

# Decreasing ICU Pressure Ulcer Incidence with Risk Focused Prevention Rounds

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### ABSTRACT

Purpose: Pressure ulcer prevalence and incidence rates are high in the adult critical care population. The purpose of this project was to determine if clinical skin rounding would positively impact implementation of prevention interventions and pressure ulcer incidence in adult intensive care units (ICUs).

Significance: Pressure ulcers are a health problem which can result in prolonged length of stay, increased pain and suffering, and increased health care costs. Pressure ulcers are one of the NDNQI Nursing Sensitive Indicators with the quality of nursing care having direct impact on pressure ulcer incidence.

Strategy and Implementation: An ICU pressure ulcer prevention team was formed incorporating clinical leadership from five adult ICUs and consultants from the wound ostomy team and School of Nursing. Using the Braden Risk Assessment tool and current literature on evidence-based nursing interventions, a risk focused pressure ulcer rounding tool was developed. This tool is utilized by clinical leadership, including clinical nurse specialists, managers, and supervisors to conduct daily skin rounds on patients in the ICU. The tool allows clinical leaders to track patients' risk for pressure ulcer development, and current skin status. It also enables leadership to ensure that interventions implemented are both comprehensive and appropriate. During rounds, leadership reinforce the importance of skin care and pressure ulcer prevention interventions providing "real time" teaching and knowledge reinforcement to nursing staff.

Evaluation: Implementation of daily skin rounds resulted in improved unit acquired pressure ulcer incidence in all of the involved units, with some units reaching zero. Elapsed time between education and implementation of nursing interventions also decreased after daily rounding was introduced.

Implications for Practice: Risk focused pressure ulcer rounds facilitate timely implementation of appropriate prevention interventions, positively impacting patient care and unit incidence. Engaging clinical leadership in these rounds reinforces the value of nursing intervention and emphasizes skin care as a priority.

#### INTRODUCTION

Pressure ulcers are a known health problem which can result in prolonged length of stay, increased pain and suffering, and increased health care costs. Data from UMHS pressure ulcer prevalence and incidence studies show that the adult critical care population is both high risk for pressure ulcer development and high incidence. Anecdotally, one may attribute this to many factors such as pre-existing health issues, long procedural or operative episodes, hemo-dynamic instability, and increased immobility. While there are many factors which result in increased risk, the role of the nurse is to mitigate that risk using evidence based prevention interventions. Pressure ulcers are identified as one of the NDNQI Nursing Sensitive Indicators with the quality of nursing care having direct impact on pressure ulcer incidence.

