

PERSPECTIVE



Should neonatal-perinatal medicine move to two-year fellowships?

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The duration of the majority of fellowships in pediatrics has been three-years. With increasing shortages of some outpatient-based pediatric subspecialists, shorter two-year fellowships are being considered for clinically oriented trainees not interested in a career based on research. Shortening the duration of fellowship may have some financial merits such as achieving a higher salary earlier after shorter training. However, we feel that continuing with a three-year duration for neonatology is more pragmatic at this time due to reductions in intensive care rotations during residency, time required to achieve procedural excellence, the need for exposure to quality assurance methodology, proficiency in novel techniques such as bedside ultrasound, and to maintain the physician-scientist pipeline. The demand for neonatal fellowship continues to be high. Ongoing evaluation of the job market, training needs and fellowship curriculum is needed to determine if the duration of fellowship should be altered in the future.

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BACKGROUND AND PEDIATRIC SUBSPECIALTY SHORTAGE

Approximately 20% of children have special healthcare needs, the result of improved survival of previously untreatable conditions without significant reduction in comorbidities [1–4].

The demand for specialized healthcare in pediatrics over the past 2 decades has not been adequately matched by an increase in pediatric subspecialists, thus creating a shortage and maldistribution of this unique workforce [5] and leading to inadequate access to care, particularly in rural areas. Subspecialists cluster near academic centers, and the nature of subspecialty academic work includes fewer patient-care hours than full-time clinical physicians such that several subspecialty physicians are needed to fulfill one clinical full-time equivalent (cFTE) [6] resulting in 2–5 month wait times for certain subspecialties. The discrepancy between burgeoning demand for specialized care and the deficient pipeline of physicians (Table 1) has been attributed to several factors: increased educational debt, decreased salaries compared to general pediatrics and general internal medicine (Fig. 1), and increased teaching (nonclinical) opportunities [7–9]. Figure 1 shows the salaries for pediatric versus adult subspecialties as a percentage of general internal medicine salary as a benchmark. Neonatology is one of 3 pediatric subspecialties above the general medicine threshold, suggesting lack of payment may not be a relevant factor informing the decision to pursue neonatology training, and subsequently not an impetus for creating 2-year

fellowships, which can reduce the financial burdens of an extra year of training.

Medicaid parity, loan repayment with incentives for practicing in rural regions, enhanced investment and flexibility of the federal Children's Hospital Graduate Medical Education (CHGME) appropriation, active recruitment of medical students and allotment of supplemental graduate medical education slots to pediatrics have been proposed as remedies for the subspecialty shortage. In 2023, the ad hoc Committee on the Pediatric Subspecialty Workforce and Its Impact of Child Health and Well-Being, part of the National Academies of Science, Engineering and Medicine (NASEM), analyzed this problem and made recommendations to mollify the dearth of physicians [4].

While several of the report's findings have been previously discussed, including raising pediatric payment, scaled increases in National Institutes of Health (NIH) funding for early career grants and greater reform of the graduate medical education system, perhaps the most controversial is the consideration of reducing fellowship duration to 2 years for clinically-oriented pediatric subspecialists.

While discussion regarding duration of training in neonatology has occurred in the past, the current report's provision has reinvigorated the debate of shortening pediatric subspecialty training, topical as pediatric hospitalist medicine fellowships are 24 months, but also at a time when neonatal physicians must

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Table 1. Data on total number of first year fellows (from American Board of Pediatrics), and match rates.

Subspecialty	Positions unfilled % NRMP match				
	October 2021	October 2022	October 2023	Absolute change 22–24	% change 22–24
Adolescent Medicine	8.9	21.1	20.6	11.7	131%
Child Abuse Pediatrics	14.8	43.5	47.6	32.8	222%
Cardiology	3.6	3.5	5	1.4	39%
Critical Care	0	4.7	7.6	7.6	n/a
Dev Beh Ped	45.8	39.2	44.9	-0.9	-2%
Emergency Medicine	0	1.8	13.5	13.5	n/a
Endocrinology	41.0	39.4	40	-1	-2%
Gastroenterology	7	0.9	24.8	17.8	254%
Hematology- Oncology	14.2	14.8	28.3	14.1	99%
Hospital Medicine	0	4.8	2.4	2.4	n/a
Infectious Diseases	47.6	50.6	51.9	4.3	9%
Neonatal-Perinatal Medicine	2.8	6.9	11.3	8.5	304%
Nephrology	45.0	46.3	46.6	1.6	4%
Pulmonology	26.5	32.6	40.7	14.2	54%
Rheumatology	30.8	37.2	38.5	7.7	25%

