

Embedding Assignments in the Experiential Curriculum that Align with Interprofessional Education Collaborative Initiatives

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Introduction

In recent years, pharmacy has become increasingly involved in the patient care process, going beyond simply filling medications. Part of this change has been brought forth due to increased demand within healthcare for interprofessional collaboration, as collaborative practice has been shown to lead to better healthcare outcomes¹.

As educators, in order to best prepare students for the workforce it is imperative for us to teach interprofessional and collaborative practice skills. Interprofessional education (IPE) allows for students to more easily integrate and interact with the healthcare team, both during and after their education⁴. As such, multiple organizations whose goal is to promote IPE to improve healthcare outcomes have arisen over the years, such as the Interprofessional Education Collaborative (IPEC).

In order to both integrate and evaluate IPE within our curriculum at the University of Findlay, we have developed multiple objectives for students to be evaluated on throughout their experiential learning. Students are additionally involved in multiple didactic IPE experiences throughout the curriculum prior to experiential learning. These objectives are built to coincide with IPEC core competencies and reflect the student's ability to work in a collaborative healthcare environment.

Objective

To demonstrate an effective mechanism in developing student integration as part of the healthcare team from Introductory Pharmacy Practice Experiences (IPPEs) to Advanced Pharmacy Practice Experiences (APPEs).

Methods

- During a student's time outside of experiential learning, they are involved in a multitude of mock IPE activities. These include mock hospital rounds, provider phone calls, patient cases, and advocacy opportunities.
- Student IPE evaluation forms were developed based on IPEC Core Competencies, with one utilized during the student's APPE rotations (Figure 1), and the other utilized during the student's IPPE rotations (Figure 2).
- The objectives of the created IPE forms directly correlate with one or more IPEC Core Competencies², as seen in Figure 3.
- Scores were assigned on a 5-point scale (0 to 4), with a score of 4 being considered outstanding, and a score of 0 indicating that evaluation did not take place.
- Preceptors evaluated students utilizing this IPE form during a student's rotation, providing scores in key competency areas.
- Data was collected from two cohorts of students over a period of 2 years, from 2023-2024.
- 2023 cohort APPE averages were a combined average of their midpoint and final IPE evaluations.
- 2024 cohort APPE averages only encompass a midpoint evaluation due to the timing of this study's data collection process.

Methods Continued

Inclusion Criteria:

- IPPE evaluation forms, once during the experiential hours of the third professional year
- APPE evaluation forms, twice during the experiential hours of the fourth professional year.
- Statistical analysis was performed utilizing averages of each core competency area.

Exclusion Criteria:

- Any section that was not scored on the assessment was nullified in the reporting process.

