

Pediatrics-Anesthesia Combined Residency Training: An Applicant's Perspective

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The residency application process induces excitement and confusion in varying proportions for every medical student. As an applicant to the recently established combined pediatrics-anesthesia residency programs, my apprehension was compounded by several additional challenges. One such challenge was explaining what these programs entail to nearly everyone I met, including many of my interviewers. Programs combining training in pediatrics and anesthesiology are a recent addition to a number of combined residency programs that have emerged over the past 30 years. They are 5-year residencies in which the initial year is spent as a categorical pediatrics intern, the second year as a clinical anesthesia resident, and the final 3 years transitioning between pediatrics and anesthesiology. The first residents to start the program have recently embarked on the final 3 years of training.

The utility of training in pediatrics and anesthesiology, 2 seemingly unrelated fields, was important to convey before approval of this program by the American Board of Anesthesiology (ABA) and the American Board of Pediatrics.^{1,2} This task was initiated by the ABA under the leadership of Dr. Mark Rockoff, a pediatrician and anesthesiologist who trained in both residency programs consecutively. The tenants of pediatrics training include understanding developmental physiology along with congenital problems, managing multiple patients on hospital wards, leading multidisciplinary general and subspecialized teams, and working with patients and their families in diverse settings. Anesthesiology training, however, stresses extensive knowledge of clinical pharmacology, independence, efficient communication, technical skills, hands-on learning, the ability to rapidly synthesize knowledge into immediate treatment, and experience in crisis management. Generalizations about the skill sets needed in pediatrics or anesthesiology break down in many clinical circumstances.

Nonetheless, several knowledgeable physicians with whom I have spoken have had reservations about pursuing what they see as a very subspecialized residency program applicable to only a narrow set of careers.

Graduates of combined programs are likely to find opportunities where the worlds of pediatrics and anesthesiology directly interact. Nowhere is this clearer than in specialties that share a place in caring for acutely ill children: pediatric anesthesiology and pediatric critical care. Training in pediatric illnesses and developmental anomalies would undoubtedly aid anesthesiologists in caring for children with complex illnesses whether in operating rooms or other procedural settings. Similarly, training in diverse perioperative and periprocedural cases should aid pediatricians in managing resuscitation and ventilation situations in intensive care units or sedation/regional anesthesia in any setting. In addition, pediatric emergency physicians could benefit from anesthesiology training because they are most often at the first line in acute care. Fields in which patients frequently require bedside or operating room procedures such as neonatology, pulmonology, oncology, and cardiology will almost certainly find value in employing dual-trained physicians. Figure 1 lists pediatrics and anesthesiology fellowships.^{3,4} The specialties that would be expected to integrate both skill sets are shown in the overlap; each of these subspecialties would be available to dual-trained physicians. Several fields that do not currently have accredited fellowships also seem well suited to dual training. These specializations include sedation for procedures, anesthesia for imaging, regional anesthesia, and pre- and postoperative care of children with complex illnesses. Finally, the broadened training could aid hospitalists or global health pediatricians who often tackle medical and surgical patient care issues not addressed during training in pediatrics or anesthesiology alone.

Match data from the past 2 years demonstrate that interest in combined pediatrics-anesthesia training is growing. In the initial 2011 match, 4 approved programs offered 3 positions that were largely unadvertised to graduating medical students. These positions were filled by 3 United States allopathic medical students among 9 applicants.^{5,6} That same year, 2 residents received approval to transition from a pediatric categorical program into a combined program after completing their first year of pediatric residency at 2 of the 4 programs authorized to offer combined training. In 2012, the number of available positions was expanded to 7 at the same 4 approved institutions. There were 16 applicants

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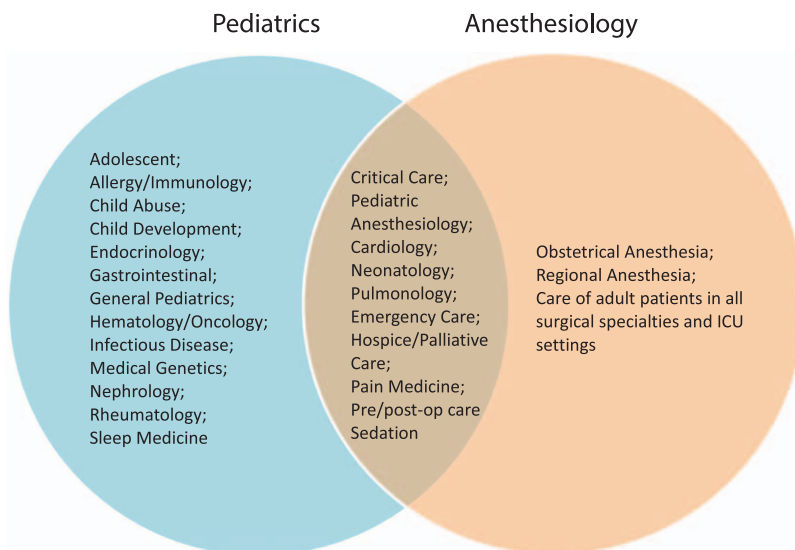
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Figure 1. Common subspecialties within pediatrics and anesthesiology are listed. The shaded overlapping area contains subspecialties within either pediatrics or anesthesiology that are expected to integrate skill sets gained in combined training.