learn newly-essential skills such as point-of-care ultrasound and limited-scope echocardiography [10]. In the next section, we will review the following considerations and give point-counterpoint opinions. We discuss issues specific to shortening neonatal-perinatal medicine (NPM) training, such as a reduction in longitudinal training – offering perspectives of neonatologists from different backgrounds (academic educators, physician-scientists, administrative leaders, and non-University based, private practice clinicians), considering academic requirements, economics and the state of neonatology at-large (Fig. 2). “FOR” includes perspectives of neonatologists in support of shortening neonatal training to a 2 year fellowship. “AGAINST,” outlines the opposing view.

GENERAL OVERVIEW OF FELLOWSHIP DURATION

The 3-year duration of Pediatric Subspecialty Fellowship training was initiated by programs in the mid-1980s by the American Board of Pediatrics, which convened a series of conferences related to pediatric training [11]. Academic pediatricians felt “training for clinical competence is enhanced in an atmosphere of inquiry and research,” and extending subspecialty fellowship training to 3 years would ensure both clinical competence, and expose trainees to the “basic principles of research [including] ...statistics, epidemiology, and experimental design.” Yet the report notes that almost 3 decades after this seismic change, there exists no outcomes data related to whether this policy contributes significantly to the research infrastructure of the subspecialty field or reliably develops pediatric-scientists [4]. While NASEM’s proposals may alleviate potential shortages and maldistribution of the NICU workforce, 2 years of training may leave physicians less prepared to evaluate changes in our field, and undermine the subspecialty overall - inverting the financing of NICUs and freestanding children’s hospitals [12–14]. Pros and cons to the proposal to reduce NPM fellowship to 2 years are discussed (Fig. 2).

Parity with adult subspecialty counterparts: (SL and SS)

FOR 2 Year Fellowship: Shorter training holds potential for supporting an aging neonatal workforce and reducing disparities in access to care. Two-year pediatric specialty training follows precedent set by adult training programs. Internal Medicine fellowships are 2 years in duration, and those of longer duration

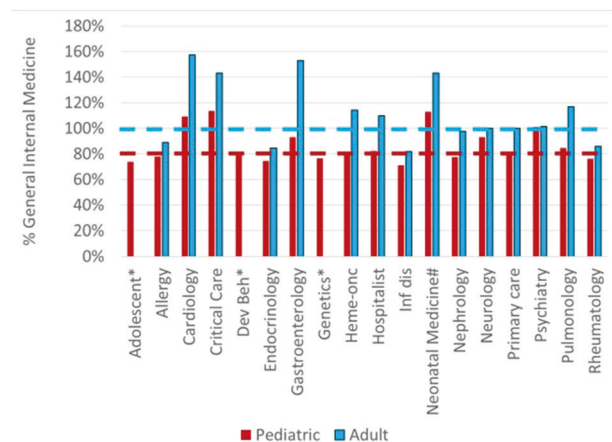


Fig. 1 Three-year average salary adjusted for inflation based on AAMC benchmarks utilized at UC Davis Health for aligned funds flow. Data are shown as a percentage of general internal medicine benchmarks at the assistant professor rank. Dashed blue line represents general internal medicine and dashed red line general pediatrics benchmarks. Several pediatric subspecialists completing a 3-year fellowship have benchmarks lower than general pediatrics. * specialties without a corresponding adult counterpart; # neonatal perinatal medicine is compared to adult critical care.

are either combined programs (e.g. Pulmonary-Critical Care Medicine, Hematology- Oncology) or highly-procedure based (e.g. Cardiology, Gastroenterology). As with NPM requirements, fellows in adult critical care medicine complete 12 clinical months that demonstrate both acquisition of medical knowledge and procedural competency [15]. Scholarly products are not required. And while 3 years’ worth of NPM clinical service and call in a shorter period of time translates into a more intense training experience, pediatric residents should have the option to accept this trade-off for the potential benefits.

