



# Acute Care Interprofessional Student Collaboration: Benefits of Medical and Pharmacy Students Working Together



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## INTRODUCTION

- Interprofessional collaboration has become fundamental in the development of a well-functioning healthcare system showing significant impact on the quality, efficacy, and safety of patient care<sup>1-2</sup>.
- The Interprofessional Education Collaborative identified core competencies moving beyond profession-specific educational efforts, engaging students of different professions in interactive learning with each other<sup>1</sup>.
- Despite the known benefits of interprofessional collaboration and the aim for a standardization in interprofessional curricula, current literature fails to identify a standard mechanism in both the design and implementation of interprofessional education (IPE) programs<sup>1-2</sup>.
- Highlighting the importance of interprofessional student collaboration, the purpose of this study was to evaluate the impact of an interprofessional team rounding model on the ability of pharmacy and medical students to achieve Interprofessional Education Collaborative standards of competency.

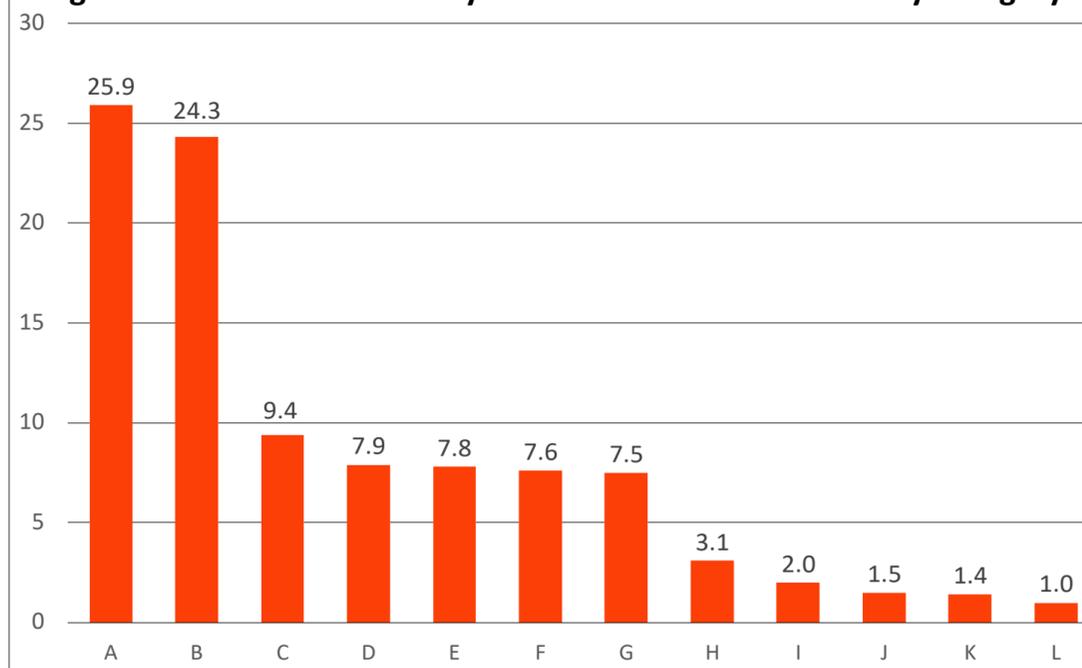
## METHODS

- Two fourth year medical students (MS) and two fourth year pharmacy students (PS) paired up into teams of 1 student from each profession during an internal medicine acute care rotation at Albany Medical Center. PS rotated for 6 weeks while MS rotated for 2 weeks then new MS began for the next 2 weeks; PS met 3 sets of MS total.
- Student teams pre-rounded on patients without faculty present, including conducting patient interviews together and working together to devise the management plan for the day, for which the medical and pharmacy students co-presented to the Physician and Pharmacist who attend rounds.
- PS tracked pharmacotherapy recommendations made each day as a result of this service.
- The Interprofessional Collaborative Competency Attainment Scale (ICCAS)<sup>3</sup> was administered to both PS and MS at the end of their IPE rotation experience.

## RESULTS

- Two hundred sixty six patient encounters were recorded. Of these encounters, 690 pharmacotherapy recommendations were made by pharmacy students to the medical team over a 36 week period. The acceptance rate was 85%.
- Figure 1** shows the types of recommendations made by pharmacy students and the corresponding category percentages. Of all recommendations, 13% involved medication history errors and 18% involved medication reconciliation errors.

