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Education

A SURVEY OF GRADUATES OF COMBINED EMERGENCY MEDICINE–PEDIATRICS RESIDENCY PROGRAMS: AN UPDATE

Ashley M. Strobel, MD,*† Rose M. Chasm, MD,‡ and Dale P. Woolridge, MD, PHD§

*Department of Emergency Medicine, Hennepin County Medical Center, Minneapolis, Minnesota, †Department of Pediatrics, Division of Pediatric Emergency Medicine, University of Minnesota School of Medicine, Minneapolis, Minnesota, ‡Department of Emergency Medicine, University of Maryland School of Medicine, Baltimore, Maryland, and §Department of Emergency Medicine, The University of Arizona College of Medicine, Tucson, Arizona

Corresponding Address: Dale P. Woolridge, MD, PHD, Department of Emergency Medicine, The University of Arizona College of Medicine, Tucson, AZ 85721

☐ **Abstract—Background: In 1998, emergency medicine–pediatrics (EM-PEDS) graduates were no longer eligible for the pediatric emergency medicine (PEM) sub-board certification examination. There is a paucity of guidance regarding the various training options for medical students who are interested in PEM. Objectives: We sought to to determine attitudes and personal satisfaction of graduates from EM-PEDS combined training programs. Methods: We surveyed 71 graduates from three EM-PEDS residences in the United States. Results: All respondents consider their combined training to be an asset when seeking a job, 92% find it to be an asset to their career, and 88% think it provided added flexibility to job searches. The most commonly reported shortcoming was their ineligibility for the PEM sub-board certification. The lack of this designation was perceived to be a detriment to securing academic positions in dedicated children's hospitals. When surveyed regarding which training offers the better skill set for the practice of PEM, 90% (44/49) stated combined EM-PEDS training. When asked which training track gives them the better professional advancement in PEM, 52% (23/44) chose combined EM-PEDS residency, 27% (12/44) chose a pediatrics residency followed by a PEM fellowship, and 25% (11/44) chose an EM residency then a PEM fellowship. No EM-PEDS respondents considered PEM fellowship training after the completion of the dual training program. Conclusion: EM-PEDS graduates found combined training to be an asset in their career. They felt that it provided flexibility in job searches, and that it was ideal training for the skill set required for the practice of PEM. EM-PEDS graduates' practices varied, including mixed settings, free-standing children's hospitals, and community emergency departments.**

☐ **Keywords—ACGME; combined residency; emergency medicine residency; emergency medicine–pediatrics combined residency; fellowship; pediatric emergency medicine; pediatrics residency; postgraduate training**

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INTRODUCTION

Guidelines for combined residency training in emergency medicine–pediatrics (EM-PEDS) were issued by the Accreditation Council for Graduate Medical Education (ACGME) in 1988 (1). The number of all dual training programs, including internal medicine–pediatrics (MED-PEDS) and emergency medicine–internal medicine (EM-IM), has grown in recent years (2,3). However, there is little research on graduate career outcomes after completing such training programs (2–4). In 2005, Woolridge and Lichenstein compiled the professional outcomes, career focus, and job satisfaction of the 29

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graduated combined EM-PEDS trainees (4). With the recognition of two new EM-PEDS programs since 2005, there are more total graduates and previous graduates have more postgraduate career time and experience. Training in EM-PEDS consists of integration of pediatrics residency training and emergency medicine (EM) residency training at one academic institution. Typically, trainees alternate every 3 to 6 months between pediatrics and emergency medicine, thereby accounting for seasonal illness variation and to allow for exposure to most pediatric pathologies. EM-PEDS residents train in various settings, including primary care pediatric continuity clinics, pediatric inpatient settings, ultrasound curricula, both adult and pediatric intensive care units, emergency departments (EDs), and elective opportunities focused toward pediatric emergency medicine (PEM). Graduation research requirements can be completed over the 5 years of training. PEM is a focus of knowledge gained from both residency curricula and applied throughout 5 years of training, in addition to specific PEM curricula discussed within the EM-PEDS residency. Upon completion, EM-PEDS trainees are eligible for the American Board of Pediatrics and the American Board of Emergency Medicine (ABEM).

The importance of pediatric-specific training for emergency providers is well established (5). At the time of this writing, 22 PEM fellowships were listed on the Association of American Medical Colleges website. As of 2000, the number of PEM fellowship slots filled by EM residents has continued to decline. According to the 2007 study by Murray et al., the number of PEM fellows with EM background as their primary training was about 5% (6). Graduates of the combined EM-PEDS residencies were eligible to sit for the PEM sub-board examination until 1998 when the training track closed and eligibility was limited to physicians who completed an accredited PEM fellowship. This exclusion made a clear distinction between combined training and fellowship training. Nonetheless, more EM-PEDS combined programs exist. There is a paucity of guidance regarding the various training options for medical students who are interested in PEM. It was the intent of this survey to determine personal satisfaction of EM-PEDS combined training, practice setting and preferences, opportunities for professional advancement, and their self-reported competency for managing high-acuity pediatric emergencies, despite the lack of sub-board certification.

Both the American College of Emergency Physicians (ACEP) and the American Academy of Pediatrics recognize the need for PEM specialists, especially in rural areas, where only 3% of PEM Board-certified physicians practice (7). In fact, six states did not have a practicing PEM physician who was primarily boarded through the American Board of Pediatrics (ABP): Alaska, Montana, New Hampshire, South Dakota, Vermont, and Wyoming; in addition, Indiana had only 3 ABP-certified PEM physicians, which is a low physican:child ratio (0.2:100,000) (7). Compounding this lack of rural presence is the fact that almost 80% of ABP surveyed PEM physicians plan to practice exclusively in an academic setting (7). Considering that only 18% of children are seen in a dedicated academic urban pediatric ED, it seems reasonable to explore ways of increasing the availability of PEM specialist care beyond academic medical centers (8).

All Board-certified emergency physicians are capable of taking care of children with emergencies; however, there exists both subjective and resource use value in focused PEM-specific training similar to critical care training (9,10). Pediatric education curricula in EM residencies have expanded to increase residents' competence in managing ill and injured children in the ED. Today, EM residency graduates who see 26% to 50% pediatric patients in their caseloads and see >50,000 pediatric visits during training feel more comfortable (11). Of course, pediatric-friendly care is paramount to ensuring children everywhere get the best pediatric care anywhere. Weiner et al. found an association between additional pediatric training and faster ED turnaround time and less ancillary testing than by EM colleagues (9). PEM providers had a statistically significantly faster turnaround time and less ancillary testing (e.g., urinalysis, chemistry panels, and chest radiography) than EM colleagues (9). Part of pediatric-friendly practice is as low as reasonably achievable imaging studies, yet PEM fellows' training at a children's hospital were less likely (i.e., 33% vs. 74%) to have formal ultrasound training, despite the technology becoming an integral component of pediatric emergency care for various conditions (12,13). Ramirez et al. identified two factors influencing ultrasound training in PEM fellowship training. These were having an ultrasound machine and having an EM residency at the site location (12). More programs have increased training in the past 5 years (14). Ultrasound is a standard part of the EM residency curriculum and ABEM examination.

It was the intent of this survey to determine personal satisfaction of EM-PEDS combined training, practice setting and preferences, opportunities for professional advancement, and their self-reported competency for managing high-acuity pediatric emergencies, despite the lack of sub-board certification.

METHODS

A survey of the 71 graduates from the three combined EM-PEDS residencies (i.e., the University of Arizona, Indiana University, and University of Maryland) was