AGAINST 2 Year Fellowship: Implicit in the NASEM report’s suggestion to reduce fellowship training is parity with adult specialties [4]. This comparison is faulty, as it not only equates adult clinical training with pediatrics (and neonatology) but tacitly agrees with the untested hypothesis that 2 years of NICU

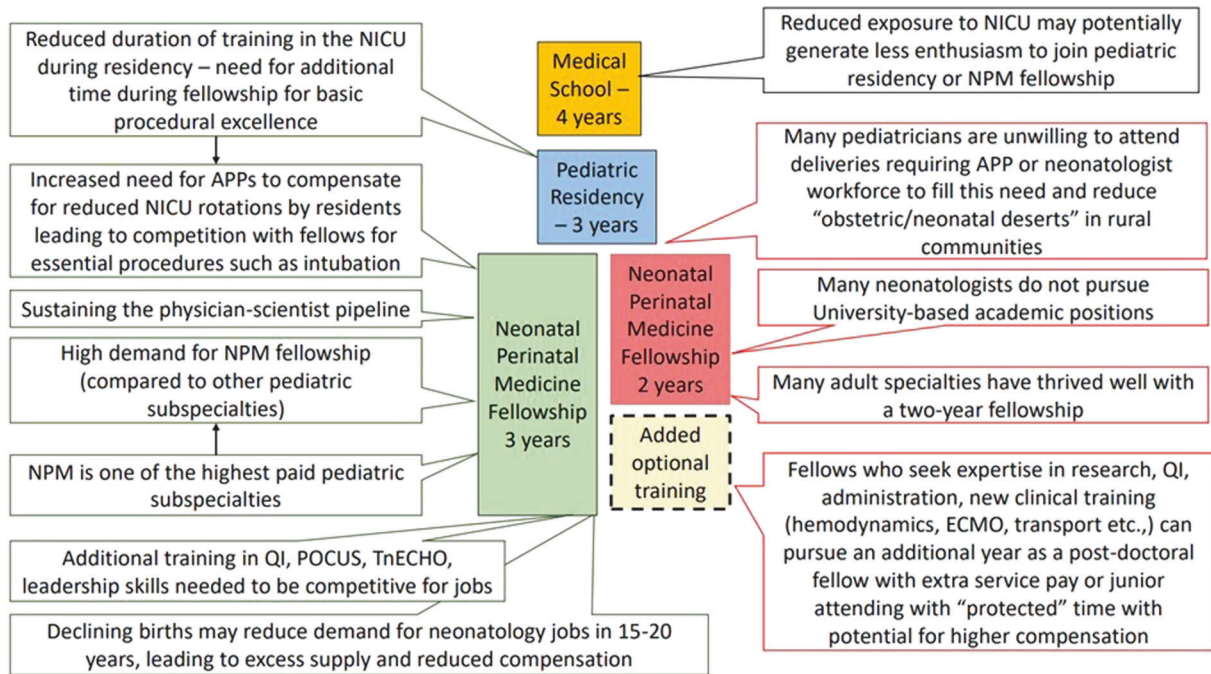


Fig. 2 Schematic representation of the argument “for” and “against” reducing in the duration of neonatal-perinatal medicine fellowship training. Factors against reducing the duration of fellowship are shown in green call-outs on the left side. Factors for reducing the duration of fellowship are shown in red call-outs on the right side.

fellowship creates clinical competence. The NASEM report was mainly geared towards outpatient-based non-ICU fellowships such as infectious diseases and endocrinology. Though trainees self-report 2 years of training as sufficient, trainee perceptions are subjective [12].

Cordero et al. reported a large discrepancy in self-reported confidence in neonatal intubation skills by trainees after simulation compared to actual performance [16]. Further, neonatology includes not only a large body of knowledge, but incorporation of family dynamics, ethics, and social aspects of care – influences present but not essential in treatment of older patients, as practice systems are built around adult care. Simply put, the comparison between NICU and adult critical care underestimates the impact of years of adult-oriented pre-medical and medical school training. NICU fellowship requires 3 years because there is just more to learn.

