THEME ISSUE: SKILLS-BASED EDUCATION

BRIEF

Managing Difficult Patient Encounters: Simulation Design, Findings, and Call to Action

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Objective. To implement and evaluate a difficult patient encounter skills laboratory simulation emphasizing students' self-assessed communication abilities and affective skills.

Methods. Twelve simulation scenarios represented difficult patient encounters in a variety of practice settings. All students completed a self-assessment of their ability to communicate during difficult patient encounters before and after the simulations and wrote a guided reflection afterward. The impact of the simulation was evaluated through quantitative and qualitative methodology. Three student cohorts were analyzed for significance of change in self-perceived communication abilities. Thematic analysis of the qualitative reflection responses was performed.

Results. Over three years, three independent student cohorts of third-year professional students participated in the simulations (n = 236). Variability between cohorts was not statistically significant. Students self-rated their ability to communicate on a 0-100 scale. Mean self-rating of ability prior to the simulation was 57.7 and after was 79.2 (SD 15.9, 15.2). This mean difference of 21.5 shows an approximate 20% increase in self-rated ability. Qualitative analysis revealed that students found the simulation revealed areas needing further development, promoting self-awareness. Students discussed that a safe, formative environment contributed to their growth and was relevant to their future professional practice.

Conclusion. This simulation fills a gap in skills-based education, addresses the affective domain of ACPE Standards, transfers easily to schools and colleges of pharmacy, and demonstrates significant quantitative and qualitative findings. This supports a call to action for pharmacy educators to provide purposeful opportunities for students to practice communicating with patients during difficult encounters.

Keywords: pharmacy skills lab, difficult conversations, difficult patients, communication, consultation, affective domain, soft skills

INTRODUCTION

Pharmacists in all practice settings face difficult patient encounters. Patients may be in a hurry, angry about prescription drug costs, embarrassed about a personal symptom, or disagree with the plan of care. The pharmacist's response during these moments may influence the patient and their medication self-management.¹⁻³ Responding effectively requires professionalism, active listening, focused communication, empathy, and responsiveness to each patient's unique needs.³⁻⁵ However, pharmacists tend to feel inadequately prepared to respond to difficult situations. In a survey administered by *Drug Topics*, only 2% of respondents indicated that they received training to support difficult patient encounters during pharmacy school.⁶

The guiding standards for professional pharmacy education mandate teaching of and assessment of growing affective domain skills such as self-awareness, patient advocacy, cultural sensitivity, and professionalism, which are necessary for communicating with and educating patients in difficult situations.⁷⁻⁹ Despite the importance of these "soft skills" to pharmacy practice, many schools and colleges of pharmacy find it challenging to teach and to assess affective skills. Moreover, the pharmacy education literature provides limited examples of teaching activities that equip students to effectively handle difficult patient encounters. One study described an interdisciplinary simulation consisting of pharmacy, nursing, and medical learners and their ability to engage in difficult conversations with standardized patients

and human simulators.¹⁰ Another study provided schools of pharmacy with a framework for student communication towards mental health.¹¹

Provider and nurse educators have implemented training and assessed students in difficult patient encounters through simulations and didactic lectures.^{12,13} Experts in medical education emphasize the development of self-awareness, preparedness, and positive interpersonal communication while targeting the patient relationship rather than the disease in the encounter.¹⁴⁻¹⁶

Drawing on the results and lessons learned from existing literature, faculty created, implemented, and evaluated a skills laboratory simulation related to the management of difficult patient encounters. The simulation was developed to provide students an opportunity to practice communicating with patients in difficult scenarios to improve performance in their overall affective domain skills (eg, self-awareness, patient advocacy, cultural sensitivity, professionalism) in preparation for pharmacy practice. The objective of this manuscript is to describe the implementation of a difficult patient encounter laboratory simulation and to investigate its impact on self-reported student ability and affective skills.

METHODS

A learning experience was created which included modeling of appropriate behaviors followed by a simulation to practice skills with difficult patient encounters in diverse practice settings. This simulation is delivered in the third professional year in a 2-credit skills laboratory course. The course includes a 50-minute didactic lecture and 2-hour laboratory each week, with four sections of 22 students each. The simulation provides 3.2 hours of IPPE for the PharmD Curriculum, based on actual clock hours that students devote to the activity. The simulation demands few faculty resources, transfers easily to other schools, and has the potential to meet accreditation expectations of pharmacy schools across the country.

To provide context and immerse students in difficult encounters prior to the simulation, the lead faculty modeled techniques to address various simulated scenarios in real-time to the entire third-year cohort in two 50-minute didactic lectures (*Article Supplement 1*). Following each modeling session, faculty facilitated a debriefing session in which students were asked to discuss which skills and key techniques the pharmacist used and areas for improvement. Students were not assessed on their understanding of the concepts represented in the modeling sessions as the objective was to immerse and engage students, providing an example of practice. A few articles were assigned as pre-readings to prepare students for the difficult scenarios that would be modeled (*Article Supplement 1*). After the didactic lectures, students participated in the difficult patient encounters activity as student pairs in their laboratory sections. Twelve simulation scenarios represented difficult patient encounters in a variety of settings, including community pharmacy, ambulatory care, emergency department, institutional pharmacy, and transition between care locations. Table 1 describes aspects of each scenario including educational objectives met and the associated ACPE Standards.

