

Characterization and Impact of Pharmacy Student Participation on Hematology/Oncology APPE Rotations in Varied Practice Settings

Matthew Yacobucci¹, Christina L. Lombardi², Laurie L. Briceland¹, Paula Zeszotarski¹

¹Albany College of Pharmacy and Health Sciences; ²St. Peter's Health Partners, Albany, NY

INTRODUCTION

- During Advanced Pharmacy Practice Experiences (APPEs), pharmacy students meaningfully contribute to clinical, economic, and/or humanistic patient care outcomes.
- The full scope/impact of APPE student contributions in the oncology setting has been sparsely characterized.
- Further, the impact of participation in the oncology APPE on the student's professionalization has yet to be characterized.

OBJECTIVES

The aims of this study were to:

- Characterize & evaluate the impact of APPE student pharmacist contributions to varied hematology/oncology practice settings.
- Evaluate the impact of the APPE on the pharmacy student's professionalization.

METHODS

- For APPE cycles 2016-2019, ACPHS students who completed any 6-week hematology/oncology (h/o) APPE were identified.
- Data extracted from each student's APPE evaluation in CoreELMS database included: student self-reported list of rotation activities and 300-500 word APPE self-reflection describing meaningful impact on the student.
- APPE grades served as evidence of student aptitude. Rotation activities were categorized into direct and indirect patient care.
- To assess the impact of student contributions on the practice site, an electronic survey was created & disseminated to the 33 preceptors of the h/o APPE cohort.
- To determine impact of APPE on student professionalization, each student's reflection was reviewed and up to 3 reflection themes per reflection were noted; thematic analysis was applied to quantify themes of impact.

