

Heads Up, Twenty Up!

Innovative Practice Changes for Ventilated-Associated Pneumonia Prevention

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Purpose

- ❖ To determine if lowering the head of bed from a goal of 30-45 degrees to 20 degrees would increase staff compliance with ventilator-associated pneumonia (VAP) bundle without increasing VAP rate or pressure ulcer incidence.

Background/Significance

- ❖ Struggle to achieve and sustain bundle compliance with head of bed elevation in Pediatric Intensive Care Unit (PICU):
 - VAP prevention bundle head of bed (HOB) elevation 30 to 45 degrees: 79% compliance rate
- ❖ VAP incidence: 2014 = 0, 2013 = 3, 2012 = 5
- ❖ Clinical nurses' concerns:
 - At 30-45 degree HOB elevation patients were sliding down in their beds.
 - Friction and shearing forces from up-and-down position changes could lead to pressure ulcers^{1,2} and/or endotracheal tube dislodgement.



Literature Review Findings

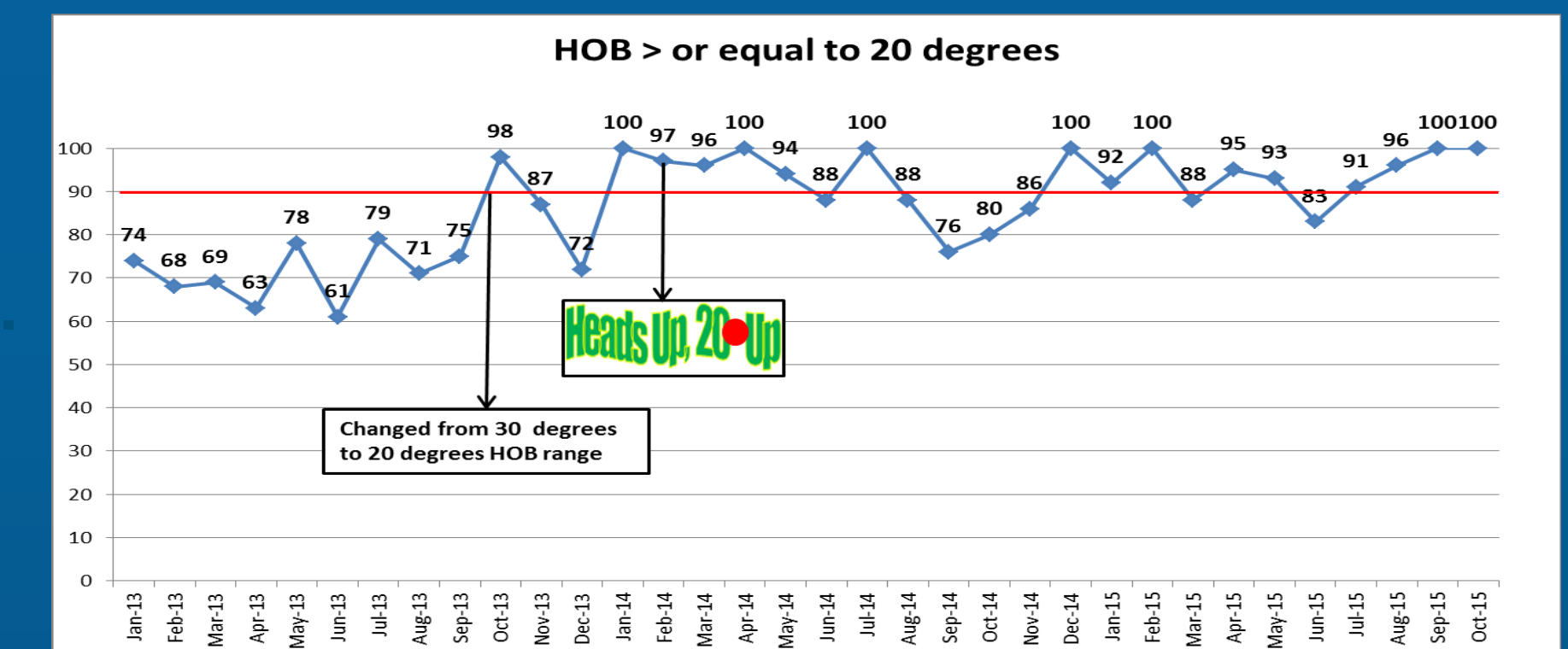
- ❖ To minimize shear and friction forces, HOB elevation should not be greater than 30 degrees.²
- ❖ Quality of evidence for HOB elevation at 30 to 45 degrees was found to be low (Grade III): based only on expert consensus without rigorous studies conducted.³



Plan

- ❖ PICU VAP committee implemented innovative practice change to 20 degree HOB elevation for ventilated patients.
- ❖ Education was developed and a slogan was created: *Heads Up, Twenty Up* based on the childhood game, Heads Up, Seven Up.
- ❖ Educational flyers were displayed throughout the PICU.
- ❖ Small *Heads Up, 20 Up* stickers were placed on patient charts and on ventilators as bedside reminders.

Outcomes



- ❖ Since implementation, bundle compliance has averaged 93% with elevating HOB to 20 degrees.
- ❖ Zero VAP rate since November 2013
- ❖ Unable to directly correlate changes in pressure ulcer incidence to this project due to multiple pressure ulcer prevention strategies implemented during same timeframe
- ❖ Implementing an innovative change in clinical practice, PICU nurses improved the safety of their ventilated patients while increasing VAP bundle compliance.



References

- ¹Hess, C. (2004). Did you know? The differences between friction and shear. *Advances in Skin & Wound Care*, 17(5), 222.
- ²Sibbale, G., Goodman, L., Norton, L., Krasner, D., & Ayello, E. (2012). *Skin Therapy Letter*, 17(8), 4-7.
- ³Klompas, M. et al. (2014). Strategies to prevent ventilator-associated pneumonia in acute care hospitals: 2014 update. *Infection Control and Hospital Epidemiology*, 35(8), 915-936.