Each scenario consisted of three participant roles: an actor, a student facilitator, and a student pharmacist role. Actors were personal acquaintances, retired health care professionals, PGY-1 residents, and graduate students. Actors in each scenario portrayed unique attributes that required students to respond using specific communication techniques, to call upon pharmacotherapy skills, and to employ soft skills from the affective domain. Scripted actors role-playing patients or caregivers were angry, embarrassed, worried, in pain, or hurried. Some were resistant to the plan of care or unwilling to take prescription medications. Others were overwhelmed, confused, or doubtful. One scenario included a provider who was demeaning and unhelpful regarding a medication cost concern. Another scenario included the need for a language translator and addressed cultural competencies. In a final example scenario, a patient was scared and worried that they might have been a victim of a medication error.

Acting guidelines were provided to hired actors one week in advance of the simulation and included demographic information, current medical history, tips for demonstrating the assigned difficult attribute, response suggestions, and questions to ask the student pharmacist. The lead faculty member followed up with each actor via telephone or email to answer questions about the assigned case and demonstrated examples of how to act out the assigned case.

The 22 students in each laboratory session were divided randomly into pairs. Student pairs rotated through the stations on their own accord. The time spent at each station varied by case and student, so having one more station than groups was desirable to afford flexibility. The average amount of time spent at each station was 10 minutes. Students were assigned to the role of student pharmacist or student facilitator in rotating stations. The course faculty provided prompts for the student pharmacist and a comprehensive key including topics of discussion for use following the encounter for the student facilitator. At the end of each scenario, the student facilitator asked the actor structured questions to stimulate formative feedback for the student pharmacist. Figure 1 provides an example of one scenario's materials for all three roles. All simulation materials are available in *Article Supplement 2*. All students participated in a faculty-lead debriefing following the simulation.

Over three years, three independent student cohorts participated in the simulations ($n = 236$). All students completed a faculty-developed self-assessment of their ability to communicate during difficult conversations through the course learning management system (LMS). Students self-rated their ability to communicate during difficult conversations on a 0-100 scale (0 = poor, 100 = exceeds expectations for a professional pharmacist). This self-assessment was a required part of the course and was completed immediately before and after the laboratory simulation. This 0-100 self-evaluation is a common component of reflective learning in this skills laboratory course. Cohorts were analyzed for variability using ANOVA and Kruskal-Wallis. The effect size was calculated with a Cohen's d and significance of change in self-perceived ability was measured with a paired t -test.

Following the simulation and post self-assessment, students also completed a guided reflection exercise through the course LMS. Students responded to the prompt: *"Reflect on your thinking, learning, and work today. What was most surprising to you? What are you most proud of?"* Student reflective writing skills were not evaluated. Student reflective writing is assessed throughout the PharmD curriculum and co-curriculum outside of this course.

Three researchers conducted thematic analysis of the qualitative reflection responses. The research team analyzed the data using conventional content analysis, including an initial inductive approach and then a deductive analysis.¹⁴ Researchers first conducted memos to bracket their assumptions. Each then independently read through all three cohort responses. Each member of the research team coded half of the first cohort's reflections, labeling key concepts or thoughts expressed by participants. All three researchers met to discuss findings and 37 codes were identified initially. Similar codes were then consolidated via development of a consensus codebook that included agreed upon definitions to clarify code meaning. The consensus codebook guided two researchers for the analysis of the remaining cohorts' reflections. An iterative process of coding and peer debriefing occurred until all three cohort reflections were fully coded. As is common practice in qualitative descriptive research, multiple codes may be applied to a single response.¹⁵ For example, three codes (thinking on my feet, realism, and relevance to practice) were assigned to the student response, "I was most surprised on how good the actresses were at staying in character. They were able to bring up issues that we will have to deal with in future, and they were very good at keeping us on our toes." During peer debriefing sessions, researchers identified student responses that best embodied each code and noted the amount of responses linked to each code. For example, approximately 75 students across the three cohorts referred to "empathizing" (Theme: Listening and empathizing), and 65 students felt that the activity helped "reveal what I don't know" (Theme: Gauging knowledge, skills, and behaviors). Codes were eventually grouped into categorical themes with corresponding illustrative quotations. Because the self-assessments and guided reflections were a part of the typical course procedure, the XXX IRB office considered the project exempt from review.

RESULTS

Of the three cohorts of students, 232 (98.3%) students provided complete responses to the self-assessment quantitative survey. The variability of responses between cohorts was tested. While some variability existed between cohorts prior to and after the simulation, which can be expected when comparing various groups of students, ANOVA and Kruskal-Wallis did not show statistical significance. Therefore, all three cohorts were evaluated together to determine overall changes in pre and post ability.

