80 70 60 50

MAP

Capillary Refill Time
1–2 seconds
3 seconds
4 seconds
≥5 seconds

Skin Colour
Pink
Pale
Grey or cyanotic
Grey and mottled

PEWS Score for Cardiovascular
(record most severe score)

Behaviour

Playing/appropriate
Sleeping
Irritable
Lethargic/confused
Reduced response to pain

PEWS Score for Behaviour

Age- specific vital signs norms based on CTAS 2013

2. Situational Awareness -factors that contribute to the risk of pediatric clinical deterioration

Caregiver Concern

Unusual therapy

Watcher patient

P.E.W.S

PEWS score 2+

Communication breakdown

Cincinnati Children's found these factors to be 100% sensitive predictors of serious deterioration. Addressing all five on a regular basis helped teams improve predicting & preventing deterioration

Situational Awareness

Here is a short video from Cincinnati Children's

http://www.risky-business.com/video.php?videoid=74

Situational Awareness

There are five factors that would prompt the identification of a pediatric patient as being at increased risk:

Patient / Family / Caregiver Concern

A concern voiced about a change in the patient's status or condition. For example:

- 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. For example:

- 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. For example:

- Float nurses or break coverage
- High risk infusion
- New medication or protocol for patient or nurse

Pediatric Early Warning System Score 2 or Higher

P.E.W.S 2+

Relevant patient assessment findings are summated 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.

Each of the factors is equally important as an indicator of risk and this "system" encourages nursing assessment of both subjective and objective risk. Cincinnati Children's Hospital found these 5 factors to be 100% sensitive (i.e. every child who deteriorated clinically had one or more of these factors when they audited 59 serious safety events in the hospital)

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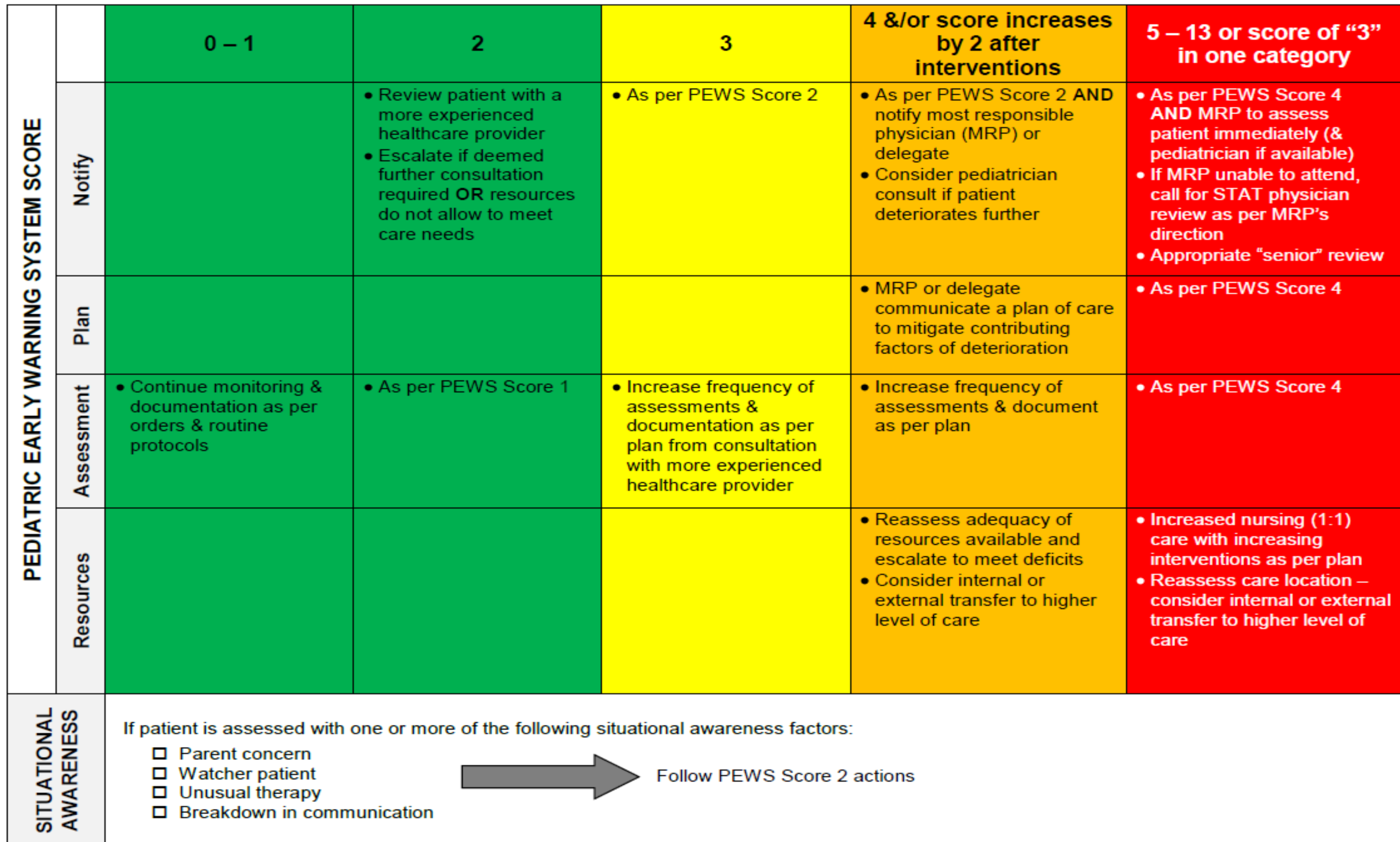
Client: CHBC
File Name: 21012221_P_PEWS_SituAware_Poster_12x18in_CMYK_v5
Actual Size: 12x18 inches + .25" Bleed
Colours: 4c
Date: 4 March 2016 9:07 AM
Target: Poster
Revisions: 0
Operator: J Shaw

