



Using Telehealth Technology as a Practical Strategy to Implement and Enhance Interprofessional Case Study Simulations

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Objectives

1. Discuss the development of interprofessional telehealth activities to engage pharmacy and other health care professional students across multiple learner levels.
2. Examine ways to integrate interprofessional telehealth activities into a school's didactic curriculum.



Institute of Medicine

- The Institute of Medicine reports that interprofessional education (IPE) is an essential component to improve communication between healthcare professionals, increase patient safety, and optimize patient care^{1,2}



IPE in the Curriculum

- Embedding IPE in the didactic and experiential portions of the curriculum models desired behaviors
- Repeated exposures facilitate collaboration among developing clinical teams and improve the quality of communication between future practitioners



Barriers to Implementation

- Psychosocial
- Cultural
- Logistical
- Structural

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Our School

- Private, Jesuit university
- Four-year doctor of pharmacy degree
- Campus and distance program
- Teaching hospital with other health care programs



Partnering with a Nearby Program

- Physician Assistant program
- Compared course content between both schools
- Compared schedules to find windows of time
- Determined goals and learning objectives for each school
- Designed cases
- Utilized a technology platform that both schools could use



Virtual Rooms

- Both schools could use WebEx platform
- Selected several dates and times to “pilot” case studies
- Took brief time out of class to have students log onto the system
- Recruited faculty to moderate virtual room



Cases

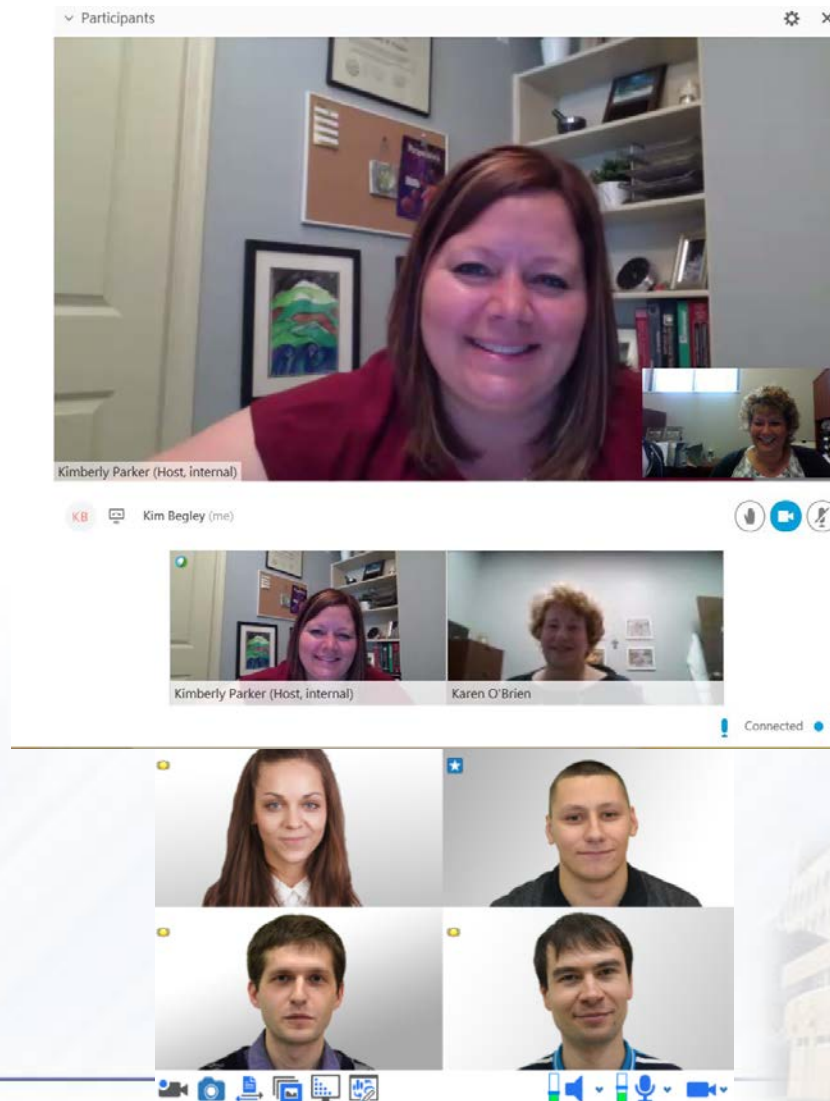
- Both pharmacy and physician assistant students had previously learned about the medical conditions detailed in the cases
- Developed multiple cases, so that students could not pass information to successive teams
- Developed cases applicable to each level of learner
- Created patient complexities for third year students