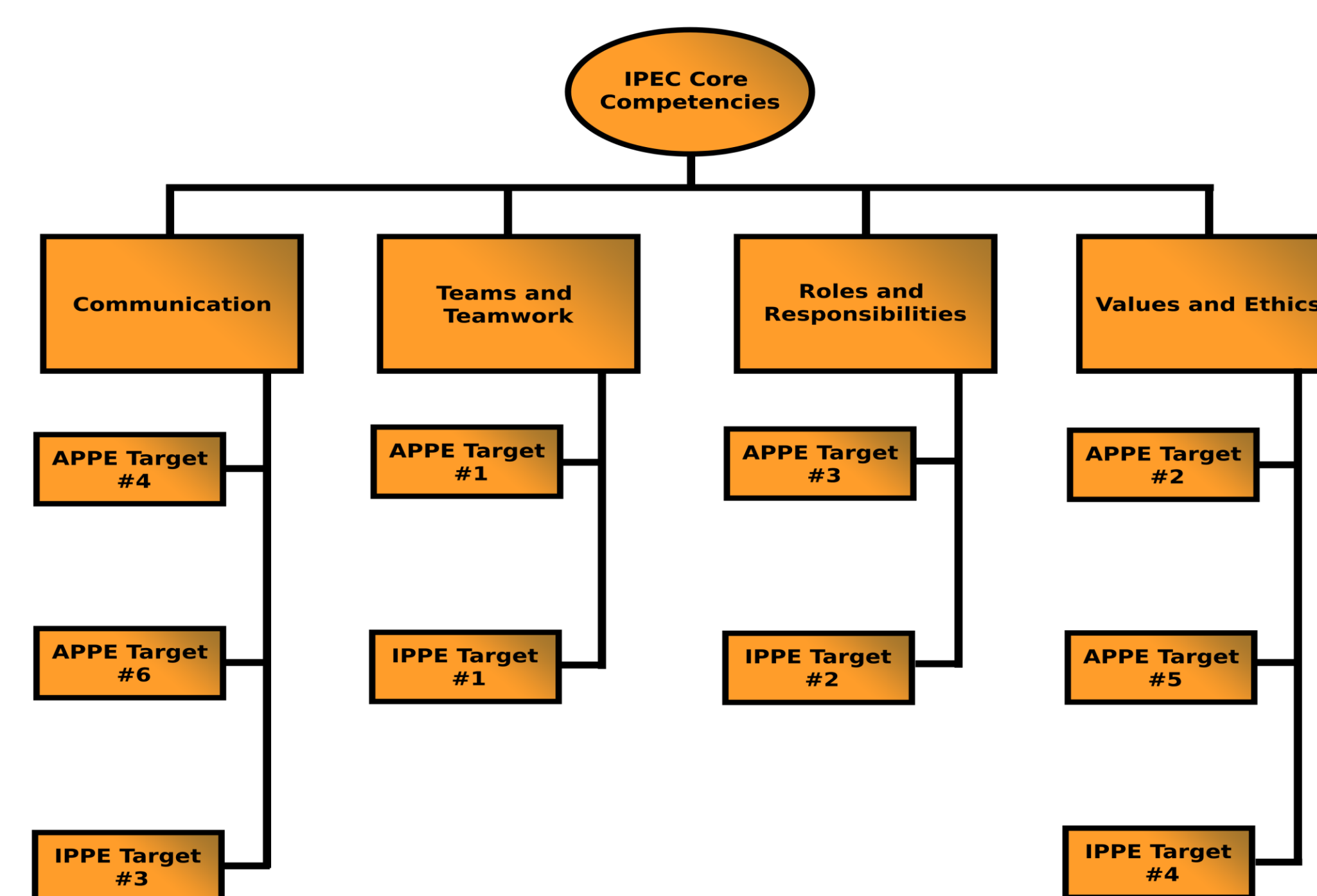
Figure 1. APPE IPE Rubric

Overall Impression	Not Done	Done Poorly	Average	Well	Outstanding
1. Demonstrate collaborative inter-professional team characteristics and behavior	N/A	1	2	3	4
2. Analyze a healthcare interaction for qualities of patient-centered care	N/A	1	2	3	4
3. Identify other healthcare providers that may be of benefit to a particular patient	N/A	1	2	3	4
4. Analyze a medical error situation to formulate a suggestion for solving the problem	N/A	1	2	3	4
5. Identify situations in which individual, institution, or government advocacy may be appropriate	N/A	1	2	3	4
6. Discuss current issues that impact all healthcare professions	N/A	1	2	3	4

Figure 2. IPPE IPE Rubric

Overall Impression	Not Done	Done Poorly	Average	Well	Outstanding
1. Describe an interaction with another healthcare professional on this rotation.	N/A	1	2	3	4
2. Identify the responsibilities of the pharmacist and each of the other healthcare professionals in a patient care team.	N/A	1	2	3	4
3. Communicate effectively with another healthcare professional.	N/A	1	2	3	4
4. Identify a way to improve collaborative care among health professionals at the institution.	N/A	1	2	3	4

Figure 3. IPEC Core Competency to IPE Target Breakdown



Results

Per the developed scale, a student was deemed average on each section with a reported score of 2. Each section of the developed 5-point scale showed that by graduation, all students scored above average in all areas of the key IPEC competencies identified.

The final post-APPE score mean in all competency areas combined for the 2023 cohort (n=41) was 3.61, and 3.73 if null-adjusted.

The 2023 Cohort did not have IPPE data, due to IPE scores no longer being accessible at the time of recording. The 2023 cohort had a total of 47 students evaluated, both for a midpoint and final evaluation. One student was not evaluated at their midpoint. The 2024 Cohort did not have final APPE data due to the timeframe of recording. There was a total of 49 students assessed for the APPE Midpoint in this cohort. IPPE data was recorded for this cohort in 37 students, who completed their IPE form with their preceptor.

Total IPE rubrics included in our data was 179 between all cohorts.