Mean self-rating of ability to communicate during difficult conversations for the entire population ($n = 232$) prior to the simulation was 57.7 and after was 79.2 (SD 15.9, 15.2). This mean difference of 21.5 ($p < .001$) shows an approximate 20% increase in self-rated ability to communicate during difficult conversation. The effect size, as measured by Cohen's d , is 1.42. Since this value exceeds 0.8, our Cohen's d measure indicated a very large effect size.

All 232 student (100%) completed the guided reflection exercise. Qualitative analysis revealed themes related to students' internal responses as well as external experiences of the simulation, as illustrated in Table 2. Most students commented about how they grew in the affective domain of learning related to attitudes, emotional responses, and communication techniques. Multiple students indicated feeling nervous and uncertain prior to the simulation. Lacking relevant work experience affected the degree to which students felt prepared—a lack of work experience often created the expectation that they would struggle during simulation. Most of these same students praised the value of practicing difficult conversations. Students who felt confident going into the simulation often indicated that their prior work experiences helped them to be comfortable and prepared to handle difficult conversations.

Overall, students appreciated the realism of the simulation, commenting on the complexity of the scenarios as well as the actors' abilities to portray "real life." Students often discussed the need to think on their feet as they attempted to listen to the patient, recall prior knowledge, think critically, use resources, and incorporate soft skills to obtain positive outcomes. Many commented that actors in the scenarios were rude, rushed, and/or inattentive, which caused students to feel thrown off and flustered, leading them to forget key information. Nevertheless, some of these students and many

others were proud that they remained calm, quickly adapted to the situation, and effectively carried out patient-centered plans. Rather than simply delivering education about medications, students discussed how they had to respond empathetically to the actors. Student responses indicated that the activity not only reinforced the importance of communicating effectively both accurate and relevant information to patients but to use therapeutic communication skills. Students reflected that empathy facilitated effective communication and outcomes. In this way, the most valuable learning experiences seemed related to growth in the affective domain.

Students found that the simulation gauged current knowledge and skills and revealed areas needing further development. Working through the scenarios, observing classmates, and receiving feedback from the actors helped students to recognize strengths and improvement opportunities. In particular, areas noted for improvement included remembering specific information, speaking more clearly and loudly, and communicating more empathetically. Most students seemed to appreciate these revelations and thought that continued practice would increase confidence and abilities, especially when encountering difficult conversations. Several students discussed how the safe, formative environment contributed to their growth. Overall, students expressed increased confidence and comfort in their abilities both during and after the simulation. Students noted the simulation scenarios were relevant to future professional pharmacy practice.

DISCUSSION

Pharmacy practice consists of a variety of patient encounters; some of which may be difficult to manage, especially without prior training. Pharmacy education accrediting bodies mandate affective learning outcomes, for example: communication, professionalism, cultural sensitivity, self-awareness, and patient advocacy.³ However, current pharmacy education literature offers few examples of learning strategies to facilitate this outcome. To address this gap in pharmacy education, this simulation focused on targeting the pharmacist-patient relationship and guided student learning.

This study's educational activity study's and findings align with other health professions literature related to difficult encounters simulations. A short training seminar for medical residents on how to handle difficult patients showed the positive learning experience noted by participants through confidence and satisfaction and acquisition of new knowledge.¹⁶ Pharmacy learners who have engaged in activities to address difficult encounters have noted self-perceived effectiveness of activities to prepare them for future practice.¹⁰ Other studies in health professions education have shown that difficult encounters simulations provide self-assessment results similar to faculty-rated and/or actor-rated performance.^{16,17} As noted in our findings, qualitative collection of debriefing and reflective responses provide a valuable assessment of student readiness and perception.^{10,16}

The learning format summarized in this study afforded students the opportunity to participate in 12 different difficult patient simulations. Student quantitative and qualitative responses regarding the simulation support its usefulness in improving student communication and patient education abilities as well as describe how the educational design supports student learning. Results from student self-assessments illustrate that these simulations were valuable in developing students' affective domain and in increasing their ability to communicate during difficult conversations. Student reflections indicated a decrease in nervousness or hesitancy and growth in both self-awareness and confidence when presented with future difficult patient encounters. Further, students acknowledged the authenticity provided by the actors to simulate real life scenarios that necessitated their use of critical thinking and the affective domain to produce optimal outcome. In summary, methods and results of this pharmacy practice focused study are consistent with previous exhibits in the health sciences literature that purposefully attempt to equip students with the tools necessary to enter practice through modeling and simulation in an academic environment.

This study has some limitations. Student reflections were part of the course curricula and to be read by the faculty; thus, responses may be influenced by social desirability. Summative evaluations were not conducted for students, so gains in skill and/or knowledge could not be measured quantitatively. The preliminary data of student self-efficacy supports the continuation of similar activities but does not necessarily demonstrate student competence or causality. Additionally, self-rating of soft skills does not always predict performance, though the provision of feedback and improvement strategies may support more accurate self-ratings.¹⁸

This simulation is easily transferrable to other institutions. The entire simulation, including acting scripts, facilitator guides, student pharmacist prompts, and patient case artifacts are available for download as article supplements to encourage seamless transferability to all interested readers.