3. Escalation Aid



Provincial Pediatric Early Warning System (PEWS) Escalation Aid

CHILD HEALTH BC — LEAD BENEFACTOR save on foods

PEDIATRIC EARLY WARNING SYSTEM SCORE	0 – 1	2	3	4 &/or score increases by 2 after interventions	5 – 13 or score of "3" in one category
Notify		• Review patient with a more experienced healthcare provider • Escalate if deemed further consultation required **OR** resources do not allow to meet care needs	• As per PEWS Score 2	• As per PEWS Score 2 **AND** notify most responsible physician (MRP) or delegate • Consider pediatrician consult if patient deteriorates further	• As per PEWS Score 4 AND MRP to assess patient immediately (& pediatrician if available) • If MRP unable to attend, call for STAT physician review as per MRP's direction • Appropriate "senior" review
Plan				• MRP or delegate communicate a plan of care to mitigate contributing factors of deterioration	• As per PEWS Score 4
Assessment	• Continue monitoring & documentation as per orders & routine protocols	• As per PEWS Score 1	• Increase frequency of assessments & documentation as per plan from consultation with more experienced healthcare provider	• Increase frequency of assessments & document as per plan	• As per PEWS Score 4
Resources				• Reassess adequacy of resources available and escalate to meet deficits • Consider internal or external transfer to higher level of care	• Increased nursing (1:1) care with increasing interventions as per plan • Reassess care location – consider internal or 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

PEWS Escalation Aid (V.3 _TN & CM) Updated August 2015

4. Standardizing Communication (SBAR)

What is SBAR?

SBAR (Situation-Background-Assessment-Recommendation) technique provides a framework for communication between members of the health care team about a patient's condition

SBAR Communication 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)
Ask receiver to repeat key information to ensure understanding	

Creating a Common & Clear Picture of Risk

Visual cues for all healthcare providers to recognize patients at risk of deterioration

Standardized check-in processes between charge nurse and RNs

Example: patient room number coloured in red on white board

Baby Smith:

- 5-month-old admitted with RSV
- Previously vigorous in her activity-now lethargic with a sunken fontanel
- RR 70 with increased use of accessory muscles
- SaO_2 is 95% on 1 L/min of NP
- HR 160, she is pale, cap refill is 4 seconds, BP 82/46
- No wet diapers for 10 hours.

How to Score: Respiratory

PEWS Scoring Legend

PEWS Scoring Legend
0
1
2
3

Respiratory			
Respiratory Rate (1 minute) Resp: ⁕	80	
	70	x
	60	
	50	
	40	
	30	
	20	
O$_2$ Saturation (%)		95%
Supplemental O$_2$ Concentration Delivered	<3L or 30%	1L
	≥3L or 30%	
	≥6L or 40%	
	≥8L or 50%	
Mode of Delivery		NP
Respiratory Distress	None	
	Mild	
	Moderate	x
	Severe	
PEWS Score for Respiratory *(record most severe score)*		2

Always use the score from the highest descriptor per category

How to Score: Cardiovascular

PEWS Scoring Legend

0
1
2
3

Cardiovascular

Heart Rate & Blood Pressure	190	
	180	
	170	
Systolic: V	160	x
Diastolic: Λ	150	
	140	
(Do not score blood pressure)	130	
	120	
Normal Parameters: Systolic (mmHg): 82 – 105 Diastolic (mmHg): 46 – 68	110	
	100	
	90	
	80	
Apex: ●	70	
	60	
Monitor: ✱	50	
	MAP	
Capillary Refill Time	1 – 2 seconds	
	3 seconds	
	4 seconds	x
	≥5 seconds	
Skin Colour	Pink	
	Pale	x
	Grey or cyanotic	
	Grey and mottled	
PEWS Score for Cardiovascular *(record most severe score)*		2

Always use the score from the highest descriptor per category

How to Score: Behavior

PEWS Scoring Legend

PEWS Scoring Legend
0
1
2
3

Behaviour															
Playing / appropriate															
Sleeping															
Irritable															
Lethargic / confused	X														
Reduced response to pain															
PEWS Score for Behaviour *(record most severe score)*	3														

How to Calculate Total PEWS Score

PEWS Score for Respiratory *(record most severe score)*	2
PEWS Score for Cardiovascular *(record most severe score)*	2
PEWS Score for Behaviour *(record most severe score)*	3

PEWS		
	Persistent vomiting following surgery	0
	Bronchodilator every 15 minutes	0
	Total PEWS Score (R + C + B + vomiting + bronchodilator)	7

Maria is:

- 2-years-old, recently diagnosed with Leukemia
- Resp rate of 55, SaO_2 is 92% on room air
- Developed a fever last night 38.8 °C axilla
- She is lethargic and confused
- Tachycardic at 155 BPM, pale, cap refill is 5, BP 98/55
- Persistent vomiting
- Her mom is extremely worried about her
- Has not voided since the previous afternoon.

