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ADVANCES IN CLINICAL PHARMACY EDUCATION & TRAINING

Evaluating the evolution of philosophy of practice over postgraduate year 1 residency training

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Abstract

Introduction: Philosophy of practice (PoP) serves as the foundation for any patient care practice. It is a set of professional values and beliefs that guides a practitioner's actions and decisions in practice. The objective of this study was to evaluate if and how postgraduate year 1 (PGY-1) residency training changed pharmacy residents' PoP.

Methods: This was a qualitative comparative analysis of PGY-1 residents' PoP at the start vs the end of residency. In July 2019, 23 incoming ambulatory care PGY-1 residents at the University of Minnesota were asked to articulate their PoPs. In April 2020, the same cohort was asked to revisit their PoPs and make any necessary revisions. Baseline PoPs were coded inductively to create a standard codebook. The codebook was applied to final PoPs to assess any changes or new codes that emerged.

Results: Three new codes emerged in the final PoPs: improving health of the community, educating the future generation of pharmacists, and professional advocacy and service. One of the largest differences that occurred was the frequency of the code "interprofessional team collaboration," with only five residents including this in their baseline PoP compared with 16 in the final PoPs.

Conclusion: After 1 year of residency training, concepts such as interprofessional collaboration became more prevalent in residents' PoPs suggesting this may be a concept residents understand and appreciate more during residency. Additionally, the emergence of new codes, such as professional advocacy and service, may also reflect the professional identity development that occurs during residency.

KEYWORDS
medication therapy management, pharmaceutical care, philosophy of practice | residency

1 | INTRODUCTION

According to Cipolle and colleagues,[1] a patient care practice has three core components: (1) a philosophy of practice (PoP), (2) a patient care process, and (3) practice management. The pharmacist patient care process represents the step-by-step process a practitioner goes

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through when providing patient care, while practice management is all the necessary resources and support to provide care in an efficient and productive manner.[2,3] PoP, on the other hand, serves as the foundation of the practice, as it is a set of professional values and beliefs that all practitioners have to guide their actions and decisions in practice.[1] PoP can sometimes be confused with ethics. However, what distinguishes PoP is that it is practice specific, whereas it has been argued that a single ethical code could exist for most health care professionals.[4] PoP may be tailored to one's unique practice setting; therefore, not everyone's may be the exact same. Nevertheless, to ensure consistency in practice delivery, there is also a need for professional adoption of core PoP tenets for pharmacists providing direct patient care.[4]

When pharmacists provide comprehensive medication management (CMM), five core tenets have been proposed to serve as the basis for PoP for the profession: (1) meeting a societal need, (2) assuming responsibility for optimizing medication use, (3) embracing a patient-centered approach, (4) caring through an ongoing patient-pharmacist relationship, and (5) working as a collaborative member of the health care team.[5] Despite the core tenets of pharmacy's PoP being defined, it is unclear how broadly they have been adopted across the profession and included in pharmacy school curricula. As PoP guides what a pharmacist does in practice, a unified professional PoP is critical for providing fidelity to CMM practice.[6] This uniformity of philosophy is needed to ensure consistency in the delivery of high-quality care to all patients. In addition, a clear understanding of what guides one's behaviors and actions in practice helps the pharmacist to both model and communicate the meaning and rationale for pharmacists providing CMM more articulately and effectively with patients and the care team.[5] Yet, while significant attention has been paid to creating a consistent pharmacist patient care process for pharmacists providing CMM,[3,7-9] less attention has been paid to the underlying philosophy that guides that process.

PoP serves as the "why" behind what pharmacists do in practice, and is a critical component of developing a professional identity.[10] Previous research has examined PoP of both student pharmacists and pharmacists providing CMM.[5,11] However, residency training often serves as a pivotal transition time in professional identity development.[12,13] Therefore, it is important to understand pharmacy residents' PoP at the beginning of residency and how residency may impact the evolution of their PoP. To better understand this progression from novice student pharmacist to experienced CMM practitioner, the goal of this study was to evaluate if and how pharmacists' PoPs change because of postgraduate year 1 (PGY-1) residency training.

