



COMMUNITY PHARMACY FOUNDATION
COMPLETED GRANT SYNOPSIS

**Creating a Culture of Safety in Community Pharmacy Practice in North Carolina:
A Project of the North Carolina Association of Pharmacists (NCAP)**

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Objectives	
<ol style="list-style-type: none"> 1) To enhance the knowledge of patients on the safest ways to use their medications 2) To demonstrate to patients the worth of the pharmacist and the numerous valuable contributions pharmacists make every day to the health care system 3) To foster the relationship between North Carolina’s state pharmacy association and both student pharmacists and patients within our communities 	
Methods	
Design	<ul style="list-style-type: none"> • This grant project ran from October 2008 through April 2009. There were three core elements to the project: (1) utilizing fourth-year pharmacy students from the three North Carolina schools of pharmacy to educate consumer groups on medication safety through “America’s Medicine Cabinet,” a presentation developed by the American Pharmacists Association (APhA) and the Institute for Safe Medication Practices (ISMP); (2) incorporating a speaker from ISMP to lead a session on medication safety at NCAP’s annual convention; and (3) distributing copies of ISMP’s 2007 white paper on medication safety, “Protecting U.S. Citizens from Inappropriate Medication Use,” at NCAP meetings and events throughout the year • The project was directed by Ryan Swanson, Pharm.D., currently serving as NCAP’s executive resident through June 2009. • To coordinate the student involvement on the project, Dr. Swanson worked in close conjunction with the directors of experiential programs at the three North Carolina schools of pharmacy: Penny Shelton, Pharm.D., CGP at Campbell University; Kim Leadon, M.Ed. at the University of North Carolina Eshelman School of Pharmacy; and Phillip Thornton, Ph.D., CGP at Wingate University. Dr. Swanson met individually with each of the experiential directors to identify appropriate rotation sites for this grant project (for the most part, these sites were ambulatory care or community-based retail pharmacies). Once the sites were identified, Dr. Swanson contacted those preceptors to solicit their involvement in the project. Almost half of the preceptors who were contacted agree to participate in the project, but only one-fourth of the

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	<p>total number of preceptors ultimately offered the presentation through their rotation site. For the sites that agreed to participate, Dr. Swanson provided both the preceptor and the pharmacy student with an overview of the project, including background on the project and instructions for giving the presentation to consumer groups. Students were furnished with an edited version of the “America’s Medicine Cabinet” presentation in electronic form. Following each presentation, preceptors and students completed an online evaluation form that collected data in the following areas: demographic information of each rotation site (i.e., type of practice setting, number of presentation attendees, etc.); value of the presentation as an educational tool to consumer groups; value of the presentation as an educational tool to students; and the effectiveness of the presentation’s content.</p> <ul style="list-style-type: none"> • At its annual convention, NCAP hosted a session on medication safety entitled “Medication Safety Across the Continuum.” The speaker for this session was Matthew Grissinger, RPh, FISMP, FASCP, and Director of ISMP’s Error Reporting Programs. The session was attended by approximately 100 pharmacists and pharmacy technicians. • One-hundred copies of ISMP’s 2007 white paper on medication safety, “Protecting U.S. Citizens from Inappropriate Medication Use,” were distributed at NCAP meetings and events during the duration of the project’s run. These meetings included NCAP’s annual convention and the “Updates on NC Pharmacy” CE program the association offers each year in conjunction with the NC Board of Pharmacy.
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Study endpoints	<ul style="list-style-type: none"> • Endpoints for this project focused primarily on the project’s first piece (employing pharmacy students to deliver the medication safety presentation to consumer groups). The following measures were evaluated: <ul style="list-style-type: none"> - Educational utility of the presentation to patients - Educational utility of the presentation to students - Content of the presentation (solicited feedback on any modifications that would enhance the presentation in the future)
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Results