**Figure 1: Percent of Pharmacy Student Recommendations by Category**



- A- Optimization of Therapy
- B- Untreated Indication
- C- Subtherapeutic Dosage Identified
- D- Adverse Drug Reaction Identified
- E- Overdose Identified
- F- Drug-Lab Identified or Requested
- G- Medication Use without Indication
- H- Improper Drug Selection
- I- Failure to Receive Medication
- J- IV to PO conversion
- K- Drug Interaction Identified
- L- Duplication of Therapy

- ICCAS survey results post interprofessional collaboration revealed a 70% [95% confidence interval 11.55-14.81,  $p < 0.05$ ] increase in the self-reported attitudes about IPE and the perceived ability to engage in collaborative practice.

- Table 1** represents the average student responses greater than a Likert value of 3 (Very Good and Excellent) before and after IPE collaboration.

**Table 1: ICCAS Survey Skills Participation Assessment Change**

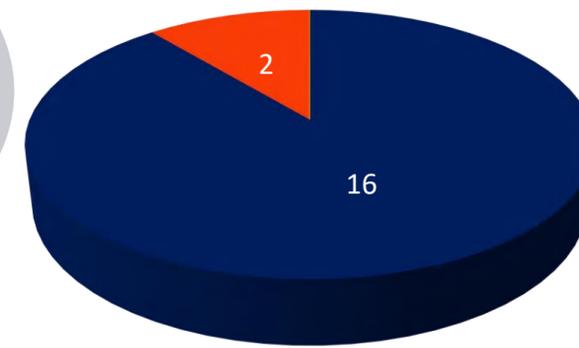
	Number of Questions Greater Than 3 Before	Number of Questions Greater Than 3 After	Change After from Before
Average	5.54	18.72	13.18
STDV	4.62	3.15	4.59

- Figure 2** depicts the students' overall reported perceived ability to collaborate interprofessionally compared to prior to the IPE.

"It is a great learning experience to be able to work with the medical students and honestly this type of inter-professional training will change the next generation of healthcare professionals. We will be more collaborative patient care providers and that is what the healthcare system needs."

"The IP team was one of my favorite rotations of medical school. I learned the incredible value pharmacy adds to the team, the benefits of different priorities, and our shared goal."

**Figure 2: ICCAS Survey Skills After Participation in the Interprofessional Rounding Team**



## CONCLUSIONS & FUTURE DIRECTIONS

- The Albany Medical College and Albany College of Pharmacy and Health Sciences IPE program demonstrated clear clinical and educational benefits, as demonstrated through types and volume of pharmacy student recommendations and statistically significant improvements in ICCAS scores.
- This experience improved patient care and provided a framework for learners to develop interprofessional clinical competencies.
- To propagate this model, with the goal of expanding access to IPE learning at the bedside which our group determined to be optimally effective, students, clinicians, educators, and administrators alike must align priorities to eliminate logistical barriers, such as redesigning existing experiential curriculum to increase preceptor availability and aligning student schedules across the medical and pharmacy schools. This work is currently being reviewed by our AMC-ACPHS Interprofessional Education Steering Committee, with an aim to pilot an IPE service in inpatient pediatrics and a second internal medicine team.

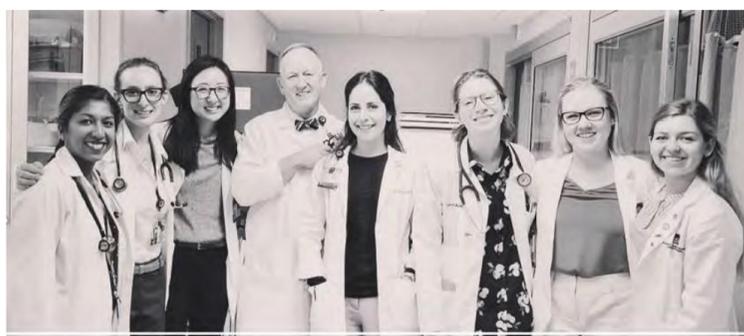
## IPEC INSTITUTE OBJECTIVE

- Create competency-based, practice-oriented curricula for improving interprofessional education

### REFERENCES

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Interprofessional Education Team Rounds