



PROGRAMME DESCRIPTION

Simulated cases to improve “real-life” communication between physician assistants and pharmacy students

Emily Weidman-Evans¹, Ashley Barbo², Roxie Stewart², Ashley Fort¹

¹LSUHS-Shreveport School of Allied Health Physician Assistant Program, Louisiana, United States

²University of Louisiana Monroe College of Pharmacy, Louisiana, United States

Keywords

Communication
Interprofessional education
Pharmacy
Physician assistant
Simulation

Correspondence

Emily Weidman-Evans
LSUHS-Shreveport School of Allied
Health Physician Assistant Program
Louisiana
United States
Emily.weidmanevans@lsuhs.edu

Abstract

Introduction: It is important to construct interprofessional education activities that simulate realistic practice, even if students are in different physical locations. This manuscript outlines an effort to provide an activity in which physician assistants and pharmacy students carry out a case-based simulation via telecommunication in their final didactic semester. **Programme description:** Both professions were tasked with providing optimal care to patients during a busy workday of managing multiple patients simultaneously. **Evaluation:** Instructional objectives were assessed through a follow-up quiz on the other’s profession, reflection questions, and appropriate documentation for each profession. Student perceptions of communication methods and the other profession were collected via an optional survey. **Future plan:** Based on overall responsiveness to the activity, this type of simulation is effective for providing interprofessional education while overcoming the common barriers of physical location and space.

Introduction

The positive effects of teamwork on performance, such as better patient outcomes, have been shown in both qualitative and quantitative studies (Rosen 2018; Schmitz 2019). This underpins the importance of team-based education for students in healthcare professions. In addition, elements of interprofessional teamwork and collaboration have become requirements for accreditation for most healthcare professions programmes, including the Accreditation Council on Pharmacy Education (ACPE) (2016), the Accreditation Review Committee on Education of the Physician Assistant (ARC-PA) (2019), the Council on Collegiate Nursing Education (CCNE) (2018), and the Liaison Committee on Medical Education (LCME) (2020). To help prepare future health professionals for enhanced team-based care of patients and improved population health outcomes, the Interprofessional Education Collaborative (IPEC) (2016) developed shared educational outcomes that revolve around four core

competencies: Values/ethics for interprofessional practice; Roles/responsibilities; Interprofessional communication; and Teams and teamwork. Many healthcare professions programmes have adopted these interprofessional education (IPE) outcomes to meet curricular and accreditation standards.

The World Health Organization defined IPE in 2010 as that which occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes. While IPE has invaluable benefits, implementation has included barriers such as the lack of other professional healthcare programmes on campus, as well as limited space and time (Lash 2014; Brewer 2017). Furthermore, since many professional interactions do not take place in person, it is potentially setting the wrong expectations for students if all IPE activities involve face-to-face communication. This point is very well demonstrated when a community pharmacist is to be involved in patient care, as they are

rarely in the same physical location as other members of the healthcare team.

This manuscript describes a case-based simulation activity that involved pharmacy and physician assistant (PA) students at two separate institutions. According to the United States definition of PA, a physician assistant is “a person trained to perform under the supervision of a physician many clinical procedures traditionally performed by a physician, as diagnosing and treating minor ailments.” Per the American Academy of Physician Assistants, PAs’ scope of practice depends on state laws, area of speciality, and level of experience. (American Association of Physician Assistants, 2022). However, they generally can do nearly all of what a physician does, from taking the medical history to developing a treatment plan. They can prescribe medication, perform procedures, assist in surgery, and provide patient education. The profession started in the United States but is expanding. There are many countries worldwide where this job is evolving. (Pasquini, 2022).

Neither of the institutions involved in the described IPE activity offers the other healthcare programme on its own campus, but establishing the roles of each profession on the healthcare team is imperative. Since the traditional method of communication between these two professions is usually via telecommunications, the authors felt that this hurdle only added to the realism of the activity. Each profession completed the activity on their respective campus, communicating through the use of student cell phones. The primary purposes of the IPE activity to be described focused on roles and responsibilities and communication. The instructional objectives were: 1) Compare and contrast the roles of the PA and the community pharmacist in the care of a patient with the assigned condition; 2) Appropriately manage a patient presenting with the assigned condition(s) within the purview of one’s own discipline, including appropriate usage of opioids; and 3) Appropriately, clearly, and respectfully communicate with other disciplines regarding the care that is being provided.

