Pharmacists in the United States work in over 28 different practice settings. In many of these settings, pharmacists work as a part of interprofessional health care teams and carry out a variety of roles. Negative perceptions or lack of understanding about health care team member roles can impact the functionality of the team and stunt innovations in interprofessional practice and education, as well as practice change initiatives.

The VCU Summer Academic Enrichment Program (SAEP) is a 6-week interprofessional program for students actively pursuing admission into Pharmacy, Medicine, Dentistry, and Physical Therapy professional programs. Throughout SAEP, students are immersed in professional level coursework and engage in a variety of Interprofessional Education (IPE) experiences (Fig 1).

![Figure 1. Estimated breakdown of VCU SAEP experiences](Image)

By studying pre-health students, perception of pharmacists’ roles on the health care team can be characterized in a population that will have a direct impact on future functionality of the interprofessional health care team. The study aimed to answer the following questions:

- How do pre-health students perceive the role of pharmacists on the health care team?
- How do pre-health students’ perceptions of pharmacists on the health care team evolve after participating in the Summer Academic Enrichment Program at VCU?

### Methods

The study utilized a concurrent embedded mixed-methods design to explore the perceptions of pharmacists by pre-health students participating in the VCU SAEP. An optional survey, including open-ended and Likert Scale questions, was emailed to students before the program began and at the conclusion of the program (Table 1). A total of 34 pre-health students completed the pre-program survey and 12 students responded to the post-program survey. Quantitative data from Likert Scale questions were analyzed using SPSS, and analysis of variance (ANOVA) was conducted to investigate student perceptions of the role of pharmacists with health professional interest, health care experience, and pharmacy experience as independent variables. Pre- and post-program survey responses were compared using a paired t-test.

### Results

The in-vivo coding process of the open-ended questions allowed for exploration of emerging themes regarding perception of pharmacists’ roles and responsibilities (Table 2, Table 3) and how these perceptions changed after participation in the VCU SAEP (Table 4).

#### Table 2. Emerging Theme 1: Pre-Health Students’ Perception of the Role of Pharmacists on the Health Care Team

<table>
<thead>
<tr>
<th>Theme</th>
<th>Findings</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited understanding of the role of pharmacists on the health care team</td>
<td>Thin code frequencies</td>
<td>...depending on their specialization in the field of pharmacy, they work alongside the doctor to help the patient.</td>
</tr>
<tr>
<td>Few references to other members of the team</td>
<td>Vague responses</td>
<td>&quot;They make sure that the patients are well.&quot;</td>
</tr>
</tbody>
</table>

#### Table 3. Emerging Theme 2: Pre-Health Students’ Perception of the Responsibilities of Pharmacists

<table>
<thead>
<tr>
<th>Theme</th>
<th>Findings</th>
<th>Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on dispensing as the pharmacist's responsibility</td>
<td>Dispensing was the most frequent code in pre-program survey.</td>
<td>&quot;Pharmacists fill prescriptions for patients&quot;</td>
</tr>
<tr>
<td>&quot;Retail v. &quot;community&quot; wording</td>
<td>&quot;...manages the organizing and dispensing of various medications prescribed by physicians.&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Quantitative survey items indicated that pre-health students initially agreed or strongly agreed with the statement "Pharmacists are an important part of the health care team" (M = 6.76, SD = 0.5). There was a significant difference in mean response before and after the program to the statement that pharmacists are the primary resource for comprehensive medication review (t(12) = 2.55, p < .05), that pharmacists provide point-of-care testing (t(12) = 3.05, p < .05), and that there are situations in which pharmacists can change a patient’s medication regimen ([t(12) = 3.39, p < 0.05] (Figure 2). Mean responses to additional Likert Scale questions were more positive after the program, but the difference in mean responses were not statistically significant. There was no significant difference between the pre-pharmacy students and students in other concentrations before the program.

#### Table 4. Emerging Theme 3: Impact of VCU SAEP on Pre-Health Students’ Perception of Pharmacists of the Health Care Team

<table>
<thead>
<tr>
<th>Theme</th>
<th>Findings</th>
<th>Quotes</th>
</tr>
</thead>
</table>
| Role of pharmacists | Responsibility, Patient counseling | "Provides patient education concerning medications and pharmacotherapy, assists doctors in assessing patient medication therapy."
| Role: Provide drug information and knowledge | |

### Conclusion

Before the VCU Summer Academic Enrichment Program, quantitative and qualitative results indicate that students had an underdeveloped understanding of the pharmacist’s roles and responsibilities, considered their role to be less collaborative, and their professional responsibility to mainly involve dispensing. However, their value of pharmacists on the health care team endured.

Though attrition rate was high in the post-program survey response, post-program responses to the open-ended questions positioned pharmacists in more cognitive roles, such as providing drug information to the health care team and education to patients.

"Pharmacists play a very important role in a health care team because the majority of the time the patient will be on some kind of medication."

The finding that pre-health students in VCU SAEP had an initial underdeveloped understanding of pharmacists on the health care team has implications for both interprofessional education and practice.

#### Implications for interprofessional education:

- Because pre-pharmacy students perceptions did not statistically differ from other concentrations, this suggests a need for deeper career exploration before selection of a profession or application to a professional program.
- Interprofessional education, or at least career exploration, may be beneficial before students enroll in health professional school or select a career path.

#### Implications for interprofessional practice:

- Understanding one’s own roles, responsibilities, and expertise, and those of other types of health professionals is a key domain in achieving improved patient outcomes through interprofessional practice.

### References


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### Acknowledgements

I would like to thank the VCU Division for Health Science Diversity, and the faculty and staff of the VCU School of Pharmacy, VCU School of Medicine, VCU School of Dentistry, and VCU School of Allied Health – Physical Therapy for the immense effort taken to make the interprofessional education components of SAEP and the program as a whole successful. In regards to this project, I would like to thank Dr. Krista Donohoe for serving as a survey content reviewer, Dr. Tyler Stevens for leading Pharmacy Discipline Exploration sessions, and Ms. Amy Talma, the SAEP Program Director. I would also like to express my gratitude to the SAEP 2015 students for their participation in the study.