

# **“RxVACCINATE: A National Education and Practice Support Initiative to Increase Pharmacist Administered Pneumococcal Vaccinations.”**

**Pfizer Grant 45130: LOI Pneumococcal Disease Prevention  
Grant ID: 45130**

*Submitted by*  
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## C. MAIN SECTION

### 1. Overall Aim & Objectives

In response to this RFP, the American Pharmacists Association (APhA) proposes to provide pharmacists with the knowledge, skills and practice implementation tools to work directly with patients and establish collaborative agreements with prescribers to increase pneumococcal vaccination rates among the patients served by the pharmacy. More specifically, our proposal intends to:

- 1) Develop and offer a 1-hour continuing pharmacist education live webinar on current pneumococcal vaccination recommendations, benefits and barriers that will be completed by at least 250 pharmacists. The webinar will be recorded and then archived on [www.pharmacist.com](http://www.pharmacist.com) for two years.
- 2) Develop and offer a 1.5-hour continuing pharmacist education live webinar focused on professional collaboration principles and pharmacist strategies for community, patient, health system and provider engagement that will be completed by at least 250 pharmacists. The webinar will be recorded and then archived on [www.pharmacist.com](http://www.pharmacist.com) for two years.
- 3) Develop an RxVACCINATE tool-kit that can be used by pharmacists to initiate and sustain community, patient, health system and provider engagement/collaboration.
- 4) Develop and deliver a half-day long workshop designed to help pharmacists practice the skills and utilize the toolkit for implementing RxVACCINATE.
- 5) Develop a technology supported procedure to alert the pharmacy indicating the patient's pneumococcal vaccination status should be assessed.
- 6) Evaluate patient, provider and pharmacist satisfaction with RxVACCINATE.
- 7) Measure the change in number of pneumococcal vaccinations administered by pharmacies/pharmacists who participate in the live workshop as compared to pharmacists that only complete the 2 self-study education programs.

### 2. Technical Approach

#### a. Current Assessment of Need in Target Area

##### i. Baseline data summary

Currently, more than 175,000 pharmacists in the United States have been trained to provide immunizations, primarily through APhA's nationally recognized certificate training program, "*Pharmacy Based Immunization Delivery*" and are authorized to administer influenza vaccines in all 50 states, the District of Columbia, and Puerto Rico. Despite the significant successes in pharmacist immunization delivery over more than 17 years, this funding opportunity announcement aimed at increasing pneumococcal immunization rates across the healthcare system and Healthy People 2020 Objectives clearly suggests that more work remains and provides an opportunity for pharmacists to play an even larger role. Unfortunately, there has been no published data or estimate of the actual number of pneumococcal vaccinations administered by pharmacists. This

project is intended to estimate the current and actual increase in pneumococcal vaccinations administered in a sample of 100 community pharmacy practices.

Pharmacists' ability to administer ACIP recommended adult immunizations are greatly influenced by state laws and regulations, and efforts are underway to achieve consistency among all states and territories regarding pharmacists' authority. Even within the variable state laws and regulations there also exists practice specific barriers such as pharmacist time availability, patient perceptions, physician acceptance and reimbursement. Strategies to overcome these barriers are imperative considering the overwhelming evidence that pharmacists can increase immunization rates and are a readily accessible point of care.

According to a report published by the CDC in June 2011, among adults 65 years of age or older, 24.3% of influenza vaccinations in the 2010-11 influenza season were administered in a community pharmacy, second only to physician offices. With the large number of influenza vaccinations provided in a community pharmacy, an opportunity for concomitant pneumococcal vaccination also exists. In fact, a study published by Jones LG, et.al. in Dec 2010<sup>1</sup> found that the receipt of influenza vaccination was associated with higher odds of receiving pneumococcal vaccination. These findings are further supported by a pneumococcal pharmacy claims evaluation published by Taitel, M et.al.<sup>2</sup> that reported 4.88% of patients who were vaccinated by a pharmacist received a pneumococcal vaccination and was significantly higher than the 2.90% rate in a benchmark analysis that did not include pharmacist immunization claims.

There are numerous reasons why adults fail to obtain recommended immunizations. A 2008 study by Johnson RD et al<sup>3</sup> found that the most common reasons consumers gave for not receiving immunizations were lack of physician recommendations and mistaken assumptions (e.g., healthy people do not need immunizations). Healthcare providers tended to cite concerns such as side effects, fear of needles, and lack of insurance coverage as reasons consumers forego vaccination. Providers also cited practice issues, such as lack of an effective reminder system, as barriers to increasing adult immunization rates.

