

***Improving Patient Immunization  
Rates through Optimizing  
Pharmacy's Role in Providing  
Immunization Services***



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Bernard J. Dunn School of Pharmacy

# Study Design

- 50 test stores in a regional community pharmacy chain received the following interventions:
  - Participation in a multi-modular online educational curriculum focused on indications for pneumococcal vaccinations, identification and characteristics of high-risk patients, utilizing immunization schedules, motivational strategies to promote immunizations, and patient education related to immunizations
  - In store marketing and direct to patient mailers regarding the pneumococcal vaccine
  - Targeted screening tools to identify potential pneumococcal vaccine candidates
- Immunization rates in the test stores were compared to 26 control stores from the same chain



# Results of the Educational Interventions

Online educational modules increased knowledge level for test store staff from baseline related to the pneumococcal vaccine.

Confidence in identifying candidates and education patients about the pneumococcal vaccine also increased.

Learning Objective	Participants	Pre-Test Average Score	Post-Test Average Score	Percent Change
Identify pneumococcal vaccine candidates based on age, past medical history, medication profile, and/or social history	170	59.2%	88.7%	49.8%
Utilize current immunization schedules to recognize patient-specific vaccination needs	169	67.8%	86.3%	27.2%
Recognize a patient who is a candidate for revaccination with the pneumococcal vaccine	171	57.7%	82.5%	43.1%
Demonstrate effective use of intervention tools to identify high risk patients	166	77.5%	92.2%	18.9%
Implement motivational strategies to promote pneumococcal and other appropriate immunizations (pharmacists only)	166	50.8%	88.4%	74.1%
Assist with implementing motivational strategies to promote pneumococcal and other appropriate immunizations (technicians only)				
Identify the appropriate product, dose and administration of the pneumococcal vaccine (pharmacists only)	170	95.3%	100%	4.9%
Recognize the appropriate product, dose and administration of the pneumococcal vaccine (technicians only)				
Provide appropriate education related to the pneumococcal vaccine (pharmacists only)	166	42.8%	86.0%	100.81%
Assist with providing appropriate education materials related to the pneumococcal vaccine (technicians only)				



# Patient Screening and Immunizations

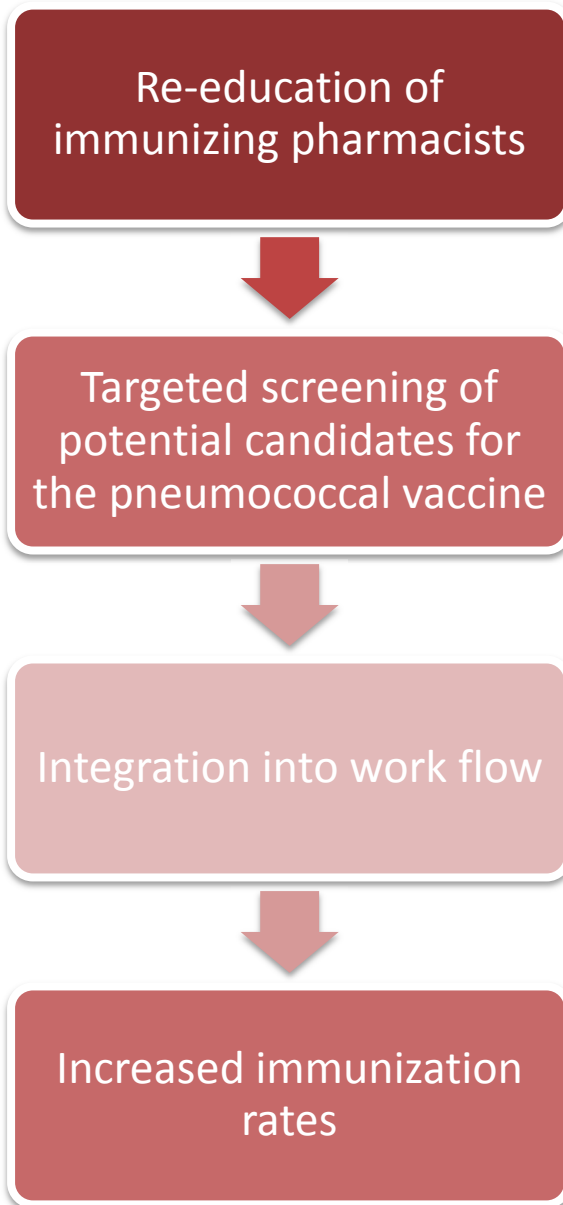
## Patient Screening

- 196 individuals were screened in a 6 month period
- 31.9% of patients screened who were a candidate received the pneumococcal vaccine
- 18.8% of the patients screened had already received the vaccine

## Immunization Rates

- 1908 pneumococcal vaccines were administered in a 16 month period
  - Test stores: 1383
  - Control stores: 449
- Vaccines per month for Aug 2013 – Dec 2014 ( $p=0.134$ )
  - Test stores:  $2.23 \pm 1.815$
  - Control stores:  $1.54 \pm 1.174$
- Vaccines per month for July – Dec 2014 ( $p=0.034$ )
  - Test stores:  $3.58 \pm 2.963$
  - Control stores:  $2.04 \pm 1.506$





## Project Impact

- Knowledge levels concerning pneumococcal vaccinations potentially decrease as time passes from initial immunization training
- Educational interventions including recertification of immunizing pharmacists or an immunization certificate program for pharmacy technicians may provide additional benefits in the efforts to reach immunization goals
- Active screening of patients during pharmacy workflow led to a significant difference in pneumococcal immunization rates between test and control stores
- Pharmacy staff must integrate screening for candidates of the pneumococcal vaccine into normal workflow if rates are to increase



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