## OBJECTIVES

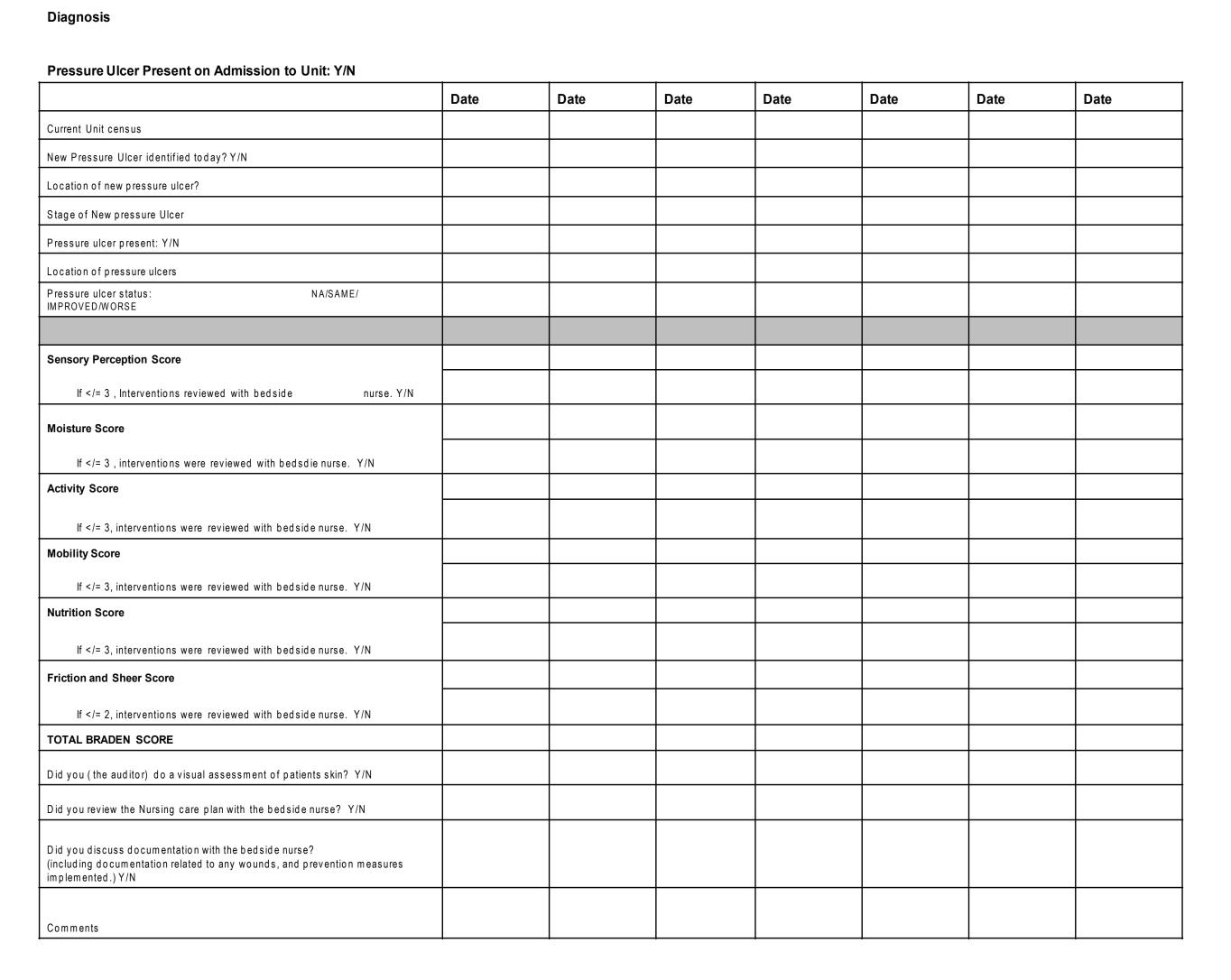
- Evaluate the impact of daily skin rounding on the implementation of appropriate, evidence based pressure ulcer prevention interventions.
- Evaluate the impact of daily skin rounding on pressure ulcer incidence in the adult critical care setting.
- Decrease pressure ulcer incidence in the adult critical care setting.

### METHODS

- An ICU pressure ulcer prevention team was formed incorporating clinical leadership from five adult ICUs, consultants from the wound ostomy team and School of Nursing.
- Using the Braden Risk Assessment tool and current literature on evidence-based nursing interventions, a risk focused pressure ulcer rounding tool was developed.
- Highlighting the Braden sub scale scores, this tool is utilized by clinical leadership, including clinical nurse specialists, managers, and supervisors to conduct daily skin rounds on patients in the ICU.
- The tool allows clinical leaders to track patients' risk for pressure ulcer development, and current skin status. It also enables leadership to monitor that interventions implemented are both comprehensive and appropriate.

During rounds, leadership reinforce the importance of skin care and pressure ulcer prevention interventions providing "real time" teaching and knowledge reinforcement to nursing staff.

