

Ohio Northern University

DigitalCommons@ONU

---

ONU Student Research Colloquium

---

Apr 22nd, 1:00 PM - 2:00 PM

## Checklist Based VAP Bundle

Molly Van Gorp

*Ohio Northern University*

Follow this and additional works at: [https://digitalcommons.onu.edu/student\\_research\\_colloquium](https://digitalcommons.onu.edu/student_research_colloquium)



Part of the [Nursing Commons](#)

---

### Recommended Citation

Van Gorp, Molly, "Checklist Based VAP Bundle" (2022). *ONU Student Research Colloquium*. 34.  
[https://digitalcommons.onu.edu/student\\_research\\_colloquium/2022/posters/34](https://digitalcommons.onu.edu/student_research_colloquium/2022/posters/34)

This Poster is brought to you for free and open access by DigitalCommons@ONU. It has been accepted for inclusion in ONU Student Research Colloquium by an authorized administrator of DigitalCommons@ONU. For more information, please contact [digitalcommons@onu.edu](mailto:digitalcommons@onu.edu).



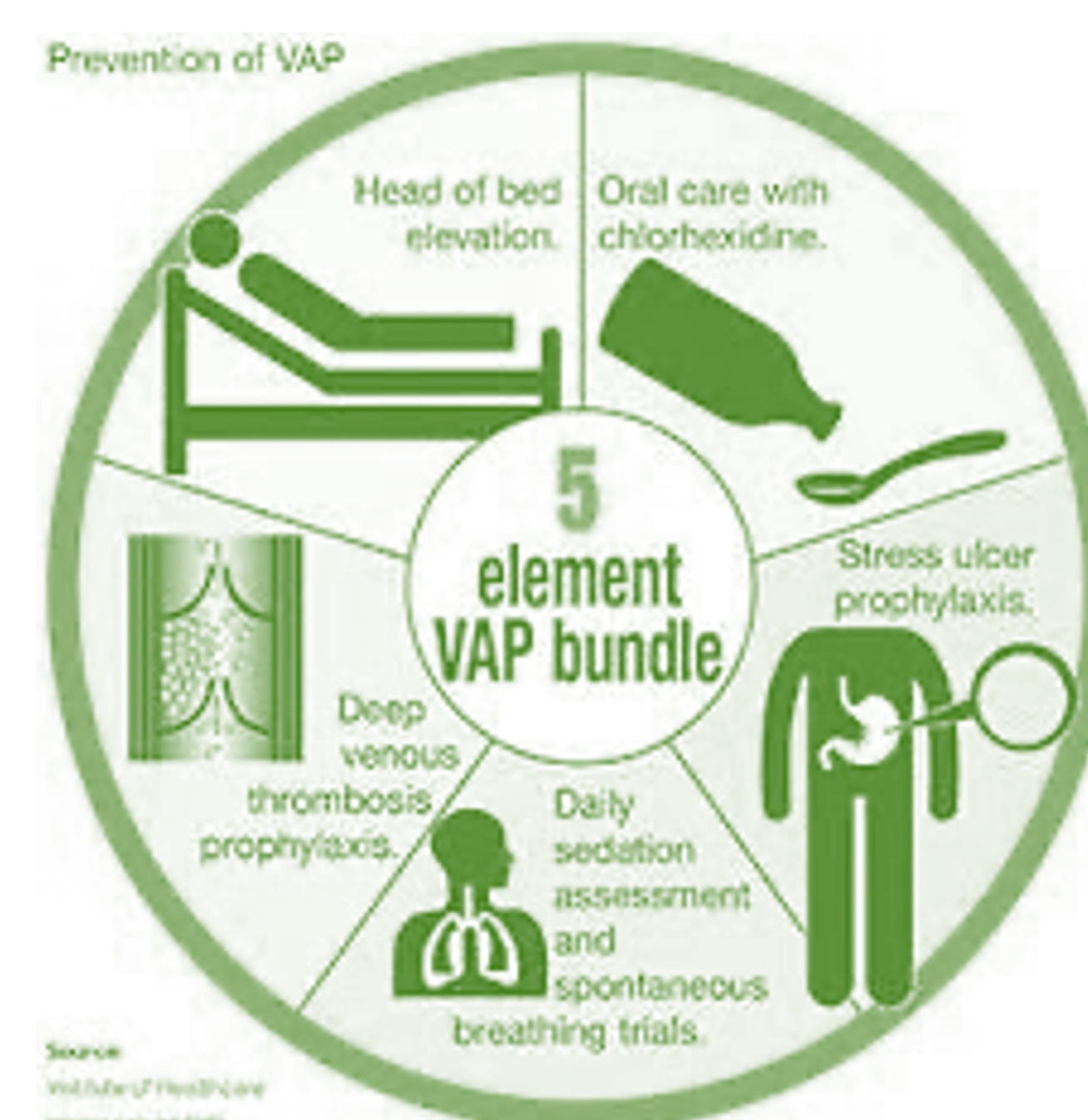
## Background:

- Ventilator associated pneumonia (VAP) is the leading cause of death of all hospital acquired infections.
- VAP is any type of pneumonia that is diagnosed through a chest x-ray and culture 48 hours after intubation (CDC, 2014).
- Bundles have been designed to implement consistent evidence-based care to prevent ventilator associated complications.
- There is a gap that exists between knowledge and physical practice.



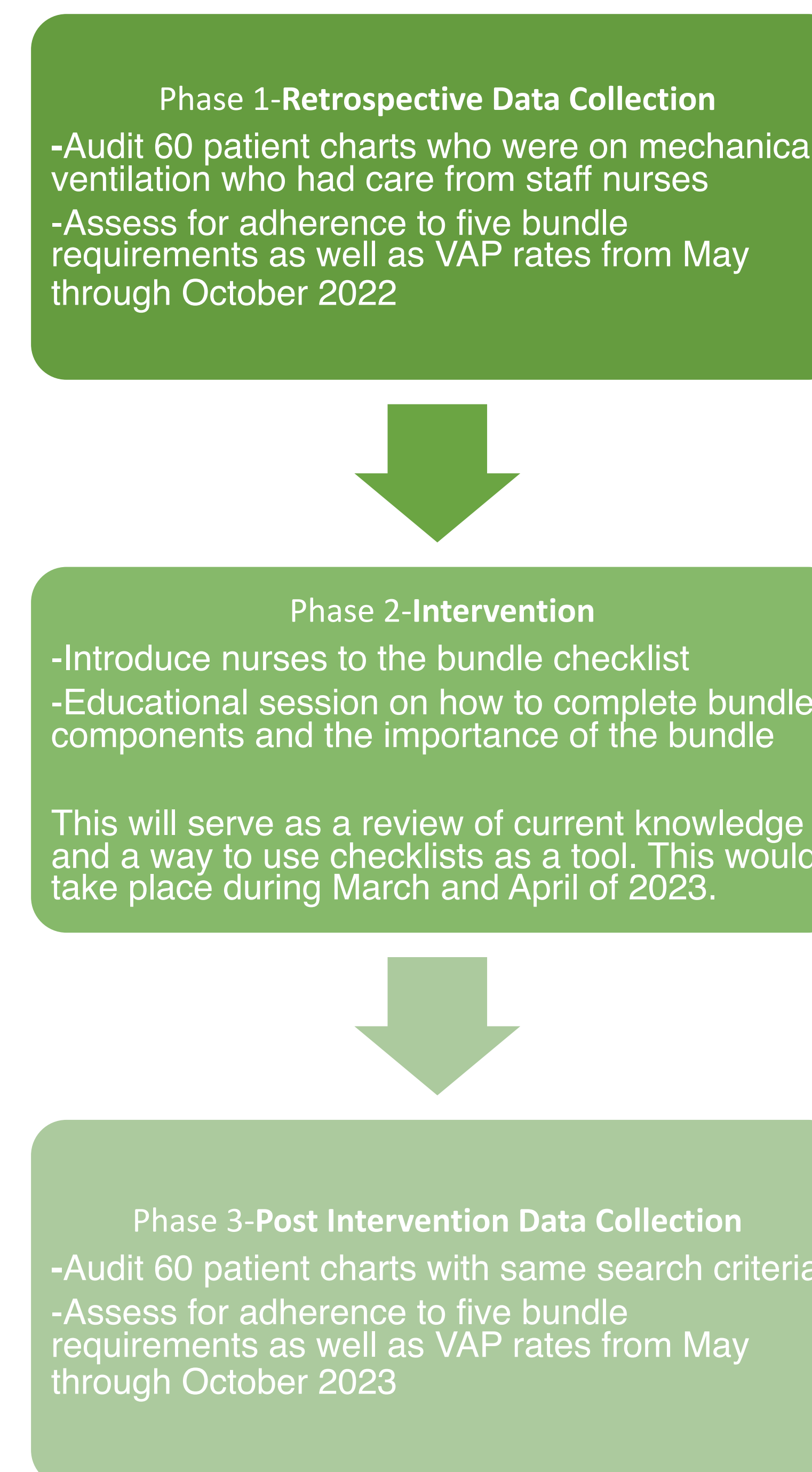
## Literature Review

- It is estimated 9% to 27% of patients will develop VAP, with an upward 70% mortality rate (Radhakrishnan et al., 2021).
- Nurses reported lack of adherence can be attributed to lack of time, lack of knowledge, larger priorities and hospitals not being strict with enforcement (Hamisheh Kar et al., 2014).
- When VAP bundles were implemented, there was a significant decrease in late onset VAP (30.9% versus 13.5%) (Burja et al., 2018).
- Education, alongside improving nursing skills showed an increase in adherence and a decrease in the incidence of VAP. They found 66.7% incidence of VAP prior to education versus 21.4% after training (Ismail et al., 2015).



## Methods

- Three phase quasi-experimental research design taking place in the ICU
- Participants include staff nurses in the ICU



## Checklist Based VAP Bundle

### Active:

- ☐ Chlorohexidine oral care q4
- ☐ Sedation free interval
- ☐ DVT prophylaxis
- ☐ Peptic ulcer prophylaxis

### Passive:

- ☐ Head of Bed Elevation to at least 30 degrees

## Education

- Staff will be required to attend one meeting
- Educate staff using interactive learning that stresses the importance of bundle compliance and components
- Checklists would be posted at the charting stations as well as in the conference room

## Evaluation of Data

- The data will be analyzed through a chart audit. VAP bundle component completion as well as VAP occurrence will be analyzed.