There have been several IPE reports involving physician assistants and pharmacy students (Gallagher 2010, Schwartz 2014; Kimberly 2019, Mazurka 2019, Mitchell 2020). All of these reports involve the roles and responsibilities of the professions and/or face-to-face clinical scenarios where students worked through cases together. To the knowledge of these authors, none have reported on the use of telecommunications to mimic scenarios involving off-site community pharmacists.

Description of programme

This IPE activity was offered in February 2020, during each profession’s final didactic semester before beginning clinical rotations. It was part of the PA students’ Pharmacology course and the sixth semester of the pharmacy students’ Integrated Lab Sequence. Students from each profession were divided across two days (Tuesday and Thursday of the same week). Each section contained nineteen PA students and forty-two or forty-one pharmacy students, respectively. Groups were randomly assigned. Due to differences in cohort sizes, one PA student was paired with two to three pharmacy students.

While the two institutions involved in this activity had a previously established relationship, the fact that they both value IPE is evidenced by the existence of an active IPE committee (PA Programme) and an IPE Director (Pharmacy Programme). Others who may want to emulate this activity could start by identifying programmes that have similar indicators of the value they put on IPE and then reaching out to the appropriate person.

Preparation for the activity

Prior to the activity, students from both disciplines shared their cell phone numbers with the faculty. The students were given their respective partner(s)’ cell phone numbers on the day of the activity. Pharmacy students were given pre-reading assignments that included Centers for Disease Control (CDC) opioid prescribing guidelines, prescription monitoring programme (PMP) information, and reviewed the SBAR (situation, background, assessment, recommendation) method of communication instructions. Physician assistant students had just completed their pain management module the previous week, which included appropriate prescribing of opioids and PMP information, and have regular assessments of their communication with other providers and with patients. Students from both professions were required to view a pre-recorded video related to the roles and responsibilities of the other profession. Instructions for the activity were distributed to students to review prior to coming to class (Appendix A).

PA student activities

At 9:00 am, the “clinic” opened, and PA students were given the medical chart for their first patient (Patient A). They were instructed to begin caring for this patient, including e-prescribing appropriate medication(s) for pain management by texting an image of their prescriptions to their pharmacy student partners. They then educated a simulated patient (a classmate) about

important post-op information, such as recovery time and activities, physical therapy, and emergency situations, including when to contact the provider. After completion of these steps, PA students were to continue working in the “clinic”, performing musculoskeletal and neuro exams on their simulated patient, which were observed by two PA faculty members.

When necessary, students were to stop clinic work in order to communicate with the pharmacist by phone. These communications involved a potential drug-drug interaction from their first patient of the day (Patient A), as well as problems related to a prescription written the previous night by a colleague for Patient B. The PA students were required to request the medical chart for this second patient from a faculty member so they could review the information and work with the pharmacist to resolve it.

Pharmacy student activities

Pharmacy students arrived in the lab at 8:00 am, at which time they were given the instructions that they would play the role of a pharmacist in a community retail pharmacy for the duration of the morning. Working in pairs or groups of three, they were given medication profiles for both pharmacy cases to begin entering into their laboratory dispensing system (PioneerRx), as well as a prescription for Patient B, which was written last night and needed follow-up with the prescriber due to inappropriate dosing and quantity. In order to minimise “downtime”, pharmacy students were also given a pharmaceutical calculations worksheet to complete while waiting on the physician assistant “office” to open at 9 am. Very soon, they also received an “e-prescribed” (via text message of an image) prescription for Patient A, that needed attention due to a possible severe drug interaction.

Pharmacy students worked in groups to complete both cases but were instructed that one student would take the lead on each. The student who was lead for each case bore the responsibility to contact their assigned PA student to communicate any necessary information needed to fill safe, effective, and legal prescriptions for their respective patients. After filling the prescriptions, all pharmacy students counselled their patients, played by fourth-year pharmacy students on an academic rotation.