Ultimately, to increase immunization rates, provider based, community relevant strategies and actions must be implemented. As the most accessible, community visible and trusted health professional, pharmacists are well positioned to engage and collaborate with patients, providers, community organizations and senior programs to increase pneumococcal vaccination rates among seniors. APhA's annual member education need assessments clearly indicates that practitioners desire education

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<sup>1</sup> Jones LG, et. al., [J Am Geriatr Soc.](#) 2010 Dec;58(12):2323-8

<sup>2</sup> Taitel M, et. al., [Vaccine.](#) 2011 Oct 19;29(45):8073-6

<sup>3</sup> Johnson DR, et.al., [Am J Med.](#) 2008 Jul;121(7 Suppl 2):S28-35.

programming that will help them attain the skills and confidence to assess patient immunization status and help patients understand the vaccines they need. More specifically, a 2010 survey of 153 pharmacists who participated in a webinar focused on expanding immunization services provides evidence on the importance and effectiveness of continued education and practice support. Key findings from the pharmacist survey include:

- 49% were seeking current information on immunization guidelines
- 23% were contemplating expanding their immunization service
- 33% indicated they would begin marketing immunizations to targeted populations
- 45% would find patient marketing materials helpful
- 33% desired marketing materials for other health care providers
- 46% requested support for overcoming billing and reimbursement barriers

RxVACCINATE seeks to provide desired education but also offer the tools, resources and training to help pharmacists initiate community specific strategies intended to increase engagement and collaboration among community organizations, senior programs, providers, and patients.

**ii. Primary audience(s)**

There are two primary audiences in the proposed project: patients and pharmacists. The pharmacists who participate in the project will receive training and support for implementing or improving pneumococcal vaccination services. Patients who receive a pneumococcal vaccination will reduce their risk of potential pneumococcal disease.

The number of patients who will benefit as a result of this project is dependent upon project findings. APhA believes that project findings will demonstrate improved pneumococcal vaccination rates that will stimulate other pharmacists to adopt a collaborative care model using the tools and resources developed for this project. Pharmacist education/training and practice resources/tools developed for this project will ultimately be made available to the more than 175,000 already certified immunizing pharmacists in the United States. APhA intends to record and archive the live webinar education program as a self-study education module. In addition, APhA envisions that the education webinars and workshop could be offered to participants in the future as an additional training component to the APhA Immunization Certificate Training Program, “*Pharmacy Based Immunization Delivery*” (IMZ CTP). If that is the case, APhA will then engage its current partners of the IMZ CTP to license the education modules, practice tools and workshop to be delivered at State and regional locations across the United States.

**b. Intervention Design and Methods**

A project advisory panel will be assembled to help guide educational content and practice tool development. Pharmacists and practice researchers with expertise and experience in immunization service development and delivery will be selected from APhA’s practice and science member academies. An advisory panel Chairperson with an established record of scholarly practice research will be selected to assist APhA with final data analysis and interpretation. To maintain an appropriate firewall, commercial support guidelines, APhA’s policy of independence, and defensible non-influence on the project, all members of the project advisory panel will be required to declare any conflicts of interest and APhA reserves the right to exclude any potential member where that conflict cannot be resolved or defended.

A key element to this project is the development and hosting of two separate continuing pharmacist education webinars, practice resources designed to support practice change and a live workshop all developed to provide pharmacists the knowledge and skills necessary to increase the number of pneumococcal vaccinations administered in community pharmacies. The education programs and resources will be promoted and made available to any pharmacist that has already completed APhA’s immunization certificate training program.

The targeted study group for this project will be a subset of 100 pharmacists from 100 different practice sites who complete both self-study education modules. Pharmacists will be invited to participate in a 4 hour live workshop to help them outline an action plan and utilize the practice resources that will support the desired practice change. The 100 pharmacists who are selected to participate in the project will be randomly assigned to either an intervention group or control group in order to reduce self-selection bias. Pharmacists assigned to the intervention group will complete the live workshop and be provided continuing support as described below. Pharmacists both the intervention and control group will be provided a stipend to cover staff and resource utilization in submitting bi-monthly reports and required pneumococcal claims summary reports. The following table summarizes the intervention and control group activities.

