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Development, Implementation, and Evaluation of a Service-Learning Series for Pharmacy Students using a Public Health Tool

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Abstract

Background and purpose—The purpose of this article is to describe the utility of the Assessment, Development, Assurance: Pharmacist's Tool (ADAPT) during the design, delivery, and assessment of service-learning events by pharmacy students

Educational activity and setting—The ADAPT instrument was used to develop a series of five service-learning events that featured a health promotion program delivered by 19 pharmacy students and attended by over 200 senior citizens at local senior centers. Student competence was assessed prior to participating in the service-learning activities and each student completed a reflection following the event. Senior center directors evaluated both the quality of the health promotion program as well as the interaction with the sponsoring college of pharmacy.

Findings—Pharmacy students reported achievement of health promotion learning objectives based on self-evaluations. Responses to reflections also indicate that students gained insight to and appreciation for several of the public health essential services, which are the basis of the ADAPT instrument. Feedback from the senior center directors was consistently positive.

Discussion and summary—Use of the ADAPT instrument helped to facilitate the delivery of a high-quality, comprehensive service-learning series at local senior centers that had a solid public health foundation. Colleges and schools of pharmacy should strongly consider consulting the tool prior to planning any future health promotion activities for students.

Keywords

service-learning; public health; health promotion; pharmacy students; pharmacy education

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none

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Background and purpose

Pharmacy has long been a profession that strives to improve the health of the public while working to support the five traditional core areas of public health (biostatistics, environmental health sciences, epidemiology, health policy management, and social and behavioral Sciences).¹ Examples of this include community and ambulatory care pharmacists addressing clinical needs of patients, performing health screenings, and utilizing medication assistance programs. Pharmacists also participate in patient-centered medical homes and accountable care organizations to increase quality and access to care. Vaccination programs, syringe exchange, and medication disposal services are examples of wide variety of public health services that pharmacists can provide. The American Public Health Association (APHA) has supported the involvement of pharmacists in public health initiatives since the 1980s. In 2006, APHA issued a formal statement on the role of pharmacists in public health which describes activities of practitioners and provides recommendations for education and training.²

Public health was one of the initial set of five professional educational outcomes released by the Center for the Advancement of Pharmaceutical Education (CAPE) advisory panel in 1994 and continues to be included in the 2013 update.^{3,4} The Accreditation Council for Pharmacy Education (ACPE) Standards 2016 also address public health through a variety of elements which may include 2.1 (patient-centered care), 2.3 (health and wellness), 2.4 (population-based care), 3.2 (educator), 3.3 (patient advocacy), 3.6 (communication), and 4.2 (leadership). Pharmacy students are expected to demonstrate knowledge, skills, and abilities in these domains.⁵

Service-learning is one mechanism of offering opportunity for achievement of these educational outcomes. Service-learning is “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development. Reflection and reciprocity are key concepts of service-learning.”⁶ Service-learning is a valuable supplement to public health education by allowing students to engage in the community while obtaining real-world experience.⁷ It has also been increasingly used as an educational tool for pharmacy students.⁸ Respondents to a 2014 survey of a convenience sample of pharmacy schools reported that 85.3% of institutions were utilizing service-learning.⁹

Pharmacists and student pharmacists are capable of establishing and participating in health promotion programs that function as service-learning experiences to benefit their local communities. The Assessment, Development, Assurance: Pharmacist’s Tool (ADAPT) was developed by Truong and colleagues¹⁰ to evaluate pharmacist-delivered health promotion activities using a public health framework. The tool can be applied to service-learning experiences. This article seeks to describe stakeholder experiences when the ADAPT tool was used to develop and implement a service-learning series for pharmacy students.

Educational activity and setting

The University of North Texas System College of Pharmacy (UNT SCP) is based in Fort Worth, Texas in the Dallas-Fort Worth (DFW) metropolitan area. With more than 6.5 million residents, DFW is the fourth largest and most rapidly growing urban area in America.¹¹ UNT SCP was granted candidate status by ACPE in June 2014 and offers a four-year professional degree program. The college seeks to foster in its students a sense of “Service Before Self.” This is accomplished through participation in a variety of required public health activities. As part of the experiential education component of the curriculum, UNT SCP requires pharmacy students to complete 20 contact hours of service-learning during each semester of the first two professional years and eight contact hours of service-learning during each semester of the third professional year. As a newly established college of pharmacy, faculty frequently interact with community partners to identify opportunities for students to engage the local public.