<https://drive.google.com/drive/folders/18HkB08oJeDXfHqJbB0xn1H9ZE138pyr?usp=sharing>

- Article Supplement 1: Didactic modeling cases (ppt)
- Article Supplement 2: Facilitator, actor, and student pharmacist materials for all 12 scenarios

One faculty facilitator is needed along with actors for each station. Out-of-lab grading time is not required as real-time formative feedback is delivered by the actors.

CONCLUSION

This simulation fills a gap in skills-based education, addresses the affective domain of ACPE Standards, transfers easily across schools, and demonstrates significant quantitative and qualitative findings. The results of this study show a statistically significant increase in student confidence to communicate during difficult conversations and suggest student gains in thinking on their feet and developing affective domain skills such as empathy to achieve positive patient outcomes. Student responses highlighted the need for learning activities that help them gauge their own knowledge, skills, and behavioral responses in safe, realistic practice environments. These practice simulations appeared well received by students as they generally increased confidence in future professional practice. Objective changes in student performance were not collected for this research.

Pharmacists face unique challenges in responding to the needs of patients during difficult conversations; however, few pharmacists receive the necessary education, practice, and feedback to develop these skills. It is incumbent on pharmacy faculty to incorporate soft skills training in their curricula. This supports a call to action for pharmacy educators to provide purposeful opportunities for students to practice responding to patients during difficult patient encounters. The authors encourage all laboratory faculty to consider creating a safe environment for students to practice responding in difficult encounters and welcome the collaborative use of all simulation materials created.

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REFERENCES

1. Meyer-Junco L. Empathy and the new practitioner. *Am J Health Syst Pharm*. 2015;72(23):2042, 2046, 2052, 2054, 2056, 2058. doi:10.2146/ajhp150020
2. Allenet B, Lehmann A, Baudrant M, Gauchet A. [We have to stop talking about “non compliant” patients but rather about patients with difficulties of medication adherence]. *Ann Pharm Fr*. 2018;76(6):489-498. doi:10.1016/j.pharma.2018.07.006
3. Communication Skills for Pharmacists: Building Relationships, Improving Patient Care, 3e. Accessed July 26, 2020. <https://ebusiness.pharmacist.com/PersonifyEbusiness/Shop-APhA/Product-Details/productId/115769>
4. Murad MS, Spiers JA, Guirguis LM. Expressing and negotiating face in community pharmacist-patient interactions. *Res Social Adm Pharm*. 2017;13(6):1110-1126. doi:10.1016/j.sapharm.2016.10.003
5. Desirable Skills in New Pharmacists: A Comparison of Opinions From Practitioners and Senior Student Pharmacists - Catherine E. O'Brien, Schwanda K. Flowers, Cindy D. Stowe, 2017. Accessed July 26, 2020. <https://journals.sagepub.com/doi/abs/10.1177/0897190015621804>
6. DeBenedette V. How to Deal with Your Worst Customers. Drug Topics. Published May 16, 2017. Accessed April 27, 2020. <https://www.drugtopics.com/article/how-deal-your-worst-customers>
7. Medina MS, Plaza CM, Stowe CD, et al. Center for the Advancement of Pharmacy Education 2013 educational outcomes. *Am J Pharm Educ*. 2013;77(8):Article 162.
8. Accreditation Council for Pharmacy Education. Guidance for the Accreditation Standards and Key Elements for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree ("Guidance for Standards 2016"). Published February 2015. <https://www.acpe-accredit.org/pdf/GuidanceforStandards2016FINAL.pdf>. Accessed May, 2020.
9. Report of the 2015-2016 Academic Affairs Standing Committee. Accessed April 27, 2020. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5221848/>
10. Marken PA, Zimmerman C, Kennedy C, Schremmer R, Smith KV. Human simulators and standardized patients to teach difficult conversations to interprofessional health care teams. *Am J Pharm Educ*. 2010;74(7):120. doi:10.5688/aj7407120
11. Muzyk AJ, Lentz K, Green C, Fuller S, May DB, Roukema L. Emphasizing bloom's affective domain to reduce pharmacy students' stigmatizing attitudes. *Am J Pharm Educ*. 2017;81(2). doi:10.5688/ajpe81235

