

APhA Pharmacy Foundation Final Report
December 14, 2020

Author: Brenna Neumann, Pharm.D.

Co-Author: Seth Wilson, B.S.

Grantee: Collier Drug Stores, Inc.

Title: Advancing Pharmacy Technician Roles to Increase Pneumococcal Polysaccharide Vaccination Rates in a Community Pharmacy Setting

Background:

Collier Drug Stores (CDS) is an independent family-owned business that has served the communities of Northwest Arkansas since 1917. At present time, CDS operates 9 independent retail pharmacies and 1 compounding pharmacy located throughout Benton and Washington Counties employing 22 pharmacists and 30 registered technicians. Collier Drug Stores, Inc. is committed to delivering comprehensive immunization services and is recognized as an accessible, knowledgeable, healthcare destination in Northwest Arkansas. All current nine retail locations and 22 certified pharmacists are able to offer immunizations. Over the last 9 years, the company has expanded immunization services in several capacities and now offers any available vaccine to persons 7 years of age or older as allowed by Arkansas Board of Pharmacy Rules. All previous vaccination campaigns have been driven by the pharmacists. CDS has identified an opportunity to further mature vaccine advocacy services by advancing the pharmacy technicians' role. The hope is to improve poor company-wide PPSV23 vaccination rates by instituting personal selling strategies delivered by both pharmacists and pharmacy technicians. We intend to develop a focused pneumococcal polysaccharide vaccination campaign utilizing pharmacy technicians as the driver for identifying potential at-risk adults 18 and older in Northwest Arkansas.

At the June 2019 meeting, the Advisory Committee for Vaccine Practices (ACIP) voted to amend Pneumococcal Disease vaccine recommendations for immunocompetent adults 65 and older. The new recommendations expected to be published later in 2019 will place emphasis back on PPSV23 vaccination completion rates. Changes in pneumococcal vaccine recommendations over the last two decades have been confusing for providers and patients leading to implementation challenges. Our campaign aims to educate pharmacists, technicians, and patients with the goal of improving PPSV23 vaccination uptake.

Primary Objective:

To increase the number of adult PPSV23 vaccines administered in a local community pharmacy setting.

Secondary Objectives:

To advance the pharmacy technician role in the vaccine advocacy campaign by improving personal-selling competencies and knowledge about the PPSV23 vaccine.

Methods:

The number of PPSV23 and PCV13 vaccinations administered by CDS pharmacists is captured via the Script Management Partners data portal. CDS subscribes to a service that captures vaccine fill data

for all 9 retail locations. The portal provides sortable de-identified reports for any timeframe since onboarding was complete in August of 2017.

A baseline knowledge assessment was administered to all CDS pharmacy technician staff on April 4, 2020. The pre-training survey consisted of 10 multiple choice questions. The questions covered the following topics: awareness of immunization services in the community setting, role of pharmacy technician in supporting vaccination services, vaccine storage, third party processing, and state immunization registry. The same questions will be utilized for the post-training knowledge assessment at the conclusion of the grant timeframe. Three demographic questions were also asked which included how many years the staff has been a registered technician, how many years the staff has been employed by CDS, and if the technician is a Certified Technician or has ever been certified in the past.

A live one-hour technician training program was delivered to CDS pharmacy technicians on June 25 and 26, 2020. The initial time frame for live training was pushed back due to COVID-19 and limitations on the number of people allowed to congregate. CDS adjusted the training program offering to include 3 APHA continuing education videos to be completed between April 17 and June 22, 2020. All technicians were required to complete the videos prior to the live training. The live training sessions included basic information about the PPSV23 and PCV13 vaccines, the state immunization registry, third party processing, and the campaign protocol.

An overview of the PPSV23 campaign was presented to Collier Drug Store pharmacists during the pharmacist meeting on June 17, 2020. Pharmacists and pharmacy managers provided input on the protocol and live technician training. The monthly pharmacist meeting was cancelled for February, March, April and May due to COVID-19 social distancing strategies. The official campaign launched shortly after the conclusion of the live technician training sessions.

Pharmacy technicians may increase involvement in the vaccine advocacy campaign through various means without jeopardizing their scope of practice. Technicians have the ability to utilize personal selling strategies to engage the patient during various types of encounters, provide written materials to patients that present to the pharmacy, and discuss the vaccine advocacy campaign with the patient while waiting on prescriptions to be processed. Pharmacy technicians may also access the Arkansas Immunization Registry to aid the initial screening process.

The pharmacy technicians notified the pharmacists of any findings by utilizing a standardized form developed by a CDS employee. This “bag tag” included questions for the pharmacy staff (technician and pharmacist) to follow when engaging with patients at the pick-up counter, and was readily available for use on July 1, 2020. After a technician or clerk referred a patient for a consultation, pharmacists either conducted immediate in-person interactions with identified patients or followed up with a phone call at a more appropriate time upon patient request.

CDS boasts a robust medication synchronization and adherence program at several locations. The Dickson Street location is home office location and the company’s busiest store with just over 1,250 patients enrolled in a medication synchronization program. Each month, either a pharmacy technician or pharmacist contacts the patient for their monthly medication review. These encounters were often used as opportunities to initiate discussion regarding PPSV23 vaccination. Additionally, the PPSV23 and PCV13 vaccination status of the patient was often noted in patient charts throughout the 2020 campaign.

CDS also developed and posted social media announcements about PPSV23 and PCV13 vaccinations as immunization practices returned to normal in light of COVID-19. Previously, vaccinations were limited due to guidance concerning immunizations suggested by the CDC and state health departments.

