Commentary

Re-examining the Entry-to-Practice PharmD Experiment

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ABSTRACT

Since 2000, the Doctor of Pharmacy degree has served as the entry-level credential for pharmacy practice in the United States. Some 20-plus years following the complete transition to an entry-level clinical doctorate in pharmacy, a re-examination of the outcomes of this move and the trajectory of the profession is merited. Particular attention might be given to the increasing diversity within pharmacy and the myriad of practice types. Regardless of the path forward, intentional and critical appraisals of both the pros and cons of the entry-level Doctor of Pharmacy, as well as the future of pharmacy practice, are warranted. Nursing is a case study in contrast to pharmacy, with its multiple degree and training programs and its hierarchical and graded system of practice. Nursing practice clearly links progressive levels of education to increasing clinical privileges.

Recently, a basic science colleague who is relatively new to pharmacy education inquired about the potential that the college could introduce a Bachelor of Science degree in pharmacy. This prompted a historical discussion of the Academy’s juxtaposition on this issue and the year 2000 when the Accreditation Council for Pharmacy Education ceased accreditation of baccalaureate degree programs in pharmacy. This alteration to the degree requirements for entry-to-practice was game-changing for pharmacy and formed the basis of what can only be termed in retrospect a “great experiment,” one of which we are continuing to see the consequences today. To be admitted to the practice of pharmacy in the United States currently, a candidate completes the necessary prerequisite coursework, earn a Doctor of Pharmacy (PharmD) degree, and passes the North American Pharmacist Licensure Examination (NAPLEX). Along with the NAPLEX, the candidate may need to pass various state jurisprudence examinations or specific requirements per jurisdiction as applicable. Although perhaps lengthy, the path is rather straightforward, or at least it appears that way from the outside. After obtaining a PharmD and becoming licensed, some graduates may complete additional training in the form of postgraduate residencies or fellowships. According to the American Society of Health-System Pharmacists (ASHP), 3741 postgraduate year-1 positions were filled in 2021 and 3688 in 2022.7 Beyond residency training, there are opportunities for Board of Pharmacy Specialties certification in some 14 different areas as of this writing.8 Pharmacists may be assisted by technicians who act as extenders and can perform a narrow list of functions under the supervision of a licensed pharmacist and as directed by state-to-state specific laws. Some technicians may choose to become certified by the Pharmacy Technician Certification Board by completing an approved training program and passing a standardized examination.9

Discussions with colleagues and others have led us to wonder if the relatively straightforward path in pharmacy punctuated by the “great experiment” of the entry-to-practice PharmD was and is in the best interest of the profession as well as patients. The transition to the entry-level professional doctoral degree was a significant shift for the profession and one that was not without extensive deliberation and debate.10,11 Some have argued that pharmacy should not preoccupy itself with the past and the delicate negotiations and nuances that led us to the place where we find ourselves today. We would argue that a scholarly, critical approach requires us to do just that - examine the path and decisions that led us here, learn from them, and alter course as needed. Along those lines, we propose that the experience of the nursing profession provides an informative case study for us to examine and compare to our own history to determine where our paths overlap and where they have deviated to create the disparate practice environments of nurses and pharmacists today.

In contrast to pharmacy, nursing has a rather complicated hierarchical system of education and practice.7 This system is demarcated by varying levels of training and credentialing with corollary increases in clinical privileges as well as salary. Certified nursing assistants (CNAs) are at the foundation of the nursing pyramid. CNAs typically complete 4–12 weeks of training programs and a certification examination linked to a state license. Annual salaries

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for these individuals are commonly around $30,000. Licensed practical nurses (LPN) generally complete 1-year training programs and must also pass a certification examination linked to a state license. Responsibilities and privileges granted to LPNs are more significant and as such annual salaries are higher at around $49,000. Unlike a registered nurse (RN), an LPN must be supervised by a RN or physician. Additionally, LPNs are entrusted to care for lower acuity patients requiring less expertise to manage. Nursing students can complete either an Associate’s or Bachelor’s degree program to qualify for certification as an RN where annual salaries are around $75,000. Completion of either a Master of Science in Nursing or a Doctor of Nursing Practice (DNP) degree allows candidates to certify as Advanced Practice Registered Nurses (APRN). APRNs both autonomously and in collaboration with other health care providers can directly provide a wide range of primary or specialty care services including diagnosis and treatment. Beginning in 2025, the DNP will be the sole entry-level credential, which qualifies an individual to practice as an APRN. Salaries for APRNs generally range from $100,000 to $180,000.

The tiered system in nursing is well recognized by patients, other healthcare providers, lawmakers, and the public at large. In fact, many members of the public may have an APRN as their primary care provider or have had experience at an urgent or immediate care center being treated by one. In contrast, we as pharmacists are not confident our own families even fully understand what our pharmacy residency training involved or exactly how we practice if our roles include no explicit physical exchange of medications. Clear delineations in education, responsibilities, and privileging have been advantageous for the nursing profession in several ways. Among other things, a knowledgeable, well-versed public is more likely to understand and support advocacy efforts by the nursing profession to improve patient care and influence policymakers. The tiered system is unambiguous and clearly links increasing education and training to expanded clinical privileges. This has at least, in part, aided nursing in advocating for expanded professional roles, including but not limited to the ability of APRNs to diagnose, prescribe, and practice with greater independence. Importantly (if not most importantly), regulatory agencies, government, and regulatory bodies, as well as third-party payers have all been partners along the way in ensuring recognition and payment for expanded services based on a tiered practice model.

