



PEWS tool in Clinical Practice

Impacting Early Recognition, Treatment
and Resource Management through
Enhanced Provider Communication

WHY?

- No consistent method to score the level of acuity/severity of illness for our patients
- Lack of Common language to describe analysis of assessment
 - What's **red** to me may be **pink** to you
- Varied perception of risk for deterioration among staff
 - Comfort Levels -Experienced vs. New staff

What is it???

- o Pediatric Early Warning Score, Pediatric Early Warning tool(PEWS):
 - o Standardized score calculated for a patient via a tool to assesses different physiological, behavioral, and clinical parameters of a patient and assigning a score to that assessment

What Good Can Come...

- o Removing bias in assessment promotes:
 - o justice of health care delivery to support autonomy, intervention, and treatment for patients based on their objective needs
- o Equal distribution of intervention based on severity of need
 - o Proper allocation of resources
- o Efficiency is gained through **TRUST**:
 - o Provider to Provider
 - o Patient to Provider
- o Early Detection = Improved Patient Outcomes

Burning Platform

- o Deterioration in patient status can be detected HOURS before a significant event
 - o 11 hours (Monaghan 2006)
 - o 8 hours (ACLS, AHA, 2010)
- o Standardized tools reduce human errors by improving communication
- o Removes emotional impact on clinical data

Objective Data → Common Language →
Timely and Effective Care → Safer Outcomes

Who is scored and when??

- o Inpatients will be assessed and scored per routine.
 - o On admission as a baseline
AND as ordered per physician or per vital signs routine
 - o Typically Q4 or Q6 hours.
- o Outpatients will be scored on an as needed basis, per nursing discretion.

How to score~

- o Patients will be evaluated and given a score that directly correlates with specific assessment findings in 3 categories: behavior, cardiovascular, and respiratory.
 - o Scores will range from 0-3 in each category.
 - o Two (2) additional points will be added to the total score for any patient that is receiving nebs Q1 hour, or more frequently.
- o The score from each category will be added together for a total PEWS score.

Pediatric Early Warning Score Card

	3	2	1	0
Behavior	<ul style="list-style-type: none"> Lethargic, confused or Reduced pain response 	<ul style="list-style-type: none"> Irritable or agitated and NOT consolable 	<ul style="list-style-type: none"> Sleeping or Irritable and consolable 	<ul style="list-style-type: none"> Playing Appropriate for patient
Cardiovascular	<ul style="list-style-type: none"> Grey or CRT \geq 5 or Tachycardia 30 above or <u>Bradycardia</u> for age 	<ul style="list-style-type: none"> CRT 4 seconds or Tachycardia of 20 above normal parameters 	<ul style="list-style-type: none"> Pale or CRT 3 seconds 	<ul style="list-style-type: none"> Pink, CRT 1-2 seconds
Respiratory	<ul style="list-style-type: none"> Grunting 5 below normal with retractions and/or \geq 50% FiO2 > 30 above normal 	<ul style="list-style-type: none"> > 20 above normal Using accessory muscles and retractions 40-49% FiO2 or \geq 3 LPM 	<ul style="list-style-type: none"> \geq 10 above normal Using accessory muscles or 24-40% FiO2 or \geq 2 LPM Any initiation of O2 	<ul style="list-style-type: none"> WNL for age No use of accessory muscles

CRT = Capillary Refill Time

Add 2 points for nebulizers delivered hourly

** Parental concern should be an automatic call to the Rapid Response Team.

Vital Sign Reference

Age	Pulse	Respiratory Rate	Blood Pressure
0-3 months	100-150	35-55	65-85/45-55
3-6 months	90-120	30-45	70-90/50-65
6-12 months	80-120	25-40	80-100/55-65
1-3 years	65-110	20-30	90-105/55-70
3-6 years	65-110	20-25	95-110/60-75
6-12 years	60-95	14-22	100-120/60-75
12 years	55-85	12-18	110-130/65-85
13 years and older	75-90	12-18	110-135/70-85

* Blood Pressure values for patients 3 years and younger are not routinely ordered. Rely on pulse and respiratory rate.

Reference: Kleigman, R.M., et al. Nelson Textbook of Pediatrics 19th ed. Philadelphia: Saunders, 2011

PEWS FLOWCHART

Families know their child best. Listen to their concerns and advocate for them. If they have concerns notify the RRN and the primary physician.