who ranked the programs and the 7 positions were again filled by United States allopathic medical students.^{5,6} Faculty involved in admissions for the respective pediatrics and anesthesiology programs reported that many of these applicants were among the strongest candidates applying among either set of categorical pediatrics or anesthesiology applicants. The growing demand among applicants is being met through increased numbers of spots in current programs and establishment of combined programs at new institutions. The ABA also recently approved the commencement of combined internal medicine–anesthesiology residency training.

In the nascent years of combined training, some challenges will likely vex program directors and residents. Programs will evolve as the most effective schedules and educational curriculums are determined. No one has yet completed the final 3 years of the residency, so there is little known about how frequent transitioning between specialties will go, let alone how it will translate in career outcomes and trajectories. Why, then, would applicants commit to a program that lengthens their training time to attain a career that they know relatively little about, especially if those same careers could be accessed through more traditional training programs?

I went through an introspective debate about these issues in the months before interviewing for residency positions. The redundancies built into the application and interview process forced reflection on the reasons for my own application. For me, planning for residency had been straightforward leading into the last clinical rotation of third year. Experiences before and during medical school led me to focus on a residency in pediatrics. However, my final rotation in surgery, which incorporated surgical procedures with anesthesia and critical care, shifted my focus to career paths involving acute care. I was fortunate enough to have peers and mentors who directed me to the pediatrics-anesthesia combined programs. However, I did not want to apply for combined training simply because I could not decide between the 2 fields. Rather, I sought to explore how dual training might be integrated into distinct careers.

With experience and mentorship, I was able to recognize the ample breadth of career possibilities, described above, that integrate both skill sets.

In the back of most applicants' minds is a fear of not being a good fit or wanting to change paths after starting residency. Although I certainly carry many anxieties about residency, I have found security in knowing that I prefer inpatient, acute care and that my residency training is aligned with that interest. A concern during applications was whether the combined residency would force me into 1 or 2 specific subspecialty paths. I believe combined training leaves many doors open in each of the separate fields within pediatrics and anesthesiology.

The ability to explore new, divergent career options was the ultimate reason for my application to combined programs. Medical students are often reminded of the tedium of redundant tasks and paperwork associated with a medical career. Combined training holds the promise of adding flexibility and divergent daily work for physicians who value those attributes. Fields such as pediatric sedation and pain services or novel fields yet to fully emerge could be an ideal match for dual-trained physicians. Additionally, there is the possibility of mixing tracts in unique ways such as pediatric critical care and pain medicine or pediatric anesthesiology and hospitalist care. It is easy to imagine a dual-trained physician working one-on-one with a patient in the preoperative clinic one day, the operating room the next, and rounding with a multidisciplinary team in the recovery room, ward, or intensive care unit in the same patient's hospital stay. I think there will be a growing subset of applicants excited by the opportunity to use different parts of their "minds and hands" more often and interact with a broad group of colleagues.

Match data and proliferation of programs indicate that quality applicants are interested in and applying to combined pediatrics-anesthesia residency programs. Blending these applicants with premium training in pediatrics and anesthesiology should create capable physicians able to approach health care needs with unique perspectives. As time and experience with combined residency training grow, I hope and believe that faculty leaders within

pediatrics and anesthesiology programs will continue to embrace pertinent expansion and development of these progressive training pathways. ■

DISCLOSURES

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Fresh Whole Blood Use for Hemorrhagic Shock: Preserving Benefit while Avoiding Complications: Erratum

In the article that appeared on page 754 in the October 2012 issue of volume 115 of *Anesthesia & Analgesia*, the authors discovered a need for clarification and wish to make the following statement:

“All hospitals responding that they use FWB were from the US. Furthermore the reference for the statement regarding 15% of children’s hospitals that have FWB available is incorrect. The reference should be: Spinella PC, Dressler A, Tucci M, Carroll CL, Rosen RS, Hume H, Sloan SR, Lacroix J. Survey of transfusion policies at US and Canadian children’s hospitals in 2008 and 2009. *Transfusion* 2010;50(11):2328–2335.”

Reference:

Spinella PC, Reddy HL, Jaffe JS, Cap AP, Goodrich RP. Fresh whole blood use for hemorrhagic shock: preserving benefit while avoiding complications. *Anesth Analg* 2012;115:751–8

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