### METHODS

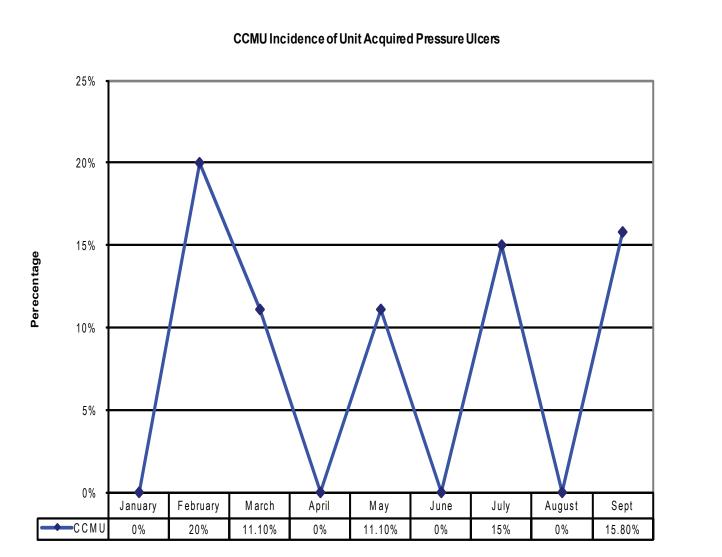


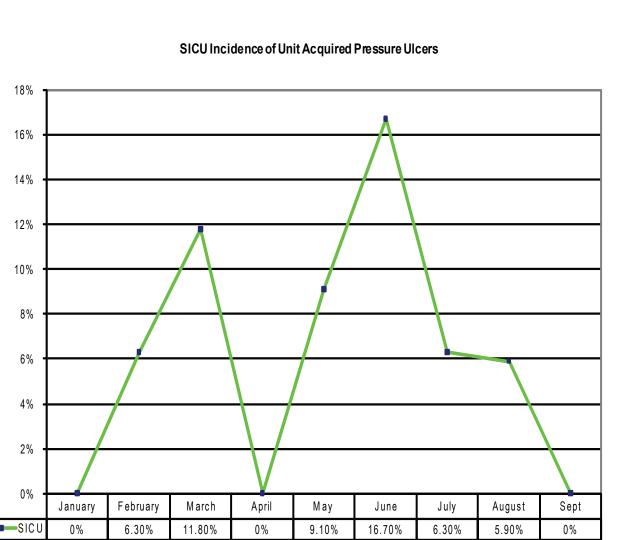
SENSORY PERCEPTION: If score = 3</th <th>MOISTURE if score<!--= 3</th--><th>ACTIVITY/MOBILITY: if score <!--= 3<br-->FRICTION/SHEER: if score <!--=2</th--><th>NUTRITION: if score <!--= 3</th--></th></th></th>	MOISTURE if score = 3</th <th>ACTIVITY/MOBILITY: if score <!--= 3<br-->FRICTION/SHEER: if score <!--=2</th--><th>NUTRITION: if score <!--= 3</th--></th></th>	ACTIVITY/MOBILITY: if score = 3<br FRICTION/SHEER: if score =2</th <th>NUTRITION: if score <!--= 3</th--></th>	NUTRITION: if score = 3</th
Im plement Q2 turning and document	Identify and manage source of moisture		
		Consider referral to PT for strengthening, mobility, balance and ROM	Assess for protein- calorie malnutrition = recent weight loss of > 10-15%, or actual body weight < 90% ideal
Avoid wrinkles in linen under patient	Diarrhea=		
	Evaluate etiology of diarrhea	Progress patient's activity as medical condition allows	Assure nutrition consult is done
Limitexcessive linen between patient and bed surface	Consider ability to implement bowel regimen and/or medication to decrease diarrhea		
	Consider need for Fecal Incontinent Device or Flexi seal	When in chair:	Provide nutritional supplements as ordered
Do not massage bony prominences	Urine=	Limit sitting in chair to 1 hour	
	Consider if source is infectious	IF mustbe in chair > 1 hour reposition/provide pressure relief Q1 and prn	Assistpatient and/orfeed patient as needed
Supportheals off bed (place pillow beneath calves to floatheals or long term consider L'Nards or Lunax)	Consider need for condom cath or Foley. Assure that the tube is secured to prevent leakage and not cause pressure.		
		When in BED:	Administer or almedications with caloric beverage is able
Assess skin under all medical devices	Assist patient with toileting Q2 and prn(if alert)	Implement Q2 turning and document (even if on pulmonary rotation bed)	
C-Collar/Miam i J= assess skin beneath at least QS		If medical condition prevents/minimizes turning = shift or tilt sacral and occipital area Q2 and prn	If patient unable to tolerate oral diet, Enteral Nutrition should be initiated within 24-48 hours following completion of resuscitation. If unable to reach goal, try to provide > 50-65% of goal.
