JPPT | Letter to the Editor

Which PGY1 Pharmacy Residency Is Right for Me? Advantages and Disadvantages of Pediatric-Focused and Traditional PGY1 Pharmacy Programs

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To the Editor

As pediatric pharmacists and residency program directors, we read with interest the article by Shaddix et al[1] outlining the advantages and disadvantages of pediatric-focused and traditional postgraduate year 1 (PGY1) pharmacy residencies. Which program is the right fit is a question every student needs to answer when evaluating PGY1 residencies. In addition to the points outlined in the recent article, we believe there are several other considerations when deciding which program best prepares one for a postgraduate year 2 (PGY2) pediatric pharmacy residency and a career in pediatrics.

The authors group PGY1 programs into "pediatric-focused" (i.e., at least 50% of rotation experiences completed in a pediatric population) and "traditional" (i.e., less than 50% of rotation experiences completed in a pediatric population).[1] We believe that this may oversimplify the comparison between PGY1 programs and contend that a third category should also be included: the traditional PGY1 residency in an institution/health system with a PGY2 pediatric pharmacy residency program. This type of program potentially offers the "best of both worlds" for many candidates.

Many of the advantages of a pediatric-focused PGY1 pharmacy residency cited in the article[1] are also features available at institutions/health systems with both a traditional PGY1 and a PGY2 pediatric pharmacy residency. These include having a "diverse pediatric population," "variety of pediatric rotations," "larger number of pediatric-trained preceptors," opportunities to "complete pediatric-focused projects (e.g., research, medication use evaluation, or presentations)," and other opportunities that will "increase their pediatric knowledge."

In addition, this third category of residency shares the traditional PGY1 program advantage of providing a "broad, well-rounded experience"[1] through learning experiences in diverse patient populations. We believe this has additional advantages beyond simply allowing "flexibility in pursuing various job opportunities."[1] Many clinical decisions in pediatrics are based on adult practice and literature because of a paucity of quality studies in the pediatric population. Residents in a traditional PGY1 pharmacy residency would likely have more familiarity and a deeper understanding of these adult data and practices, giving them a stronger foundation for how these data are extrapolated into the pediatric population. The tendency for there to be more well-designed studies in the adult population also provides residents in traditional PGY1 pharmacy programs more opportunities to develop skills in applying evidence-based medicine to clinical practice. Studies have shown that although standalone teaching (such as journal clubs or lectures) may improve knowledge base, clinically integrated teaching of evidence-based medicine with real-patient cases (such as discussions on rounds or case presentations of current patients) is more likely to bring about changes in critical appraisal skills, attitudes, and behavior.[2]

There are several other potential advantages to completing a traditional PGY1 pharmacy residency in an institution/health system with a PGY2 pediatric pharmacy residency program that were not outlined in the previous article. These programs tend to have a larger class size than pediatric-focused PGY1 programs, which may be personally desirable for many candidates. A review of the programs listed in the 2019–2020 American Society of Health-System Pharmacists Directory[3] showed that the average class size for a traditional PGY1 in an institution/health system with a PGY2 pediatric pharmacy residency program is 6.9 ± 3.4 residents compared with 1.9 ± 1.1 residents for pediatric-focused PGY1 programs. This larger class size may allow for other resident-supported opportunities within the hospital, such as a 24/7 in-house on-call program, that would be difficult to sustain by smaller programs. These types of on-call services may also provide additional pediatric experiences. For example, in the last 12 months, traditional PGY1 residents on-call at the University of Chicago Medicine each participated in an average of 28 pediatric-specific emergencies in the children's hospital (e.g., codes, traumas, sepsis alerts), in addition to the emergencies they encountered during pediatric rotational learning experiences (Bondi, unpublished data). In addition to a larger class size, these programs tend to have a larger overall preceptor pool when accounting for both pediatric- and adult-trained preceptors. Both of these allow residents to start developing a broader professional network early in their career. Another potential advantage is that a larger proportion of these programs have a primary affiliation with a college of

pharmacy when compared with pediatric-focused PGY1 residencies (43% vs 16%, respectively)[3]; this affiliation may allow for access to more teaching opportunities and experienced researchers. For example, at the University of Illinois at Chicago, tenure-track faculty participate in the PGY1 Pharmacy Residency Research Committee and serve as research and seminar mentors. This would be of particular interest to PGY1 candidates with a future interest in academia. Training in an institution with adult and pediatric populations also allows the resident to gain an understanding of how pediatric patients fit into a larger health care system. Exposure to medication safety considerations that need to be made to provide optimal care at institutions with both populations (e.g., selection of infusion devices, electronic health record systems, formulary decisions) provides valuable experience that may not be gained from a pediatric-focused PGY1 program. Finally, because 51 of the 66 PGY2 pediatric pharmacy residencies (77%) listed in the 2019–2020 American Society of Health-System Pharmacists Residency Directory are also at an institution with a traditional PGY1 residency,[3] there are increased opportunities for early commitment in these types of programs.