Case Study 1

PEWS Score for Respiratory *(record most severe score)*	2																	

PEWS Score for Cardiovascular *(record most severe score)*	3														

PEWS Score for Behaviour *(record most severe score)*	3													

PEWS																
Persistent vomiting following surgery																
Bronchodilator every 15 minutes																
Total PEWS Score (R + C + B + vomiting + bronchodilator)	8															

- 4-years-old, newly diagnosed diabetic
- Transferred to your unit from the ED with an initial PEWS Score of 0
- Respiratory rate 50, SaO_2 90% on room air
- Heart rate 90, pale, cap refill 3 seconds, BP 110/78
- You find her irritable and increasingly lethargic

Case Study 2

PEWS Score	
PEWS Score for Respiratory *(record most severe score)*	2
PEWS Score for Cardiovascular *(record most severe score)*	1
PEWS Score for Behaviour *(record most severe score)*	3

PEWS	
Persistent vomiting following surgery	
Bronchodilator every 15 minutes	
Total PEWS Score (R + C + B + vomiting + bronchodilator)	6

Case Study

You have received your patient assignment for the day. You are looking after a three year old girl, Molly, who has been admitted a few days ago with Pneumonia. Her Mom is staying with her. She was started on Cefotaxime 1000mg q8h. She has been drinking well.

Case Continued

- Her health history includes no developmental delay, history of asthma and allergy to sulfa drugs.
- She is toilet trained but has been wearing pull-ups in hospital.
- Admission weight was 20 kg. Previous 24 hour was 19.8 kg.

0720

- You go in to check on your patient and do your bedside safety check.
- Pt is asleep.
- Bedside safety check (O2, suction, crib rails up, clear access to bedside)
- IV pumps are in the correct profile
- IV solution D5NS at 15 mL/hr.

Respiratory PEWs

Respiratory:

- RR 38, 02 saturations 98% on room air
- Mild shortness of breath on exertion
- Frequent cough
- A/E equal BL with scattered crackles
- LLL wheeze

Respiratory						
Respiratory Rate (1 minute) Resp: •	70					
	60					
	50					
	40					
	30					
	20					
	O_2 Saturation (%)					
Supplemental O_2 Concentration Delivered	<3L or 30%					
	≥3L or 30%					
	≥6L or 40%					
	≥8L or 50%					
	Mode of Delivery					
Respiratory Distress	None					
	Mild					
	Moderate					
	Severe					
PEWS Score for Respiratory *(record most severe score)*						

PEWS Scoring Legend:	0	1	2	3

CTAS 2013 Respiratory Distress Definition:

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.

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.

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.

Respiratory Assessment

RESPIRATORY

- ☐ Respirations even and unlaboured
- ☐ Respiratory distress:
  - ☐ Mild ☐ Moderate ☐ Severe
- ☐ Nasal flaring
- ☐ Tracheal tug
- ☐ Head bobbing
- ☐ Indrawing:
  - ☐ Intercostal ☐ Subcostal
  - ☐ Substernal
- ☐ Abdominal breathing
- ☐ Scalene contractions
- ☐ See Nurses' Notes

BREATH SOUNDS

- ☐ Clear to bases
- ☐ Crackles
  - ☐ RUL ☐ RML ☐ RLL
  - ☐ LUL ☐ LLL ☐ Throughout
- ☐ Wheezes:
  - ☐ Inspiratory ☐ Expiratory
- ☐ Location:
  - ☐ RUL ☐ RML ☐ RLL
  - ☐ LUL ☐ LLL ☐ Throughout
- ☐ Stridor ☐ Grunting
- ☐ Referred upper airway sounds
- ☐ Cough: ☐ Dry ☐ Loose
  - ☐ Productive
- ☐ Nasal congestion
- ☐ See Nurses' Notes

AIR ENTRY

- ☐ Equal to bases
- ☐ Decreased to:
  - ☐ RUL ☐ RML ☐ RLL
  - ☐ LUL ☐ LLL ☐ Throughout
- ☐ See Nurses' Notes

CHEST MOVEMENT

- ☐ Equal & adequate
- ☐ See Nurses' Notes

Cardiovascular PEWS Scoring

- HR 138 per minute
- Cap refill 1-2 sec.
- BP 110/68
- Pale

Cardiovascular

Heart Rate (1 minute)
& Blood Pressure

Systolic: V
Diastolic: Λ

(Do not score blood pressure)

Normal Parameters:
Systolic (mmHg):
85 – 109
Diastolic (mmHg):
37 – 67

Apex: •

Monitor: *

190
180
170
160
150
140
130
120
110
100
90
80
70
60
50

MAP

Capillary Refill Time

1 – 2 seconds
3 seconds
4 seconds
≥5 seconds

Skin Colour

Pink
Pale
Grey / Cyanotic
Grey & Mottled

PEWS Score for Cardiovascular
(record most severe score)