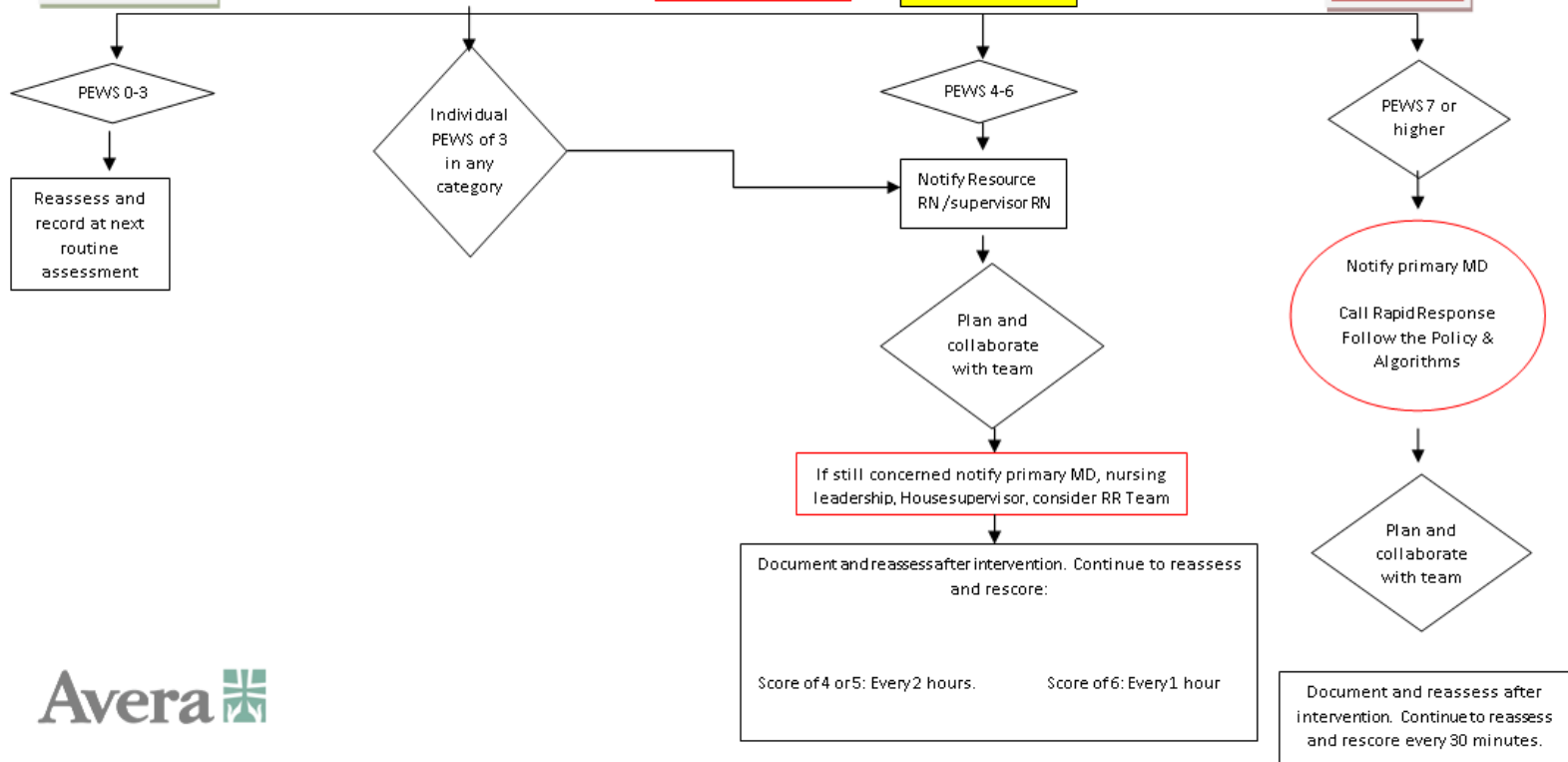
Pt admitted to Pediatric Unit

Pt assessed/reassessed by RN, including PEWS Score

GREEN ZONE

YELLOW ZONE

RED ZONE



Pediatric Early Warning Score

Behavior	<input type="radio"/> 3 <input type="radio"/> 2 <input checked="" type="radio"/> 1 <input type="radio"/> 0 <hr/> 3 - Lethargic, confused, or reduced pain response 2 - Irritable or agitated and NOT consolable 1 - Sleeping or irritable AND consolable 0 - Playing, appropriate for patient
Behavior Criteria	<input type="checkbox"/> Lethargic/Confused <input type="checkbox"/> Irritable-NOT consolable <input type="checkbox"/> Sleeping <input type="checkbox"/> Playing <input type="checkbox"/> Reduced pain response <input type="checkbox"/> Agitated-NOT consolable <input checked="" type="checkbox"/> Irritable-AND consolable <input type="checkbox"/> Appropriate for patient
Cardiovascular	<input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1 <input checked="" type="radio"/> 0 <hr/> 3 - Grey, CRT>4, tachycardia 30 above or bradycardia for age 2 - CRT = 4, tachycardia 20 above normal parametes 1 - Pale or CRT = 3 0 - Pink, CRT = 1-2 CRT - Capillary Refill Time
Cardiovascular Criteria	<input type="checkbox"/> Grey or CRT >= 5 sec <input type="checkbox"/> CRT = 4 sec <input type="checkbox"/> CRT = 3 sec <input checked="" type="checkbox"/> CRT = 1-2 sec <input type="checkbox"/> Tachy >30/Brady for age <input type="checkbox"/> Tachy>20 for age <input type="checkbox"/> Pale <input type="checkbox"/> Pink
Respiratory	<input checked="" type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1 <input type="radio"/> 0 <hr/> 3 - 5 below normal with retractions and/or >=50% FiO2 2 - >20 above normal, using accessory muscles, 40%-49% FiO2, or >=3LPM 1 - >10 above normal, using accessory muscles, 24%-40% FiO2, >=2LPM, or any initiation of O2 0 - WNL for age, no retractions
PEWS Respiratory Criteria	<input type="checkbox"/> 5 below normal <input checked="" type="checkbox"/> >20 above normal <input type="checkbox"/> >10 above normal <input type="checkbox"/> WNL for age <input checked="" type="checkbox"/> Retractions <input type="checkbox"/> Using accessory muscles <input checked="" type="checkbox"/> Using accessory muscles <input type="checkbox"/> No retractions <input type="checkbox"/> >=50% FiO2 <input type="checkbox"/> 40-49% FiO2 or >=3LPM <input type="checkbox"/> 24-40% FiO2 or >=2LPM <input checked="" type="checkbox"/> Oxygen <2LPM