To aid in successful completion of multi-dose vaccination rates, CDS developed and purchased appointment reminder cards that were utilized for many vaccinations, serving as a reminder mechanism for patients. The reminder cards were used for appointments scheduled off-site and on-site for vaccinations. To date, the reminder cards were specifically utilized for an off-site shingles vaccine clinic in an independent retirement community served by CDS. Forty-one reminder cards were mailed out to patients scheduled for a shingles clinic on June 9, 2020. The hope was to use appointment reminder cards to improve PPSV23 and PCV13 vaccination rates in 2020 and beyond.

Outcome measures for the primary objective included the number of PPSV23 vaccines administered at any CDS location for anyone 18 and older. The evaluation timeframe extended from June 1, 2020, through November 30, 2020. Results were then compared to the same timeframe from 2019 in order to determine the percent increase in PPSV23 vaccines given at CDS. Basic de-identified demographic data such as age and gender were collected in aggregate.

For technician personal selling competence and vaccine knowledge, a pre- and post-test were conducted to determine the effectiveness of the pharmacy technician training program in improving these competency areas. Results were then compared for the outcomes of Certified versus Non-Certified pharmacy technicians.

Results:

Primary Objective:

The official campaign was launched on July 1, 2020, after the conclusion of the CDS pharmacy technician live training, and the campaign concluded on November 30, 2020.

As a baseline reference, 2019 and 2020 vaccination rates for PPSV23 and PCV13 were compared for dates between January 1 and May 31. In 2019, CDS pharmacists administered 18 PPSV23 and 22 PCV13 vaccinations. In 2020, 29 PPSV23 and 24 PCV13 vaccinations were administered.

Our primary objective compared 2019 and 2020 rates of PPSV23 and PCV13 vaccination from July 1 through November 30 for both years in order to compare the impact of technician training on vaccine administration rates. For these dates in 2019, CDS administered 43 PPSV23 and 50 PCV13 vaccines. For the same dates in 2020, CDS administered 125 PPSV23 and 26 PCV13 vaccines.

Secondary Objective:

Pretest:

Twenty nine (n=29) out of 36 CDS technicians completed the baseline survey assessment. Seven technicians did not complete the survey for the following reasons: one technician employee was on long term disability, one technician was the company DME administrative employee, and 5 technicians only staff in the compounding pharmacy, which does not offer immunization services. Technicians were asked to identify the number of years they had worked as a licensed technician in any state. The categories included the following: 0-5 years, 6-10 years, 11-15 years, or more than 15 years of experience, and the respective results were 17 (58.62%), 8 (27.58%), 1 (3.44%) and 3 (10.34%). The average pre-test survey scores for the years of experience were 62.5%, 77.5%, 70%, 83.33% respectively. The initial average score correlated to years of

technician work experience with the exception of the one technician with 11-15 years as the outlier.

The number of years employed by CDS was also assessed. The categories were as follows, less than 1 year of CDS employment, 1 to 5 years, 6 to 10 years and 10 or more years. The results (n) pertaining to the number of years employed at CDS were 3, 17, 5, and 4 respectively. The average survey score pertaining to the number of years employed at CDS were respectively as follows: 66.66%, 62.35%, 78% and 75%. Overall, for all 29 technicians surveyed the average pre-test score was 70.3%.

After reviewing the individual reports of Certified Technician history, it was determined that some technician participants did not understand the nature of the question. It is assumed some technicians self-identified as being certified when indeed they were only registered. The demographic questions pertaining to certification history will be assessed again on the post training survey and will be asked using definitions of “certified” and “registered”. On June 8, 2020, 20 out of 29 technicians completed all three online APHA CE training videos.

Post-Test:

Twenty-five (n=25) out of 32 CDS technicians completed the post-test survey and assessment. Seven technicians did not complete the survey for the following reasons: 4 technicians from the pre-survey no longer worked for the company, 1 technician was not at work due to COVID, 2 technicians neglected to take the post-test. Additionally, 2 technicians who did not take the pretest did complete the post-test.

The average score on the posttest was 84% compared to 70.3% on the pre-test. The overall average on the posttest was nearly 14% higher after completion of the technician training.

Evaluation:

From 2019 to 2020, PPSV23 vaccination rates for July 1 through November 30 increased 191% for CDS company-wide. Conversely, PCV13 administration decreased by 48% over the same timeframe.

It is reasonable to assume that pharmacist and technician education regarding pneumococcal vaccination guidelines contributed to a shift in preferentially vaccinating for PPSV23 instead of PCV13.

However, it is also likely that provided technician training improved both general pneumococcal vaccine knowledge and personal selling competencies, which correlated with drastically improved PPSV23 vaccination rates across the company and improved technician scores on the posttest pneumococcal assessment. Each store in the company improved in their vaccinations for PPSV23 for 2020 in comparison to 2019. While a detailed analysis of PPSV23 vaccinated patient demographics were not assessed for this evaluation, it is possible that a higher number patients within the Collier Drug Store, Inc. patient population were eligible for the PPSV23 vaccine versus PCV13. The PPSV23 vaccine target population includes patients age 18 and older whereas the PCV13 candidates for a typical community pharmacy population is usually 65 and older.

It is unclear whether or how the COVID-19 pandemic influenced CDS vaccination rates for PPSV23. While it is reasonable to suggest that COVID-19 possibly influenced PPSV23 vaccination rates, the degree to which this cannot be assumed. The grant project was proposed prior to the Covid-19 pandemic and therefore evaluations of the pandemic impact on vaccine uptake were not assessed.

A comprehensive technician training program did improve technician knowledge with regards to the PPSV23 vaccine, the technician's role in vaccine advocacy and vaccine storage and handling requirements. We conclude that the technician training strategies delivered thru this program may be successfully duplicated in other community pharmacy settings.