

Interprofessional Education Training and Experiential Learning Model for Pre-Health Advisors

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ABSTRACT

Pre-health advisors help prepare college students to apply to health professions programs. The Western Association of Advisors for the Health Professions (WAAHP) is an organization with a commitment to enhance the development of pre-health advisors. In this pilot study, Roseman University of Health Sciences (RUHS) explored whether an active learning multi-disciplinary workshop could enhance advisors' understanding of three health professions and how healthcare providers collaborate to provide care. Presented as part of the 2019 WAAHP regional conference, more than 100 RUHS students and faculty members from its colleges of dentistry, nursing and pharmacy offered conference attendees the opportunity to participate in a half-day hands-on active learning workshop representing each of these three healthcare disciplines. The workshop used RUHS facilities, including its simulation clinics, and consisted of three sessions, each about 50 minutes long. Among the 80 conference attendees who returned the WAAHP conference evaluations, 44 (55%) completed the workshop evaluation. All 44 respondents uniformly offered positive comments, which clustered into four themes: overall experience, hands-on active learning experience, learning about three health profession programs and what dental, pharmacy and nursing professional students do and experience. About 1 in 5 attendees commented favorably about the hands-on opportunity and the value of interacting with students who helped manage the workshop. While still giving an overall positive evaluation, eight respondents felt that their sessions were too short or rushed. This pilot study demonstrates that active learning workshops can enhance pre-health advisors' understanding of health professional programs and student experiences and have the potential to help advisors match the right student to the right program.

KEYWORDS: Pre-health; Advisors; WAAHP; Experiential learning; Interprofessional education; Health professions; Dentistry; Nursing; Pharmacy

INTRODUCTION

The primary goal was to pilot an active team-based workshop and learning model as an engaging and enjoyable experience to give pre-health advisors an enhanced understanding of the profession and students' experience in dental, pharmacy and nursing programs. As part of the 2019 Western Association of Advisors for the Health

Professions (WAAHP) regional conference, attendees could select to attend a hands-on active learning workshop representing each of three health care disciplines, pharmacy, dentistry and nursing. The workshop used the facilities, including simulation clinics, located at Roseman University of Health Sciences (RUHS) in South Jordan, Utah, United States.

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The WAAHP is an organization of health professions advisors at colleges and universities throughout 13 western states and the Pacific United States Territories with a commitment to enhance the professional development of pre-health advisors. Members share the common goal of preparing and directing students to apply to programs in the health professions [1]. The target audience was the 200+ pre-health professional advisors attending the 2019 WAAHP conference in Salt Lake City, Utah, United States.

MATERIALS AND METHODS

Required Materials

The program required a dental simulation clinic, pharmacy compounding facility and a nursing simulation clinic which included high-fidelity manikins and an auditory hallucination simulation model using headphones and a recording. The collaborative care model activity utilized a mock hospital room and a standardized patient with faculty members trained in interprofessional education representing pharmacy, nursing and dental medicine who used a standardized script to demonstrate collaborative care. Other personnel included trained student and faculty facilitators as well as support staff.

Other requirements included:

- a) Orientation room
- b) Manikin
- c) Simulated hospital inpatient room with standardized patients and clinical support staff
- d) Simulated pharmacy and outpatient clinic
- e) Trained facilitators (both faculty members and students)
- f) Trained student preceptors from each discipline
- g) Sufficient compounding supplies for participants to make a beverage
- h) Sufficient supplies to make and restore teeth
- i) Sufficient personal protective equipment for safety protection in a simulation clinic
- j) Sufficient syringes to learn proper injection techniques
- k) Sufficient audiovisual equipment to listen to patient voices for the empathic care segment
- l) Case discussion activity room

Activity Description

Planning: Two years prior to the conference, a team representing RUHS, a non-profit health sciences university with colleges of nursing, pharmacy and dentistry, met with the WAAHP conference leadership to discuss a half-day active learning workshop for attendees at the 2019 WAAHP conference to be held in Salt Lake City. Located 15 miles southwest of Salt Lake City, RUHS agreed to provide transportation and food for those choosing to attend the workshop. The RUHS team, consisting of faculty members representing each discipline, then met to collaboratively develop hands-on experiences and simulations designed to enhance attendees' understanding of the health professions.

Program schedule and orientation: Attendees participated in a brief workshop orientation and were then divided into 3 groups

of approximately 30 participants. Student leaders assigned to each group of participants and escorted the groups to workshop activities which consisted of three 50- minute sessions. The program lasted for 3 hours altogether.

Dental session: The dental session took place in RUHS dental simulation clinic. Each participant received individual guidance by a dental faculty member and/or a dental student to restore teeth using various dental hand pieces. RUHS provided personal protective equipment and dental supplies. A team of clinical faculty briefly instructed participants about the equipment and its usage prior to the dental activities and debriefed them at the end of each activity.

