



BiPAP-related HAPI in DSU During the COVID-19 Pandemic

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
- The DSU is the primary site for admission of unstable COVID patients

PURPOSE

- To reduce and eliminate BiPAP related pressure injuries using an evidence-based solution in conformance with the precautions and restrictions in caring for COVID-19 patients
- 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: COVID and Non-COVID patients using BiPAP

Procedure:

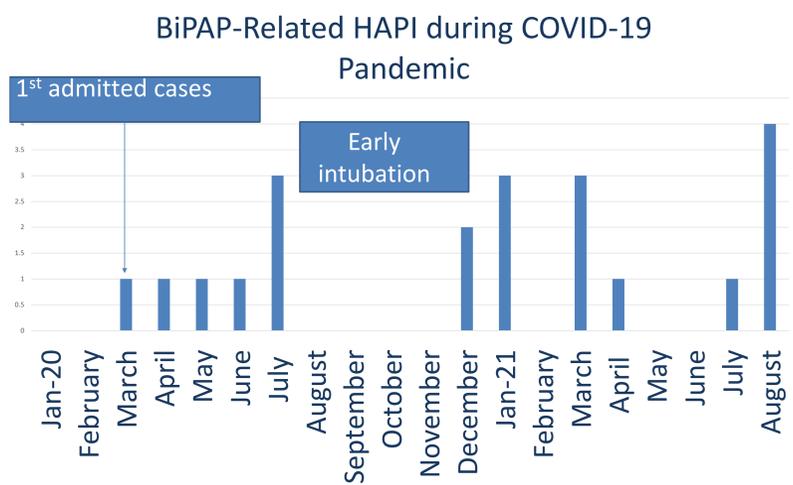
- Obtained historic data from leadership
- Conducted baseline chart audits
- Continued use of Curagel Nasal Pad (silicone), alternating between full face and total face masks every 6 hours, prn, and when safe and tolerated by the patient
- Engaged respiratory therapists in the project
- Educated staff 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

- BiPAP-related HAPI occurred in conjunction with peaks in COVID-19 census and severity of illness
- Compliance with the evidence-based quality improvement project was adapted based on COVID-19 restrictions and precautions

DISCUSSION

- Rotation of masks and use of silicone pads proved to be effective in eliminating BiPAP associated pressure injuries based on a project prior to the COVID pandemic and the use of proning
- 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 puts additional pressure on face



CONCLUSION

- Prior to COVID-19, project interventions eliminated HAPI related to BiPAP. Modifications in care required for COVID-19 patients contributed to new occurrences of BiPAP related HAPIs
- Additional study is necessary to determine the most effective methods of decreasing HAPI associated with prone positioning and the debilitating effects of COVID