2 | METHODS

2.1 | Program setting

The University of Minnesota (UMN) PGY-1 pharmacy residency program is a multisite, multi-health system program centered on the practice of pharmaceutical care.[1,14] In 2019, the residents completed training across 19 sites within 16 health care organizations in Minnesota and spent more than 50% of their time in ambulatory care practice. Although each site offers diversity in geography, practice infrastructure, and population served, each resident is trained in a high-quality patient care service providing CMM.[15] This is defined by meeting with a patient (and potentially their caregiver) and comprehensively assessing all of their medications to ensure that each one is indicated, effective, safe, and able to be taken as intended. If, during this process, the pharmacist identifies any medication-related problems, they work with the patient and the care team to resolve them and continue to follow up with the patient to ensure that they are meeting their health care goals.[8] Additionally, pharmacist preceptors consistently work within interprofessional teams, utilize collaborative practice agreements, and bill for services.

2.2 | Collecting baseline philosophies of practice

In July 2019, at the start of the 2019-2020 residency year, incoming UMN PGY-1 pharmacy residents were asked to articulate their baseline PoP and submit their response via Qualtrics (Qualtrics, Provo, UT) within 1 week (file available upon request). Responses were compiled and a copy of each resident's baseline PoP was sent to them individually in a Word document.

This study was reviewed by the University of Minnesota's IRB and was deemed not human research.

2.3 | Philosophy of practice learning activities and collecting final philosophies of practice

To facilitate residents' reflection on philosophy of practice, in August 2019, they attended a one-hour educational session focused on the principles of CMM. They received a brief overview of the concepts of (1) PoP, (2) the pharmacist's patient care process, and (3) practice management and how these concepts tie to the practice of CMM. At the end of the session, they were encouraged to reevaluate the PoP they had written in July and revise it as necessary throughout their residency year.

In April 2020, residents attended a one-hour educational session via Zoom (Zoom Video Communications, Inc., San Jose, California) where the topic of PoP was revisited. At the conclusion of the April session, residents were asked to submit their revised PoP with track changes to the program's online submission site within 5 days.

2.4 | End of residency philosophy of practice small group discussions

To better understand if and how residents' PoP may have changed during residency and the factors that led to those changes, small group discussions occurred with the residents in May 2020. Residents

were split into groups of 4-5 and participated in 45-minute discussions via Zoom. Discussions, led by members of the residency team (discussion guide available upon request), were recorded via Zoom, and were transcribed.

2.5 | Data analysis

Using a qualitative approach and an inductive process, three members of the research team (Schweiss, Hager, Pestka) independently reviewed all resident baseline PoPs and documented emergent codes. Codes were defined as salient and distinct topics or concepts included in PoPs. The three researchers then met to discuss codes and definitions and came to consensus to create a codebook. Not knowing how residents may conceptualize the CMM PoP, an inductive coding process was used rather than relying on the previously stated five core tenets of CMM PoP as the initial coding schema. This provided the advantage of allowing for a constant comparative approach[16] by not only examining how residents conceptualized their PoP, but also considering how the core tenets and definitions may be interpreted or modified. One researcher (Schweiss) applied the codebook to all baseline PoPs using the comments feature in Word (Microsoft, Redmond, Washington). Segmenting of the data (defined as the data that were selected to be coded) and application of codes were reviewed and confirmed by two additional researchers (Pestka, Lounsbery).

A similar process was applied to analyzing the revised PoPs. One researcher (Schweiss) applied the codebook to the revised PoPs while also examining the data for any emergent codes. The application of codes was similarly reviewed by two additional researchers (Pestka, Lounsbery). Any emergent codes that came out of the revised PoPs were added to the codebook and the final codebook was applied to both the baseline and revised PoPs. This work was completed in accordance with the Standards for Reporting Qualitative Research (SRQR).[17]

3 | RESULTS

There were 26 PGY-1 residents at the beginning of the residency year. Twenty-three residents completed both baseline and final PoPs and were included in the analysis. Resident demographics are summarized in Table 1.

TABLE 1 Resident characteristics (N = 23)

Characteristic	n (%)
Gender	
Male	4 (17%)
Female	19 (83%)
Age	
Mean (min, max)	26 (24, 34)
Pharmacy school graduation year	
2018	1 (4%)
2019	22 (96%)
Previous PoP education (didactic or experiential)	
Yes	13 (57%)
No	9 (39%)
Unsure	1 (4%)
Previous PoP education outside of didactic or experiential curriculum	
Yes	1 (4%)
No	21 (91%)
Unsure	1 (4%)
Previous pharmacy work experience	
Community chain pharmacy	18 (78%)
Community independent pharmacy	8 (35%)
Community clinic pharmacy	5 (22%)
Ambulatory care pharmacy	3 (13%)
Long term care pharmacy	1 (4%)
Hospital pharmacy	7 (30%)
Other[a]	5 (22%)
Pharmacy graduation state	
Iowa	1 (4%)
Minnesota	13 (57%)
Missouri	1 (4%)
North Carolina	1 (4%)
South Dakota	4 (17%)
Texas	1 (4%)
Washington	1 (4%)
Wisconsin	1 (4%)

Abbreviation: PoP, philosophy of practice.
[a]Research, association management, specialty clinic pharmacy, comprehensive medication management, patient recruitment.