Every Hour Nebs	<input type="radio"/> Yes <input checked="" type="radio"/> No
Total	Score: 4, Yellow Zone
Additional Information	

Green Zone

Green Zone: score of 0-3.

- Reassess based on physician orders.

Yellow Zone

- o Yellow Zone: score of 4-6, or any individual category score of 3.
 - o Notify charge RN and mid-level if present.
 - o Plan and collaborate with the team.
 - o If concern continues, notify primary physician, nursing leadership (when available), house supervisor; consider a Rapid Response Team (RRT).
 - o Document and reassess every 2 hours for a score of 4 or 5, or every 1 hours for a score of 6.

Red Zone

- o Red Zone: score of 7 or higher.
 - o Call PRRT, follow Pediatric Rapid Response policy (#6075.70) and algorithms.
 - o Plan and collaborate with the team.
 - o Document and reassess every 30 minutes.

IMPORTANT THINGS TO REMEMBER WHEN USING THE PEWS FLOWCHART/SCORING CARD

- o Age cutoffs - For example, when the patient actually turns 6 yrs old use the 6-12 yr old reference.
- o Nebulizer treatments ordered every hour adds 2 additional points
- o The patient is on 45% FiO₂ and has respirations <10 take the higher scoring number.
- o Any individual score of 3 equals zone yellow.
- o Once initial RRT called, RRT does not necessarily need to be repeated at every reassessment. **If any concerns call resource nurse or house supervisor for assistance and re-evaluation.**
- o The febrile patient with a score of 7 can be an expected finding for pediatrics as this can cause elevated heart rate and respiratory rate.

PATIENT #1 – 6 YR OLD

o Assessment

- o Patient has had a seizure in CT prior to admission. Patient arrives to unit awake, but drowsy. PERRLA, CRT <3 sec

o Vital Signs

- o HR = 129
- o RR = 35
- o O₂ = RA

Patient #1 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #1 – PEWS Score

- o Behavior = 1
- o Cardiovascular = 3
- o Respiratory = 1
- o Total = 5
- o Zone = **Yellow**
- o Action = Notify Resource Nurse and plan/collaborate with the team. Assess patient every 2 hours

PATIENT #1 REASSESS – 6 YR OLD

o Assessment

- o Drowsy, confused
- o PERRLA
- o Seizures X7 (10-15sec each) Phenobarbital, keppra, and ativan given, EEG on.

