Connecting Interprofessional Research with Practice to Reduce Non-Ventilator Hospital Acquired Pneumonia

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**Aim**

Non-ventilator hospital acquired pneumonia (NV-HAP) is an understudied disease, with potential for improved health and fiscal impacts.

We sought to:
1. Determine the incidence of NV-HAP in three large hospital systems
2. Implement and sustain an oral care intervention to reduce NV-HAP.

**Background/Significance**

Because it is not required by regulatory agencies, most hospitals do not monitor NV-HAP. However, recent studies indicate that NV-HAP is now a leading cause of hospital-acquired infections.

![NV-HAP Rate: 1.22-8.9 per 1000 patient days](image)

![Excess Length of Stay](image)

![Missed Oral Care](image)

**Pathogenesis of NV-HAP**

**Methods**

To prevent NV-HAP, the CDC recommends selecting **modifiable** risk factors and creating an intervention program based on those risk factors.

- Preventing certain hospital-acquired infections
- Antimicrobial stewardship
- Oral health education/hygiene
- **Modifiable risk factors:**
  - Malnutrition
  - Invasive mechanical ventilation
  - Acute respiratory failure
  - Non-elective admission
  - Distress from hospitalization

**Goal:** To decrease non-ventilator hospital acquired pneumonia by 20% with a comprehensive oral care program.

**Intervention:** Evidenced-based oral care for ALL adult patients.

**Interprofessional Partnerships:** Important to reduce silos—nursing, perioperative, speech therapy, physicians, infection prevention, respiratory, dental professionals, & academic partner.

**Results**

**Figure 1. Increased Oral Care Frequency**

![Chart showing increased oral care frequency](chart)

**Figure 2. Control chart for non-ventilator HAP, January 2010 to December 2014**

![Control chart](chart)

**What does this mean? Saved lives and fiscal resources**

- **86 Patients Safe from Harm**
- **16 Lives Saved**
- **600 Hospital Days Saved**
- **$3.4M Saved**

**Conclusions**

NV-HAP is one of the most common hospital-acquired infections and it occurs on every type of hospital unit. Nurses, using a team-based, interprofessional approach, can lead their hospitals in monitoring and implementing effective NV-HAP prevention programs.

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