There was a total of 2 students who scored a 2 on any given competency APPE data, and 1 student who scored a 2 on any given competency for IPPE data. No students received a score of 1 on any competency for both cohorts. APPE competency #4 was the lowest average for both cohorts, with a null-adjusted average value of 3.63 for the 2023 cohort, and a value of 3.64 for the 2024 cohort.

Table 1. Null-Adjusted Average 2023/24 Cohort APPE IPE Competency Scores

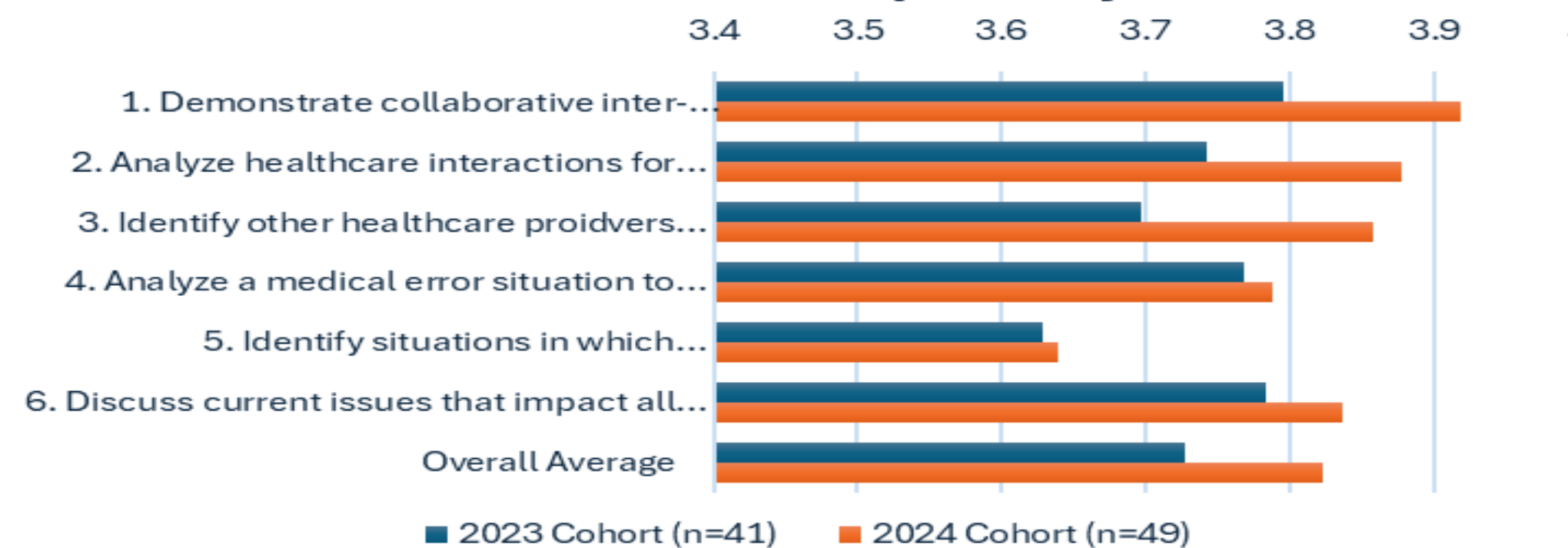
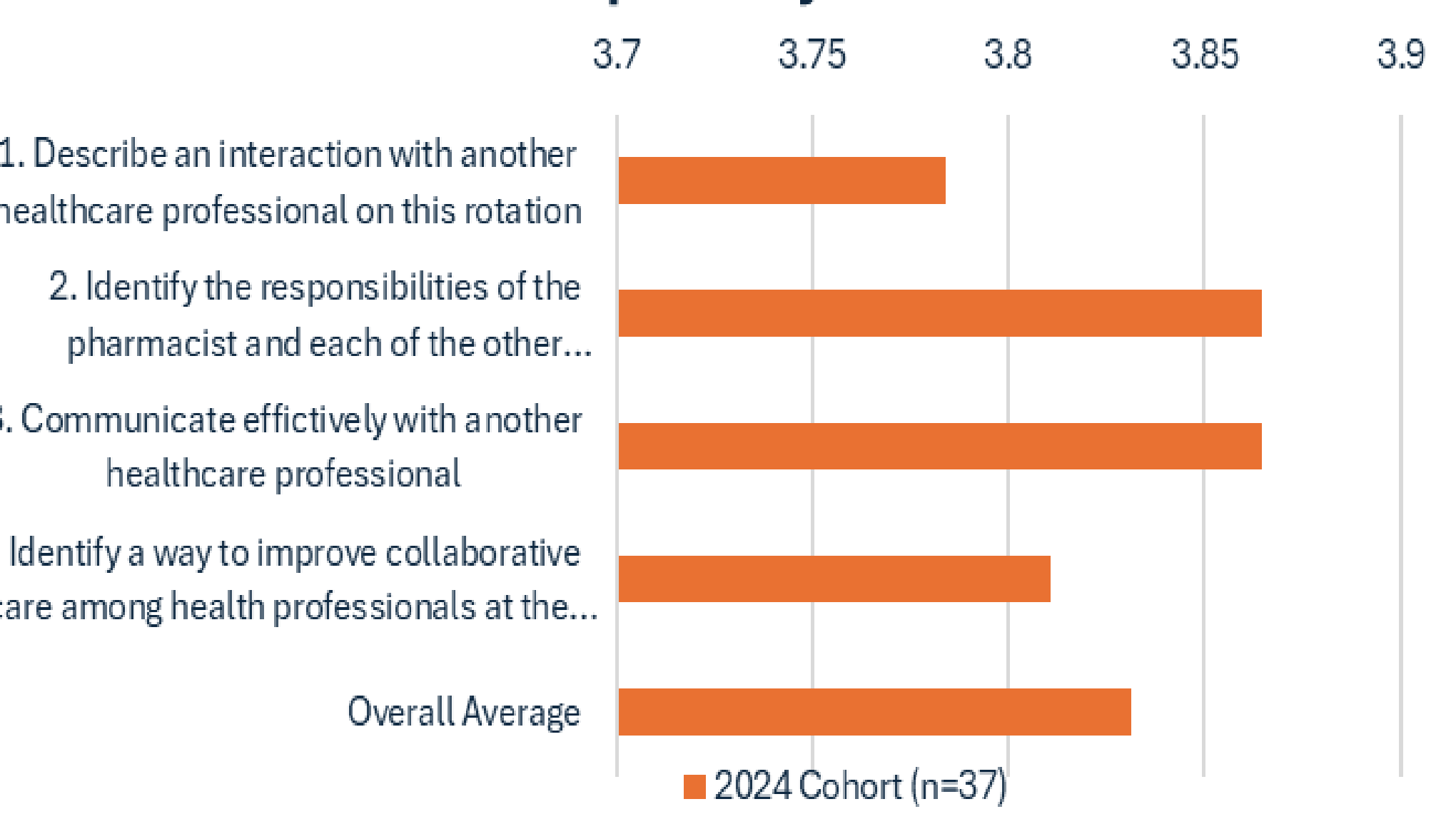