o Vital Signs

- o HR = 123
- o RR = 34
- o O2 = RA

Patient #1 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #1 – PEWS Score

- o Behavior = 3
- o Cardiovascular = 2
- o Respiratory = 1
- o Total = 6
- o Zone = **Yellow**
- o Action = Notify MD, Notify Resource Nurse
 - o Consider Rapid Response.
 - o Monitor vital signs every 1 hour

PATIENT #2 – 5 YR OLD

o Assessment

- o Alert, awake
- o Labored
- o Weak insufficient cough
- o Apical pulse WNL
- o CRT <3 sec

o Vital Signs

- o HR = 138
- o RR = 34
- o O2 = 96% 4L NC

Patient #2 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #2 – PEWS Score

- o Behavior = 0
- o Cardiovascular = 2
- o Respiratory = 2
- o Total = 4
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Assess every 2 hours

PATIENT #2 REASSESS – 5 YR OLD

o Assessment

- o Alert and awake
- o Back to back nebs x2
- o Increased wheezes/tight LS

o Vital Signs

- o HR = 166
- o RR = 44
- o O2 = 94% on Oxy Mask 40% - 8L

Patient #2 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #2 – PEWS Score

- o Behavior = 0
- o Cardiovascular = 3
- o Respiratory = 2
- o Total = 5 + 2 for hourly Nebs = 7
- o Zone = **RED**
- o Action = Notify MD, Notify Resource Nurse
 - o Call Rapid Response Team
 - o Reassess every 30 minutes

PATIENT #3 – 5 YR OLD

o Assessment

- o Appropriate for age
- o Alert, awake, and verbal
- o Tachypnea and labored at rest
- o CRT <3 sec
- o Strong pulses

o Vital Signs

- o HR = 134
- o RR = 36
- o O2 = 91% on 4L NC (decreases to 80% on RA)

Patient #3 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #3 – PEWS Score

- o Behavior = 0
- o Cardiovascular = 2
- o Respiratory = 2
- o Total = 4
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Assess every 2 Hours

PATIENT #3 REASSESS – 5 YR OLD

- o Assessment
 - o Alert and verbal
 - o Labored respirations at rest
 - o CRT <3
 - o Pulses strong
- o Vitals Signs
 - o HR = 133
 - o RR = 50
 - o O2 = 95% on 10L NRB

Patient #3 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #3 – Reassess PEWS Score

- o Behavior = 0
- o Cardiovascular = 2
- o Respiratory = 3
- o Total = 5
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Assess every 2 Hours

PATIENT #3 REASSESS – 5 YR OLD

o Assessment

- o SOB – won't speak, irritable
- o Tachypnea and tight with infrequent cough
- o CRT <3 sec

o Vital Signs

- o HR = 137
- o RR = 44
- o O2 = 89% on 10L NRB

Patient #3 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #3 – PEWS Score

- o Behavior = 2
- o Cardiovascular = 2
- o Respiratory = 3
- o Total = 7
- o Zone = **RED**
- o Action = Call MD, Notify Resource Nurse
 - o Call Rapid Response Team
 - o Assess every 30 minutes

PATIENT #4 – 12 YR OLD

o Assessment

- o Alert and content
- o LS = diminished, tight, and expiratory wheezes
- o Unlabored and regular respiratory rhythm

o Vital Signs

- o HR = 123
- o RR = 26
- o O2 = 93% on 2L

Patient #4 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #4 – PEWS Score

- o Behavior = 0
- o Cardiovascular = 3
- o Respiratory = 1
- o Total = 4
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Reassess every 2 hours

PATIENT #4 REASSESS – 12 YR OLD

- o Assessment
 - o Appropriate for age/patient
 - o LS = shallow, wheezes, tight
 - o Unlabored and regular respiratory rhythm
 - o CAP <3 sec and color normal for race
 - o Started on continuous nebs
- o Vital Signs
 - o HR = 152
 - o RR = 44
 - o O2 = 40% FiO2

Patient #4 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #4 – PEWS Score

- o Behavior = 0
- o Cardiovascular = 3
- o Respiratory = 2
- o Total = 5 + 2 for continuous nebs = 7
- o Zone = **RED**
 - o Note patient on continuous nebs should be evaluated for ICU setting
- o Action = Call MD, Notify Resource Nurse
 - o Call Rapid Response Team
 - o Reassess every 30 minutes