Pharmacy session: Using a pharmacy lab and compounding supplies, pharmacy faculty with compounding experience gave participants instruction about pediatric compounding followed by participants compounding a beverage that participants tasted at the end the workshop. A second activity used a mock inpatient room with a standardized patient and an interprofessional team of clinical staff and healthcare providers to simulate a collaborative care model and to illustrate the roles of multiple disciplines collaborating in the care of a hospitalized patient. Other activities included simulations where pharmacists educated participants on proper inhaler technique and reducing inappropriate use of antibiotics.

Nursing session: The nursing session included two activities: The first activity taught the participants about sterile and injection techniques using syringes to give an injection to a manikin. The second activity placed participants in teams of 4 to 6 people and used audiovisual tools to develop a better understanding of a mental health patients' experience with auditory hallucinations while trying to focus on cognitive task such as solving math problems. Following the activity, faculty and student facilitators led a group discussion about empathetic care strategies. The group was divided into two sections so that each section could experience both nursing activities.

RESULTS

As part of the overall conference evaluation, attendees were asked to evaluate the workshop and to provide comments about the experience. Among the 80 attendees who returned conference evaluations, 44 (55%) completed the workshop evaluation. Among the respondents, 48% reported previously attending a WAAHP conference, while 27% attended at least three conferences. All 44 respondents uniformly offered positive comments about the workshop. Of these, 6 consisted of single phrases or statements. Examples included:

Well done! It surpassed my expectations!

That was great fun and a good learning experience.

It was great!!! I think that was my favorite part of the conference.

Positive comments could be grouped into four themes: overall experience, hands-on active learning experience, learning about the profession and what professional students do, and dental experience. About half the comments included more than one theme. While still giving an overall positive evaluation, eight felt that their activities were too short or rushed. Although the workshop included interactions between disciplines no one specifically commented on this aspect of the workshop. Table 1 summarizes the comments.

Table 1: Attendee Comments (N=44). Note that comment mentions > 44 since some respondents included more than one comment.

Themes	Times Mentioned	Sample Comments
Positive Experience	41	"That was great fun and a good learning experience."
		"FANTASTIC!!! LOVED THIS EVENT!"
		"Good."
Mentioned Hands-On	8	"Very cool to have some hands-on experience."
		"The hands-on activities were fun as well."
Learned about what student's experience and the profession	8	"Such a great opportunity to experience what my students might experience."
		"Learned a lot of what students go through and also seeing first-hand how important coursework is for each profession."
		"learned about various health professions"
Specifically mentioned dental	4	"The dental session was the best!"
		"It was so cool! Especially the dental part."
Expressed inadequate time	4	"This session felt rushed through some parts and I think I would have preferred seeing less programs to spend more time in fewer program locations."

DISCUSSION

Impact

Undergraduate institutions rely on pre-professional health advisors to guide students in their choice of professions. For those interested in health careers, pre-health advisors serve as an interface between students and a health profession, and their advice significantly influences student decisions [2,3]. Conference programs that enhance an advisor's understanding of the profession and the health professional student's experience contributes to an advisor's effectiveness [4]. In this pilot study, RUHS explored whether an active learning multi-disciplinary workshop could enhance an advisor's understanding of three health professions and how they collaborate to provide care. Virtually all workshop attendees rated the workshop positively with about 1 in 5 attendees specifically commenting favorably about the active learning experience. No report of a similar workshop exists in the literature and our pilot event suggests that an interprofessional workshop with hands-on activities is an innovative and effective way to enhance advisors' perspectives about a health profession. Several participants noted that the interaction with student facilitators increased their insight into the student experience suggesting that including students as facilitators adds additional impact.

Two other interesting findings emerged. First, many participants cited the dental session as their favorite experience. It may be the dental simulation gave advisors a greater understanding about advising prospective dental students about the profession's need for an ability to work with one's hands and the importance of accuracy in dental work [5]. Second, eight attendees commented that the workshop was too short. Adult learning theory maintains that shorter sessions work best [6] and those planning the workshop deliberately kept sessions short in order to keep participants engaged. Perhaps longer sessions or allowing attendees to choose among activities of various length might be a better strategy.

Limitations

There were a few limitations in this study. One limitation was that simulations designed to demonstrate interprofessional collaboration did not elicit comments, making it difficult to assess their impact. Second, as a pilot program the assessment relied on qualitative data extracted from the conference evaluation. A future program should be planned to directly evaluate the sessions independently and to explore the impact of interprofessional

collaboration. Finally, a single institution conducted the workshop, and it might not translate to other institutional settings. However, nothing about the session or materials were unique to the institution and other universities with multiple simulation labs should be able to develop a similar workshop.

CONCLUSION

Pre-health professional advisors attending an active learning workshop developed collaboratively by three health professional colleges enhanced the advisors understanding of the represented professions and the student experience. Students have many health careers options. Programs such as these have the potential to help advisors understand what specific health professional careers offer and may lead to more effective advising of students considering careers in health professions.

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ETHICS APPROVAL OF RESEARCH

This study was approved by Roseman University of Health Sciences Institutional Review Board (Protocol Number: 1471322; Date: October 31, 2019; Principal Investigator: Dr. Man Hung).

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