3.1 | Changes in PoPs from baseline to end of residency

During baseline coding, there were six codes that emerged from residents' PoPs. However, when reviewing residents' final PoPs, three new codes occurred: (1) improving the health of the community, (2) educating the future generation of pharmacists, and (3) professional advocacy and service. As a result, a final codebook made up of nine codes and definitions was applied to code all baseline and final PoPs (Table 2). Table 2 also illustrates how the frequency of codes changed from residents' baseline PoP to their final. Representative quotes for each code were selected from residents' baseline and final PoPs by the research team to provide examples of how the residents spoke to each code within their PoPs. The following describes each identified code that presented:

3.1.1 | Providing patient-centered care

Residents expressed this code as providing care that addresses the patient's primary concerns, keeping the patient at the center of all

TABLE 2 Identified resident philosophy of practice codes along with definitions and frequencies

Code	Definition	Baseline n (%)	Final n (%)
1. Providing patient-centered care	• Providing care that addresses the patient's primary concerns, keeps the patient at the center of all health care decisions, and involves advocating for the patient • Setting treatment goals with the patient's interests, beliefs, values, and other factors in mind (ie, individualized treatments) • Providing holistic care	19 (83%)	20 (87%)
2. Roles and responsibilities in the patient-pharmacist therapeutic relationship	• Developing trusting relationships • Engaging the patient in their care through shared decision-making • The importance of effective communication (including active listening) in developing and maintaining patient relationships • Showing empathy, respect, and compassion towards the patient • Maintaining an ongoing relationship with the patient • Empowering patients	17 (74%)	18 (78%)
3. Providing quality care	• Applying clinical guidelines, pharmacotherapy knowledge, and scientific literature • Practicing at the top of one's license • Optimizing medication use ◦ Providing care that ensures medications are indicated, effective, safe, and the patient is taking the medication as intended • Practicing evidence-based practice • Providing efficient care • Providing patient education • Improving access to medications • Being the medication expert	12 (52%)	18 (78%)
4. Maintaining professional competence	• Continually learning about new topics and evolving guidelines related to practice • Continual professional development	4 (17%)	5 (22%)
5. Interprofessional team collaboration	• Building successful working relationships with the team, including trust and respect for one another • The importance of effective communication with interprofessional team members • Providing team-based care • Educating providers/team members	5 (22%)	16 (70%)

6. Developing a philosophy of practice is a reflective and evolving process	• Philosophy of practice evolves as residents gain more experience, including exposure to:
	  ◦ Other practicing clinicians
	  ◦ New patient care populations and scenarios
	• Knowing the why/motivation behind what you do
		4 (17%)	5 (22%)

7. Improving the health of a community	• Serving the community as an accessible health care provider • Improving public health by optimizing population health outcomes • Improving the health of the community • Desire to provide care that is equitable and addresses social justice	2 (9%)	6 (26%)
8. Educating the future generation of pharmacists	• Pharmacists serve an important role in educating future pharmacists	0 (0%)	2 (9%)
9. Professional advocacy and service	• The importance and benefit pharmacists can bring to the profession through advocacy • Advocating for the value pharmacists bring to the care team and patients • Serving the profession through innovation and leadership	1 (4%)	4 (17%)

health care decisions and advocating for the patient, if necessary. It also included setting treatment goals with the patient's interests, beliefs, values, and other factors in mind. As one resident stated: "My philosophy of practice centers around the patient and making sure to consider the patient's individual circumstances, beliefs, socioeconomic situation, etc."

3.1.2 | Roles and responsibilities in the patient-pharmacist therapeutic relationship

The roles and responsibilities in the patient-pharmacist therapeutic relationship were described by residents as developing trusting relationships with patients, engaging patients in their care through shared decision making, and maintaining an ongoing relationship with the patient. They also stressed the importance of effective communication, showing empathy, compassion, and respect, and empowering patients. One resident wrote, "Having the ability to truly listen to a patient and his or her family members, take their concerns into consideration, and empathize with them is key. This will help to build a trusting relationship that will provide the most beneficial patient encounters."

