A Collaborative Program Using Student Pharmacists

to Increase Adult Vaccination Rates for a High-Risk Patient Population Receiving Care at Urgent Care Clinics

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Background: The Centers For Disease Control (CDC) recommend that high-risk patients between the ages of 19-64 receive pneumococcal vaccination, but documented rates of vaccination in this patient population remain low. We found similar low rates of vaccination in our metro health system. Thus, we implemented an inter-professional collaboration utilizing student pharmacists to increase pneumococcal vaccination rates in at-risk patients receiving medical care within urgent care clinics. The study also sought to better identify the number of patients previously vaccinated for pneumococcal disease in this health-system.

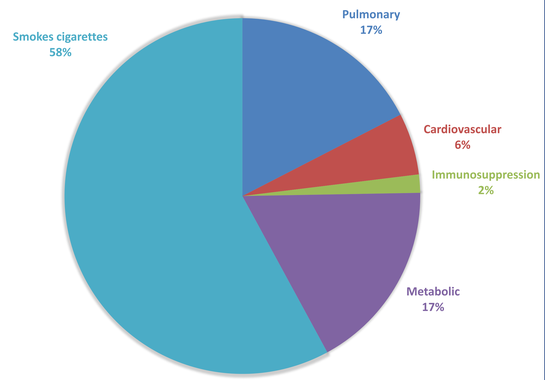
Methods: Two urgent-care intervention clinics were staffed 10-15 hours weekly with pharmacy students completing Introductory Pharmacy Practice Experiences (IPPE) and compared to two matched control clinics. These students assessed patients using the urgent care clinic for eligibility for the pneumococcal vaccine based on CDC criteria as well as for prior vaccination status. If eligible, students discussed the importance of the vaccination, answered questions, and offered to have the vaccine administered during the current visit. The number of administered and declined vaccinations, and the reason for refusal were recorded.

Results: A total of 1178 patients were eligible for pneumococcal vaccination. Through patient interview or review of medical records, 287 patients (24.4%) were determined to have been previously vaccinated for pneumococcal disease. Of the remaining 891 patients, pneumococcal vaccination was provided at the time of the urgent care visit to 96 patients (10.7%) in the intervention clinics compared with 6 patients in the control clinics ($p<0.0001$). Patients cited cost or lack of health insurance as the primary reason for declining vaccination.

Conclusions: Student pharmacists in an IPPE experience improved documentation of previous pneumococcal vaccination as well as administration of new vaccinations to high risk patients seeking care in an urgent care clinic. This was done with no extra cost or personnel time to the clinic, and with student pharmacists only on site 10-15 hours weekly.

Demographics	N = 1178
Male	464 (39.4%)
Mean Age	40.8 (sd=12.4)
Ethnicity	
African American	45 (3.8%)
Asian	90 (0.8%)
Caucasian	1034 (87.8%)
Hispanic or Latino	46 (3.9%)
Native Hawaiian/Pacific Islander	2 (0.2%)
Unknown	42 (3.6%)
Primary Insurance	
Medicaid/Iowa Health Wellness	276 (23.4%)
Medicare	44 (3.7%)
Private	813 (69%)
None	45 (3.8%)

INDICATION FOR PNEUMOCOCCAL VACCINATION (N=1388) (PATIENTS MAY HAVE MORE THAN ONE INDICATION)



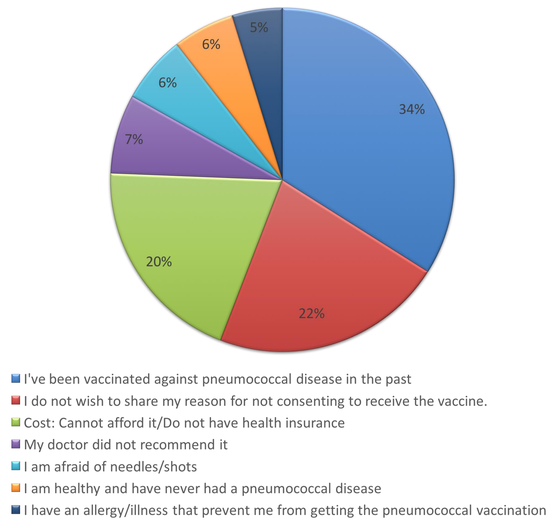
Results

Vaccination Status Prior to Visit	N (1178)
Yes	287 (24.4%)
No	877 (74.4%)
Unable to assess	14 (1.2%)

Group	Number of patients vaccinated
Intervention clinics	96
Non-Intervention clinics	6

Chi squared =117.480 with 3 degrees of freedom. **P value < 0.0001**

REASONS FOR DECLINING VACCINATION



Key Points or Lessons Learned

- Many patients with high-risk medical conditions reporting to urgent care clinics are eligible for pneumococcal vaccine
- Utilizing healthcare students in these settings can serve as a platform for education and increasing vaccination rates
- Documentation of pneumococcal vaccination in a patient's electronic medical record is inconsistent
- In patients not previously vaccinated, cost and lack of health insurance are barriers to patients receiving pneumococcal vaccines

Limitations

- We lacked a method to efficiently verify third party coverage and patient cost of vaccine
- Students were not present during all operating hours of the urgent care clinics
- Real-world functional changes within clinic (structural and staffing changes) may have impacted patient assessment and vaccination rates

Conclusion

- Student pharmacist intervention in an urgent care setting provided an introductory clinical experience for the pharmacy student and increased pneumococcal vaccination rates in eligible patients.

Future Opportunities

- Similar processes could be used in a primary care setting to prospectively review and counsel patients regarding indicated vaccinations prior to their scheduled clinic visit
- A process to eliminate cost concern as a reason for declination could include both an efficient real-time ability to determine third-party coverage and establishing methods to offset cost for those with no coverage

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