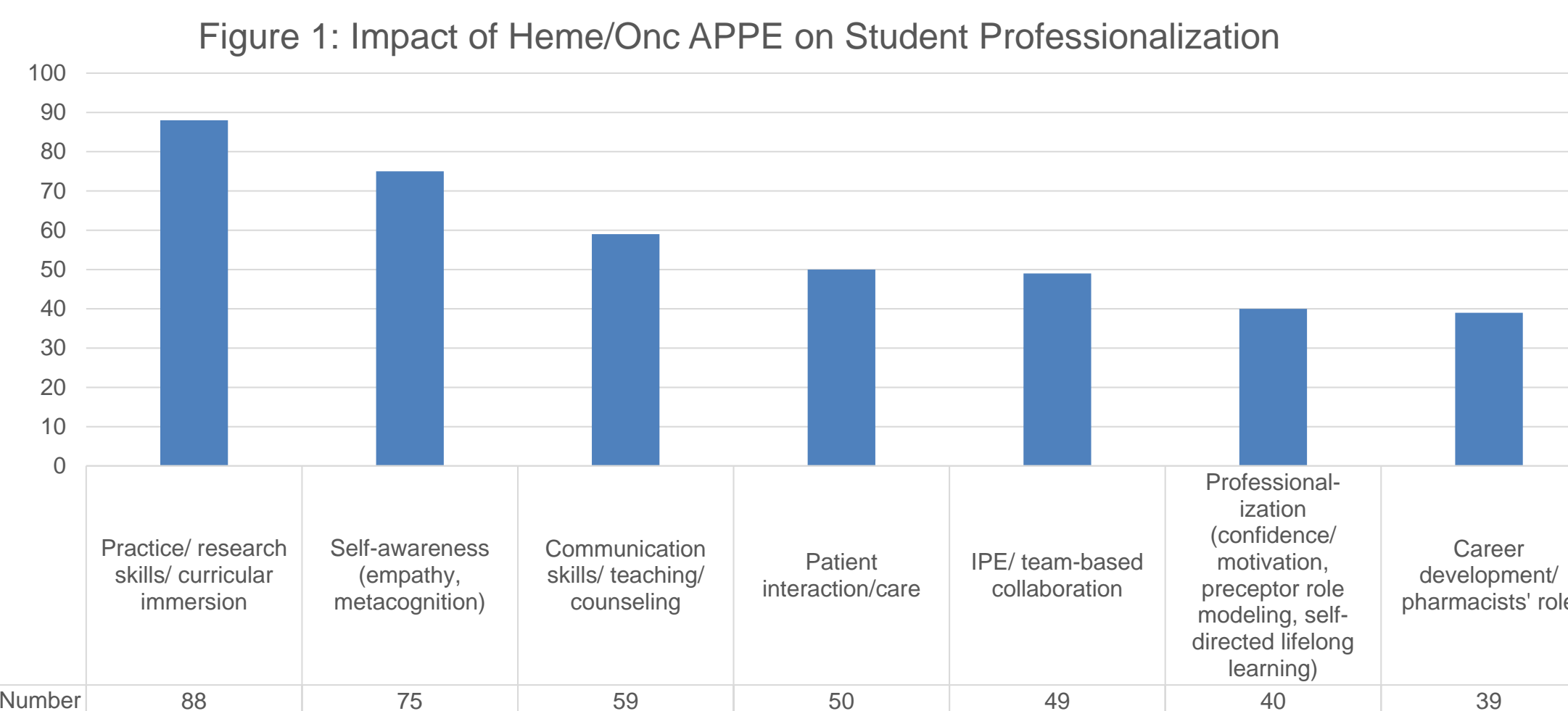
RESULTS

171 students completed a h/o APPE in private or hospital-affiliated ambulatory care (133) and/or inpatient (38) settings; 11 APPEs were at NCI designated comprehensive cancer centers. All but seven students (0.04%) earned a grade of B+ or higher, with the lowest grade recorded as a C-. 932 self-reported student activities (avg 5.5 per student) were identified (Table 1); the majority (64.6%) involved direct patient care. The electronic survey was comprised of six questions and was completed by 16 preceptors (48.5%). The survey evaluated the impact of student contributions on the practice site (Table 2). For student professionalization impact, 400 themes (average 2.3 per student) were extracted from reflections and thematically categorized (Figure 1).

RESULTS

Table 1: Student Activities at Hematology/Oncology Rotation Sites. Bolded activities are direct patient care activities.

Student Activity	Total Number
Evaluating pharmacotherapy	209
In-service presentation to medical staff (physicians, pharmacy, or nursing)	132
Non-chemotherapy patient counseling	99
Answering drug information questions	96
Chemotherapy patient counseling	82
Entering and/or Compounding pre-medications and chemotherapy	78
Medication education and adherence resources (patient medication handouts, drug calendars, and filling pill boxes)	64
Formulary review	45
Providing pharmacotherapy recommendations during inpatient rounds	24
Written SOAP note	23
Medication reconciliation	23
Pharmacy management	21
Updating policies, procedures, and guidelines	19
Research endeavors	17
Total	932



CONCLUSIONS

Pharmacy students make significant direct patient care contributions to h/o practice settings by evaluating pharmacotherapy and providing education to patients and HC personnel. Participation in h/o APPEs is highly influential to the professionalization of students, particularly in developing skills in oncology practice, patient interactions/communications, and empathy.

Table 2: Most Common Survey Results for Electronic Survey Distributed to Preceptors

Question	Most Common Results	
Please evaluate the pharmacy students you have had on oncology rotations on the level that you trusted them to perform the following tasks by the end of the rotation.	I trust the learner, with specific direction and direct supervision, to perform this activity.	Chemotherapy patient counseling (37.5%) Research endeavors (33.3%)
	I trust the learner with direct supervision and frequent correction, to perform this activity.	Written SOAP note (50%) Evaluating pharmacotherapy (46.7%)
	I trust the learner, with limited correction to perform this activity.	Inservice presentation to medical staff (53.3%) Medication reconciliation (46.7%)
What impact did the students have on the following activities?	No impact	Research endeavors (26.67%)
	Some impact	Evaluating pharmacotherapy (46.7%) Non-chemotherapy patient counseling (46.7%)
		High impact
Please rank the 5 activities from this list where the students had the most impact.	Evaluating pharmacotherapy	
	Providing pharmacotherapy recommendations during inpatient rounds	
	Medication education and adherence resources	
	Non-chemotherapy patient counseling	
Which of these activities might not have happened or happened less frequently without the students?	Inservice presentation to medical staff (50%)	
	Answering DI questions (41.7%)	
	Research endeavors (41.7%)	
What do you think your site gained from having a pharmacy student?	Increased research, counseling, education, med reconciliation	