PEWS Scoring Legend:	0	1	2	3

Cardiovascular Assessment

- Warm to touch
- Pulses normal

CARDIOVASCULAR

CENTRAL COLOUR

☐ Pink ☐ Pale ☐ Mottled
☐ Jaundiced ☐ Flushed
☐ Other ______
☐ See Nurses' Notes

PERIPHERAL COLOUR

☐ Pink ☐ Pale ☐ Mottled
☐ Jaundiced ☐ Flushed
☐ Other ______
☐ See Nurses' Notes

PERIPHERAL TEMPERATURE

Warm to: ☐ Extremities
☐ Other ______
☐ See Nurses' Notes

APICAL PULSE

☐ Regular ☐ Irregular
☐ Murmur
☐ Other ______
☐ See Nurses' Notes

PERIPHERAL PULSES	Normal	Nurses' Notes
Left radial / ulnar / brachial		
Right radial / ulnar / brachial		
Left femoral / D pedis / P tibialis / popliteal		
Right femoral / D pedis / P tibialis / popliteal		

☐ See Neurovascular assessment record

Behaviour PEWS Scoring

- Awake, quiet
- Co-operative

Behaviour				
Playing/Appropriate				
Sleeping				
Irritable				
Lethargic/Confused				
Reduced response to pain				
PEWS Score for Behaviour *(record most severe score)*				

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

Persistent Vomiting following Surgery & Bronchodilator

Persistent vomiting following surgery	**2**
Bronchodilator every 20 minutes	2

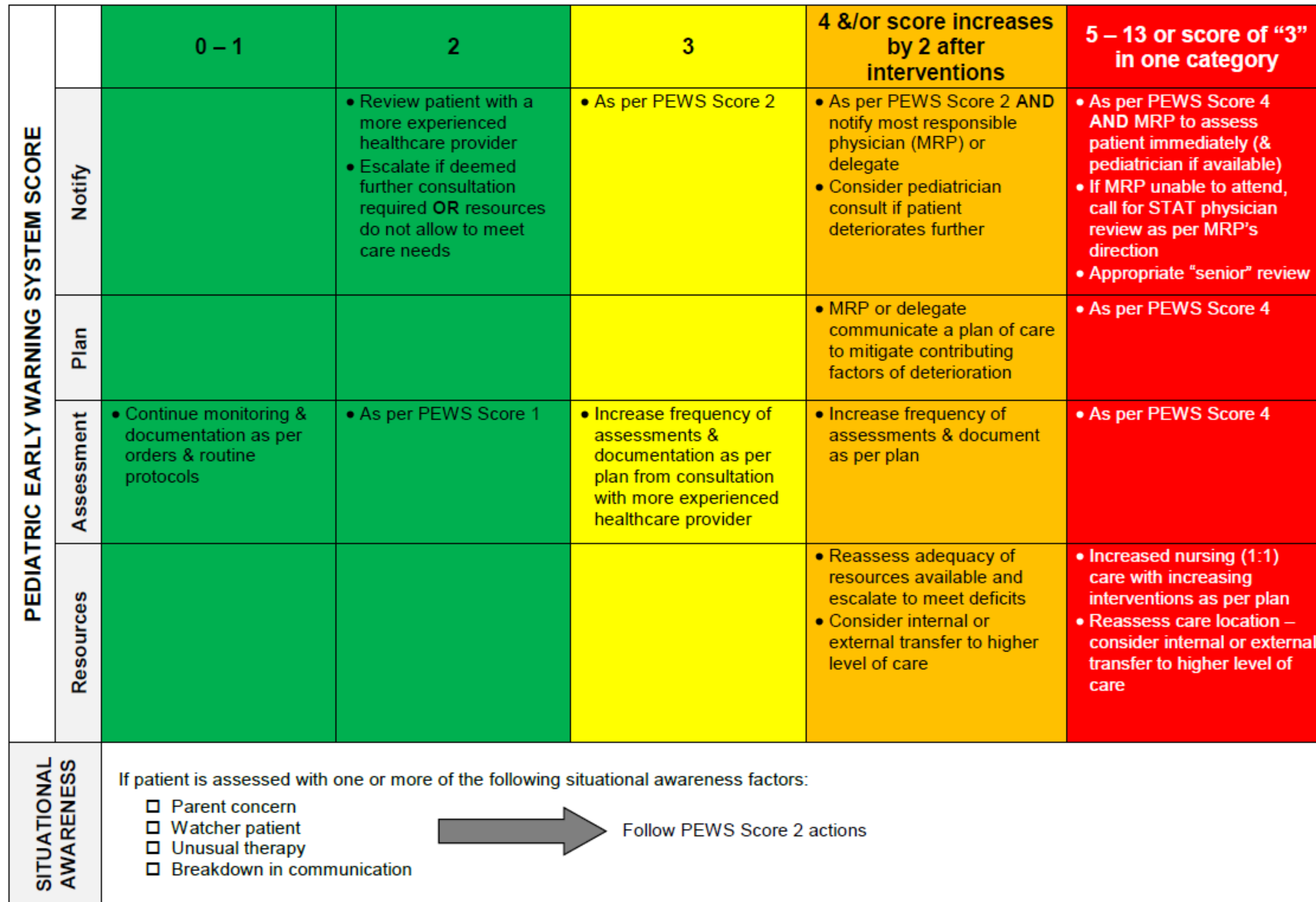
PEWS Scoring Legend: 0 1 2 3

2 points each
This is how the score can be 13

Chart Total PEWS Score

- With each vital sign assessment
- If PEWS Score is zero please chart **0**

What is Molly’s PEWS score? What are your actions?