Clinically focused careers and scholarly activity requirement: (ASD, CS)

FOR 2 Year Fellowship: Non-university based careers may thrive with shortened, exclusive, clinically-focused training. Most neonatologists do not pursue research careers. In fact, only a small percentage of NICUs practice at the highest levels of care and are typically located in university-based settings [17].

Pineda et al. recently reported that only 11% (152) of 1424 NICUs in the United States were academic Level IV units [18]. To succeed in a non-university career, clinical care and quality improvement skills are more essential than basic science concepts. Thus, research requirements in a 3-year fellowship are unrelated to the career paths most US neonatologists pursue and jettisoning them would not under-prepare NICU physicians. There remain several other means of addressing the scholarly requirement, including quality improvement and educational scholarship. Educational scholarship again relates most directly to those who will assume teaching roles, most often in university-based settings. Quality improvement work can be integrated into a 2 year framework, as evidenced by its inclusion in the requirements for the 2-year Hospital Medicine fellowship.

AGAINST 2 Year Fellowship: Achieving equivalent clinical exposure to a 3-year fellowship cannot be accomplished by simply eliminating scholarly activity. Other ACGME-required structured educational activities essential for patient care also cannot be included if trying to provide 3 years of training in 24 months. Critics may argue the current amount of fellowship training is excessive to achieve minimum competency, but absent educational data, defaulting to the current standard should be maintained.

Further, critical-thinking skills are necessary to analyze research and developments in the field. Understanding, interpreting, and evaluating data from clinical trials, meta-analyses, systematic reviews and quality improvement projects requires training that cannot be incorporated into a 2-year framework but are indispensable to a neonatal career. Three years of fellowship are helpful for building these critical-thinking skills through journal clubs and conference presentations.

These skills are potentially more important outside of academia. The majority of NICUs in the United States are part of a community hospital (79%) and rapid ascent to administrative leadership roles after fellowship are common. Community neonatologists need to be trained as leaders in evidenced-based practice, quality improvement and patient safety to ensure high quality, equitable care for the large number of babies cared for in non-university settings. Even if quality improvement skills were integrated into a 2-year framework, it would still be at the expense of reduced clinical exposure compared to 3 years of training, time made more essential in light of upcoming reductions in NICU time in residency training.

Supporting the neonatology workforce: (PM, SS)

FOR 2 Year Fellowship: Targeted clinical education will strengthen the pipeline. The ABP reports that ~45% of the board-certified neonatology workforce is over the age of 60 years, with an average age of 51—the oldest of all subspecialties [19]. Maintaining a robust workforce is an important consideration given the workload of neonatologists is expanding to often

include care for healthy newborns and the threshold of viability is moving to 22 weeks, creating patients with longer lengths of stay. These increased duties will offset any predicted decrease in premature infants stemming from a declining US birthrate—especially when the average maternal age at delivery is increasing and higher maternal age at birth is associated with a higher NICU admit rate [20].

AGAINST 2 Year Fellowship: Shortening fellowship is not needed to support the NICU pipeline. Neonatology Program and Applicant Numbers have remained relatively stable over 10 years, but have seen a decrease in the last 2 years (from 288 applicants in 2022 to 278 in 2023). The number of programs and total fellowship positions has increased over time, and the percent of positions filled has also remained relatively stable. In the last 9 years the fill rate of NPM fellowship positions has ranged from 87% (2018–2020) to 98% (2015). This is the result of an increase of applicants to NPM fellowships from 245 (2015) to a high of 333 in 2022. Taken together, these numbers do not suggest a massive exodus away from neonatal fellowship among trainees and do not support a reduction of training as a means of recruiting pediatric trainees.

This approach to reduce fellowship duration may be attractive for specialties such as endocrinology, infectious diseases, and nephrology due to low demand for fellowship (Table 1). While the recent threefold increase in unfilled NPM slots over the last 3 years in the NRMP match may signal a trend and necessitates observation, it should not yet be a cause for alarm. The long-term impact of new ACGME Pediatric residency curriculum changes will reduce NICU exposure, which may limit enthusiasm and decrease NPM fellowship applicants, but this is speculative.

Economic implications of shortening fellowship: (SL, SS)

FOR 2 Year Fellowship: Reducing fellowship duration, creating an extra year of attending-level compensation is perceived by residents as economically advantageous. Ever-increasing educational debt deters residents from pursuing pediatric subspecialty training [21]. While there is concern that lack of scholarly work may result in the loss of promising investigators who might otherwise not be exposed to research, expansion of financial supports such as the NIH Pediatric Loan Repayment Program may still provide a conduit by which those interested in science can seek research opportunities.