Senior Citizen Services of Greater Tarrant County, Inc (SCSTC) was identified as an ideal collaborator soon after UNT SCP was founded. SCSTC is a non-profit partner organization of the Area Agency on Aging that provides a wide range of programs and services that enable senior adults to live independently with dignity within the county where UNT SCP is located. As part of its mission, SCSTC regularly offers health and wellness programs. Outreach programs are offered at almost thirty senior centers located throughout the county. Multiple discussions were held between SCSTC staff members and UNT SCP faculty to plan for high-impact programs. As part of a needs assessment, SCSTC staff reported that seniors had difficulty managing their multiple medications and often had questions about safe and appropriate use of medications.

Pharmacy faculty proposed a service-learning series that would be delivered by pharmacy students and achieve multiple goals: 1) building community partner relationships, 2) provision of health and wellness programming at SCSTC, and 3) an opportunity for pharmacy students to fulfil the semester hour service-learning requirement. In order to ensure the program was beneficial to the seniors as well as a high-quality learning experience for students, guidance was sought on recommended standards for health promotion program implementation.

Many pharmacists and students pharmacists are engaging in their communities by planning and implementing health promotion programs. In order to ensure that these programs will be high-quality, Truong and colleagues¹⁰ developed the ADAPT instrument to guide pharmacists and student pharmacists. The ADAPT instrument is a comprehensive and validated instrument based on public health’s three core functions and ten essential services, as shown in Appendix 1. To support the public health framework, resources such as the Centers for Disease Control and Prevention (CDC), APHA, and the Association of Schools of Public Health were used as an evidence-base. The tool’s developers also considered position statements from the American Pharmacists Association (APhA) and American Society of Health-System Pharmacists (ASHP) as the focus of the instrument is pharmacist-delivered interventions. The ADAPT instrument is a 36-item checklist to be completed by program planners. The ADAPT instrument was used for planning prior to implementation,

during implementation, and after completion of the service-learning series offered in partnership between UNT SCP and SCSTC as detailed below. As the service-learning series was an educational program, items on the ADAPT instrument related to patient care interventions were not pertinent.

Assessment

Older adults were identified as a target population, based on the expected participants in the senior centers.¹² This older adult population consumes a disproportionate amount of prescription and non-prescription drugs, the use of which confers disproportionate risk.¹³ Across the US, persons 65 years of age and older are twice as likely to require an emergency department visit due to an adverse drug event compared with younger adults.¹⁴ On a local level, SCSTC conducts an annual survey of its seniors. This allowed the program planners to have access to relevant data such as demographics and basic socioeconomic status prior to implementation. Three-fourths of seniors served by SCSTC were taking three or more prescriptions, which demonstrated a need for intervention.¹⁵ In addition, geriatric training and education has been identified as an essential component of curricula to prepare student pharmacists for the future practice of pharmacy.¹⁶

“Taking Your Medicines Safely” (TYMS) was chosen by UNT SCP and SCSTC as the health promotion program for this service-learning series. TYMS is a medication safety and poison prevention education program endorsed by the Poison Control Program and Health Resources and Services Administration (HRSA). The TYMS program is intended to be delivered to older adults and designed to be interactive, including patient cases and audience response. TYMS covers the following key points: 1) potential problems of taking prescription medicines with over-the-counter products; 2) ways for individuals to keep track of their medicines; 3) important questions older adults should ask health care professionals about their medicine and 4) free and confidential services provided by the nation’s poison centers. A review of the TYMS program demonstrated its contents satisfied the needs that SCSTC staff members had verbalized involving seniors and lack of medication knowledge. As part of the service-learning series, a program planning team, including key stakeholders from both UNT SCP and SCSTC, was formed. A UNT SCP pharmacist faculty member served as primary preceptor for all of the scheduled service-learning events. This preceptor attended the TYMS train-the-trainer webinar. The UNT SCP curriculum places service-learning within introductory pharmacy practice experience (IPPE) courses. As such, the course director for the IPPE course was involved to coordinate the students’ coursework. The Program Manager for SCSTC was the initial point of contact for the activities at the senior centers.

Policy development

To ensure that the TYMS program would be well received, the UNT SCP faculty preceptor attended a SCSTC staff meeting. The staff meetings are attended by SCSTC administrative personnel, including the program manager, and are open to each of the senior center site directors. A senior center site director manages each of the senior centers located throughout the county. At the SCSTC staff meeting, the UNT SCP faculty preceptor discussed the

TYMS program, the benefits of offering the program to community-dwelling seniors, and began to schedule the program at individual senior centers.