12. Cureus | Difficult Patient Encounters: Assessing Pediatric Residents' Communication Skills Training Needs. Accessed July 26, 2020. <https://www.cureus.com/articles/13346-difficult-patient-encounters-assessing-pediatric-residents-communication-skills-training-needs/metrics>
13. Falkenstrom MK. A Qualitative Study of Difficult Nurse-Patient Encounters in Home Health Care. *ANS Adv Nurs Sci.* 2017;40(2):168-183. doi:10.1097/ANS.000000000000156
14. Hsieh H-F, Shannon SE. Three Approaches to Qualitative Content Analysis: *Qualitative Health Research*. Published online July 1, 2016. doi:10.1177/1049732305276687
15. Saldaña J. *The Coding Manual for Qualitative Researchers*. Sage; 2009.
16. Shikino K, Ito S, Ohira Y, Noda K, Asahina M, Ikusaka M. Usefulness of a short training seminar on how to handle difficult patients in simulated education. *Adv Med Educ Pract.* 2019;10:483-491. doi:10.2147/AMEP.S209573
17. Rc W, C W, J D, Dw M. Comparison of dental students' Self-Evaluation and Faculty Evaluation of Communication Skills During a Standardized Patient Exercise. *J Dent Educ.* 2018;82(10):1043-1050. doi:10.21815/jde.018.101
18. Karpen SC. The social psychology of biased self-assessment. *Am J Pharm Educ.* 2018;82(5). doi:10.5688/ajpe6299

AJPE
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[ACTING PATIENT]

Case 10 information
<p>You are coming into Health Mart Pharmacy to pick up some medications for your new foster child.</p> <p>You are IN A HURRY TO LEAVE (look at watch or cell phone frequently, repeat several times that you really need to get going, ask the pharmacist if they can hurry up so you can get home to your family...)</p> <p>Child's Name: Emily Smith</p> <p>Emily's Age: 04/04/20XX</p> <p>The social worker gave you a nebulizer that you brought with you to the pharmacy</p>
Reason you are presenting to the pharmacist: TELL THE PHARMACIST THIS
<p>Hi, I'm picking up for Emily Smith. Her date of birth is 4/4/XX. I think it's for some medications she has to inhale. The social worker had them filled. I have never used any of these products much less this weird nebulizer machine. "</p> <p>I don't have time to listen to all of this. My husband is in the car waiting for me. My neighbor is a veterinarian so I'm sure he can explain them to me."</p>
Answers to questions the pharmacy student may ask you
<p><u>Medications you are picking up:</u></p> <ul style="list-style-type: none"> ○ Albuterol solution to nebulize ○ Budesonide solution to nebulize <p><u>Emily's disease states:</u> asthma</p> <p>I do not know anything about these medications</p> <p>These are all the medications she is on</p>
Questions to ask the pharmacy student about the medications: ASK ALL THESE QUESTIONS
<p>Why do I have to give these to her?</p> <p>Which one do I only give her if she is short of breath?</p> <p>Do these have any side effects?</p> <p>What if she does not have any symptoms? I can just skip her medications that day right?</p> <p>Will I notice these medications working right away? How long will it take for them to work?</p>
Questions to ask the pharmacy student about the nebulizer: ASK ALL THESE QUESTIONS
<p>How do I clean the nebulizer?</p> <p>How do I put together the machine and use it?</p> <p>What do I do if there is still liquid in the cup and she doesn't want to finish it?</p> <p>How will I know when she is done with her treatment?</p>
After activity completion, you will be asked these questions about the pharmacy student:
<p>1. What did the pharmacy student say to make you feel like you wanted to stay and listen to what they wanted to explain to you even though you were trying to leave in a hurry?</p> <p>2. What was the most helpful thing the pharmacy student did or said to help you understand how to use a nebulizer?</p> <p>What was something that confused you after the student described how to use the medications and nebulizer?</p>

[STUDENT PHARMACIST]

Station 10 information
<ul style="list-style-type: none"> ▪ Role: retail pharmacist at Health Mart Pharmacy ▪ Listen to the patient's concerns ▪ Ask the patient any necessary questions ▪ Take time to look over needed references ▪ Counsel on new medications and devices ▪ Answer patient questions

[FACILITATING STUDENT]

Case 10 information
<ul style="list-style-type: none"> ▪ <u>Setting:</u> Health Mart Pharmacy ▪ Pharmacy student will be counseling patient on budesonide solution, albuterol solution, and how to use a nebulize machine. ▪ Answers are provided to you on this sheet, if student is struggling or misguiding the patient, please step in!
Key points about BUDESONIDE
<ul style="list-style-type: none"> ▪ <u>MOA:</u> works as an anti-inflammatory synthetic corticosteroid inhibiting cells of the immune system that mediate inflammation ▪ <u>Side Effects:</u> headache, nose bleeds, increased risk of getting upper respiratory infections ▪ <u>Rinse mouth</u> out with water and spit out after using the medication ▪ This medication should <u>not be used in acute asthma attacks</u> ▪ This is a scheduled medication to decrease the number of asthma attacks, should be used twice daily regardless of patient's symptoms ▪ Monitor the child's growth while on this medication. ▪ <u>Onset:</u> will see results in 2-4 days, full benefit may not be seen for 1-2 weeks
Key points about ALBUTEROL
<ul style="list-style-type: none"> ▪ <u>MOA:</u> short-acting, beta-2 agonist that works to increase cAMP resulting in bronchodilation and inhibition of hypersensitivity mediators from mast cells ▪ <u>Side Effects:</u> tachycardia, nausea, pharyngitis, throat irritation, feeling nervous, headache, cough, and increased risk of upper respiratory infections ▪ <u>Give as needed for shortness of breath</u>, do not give if the patient does not need it ▪ <u>Onset:</u> 5-10 minutes ▪ If difficulty breathing has not resolved within 15 minutes, go to the ER
Nebulizer USE
<ul style="list-style-type: none"> ▪ Refer to provided guide