Further, 2-year fellowships would allow scientists to enter research years at the “post-doctoral” fellow level with the benefit of billing at the attending level and with commensurate salary support. While billing for clinical duties may not be sufficient to cover an early career investigator’s salary, many institutions provide philanthropic and endowment funding to physician-scientists, both in their early career and via bridge funding in an era of uncertain NIH support. By allowing self-identified individuals committed to research to pursue this work independent of clinical distraction, departments are ultimately likely to see an increased return on investment in the form of overall institutional extramural funding.

AGAINST 2 Year Fellowship: Financial incentives informing shorter fellowship training are not applicable to Neonatology, which is amongst the highest-paid pediatric subspecialties. Unlike other fields, neonatology yields higher financial returns after fellowship training [8]. Increased lifetime earning potential may be a stronger driver of the high NPM fellowship fill rate compared to years of training. Thus, maintaining or increasing strong salaries may be the most influential solution to continue to attract trainees.

Shortening training to 2 years does not make a substantial impact on educational debt.

Compared to the current 3 years of training, Catenaccio et al. estimated \$250,000 in additional net-present-value dollars over the course of a ~33-year career and amounting to \$7575 in extra

annual income [7]. While these funds are welcome, it is unlikely to be sufficient to attract more trainees to fill the remainder of neonatology positions [22].

Shortening fellowship and expertise (JME, PM, AS)

FOR 2 Year Fellowship: Changing clinical coverage requirements [and FTE definitions] further necessitate an increased workforce. Several professional organizations have endorsed a 24/7 in-house coverage model in NICUs as best practice. Although in-house coverage has yielded mixed results in improving outcomes, some argue the model is justified by the increasing complexity of care. Just as duty hour limitations exists for trainees, sustainable staffing models are needed to prevent attrition, turnover and burnout. This can be best achieved only through the creation of more neonatal specialists, incentivized by measures such as shorter training.

AGAINST 2 Year Fellowship: Over the past several years, reductions in neonatal exposure during residency have rendered 1st-year fellows increasingly less prepared for the NICU environment. The most recent ACGME changes are poised to further reduce time pediatric residents spend in the NICU. This decrease will have several deleterious effects on medical knowledge, procedural skill preparedness and replacement staffing needs. Both NPM program directors and fellows already believe 1st-year NPM fellows are unprepared for fellowship [23]. Decreased exposure during residency will exacerbate this trend and may require NPM fellowship clinical time to be expanded from the 12 months required by the ABP to 18–24 months to remediate skills no longer obtained during residency. Requiring this duration of clinical service across 24 months in a high-acuity NICU translates to arduous service commitments, not including call responsibilities or other non-clinical requirements. Incorporating the same amount of clinical work, while maintaining duty-hour restrictions, is nearly impossible.

A reduction of pediatric residents, coupled with decreased preparedness of fellows, will lead to increased dependence on advanced practice providers such as neonatal nurse practitioners, physician assistants, and hospitalists. All must maintain procedural credentials by performing a set number of procedures, creating competition and friction among fellows and mid-level providers [24] for the reduced number of procedures in an era of decreasing intubation opportunities [25, 26]. Fewer procedural opportunities may necessitate 3 years of training to achieve competence. This may be even more applicable in the next several years, as skills in point-of-care-ultrasound and targeted neonatal echocardiography become standard aspects of training.

Sustaining research scholarship in shortened fellowships: (EC, AS)

FOR 2 Year Fellowship: Reducing overall duration of training may be an alternate approach to reducing educational debt without shortening fellowship. As outlined in the NASEM report, there exist several means of reducing debt burden by shortening training, with a more established track record of maintaining competency [4]. Six-year and 7-year combined undergraduate/medical degree programs exist, and institutions are implementing accelerated, 3-year MD programs [27]. Direct models into fellowship that shorten residency to 2 years already exist in pediatric neurology and are worthy of exploration in neonatology. These proposals mirror the Accelerated Research Pathway (ARP) already approved by the ABP for individuals who are focused on an academic research track. In that pathway, residency is condensed to two intense years with four years required in fellowship. The fellowship is then separated into 2 years focused on clinical skills and 2 for research. Combined, these programs could reduce training from 14 to 11–12 years without shortening fellowship. It is important to re-examine whether 4 years of undergraduate medical education is truly needed. Re-designing medical curricula to ensure required

education and preparation of medical students in 3 years prior to graduate medical education would reduce the financial burden of medical school that accrues with each year.