In 2020, Brown suggested that, like nursing, the diverse nature of pharmacy practice would be better served with a tiered approach to training rather than a “one-size-fits-all” approach. The argument presented by Brown is predicated on ever-increasing and diverging scopes of pharmacy practice. Today, pharmacy practice can assume a myriad of roles, which can be impacted at least to some degree by the level(s) of postgraduate training an individual has completed and by pharmacy laws, which often diverge from state to state. In our state of Kentucky, for example, pharmacists may dispense medications without a prescription pursuant to board-approved protocols, while in other states pharmacists may attain varying levels of independent prescribing authority.

The current “one-size-fits-all” model of pharmacy training creates several pressure points for the profession. A unified degree that serves as the entry point for the myriad of scopes and types of pharmacy practice that currently exist as well as those that could exist in the future may confuse laypeople as well as other healthcare professionals. Other providers may struggle to understand the differences in the nomenclature of the profession (retail pharmacist, community pharmacist, clinical specialist, etc.) and between the various classifications of pharmacists (residency trained, board-certified, etc.). As previously mentioned, the DNP is becoming the entry-to-practice degree for Nurse Practitioners as a sub-specialty of nursing but will not be the entry-to-practice degree for RNs. As pharmacy grapples with legislation and advocacy efforts surrounding provider status, one must wonder if the all-PharmD paradigm serves as an impediment to progress in this area. Well-being, burnout, and resiliency are ever-increasing professional concerns across all healthcare professions including pharmacists and pharmacy students alike. A common frustration often expressed by both practicing pharmacists and students is that they are over-trained for certain positions and job duties. A common refrain from some students is that they cannot and/or do not envision themselves applying much of the education and training they are being provided. These opinions may at times be reflections of the sentiments they garner from pharmacist mentors. Admittedly, this component of the overall issue is multifactorial, and some states are addressing it at different rates than others; however, the fact remains that the all-PharmD educational paradigm casts a wide net for entry-to-practice that may not be reflective of variations in practice settings or the desired career paths of many graduating pharmacists. Complicating this scenario is ever-increasing tuition and debt rates. The prospect of assuming significant debt is daunting for anyone but could become more frustrating when it is amassed against a backdrop of coursework that one perceives may not be needed or ever used. Alternatively, some graduating students as well as practicing pharmacists find that they are under-trained for many highly specialized career paths or more niche practice settings. In either scenario, the mismatch runs the risk of furthering the stress and burnout which is now common across many sectors of the profession.

Lastly, our current approach to training has led, at least in part, to the eruption of certificate and badge programs within the profession. The badge/certification phenomenon is not unique to pharmacy but may be more pronounced as compared to other health professions. With everyone in the United States obtaining the same baseline credential at graduation (the PharmD), pharmacists may have found it necessary to use these programs to differentiate themselves from other pharmacists for employment or other similar purposes. Certificate programs are available in multiple areas both health and non-health-related. Some certificate programs such as in immunization delivery arose in the early 2000s and served the purpose of introducing new and novel professional skills and education. These immunization certification programs filled a temporal niche to teach new skills to then practicing pharmacists; interestingly, however, the programs persist today, long after PharmD curricula have included such training organically. Each year at commencement graduates must be sure that they are either certified by some external agency or have documentation from their college or school acknowledging that they have completed immunization delivery training. This employer and sometimes state board-mandated documentation is often an absolute requirement to immunize that may at least in part serve to mitigate risk that underscores the conservative nature of our profession. It remains curious yet unsurprising that in many instances the PharmD degree itself remains an insufficient stand-alone credential to immunize.

There may be some logical arguments against revisiting the concept of tiered training in pharmacy. As Brown pointed out in his 2020 paper, a major driver toward the sole entry-to-practice level degree was to elevate pharmacy practice. Arguments were made that the intensified clinical training that accompanies the degree would lead to a proportional and corresponding elevation in practice, essentially channeling the associated aphorism that “a rising tide lifts all boats.” This argument forms the basis of our description of the entry-level PharmD as the “great experiment,” one which was certainly not without reasoning and merit at the time. However, we would argue that this has not generally occurred across most pharmacy practice settings, at least not yet. It is conceivable that more time is needed to fully realize the outcomes of the experiment, though one could wonder how much additional time could be needed. In 2006, Murphy and colleagues suggested that postgraduate pharmacy residency training should, in addition to a PharmD degree, be a prerequisite for direct patient care. Most concerning is the recent phenomenon of prescribing authorities, such as Advanced Registered Nurse Practitioners being physically situated within community pharmacies to provide basic primary care services. These arrangements, while convenient for patients, further illustrate the point that the wider commercial and medical communities perceive pharmacy practice as wholly separate from that of providers both figuratively and literally.

It is important to note that the arguments we make here are not to suggest that the Academy should overtly, wholly, and arbitrarily begin turning back the hands of academic time. In 2010, Nahata suggested “the profession needed to clearly define the role and outcomes of our PharmD programs, residencies, certificate programs, and board certification.” A critical component of such an appraisal requires us to examine where we have come from and what decisions have led us to this point. Properly understanding the advantages and disadvantages of the entry-level PharmD requires cognizance of the historical aspects of our profession and will likely require difficult and arduous conversations with conflicting opinions. Experiments, even well-
reasoned and thought-out ones, require full, transparent reconciliation and examination to determine if they achieved the desired goals. The simple fact that challenging discussions may loom around this topic should not alone be the cache to refuse to entertain them.

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