3.1.3 | Providing quality care

When residents wrote about providing quality care, they included statements about applying clinical guidelines, pharmacotherapy knowledge, and scientific literature to their care. They also wrote about practicing to the top of one's license, optimizing medication use, performing evidence-based practice, and being the medication expert. As one resident wrote, "My philosophy of practice is to practice at the top of my license and to remain up to date on data and evidence to ensure I am providing quality care."

3.1.4 | Maintaining professional competence

Maintaining professional competence included statements about continually learning about new topics and evolving guidelines related to practice, as well as continual professional development. This was expressed by one resident when they wrote, "An additional key component is to be open to mastering topics outside of my comfort zone so that my knowledge continues to expand for the duration of my career."

3.1.5 | Interprofessional team collaboration

Interprofessional team collaboration presented in residents' PoPs as providing team-based care, building successful working relationships with the team, including trust and respect for one another, and the importance of effective communication with interprofessional team members. As one resident articulated, "As far as communication between myself and providers, I believe that there needs to be a mutual respect for one another and our duties and responsibilities. This will ultimately help foster open communication and trust in one another that will lead to more team-based care for our patients."

3.1.6 | Developing a philosophy of practice is a reflective and evolving process

Residents described the reflective and evolving process of developing a PoP as understanding the "why" and motivation behind what you do as a pharmacist and stating that this evolves as one gains more experience, including exposure to other practicing clinicians and new patient populations. This was illustrated in one resident PoP when they wrote, "My personal philosophy of practice continues to evolve as I gain more experience in the field of pharmacy."

3.1.7 | Improving the health of the community

In their final PoPs, a number of residents included statements related to serving the community as an accessible health care provider, playing a role in public health by optimizing population health outcomes, improving the health of the community, and promoting health equity and justice. As one resident wrote, "While my main obligation is to individual patients, my servitude may at times extend beyond the individual to the communities I serve and society."

3.1.8 | Educating the future generation of pharmacists

Two residents included comments pertaining to "participating in student education to develop future pharmacists" and the important role pharmacists serve in educating future pharmacists. One resident expressed this as wanting to share their "knowledge, skills, values, and experiences to cultivate future generations of pharmacists."

3.1.9 | Professional advocacy and service

Finally, there was an increase in statements from baseline to final PoPs related to the importance and benefit pharmacists can bring through professional advocacy and service. As one resident put, "I believe it is important to not only take initiative to advocate for my patients but also to advocate for pharmacists and the value we can provide to the health care team."

3.2 | End of residency small group discussions

During the small group discussions, residents who attended the University of Minnesota for pharmacy school noted that they had had previous exposure to PoP during their pharmacy curriculum, in

contrast with others, and this was their first experience with PoP. Residents expressed that completing a PoP was intimidating at first and there was concern about wanting to provide "the right answer." However, many residents commented that their PoP grew and became more solidified during residency as they provided direct patient care in collaboration with the care team. Several noted that they gained a greater appreciation for interprofessional relationships, being patient-centered, building trusting patient relationships, the importance of patient advocacy, and their role as an educator. They also noted that moving forward, they felt having a PoP was useful for completing job applications and that their PoP would serve as the backbone of their practice and help them stay focused. One resident shared their thoughts on this:

> "*I think when we look into our philosophy of practice, that helps to establish a bit of a why, or if you're dealing with a what am I doing here or what should I be doing, going back to the philosophy of practice helps to show where your values are and where you hope to contribute in that position. I think that it is something that I should continue to update with that in mind, knowing that I'll come through certain times of uncertainty and that philosophy of practice will help serve as a backbone for my purpose in that certain role.*"

Many residents expressed that they felt their PoP would evolve over time and may depend on their job setting. One resident also commented that the more personal a PoP is, the more useful it will be.

4 | DISCUSSION

The findings of this study suggest that 1 year of residency training may influence PoP development. In the final PoPs, there was an increase in frequency in some codes, such as interprofessional collaboration and providing quality care, and the emergence of new codes, such as improving the health of a community and professional advocacy and service. The data suggest that 1 year of residency experience may lead to a greater understanding and appreciation for these concepts as they relate to PoP. Furthermore, this may also reflect the professional identity development that occurs during residency. The increased incidence of codes related to improving community health and providing quality care in the residents' final PoPs may be reflective of their exposure to continuous quality improvement projects and processes during residency training, in addition to increased experience gained in providing patient care overall.