Both professions’ activities

For each case, the PA and pharmacy students were only given the information that they would normally have in their practice settings. Thus, each had information that the other might not that could impact their decisions

and/or actions. Both professions had access to simulated prescription monitoring programme data but had to request it from faculty members to simulate looking it up. As a team, the PA and pharmacy students were to determine the best alternatives or corrections that needed to be made, as well as discuss important education points for the pharmacy students to go over with the patient. The PA student was to communicate any corrections needed, either verbally or by transmitting a new prescription if legally required. The nature of this activity allowed for the “real-world” feel, as the work for each case began to overlap with the other case. Students were expected to handle both cases simultaneously and to document them appropriately.

Student assessment

Student assessment was completed for each profession by their respective faculty. Activities included in student assessment for both professions were the IPE quiz (based on pre-recorded videos about the other profession), reflection questions (Appendix B; rubric available in Appendix A—Instructions for students), and profession-specific documentation of patient care. Physician assistant students were also assessed on their successful completion of peer evaluations of professionalism (included in Appendix A—Instructions for students). Scores from peers were not included in grades due to potential variability. PA students were awarded a pass or fail grade for the IPE activity based upon whether they earned at least 80% of the points available on all assessment activities. Pharmacy students were also assessed on whether they accessed the PMP document but were not assessed on completion of the peer evaluations since not all pharmacy students were able to directly communicate with a PA student due to group configurations. However, all who communicated with a PA student were required to complete the peer evaluation.

Evaluation

The effectiveness of the activity was evaluated based on students’ responses to the required reflections and an optional survey that was developed by the faculty (Appendix B). The survey included questions related to student perceptions of attainment of learning objectives, as well as strengths and suggestions for improvement. It is important to note that, because this was not originally a research project, responses to the survey were not blinded; therefore, students may not have been as forthcoming in any negative perceptions about the activity. Overall, there were 83 pharmacy

students and 38 PA students involved in the activity. The presentation and/or publication of the deidentified, composite results of the required reflections and optional survey was approved by both institutions’ Institutional Review Boards (STUDY00001598 and ID#1092-2021, respectively).

Required reflections (Appendix B)

The responses of the PA and pharmacy students were compared for two reflective questions using Chi-squared tests (Microsoft Excel 2019), based on whether they perceived the communication to be efficient or not and if they reported a change in perception or not. Since the activity was not initially developed as a research project, no a priori sample size was calculated. However, a post hoc power analysis based on a medium effect size showed a power of 85% to detect a difference between the proportion of PA and pharmacy students’ responses (Faul 2007).

Reflection 1 (communication)

As shown in Table I, the majority (91; 75.2%) of students felt that the methods of communication demonstrated in this activity (simulated e-prescribing

and telephone) were efficient. There was no statistical difference between pharmacy and PA students related to the perception of the efficiency of communication. All responses to the second part of Reflection 1, related to perceived barriers to communication, were grouped by the authors according to overarching themes. Table I shows all comment themes that were included by at least 10% of either or both cohorts, which is the arbitrary benchmark used in the PA programme in all assessment practices. There was no statistical difference between the two professions related to these perceived barriers.

The barriers included were similar across professions and were all in keeping with those seen in practice. While the authors agree that there are benefits to holding “in-person”, face-to-face IPE events, the authors also felt it was vitally important to ensure the students in this profession get practice in the most common means of communication and collaboration that they will be using. The majority of current pharmacy school graduates will go to work in a community setting (United States Department of Labor); therefore, ensuring that appropriate communication can occur from this set with others on the healthcare team is imperative.