A promotional flyer for the TYMS program was available through the website. It was adapted to include the SCSTC logo to make it familiar to local seniors and placed throughout senior centers. Once a TYMS program was scheduled, senior center site directors were encouraged to place the event on their center calendar and to advertise the program.

At the senior centers, the TYMS programs were scheduled immediately before meals or group events to increase participation. The TYMS program is designed to be delivered through a slide presentation. However, only one of the senior centers had access to this audio-visual equipment. For the remaining senior centers, the majority of the information found on the TYMS slides was verbally presented. A flip-chart was used to highlight key information when needed. College of pharmacy students were instructed to avoid the use of medical jargon during the presentation. All material displayed, discussed, or offered to participants was obtained from the official TYMS website (<http://poisonhelp.hrsa.gov/resources/safemedicine/>) and are endorsed by credible sources (e.g., Poison Control Program, HRSA, Food and Drug Administration). Slight modifications were made to ensure the materials were appropriate for community seniors. For example, because limited literacy was identified within the target population by SCSTC, all written material was prepared to a fifth-grade reading level.

This educational program required a limited amount of supplies, including resources that were distributed to senior participants. At each TYMS program, seniors were provided with tools to track their medications including a medicine wallet card and a medicine record.

Through the TYMS webinar, program planners were encouraged to contact their local poison control center for complimentary materials. The county is serviced by a local poison control center which provided various materials, including telephone stickers and wall magnets, brochures discussing safe medicine use, poison prevention tips tailored to older adults, instructions for the “Poison Help” mobile application and contact information for the poison center in both English and Spanish. To increase participation, branded UNT SCP tote bags were distributed to seniors that included a pill box, pens, adhesive pads, and the educational materials. Each TYMS program raffled off one gift card as an incentive. This project was supported financially by grant funding from the National Institute On Minority Health And Health Disparities. The sponsor had no role in the collection, analysis and interpretation of data; in the writing of the manuscript; or in the decision to submit this article for publication.

Assurance

This service-learning series was reviewed and approved by the local Institutional Review Board. Health literacy of the senior participants was considered, and SCSTC provided guidance on “Choosing or Writing Teaching Materials for Patients with Low Health Literacy.” In addition, one of the senior centers had Spanish as the predominant language. A

bilingual UNT SCP student signed up for the event, a SCSTC staff member was available to translate, and all educational materials were provided in both English and Spanish.

Poison control centers and medication disposal were two topics discussed during the TYMS program. Senior participants were provided contact information for the local poison control center and how and why to dispose of unused medication.

The TYMS program was delivered by students in the second professional year of the pharmacy program. These students were chosen based on a strong foundational knowledge that could readily be applied to service-learning experiences. During the first professional year, UNT SCP students take a communications course that introduces the factors and methods involved in interpersonal communication. It has a lecture component on verbal, written and electronic communication with patients. Students practice taking medication histories and patient interviewing techniques during the lab component. In addition, students acquire basic drug knowledge through the top 200 drug quizzes. Specifically for TYMS, each student was responsible for reading the program's leader guide, a step-by-step instruction manual to prepare students to deliver the TYMS program. A medication safety review quiz assessed student knowledge, and faculty preceptors ensured that students completed the quiz to satisfactory competency prior to participating in any service-learning.

The assessment plan for this service-learning series was multifaceted. Students were asked to evaluate if participation in the experience achieved the objectives of the TYMS program. They also completed a reflection based on David Kolb's model of "what?, so what?, now what?" This model is used consistently throughout all UNT SCP service-learning experiences. Using prompting, open-ended questions, students are asked to objectively report the facts and events of the experience in detail, analyze the experience, and consider the broader implications of the experience on themselves and the community.¹⁷ Student reflections were identifiable as they were considered for credit in the IPPE course. Senior participants were asked to evaluate if the objectives of the TYMS program were achieved and on how informative and interesting the program was. Site directors anonymously evaluated the overall TYMS program presentation and their interaction with UNT SCP in establishing a service-learning experience. Comments for program improvement were collected from students, senior participants, and site directors.

