

# Pre-Health Students' Perceptions of the Role of Pharmacists on Healthcare Teams

Erin L. Hickey, B.S., Pharm.D. Candidate 2017

*4<sup>th</sup> Annual Emswiler Interprofessional Symposium: Leading  
Interprofessional Innovations in a Changing World*

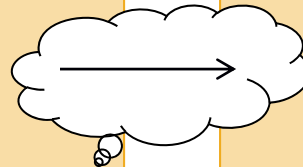
February 6<sup>th</sup>, 2016 – Lewis Ginter Botanical Garden, Henrico, Virginia

The logo for Virginia Commonwealth University (VCU), consisting of the letters 'VCU' in a bold, yellow, sans-serif font.

V i r g i n i a   C o m m o n w e a l t h   U n i v e r s i t y

# Pre-Health Students' Perceptions of the Role of Pharmacists on Healthcare Teams

**Pre-Health Students**



**Pharmacists**

**VCU**

V i r g i n i a C o m m o n w e a l t h U n i v e r s i t y

# Pharmacists

- Practice in over 28 different settings<sup>1</sup>
- Undergo extensive training<sup>2,3</sup>
- Carry out a variety of roles and responsibilities<sup>4</sup>
  - Ensuring appropriate medication therapy and outcomes, health promotion and disease prevention, health systems management
- *“Do much more than dispense medication”*<sup>5</sup>

**VCU**

**BUSINESS  
INSIDER**

# Rationale

- Lack of literature exploring perception of pharmacists by pre-health students
- IPEC Core Competency: knowledge of professional roles and responsibilities<sup>6</sup>
- Changing profession's ability to positively impact patient care



# Research Question

**How do pre-health students perceive the role of pharmacists on the healthcare team?**

**VCU**

V i r g i n i a   C o m m o n w e a l t h   U n i v e r s i t y

# Methods: *Participants & Setting*

- Summer Academic Enrichment Program 2015
- Pre-program survey: 34 respondents
  - Dentistry = 12
  - Medicine = 8
  - Pharmacy = 8
  - Physical Therapy = 6
- Average age: 21.1 years
- Healthcare experience: 22 students
- Pharmacy experience: 5 students
- From 10 different U.S. states



# Methods: *Instruments*

- Concurrent, embedded mixed methods
- Optional electronic survey via RedCAP at the beginning of the program
  - Likert scale questions
    - 10 statements
  - Open-ended questions
    - 4 questions



# Methods: *Likert Scale Questions*

**[1-7; Strongly Disagree-Strongly Agree]**

Pharmacists are an important part of the healthcare team.

Pharmacists advise physicians on drug information.

Pharmacists advise patients on drug information.

Pharmacists provide drug information to non-physician members of the healthcare team.

Pharmacists counsel patients on how to take medications prescribed by authorized prescribers.

Pharmacists prevent medication errors.

Pharmacists verify that prescriptions are correct.

Pharmacists are the primary resource for comprehensive medication reviews.

Pharmacists provide point-of-care testing.

There are situations in which pharmacists can change a patient's medication regimen.

The logo for Virginia Commonwealth University (VCU), consisting of the letters 'VCU' in a bold, yellow, sans-serif font.

V i r g i n i a C o m m o n w e a l t h U n i v e r s i t y



# Methods: *Open-Ended Questions*

**Please answer the following questions  
in your own words.**

What does a pharmacist do?

Where do pharmacists work?

What is the role of the pharmacist on the  
healthcare team?

What is the difference between a pharmacist and  
a pharmacy technician?