Table I: Responses and comment themes* for Reflection 1 (communication)

	Pharmacy (n=83)	Physician assistant (n=38)
Efficiency		
Yes, efficient	61 (73.5%)	30 (79%)
Somewhat efficient	20 (24.1%)	7 (18.4%)
Not efficient	2 (2.4%)	1 (2.6%)
Barriers		
Too busy	16 (13.2%)	14 (36.8%)
Not having all information	11 (9.1%)	4 (10.5%)
Miscommunication (inc. distractions, typos, bad handwriting, hard-to-understand)	14 (11.6%)	14 (36.8%)
Not “face-to-face”	11 (9.1%)	4 (10.5%)
Bad connection/reception	9 (7.4%)	10 (26.3%)

*Themes defined as those included by >10% of either or both cohorts

Reflection 2 (roles and responsibilities)

Table II shows the change in perceptions of the roles and responsibilities of the other profession after the activity. There was a statistically significant difference between this change, with PA students more likely to have changed their perception ($X^2(2, N=121)=10.883, p=0.001$). The authors inferred that this is most likely due to the fact that many do not see the role pharmacists have “behind the scenes” in communicating with other healthcare providers. In addition, those PA students with healthcare experience were most likely to have been in a supportive role, such

as medical scribes, medical assistants, or nursing assistants. Therefore, they would not necessarily have interacted with pharmacists significantly. Likewise, it is not surprising that pharmacy students were less likely to have a change in perceptions of PA students, as these students had already completed their Introductory Pharmacy Practice Experiences, meaning that they had worked in both a community and hospital pharmacy as part of their curriculum, and were likely to have interacted with many types of providers.

Of those who reported a change in perception of the other profession (43.8%), all changes were positive in

nature, based on the supporting comments. All changes expressed by both professions could be classified as the other profession either having a larger role in healthcare that was previously perceived or being more willing to communicate about shared patients. Of those

who reported no change in perception of the other profession (56.2%), all stated this was due to prior work experience or interaction with the profession; the second most common reason was a relationship with someone in that profession.

Table II: Responses and comment themes* for Reflection 2 (roles & responsibilities)

Changes in perception	Pharmacy (n=83)	Physician assistant (n=38)
There are changes in perception	28 (33.7%)	25 (65.8%)
More expansive role(s) than previously known	18 (64.3%)	20 (80%)
Willingness to communicate	10 (35.7%)	5 (20%)
There are no changes in perception	55 (66.2%)	13 (34.2%)
Prior professional experience	45 (81.2%)	13 (100%)
Relationship with someone in the profession	10 (18.2%)	0

*Themes defined as those included by >10% of either or both cohorts

Responses to the optional survey (Appendix B)

One hundred and fourteen (94.2%) students completed the optional faculty-developed survey after their reflections. Of these, all felt that the three objectives were either "achieved" or "achieved well". There were 44 comments regarding the strengths of the activity. Some representative comments from each profession

are included in Table III. The most commonly cited was the activity's realistic nature (17; 38.6%). Students also felt the communications/interactions went well (15; 34.1%) and that it was good practice, either in working through cases or working on the pharmacy platform (for pharmacy students) (7; 15.9%). Comments included words like "chaos", "multitasking", "disruptions", and "bumps" among the strengths.

Table III: Student comments regarding the activity

Pharmacy students	PA students
Strengths	
I think that the phone call portion of the activity was very realistic to how pharmacy is practiced in real life, and how misunderstandings can occur over the phone as well.	I think the communication over the phone was great. Being that we are all students with little to no experience talking about prescriptions over the phone, I would say that this aspect was surprisingly painless.
I liked that I got to experience what it will actually go on when I am a pharmacist when I need to contact a provider about a patient's medications.	This was perfect; the disruptions were very real-life like, the pharm students were so patient with us, and I learned to go ahead and put meds through interaction checker beforehand so pharmacy does not have to keep calling back!
The adjusting the medications based on the pharmacist recommendation and the PA implementing that--it helped because it allowed us to relieve some of their pressure while also optimizing patient care	I liked that there was a built in mistake that needed to be changed in order to make us use critical thinking
Suggestions for improvement	
Maybe a written document with instructions and details would help to give an overview of what is expected from the lab.	A short briefing beforehand of how the entire shebang should go would be nice.
It would be beneficial to do this activity as a team based exercise in person to get some experience interacting with them before having to do it over the phone.	I think it would have been cool to also have an activity where we communicated in person.
Maybe have a "doctor line" phone for in the lab. Me & my partner's phone kept dropping the calls.	If anything try to ensure better cell service or that the students will/can take each others phone calls (but that is out of your control).

