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Improving Pneumococcal Vaccination Rates in Jefferson Hospital Ambulatory Practice Patients

Kemarut Laothamatas, MD
Thomas Jefferson University Hospital

Linda Yan, MD
Thomas Jefferson University Hospital

Daniel Kramer, MD
Thomas Jefferson University Hospital

Matthew Enriquez, MD
Thomas Jefferson University Hospital

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Kemarut Laothamatas MD, Linda Yan MD, Daniel Kramer MD, Matthew Enriquez MD, Albert Lee MD

Department of Medicine, Sidney Kimmel Medical School, Thomas Jefferson University, Philadelphia PA

BACKGROUND

- Pneumococcal polysaccharide vaccines are effective against invasive pneumococcal infections which remain an important source of morbidity and mortality in older adults.
- Beginning in 2014, the US advisory Committee on Immunization Practices (ACIP) recommended PCV 13 for all adults 65 years and older.
- While superiority of the newer conjugate vaccines over the polysaccharide vaccines remains to be seen, rates of adverse events with the PCV 13 are low.
- At JHAP, the pneumococcal vaccination rates for patients 65 years and older are 58% in August 2016.
- Multi-strategic approach and nurse-initiated protocols have been shown to result in higher vaccination rates without resulting in inappropriate or unnecessary vaccines. [1,2]

AIM

To improve the pneumococcal vaccination initiation rates in patients 65 years and older in Jefferson Hospital Ambulatory Practice (JHAP) to the institutional quality measure goal of 80% over a 4 month period from January to May of 2017.

INTERVENTION

- Participants: JHAP patients, residents and MAs
- Multi-strategic approach implemented over a 3 month period
    - Resident and medical assistant education on indications for pneumococcal vaccination and documentation
    - Patient education: posters and flyers promoting pneumococcal vaccination in patients 65 years and older displayed throughout our waiting area and patient rooms
    - Medical assistant (MA)-driven vaccination ordering protocol: one page questionnaire prompting the MAs to obtain consent and administer the pneumococcal vaccine to eligible patients through standing orders without requiring physician's approval.
- Design: Electronic health record chart review

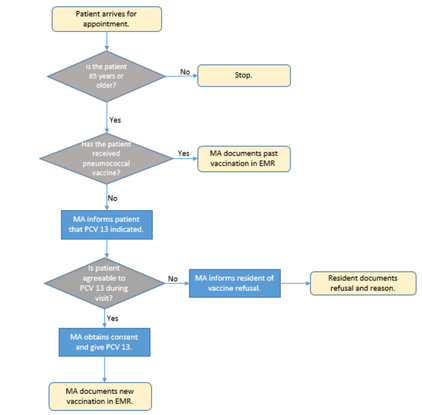

Fig.1: Process map of MA-driven pneumococcal vaccination initiation protocol

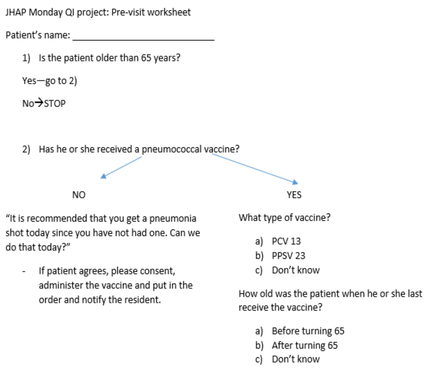

Fig. 2: MA questionnaire as part of the MA-driven pneumococcal vaccination protocol

RESULTS

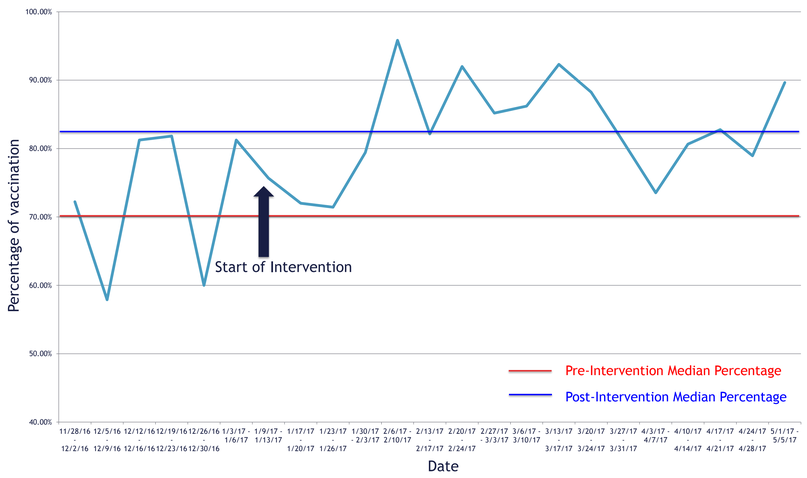

Fig. 3: Weekly percentage of patients who presented to JHAP age ≥ 65 who have received pneumococcal vaccination

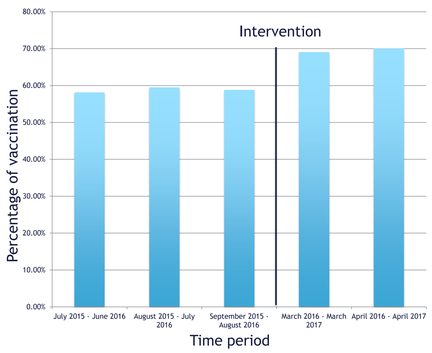

Fig. 4: Percentage of all patients in JHAP age ≥ 65 who have received pneumococcal vaccination

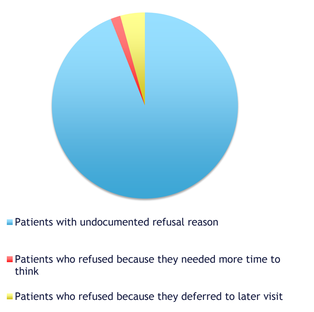

Fig. 5: Patients in JHAP age ≥ 65 who refused pneumococcal vaccination

DISCUSSION

- After the intervention was implemented, there was an improvement in the percentage of patients 65 years and older who presented to JHAP and received pneumococcal vaccination.
- There was a sustained increase in pneumococcal vaccination during the intervention period.
- There continued to be a large number of patients who refused pneumococcal vaccination despite the change in patient education via posters/flyers and physician discussion with patients advocating for vaccination.
- The reason for patient refusal of pneumococcal vaccination was not an aim of this project and was not thoroughly addressed during this intervention.

LIMITATIONS

- Intervention period overlapping with transition to new EMR system which integrates previous inpatient vaccinations unaccounted for in the old EMR, possibly confounding the effects of our intervention
- Incomplete resident adherence to documentation of vaccine refusals
- Length of follow-up may be insufficient to detect the long-term effect of the intervention

NEXT STEPS

- Administer a follow up survey to eligible patients who refused the vaccination to investigate the reasons behind the refusal. This information could be used to further augment the current approach.
- Schedule a vaccination specific clinic visit/ drop in hours
- Refresher course and reminders of the current MA-driven vaccination protocol for both the residents and MA's
- Investigate ways to improve documentation rates of vaccine refusals and past vaccinations by both the MA's and the residents

REFERENCES

1. Rhew DC, Glassman PA, Goetz MB. Improving pneumococcal vaccine rates. Nurse protocols versus clinical reminders. *Journal of General Internal Medicine* 1999;14:351-6

2. Centers for Disease Control and Prevention. Use of Standing Orders Programs to Increase Adult Vaccination Rates: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR. 2000/ 49(RR01); 15-26