A QUALITY IMPROVEMENT PROJECT TO REDUCE HOSPITAL READMISSION AMONG OLDER ADULTS ADMITTED WITH A PRIMARY DIAGNOSIS OF PNEUMONIA TO THE ACUTE CARE SETTING.

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Introduction

- Pneumonia is responsible for approximately 1 million hospital admissions and more than 50,000 deaths annually.
- 1 in 5 patients is readmitted within 30 days either with pneumonia or other causes related to existing co morbidities (De Alba, 2014).
- Pneumonia readmissions increases length of stay by 7-9 days, 30% to 70% mortality rates and over $40,000 in cost for hospitals (Flanagan, 2016).

Objective

The purpose of the QI project was to determine the feasibility and effectiveness of the "Be Ready for Home" discharge checklist transitional care intervention in reducing readmission rates among older adults with pneumonia

Method

Sample:

- RNs working on the medical unit.
- Patients who were 65 years and older admitted with Pneumonia and being discharge to home.

Interventions:

- Structured Education regarding impact of Hospital Readmissions
- "Be Ready for Home" discharge Checklist.

Table 1: Demographic characteristics of the nurses working on the medical unit of study. (n=28)

Age group in years	18-25	5	17.9 %
	26-50	14	50.0%
	51-75	9	32.1%
Gender	Male	1	3.6%
	Female	27	96.4%
Education	Associates	13	46.4%
	Bachelors	14	50.0%
	Master	1	3.6%
Experience as RN in years	0-2	11	39.3%
	>2-6	7	25.0%
	>6	10	35.7%

Implementation

Based on evidence search and translation model- Knowledge to Action

- A 10 item questionnaire was administered as pre-post test to nurses (N-28) working on the medical unit.
- The questionnaire, education and poster board were based on the education tool obtained on "Hospital Readmission" by Patient Safety and Quality at Johns Hopkins Medicine (2017).
- A comprehensive discharge checklist " Be Ready for Home" was implemented for patients 65 years and older who were admitted with pneumonia and 24 hours prior to being discharged to home by the nurses as an adjunct to the discharge process.

Table 2: Overall Mean (M) and Standard Deviation (SD) on the measure of knowledge level of nurses regarding impact of Hospital Readmission

	N	Mean (M)	Standard Deviation (SD)	Median	IQR	Wilcoxon signed rank test *P value*
Pre-test	26	9.73	.533	10.0	2	*p*= .059
Post Test	26	9.92	.272	10.0	1	

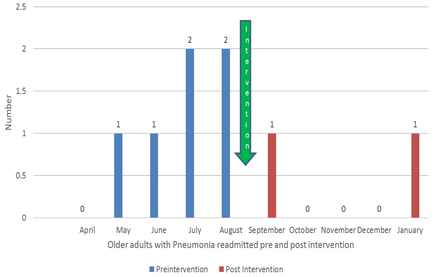
Statistical Analysis

- Wilcoxon signed rank test result comparing pre and post test scores (*p.059).(Table 2)*
- Kruskal-Wallis test was done to compare the knowledge level scores with years of experience.
  Pre test *p*= 0.064 and post test *p*= 0.495.
- There were no statistical significance or association between demographic variables and the knowledge level among nurses working on the target unit.

Results

- The high mean pretest scores might possibly be reflective of preexisting knowledge and awareness among the nurses regarding impact of hospital readmission on quality outcomes and financial impact.
- 2 patients were readmitted of the 38 (5.3 %) within 30 days of discharge.(figure 1)
- 85% compliance rate among nurses in implementing and completing the checklist indicative of their engagement and motivation to improve the care process for the patients.
- 50% reduction in the number of readmissions among older adults with pneumonia pre and post intervention.

Figure 1: depicts the monthly trend in readmission among older adults with pneumonia discharged to home on the medical unit (April 2017 to Jan 2018)



Discussion

- Small sample size for both RNs and patients under study impacted ability to show statistically significant improvements.
- Time duration for data collection and stringent inclusion criteria limited the number of patients sample included for the study.
- Seasonal influence cannot be overlooked as a bias.

Conclusion

- Cost Analysis indicated that the hospital benefits about $660/patient day, when a patient is not readmitted.
- Healthcare outcomes can be improved when appropriate, comprehensive transitional care interventions are utilized effectively by bedside nurses.

Translation and Dissemination

- Incorporating the discharge checklist into the electronic medical record to facilitate inter disciplinary early discharge planning and prevent readmission.
- Utilizing the discharge checklist for patient population with other medical conditions.
- Publications in nursing journals and presentation at conferences.

Reference:

- De Alba, I., & Amin, A. (2014). Pneumonia readmissions: Risk factors and implications. *The Ochsner Journal*, 14(4), 649-654. doi:10.1043/1524-5012-14.4.649
- Flanagan, J., Stamp, K., Grease, M., Shindul-Rothschild, J. (2016). *Journal of Nursing*. 46 (2), 69-74

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