There were 26 "suggestions for improvement" left by the students. Those that were left by three or more students (representing at least 10% of all suggestions)

include 1) More detailed or clear instructions (9; 34.6%); 2) More face-to-face (5; 19.2%); 3) Improved cell service in the building (5; 19.2%). The most

common suggestion, requesting more clear and detailed instructions, can be addressed by faculty on future iterations of the activity; however, the authors feel that part of the realism of this activity is the “chaos” to which more than one student referred to as a strength. Therefore, the authors will have to find a balance between giving students clear direction without guiding them to the “right” answers.

The suggestion that this activity should take place “face-to-face” is addressed above; it was the authors’ express intention to design an activity that was not in-person, to simulate a real-life interaction. Lastly, the logistical suggestion of ensuring that there is good phone reception is one that can be easily addressed by instructing students to step out of their lab, or even the building, if they are not able to communicate effectively from within. In addition, the faculty can collect and share cell phone numbers earlier in the process and require students to send “test texts” to minimise communication issues.

Future plans

This activity was designed to allow for interprofessional education with physician assistants and pharmacy students, so the cases that were used were developed by faculty to focus on their respective roles in patient care. However, the underlying premise—participation in cases that simulate the real-life interactions when healthcare professionals are not in close physical proximity to each other—can be applied using any number of case-based approaches. The authors plan to include additional allied health professions in future iterations of this activity. It would be ideal to have a one-to-one ratio between the participants so that every student gets an opportunity for meaningful interaction. In the future, there are several possible ways to increase the number of prescribers and even out the groups: second-year PA students could take part; medical or nurse practitioner students could be invited from other institutions; or additional cases could be developed, allowing PA students to participate in two days’ of IPE activities, being paired with a different pharmacy student each day.

Limitations

As stated previously, research was not the primary goal of this activity. Therefore, there are several components reported in this manuscript that could be considered weaknesses of a study. There were many data points that would have been useful for analysis, including previous healthcare experience of the students and perceptions of the other profession prior

to starting the activity. Data analysis was not particularly robust, considering the methods of data collection, and qualitative cutoffs for comment themes were randomly chosen by faculty. The survey tool was developed by faculty for quality improvement of the activity and, thus, was not validated. Lastly, this report only includes the results from one cohort of participants, with each profession representing only one institution. Therefore, the generalisability of the results to other programmes is not established.

Conclusion

This simulation IPE activity was perceived by students as both realistic and effective while overcoming some of the known barriers of IPE, such as space and distance between the professions. There were several lessons learned for the next iteration of the activity. An activity such as this could be undertaken by many different healthcare professionals who do not regularly find themselves in close physical proximity, which could improve preparation for “real world” clinical practice.

References

- Accreditation Council for Pharmacy Education (ACPE). (2016). Standard 11: Interprofessional Education (IPE). Accreditation standards and key elements for the professional program in pharmacy leading to the Doctor of Pharmacy degree. Retrieved February 8, 2022, from <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>
- Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). (2019, September). Section B.2: Didactic Instruction. Accreditation Standards for Physician Assistant Education. 5th ed. Accreditation Standards for Physician Assistant Education. 5th ed. Retrieved February 8, 2022, from <http://www.arc-pa.org/accreditation/standards-of-accreditation>
- American Academy of Physician Assistants (AAPA) (2022). What Is a PA? Retrieved May 17, 2022, Available at: https://www.aapa.org/what-is-a-pa/#accordion_panel--2--what-is-a-pa
- Brewer, M.L., Flavell, H.L., & Jordon, J. (2017). Interprofessional team-based placements: The importance of space, place, and facilitation. *Journal of Interprofessional Care*, *31*(4), 429–437. <https://doi.org/10.1080/13561820.2017.1308318>
- Commission on Collegiate Nursing Education (CCNE). (2018). Standard III: Program Quality: Curriculum and Teaching Learning Practices. American Association of Colleges of Nursing (AACN) 2018. Standards for Accreditation of Baccalaureate and Graduate Nursing Programs. Retrieved February 8, 2022, Available at:

<https://www.aacnursing.org/Portals/42/CCNE/PDF/Standards-Final-2018.pdf>

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, Behavioral, and Biomedical Sciences. *Behavior Research Methods*, **39**(2), 175–191. <https://doi.org/10.3758/bf03193146>

