Preventing Pressure Ulcers

Repositioning and Microturns

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Objectives

- Understand the significance of this topic for Minnesota Hospitals
- Define “optimal positioning” for the bedbound patient
- Discuss MHA Recommendations for alternative positioning (only in the absence of optimal positioning)
- Describe the history and literature related to weight shifting and microturning
- Present examples of techniques for alternative positioning
- Provide relevant references for further exploration of the topic
Almost 60% of stage 3, 4, and unstageable pressure ulcers in MN hospitals develop on the sacral, coccygeal, buttocks region.

- Sacrum, Buttocks, Coccyx
- Medical Devices
- Other
Significance

AHE reports revealed:

- 52% - condition prohibited turning
- 22% - patient refused positioning

Hospitals reporting success:

- Nurse-MD communication about positioning issues
- Bed ahead programs
- Frequent tailbone offloads of some kind
- Frequent reevaluation, reeducation and turning trials
If a patient is not able to be adequately or routinely repositioned:

- **written confirmation** that patient cannot be repositioned from the physician with daily re-evaluation
- Immediate **evaluation for the most appropriate surface** to redistribute pressure
- at least **hourly mini shifts** off the tailbone
Optimal Positioning

- Tissues of the body are not meant to be stationary
- The average healthy person repositions him/herself every 6 to 11.6 minutes

Optimal Positioning

- Hospital bedbound patients
- 30 degrees side lying turns
- Every 2 hours

Optimal Positioning

- HOB 30 degrees or less
- Float heels

National Pressure Ulcer Advisory Panel (NPUAP) and European Pressure Ulcer Advisory Panel (EPUAP): Prevention and treatment of pressure ulcers: Washington DC, 2009
In the Absence of Optimal Positioning:

Off loads

Micro turns

Weight shifts

Mini turns

Courtesy Mayo Clinic
History Behind Weight Shifts


Pressure Mapping
Pressure Mapping - Weight Shifts

Ischial Tuberosities (Sitting Bones)
Sitting on Chair with Cushion

Ischial Tuberosities (Sitting Bones)
Same Patient Leaning to Side
Pressure Mapping - MiniTurn

Supine Position
Pressure Redistribution Mattress
HOB 30 Degrees

Same Patient – Miniturn
Same Mattress
HOB 30 Degrees
Critical Care

Critical Care 63%

Other 37%
Hemodynamic Instability

“Hemodynamic Instability” may be used inappropriately to describe critically ill patients.

Repositioning may be withheld due to fear of affecting systemic perfusion, ICP or oxygenation.

It is passed on from shift to shift without verification nor inclination of when to resume or trial positioning.

Winkelman C, Peereboom K. Staff-perceived barriers and facilitators. Crit Care Nurse. 2010;30:13–16

Most neurosurgery patients with intracranial pressure monitoring can be turned safely beginning in the immediate postoperative period.


Gravitational Equilibrium

Process
- Failure to turn for prolonged periods
- Hemodynamically calibrates to a supine position
- Creates maladaptation to position changes
- Orthostatic response with rapid movement

Management
- SLOW movement followed by 5- to 10-minute recovery periods
- CLRT (turning beds) does not count as patient turning for pressure ulcer prevention

SVO2 and Heart Rate

- Monitored changes in SvO₂ and heart rate following lateral turns in ICU patients
- Changes found to be transient
- Most patients returned to baseline within 5 minutes

Respiratory Instability

Sometimes repositioning is the actual treatment for the respiratory instability:

- Atelectasis
- Shunting in the context of a collapsed lung
- Differences in lung compliance.

Turning Trials

- Insufficient evidence to determine which patients are severe enough to preclude turning trials
- Turning, repositioning, and mobilizing the intensive care patient requires multidisciplinary collaboration


Discuss With MD and Reassess Each Shift:

- Active uncontrolled bleeding (ex: Open chest graft failure)
- Massive Transfusion protocols
- No fluid/blood going in= no blood pressure (does NOT include minor fluid boluses for correction)
- Sudden desaturation from patient’s baseline that doesn’t RECOVER
- Sudden change in MAP that does not RECOVER (and can’t be corrected with vasopressive agents)
- King LT Airway

Techniques

- SLOWLY move to 10 degrees-allow recovery period-
  move to 20 degrees-allow recovery period etc
- Using a turn/lift sheet to tilt off tailbone
- Lift head or extremity off bed surface for 1-2 minutes at a time
- Utilize the lost art of passive range of motion
- Communicate, Trouble Shoot, Communicate!!

References
(Micro/Minor/Mini) Shifts or Turns

- Brindle CT Outliers to the Braden Scale Identifying high ICU patients and the results of prophylactic dressing use. *WCET Journal Volume 30 Number 1 – January/March 2010*.
References

Positioning & Hemodynamic Unstablity


Thank You!!

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