DH/NG/ET tube- assess oral/nasal skin and reposition tube as needed	Cleanse skin with Aloe Vesta cleanser with each incontinent episode	Limit turning to 30 degrees lateral position to avoid pressure on trochanter areas	
TLSO= only on when medically needed and assess skin beneath at least Q4 and prn. If pt not in TB or SICU, secure MDs orders for use.			If patient with protein - calorie malnutrition and enteral nutrition is not feasible, consider parenteral nutrition following resuscitation.
Bipap= assess beneath masks for signs of pressure. Use restore as protective barrier; assess beneath straps for signs of pressure and pad as needed. Assess occipital area for signs of pressure from straps.		If patient NOT on a ventilator, NOT at risk for aspiration and NOT at risk for increased ICP, Keep HOB < 30 degrees.	
Trach Site= Assess ties, and trach plate to assure pressure not excessive Q shift and prn			If unable to meet 100% of goal after 7-10 days of enteral nutrition, consider initiating supplemental parenteral nutrition. * exception if pt obese
L'Nards= assure properalignm entof footin boot, check for pressure Q4 and prn	Avoid use of diapers except when patient up OOB to ambulate	Use assistive devices to prevent sheer injury (maxislides, air pals, slide boards, trapezes, ceiling lifts) and/or additional personnel (regardless of patient size.)	
SCDs= place per order/protocol. Assess skin beneath at least Q4			If patient has a BMI > 30, the goal of enteral nutrition should not exceed 60-70% of the target requirements.
Hair- i.e.: pony tails /braids= com b out hair and assess scalp OD			
If score = 1	Prevent drainage from wounds, tubes, trach sites and drains from irritating skin. (i.e.: G tubes, Trach sites, leaking Foleys etc.) Apply barrier cream or cavilon.		
Increase frequency of above interventions			
Consider need for Low Air Loss surface	If moisture in skin folds= place unsterile ABD pads and change Q2 and prn		
	If Total Braden = 17 and patienthas Stage I or Stage II and/or moisture problem consider need for Low Air Loss surface</td <td></td> <td></td>		