PEDIATRIC EARLY WARNING SYSTEM SCORE

	0 – 1	2	3	4 &/or score increases by 2 after interventions	5 – 13 or score of “3” in one category
Notify		• Review patient with a more experienced healthcare provider • Escalate if deemed further consultation required **OR** resources do not allow to meet care needs	• As per PEWS Score 2	• As per PEWS Score 2 **AND** notify most responsible physician (MRP) or delegate • Consider pediatrician consult if patient deteriorates further	• As per PEWS Score 4 AND MRP to assess patient immediately (& pediatrician if available) • If MRP unable to attend, call for STAT physician review as per MRP’s direction • Appropriate “senior” review
Plan				• MRP or delegate communicate a plan of care to mitigate contributing factors of deterioration	• As per PEWS Score 4
Assessment	• Continue monitoring & documentation as per orders & routine protocols	• As per PEWS Score 1	• Increase frequency of assessments & documentation as per plan from consultation with more experienced healthcare provider	• Increase frequency of assessments & document as per plan	• As per PEWS Score 4
Resources				• Reassess adequacy of resources available and escalate to meet deficits • Consider internal or external transfer to higher level of care	• Increased nursing (1:1) care with increasing interventions as per plan • Reassess care location – consider internal or external transfer to higher level of care

SITUATIONAL AWARENESS

If patient is assessed with one or more of the following situational awareness factors:

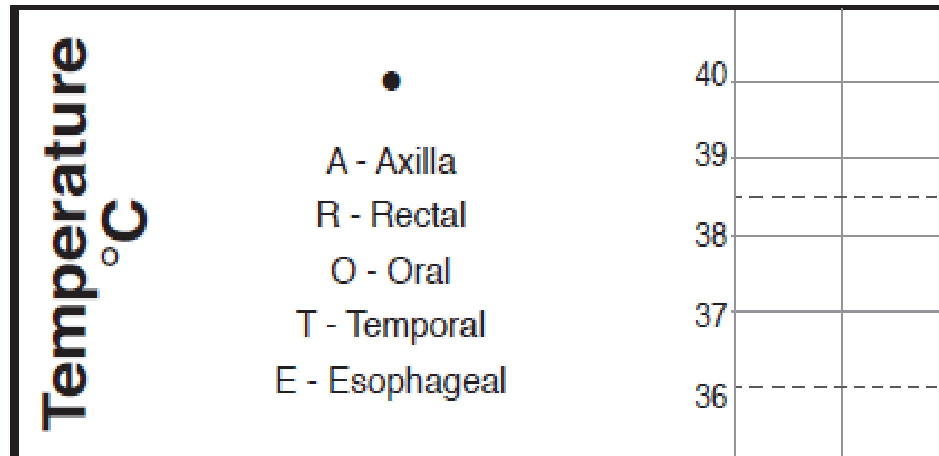
- ☐ Parent concern
- ☐ Watcher patient
- ☐ Unusual therapy
- ☐ Breakdown in communication

→ Follow PEWS Score 2 actions

PEWS Escalation Aid (V.3 _TN & CM) Updated August 2015

Temperature

- Temp 37.4



Neurological Assessment

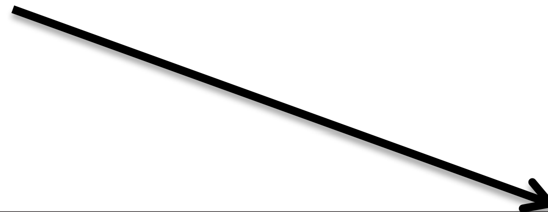
- This is to be done per shift or more frequent as condition or orders determine
- GSC and Pediatric modified GCS will be in resource pack
- CWMS charting is still required on limb assessment form for orthopedic patients
- Bladder function reflects normal tone/emptying

SPINAL / NEUROLOGICAL			
PUPILS	Size	Right	
		Left	
B = Brisk S = Sluggish F = Fixed	Reaction	Right	
		Left	
EYE		Spontaneous	4
		To speech	3
		To pain	2
	C = Closed	None	1
VERBAL		Coos/Oriented	5
		Irritable Cry/Confused	4
		Cries to pain/Inappropriate	3
		Moans to pain/Incomprehensible	2
		None	1
MOTOR		Normal spontaneous / Obeys	6
		Withdraws to touch / Localized	5
		Withdraws to pain / Withdraws	4
		Abnormal flexion	3
		Abnormal extension	2
		Flaccid	1
TOTAL SCORE GCS			
Muscle Strength *Refer to rating scale below* Rate 0–5		Right Arm	
		Left Arm	
		Right Leg	
		Left Leg	
COLOR, WARMTH & SENSATION OF EXTREMITIES ✓ = Normal NN = Nurses' Notes		Right Arm	
		Left Arm	
		Right Leg	
		Left Leg	
BLADDER FUNCTION	✓ = Normal NN = Nurses' Notes		