<b>Project Activity</b>	<b>Control Group</b>	<b>Intervention Group</b>
Complete Pneumococcal Update CPE webinar	Yes	Yes
Complete Pneumococcal Immunization Service CPE webinar	Yes	Yes
Apply for project participation (no limit)	Yes	Yes
Selected for workshop participation/attendance and serve as	No	Yes (50)

intervention group		
Not selected for workshop but agree to serve as control group.	Yes (50)	No
Agree to submit 12 month pre-workshop pneumococcal immunization claims report.	Yes	Yes
Submit bi-monthly online progress reports	Yes	Yes
Register and participate in project specific e-community	No	Yes
Participate in voluntary monthly teleconferences with project team/consultant	No	Yes
Agree to submit 12 month post-workshop pneumococcal immunization claims report.	Yes	Yes

### Pharmacist Continuing Education Webinars

APhA continuing education programs are designed to meet the Accreditation Council for Pharmacy Education's (ACPE) Standards for Continuing Pharmacy Education. APhA adheres to all guidelines outlined in the updated ACPE Standards for Commercial Support and strives to deliver education that develops and maintains pharmacist proficiency in the following five core areas:

- delivering patient-centered care
- working as part of interdisciplinary teams
- practicing evidence-based medicine
- focusing on quality improvement, and
- using information technology.

All of APhA's educational programs are assessed using pre/post knowledge assessments and evaluation specifically about the learning activity.

Webinars will be conducted live at least 1 time but recorded and archived for access by pharmacists for at least 2 years following this project on APhA's learning management system, which is located on APhA's robust website, [www.pharmacist.com](http://www.pharmacist.com). The learning management system allows for interactive learning experiences that can not only assess knowledge acquisition but also require knowledge application beyond basic recall. Program content will be independently prepared by a medical writer with guidance from the project advisory panel

#### *Webinar 1: Pneumococcal Vaccination Update (1 hour)*

Learning Objectives:

- 1) Recall the current CDC recommendations for pneumococcal vaccinations
- 2) Discuss the benefits and risks associated with pneumococcal vaccinations
- 3) Answer the most frequent questions posed by patients and prescribers

*Webinar 2: Pharmacist Pneumococcal Immunization Services (1.5 hours)*

Learning Objectives:

- 1) Evaluate current practice capability/readiness to provide service
- 2) Identify required service components and implementation steps
- 3) Outline a process for identifying and securing collaborative partners
- 4) Describe several strategies for promoting and marketing the service
- 5) Recall third-party payment and reimbursement requirements for pneumococcal immunizations.

Webinar 2 will also include examples, description and application of the following practice development tools related to pneumococcal immunizations:

- Practice capability/readiness assessment to identify operational gaps that may hinder pneumococcal immunization delivery
- Model collaborative practice agreement and standing orders
- Community group presentation slides/notes
- Communication tool for making pneumococcal vaccination recommendations to patients
- Examples of patient brochures and pharmacy signage
- Service satisfaction surveys
- Physician communication forms
- Social media information messages
- Web resources for patients

*Live Workshop: RxVACCINATE: A Pharmacist Workshop to Improve Pneumococcal Vaccination Rates (4 hours)*

Workshop Objectives: Participants will utilize project developed practice resources/tools and be led through individual and group work activities to:

- 1) Complete a practice capability/readiness assessment for initiating or improving pneumococcal immunization services and seeking collaborative partners.
- 2) Create a plan for identifying and modifying existing pharmacy operations required to effectively and efficiently offer pneumococcal immunizations.
- 3) Outline a pharmacy fact sheet detailing pneumococcal immunization services and benefits to patients, providers and the community.
- 4) Develop a marketing and promotion plan to increase the number of pneumococcal immunizations requested and administered at the pharmacist practice site or collaborative partner care location
- 5) Provide interactive learning and discussion through case based learning and role play.

For a 12 month period following the live workshop, participants will be actively engaged to encourage progress, peer support and problem-solving. All pharmacists will be registered in a project specific e-community to facilitate communication and important

announcements from APhA as well as allow pharmacists to interact and exchange information. Lastly, APhA will host a voluntary monthly teleconference for all participants to discuss experiences, gauge progress, foster friendly competition and facilitate group problem-solving.

**c. Evaluation Design**

This is a controlled comparison that will:

- 1) measure the change in pharmacist pneumococcal immunization activity as a result of webinar education, and implementation tools combined with workshop training and support services (intervention group) and;
- 2) compare the extent of change measured in the intervention group to a control group of pharmacists who completed the webinar programs and had who had access to implementation tools but did not participate in the workshop training or implementation support activities. (control group).

**Primary Research Question – Increased Pneumococcal Vaccinations**

APhA estimates that the webinars, workshop and practice support will increase pneumococcal vaccination rates by 10% in the intervention pharmacies. A lesser increase of 2-3% is projected in the control group pharmacies. To measure the change in pneumococcal vaccination rates, pharmacists in both the intervention and control group will be required to submit a letter of agreement signed by a pharmacy management official at their practice site and submit a summary report from their pharmacy system that identifies the number of pneumococcal immunization prescriptions and Medicare Part B claims for a 12 month period immediately preceding and 12 months following the workshop. Baseline and final claims data will be compared to determine the change in pneumococcal immunization activity. APhA, the advisory panel chairperson or any person from the project team will not have access to any patient identifiable information and only aggregate data from each pharmacy site will be reported to APhA by the technology partner.