**VCU**

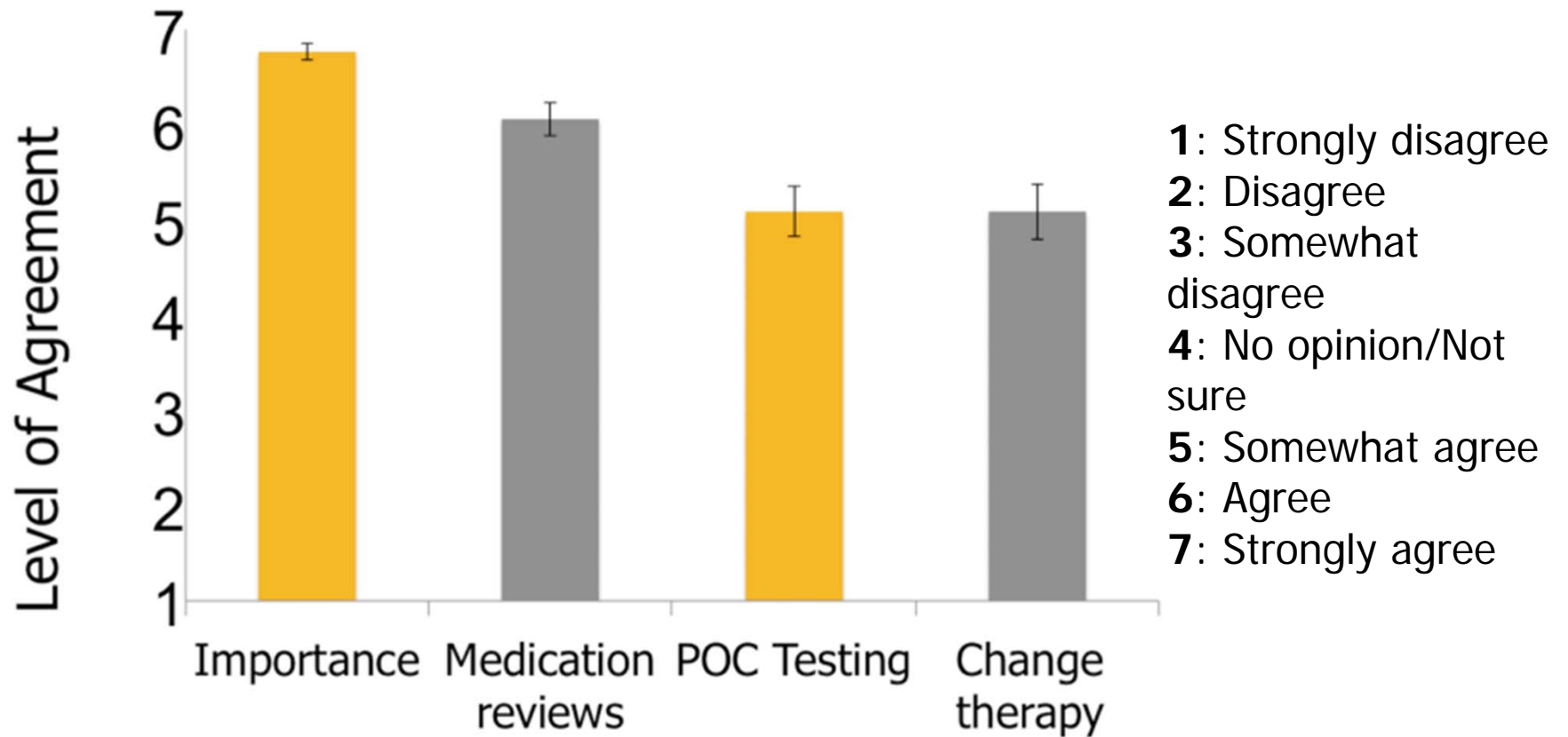
V i r g i n i a   C o m m o n w e a l t h   U n i v e r s i t y

# Results: *Data Analysis*

- Analysis of Variance (ANOVA)
  - *Health profession of interest*
- Independent samples *t*-test
  - *Healthcare experience*
  - *Pharmacy experience*
- In-vivo coding process
  - 3 member team

**VCU**

# Results: *Quantitative*



**VCU**

# Results: *Quantitative*

- ANOVA
  - No statistically significant differences between four health professions of interest
- Independent samples *t*-test
  - Healthcare experience v. no experience
  - Pharmacy experience v. no experience
    - Changing medication regimen ( $p = 0.031$ )



# Results: *Qualitative*

Emerging Theme #1: Limited understanding of the role of pharmacists on the healthcare team

Findings	Quotes
<ul style="list-style-type: none"><li>• Thin code frequencies</li><li>• Few references to other members of the team</li><li>• Vague responses</li></ul>	<p><i>"...depending on their specialization in the field of pharmacy, they work alongside the doctor to help the patient."</i></p> <p><i>"They make sure that the patients are well."</i></p>



# Results: *Qualitative*

Emerging Theme #2: Underdeveloped recognition of pharmacy practice settings

Findings	Quotes
<ul style="list-style-type: none"><li>• Large recognition of pharmacists in hospitals (25) but few in clinical settings (3)</li><li>• Retail pharmacy commonly mentioned (24)</li><li>• Low code frequencies for other settings</li></ul>	<p><i>"Pharmacists can work in hospitals, or in pharmacies such as Walgreens or CVS."</i></p> <p><i>"They usually work in an area to distribute such drugs."</i></p>



# Results: *Qualitative*

Emerging Theme #3: Perception focused on pharmacists' dispensing responsibilities