Regular Checks

- Pain (see resources)

Pain (q4h & PRN)	Tool ______________	Pain Score		
		Location of Pain		
Arousal Score				



PUPIL SIZE (mm)							
1	2	3	4	5	6	7	8

MUSCLE STRENGTH GRADING SYSTEM			
0/5	No movement	3/5	Movement overcoming gravity, but not against resistance
1/5	Trace movement	4/5	Movement overcoming gravity & some resistance
2/5	Movement only (not against gravity)	5/5	Normal strength against resistance

LEVEL OF AROUSAL SCORE				
1	2	3	4	5
Awake & Alert, Oriented	Normal Sleep, Easy to Arouse to Verbal Stimulation	Difficult to Arouse to Verbal Stimulation	Responds Only to Physical Stimulation	Does Not Respond to Verbal or Physical Stimulation

Regular Checks

CARE				
Regular Checks	Enteral / Gastric Tube			
	IV Site to Source: Touch, look & compare q1h			
	Patient Safety Check q1h			
	PRAM Score (Asthma patients only)			
	Phototherapy / Eye Shields			
Routine Nursing Care	Repositioning q_____ h			
	Ambulation			
	Foley Care / Pericare			
	Shower (S) / Bath (B)			
	Mouth care			
	Oximeter site probe change q4h			
	Family presence			

- Hourly for IV site to source & TLC
- Hourly Enteral/Gastric if in use
- PRAM as ordered and PRN (Asthma only)
- Hourly Phototherapy/Eye Shield if in use

Assessment

- Initial head to toe assessment to be complete at the start of each shift
- Document time of assessment and initial

Assessment	Time:	Initials:

	Strike a line through any assessment data to indicate that it does not apply or has not been assessed *Check boxes ☑ to indicate assessment findings.*

Quality Checks & Safety Scores

QUALITY CHECKS & SCORES

Indicate completed check with a ✓ and insert actual score into box

		Braden Q Score	
Alarms on & reviewed			
Identification Band on		Mobility	
Allergy Band on		Activity	
Bedside Safety Check		Sensory Perception	
Violence Prevention Screen		Moisture	
Patient plan of care updated		Friction & Shear	
Falls Risk Assessment score		Nutrition	
Family orientation / Education to area / Diagnosis		Tissue Perfusion	
Seizure chart		Total Score	

Mental Health

Continue to chart on the Mental Health documents in addition to this assessment

PSYCHOSOCIAL / BEHAVIORAL

AFFECT/MOOD

☐ Happy ☐ Calm ☐ Anxious
☐ Withdrawn ☐ Upset ☐ Irritable
☐ Flat ☐ Other ________
☐ Mental Health Status Exam
☐ See Nurses' Notes

PERSONAL SAFETY PRECAUTIONS

- ☐ None ☐ Suicidal ☐ Elopement
- ☐ Siderails Up
- ☐ Other ____________________
- ☐ Violence Prevention Care Plan insitu
- ☐ See Nurses' Notes

Additional Assessment

GI:

- Abdomen soft and round, BS x 4

GASTROINTESTINAL

ABDOMEN

☐ Flat ☐ Rounded ☐ Soft
☐ Firm ☐ Distended ☐ Shiny
☐ Tenderness:
☐ RUQ ☐ LUQ ☐ RLQ ☐ LLQ
☐ Guarding
☐ See Nurses' Notes

BOWELS

☐ Last bowel movement ____________
☐ See stool chart
☐ Ostomy site ____________
Drainage: ☐ Yes ☐ No
☐ See Nurses' Notes

BOWEL SOUNDS

☐ Present ☐ Absent
Location of bowel sounds:
☐ RUQ ☐ LUQ ☐ RLQ ☐ LLQ
☐ See Nurses' Notes

NUTRITION

☐ Oral ad lib ☐ Breastfeeding ☐ NPO
☐ Nausea ☐ Vomiting
☐ Meal Plan ____________
☐ See Nurses' Notes

FEEDING ☐ N/A

☐ Continuous ☐ Bolus
☐ Intermittent q_____h
☐ See Nurses' Notes

GASTRIC TUBE ☐ N/A

☐ Insitu
☐ Location ____________
☐ Type ____________
☐ Length ____________
☐ Tube placement verified pH ________
☐ Straight drainage ☐ Intermittent suction
☐ Clamped ☐ Open barrel
☐ Suction:
☐ Continuous ☐ Intermittent
☐ See Nurses' Notes

Additional Assessment

GU:

- has a pull up on, no void

GENITOURINARY

BLADDER

☐ Self-voiding ☐ Diaper
☐ Catheter: Size ____________
☐ Intermittent ☐ Continuous
☐ See Nurses' Notes

URINE ☐ N/A

☐ Dilute ☐ Concentrated

Colour:

