BiPAP-Related HAPI in DSU

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BACKGROUND

- Reduction or elimination of medical device-related pressure injuries (MDR PI’s) are among key indicators of patient safety and nursing quality in healthcare facilities.
- Most MDR PI’s develop when skin or underlying tissues are subjected to a sustained pressure or shear from medical devices.
- Dressings have shown substantial biomechanical effectiveness in alleviating facial tissue deformations and stresses by providing localized cushioning to the tissue at risk.
- In the 4 months before the project initiation, one patient per month had BiPAP related pressure injuries.

PURPOSE

- To reduce and eliminate BiPAP related pressure injuries using evidence-based solutions.
- To promptly identify problem areas for early treatment and prevention.

REFERENCES

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METHODS

- Design: Evidence-based quality improvement
- Setting: DSU and SDU
- Participants: Patients using BiPAP

Procedure:
- Obtained historic data from leadership.
- Conducted baseline chart audits.
- Acquired Curagel Nasal Pad (silicone).
- Engaged respiratory therapists in the project.
- Educated staff regarding project.
- Alternated between full mask and total face mask every 6 hours.
- Incorporated skin assessment under medical device during 4-eyes.
- Conducted 20 monthly audits including 4-eyes, Braden Score, skin order set, presence of silicone pad, and presence of HAPI.

RESULTS

- From October 2019 to March 2020, there was zero occurrence of BiPAP related HAPI.
- Audits demonstrated 100% compliance on all measures.
- BiPAP related injuries recurred in April with COVID-19 pandemic at a rate of one per month.

DISCUSSION

- Face mask and silicone pad proved to be effective in eliminating BiPAP associated pressure injuries.
- COVID-19 necessitated changes in practice:
  - Requirement to keep the BiPAP system intact; unable to rotate between full face mask and total face mask.
  - Prone position put additional pressure on face.
  - Continue project with additional interventions to decrease effects of proning and compensate for being unable to change mask.

CONCLUSION

- Under normal conditions, the interventions produced complete elimination of pressure ulcer. The changes in care necessitated by the COVID-19 pandemic require new interventions to address additional risks.