After activity completion, ask the patient the following questions:

1. What did the pharmacy student say to make you feel like you wanted to stay and listen to what they wanted to explain to you even though you were trying to leave in a hurry?
2. What was the most helpful thing the pharmacy student did or said to help you understand how to use a nebulizer?
3. What was something that confused you after the student described how to use the medications and nebulizer?

Table 1. Difficult Encounters Simulation Description

Difficult Attributes	Case Description	Objective(s)	ACPE Standards and Appendix 1
Patient is angry and resistant to OTC recommendation Setting: Community pharmacy	<ul style="list-style-type: none"> • Patient receives negative strep test • Patient needs recommendation for OTC-treatable cough and cold symptoms • Patient persistently asks for antibiotic, although it's not indicated, saying, <i>"Why can't I just get the Levaquin?!?! I'll pay for it!!!"</i> 	<ul style="list-style-type: none"> • Educate a patient regarding medication appropriateness • Provide information regarding antibiotic resistance while considering health literacy • Recommend appropriate OTC and nonpharmacologic therapies 	Standards 2.1 Patient-Centered Care 3.2 Education 3.6 Communication Appendix 1 Professional Communication Natural Products and Alternative and Complementary Therapies Self-Care Pharmacotherapy
Provider is annoyed and hurried Setting: Hospital pharmacy	<ul style="list-style-type: none"> • Provider prescribed expensive medication not on patient's formulary • Alternatives to therapy are present on formulary with similar efficacy • The distracted provider continues typing notes while pharmacy student is talking, saying <i>"I've got a very busy schedule, I don't have time to deal with your problems right now. I'll give you 30 seconds."</i> 	<ul style="list-style-type: none"> • Review a patient's insurance formulary for cost effective alternatives • Advocate effectively for a patient to a provider • Effectively engage a distracted and resistant provider in considering patient needs • Recommend therapeutic medication alternatives 	Standards 2.1 Patient-Centered Care 3.1 Problem Solving 3.2 Education 3.3 Patient Advocacy 3.4 Interprofessional Collaboration 3.6 Communication 4.4 Professionalism Appendix 1 Professional Communication Pharmacoeconomics
Patient is embarrassed Setting: Community pharmacy	<ul style="list-style-type: none"> • Patient needs OTC recommendation for vaginal yeast infection and vaginal dryness • Patient avoids eye contact, looks down, and consistently ensures others can't hear the conversation • Patient says, <i>"Shh, not so loud! Isn't there a female I can talk to? I have something going on down there."</i> 	<ul style="list-style-type: none"> • Recommend appropriate OTC and nonpharmacologic therapies • Ease patient's concerns of embarrassment while discussing sensitive topic • Portray professionalism and ease while discussing sensitive topic • Offer strategies for privacy when discussing a sensitive topic 	Standards 2.1 Patient-Centered Care 3.6 Communication 4.4 Professionalism Appendix 1 Patient Assessment Self-Care Pharmacotherapy Professional Communication
Patient is scared and worried Setting: Community pharmacy	<ul style="list-style-type: none"> • Patient presents with a partially filled medication bottle, stating that warfarin is a different color than previously received • Patient is scared and worried about how warfarin dose change will affect INR levels and health: <i>"Oh no! So, I've been taking a different strength for 5 days? What will that do to my blood?"</i> 	<ul style="list-style-type: none"> • Investigate a potential medication dispensing error • Clearly communicate medication error with a concerned patient and allay patient's fears • Acknowledge, not blame, and apologize for medication error • Discuss with patient continuous quality improvement measures to prevent errors in the future 	Standards 3.1 Problem Solving 3.2 Education 3.6 Communication 4.4 Professionalism Appendix 1 Medication Dispensing, Distribution and Administration Patient Safety
Caregiver is sad and overwhelmed Setting: Hospital, discharge	<ul style="list-style-type: none"> • Discharge consultation to caregiver for patient who was just placed on hospice • Discussion of haloperidol and morphine indications for end of life care • Caregiver says, <i>"She had such a great life. I can't believe that it is coming to an end. There's all these new medications and I</i> 	<ul style="list-style-type: none"> • Acknowledge and offer emotional support for end of life concerns • Acknowledge and confidently discuss end of life concerns • Provide support resources for end of life care • Ease concerns by providing education on medications for end of life care 	Standards 2.1 Patient-Centered Care 3.2 Education 3.3 Patient Advocacy 3.6 Communication 4.4. Professionalism Appendix 1 Medication Dispensing, Distribution and Administration