<ul style="list-style-type: none"> • For the project’s first piece, a total of twenty preceptors representing the three NC schools of pharmacy were contacted to participate in this project. By project’s end, each school of pharmacy was represented by at least one preceptor and one student who completed the project. • Nine preceptors initially committed to the project, but four of those could not complete the project for various reasons. Five preceptors and fifteen students ultimately completed the project, resulting in a total of fifteen individual presentations delivered to various consumer groups. The preceptor-to-student ratio was not 1:1 due to (1) several preceptors repeating the presentation over multiple months with multiple students or (2) the fact that some preceptors had more than one student per rotation month. • Three of the five participating sites are independent community pharmacies. A fourth site belongs to a smaller regional chain (less than 100 stores), and the final site is private, non-profit center that services independent senior living communities and various senior centers. • The patients who attended these presentations were ambulatory adults (aged 40 and up). The number of patient attendees at the fifteen presentations ranged from 1 to 50, with an average of about 17 people in attendance per presentation. Nearly 250 patients attended these presentations in total.

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- Regarding the utility of the presentation to patients, preceptors and students were asked if they strongly agreed, somewhat agreed, somewhat disagreed, or strongly disagreed with the following statements:
 - “This presentation (an edited version of ‘America’s Medicine Cabinet’) is an educational and valuable one for patients.” Seventy-five percent of preceptors strongly agreed with this statement, while 25% somewhat agreed. No preceptors disagreed with this statement. Sixty percent of students strongly agreed with this statement, while 40% somewhat agreed with it. No students disagreed with this statement.
 - “The audience seemed to find this presentation to be an educational and valuable one.” There was a nearly equal split among both preceptors and students between “strongly agree” and “somewhat agree.” No project participants disagreed with this statement.
- Regarding the utility of the presentation to students, preceptors were asked if they would have future students deliver this same presentation to patients. Every preceptor responded in the affirmative that they would have future students deliver this presentation.
- The preceptors were asked how they believed their students benefited from this project. A sampling of their remarks are found below:
 - “Improved presentation skills”
 - “Seemed mostly to gain better presentation skills and how to interact with clients better, especially in group settings”
 - “I think they learned how to convey the information to the audience in a valuable way.”
 - “Gained more experience with public speaking”
 - “Learned important facts to relay to patients on safe medication use”
- Students were also asked to describe what they gained from participating in this project. A sampling of their remarks are found below:
 - “Provided a good opportunity to talk to seniors about their medications and answer specific questions about their regimens”
 - “[An] important thing I learned is about proper and safe disposal of medications.”
 - “I learned some statistics about medication errors and their consequences.”
 - “I improved my presentation-giving skills.”
 - “It helped to refine my speaking abilities.”
 - “I learned how to recruit patients for a presentation geared towards the general public as well as how to tailor a presentation to an audience...and how to modify when needed.”
 - “Giving this presentation helped to improve my speaking ability and allowed me to interact with my audience.”
 - “It made me realize from the questions we received from our audience that people truly believe that if one [pill] works, then two must be better.”
 - “Seniors really are interested in these kinds of issues, and they do want to use their medications correctly. Sometimes they get blamed for misusing medications when no one takes the time to explain to them how and why they take the medicines they do.”
- Regarding the content of the edited version of “America’s Medicine Cabinet” that was provided to the rotation sites, both preceptors and students were asked if there were any elements of the presentation they would modify. Every preceptor responded that there was some element to the presentation that they would change. The student response was split: 53% of students responded in the affirmative, and 47% of students said that there were no elements of the presentation they would change. If respondents answered

“yes,” they were asked to explain any changes to the presentation they would make. A sampling of their remarks are found below:

- “Less statistics needed”
- “I would tailor to a more low-level literacy to make it more valuable to my clients. It seemed to go over their heads in a few places.”
- “Some slides were wordy for seniors to read.”
- “Many slides were repetitive.”
- “Some of the statistics need to be updated.”
- “Provide more opportunities for audience interaction”

Conclusion

- Overwhelmingly, the preceptors and students that participated in this grant project found the presentation to be an incredibly helpful one in providing medication safety advice to patients.
- From the perspective of the preceptors and students who participated in this project, students pharmacists in North Carolina benefit academically and professionally when given the opportunity to educate patients on medication safety.
- While the “America’s Medicine Cabinet” presentation is a valuable tool for pharmacists and student pharmacists to utilize in educating patients on medication safety, slight modifications to the current presentation content may only increase its effectiveness (such as decreasing the number of statistics within the presentation, editing information that is unnecessarily repeated, etc.).