

Advancing Education for Senior Health: Improving Immunization Rates in Under-served Populations is Key

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Background

The senior population (≥65 years) is expected to more than double between 2012 and 2060.¹ As the demographics of the population continue to grow, more efforts are needed to capitalize on preventive disease services specifically in low income and African American populations. Currently vaccination rates in the elderly for pneumonia and influenza are well below Healthy People 2020 targets.² Perceived susceptibility and perceived severity influence vaccination rates.³

Objective

Overall: To improve influenza and pneumococcal immunization rates in patients age ≥65 years by developing relationships with community organizations that would provide opportunities for community member education about adult vaccines.

Pre/post Surveys: To assess potential changes in influenza and pneumococcal immunization knowledge and opinions in community members exposed to an educational presentation.

Methods

Using personal and university resources, contact was made with a variety of organizations serving the senior, underserved population in West Dayton, Ohio (see Figure 1 for area zip codes). An educational presentation about adult immunizations was developed and used at ten community events. The presentation included oral and written communication (Figure 2), and was based on the Health Belief Model (Table 1). The presentation focused on dissemination of information both verbally and through low-literacy focused written information.⁴ Written material was also distributed through community channels. The effectiveness of the oral presentations was examined through pre/post questionnaires at five of the events. Two questions (Questions 1 and 2) directly measured response to the presentation while two questions (Questions 3 and 4) measured general knowledge. Statistical analysis was both descriptive and analytical. Results were compared using methods for two proportions with p-values reported from Fisher's Exact test.⁵ Any p-value less than 0.05 was considered statistically significant.

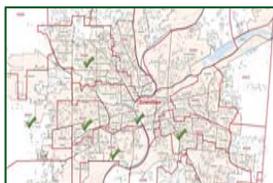


Figure 1: Map displays zip codes of community presentations.



Figure 2: Examples of written materials provided at presentations.

Table 1. Objectives Used to Change Vaccination Perception

Theoretical Constructs	Learning Objectives
Perceived susceptibility	<ul style="list-style-type: none"> Threat of severity and complications from influenza and pneumonia with increased age Seriousness of infection with compromised immune system with heart, lung or kidney disease
Perceived severity	<ul style="list-style-type: none"> 200,000 people hospitalized with the flu annually 1.2 million people hospitalized with pneumonia annually or 40/10000 50,000-60,000 people die each year from pneumonia in the US Seriousness of bloodstream and meningial infection caused by pneumococcus bacteria
Perceived benefit – perceived barriers	<ul style="list-style-type: none"> Ease and availability of vaccines through pharmacies and FQHC (Federally qualified health center) Coverage through private/public insurers Preventive care benefit for eligible seniors as part of the patient protection and affordability act of 2010 Concern of vaccine safety addressed
Cues to act	<ul style="list-style-type: none"> Protection of loved ones through herd immunity
Self-efficacy	<ul style="list-style-type: none"> Individual skill development through training, guidance and pledge cards

Note: Committee identified through evidence-based medicine research.

Results

Outreach was established to more than 1,000 individuals through direct mailings, flyers and oral presentations. Presentations were made at ten community events (Table 2), where more than 80% of the participants were ≥65 years of age, indicating success in targeting our select population. Feedback about the presentations was positive. While responses to general knowledge questions remained constant on pre- and post- questionnaires, there was statistically significant improvement in correct answers to questions dealing with adult vaccination (Table 3). In addition, the majority of the participants who were unvaccinated signed pledge cards agreeing to obtain appropriate vaccinations following participation in the community outreach presentation.

Table 2. Community Presentation Venues

Mt. Calgary Baptist Church Silver Saints *
Summit Christian Church*
Summit Christian Church Women's Fellowship*
Church Women's United*
The Roosevelt Center*
Community Action Partnership
Public Health - Dayton & Montgomery County
Westtown Health Fair
Dayton Metro Library**
Good Samaritan Health Ministries

Note: *Centers where pre- and post-surveys were distributed and collected. **Written-information only.

Table 3. Pre- and Post-test Results

Questions	Pre-tests (n=103)	Post-tests (n=99)	Fisher's Exact
	Correct Responses, n (%)	Correct Responses, n (%)	p-value
Q1. The flu shot is recommended for everyone.	86 (84%)	93 (94%) ^a	0.026
Q2. Everyone 65 years and older needs a pneumonia shot.	88 (85%)	96 (97%) ^b	0.0054
Q3. As you get older your immune system is just as strong as it is when you are younger. Shots are not important.	90 (87%)	85 (86%)	0.84
Q4. I should ask my doctor about the vaccines I need.	101 (98%)	98 (99%)	1.00

Discussion & Conclusion

The strategies to improve awareness of the importance of influenza and pneumococcal vaccination in the community were successful. Direct contact between physician providers and seniors in the community was well received and provided a venue for productive discussion and interaction in a neutral setting.

Limitations

The assessment of the intervention may have been better if we provided vaccination during community gatherings, however, the responses on pledge cards were encouraging. There were low numbers of community dwelling seniors at our events.

Implications and Future Direction

Positive relationships with community organizations have been developed and will provide future opportunities for educational outreach to assist in improving the health of the community.

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