	<i>don't know what they are for. I thought hospice was supposed to help!"</i>		Professional Communication Ethics
Caregiver does not speak English and has cultural concerns for implications of plan of care Setting: Hospital, discharge	<ul style="list-style-type: none"> ● Patient needs consultation on antibiotic suspension and OTC antipyretic prior to discharge ● Caregiver of pediatric patient receives consultation with translator present ● Caregiver is concerned about cultural implications, stating <i>"Does the amoxicillin suspension contain gelatin? Because of our religious beliefs we do not eat any pork-containing products."</i> 	<ul style="list-style-type: none"> ● Communicate effectively with the use of a translator ● Acknowledge and address cultural concerns ● Determine active and inactive ingredients of medications are in line with cultural needs ● Assess understanding through teach-back techniques 	Standards 2.1 Patient-Centered Care 3.1 Problem Solving 3.2 Education 3.5 Cultural Sensitivity 3.6 Communication 4.3 Innovation and entrepreneurship 4.4. Professionalism Appendix 1 Pharmaceutics/Biopharmaceutics Cultural Awareness Professional Communication Medication Dispensing, Distribution and Administration Self-Care Pharmacotherapy
Patient prefers natural products only Setting: Community pharmacy	<ul style="list-style-type: none"> ● Patient needs OTC recommendation for motion sickness and insomnia ● Patient is resistant to any products that aren't "natural," saying, <i>"I hate it when people try to get me to take anything that is not a natural product. Herbs, in my opinion, are the only way to go."</i> 	<ul style="list-style-type: none"> ● Discuss effectiveness of natural products while acknowledging patient's preferences and beliefs ● Recommend appropriate natural products ● Offer appropriate nonpharmacologic recommendations 	Standards 2.1 Patient-Centered Care 3.1 Problem Solving 3.2 Education 3.6 Communication 4.4 Professionalism Appendix 1 Professional Communication Natural Products and Alternative and Complementary Therapies Self-Care Pharmacotherapy
Patient is frustrated and doubtful of provider's plan of care Setting: Community pharmacy	<ul style="list-style-type: none"> ● Five-day post-op patient complains of severe constipation following use of an opioid ● Patient is resistant to taking more medications, saying, <i>"Every time I go to the doctor they just put me on more medications that just give me more side effects than they are worth. Now I can't even go to the bathroom!"</i> 	<ul style="list-style-type: none"> ● To assess appropriate pain management ● To recommend appropriate OTC and nonpharmacologic therapies ● To mitigate a patient's concerns about a provider's plan of care 	Standards 2.1 Patient-Centered Care 3.1 Problem Solving 3.2 Education 3.3 Patient advocacy 3.6 Communication 4.4 Professionalism Appendix 1 Pathology/Pathophysiology Pharmacotherapy Professional Communication Self-Care Pharmacotherapy
Caregiver is stressed and overwhelmed Setting: Community pharmacy	<ul style="list-style-type: none"> ● Caregiver to provide home care of elderly mother-in-law ● Patient has complex medication regimen, including varied dosing of methotrexate and Humira injections ● Caregiver has 3 children at home to care for and is pregnant, saying, <i>"How am I going to have another child and take care of my mother-in-law with all of these medications!?!?"</i> 	<ul style="list-style-type: none"> ● To provide appropriate recommendations for medication adherence solutions ● To provide teaching on medication administration techniques ● To make suggestions for simplifying plan of care and strategies for obtaining support from others 	Standards 2.1 Patient-Centered Care 2.2 Medication use systems management 3.1 Problem Solving 3.2 Education 3.3 Patient advocacy 3.6 Communication 4.4 Professionalism Appendix 1 Professional Communication Medication Dispensing, Distribution and Administration

Caregiver is hurried, distracted, and overly confident in understanding of medication delivery	<ul style="list-style-type: none"> ● New foster parent picks up foster child's QID nebulizer medications and has never used a nebulizer ● Caregiver distracted by cell phone ringing frequently during education session ● Foster parent says, <i>"I don't have time to listen to all of this. My husband is in the car waiting for me. My neighbor is a veterinarian and I'm sure he can explain it to me."</i> 	<ul style="list-style-type: none"> ● To provide comprehensive consultation on the use of nebulizer and medications ● To engage distracted caregiver in teaching topic ● To redirect attention away from personal cell phone, explaining implications on HIPAA ● To provide alternatives for teaching time 	Standards 2.1 Patient-Centered Care 2.3 Health and Wellness 3.1 Problem Solving 3.2 Education 3.3 Patient advocacy 3.6 Communication 4.4 Professionalism Appendix 1 Ethics Professional Communication Medication Dispensing, Distribution and Administration Patient Safety
Patient is confused	<ul style="list-style-type: none"> ● Patient receiving multiple new medications upon discharge ● Taper up and taper down dosage regimen for new medications ● Patient says, <i>"This is all so much to keep track of. Prednisone, Chantix, Zpak – they all have so many changing directions. I don't understand what to take when. I can't do it."</i> 	<ul style="list-style-type: none"> ● To provide complete consultation on taper up and taper down dosing regimens ● To provide supportive tools for medication adherence ● To ensure patient understanding with teach-back technique 	Standards 2.1 Patient-Centered Care 3.6 Communication 4.4 Professionalism Appendix 1 Medication Dispensing, Distribution and Administration Patient Safety
Patient is in pain and worried	<ul style="list-style-type: none"> ● Patient being admitted from ED to hospital ● Patient in severe pain and worried about being admitted to the hospital ● Patient says, <i>"I'm worried about being in the hospital. My friend got an infection just from being here!"</i> 	<ul style="list-style-type: none"> ● To perform medication reconciliation ● To respond to patient with early empathy, addressing pain concerns prior to other tasks ● To discuss risk-benefit of hospital admission with patient 	Standards 3.1 Problem Solving 3.2 Education 3.6 Communication 4.4 Professionalism Appendix 1 Patient Assessment
ACPE: Accreditation Council for Pharmacy Education OTC: Over-The-Counter HIPAA: Health Insurance Portability and Accountability Act			

