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Improving Pneumococcal Vaccination Rates in Jefferson Hospital Ambulatory Practice Patients

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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

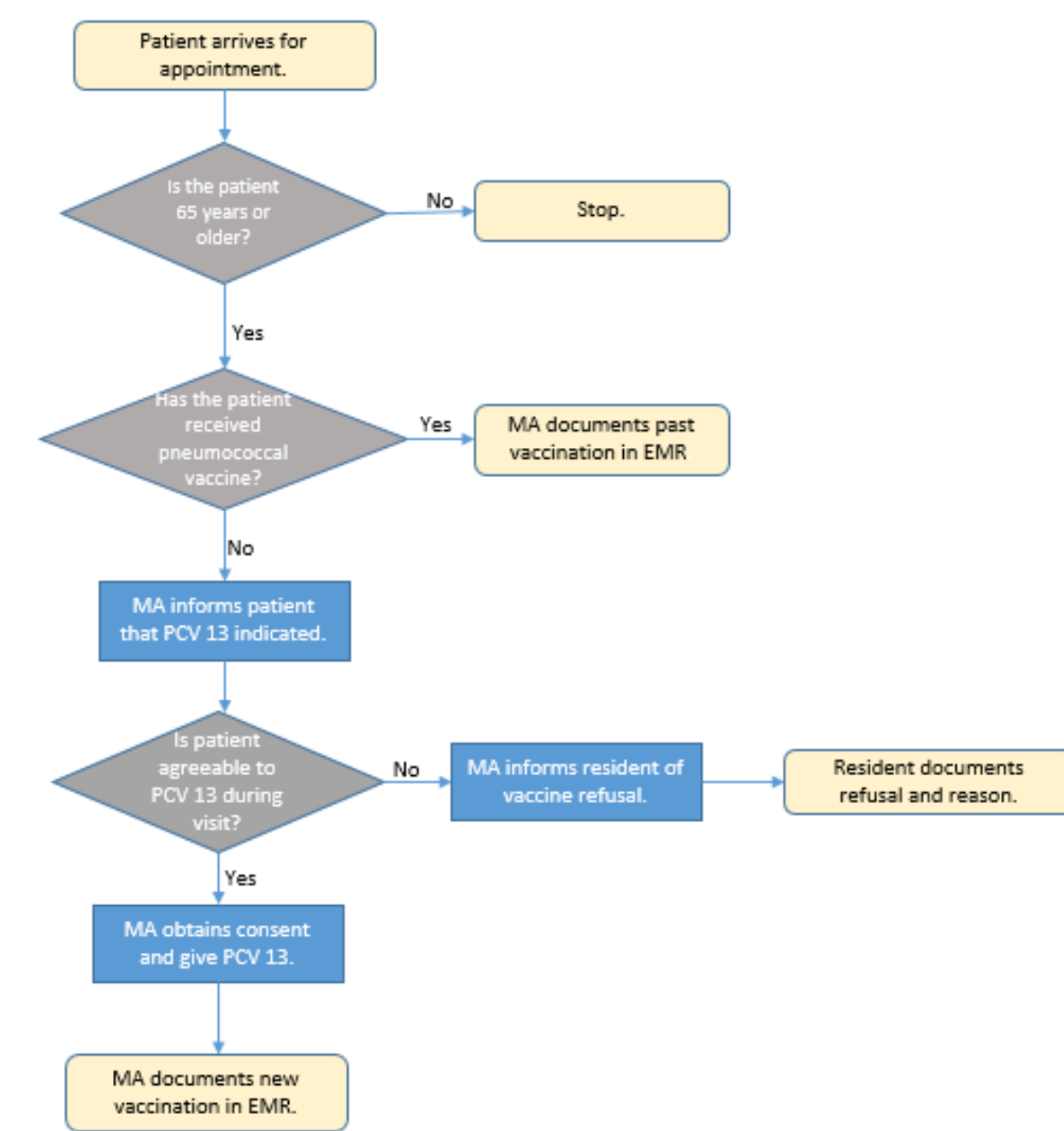


Fig.1: Process map of MA-driven pneumococcal vaccination initiation protocol

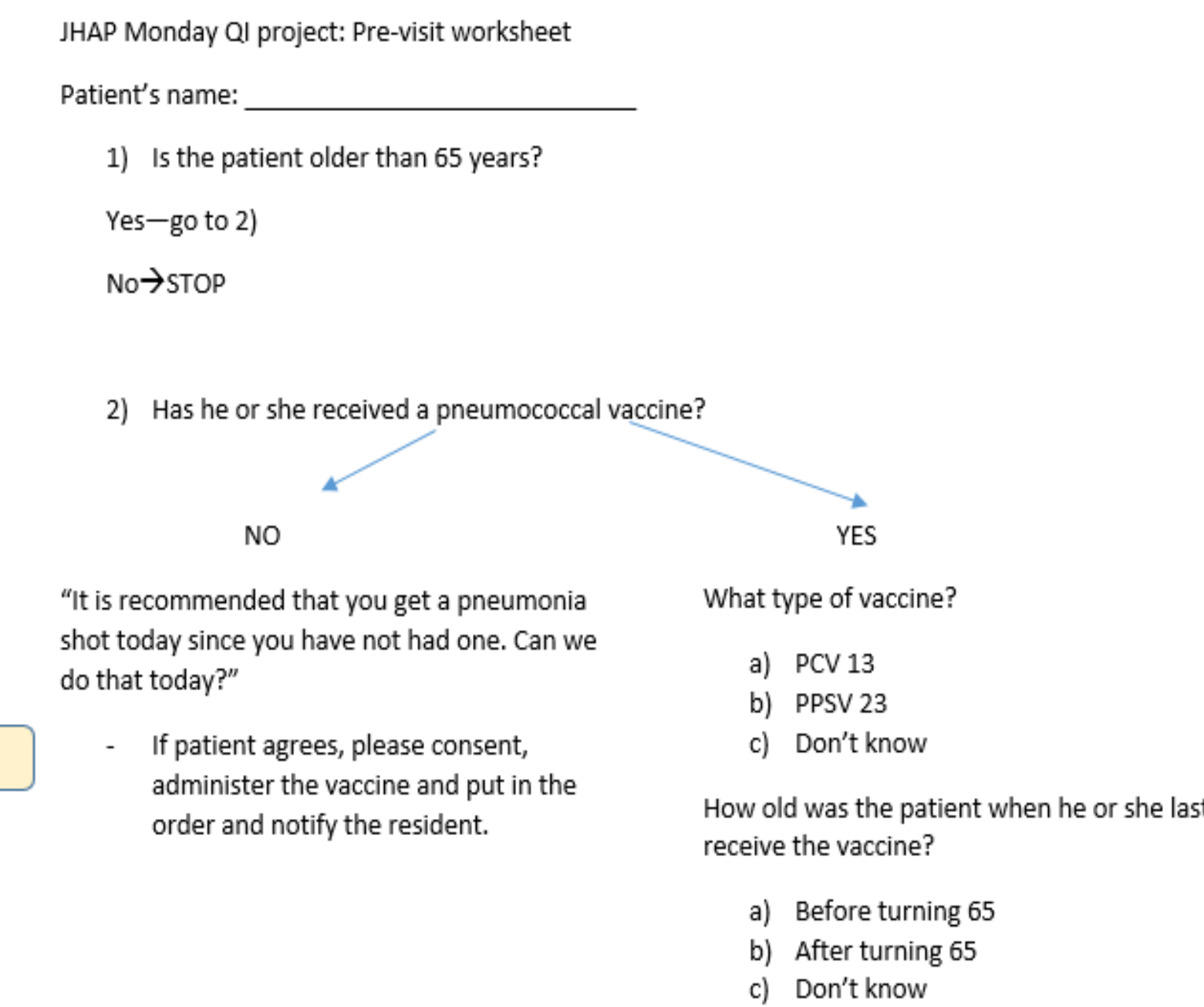


Fig. 2: MA questionnaire as part of the MA-driven pneumococcal vaccination protocol

