

# Addressing the Negative Financial Impact of Fellowship to Increase the Workforce

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In this issue of *Pediatrics*, Catenaccio et al<sup>1</sup> examined the impact of completing a pediatric fellowship on lifetime financial returns (expressed as net present value) compared to pursuing a general pediatrics private practice and the effect of eliminating medical school debt, shortening fellowship, and loan repayment on the return. The authors also compared these results to a similar study they conducted 10 years ago.<sup>2</sup> The main finding is that for all but 3 subspecialties (cardiology, critical care, and neonatology), the net present value is lower for trainees that pursue a fellowship compared with those who enter private practice general pediatrics. The authors also found that the difference between the highest and lowest paying subspecialties has widened over time, as has the gap between most subspecialties with general pediatrics.

To calculate net present value, the authors use 3 well-recognized databases and assume that all subspecialists are practicing in an academic medical center, whereas general pediatricians are in a private practice. However, these assumptions are not entirely accurate. Freed et al<sup>3</sup> reported that, although the majority of recent fellowship graduates are initially employed by universities or medical schools, at midcareer, fewer than one-half have their clinical practice in a university or academic medical center.<sup>4</sup> Because academic medical salaries tend to be lower than those in

private practice,<sup>4,5</sup> this could have significantly altered the findings. However, even when compared with academic general pediatricians, rather than those in private practice, many subspecialties still had a larger negative difference in net present value. Nonetheless, because the authors used the same data sources to calculate the financial returns in both the current and past studies and the assumptions were similar, the relative values should be representative and reveal a greater negative difference in net present value in many subspecialties since 2007–2008.

The authors found that shortening the fellowship from 3 to 2 years and implementing a federal loan repayment program reduced the negative financial impact. Even with these actions, only 1 pediatric subspecialty, emergency medicine, had a positive return, and the net present value for most subspecialties was still below that of private practice general pediatrics, although the gap did narrow. Reducing the training duration may help to reduce the financial impact, but it is unclear whether subspecialty competency can still be obtained in 2 years. In particular, 4 of the subspecialties with negative financial returns require expertise in procedures (gastroenterology, hematology-oncology, pulmonology, and nephrology),<sup>6</sup> and it may be difficult for all trainees to achieve competency in these skills in 2 years. It is also not clear that subspecialists favor a shorter

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Opinions expressed in these commentaries are those of the author and not necessarily those of the American Academy of Pediatrics or its Committees.

**DOI:** <https://doi.org/10.1542/peds.2020-047506>

Accepted for publication Jan 19, 2021

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PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

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**FINANCIAL DISCLOSURE:** The author has indicated he has no financial relationships relevant to this article to disclose.

**FUNDING:** No external funding.

**POTENTIAL CONFLICT OF INTEREST:** The author has indicated he has no potential conflicts of interest to disclose.

**COMPANION PAPER:** A companion to this article can be found online at [www.pediatrics.org/cgi/doi/10.1542/peds.2020-027771](http://www.pediatrics.org/cgi/doi/10.1542/peds.2020-027771).

**To cite:** Mink RB. Addressing the Negative Financial Impact of Fellowship to Increase the Workforce. *Pediatrics*. 2021;147(4):e2020047506

**TABLE 1** Number of First-Year Trainees Enrolled in US Pediatric Residency or Fellowship Programs in 2013 and 2018 and the Percent Change

	2013	2018	% Change
Adolescent medicine	22	30	36.4
Cardiology	141	153	8.5
Categorical pediatrics	2915	3048	4.6
Child abuse pediatrics	12	17	41.7
Critical care medicine	168	189	12.5
Developmental-behavioral pediatrics	34	40	17.6
Emergency medicine	167	189	13.2
Endocrinology	83	79	-4.8
Gastroenterology	95	112	17.9
Hematology-oncology	164	157	-4.3
Infectious diseases	57	60	5.3
Neonatal-perinatal medicine	241	267	10.8
Nephrology	35	47	34.3
Pulmonology	53	59	11.3
Rheumatology	23	28	21.7

Adapted from American Board of Pediatrics. Data of General Pediatrics Residents by Demographics & Program Traits. Available at: <https://www.abp.org/content/data-general-pediatrics-residents-demographics-program-traits>. Accessed February 18, 2021; and American Board of Pediatrics. Data of Subspecialty Fellows by Demographics & Program Traits. Available at: <https://www.abp.org/content/data-subspecialty-fellows-demographics-program-traits>. Accessed February 18, 2021.

fellowship. In a study involving fellowship graduates, the majority would not change the duration of clinical training, although some prefer a shorter fellowship if the intended career path of the individual is predominately that of clinician or clinician-educator.<sup>3,7</sup>

Would addressing the negative financial impact greatly alter the decision of graduating residents of whether to pursue a subspecialty career? Perhaps not, because trainees do not seem to lend much importance to future earnings when they decide to pursue subspecialty training. Factors including interest in a specific disease or organ system, interest in working with a specific patient population, teaching, and the research environment weigh more heavily in the decision compared to earning potential.<sup>7,8</sup> In a recent study, researchers examining career choices in pediatric pulmonology noted financial implications to be of little importance in the decision to pursue pulmonology, and trainees commented that they had already decided to forgo some future earnings when they chose to be a pediatrician.<sup>9</sup> Furthermore, in the 2019 Annual Survey of Graduating Residents conducted by the American Academy of Pediatrics, trainees were asked to

rate the importance of 12 factors in deciding to pursue fellowship.<sup>10</sup> Financial implications ranked 10th, with interest in a specific disease or organ system the most important factor. In addition, the 2011 publication in which the authors reported the negative financial impact of pursuing some fellowships<sup>2</sup> has not deterred recruitment because there has been an increase in the number of trainees in most subspecialties, including those with a negative net present value (Table 1). From 2013 to 2018, the increase in the number of first-year fellows in cardiology ( $n = 12$ ) was exceeded by that in emergency medicine ( $n = 22$ ), the same as in nephrology ( $n = 12$ ) and nearly matched by that in adolescent medicine ( $n = 8$ ). Although these numbers are insufficient to meet current workforce demands, it is unclear if addressing the negative difference in net present value from fellowships will have a substantial effect on recruitment, but, with increasing educational debt, it might.

Nonetheless, although these negative financial implications may not influence career choice, they should still be addressed. Educational debt continues to increase, and subspecialists practicing in an

academic center should not be penalized for doing so. Perhaps, in addition to providing more options for loan repayment, other options could be explored, including increasing subspecialty salaries so that they are comparable to those of their internal medicine counterparts.<sup>11</sup>

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