Findings

During the fall 2014 semester, UNT SCP pharmacy students delivered five TYMS programs at five different senior centers throughout the local county. Nineteen pharmacy students participated in this service-learning series. One additional event was held at a local senior center, but due to conflicts with exam schedules only the UNT SCP faculty preceptor was able to deliver the program. A total of 219 seniors attended the five TYMS programs led by students. All 19 students completed an electronic evaluation and reflection form after participating in the service-learning series. Each knowledge-based objective of the TYMS program was rated on a five-point Likert-scale. Higher scores on each item indicate more agreement with that particular objective. All analyses were conducted using SPSSv23. Students consistently agreed that participating in this service-learning series helped them

achieve the TYMS program objectives (Table 1). Students were also asked to respond to reflective prompts based on the “what?, so what?, now what?” model. Responses indicate that students were able to critically assess their participation in the TYMS program and thoughtfully process the impact of their experience with the seniors (Table 2). Completion of the program evaluation by senior participants was low (<5%) and not reported. Informal feedback from senior participants was very positive. At all TYMS programs, seniors were very engaged and asked student presenters thoughtful questions. The senior center site directors evaluated the quality of the TYMS program as presented by UNT SCP students. Overall, site directors reported that pharmacy students delivered a high-quality health and wellness program (Table 3). In addition, site directors were asked questions about their interactions with UNT SCP in planning this service-learning series, and responses show they had positive experiences in working with UNT SCP (Table 4). Site directors were asked open-ended questions regarding the best/beneficial aspect of the service-learning series. Responses included: “Participants [seniors] understood the importance of taking their medications on a timely basis”; “Informing seniors of drug... interactions” and “that seniors are aware of dangers for themselves and children.”

When asked to provide suggestions for change or identify challenges, site directors’ feedback included comments such as, “All aspects of the experience with seniors were positive” and “[the presentation] needs to be longer.”

Discussion

The ADAPT instrument was used to develop and implement a service-learning series in partnership with UNT SCP and SCSTC during Fall 2014. Use of the comprehensive and validated ADAPT instrument ensured detailed, relevant, high-quality health promotion programming. As a result, the TYMS educational activities that were developed addressed the needs of the senior community members and benefited the student pharmacists who participated.

As a newly established pharmacy program, one of the goals of UNT SCP is to build and promote community partner relationships. Completing several items of the ADAPT instrument during the implementation of this service-learning series were key in working to strengthen the collaboration between UNT SCP and SCSTC. Having the Program Manager of SCSTC on the planning team was crucial as they served as a conduit between the UNT SCP faculty preceptor and the senior center site directors. The SCSTC staff meeting was attended by the UNT SCP faculty preceptor, in part, to gauge if site directors would accept the TYMS program at their individual senior centers. Demand and support for the TYMS program has been extremely positive.

Several learning outcomes, based on the evaluation plan of the ADAPT instrument and the UNT SCP curriculum, were measured for the pharmacy students who participated in the service-learning series. Following service-learning, students completed a self-assessment derived from the learning objectives of the TYMS program which enhance material that is currently taught in the UNT SCP curriculum and applied to the community setting. Students reported achievement of these learning objectives which is a positive indicator. Reflection

has been recognized as the key link between service and learning, so structured time was provided for students to complete their “what?, so what?, now what?” exercise. Because service-learning activities are embedded into IPPE coursework, the IPPE course director provides feedback via a standardized rubric on service-learning reflections of the students.

Responses to the service-learning reflections (Table 2) indicate that students appreciated many of the public health essential services (ES), as defined by the Institute of Medicine and CDC, after participating in the TYMS program designed using the ADAPT instrument.¹⁸ The impetus of this service-learning series was general concern expressed by SCSTC staff regarding medication knowledge and safety for their senior community members. Students confirmed this concern after interacting with seniors and provided specific examples of high-risk behaviors related to medications. As described in ES 1, this demonstrates an ability to determine the health service needs of the seniors. Students committed to sharing the presentation, so that seniors are well equipped and empowered to ask appropriate questions of healthcare providers. This activity relates to ES 3: building knowledge and informing decision-making choices within the community. One of the TYMS programs was presented at a predominately Spanish-speaking senior center, and the pharmacy students were sensitive to ensure that targeted health information was culturally appropriate, as discussed in ES 7. Other initiatives in ES 7 include the linkage of seniors to appropriate services, such as poison control, medication disposal, and medication organizers. As these were positively received by the seniors who attended the TYMS programs, several students thought of ways to increase access in the community.