Scheduling

Kim Room 1 Case 1	Shana Room 2 Case 2	Kelli Room 3 Case 3	Kalin Room 4 Case 4	Katie Room 5 Case 5	Karen Room 6 Case 6	Amy Room 7 Case 7	Ann Room 8 Case 8
10:00-10:20 RX - Jack PA - Susan	10:00-10:20 RX - Allen PA - Rebecca	10:00-10:20 RX - Eric PA - Christine	10:00-10:20 RX - Alexis PA - Jenna	10:00-10:20 RX - Taylor PA - Dustin	10:00-10:20 RX - Mary PA - Anne	10:00-10:20 RX - Daniel PA - Margaret	10:00-10:20 RX - Carl PA - Spencer
10:20-10:40 RX - Thy PA - Mark	10:20-10:40 RX - Brooke PA - Brittany	10:20-10:40 RX - Courtney PA - Chad	10:20-10:40 RX - Kenneth PA - David	10:20-10:40 RX - Madeline PA - Addison	10:20-10:40 RX - Cara PA - Amber	10:20-10:40 RX - Lennia PA - Chase	10:20-10:40 RX - Robert PA - Edward
10:40-11:00 RX - Austin PA - Hannah	10:40-11:00 RX - Danikah PA - Bryce	10:40-11:00 RX - Muhammad PA - Stacey	10:40-11:00 RX - Thien PA - Bailey	10:40-11:00 RX - Linh PA - Marian	10:40-11:00 RX - Morgan PA - Brian	10:40-11:00 RX - Kelsey PA - Amanda	10:40-11:00 RX - Shannon PA - Aaron
11:00-11:20 RX - Alex PA - Katherine	11:00-11:20 RX - Josie PA - Thomas	11:00-11:20 RX - Olivia PA - Emma	11:00-11:20 RX - Charles PA - Ashley	11:00-11:20 RX - Krista PA - Craig	11:00-11:20 RX - Kierstyn PA - James	11:00-11:20 RX - Samantha PA - Derek	11:00-11:20 RX - Melanie PA - Jason
11:20-11:40 RX - Julia PA - Jennifer	11:20-11:40 RX - Rachel PA - Matthew	11:20-11:40 RX - Dylan PA - Cody	11:20-11:40 RX - Doug PA - Monica	11:20-11:40 RX - Angela PA - Laura	11:20-11:40 RX - Allison PA - Mikayla	11:20-11:40 RX - Emily PA - William	11:20-11:40 RX - Jon PA - Jeremy

Videoconferencing



Assessment

- Clinical knowledge
 - Feedback
- Interprofessional communication
 - Creighton Interprofessional Collaborative Evaluation (C-ICE) assessment tool
 - All sessions were recorded



Team Skills Scale

- One hundred sixty-two students completed both the pre- and post-TSS survey (94% response rate).
- Mean pre- and post- scores were compared using paired student's t tests. Mean total TSS scores significantly improved, pre- 62.3 ± 8.4 and post- 72.6 ± 5.8 , $p < 0.001$.



Team Skills Scale

	Completed Surveys	Mean Total Score Pre-Case	Mean Total Score Post-Case	<i>p</i>
Session 1	n = 40	60.5 \pm 10.3	70.3 \pm 6.6	p<0.001
Session 2	n = 42	61.4 \pm 9.6	72.1 \pm 5.9	p<0.001
Session 3	n = 42	63.1 \pm 7.2	73.2 \pm 5.5	p<0.001
Session 4	n = 38	64.8 \pm 4.8	75.2 \pm 3.9	p<0.001

Format Preference

If you would like to participate in a future interprofessional activity, what format for team interactions would you prefer?

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	Live	Telehealth	Telephonic
Pre-Survey	64 (52%)	40 (33%)	18 (15%)
Post-Survey	50 (41%)	65 (53%)	7 (6%)

Future Sessions

Would you be interested in participating in an interprofessional activity in the future?

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	Yes	No	Unsure
Pre-Survey	46 (38%)	10 (8%)	66 (54%)
Post-Survey	110 (90%)	4 (3%)	8 (7%)

Reflection

- *I loved working with PA students and being there as a team member as they thought through a diagnosis and what treatment they would use for the patient. I was surprised at how much I knew. It was a great learning experience and a confidence booster. I am able to help with other cases, so please contact me if you need volunteers.*
- *All I can say is “why haven’t we done these every year?” I was worried about participating and found out it wasn’t as bad as I thought. I felt like we were there as a team to help each other out. I think this made the experience worth doing. If all health care practitioners worked together like this, what a benefit it would be to our patients.*
- *I loved participating in this! I think the idea of interdisciplinary activities like these is great preparation for all involved, and gives good practice with real life situations. Seeing how different disciplines think about the case was interesting. These activities were beneficial and should be in all years of the curriculum.*

Lessons Learned

- Time for individual sessions
- Number of cases/Order of cases
- Recording each session
- Feedback from students
- Grading versus ungraded pilot
- Practice sessions
- Incorporating a “patient” in the cases



Future Plans

- Expansion to other healthcare partners
- Offer multiple sessions during the semester (including practice sessions)
- Addition of ethical dilemmas into the cases
- Partnering with programs in other states



Incorporation in Your Program

- Easily implemented
 - Reach out to find a partner who will work with you
 - Make sure each objective is being met
 - Commercially available product that each school can use



References

1. Institute of Medicine. To Err Is Human: Building a Safer Health System. Washington, DC: National Academies Press; 2000.
2. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academies Press; 2001.



Questions?