Gallagher, H., Cooper, M., & Durand, C. (2010). Effects of an interdisciplinary volunteer experience on students' knowledge of and attitudes toward the Health Care Team. *The Journal of Physician Assistant Education*, **21**(3), 27–30. <https://doi.org/10.1097/01367895-201021030-00005>

Interprofessional Education Collaborative (IPEC). (2016). Core Competencies for Interprofessional Collaborative Practice. 2016 Update. Core Competencies for Interprofessional Collaborative Practice. Retrieved February 8, 2022, Available at: <https://nebula.wsimg.com/2f68a39520b03336b41038c370497473?AccessKeyId=DC06780E69ED19E2B3A5&disposition=0&alloworigin=1>

Lash, D.B., Barnett, M.J., Parekh, N., Shieh, A., Louie, M.C., & Tang, T. T.-L. (2014). Perceived benefits and challenges of interprofessional education based on a multidisciplinary faculty member survey. *American Journal of Pharmaceutical Education*, **78**(10), 180. <https://doi.org/10.5688/ajpe7810180>

Liaison Committee on Medical Education (LCME). (2020, March). Standard 7.9: Interprofessional collaborative skills. Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree. Retrieved February 8, 2022, Available at: <http://lcme.org/directory>

Mazur, Z., Hanes, S.D., & Kern, D. (2019). Effect of a clinical case-study course on physician assistant and Pharmacy Students' interprofessional care competencies. *Journal of Physician Assistant Education*, **30**(4), 223–227. <https://doi.org/10.1097/jpa.0000000000000279>

Mitzel, K., Storjohann, T., Herrick, A., Davis, L., Shamblen, C., & Bonnin, K. (2020). Interprofessional objective structured clinical examination with physician assistant and pharmacy students – a qualitative and quantitative study. *Currents in*

Pharmacy Teaching and Learning, **12**(2), 174–180. <https://doi.org/10.1016/j.cptl.2019.11.011>

Pasquini, S. (2022) Where PAs and Physician Associates Can Work Internationally. The Physician Assistant Life. Retrieved May 17, 2022, Available at: <https://www.thepalife.com/physician-assistants-pas-and-associates-around-the-world/>

Rosen, M.A., DiazGranados, D., Dietz, A.S., Benishek, L.E., Thompson, D., Pronovost, P.J., & Weaver, S.J. (2018). Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*, **73**(4), 433–450. <https://doi.org/10.1037/amp0000298>

Schmutz, J.B., Meier, L.L., & Manser, T. (2019). How effective is teamwork really? the relationship between teamwork and performance in Healthcare Teams: A systematic review and meta-analysis. *BMJ Open*, **9**(9). <https://doi.org/10.1136/bmjopen-2018-028280>

Schwartz, M.D., & Zdanowicz, M.M. (2014). Expectations of students enrolled in Doctor of Pharmacy, master's physician assistant, and anesthesia assistant programs. *The Journal of Physician Assistant Education*, **21**(1), 4–9. <https://doi.org/10.1097/01367895-201421010-00001>

U.S. Department of Labor. (n.d.). Occupational Outlook Handbook, Pharmacists. Bureau of Labor Statistics. Retrieved February 8, 2022, Available at: <https://www.bls.gov/ooh/healthcare/pharmacists.htm#tab-3>

World Health Organization. (2010). Framework for Action on Interprofessional Education and Collaborative Practice. Retrieved February 8, 2022, from https://apps.who.int/iris/bitstream/handle/10665/70185/WHO_HRH_HPN_10.3_eng.pdf;jsessionid=207D2E9C2A51A152D0A12B9CFCCB3136?sequence=1

Wynarczuk, K.D., Hadley, D.E., Sen, S., Ward, J.F., Ganetsky, V. S., & Sen, S. (2019). Pharmacy, physical therapy, occupational therapy, and physician assistant professional students' perspectives on interprofessional roles and Responsibilities. *Journal of Interprofessional Care*, **33**(6), 832–835. <https://doi.org/10.1080/13561820.2019.1572599>

Appendix A—Instructions and rubrics

PA/Pharmacy Interprofessional Education Activity (general)—Spring term

Purpose: Not all interactions between the health professions can be done face-to-face; that doesn't make them less important, or less “interprofessional”! This exercise is meant to be as true-to-life as possible, integrating scenarios where patients have seen their provider and are now on their way to the community pharmacy to obtain their medications. The purpose of this exercise is to allow PA and pharmacy students to work collaboratively on a patient case, allowing them to utilize the unique knowledge and skills of the other to provide the best care possible.