Many students were impacted by their experience with programs. Some expressed a desire to pursue advanced education and life-long learning with an emphasis on geriatric training which speaks to ES 8--maintaining workforce standards. Other students planned more immediate action, which is evidence of engaging the community to promote health improvement as mentioned in ES 4. Following the TYMS programs, students are still very much involved with service-learning at SCSTC senior centers. In Spring 2015, multiple health fairs which offered free screenings along with educational sessions were provided. By Fall 2015, several students had assumed the role of program planners and successfully implemented additional service-learning events. UNT SCP and SCSTC continue to have a positive working relationship with frequent collaboration.

Limitations of this service-learning series include a lack of formal feedback from the senior participants. The TYMS programs were intentionally scheduled at the senior centers immediately before a meal or popular social activity to increase participation. The combination of time pressure and the availability of evaluation forms only on paper may have contributed to the very low response rate. However, seniors readily provided positive verbal feedback. Community seniors at each senior centers asked students a variety of questions, requested brief medication regimen reviews, and indicated they would use the information they learned from the TYMS program. Funds were used to purchase promotional items for distribution at the senior centers. However, from the interaction and response of the seniors it is likely that the TYMS program can successfully be conducted without such resources. The majority of educational materials were complimentary, and expenses could be limited to copying and printing costs. The material in the TYMS program

includes topics amenable to interprofessional education. Future service-learning opportunities could consider including students from other health education disciplines to provide additional perspectives.

Delivery of the TYMS program by pharmacy students has previously been described.¹⁹ However, this was limited to a single event, and no outcomes were reported. Use of the ADAPT instrument while planning and implementing this service-learning series provided several distinct advantages. First, it provided the relevant public health framework. As service-learning is an educational tool designed to “address human and community needs,” it is fitting to utilize a tool based on public health principles when developing opportunities for students. In addition, there is appropriate focus on serving the community. As pharmacy educators, the needs of students are often priority. However, when delivering public health interventions, the needs of the community and stakeholders should be appropriately considered. The ADAPT instrument addressed the multiple parties involved in public health programs. The ongoing relationship between UNT SCP and SCSTC demonstrates achievement of the desired balance. Lastly, the ADAPT instrument includes considerations for evaluation. The ACPE Standards 2016 place significant emphasis on assessment. Thoughtful attention to items within the ADAPT instrument will allow experiential education faculty to complete an assessment plan related to health promotion activities.

Summary

Colleges and schools of pharmacy typically rely on faculty or staff members’ experience and expertise when planning and implementing public health programs, including health promotion or community outreach activities. The resulting programs may not have adequate resources, possibly be confronted by unanticipated barriers, and ultimately may fail to achieve their objectives. The ADAPT instrument is inclusive from the initial planning to final evaluation of health promotion programs facilitated by pharmacists and student pharmacists. The availability of the ADAPT instrument, with its systematic process and public health framework, is a value-added benefit for the pharmacy community, and routine use by pharmacists and student pharmacists is highly encouraged.

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Appendix 12: Summary of Assessment, Development, Assurance Pharmacist's Tool (ADAPT) instrument¹⁰

Public Health Essential Services ¹⁸	ADAPT Items	Key Fundamentals
1 - Monitor health status to identify and solve community health problems	1–3	Program planners complete an accurate periodic assessment of the community's health status
2 - Diagnose and investigate health problems and health hazards in the community	4–7	Program planners ensure timely identification and investigation of health problems
3 - Inform, educate, and empower people about health issues	8–11	The program includes health education and health promotion initiatives within the community to support healthy living

Public Health Essential Services ¹⁸	ADAPT Items	Key Fundamentals
4 - Mobilize community partnerships to identify and solve health problems	12–13	Program planners identify potential stakeholders and develop partnerships to promote health improvement
5 - Develop policies and plans that support individual and community health efforts	14–16	Program planners consider development and/or alignment of policies and resources to promote health and guide public health practice
6 - Enforce laws and regulations that protect health and ensure safety	17–20	Program planners review and evaluate, legal authority, laws, and regulations as required; Support compliance efforts and enforcement as needed
7 - Link people to needed personal health services and assure the provision of health care when otherwise unavailable	21–24	Program planners identify barriers to care within the community and develop interventions that address barriers to care
8 - Assure a competent public and personal health care workforce	25–27	Program planners assess the program implementation team and maintain standards
9 - Evaluate effectiveness, accessibility, and quality of personal and population-based health services	28–34	Program evaluation must be on-going and should examine effectiveness and quality improvement
10 - Research for new insights and innovative solutions to health problems	35–36	Program planners monitor for innovative solutions and identify research activities to advance public health

