VIEWPOINT – POINT/COUNTERPOINT

Is It Time to Decrease Preprofessional Pharmacy Requirements?

Adam Pate, PharmD, BCPS

University of Louisiana at Monroe School of Pharmacy

Academia, as a whole, is poised for a dramatic paradigm shift in terms of the utility and value of a formal degree from a higher education institution. In preparation for this shift, I suggest the academy consider decreasing preprofessional requirements. The issue of preprofessional requirements has been broached in multiple ways within the academy, but, in my opinion, the issue requires more deliberate debate and action on a broader level. It is my hope that this point/counterpoint will be a starting point for that debate.

The discussion about how much preprofessional curriculum is needed for an individual to be prepared for and succeed in pharmacy school and in practice is not an easy one. I write this article admitting that I have inherent biases. As a product of a 2-year community college education, followed by a traditional 4-year pharmacy program, it is hard not to feel “if it was good enough for me then, it is still good enough today.” During my student years, I felt well prepared and found my academic struggles and successes similar to those of fellow classmates. Since I graduated, several pharmacy schools including my alma mater, have moved to a 3-year preprofessional admissions requirement. In fact, from 2006 to 2011, the number of schools requiring 3 years or more of preprofessional requirements increased by 525% from 4 to 25.¹ Pharmacy prerequisite data from 2015 to 2016 shows 102 of 129 reporting programs require less than 75 semester credit hours (3 years) with an average requirement of 68 semester credit hours (100 max, 48 min).² The trend of increasing preprofessional requirements seems to be continuing as 27 programs now require 3 years or more. A concurrent trend may be the progression to a 4-year preprofessional requirement—nine programs already require a BS degree for admission.² These trends are continuing as academic pharmacy administrators do not have consistent agreement regarding content or length of preprofessional requirements.³

I am not a critic of formal education, nor do I want to devalue the experiences and learning that occur in the preprofessional coursework or through attainment of a bachelor's degree. That being said, I also do not think that obtaining a bachelor's degree or completing an arbitrary number of college credit hours makes an individual

more qualified or prepared to enter and be successful in a professional program or career than someone who has not. I found in my educational experience more often than not it was the quality of the instruction, professor, and experience as a whole, or individual learner characteristics, that made a substantial difference, not simply taking a class. One such instructor who helped lay the foundation for my success taught a course I wasn't even “required” to take for admission to pharmacy school. Simply put, a host of factors, many of which cannot be quantified, contribute to student preparedness and success.

In looking at the evolution of the 3-year preprofessional requirement, one must ask if there was an influential text or event that initiated this trend. According to Gleason et al, the most commonly cited reasons for increasing preprofessional requirements were increasing maturity of the student and additional clinical science-based classroom or experiential coursework in the PharmD curriculum.¹ The most commonly cited reason for considering an increase in preprofessional requirements was the desire to remain competitive among peer colleges and schools of pharmacy. Another plausible explanation for this preprofessional requirement increase may have been in the effort to trim a historically competitive applicant pool, whose transcripts often exceeded the minimum preprofessional requirements.⁴ It is also possible that many potential students “exceeded” the minimum admission requirements resulting from the shift to performance-based funding for higher education, which emphasized metrics such as graduation rates, course completion, on-time graduation rates, number of degrees awarded, etc. Thus, it may have been more desirable to have prepharmacy students be on a “degree plan” track rather than simply fulfill minimum prepharmacy requirements.⁵

Students with more education (eg, a bachelor of science, more credit hours, more advanced science courses) may be more “successful” (have higher GPAs, make satisfactory grades, or not drop out) in pharmacy programs.⁶⁻⁸ One unaddressed issue in many of these articles, however, is a description of professional content in which “less educated” students struggle. Schauner and colleagues pointed out that 82% of the poor grades they observed occurred in the first 2 years of the pharmacy degree program and tended

to occur in basic science courses that primarily used recall-based assessments and did not have a laboratory component.⁷ Thus, fault for academic struggle may lie with faculty members, students, and overall curriculum/course design, and one cannot assume that requiring additional coursework will solve the problem, especially because additional preprofessional training comes at a substantial cost. Data from 2012-2013 indicated the average cost (tuition, room, and board) for each year of undergraduate education was \$15 022 at public institutions, \$39 173 at private nonprofit institutions, and \$23 158 at private for-profit institutions. Costs for undergraduate education have increased 27% to 39% across the country during the last decade.⁹ Considering that an average of 88.6% of pharmacy students borrow money to pay for their education, and the average pharmacy student loan debt was \$149 320 in 2015, the cost of any additional preprofessional coursework should not be taken lightly.¹⁰ Considering the likelihood that rising student debt and undergraduate education costs will continue, we must give careful consideration to the benefits and risks of additional preprofessional coursework such as student success, public safety, ability to appropriately perform the duties of a pharmacist upon graduation, quality of preprofessional instruction, and economic impact for the student and the institution.

Understanding these issues requires an awareness of the current educational environment. The 2015 AACP Annual Report reveals a 3.8% decrease in the number of Pharmacy College Application Service (PharmCAS) applicants (approximately 6000 students nationwide), a 7.7% decrease in the number of applications submitted, and an average of 4.3 applications per applicant (a 7.5% decrease from the previous year).¹¹ These decreases, while not causing alarm now, may be a forewarning of hard times to come and should stir debate about changes that would help preserve and advance member institutions. Other health care career opportunities afford a comparable salary with similar times to degree completion. Potential students may weigh options accordingly and make career decisions based on these factors, as well as amount of student debt, job market demand, etc. Thus, we should reconsider the need for and benefits of additional preprofessional education requirements.

The trend of increased preprofessional requirements contrasts with 2 important bodies of work, the 2012 Argus Commission and ACPE Standards 2016. The Argus Commission recommended that “specification of pre-pharmacy requirements be minimized” and a focus on experiences that develop an inquisitive mind be emphasized.¹² The updated ACPE Standards also are noticeably less rigid and descriptive regarding preprofessional requirements for admissions.¹³ This shift in viewpoint on preprofessional

requirements coincides with emerging thought on the educational change anticipated in the coming decades, wherein diplomas and GPAs may go away and are replaced by skills and “open badges” (ie, validated web compatible badges detailing skills/knowledge gained from educational experience)¹⁴ The potential change to a skills-based educational economy, accompanied by the reality that the health care student market is becoming increasingly competitive, require that we strategically plan for the future of pharmacy education. Is it time to stop this veritable arms race of increasing preprofessional requirements, which appear to have been mandated with little significant forethought, and simply come to the table for discussion? I fear if we do not, the consequences may be dire.

Pharmacy is one of the greatest and most rewarding health care professions. At the same time, it is costly for students, who are increasingly faced with difficult decisions regarding career choice. It is time to critically reevaluate our preprofessional requirements. The academy possesses the knowledge and talent to create innovative and workable solutions to this issue. We cannot remain neutral or continue with such vastly differing opinions on preprofessional requirements. In the absence of unified opinions, we let students down and potentially allow others to wield undue influence on our preprofessional requirements. I believe the future of academic pharmacy is bright and know that substantive change is never quick or easy, but we must take responsibility and begin to act now to realize this bright future.

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