

## Abstract

### Objective

Older adults 65 years and older are at risk for contracting community acquired pneumonia. Nationally, vaccination rates remain below the Centers for Disease and Prevention Control (CDC) benchmark. Identifying practice barriers can offer insight and understanding of low pneumococcal vaccination rates in an institution. This Quality Improvement (QI) evidence-based project sought to improve pneumococcal vaccination rates by identifying specific barriers utilizing a validated tool to observe intervention efficacy. The goal was to demonstrate that a targeted intervention can effectively improve nursing practice readiness and help mitigate barriers seen in practice, while improving vaccination rates as a secondary effect.

### Methods

This project used a pretest-posttest longitudinal cohort design to identify practice barriers by observing nursing staff vaccination readiness within six outpatient clinics over a 14-week period. A convenience sample of nurse volunteers with access to pneumococcal vaccinations participated in the surveys. Pretest and posttests 1 and 2 were collected as an anonymous 37-item questionnaire, on a 4-point likert ordinal scale called the *4 Pillars Toolkit Vaccination Practice Readiness Questionnaire*. There were three survey checkpoints between mid-September through end of December to assess baseline readiness knowledge, improvement, and retention. A guideline-based educational intervention was implemented between the pretest and posttest 1. After all surveys were collected, a thematic analysis was performed to supplement insight.

### Results

A total of 37 outpatient nurse participants were invited to volunteer for the project. Among this group, 16 joined. A total of 30 participants comprised of managers, outpatient nurses, and nurse educators joined two separate educational expositions performed by two DNP students. The survey response rates for the pretest, posttest 1, and posttest 2 were 43%, 16%, and 21.6%. Baseline knowledge scores ranged from 0.45 – 0.83 with a Mean [SD] of 0.71 [0.10]. Posttest 1 scores ranged from 0.65 – 0.80 with a Mean [SD] of 0.73 [0.09]. Posttest 2 ranged from 0.61 – 1.0 with a Mean [SD] of 0.76 [0.12]. The pre-intervention pneumococcal vaccination rate for the facility was 71.38%. The post-intervention pneumococcal vaccination rate was 92.6%.

### Conclusion

The clinical significance of this project revealed that a guideline-based, targeted intervention can effectively improve practice readiness and help identify barriers to ultimately influence vaccination rates. This project found that utilizing a validated tool to examine individual, clinic-based, and system-based vaccination barriers was helpful in pinpointing where practice readiness improvements could be made in an organization. This project may be a useful strategy to other health systems wanting to achieve similar clinical goals, not just with pneumococcal immunizations.