☐ Clear ☐ Cloudy ☐ Amber
☐ Yellow ☐ Other ____________
☐ Hematuria:
☐ Slight ☐ Moderate ☐ Marked
☐ See Nurses' Notes

REPRODUCTIVE ☐ N/A

☐ Menses at present
☐ See Nurses' Notes

Additional Assessment

- Musculoskeletal
- Integument
- Hydration

MUSCULO-SKELETAL

GAIT

☐ Steady ☐ Unsteady
☐ Not observed
☐ Ambulatory/Walker
☐ Wheelchair
☐ See Nurses' Notes

DEVICES ☐ N/A

☐ Traction ☐ Cast
☐ Splint ☐ Brace
☐ Other ________
☐ See Nurses' Notes

INTEGUMENT

☐ Skin clear
☐ Bruising ☐ Petechiae ☐ Rash
Location ________
☐ See Nurses' Notes

PHOTOTHERAPY ☐ N/A

Start date ________ Type ________
Irradiance ________
☐ See Nurses' Notes

MUCOUS MEMBRANES

☐ Pink ☐ Intact ☐ Lesions
☐ Painful ☐ Drooling
☐ Stomatitis/Mucositis Grade ________
☐ See Nurses' Notes

DRESSINGS ☐ N/A

Site: ________
☐ Dry & intact
☐ VAC continuous/intermittent at ________ mm Hg
☐ See Nurses' Notes

DRAINAGE ☐ N/A

☐ Fresh ☐ Old ☐ Sanguinous
☐ Serous ☐ Serosanguinous ☐ Purulent
☐ None
☐ See Nurses' Notes

DRAIN ☐ N/A

☐ Insitu
☐ Location ________
☐ Type ________

HYDRATION

Central edema present: ☐ Yes ☐ No
Peripheral edema present: ☐ Yes ☐ No
Skin turgor: ☐ Elastic ☐ Poor
Skin: ☐ Dry ☐ Diaphoretic
Mucous membranes: ☐ Moist ☐ Dry
☐ See Nurses' Notes

FONTANELLE ☐ N/A

☐ Closed ☐ Flat & soft
☐ Full/bulging ☐ Sunken
☐ See Nurses' Notes

Additional assessment

- Other measurements

Other Measurements: (For example: height, abdominal girth, head circumference, photometer, peak flows)

Other measurements include Head Circumference, PICC length, abdominal girth etc.

Molly’s weight today is 19.7 kg. Molly ate a small amount yogurt and 50 mL’s of apple juice for breakfast. She walks with her Mom to the BR and her pull-up is changed for 220 mL clear amber urine.

(Molly’s admission weight was 20 kg & previous 24 hours was 19.8)

In’s and Outs

	07	08	09	10	11	1900
D5NS	/ 15	15 / 30	15 / 45	15 / 60	15 / 75	/ 180

Record the actual time of reading the pumps, pump cumulative at the bottom, calculated infused amount at the top

INTAKE

Time:

Cumulative Total IN:

OUTPUT

Bristol Stool Score:
(Document in NN if abnormal)

Cumulative Total OUT:

Calculated Maintenance Fluids _____ mL//hr Total Fluids _____ mL/kg/hr Urine Output _____ mL/kg/hr 12 hour balance:

Calculated Maintenance Fluids _____ mL//hr
Total Fluids _____ mL/kg/hr Urine Output _____ mL/kg/hr 12 hour balance:

24 hour balance:

Previous 24 hour balance:

INTRAVENOUS INITIATION:

Time	Insertion Site	Catheter Size	# of Attempts	Signature

Other Measurements:
(For example: height, abdominal girth, head circumference, photometer, peak flows)

ADMISSION WEIGHT: kg

PREVIOUS 24 HR WEIGHT: kg

TODAY’S WEIGHT: kg kg

Intake/Output Example

	Time:	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06
INTAKE	IV-D5NS	24 / 24	24 / 48	24 / 72	24 / 96	10 / 120	10 / 130	10 / 140	10 / 150	10 / 160	10 / 170	10 / 180	10 / 190	10 / 10	10 / 20	10 / 30	10 / 40	10 / 50	10 / 60	10 / 70	10 / 80	10 / 90	10 / 100	10 / 110	10 / 120
	PO																								
	NG - Similac Advance					15 / 0	15 / 15	15 / 30	15 / 45	15 / 60	15 / 75	15 / 90	15 / 105	15 / 15	15 / 30	15 / 45	15 / 60	15 / 75	15 / 90	15 / 105	15 / 120	15 / 135	15 / 150	15 / 165	15 / 180
	- med / Flush								3 / 3				3 / 6				3 / 3				3 / 6				3 / 9
	Cumulative Total IN:				96				198				301				103				206				309
OUTPUT	Urine		90 / 90			20 / 110							30 / 140				50 / 50		20 / 50						40 / 90
	Stool																								
	Combo							80 / 80			60 / 140				48 / 48							28 / 76			
	Bristol Stool Score: (Document in NN if abnormal)																								
	Cumulative Total OUT:				90				190				280				78				98				166

Calculated Maintenance Fluids 24 mL/hr Total Fluids 4.2 mL/kg/hr Urine Output 1.9 mL/kg/hr **12 hour balance:** +21

Total Fluids 4.3 mL/kg/hr Urine Output 1.25 mL/kg/hr **12 hour balance:** +143

24 hour balance: +164

Previous 24 hour balance: -125

INTRAVENOUS INITIATION:				
Time	Insertion Site	Catheter Size	# of Attempts	Signature

Other Measurements:
(For example: height, abdominal girth, head circumference, phototmeter, peak flows)

Mom calls you to the room and is concerned Molly "feels warm" to her. Temp 38.8C. Tylenol 285 mg given po.