Table 2. Qualitative Themes and Associated Illustrative Quotes

Themes	Illustrative Quotes
Internal Responses: Attitudes, Feelings, and Emotions	
Experiencing Discomfort	
Nervous	I was nervous before going into this lab, but I surprised myself by being able to deal with difficult situations in an empathetic and effective way. (Fall 2019, Participant 76)
Thrown off/flustered	I was mostly surprised how easily I was thrown off by a patient on the phone. I couldn't get through my needed materials and it made me become all over and lose track of my thoughts. (Fall 2019, Participant 26) I was most surprised how flustered I feel [sic] and how I often forget to say important information. My mind starts going a million miles a minute trying to process what they are saying while making sure I am saying appropriate information regarding the drug. (Spring 2019, Participant 70)
Experiencing Growth	
Remaining calm	I am proud of how well I was able to stay calm in all situations, or seem calm. (Fall 2019, Participant 26) I learned how important it is to take a deep breath and address the patient directly, in order to continue on and give the best patient care possible. (Fall 2019, Participant 47)
Listening and empathizing	I was extremely proud of myself being able to empathize in a way that made my patients feel comfortable talking to me and taking my advice. (Fall 2019, Participant 24) It is reassuring to know that there is no perfect way to deal with these sorts of situations but instead it is just important to face them with as much empathy, understanding, patience, and knowledge as possible. (Spring 2018, Participant 55)
Think on my feet	The situations really make you think on your feet and adapt to the scenario as it changes and based on what concerns the patient has. (Fall 2019, Participant 45) It was surprising to me how many questions some people have, but it taught me to think on my feet or ask for a minute while I look something up. (Fall 2019, Participant 9)
Adaptability	The situations really make you think on your feet and adapt to the scenario as it changes and based on what concerns the patient has. [...] Going forward, I think that I have more tools to help reassure patients of their concerns before talking about their medications to ensure the most helpful experience with them. (Fall 2019, Participant 45)
Gauging knowledge, skills, and behaviors	Throughout the difficult conversations lab, I was most surprised by how I was able to put the information that we have learned over the years into knowledge that I could easily explain to the patients. (Fall 2019, Participant 32) I realized I need to ask more questions. The patient may think they are telling me what they need, but I need to find out everything in order to give them the best advice. (Spring 2019, Participant 25)
Lacking experience	I don't [sic] have any background with working with patients [...] I found this practice to help me with difficult situations I will encounter in future practice. I liked the challenge of trying to explain the importance of the medications to patients. I still have a lot of learning to do, but I am proud of how I handled myself with no prior experience. (Fall 2019, Participant 60)
Increased confidence	I was most surprised at what knowledge came back to me when we were forced to counsel on certain topics. It gave me a confidence boost to think that I am retaining information we learned in previous coursework. (Fall 2019, Participant 60)
External Experiences	
Critiquing the Activity	
Positive perception	I believe that this activity in lab was extremely beneficial for practicing patient communication skills in a real-world setting. (Fall 2019, Participant 3) I was surprised by the complexity of some of the scenarios, but was very happy that they required more thinking and soft skills. (Spring 2019, Participant 69)
Realism	I enjoyed the experiences [sic] of talking to "real" patients. It is one thing to counsel each other, but it is completely different counseling someone who doesn't know anything about medications. It was also nice to be in scenarios that may happen in real life. (Spring 2018, Participant 22)
Safe learning environment	This lab was very valuable as it gave us real life situations that we got to practice in a safe environment to learn how to provide the best care to patients. (Fall 2019, Participant 50)

Relevance to future practice	<p>I enjoyed being able to practice situations like these, and I think it has better prepared me for situations in my future practice. (Spring 2019, Participant 21)</p> <p>We were able to work at our own pace, have a variety of situations, and were confronted with unpredictable but realistic circumstances that we could encounter in the workforce. (Spring 2018, Participant 27)</p>
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