AGAINST 2 Year Fellowship: The current training model is essential to preserving the physician-scientist workforce. Fellows choose focused research in their subspecialty area-of-interest, thus driving continued discoveries. The 3-year training model affords the unique opportunity for up to 21 months of protected time spent on in-depth research. This block of time does not occur any other time in training and stimulates successful careers in academic neonatology, strengthening the pipeline of researchers. Most entering fellows are undecided on whether they will pursue a clinical or academic career. A 2-year fellowship that lacks in-depth research training will amplify losses of future academic leaders. With the 3-year training model, the required 48 weeks of clinical time can be distributed over 3 years to allow 80% protected time for research or advanced training opportunities including master's degrees. Federal (i.e., T32), state (i.e. California Institute of Regenerative Medicine/CIRM), and institutional training grants (i.e., donor funds to the institution/Department) underwrite career development opportunities that provide formative experiences for future academic leaders in neonatology, supporting these efforts.

The health of the field: (SS, CS)

FOR 2 Year Fellowship: The ability of general pediatricians and recent pediatric graduates to attend deliveries, care for transient neonatal problems and stabilize ill infants for transport is gradually decreasing and is likely to worsen with new ACGME guidelines. Such shortages will exacerbate already existing obstetric and neonatal care deserts. Recently, a hospital in Idaho closed obstetric services due to "loss of pediatric coverage to manage neonatal resuscitations and perinatal care" [28]. To close the gap in resuscitation and stabilization, more neonatologists will be needed to support advanced practice providers (APPs) and sustain obstetric services in rural areas. Two-year fellowships hold promise for reducing these deserts and creating more equity in access to neonatal care immediately after birth. There may also be a potential for creating a "mini-fellowship" or "rural-track residency" of 6 to 12 months to create "neonatal pediatricians" comfortable in covering deliveries in rural areas. Absent a sufficient supply of neonatologists to supervise these mid-level and general pediatric providers, there is a risk their expanded scope of practice could threaten neonatal practice – cheapening our level of expertise.

Currently, neonatologists have high percentage of professional fulfillment, low rate of burnout and low intention to leave their specialty. However, COVID-19 [29], increased pressures of practice, and administrative responsibilities have functionally reduced the NICU clinical workforce which may increase burnout in the future. In most systems, the majority of the clinical burden falls on junior division members. New NPM physicians are disproportionately female and graduate at an age when many are considering parenthood—creating stressors associated with accelerated levels of burnout. Further, a greater proportion of NPM fellow graduates may desire part-time work during early career. To maintain even the same staffing needs, a greater number of individuals will need to be trained. Shortening fellowship and increasing neonatologist supply may reduce burnout by allowing for more even distribution of the clinical workload.

AGAINST 2 Year Fellowship: Supply exceeding demand reduces potential for long-term compensation. Two-year fellowships will increase the number of neonatologists, threatening compensation for NICU providers over time. Unlike other subspecialists, where extreme shortages exist, a surplus of neonatologists is forecasted through 2035 [13]. The National Center for Workforce Analytics predicts neonatology to be over-capacity at 110% over the next decade, with shortages only in non-Metro areas [13, 30]. While

gross salaries are higher than in general pediatrics, neonatology remains underpaid compared to both other pediatric subspecialties and other critical care specialties when measured per hour or per work Relative Value Unit (wRVU) generated [31, 32]. Within the traditional structure of pediatric department financing, funds from neonatal care are already allocated to support physicians from lower-reimbursing fields. Increasing the supply of neonatologists will allow administrators to reduce compensation, especially if more graduating applicants exist for neonatologist positions. This will be especially true in more desirable locations – as hospitals are currently incentivized to pay neonatologists as little as the market allows, creating more funds to recruit in short-staffed subspecialties. This will disproportionately impact mid-career neonatologists, who traditionally see salary increases but now may find themselves replaced with an increasing number of lower-paid, new graduates. Increasing the graduating pool of neonatologists highlights another concern. Shortening fellowship training without the greater financial supports outlined in the NASEM report, such as Medicaid parity, reassignment of wRVUs, increases and support of research training and greater CHGME support, can worsen the current system for neonatologists and illustrates the potential for damage to pediatrics overall should the NASEM recommendations be adopted individually instead of as a comprehensive overhaul of the entire pediatric subspecialty landscape.