PATIENT #5 - 3 MONTH OLD

o Assessment

- o Irritable, consolable
- o CRT 3 sec

o Vital Signs

- o HR = 162
- o RR = 52
- o O₂ = 1/2L O₂

Patient #5 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #5 – PEWS Score

- o Behavior = 1
- o Cardiovascular = 3
- o Respiratory = 1
- o Total = 5
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Reassess every 2 hours

PATIENT #6 – 12 YR OLD

o Assessment

- o Sleeping but arousable
- o Tachypneic
- o LS = shallow and wheezy
- o Patient on continuous nebs
- o CRT < 3 sec, skin normal for patient

o Vital Signs

- o HR = 152
- o RR = 44
- o O2 = 91% sat on 70% FiO2

Patient #6 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #6 – PEWS Score

- o Behavior = 1
- o Cardiovascular = 3
- o Respiratory = 3
- o Total = 7 + 2 for continuous nebs = 9
- o Zone = **RED**
- o Action = Notify Physician and Call Rapid Response Team
 - o Plan and Collaborate with Team
 - o Reassess every 30 minutes

PATIENT #7 – 2 YR OLD

o Assessment

- o Lethargic
- o CRT 3 sec
- o Unlabored breathing

o Vital Signs

- o HR = 125
- o RR = 18
- o O₂ = 98% on RA

Patient #7 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #7 – PEWS Score

- o Behavior = 3
- o Cardiovascular = 1
- o Respiratory = 0
- o Total = 4
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Reassess every 2 hours

PATIENT #8 – 5 YR OLD

o Assessment

- o Lethargic
- o LS slightly coarse - no increased work of breathing
- o CRT 2 sec

o Vital Signs

- o HR = 90
- o RR = 24
- o O2 = 97% on RA

Patient #8 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #8 – PEWS Score

- o Behavior = 3
- o Cardiovascular = 0
- o Respiratory = 0
- o Total = 3
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Reassess every 2 hours

PATIENT #9 – 17 YR OLD

o Assessment

- o Drowsy, need to sternal rub to arouse
- o Shallow respirations
- o Moaning
- o CRT 3 sec

o Vital Signs

- o HR = 116
- o RR = 16
- o O2 = 98% on RA

Patient #9– PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #9 – PEWS Score

- o Behavior = 3
- o Cardiovascular = 2
- o Respiratory = 0
- o Total = 5
- o Zone = **YELLOW**
- o Action = Notify Resource Nurse
 - o Plan and Collaborate with Team
 - o Reassess every 2 hours

PATIENT #10 – 7 DAY OLD

o Assessment

- o Irritable – takes pacifier with sweetase
- o No increased work of breathing
- o CRT 2 sec

o Vital Signs

- o HR = 165
- o RR = 42
- o O2 = 98% on RA

Patient #10 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #10 – PEWS Score

- o Behavior = 1
- o Cardiovascular = 0
- o Respiratory = 0
- o Total = 1
- o Zone = **GREEN**
- o Action = Reassess based off physician orders or standards of care
 - o Reassess at next routine assessment

PATIENT #11 – 2 MONTH OLD

o Assessment

- o Agitated but consolable
- o No cough, unlabored respirations
- o CRT < 3 sec
- o Pale

o Vital Signs

- o HR = 150
- o RR = 30
- o O₂ = 100% on RA

Patient #11 – PEWS Score

- o Behavior =
- o Cardiovascular =
- o Respiratory =
- o Total =
- o Zone =
- o Action =

Patient #11 – PEWS Score

- o Behavior = 1
- o Cardiovascular = 1
- o Respiratory = 0
- o Total = 2
- o Zone = **GREEN**
- o Action = Reassess based on physician orders or standards of care
 - o Reassess at next routine assessment

IDENTIFYING YOUR PT'S PEWS SCORE

- o As per your facility policy consider:
 - o Circles will be present at your patient's door identifying your patient's zone. You will need to change the color accordingly to your patient's score.
 - o Or just on high risk patients **(RED ZONE)**
 - o Status board or indicator in electronic medical record