Findings	Quotes
<ul style="list-style-type: none"><li>• Dispensing was the most frequent code (21)</li></ul>	<p><i>"Pharmacists fill prescriptions for patients".</i></p> <p><i>"...manages the organizing and dispensing of various medications prescribed by physicians."</i></p>



# Discussion

- Implications for health career decision making
  - Pre-pharmacy students
  - Other pre-professional health students
- Value of role & responsibility exposure in professional level interprofessional education activities
- Visibility of the pharmacy profession

**VCU**



# Conclusion

- Perception is that pharmacists' role is important, but knowledge of responsibilities is limited
- Importance of IPE to gain knowledge and appreciation for other health professions
  - Pre-professional level could be a critical time for IPE exposure

**VCU**

# Future Work

- SAEP 2016
  - Undergo second round of data collection
- Pre-/Post-Program
  - ***Research Question #2: How do pre-health students' perceptions of pharmacists on the health care team evolve after participating in the Summer Academic Enrichment Program at VCU?***

**VCU**

# Acknowledgements

- **Ron Ballentine**, Pharm.D., Associate Professor, Department of Pharmacotherapy and Outcomes Science; Assistant Director of Admissions and Student Services, VCU School of Pharmacy
- **Erika Dumke**, M.Ed., Director of Research and Evaluation, VCU Division for Health Sciences Diversity
- **Amy Taloma**, M.Ed., Assistant Director, VCU Division for Health Sciences Diversity
- **SAEP 2015 Coordinators and Staff**



# Questions or Comments

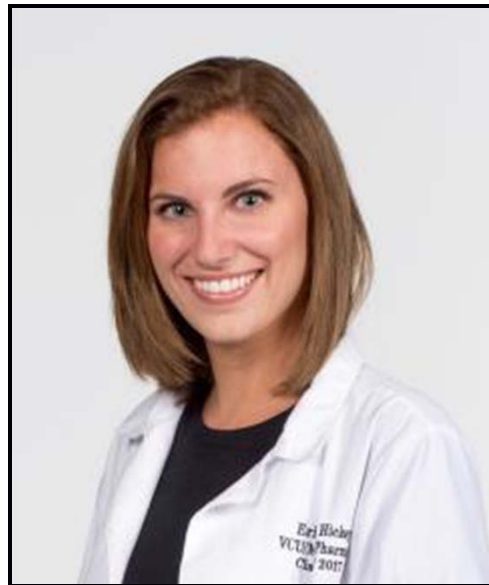


**VCU**

V i r g i n i a   C o m m o n w e a l t h   U n i v e r s i t y

# Contact Information

Erin L. Hickey, B.S., Pharm.D. Candidate 2017  
VCU School of Pharmacy  
**[ehickey@vcu.edu](mailto:ehickey@vcu.edu)**



**VCU**

V i r g i n i a   C o m m o n w e a l t h   U n i v e r s i t y

# Key References

1. Schommer, J. C., Sogol, E. M., & Brown, L. M. (2013). Identifying work setting profile factors from the Career Pathway Evaluation Program. *American Journal of Pharmaceutical Education*, 77(9), 194. <http://doi.org/10.5688/ajpe779194>
2. Accreditation Council for Pharmacy Education. (2011). Accreditation Standard and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree. *Accreditation Council for Pharmacy Education*, 1–97.
3. Johnson, T. (2008). Pharmacist work force in 2020: Implications of requiring residency training for practice. *American Journal of Health-System Pharmacy*, 65, 166–70. <http://doi.org/10.2146/ajhp070231>
4. Albanese, N. P., & Rouse, M. J. (2010). Scope of contemporary pharmacy practice: roles, responsibilities, and functions of pharmacists and pharmacy technicians. *Journal of the American Pharmacists Association : JAPhA*, 50(2), e35–69. <http://doi.org/10.1331/JAPhA.2010.10510>
5. Gums, J. (2016). There's a glaringly simple answer to a growing problem in the US healthcare system. *Business Insider*, 1–5. Retrieved from <http://www.businessinsider.com/can-pharmacists-help-fill-the-growing-primary-care-gap-2016-1>
6. Kahaleh, A. A., Danielson, J., Franson, K. L., Nuffer, W. A., & Umland, E. M. (2015). An Interprofessional Education Panel on Development, Implementation, and Assessment Strategies. *American Journal of Pharmaceutical Education*, 79(6), Article 78. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4584370/pdf/ajpe79678.pdf>

**VCU**

V i r g i n i a   C o m m o n w e a l t h   U n i v e r s i t y