**Secondary Research Questions –Extent of Practice Change and Satisfaction**

To determine the effectiveness of the educational programming, pharmacists in both the intervention and control groups will be required to submit bi-monthly progress reports via a customized data collection website that details:

- Specific practice changes implemented
- Number, type and success of collaborative outreach activities
- Number and type of promotional/marketing activities
- Number and size of community presentations delivered
- Number of pneumococcal immunizations administered
- Patient satisfaction
- Provider satisfaction

- Barriers identified and actions taken
- Requests for advice/guidance from project consultant or other participating pharmacists.

Tabulated results of the submitted progress reports from the intervention and control group pharmacists will be compared to determine whether the workshop and support activities produced greater practice change. In addition, the analysis will attempt to identify specific practice change activities that may correlate with increased pneumococcal immunizations administered at the pharmacy practice site. Upon completion of the project, participating pharmacists will be surveyed to determine the level of satisfaction related to,

Final results of the project will be summarized as an article for distribution in APhA’s publication Pharmacy Today that reaches approximately 150,000 pharmacists nationwide. In addition, final results may be released to the press and summarized on APhA’s website, [www.pharmacist.com](http://www.pharmacist.com).

### 3. Detailed Work Plan and Deliverable Schedule

To achieve the research goal and objectives identified above, the project will be conducted over 24-30 month period. Year 1 of the project will focus on project element development, promotion and offering of education modules and live workshop. Year 2 will include site support activities and data collection. Following data collection approximately 6 months will be required to analyze, interpret and report final results.

<b>YEAR 1: DEVELOPMENT and EDUCATION</b>		
<b>Work Task</b>	<b>Target Date</b>	<b>Deliverable</b>
Identify/recruit and convene 4 individuals to serve on project advisory panel	Month 1-3	Advisory panel roster of members, agendas and meeting minutes.
Identify and execute agreement with technology partner to conduct claims analysis at study sites.	Month 1-3	Executed agreement.
Develop webinar and workshop content.	Month 4-6	Webinar and workshop content outlines/materials
Obtain ACPE accreditation	Month 4-6	ACPE accreditation documents
Finalize and schedule dates for webinars and workshop. Select and contract workshop location.	Month 4-6	Confirmed dates and venue contract.
Develop on-line progress report system.	Month 4-6	data collection website link and electronic data collection forms
Create project e-community.	Month 4-6	e-community web link
Develop materials and initiate webinar and workshop promotional campaign.	Month 4-6	Electronic and print promotional materials.

Solicit/process webinar registrations and study participation applications.	Month 7-8	Registration list
Deliver webinars and publish recorded CPE activity on APhA Learning Management System.	Month 9	Webinar participant list.
Review study participant applications for workshop.	Month 9	Applicant list and review results.
Select and notify workshop participants and control group pharmacists.	Month 10-11	Notification letters/e-mails.
Obtain final participation agreements from control and intervention groups.	Month 10-11	Signed agreements, list of intervention and control project sites.
Collect 12-month pre-workshop claims reports from participating sites.	Month 11-12	Aggregate data report.
Register intervention group pharmacists in project e-community	Month 12	E-community member list
Conduct workshop training	Month 12	Participant list.
<b>YEAR 2: DATA COLLECTION and SUPPORT</b>		
<b>Work Task</b>	<b>Target Date</b>	<b>Deliverable</b>
Initiate/conduct monthly teleconferences with intervention group project sites.	Month 13-24	Conference call schedule, participant list, agendas and minutes.
Initiate bi-monthly progress reporting from project sites	Month 15-23	Data reports/records.
Initiate on-going site monitoring of progress reports and facilitate e-community activities.	Month 13-24	e-community posts and bi-monthly summarized site progress reports
<b>YEAR 3: ANALYSIS AND PUBLICATION</b>		
<b>Work Task</b>	<b>Target Date</b>	<b>Deliverable</b>
Collect 12-month post-workshop claims reports from participating sites.	Month 25	<b>Aggregate data report</b>
Begin/complete data analysis and summary of findings.	Month 26-27	Data findings, interpretation and conclusion summary.
Prepare manuscript for publication	Month 28-30	Submitted manuscript
Publish project findings	Month 31-32	Published manuscript.