RESULTS

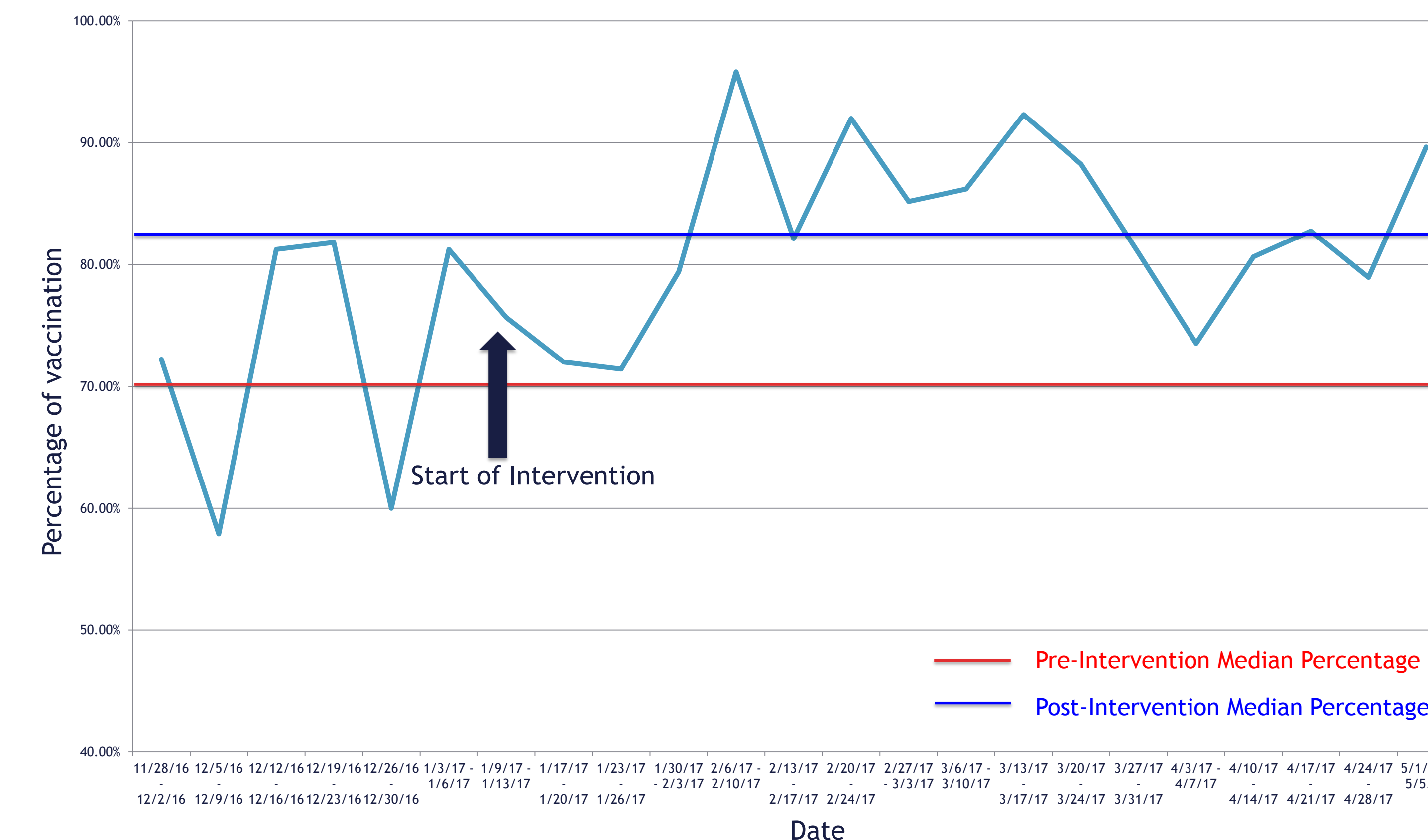


Fig. 3: Weekly percentage of patients who presented to JHAP age ≥ 65 who have received pneumococcal vaccination

