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PRACTICE POSITION STATEMENT

Non-Ventilator Healthcare-Associated Pneumonia (NV-HAP)

NON-VENTILATOR HEALTHCARE-ASSOCIATED PNEUMONIA (NV-HAP)

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PURPOSE

This practice position statement serves to highlight the importance of understanding NV-HAP and its impact on patient outcomes. The intent is to provide an overview of the current evidence on NV-HAP and encourage actions that lead to prevention.

INTRODUCTION

NV-HAP is costly and preventable with significant impact on patient morbidity and mortality.[1,2] While there are recent data showing decreases in many healthcare-associated infections (HAIs), recent publications highlight the understated but significant burden of non-ventilator hospital-acquired pneumonia (NV-HAP).[3,4] Tracking of NV-HAP is not currently mandated for inpatient settings such as the majority of hospitals and long-term care settings, but prevention strategies would likely impact patient safety, health, and quality of life.[5, 6] Currently, there are no consensus guidelines for the implementation of a NV-HAP prevention bundle. An international review of the literature found that most NV- HAP occurs outside of the hospital ICU, meaning that pneumonia occurs in patients who are not critically ill.[7,8] For example, Kopp found that 47% of patients with spinal injury suffered sequelae of NV-HAP and were more likely to die, even 10 years after hospitalization.[9] Hence, the potential for pneumonia acquisition in the inpatient or long-term care setting is high, and it may be prudent to implement a NV-HAP prevention bundle. The prevention of one pneumonia case would be significant in cost-avoidance and unnecessary patient suffering.

Challenges for healthcare systems, infection preventionists, and clinical providers

- Healthcare professionals may not appreciate the relationship between integrity of the oral cavity and the onset of pneumonia.
- Direct healthcare providers may be unfamiliar with the importance of pneumonia- prevention strategies outside of the ICU and in non-ventilated patients.
- Healthcare settings may lack pneumonia prevention policies.
- There may be a lack of equipment and other resources to address oral care.
- Many electronic databases and electronic health records may not be designed to record and report

compliance with pneumonia prevention bundle components (e.g., head of bed up, mobility, oral care, etc.).
- Cases of NV-HAP may be difficult to identify and standardize.
- Research on NV-HAP risk factors and the relationship of prevention strategies and NV- HAP are lacking.

SUMMARY

APIC encourages infection preventionists to understand and apply the current CDC NV-HAP surveillance definitions in selected patient populations in order to establish prevalence rates. APIC calls on healthcare systems, clinical providers and infection preventionists to:

- Reduce the incidence of NV-HAP with appropriate interventions targeted to specific patient populations;
- Support process improvement efforts;
- Support research, to identify highest risk populations and methods of active surveillance for a proactive response to reducing NV-HAP incidence.

REFERENCES

1. Davis J, Findley E. A Second breadth: Hospital-acquired pneumonia in Pennsylvania, nonventilated versus ventilated patients. *Pa Patient Saf Advis*. 2018;15(3):1-12.
2. Giuliano, K, Baker D, Quinn B. Non-ventilator hospital acquired pneumonia in U.S. hospitals: Incidence and cost. *Am J Infect Control.* 2018; 44(6):322-327
3. Magill, S. et al. Changes in prevalence of health care-associated infections in U.S. hospitals. *N Engl J Med.* 2018;379(18):1732-44.
4. Baker, D, Quinn B. HAPPI-2: Incidence of non-ventilator hospital-acquired pneumonia in the United States. *Am J Infect Control.* 2018; 46(1):2-7.
5. Micek ST, Chew B, Hampton N, et al. A case control study assessing the impact of nonventilated hospital acquired pneumonia on patient outcomes. *Chest.* 2016:150(5), 1008-14.
6. Lyons PG, Kollef MH. Prevention of hospital acquired pneumonia. *Curr Opin Crit Care.* 2018:24(5), 370-378.
7. Klompas, Michael. (2016). Hospital-Acquired Pneumonia in Nonventilated Patients: The Next Frontier. *Infection Control and Hospital Epidemiology.* 37. 825-826. 10.1017/ice.2016.101.
8. Di Pasquale M, Aliberti S, Mantero M, Bianchini S, Blasi F. Non-intensive care unit acquired pneumonia: A new clinical entity? *Int J Molecular Sciences.* 2016;17(3):287.
9. Kopp MA, Watzlawick R, Martus P, et al. Long-term functional outcome in patients with acquired Infections after acute spinal cord injury. *Neurology.* 2017;88(9):892-900.

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