Timing: 2/18 (Tuesday) AND/OR 2/20 (Thursday) 8:30-10:00 (student interactions and practice activities); 10:00-10:30 (documentation)

Objectives: Upon completion of this activity, the student will have the knowledge and skills necessary to: 1) Compare and contrast the roles of the PA and the community pharmacist in the care of a patient with the assigned condition. (*Roles & Responsibilities*); 2) Appropriately manage a patient presenting with the assigned condition(s) within the purview of one's own discipline, including appropriate usage of opioids. (*Roles & Responsibilities; Teams & Teamwork*); 3) Appropriately, clearly, and respectfully communicate with other disciplines regarding the care that is being provided. (*Values/ethics for Interprofessional Practice; Interprofessional Communication*)

Procedures: Students will be assigned into roughly 2:1 (pharmacy:PA) teams. (Some teams will be 3:1.)

Prior to activity: 1) All students will submit their cell phone numbers, which will be shared with their “partners” of the other profession. (*If you do not have a cell phone that is capable of texting and sending images, please discuss with appropriate faculty member as soon as possible so other arrangements can be made!*); 2) All students will view the opposite profession's informational presentation/video and take a short “quiz”. (These videos and quizzes will be posted in the respective Moodle courses (PA—Pharmacology; Pharm. D.—ILS6).

During activity: Students will be participating in mock and practice activities in their respective labs, as if they were working on other activities in a normal, busy work setting (i.e. clinic or pharmacy). PA students will also be practicing musculoskeletal and neuro physical exam/assessment during this time. They will be provided with information for a case and be required to

treat the patient and interact with the pharmacist, as necessary.

Pharm. D. students will be working on pharmaceutical calculations. They will be provided with information for a case and be required to interact with the PA, as necessary.

This IPE experience will involve communication with the other profession in order to best care for patients; the care of these patients should be the priority for students, to ensure optimal and efficient communication (i.e. do the tasks related to this as soon as you have the information to do so, putting your other “practice” activities on hold. Again, this is very similar to real-life, where patient care should be your utmost priority).

Students will be given all patient information that they would typically have in their practice setting. You may ask for additional information from faculty (if it is something you would normally have or obtain in your own practice setting) or the other profession (if it is something they would know that you do not), as necessary.

PA students will be required to write prescriptions to be “e-prescribed” (as an image via cell phone) to their pharmacist.

Pharmacy students will identify any problems with the prescription and call (not text) to communicate that to the PA, along with his or her recommendation(s). PA students will resolve any problems and communicate back to the pharmacist, as appropriate (either e-prescribing via text, or calling on the phone).

Be sure to ask pertinent questions of the other profession or the patient (if applicable) before taking the next step! Don't assume you have all the information you need.

Each profession will educate the “patient” (your partner who is in your own profession working with you), as necessary and in line with your scope of practice.

Each discipline will document encounter appropriately.

Assessment: (P/F for PA students—passing for PA will be at least 80% of all available points; “passing” grades will receive 100% of credit for this activity; percentage grade for Pharm. D. students— based upon points earned out of total points available)

Peer evaluation (link to rubric available on Moodle after the activity): Student peer assessment of their team members—participation, professionalism, & knowledge (*Due to instructor(s) 2/28; See rubric below. Points will not count for Pharmacy students, as they*

might not all get to talk to a PA student; however, feedback will be returned to those who do.)

Patient care: Based upon documentation of encounter (Graded by faculty; due at the end of the activity, per individual faculty instructions)

Reflection (link to reflection questions available on Moodle after the activity): Scored based upon a standardised rubric. (Due by 2/28. See rubric below).