One of the most substantial differences in PoP was the increased integration of "interprofessional team collaboration" from five residents at baseline to 16 at final submission. This shift in PoP may be due to increased interprofessional collaboration exposure in their experiences over a relatively short amount of time and further highlights how impactful these early years can be on the pharmacist's journey. This code may be an example of "hidden curriculum" learning, which includes values and norms that are taught through day-to-day interactions and experiences on the job, vs didactic education.[18] As research indicates, the impact of the "hidden curriculum" in medical resident training may reinforce how critical these early experiences can be on future professional development.[18,19] This study did not fully examine what types of experiences (positive or negative) the pharmacy residents obtained to make this shift; however, residency programs are held to accreditation standards requiring collaboration with other members of the health care team.[20] Also, this specific residency program emphasizes an interprofessional team approach to patient-centered care in its vision statement. Both of these efforts reinforce that the transition in PoP is a desired outcome for these pharmacy residents. Further research is needed to understand the specific types of experiences residents had that led to this change and why some residents did not include interprofessional team collaboration as a core component.

Two previous studies have examined the PoP of first-year student pharmacists and CMM pharmacists.[5,11] When comparing the codes that emerged in those studies with the codes that occurred with residents (file available upon request), there were several areas of overlap. However, there were two codes, "developing a PoP is a reflective and evolving process" and "educating a future generation of pharmacists," that were present in residents' PoPs that were not present in the other two studies. PoP being seen as a reflective and evolving process is not surprising given this study population. As residents enter into practice and are exposed to the realities and responsibilities of patient care, one may expect that their view of practice and professional responsibilities may evolve over time. Another area that residents brought up that were unique was educating the future generation of pharmacists. It is important to note that while a PoP and a teaching philosophy are distinct concepts, residents appeared to view preparation of future pharmacists as a responsibility within the philosophy of practice.

While residents' PoP codes aligned with the five core tenets of PoP previously proposed by Pestka and colleagues (meeting a societal need, assuming responsibility for optimizing medication use, embracing a patient-centered approach, caring through an ongoing patient-pharmacist relationship, and working as a collaborative member of the health care team),[5] as illustrated in Table 2, there was considerable variation in the codes that presented in residents' PoPs. Because PoP underpins the patient care process, it is important for pharmacists to adopt a unified PoP that includes all five PoP tenets. This is vital to pharmacists' professional identity and provides clear messaging to patients and the health care team about the role of the pharmacist. In this study, residents were not instructed that they needed to include the five tenets in their PoPs. However, to foster adoption of a consistent PoP for future residents, a next step may be to have them reflect on how what they wrote for their baseline PoP compares with the PoP tenets and reiterate the importance of a unifying PoP for pharmacy practice.

As residency directors and preceptors, it is important to support PoP development in learners and to emphasize the importance of a unified PoP for the profession as a whole. Some important questions to reflect upon when training learners include:

- Can the pharmacy profession's PoP be articulated to learners?

- Does the practice exemplify the tenets of the PoP?
- Do learners (student pharmacists and pharmacy residents) have exposure to PoP in action during their experiential education and residency training? If so, is it consistent?

Exemplifying, teaching, and making space for discussion and reflection on PoP are important steps in helping learners adopt a unified PoP as part of their professional identity and should be a part of all accredited residency training programs.

5 | LIMITATIONS

There were a number of limitations in this study that should be considered. The findings represent one cohort of one residency program in Minnesota, assessing change over 9 months. Therefore, residents in other residency programs, particularly in different care settings, may articulate PoP differently. In addition, when drafting their PoP, residents may have provided socially desirable responses. In fact, this was mentioned by residents in the final small group discussions when they stated they felt a need to provide "the right answer." In addition, there were significant changes facing society and health care professionals during this particular timeframe, including the coronavirus disease 2019 (COVID-19) pandemic and social unrest, which could have impacted residents' views of PoP. Also, some pharmacy residents had previous exposure to the concept of PoP during their pharmacy school curriculum, which may have impacted their perception and development of PoP. Finally, formal analysis of the small group discussion data was not completed, but rather the transcriptions were reviewed to further inform the written PoPs.

6 | CONCLUSION

PoP is foundational to guiding practice and this study examined how residents articulate their PoPs at the beginning vs the end of residency. The results suggest that PGY-1 residency training had an effect on pharmacy residents' PoPs. The findings, when compared with other research focused on PoP development, suggests that experiential training may be influential in the evolution of individual PoPs. It is important to combine and adopt the findings of these studies in the education of future pharmacist practitioners and among the profession as a whole. As providers of patient care, it is imperative to have a unified philosophy of practice within the pharmacy profession, similar to other health care professionals.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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