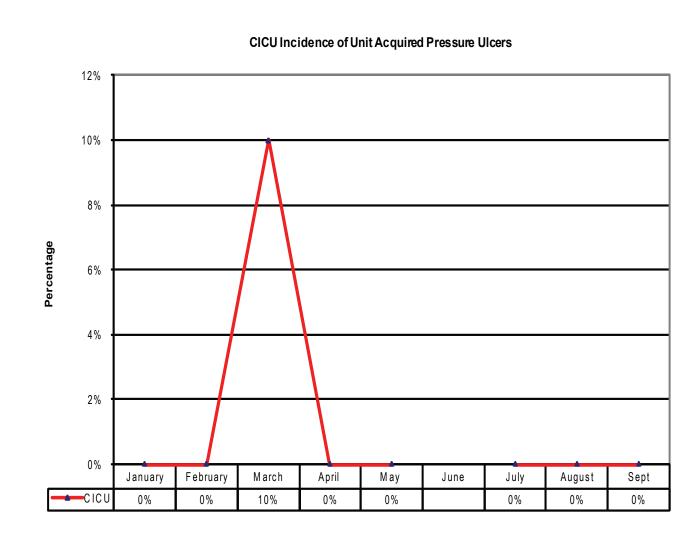
#### OBSERVATIONS

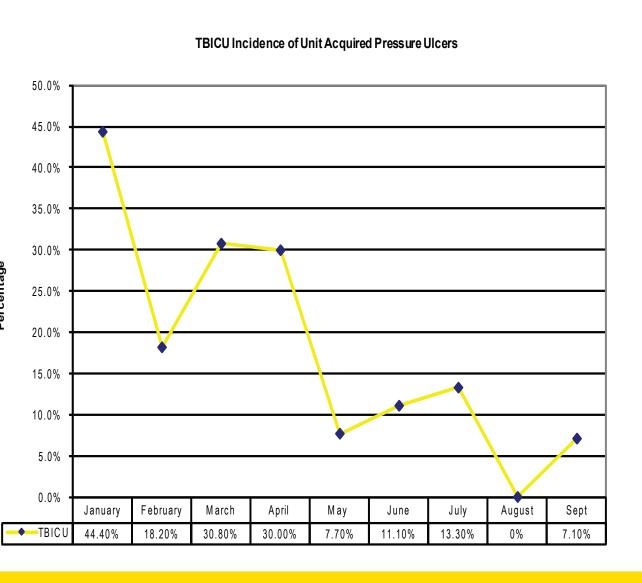
- Following implementation of the prevention rounds at the beginning of April 2009, there is evidence of improvement in unit acquired pressure ulcer incidence in all of the involved units, with some units reaching zero for several months.
- In May and June 2009 it was noted that the SICU experienced a significant increase in unit acquired pressure ulcers. This increase was directly related to the high acuity of multiple H1N1 patients. These patients were unable to be repositioned for prolonged periods of time due to severe hemodynamic and respiratory compromise.
- In July 2009 it was noted that several of the adult ICUs demonstrated an increase in unit acquired pressure ulcers. In discussion with the team, it was determined that this may be attributed to 1) Increased acuity on the units which was perceived by leadership or 2) Inability to sustain daily rounding due to staffing, and overall workload.
- July 2009- September 2009 CVC 4 experienced a significant increase in unit acquired pressure ulcers. It is believed that this increase is related to the change in unit leadership, and an inability to consistently conduct daily rounds.
- In addition to the positive impact on pressure ulcer incidence, observations suggest that as the daily rounding process has evolved the time from education of staff to implementation of prevention interventions has decreased.

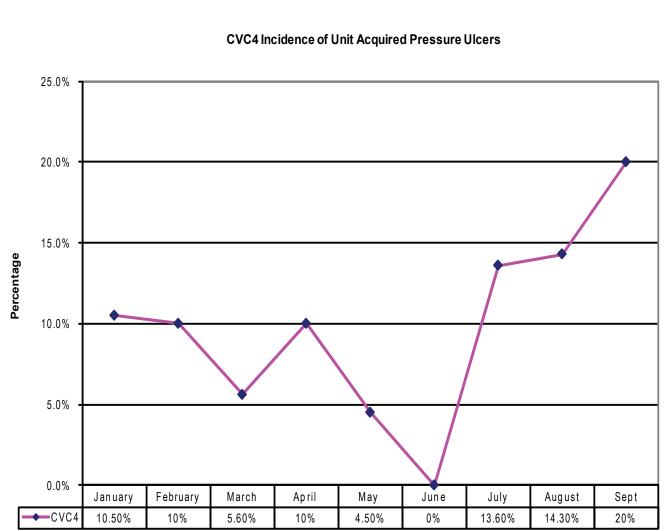
#### Unit Acquired Pressure Ulcer Incidence











#### IMPLICATIONS FOR PRACTICE

- Risk focused pressure ulcer rounds are effective.
- The rounds facilitate timely implementation of appropriate prevention interventions.
- The rounds positively impact patient care and unit incidence.
- Engaging clinical leadership in these rounds is effective.
- Involvement of clinical leadership in rounding reinforces the value of nursing interventions.
- Involvement of clinical leadership in rounding emphasizes to staff that skin care is a priority.

# REFERENCES

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