Table 2. Null-Adjusted Average 2023 IPPE IPE Competency Scores



Discussion & Conclusions

- Academic experiential assignments focused on the integration of students during IPPEs and progressing through APPEs provide intentional exposure to healthcare teams early in student careers. These assignments are inclusive in nature to intentionally have preceptors bring students into the healthcare team process to improve patient care.
- While overall the results for each competency in both IPPE and APPE experiences are well above average per scale, early data suggests that more education or exposure to APPE impression 5 (advocacy) may be beneficial.
- Implementation of the evaluation tool used by other programs would increase validity and future research with interprofessional education/experiences³.
- In addition, the IPE evaluation tool used was developed utilizing only pharmacists and pharmacy educators. There is room in the future to adjust student's IPE experience prior to experiential learning to be more practically intertwined with other professions or other profession students.
- Students that scored low were asked to redo their IPE evaluation in subsequent rotations.
- The research is limited to one program's results.
- Additional limitations include the limited sample size, and relative length of the study.
- Areas for future study include evaluating the efficacy of more focused advocacy learning experiences, and the subsequent result of the APPE impression 5. Additionally, future study should consider the student's own perspective on interprofessional collaboration, and how comfortable they feel implementing it both prior and subsequently after IPE experiences.
- This scholarship demonstrates upon graduation that students are exposed to quality interactions during multiple years of experiential education, identifying various healthcare team members, identifying system errors, and advocating for patients through a team approach.

References

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- 4) Madchado AC, Czock A, Boone J, Anderson C, Leite SN. How interprofessional education is offered to pharmacists and pharmacy students: A scoping review. Journal of Interprofessional Education & Practice. 2022, Dec; 29:100563. doi:10.1016/j.xjep.2022.100563