Respiratory:

- RR 44, mild use of accessory muscles, subcostal retractions
- O2 saturation is 97% on room air

Cardiovascular:

- HR 156, pulses normal peripherally
- BP 105/72
- Cap refill 2 seconds, remains pale with flushed face

Behavior:

- Patient co-operative but increasing sleepiness noted

Situational Awareness

Situational Awareness Factors						
	Patient/family caregiver concern					
	Unusual therapy					
	Watcher patient					
	Communication breakdown					
	PEWS Score ≥ 2					
PEWS Escalation Process Activated (time) See NN						

Situational Awareness

There are five factors that would prompt the identification of a pediatric patient as being at increased risk:

Patient / Family / Caregiver Concern

A concern voiced about a change in the patient's status or condition. For example:

- 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. For example:

- 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. For example:

- Float nurses or break coverage
- High risk infusion
- New medication or protocol for patient or nurse

Pediatric Early Warning System Score 2 or Higher

P.E.W.S 2+

Relevant patient assessment findings are summated 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.

In NN Record the **time** the Pews escalation process is activated as well as **DAR**

Respiratory:

- RR-40, A/E BL with scattered wheeze, indrawing remains
- O2 saturations 99 % on 2 LNP

Cardiovascular:

HR: 148, Pulses normal, cap refill 2 seconds, BP 107/77 remains pale, cheeks less flushed

Temp 38.5, given 4 puffs Ventolin

Behavior:

- More interactive during assessment, although slept between assessments

1215

Respiratory:

- RR-38, wheeze resolved, no more indrawing noted
- O2 sats 100% on 2L NP

Cardiovascular:

- HR 138, cap refill 2 seconds, BP 108/67
- Pale, slight facial flush remains

Behavior:

- Asking for juice
- Playing quietly with toys

Temp 37.8

Things to Consider

- Any change from original shift assessment will need to be documented in the Nursing Notes in Data, Action, Response (DAR) format
- Continue to use Sepsis and PRAM tools if used at your agency
- Continue to document medications given on the Medication Administration Record (MAR) specific to your agency
- The PEWS CDST, Using the Flowsheet and Vital Sign Assessment & Documentation guidelines are found on the CHBC website
- Charting to be completed “just in time” at bedside whenever possible- chart the actual time of interventions
- Share questions/concerns with your PEWS site leader, and/or educator/coordinator. They will pass concerns to CHBC Regional Coordinator, who will share with PEWS Project Team.

Do the PEWS tools work? What has research found?

- Nearly **50% decrease in rates of UNSAFE ICU transfers**
- Potentially provides **advanced time of >11 hours**
- Positive directional trends in **improved clinical outcomes**
- Enhanced **multi-disciplinary team work, communication and confidence**
- There are **no negative outcomes** reported in the literature related to the use of PEWS

How will we know if PEWS is working?

- ✓ Mixed method, pre-post evaluation design: chart reviews, interviews, focus groups and surveys at all phase 1 sites.

What is My Role in Supporting the PEWS Evaluation?

- ✓ Regular implementation audits as needed to ensure ongoing quality
- ✓ Complete the PEWS Implementation Plan Report (one month post implementation)
- ✓ Complete 20 quick flowsheet audits, (or max 20 dependent on # of patients) @: **6 weeks, 3 months, 6 months, 9 months, 12 months** and then every quarter post implementation. Send to the coordinator in your Health Authority(HA)

Implementation Plan

Work with your team members to identify:

- ✓ What will be the visual cue for your unit or agency?
- ✓ What will be your daily management plan?
- ✓ How will you ensure nurses are using the PEWS flowsheet correctly?
- ✓ How will you encourage your healthcare team to engage patient's and families in the situational awareness factors?
- ✓ Where will you hang the situational awareness posters?
- ✓ Where will you put your supporting resources (Braden Q, falls, pain etc.) ring with the clipboard? resource binders?

Trainer's Next Steps…

- ✓ Track staff completion of online modules
- ✓ Book your in-person site training sessions (2 hours) to ensure you capture all staff who will be using the system
- ✓ Continue to finalize the implementation plan for your agency
- ✓ Access and review all PEWS resources Seek out additional support as needed
- ✓ Educational Resources are all available on the Child Health BC Website

Trainer Resources

Education Support Tools

- Situational Awareness Poster
- Brief Overview of PEWS
- SBAR tool
- PEWS Lanyard Card
- Pediatric Vital Sign Lanyard Card
- PEWS Nursing PowerPoint
- Provincial PEWS Education Lesson Plan
- PEWS Education Session Evaluation
- Physician PowerPoint
- Leadership PowerPoint
- Case Studies
- QI Tools
- Edu-quicks