In our experience, residents who have trained in a traditional PGY1 pharmacy residency at an institution with a PGY2 pediatric pharmacy residency program are no less comfortable transitioning into a PGY2 pediatric pharmacy residency than those completing a pediatric-focused PGY1. We would advise students not to view experiences with adult patients as "not align[ing] with their interests and career goals".[1] Instead, we suggest they view them as opportunities to learn and to challenge themselves to identify similarities and differences between adult and pediatric populations and to evaluate how knowledge gained from working with adult patients can be extrapolated to, and enhance their care of, children. We encourage mentors and residency program directors to be cautious in making statements, intentional or unintentional, that suggest that by choosing to complete a traditional PGY1 pharmacy residency, a student demonstrates less early interest in, or ardent commitment to, the specialty of pediatrics. The "right fit" will vary from student to student, and our role is to highlight the many considerations that go into making this very personal decision, in which the lines between "advantages" and "disadvantages" are often blurred.

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REFERENCES

1. Shaddix BP, Harkin M, Miller JL, Johnson PN. Which PGY1 pharmacy residency is right for me? Advantages and disadvantages of pediatric-focused and traditional PGY1 pharmacy programs. *J Pediatr Pharmacol Ther.* 2020;25(4):273–277.
2. Coomarasamy A, Khan KS. What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. *BMJ.* 2004;329(7473):1017.
3. American Society of Health-System Pharmacists. Residency Directory. https://accreditation.ashp.org/directory/#/program/residency. Accessed June 19, 2020.

Response

We appreciate the letter to the editor submitted by Ohler and Bondi regarding our commentary entitled "Which PGY1 Pharmacy residency is right for me? Advantages and disadvantages of pediatric-focused and traditional PGY1 Pharmacy residency programs".[1] We agree that there may be additional factors to consider when selecting a residency program other than what was outlined in the commentary. As discussed in our commentary, the advantages and disadvantages were generalizations given the variability amongst programs. Therefore, 2 general categories (i.e., traditional postgraduate year 1 [PGY1] Pharmacy and pediatric-focused PGY1 Pharmacy) were included. This distribution was selected because PGY1 programs at an institution with pediatric and adult rotation opportunities may limit the resident to completion of up to three 1-month rotations in a pediatric setting. This limit may be imposed to meet the intent of the American Society of Health-System Pharmacists (ASHP) Standard 3.3.a.(5),[2] which states that no more than one-third of the 12-month program may deal with a specific patient disease state and population, depending on how that standard is interpreted. Therefore, the purpose of the commentary was to give general, preliminary guidance for a student with an interest in pediatrics, given the number of students that face this dilemma and become overwhelmed when initiating their search for residency programs. In addition, students may not even be aware of the differences in training that can be obtained in a pediatric-focused versus traditional PGY1 program. This commentary is not intended to be all-inclusive but rather to provide students with initial considerations and to empower them when reaching out to a mentor for further guidance.

We agree with the advantages discussed by Ohler and Bondi in regards to traditional PGY1 programs that

are conducted at a site with a PGY2 pediatric pharmacy residency program. In fact, 3 of the authors were residents at a traditional PGY1 Pharmacy program and transitioned into a PGY2 pediatric pharmacy program at the same academic medical center. Two of the authors are residency program directors for the PGY1 Pharmacy and PGY2 pediatric pharmacy programs at the University of Oklahoma College of Pharmacy/Children's Hospital at OU Medical Center, and agree with Ohler and Bondi that our PGY1 Pharmacy residents are adequately prepared to transition into the PGY2 Pharmacy program. This is evidenced by the fact that two-thirds of our PGY2 pediatric pharmacy residents since 2007 transitioned from the traditional PGY1 Pharmacy program at our institution. Of these residents, all of them completed 2 to 3 one-month pediatric rotations, a pediatric-focused research project, a pediatric medication use evaluation, a pediatric formulary project, and/or a platform presentation on a pediatric topic as a traditional PGY1 resident.

In our commentary, the intent behind the statement regarding alignment of adult rotations with career goals in pediatric pharmacy may have been misinterpreted. The intent behind the statement was that the trainee may believe that rotations in adult settings do not align with their interests and career goals. We have had numerous students and PGY1 residents express that they feel that adult-focused rotations do not align with their interests and career goals. Because all of the authors have completed a PGY1 Pharmacy residency with experiences in the adult setting, we have emphasized to these trainees that these experiences allow for development of a broad knowledge base and ability to apply information learned to pediatric patients.

In conclusion, we appreciate the letter submitted by Ohler and Bond and appreciate the opportunity to provide some of the background experiences of the authors and clarify the generalizations provided in the commentary. We believe this commentary will provide a starting point for students beginning their residency application journey. However, as discussed by Ohler and Bond, there are many other factors that have to be considered as the student seeks to find the program that is the best fit for their expectations of a residency program and their future career goals. This is where we, as pediatric pharmacy mentors, can assist students in exploring the advantages and disadvantages of a specific residency program, versus the global view provided in the commentary.

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REFERENCES

1. Shaddix BP, Harkin M, Miller JL, Johnson PN. Which PGY1 pharmacy residency is right for me? Advantages and disadvantages of pediatric-focused and traditional PGY1 pharmacy programs. *J Pediatr Pharmacol Ther*. 2020;25(4):273–277.
2. American Society of Health-System Pharmacists. Accreditation standards for PGY1 Pharmacy residencies. Accessed June 11, 2020. https://www.ashp.org/Professional-Development/Residency-Information/Residency-Program-Directors/Residency-Accreditation/Accreditation-Standards-for-PGY1-Pharmacy-Residencies