Implementation of a Mouth Care and Incentive Spirometry Care Bundle Checklist

Rebecca Waksmunski, MS, RN
Mary Ellen Connolly, DNP, CRNP; Nancy Bolan, PhD, MPH, FNP, CNM

University of Maryland School of Nursing

Problem Statement

- **Hospital Acquired Pneumonia (HAP)** is the second most prevalent hospital acquired condition and first in terms of morbidity, mortality and cost
- HAP is associated with increased length of stay and cost of care
- **Checklists** that bundle modifiable risk factors decrease risk of HAP and improve patient care

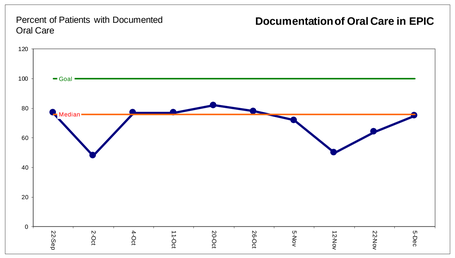
Purpose of Project/Goals

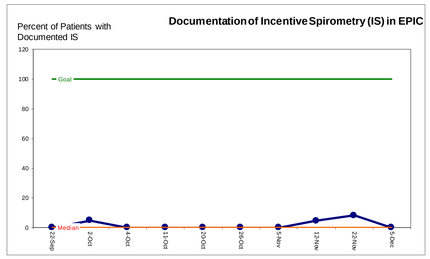
- **Quality Improvement Project:** Develop and Implement care bundle checklist to prevent HAP on 22-bed Intermediate Care Unit (IMC) at community hospital
- **Short Term Goal:** After education and training, 100% of the nurses and techs will complete care bundle checklists each shift for all patients on IMC to reduce risk of development of HAP by 10%.
- **Long Term Goal:**100% of patients with checklist completed will not develop HAP on IMC

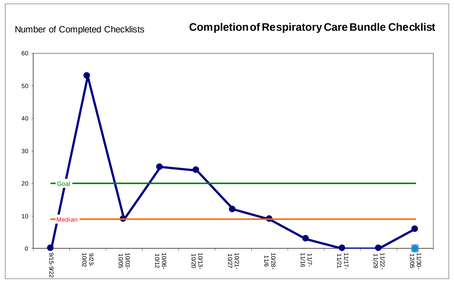
Methods

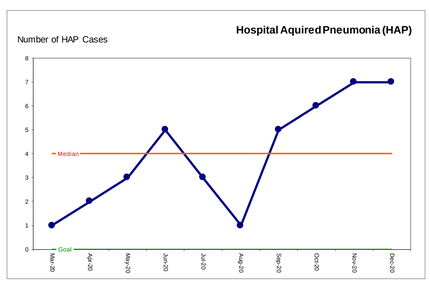
- **Setting**: 22 -bed IMC at community hospital in mid-Atlantic region
- **Population**: All IMC patients without admitting diagnosis of pneumonia. (Covid+ patients excluded)
- **Implementation**: Staff education about prevention of HAP and how to complete checklist
- **Unit champions** were charge nurses, staff nurses, and unit secretaries
- **Data Collection:** Weekly chart audits of checklist completion, oral care and IS documentation in EPIC, and monthly audits of HAP

Figures









Respiratory Care Bundle Checklist	
Toothpaste and toothbrush at the bedside	
IS at bedside within arm's reach of patient	
Nurse or PCT demonstrates proper use of IS	
Patient provides return demonstration of IS	
Water at the bedside for mouthcare	
Head of bed is at least 30 degrees	
Swallow evaluation by SLP has been done since admission if warranted (coughing while eating or drinking, slurred speech, facial droop)	

Results

- **Care Bundle Paper Checklist:** Checklist completion initially remained high but dropped off in early October and remained flat thereafter.
- **Incentive Spirometry Documentation**: IS documentation remained low throughout project implementation and was unchanged from baseline data. The average of IMC patients using the IS was 0%.
- **Oral Care Documentation**: Oral care documentation in EPIC remained high but unchanged from baseline during checklist implementation period. An average of 76% of IMC patients received oral care
- **HAP Cases:** HAP increased significantly from median baseline value of 4 to 7 during implementation period

Discussion

- **No statistically significant relationship** appreciated with checklist completion and IS and oral care documentation in EPIC. Introduction of checklist did not cause a decrease in HAP cases
- **Cases of HAP rose** during project implementation period and COVID-19 surge
- Introduction respiratory care checklist did not mirror **literature findings** that care bundles increase nursing compliance or decrease incidence of HAP
- **Limitations:**
  - Ongoing work group targeting aspiration pneumonia displaced focus on prevention of HAP using care bundle and focuses on SLP involvement.
  - Lack of early administrative support
  - Covid+ patients exempt from intervention. Decreased sample size
  - Paper checklist not part of EHR
  - No IS orders from providers
  - Project originally created based on inadequate flowsheet from old EHS.

Conclusions

- **Transition paper checklist to electronic format** within EPIC for sustainability and improved compliance within year of project start date
- **Targeted care bundles i**mprove documentation compliance and performance measures because interventions are consolidated
- **Multidisciplinary approach** addresses multifactorial HAP causes
- **Future QI projects** should target provider order sets to include IS for all IMC patients
- **Ongoing staff education** on HAP risk factors and interventions enhance knowledge and increase compliance

References

Acknowledgement

I would like to express gratitude to Andrea Norris, RN, AA for her assistance with data collection and her ongoing support of the project's implementation and to Mary- Ellen Connolly for her ongoing support and advice.