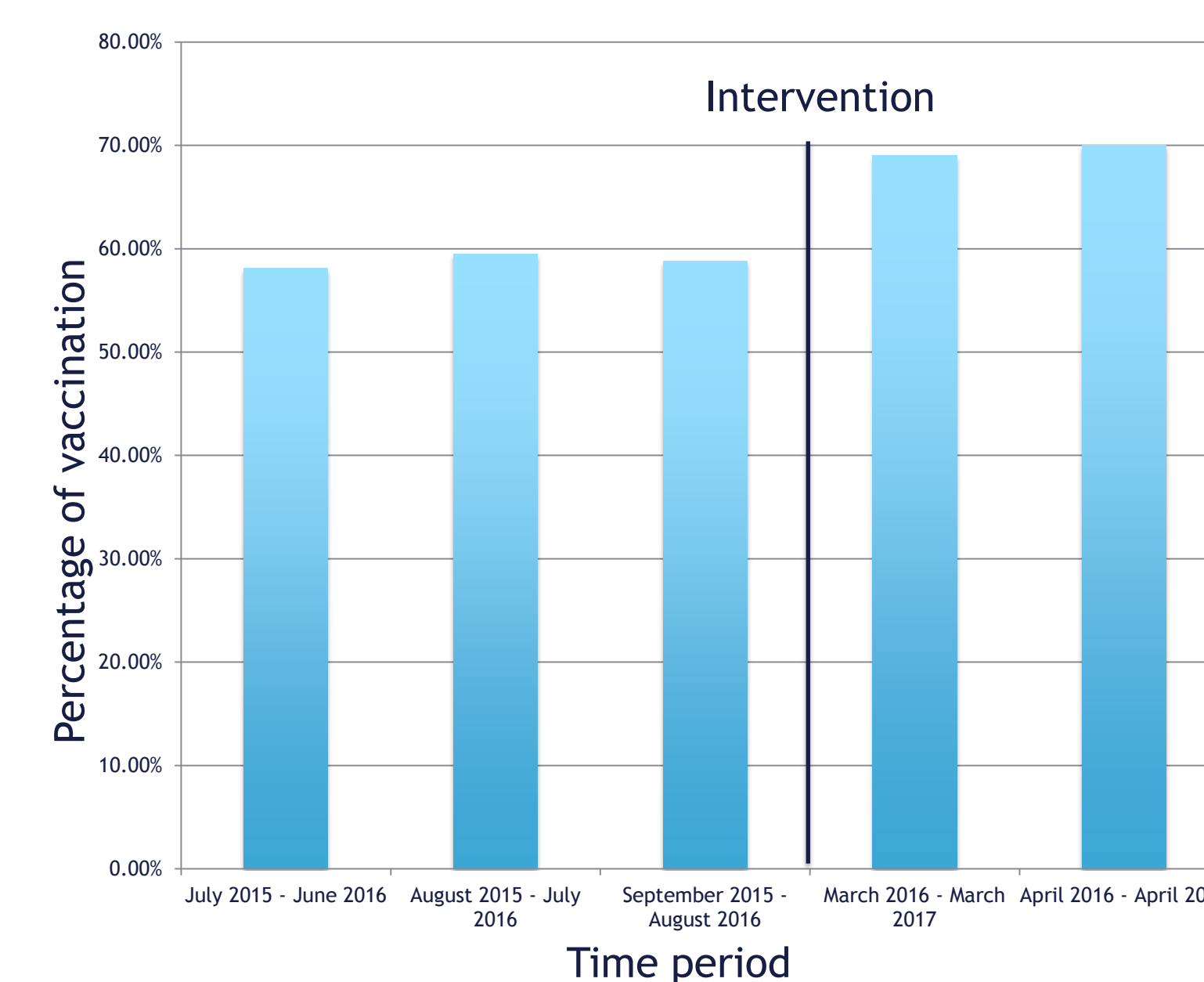


Fig. 4: Percentage of all patients in JHAP age ≥ 65 who have received pneumococcal vaccination



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

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