Table 1

Student Evaluation Results

TYMS Program Objectives	Mean Responses N = 19
1. Recognize potential problems of taking prescription medicines with over-the-counter products	4.84
2. Discuss ways to keep track of medicines	4.84
3. Know questions older adults should ask about their medicine	4.89
4. Be aware of free and confidential services provided by the nation's poison centers	4.84

TYMS: Taking Your Medicines Safely

5 = Strongly Agree; 4 = Agree; 3 = Neither Agree or Disagree; 2 = Disagree; 1 = Strongly Disagree

Table 2

Student Reflections

Reflective Prompt	Excerpt
What?	<p>"I, along with two of my fellow classmates, provided a presentation to seniors on the various ways they can stay informed about their medicines and the different techniques they can utilize to keep track of their medicines. We also provided information on poison control and the poison control number they should keep handy in the event there is an emergency. After the presentation we also allowed for questions and handed out bags with helpful information pertaining to our presentation."</p>
So What?	<p>"This presentation showed them [seniors] how to ask without feeling uncomfortable. It's their responsibility and their right to ask questions. Knowing the right questions to ask can increase their confidence for talking with their health care providers. I will share this presentation with my family ... because the information it contains is educational for everyone."</p> <p>"This was my first opportunity to interact with a culturally diverse community of elderly adults... After completing this activity, it shed light on the fact that access to, knowledge and understanding of the information is just a piece of the bigger puzzle which involves sharing the information to the community in a consistent, clear and easy to understand method. It also sheds light on the fact that delivery format should be flexible and be appropriate to the audience. This activity was another opportunity to build and enhance team work. We all were able to collaborate to ensure that presentation stayed on track, props were limited, non-distracting and appropriate for the audience."</p> <p>"This experience showed the importance of education that is needed for the general public in order to take medications safely. Many of the seniors take their prescription medications as ordered, but struggle when it comes to choosing over the counter medications. Some of the seniors failed to see why taking a baby aspirin everyday without telling their doctor was wrong. They felt seeing commercials on T. V and getting advice from others was okay. This learning experience ... reinforced my desire to help community members. I hope to continue to raise awareness and counsel patients on their medications and how to adhere to them safely. I felt that I achieved this with this small group."</p>
Now What?	<p>"From this experience, I can be more proactive about teaching seniors about their medicines safety and letting them know all the resources in the area that they can use to help prevent drug interaction or drug poisoning."</p> <p>"These experiences will affect my education and future practice in pharmacy by convincing me that a career in geriatric pharmacy may be very enjoyable for me. I would now like to learn more about geriatric pharmacy and the areas in pharmacy that the geriatric population could really utilize ... In order to further develop these skills I would like to take the Geriatric elective course ... Other resources I may utilize is the Commission for Certification in Geriatric Pharmacy... The majority of my future service learning will focus on the geriatric population."</p> <p>"I would also like to set up more presentations, health screenings, or offer immunizations at the senior centers in the future. It would be a great way to show the geriatric population that health professionals are concerned about their well-being."</p>

Table 3

Site director evaluation of TYMS student presentation

	Mean Responses N = 5
Voice appropriate (volume, pitch, clarity)	4.8
Speed of talk	5.0
Stance/posture/appearance	5.0
Rapport with audience (eye contact)	4.8
Confidence	5.0
Adequate time	4.9
Response to questions	4.8
Demonstrated mastery of topic	5.0

TYMS: Taking Your Medicines Safely

5 = Excellent; 4 = Above Average; 3 = Average; 2 = Below Average; 1 = Unsatisfactory

Table 4

Site director satisfaction with UNT SCP collaboration

	Mean Responses N = 5
Overall communication with students/faculty.	5.0
Level and quality of interaction with students/faculty.	5.0
Quality of student work.	4.9
Feedback and input into planning of experiences.	4.8
Scope and timing of activity.	5.0
Level of trust with faculty and students.	5.0

UNT SCP: University of North Texas System College of Pharmacy

5 = Very Satisfied; 4 = Satisfied; 3 = Neutral; 2 = Dissatisfied; 1 = Very Dissatisfied