Summary

o **Early Detection**

- o Life Saving interventions can be implemented long before “Life Saving” is needed
- o *PEWS (EBP) enhances use of RRT by providing systematic scoring and algorithms*
- o Detection of deterioration can be improved by as much as 11 hours

o **Staff Empowerment**

- o *Allows initiation of care using a validated tool- No need to wait*

o **Physician Communication**

- o *Provides an objective communication tool between RN-MD*

References

- o Akre, M., Finkelstein, M., Erickson, M., Liu, M., Vanderbilt, L., & Billman, G. (2010). Sensitivity of the pediatric early warning score to identify pediatric deterioration. *Pediatrics*, 125(4), 763-769. doi:10.1542/peds.2009-0338
- o Barbetti, J., & Lee, G. (2008). Medical emergency team: A review of the literature. *Nursing in Critical Care*, 13(2), 80-85.
- o D'Agincourt-Canning, L. G., Kisson, N., Singal, M., & Pitfield, A. F. (2011). Culture, communication, and safety: Lessons from the airline industry. *Indian Journal of Pediatrics*, 76(6), 703-708. Doi:Retrieved from
- o Demmel, K. M., Williams, L., & Flesch, L. (2010). Implementation of the pediatric early warning scoring system on a pediatric hematology/oncology unit. *Journal of Pediatric Oncology Nursing*, 27(4), 229-240.
- o Duncan, H., Hutchison, J., & Parshuram, C. S. (2006). The pediatric early warning system score: A severity of illness score to predict urgent medical need in hospitalized children. *Journal of Critical Care*, 21, 271-279.
- o Early warning scoring system proactively identifies patients at risk of deterioration, leading to fewer cardiopulmonary emergencies and death. (2008). Retrieved from <http://www.innovations.ahrq.gov/content.aspx?id=2607>
- o Early warning systems: Scorecards that save lives. (2011). Retrieved from <http://www.ihl.org/knowledge/Pages/ImprovementStories/EarlyWarningSystemsScorecardsThatSaveLives.aspx>
- o Ehlers, C. (2012). *Ethical considerations: Implementing PEWS into practice, submitted to Dr. Hegge as assignment for NUR 835*. Unpublished manuscript, College of Nursing, South Dakota State University.
- o Ehlers, C. (2012). *Implementing Pediatric Early Warning Score Tool into Clinical Practice Impact on Early Identification of Patient Deterioration and Provider Communication submitted to Dr. Hegge as an assignment for NUR850*. Unpublished manuscript, College of Nursing, South Dakota State University.
- o Haines, C., Perrott, M., & Weir, P. (2006). Promoting care for acutely ill children-Development and evaluation of a Paediatric Early Warning Tool. *Intensive and Critical Care Nursing*, 22, 73-81.
- o IOM (2007). Arming the emergency care workforce with pediatric knowledge and skill. In *Emergency care for children: Growing pains* (pp. 151-185). Retrieved from http://www.nap.edu/catalog.php?record_id=11655
- o Kyriacos, U., Jelsma, J., & Jordan, S. (2011). Monitoring vital signs using early warning systems: A review of literature. *Journal of Nursing Management*, 19, 311-330. Doi:DOI: 10.1111/j.1365-2834.2011.01246.x
- o McGaughey, J., Alderdice, F., Fowler, R., Kapila, A., Mayhew, A., & Moutray, M. (2009). Outreach and early warning systems (EWS) for the prevention of intensive care admission and death of critically ill adult patients on general hospital wards. *The Cochrane Collaboration*, 1, 1-23.
- o Monaghan, A. (2005). Detecting and managing deterioration in children. *Paediatric Nursing*, 17(1), 32-35.
- o Orlando's Nursing Process Theory. (2012). Retrieved from http://currentnursing.com/nursing_theory/Orlando_nursing_process.html
- o Park, E. (2012). An integrated ethical decision making model for nurses. *Nursing Ethics*, 19(1), 139-159.
- o Pfrimmer, D. (2009). Teamwork and communication. *The Journal of Continuing Education in Nursing*, 40(7), 294-295.
- o Popovich, D. (2011). 30 second head-to-toe tool in pediatric nursing: Cultivating safety in handoff communication. *Pediatric Nursing*, 37(2), 55-60.
- o Potter, M., & Tinker, S. (2000). Put power in nurse's hands: Orlando's nursing theory supports nurses simply. *Nursing Management*, 31(7), 40-41.
- o Tucker, K. M., Brewer, T. L., Baker, R. B., Demeritt, B., & Vossmeier, M. T. (2008). Prospective evaluation of a pediatric inpatient early warning scoring system. *Journal of Specialist in Pediatric Nursing*, 14(2), 79-85.
- o Vardman, J. M., Cornell, P., Gondo, M. B., Amis, J. M., Townsend-Gervis, M., & Thetford, C. (2012). Beyond communication: The role of standardized protocols in a changing health care environment. *Health Care Management Review*, 37, 88-97. Doi:DOI: 10.1097/HMR.0b013e31821fa503