CONCLUSION

It takes ~10,000 h to reach an expert level of performance for most skills. NPM Training is nuanced, complicated and may require even more time to graduate from apprentice to master [33]. Belief that the current 3-year fellow training model can be reduced to 2 years challenges the presumption of time required to develop proficiency. While 3 years of fellowship training aims to create competence in medical knowledge, clinical skills and scholarship, the reality is competence is not attained in all areas even in the current paradigm of training. Fellowship is the final step of training on a path toward continued life-long learning and skill development.

NPM fellowship follows 3 years of training in pediatrics, where patient ages range from 0 to 18 years. Strictly speaking, NPM fellowship focuses primarily on the fetus and neonate, defined as up to and including 28 days of age. If the goal of a 2-year fellowship is to stabilize the longevity of the profession by increasing clinically-competent neonatologists, consideration should be made to reducing pediatric training for residents determined to pursue NPM. For reasons outlined above, the focus on training within neonatology should be preserved at 3 years to ensure that NPM graduates can perform at the highest standard upon completion of training.

Abandoning the scholarly requirement as a means of reducing training posits a philosophical question, "what will our culture of inquiry be?" A 2-year fellowship decreases time for academic pursuits and will erode the spirit of investigation and technological innovation that has made NPM among medicine's most successful. Failing to cultivate skeptical and questioning neonatal fellowship graduates risks condemning the profession to blind, algorithmic medicine, where guidelines are strictly followed with lack of thoughtful, individualized care. While most neonatologists do not engage in academics, each should be trained in an environment that demands scientific inquiry. This core belief should not be abandoned.

The question of shortening training is multifactorial, with long-term public health consequences.

Over time, a 2-year fellowship format may be valuable for fellowships with high rates of unfilled positions. But even under those circumstances, careful thought and ironically, more research into the time to establish competency in the current era of

training is needed. Ongoing observation of NRMP match rates, interest levels in pediatrics and NPM training, geographic distribution of subspecialists and overall evaluation of the pediatric and neonatal subspecialist workforce by professional associations are needed to refine the pediatrics and NPM curriculums. Considering all factors (Fig. 2), this group feels retaining the current 3-year model is optimal, particularly given FURTHER reduced clinical exposure to neonatology at earlier stages of training.

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AUTHOR CONTRIBUTIONS

SS contributed to the manuscript and provided critical revisions of the text. PM and JE wrote the drafted the section impacting education and made critical revisions to the manuscript. AD made critical revisions to the manuscript. EC and AS co-authored the section evaluating this potential change on research and made critical revisions to the manuscript. CS wrote the section on the impact on clinical neonatologists outside academic institutions. SL proposed the drafting of the manuscript, created the original outline, wrote the section compensation and made critical revisions to the manuscript. All authors approved of the manuscript prior to submission.

COMPETING INTERESTS

SL is currently a member of the Subboard of Neonatal, Perinatal Medicine at the American Board of Pediatrics (ABP). He is also the chair of the clinical care committee of Association of Medical School Pediatric Department Chairs (AMSPDC). Elizabeth Crouch is the Research Chair of the Trainees and Early Career Neonatologists group in the Section on Neonatal Perinatal Medicine of the American Association of Pediatrics. CS is currently the Chair Elect for the American Academy of Pediatrics (AAP), Section on Neonatal-Perinatal Medicine. PM is on the Council of Pediatrics Subspecialist (CoPS) executive committee and serves on the Organization of Neonatal-Perinatal Medicine Training. Program Directors (ONTPD) executive as the immediate past chair. The views expressed by the authors is their individual view and does not represent the official position of AAP, ABP, AMSPDC, CoPS or ONTPD.

ADDITIONAL INFORMATION

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