- The retrospective chart audit will be conducted on 60 patients on mechanical ventilation during the five months. Criteria will be outlined as what will be counted as a “yes” (criteria met) and “no” (not met).
- The same chart audit process will be conducted on the post intervention group. Incidence of VAP will be measured pre and post intervention according to CDC guidelines.

## Nursing Implications

- The bundle checklist will serve as a reminder and organized system to keep nurses accountable.
- Patients on mechanical ventilation will be cared for with a consistent level of evidence-based care which will reduce their chance of developing VAP.

## References

- Burja, S., Belec, T., Bizjak, N., Mori, J., Markota, A., & Sinković, A. (2018). Efficacy of a bundle approach in preventing the incidence of ventilator associated pneumonia (VAP). *Bosnian Journal of Basic Medical Sciences*, 18(1), 105–109. <https://doi.org/10.17905/bjbm.2017.2278>
- Ge, W., Wei, W., Shuang, P., Yan-Xia, Z., & Ling, L. (2019). Nasointestinal tube in mechanical ventilation patients is more advantageous. *Open Medicine (Warsaw, Poland)*, 14, 426–430. <https://doi.org/10.1515/med-2019-0045>
- Hamisheh Kar, H., Vahidnezhad, M., Mashayekhi, S. O., Asgharian, P., Hassanzadeh, H., & Mahmoodpoor, A. (2014). Education alone is not enough in ventilator associated pneumonia care bundle compliance. *Journal of Research in Pharmacy Practice*, 3(2), 51–55. <https://doi.org/10.4103/2279-042X.137070>
- Radhakrishnan, R., Sood, R., Wig, N., Sethi, P., Soneja, M., Kumar, A., Nischal, N., Biswas, A., & Pandey, R. M. (2021). Effect of training and checklist based use of ventilator associated pneumonia (VAP) Prevention Bundle Protocol on Patient Outcome: A Tertiary Care Center Study. *The Journal of the Association of Physicians of India*, 69(8), 11–12.