Clinical Phone Encounter

Pharmacy--peer evaluation of PA student

**Note: Only evaluate a PA student if you directly interacted with him or her.*

Your name _____

PA student being evaluated _____

	2—Fully completed	1—Partially completed	0—Not completed
Confirmed Identity-- The provider verified identity of patient (i.e. made sure they were correct person with a DOB or other identifier)			
Situation/Background-- The provider acknowledged the problem and accepted responsibility to correct the error			
Recommendation-- The provider accepted your recommendation and/or provided an alternative solution to the problem			
Professionalism-- The provider displayed professionalism at all times			
Assertiveness-- The provider displayed an appropriate level of assertiveness during the encounter			
Completeness-- The provider was able to address all concerns in one call			

Notes or comments about your evaluation:

Score _____/12 points

Clinical Phone Encounter

PA--peer evaluation of pharmacy student

**NOTE: You will be evaluating the TWO pharmacy students with whom you had direct interaction, on separate forms.*

Your name _____

Pharmacy student you are evaluating _____

	2—Fully completed	1—Partially completed	0—Not completed
Introduction-- The caller identified themselves by name and profession			
Verified Identity-- The caller verified <i>your</i> identity (i.e. made sure they were calling the correct person)			
Situation/Background-- The caller provided a concise statement of the problem with a sufficient level of detail			
Recommendation-- The caller requested action, and/or offered a recommendation			
Professionalism-- The caller displayed professionalism at all times			
Assertiveness-- The caller displayed an appropriate level of assertiveness during the encounter			
Completeness-- The caller was able to address all concerns in one call			

Notes or comments about your evaluation:

Score _____/14 points

IPE Reflective Writing Grading Rubric

Student name _____

	1--Unsatisfactory	2--Average	3--Exemplary
Rationality—Does the student's response flow logically and make sense?	The majority of the response is unclear or does not make sense.	Some parts of the response are unclear or do not make sense.	Students' response uses relevant examples, is clear, and comes to a conclusion.
Completeness/Content—Did the student fully answer the question(s)?	The response does not address a majority of the question(s).	The response addresses most of the question(s), but not all.	The response fully addresses the question(s).
Grammar/punctuation/syntax—Did the student use correct grammar, spelling, and professional word choices?	>5 errors	A few (3-5) errors	1-2 errors

Score: _____/9 points

Appendix B: IPE Required Reflection and Optional Survey

Instructions: This activity is a real-life example of the back-and-forth communication that must happen in order to optimize pharmacologic therapy in a patient. Please think about how you communicated with the other profession during this case and answer the reflection questions, in narrative (paragraph) below. *The survey questions are not required for any portion of your grade, but we would appreciate your feedback, if you are willing to give it!*

Last name: _____

First name: _____

Which profession are you in? (Choose one)

Pharmacy

Physician assistant

(Required) Reflection question 1: Would you say that the means of communication (phone, "fax" or electronic submission [as simulated by your texted photo(s) of prescriptions]) between these two professions is efficient? What potential barriers could you see to communication? How would you optimise communication further, while still ensuring the patient got the best care? *(Please note this question is not for commentary on the activity itself, but on the way providers and pharmacists communicate in "real life" in their daily practice. Feedback on the activity itself is requested later.)*

(Required) Reflection questions 2: Based on this activity, did your perception of the role and responsibilities of the other healthcare professional change? If so, how? If not, do you believe this is due to prior knowledge of that profession, the quality of your interaction, or some other factor(s)?

(Optional) How well do you feel the following objectives were achieved during this activity?

Objective	Not achieved	Achieved	Achieved well
Compare and contrast the roles of the PA and the community pharmacist in the care of a patient with the assigned condition. (Roles & Responsibilities)			
Appropriately manage a patient presenting with the assigned condition(s) within the purview of one's own discipline, including appropriate usage of opioids. (Roles & Responsibilities; Teams & Teamwork)			
Appropriately, clearly, and respectfully communicate with other disciplines regarding the care that is being provided. (Values/ethics for Interprofessional Practice; Interprofessional Communication)			

(Optional) Were there any parts of this activity that you felt went especially well, or that taught you a lot?

(Optional) Do you have any suggestions for improvement of this activity in the future?