

Multidisciplinary Approach to Pressure Injury Leads to Reduction in Pressure Injuries

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BACKGROUND:

Pressure Injuries (PIs) are prevalent in critically ill pediatric patients, including those secondary to trauma. They are the most frequent care-related adverse event. PIs complicate patient care, prolong hospital length of stay, and increase healthcare costs. They can be attributed to skin immaturity and variance in body size of the pediatric patient population. Using a multidisciplinary approach, we created a system to reduce the incidence of PIs through early recognition and implementation of preventative measures.

SMARTER OBJECTIVE:

Our goal was to decrease the incidence of pressure injuries in our pediatric trauma patients by 1.5% in 2024 compared to the 5.97% occurrence rate in 2023 by utilizing a multidisciplinary approach to improve detection and implement early preventative measures.

IMPROVEMENT ACTION PLAN WITH ACTIONS TAKEN:

- The Pediatric Trauma Team and Advanced Wound Care Team met to discuss key interventions for prevention and early detection of PIs.
- We created a SmartPhrase with recommendations for PI prevention (see image below for an example).
- We shared this SmartPhrase with the PICU.
- When a pediatric trauma patient who is at high risk for developing pressure injuries is admitted to the PICU, either the Pediatric Trauma team or the PICU team places a "Miscellaneous MD to Nurse" Order with the PI Prevention SmartPhrase.
- Nursing staff completes an initial comprehensive skin assessment on arrival to the PICU, then the age-appropriate Braden Scale is completed every shift. They also work to implement the recommendations in the order including a specialty bed, a Z-flow pillow, and padding bony prominences.

RESULTS:

2023:

- 67 total trauma patients admitted to the PICU
- Four PIs documented
 - Two were related to medical devices (one from an EEG lead and one from a cervical collar)
- Incidence rate: 5.97%

2024:

- 81 total trauma patients admitted to the PICU
- Three PIs documented
 - Two were related to medical devices (both were EEG leads)
- Incidence Rate: 3.70%

Summary:

- We overall decreased our incidence rate of PIs by 2.27%, therefore meeting our goal.

SCALE UP PLAN:

- This SmartPhrase can be implemented on other pediatric trauma patients at high risk for pressure injury who are admitted to other units.
- Pressure injury prevention is not just an issue in the pediatric trauma population, it is a concern for most patients in critical care units. Therefore, we can expand our efforts and implement the PI Prevention SmartPhrase on any high-risk patients admitted to the PICU. We could also consider other critical care units such as the Pediatric Cardiac ICU and the Neonatal ICU.

SUSTAINABILITY PLAN:

Because we used a multidisciplinary approach, we have delegated the responsibility to multiple services. The Advanced Wound Care team keeps us up-to-date with pressure injury prevention recommendations. The PICU and the Pediatric Trauma team work together to ensure that the recommendations in the PI Prevention SmartPhrase are being met and hold discussions regarding pressure injury prevention during rounds.

Our goal going forward is to continue discussions regarding PI prevention focusing on prevention of medical device related PIs (MDRPIs), specifically aimed at decreasing the incidence of injuries related to EEG leads.

LESSONS LEARNT:

- It takes a multidisciplinary approach to ensure proper checks and balances are in place to adequately monitor for early signs of PIs and implement preventative measures for PIs.
- We can successfully reduce the incidence of PIs by altering our approach to care, therefore, we need to re-assess our care of patients with medical devices and ask ourselves "what can we change" or "what care could be better" in relation to medical devices to better prevent MDRPIs.

Wound Care Prevention Recommendations for Pediatric Trauma Patients:

- NURSING is to place a consult order for "IP CONSULT FOR ADVANCED WOUND CARE TEAM- PRESSURE PREVENTION" within the first 4 hours of arrival to the unit.
- Perform a full-body assessment of the patient within a few hours of arrival to the unit and clearly document any pre-existing wounds. PLEASE notify the primary team of any wounds.
- Order a Z flow pillow from materials (reference #108754) within 8 hours of arrival to the unit.
- Q2 turns by bedside nursing - the patient can AT LEAST be turned from the waist down at a 30 degree angle off their sacrum and buttocks with the use of a z flow pillow, even those with severe traumatic head injuries.
- Once order for activity is in place, use waffle cushion anytime patient is in a seated position outside of the bed.
- Utilize foam border dressings on all bony prominences (heels, elbows, and sacrum, etc.).
- If patient is over the age of 13 (more so due to being closer to adult size) you can utilize waffle boots which can offload the heels better than just a pillow.
- If expected to be immobile for >24 hours, NURSING to order a low air loss and alternating pressure specialty bed (order NUR304476).

* PLEASE place order for "IP CONSULT FOR ADVANCED WOUND CARE TEAM" and call 152288 with any open/drainage wound. * This order should be placed by an APP or physician only.

