

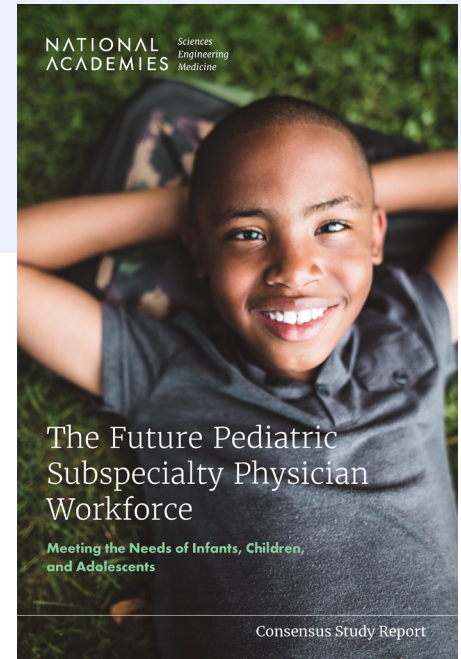
The Future Pediatric Subspecialty Physician Workforce

Meeting the Needs of Infants, Children, and Adolescents

OVERVIEW

The health of today's children sets the foundation for the future health of the nation. When children require preventive care or experience illness, injury, or a limitation in their functioning, a wide variety of health professionals provide expert care to maintain and promote their health and well-being. Pediatric subspecialists—pediatricians who receive additional fellowship training in specialty areas after residency—augment the care provided by primary care clinicians (such as family medicine physicians, general pediatricians, nurse practitioners, and physician assistants) by caring for children with uncommon health conditions or children who require technical procedures. For many children, pediatric subspecialty care is essential to their survival and a flourishing life. Data show that 10 to 20 percent of children in the United States visit a pediatric subspecialist every year. However, there are substantial disincentives to pursuing a career as a pediatric subspecialist. These disincentives, in addition to children's changing health care needs, have raised concerns about the current and future availability of pediatric subspecialty care and research.

In response to a request from a coalition of sponsors, the National Academies assembled an interdisciplinary committee of experts to recommend strategies and actions that will ensure an adequate pediatric subspecialty physician workforce to support broad access to high-quality subspecialty care and a robust research portfolio to advance the health and health care of infants, children, and adolescents.



The committee's report, *The Future Pediatric Subspecialty Physician Workforce: Meeting the Needs of Infants, Children, and Adolescents*, contains its analysis, findings, conclusions, and recommendations. While the committee recognized the contributions of many different clinicians in the care of children, it was charged to focus on pediatric subspecialty physicians (including both clinicians and physician–scientists). The committee particularly focused on the 15 medical subspecialties certified by the American Board of Pediatrics; however, where appropriate and relevant, the committee also considered other types of pediatric subspecialty physicians (see Table S-1 in the report). As a secondary focus, the committee examined the collaboration between pediatric subspecialty physicians and primary care clinicians. The committee's recommendations were developed for their vision of a high-quality pediatric subspecialty workforce, achieved through effective education and training, well-designed care models, appropriate reimbursement, innovations in care delivery and technology, and the continued attention to changing health care and economic landscapes.

CHALLENGES TO RECRUITMENT AND RETENTION

Recruiting and retaining a high-quality pediatric subspecialty workforce is complicated by several factors:

- **Access to care**—Appropriate use of subspecialty referrals can help improve access to care but unnecessary referrals can lead to overuse of subspecialty care and contribute to prolonged wait times. Insurance type and status, as well as out-of-pocket costs, also impact financial access to subspecialty care. Some patients may have to travel long distances to access subspecialty care, though these challenges may be lessened by using telehealth and outreach clinics.
- **Education and training**—The current model has not evolved in response to changing practice patterns and the needs of today's children, who are increasingly surviving illnesses and living with long-term conditions, resulting in a pediatric population whose care presents new challenges. Today's education and training paradigm has limited ability to change

quickly in response to emerging challenges, as well as limited flexibility for training in accordance with different career goals.

- **Influences on pursuing a career in a pediatric subspecialty**—Influences on the choice to pursue subspecialty training include early exposure to such careers, the presence of role models, the length of fellowship training, lifestyle factors, the likely high debt burden after pursuing such a career, and lower salaries for some subspecialties compared to other clinical specialties and general pediatricians in practice. Pediatric physician–scientists may also be discouraged by a lack of dedicated research time, inadequate research funding in grant awards, and competing clinical responsibilities, which can impact pediatric research.
- **Primary care–subspecialty interface**—Challenges at this interface can be frustrating for patients, families, and clinicians alike. Demands on primary care clinicians may result in the referral of patients to pediatric subspecialists when their medical issues could be handled within primary care with adequate time and resources. Communication and coordination between primary and subspecialty care teams is often fragmented and further complicated by the lack of evidence-based protocols to guide when patients should return to primary care versus remaining in specialty care. A more coordinated interface could be achieved through innovations such as integrating primary and subspecialty care, using telehealth and nurse-led models of care, and deploying financing innovations—but there are barriers to fully implementing and scaling these approaches.
- **Financing children's health**—The large percentage of children on Medicaid, especially among those cared for by pediatric subspecialists, coupled with low payment rates and productivity-based fee schedules that do not adequately reflect the time and expense required for most pediatric care, adversely affects reimbursement for pediatric subspecialty care, resulting in lower salaries for many pediatric subspecialists compared to their adult counterparts.

RECOMMENDATIONS

The committee emphasizes the importance of high-quality primary care for achieving high-quality subspecialty care, and that accompanying changes are needed to support primary care clinicians. For this study, the committee's recommendations fall under four broad goals that support their vision of a high-quality pediatric subspecialty workforce with a robust research portfolio to advance the health and health care of infants, children, and adolescents.

1. **Promote collaboration and the effective use of services between pediatric primary care clinicians and subspecialty physicians.**

- a. Understanding trends in children's health care needs, demands, and access to care, as well as the composition of the pediatric workforce, will help characterize necessary education and training, inform innovative models of care, and identify subspecialties to receive additional support or resources. The Agency for Healthcare Research and Quality (AHRQ) should submit a biennial report to the Secretary of the Department of Health and Human Services summarizing these trends, including information on clinicians from backgrounds underrepresented in medicine (URiM) (see **Recommendation 2-1** in the report).
- b. Effective pediatric subspecialty care depends on seamless coordination with the patient's primary care team. However, inadequate training, productivity pressures, and payment and regulatory barriers stand in the way of fully integrated team-based care. To promote team-based care, pediatric professional societies should collaboratively develop and implement testing, management, and referral guidelines that clarify when to consult, when to co-manage, and appropriate follow-up roles (see **Recommendation 7-1** in the report). Payers should adequately reimburse evidence-based delivery models that improve team-based care, including e-consults, telehealth visits, and integrated care teams (see **Recommendation 7-2** in the report). Lastly, the Centers for Medicare

& Medicaid Services (CMS), state Medicaid agencies, private foundations, and health systems should invest in the development of innovations at the primary-specialty care interface and in pediatric subspecialty referral and care coordination processes (see **Recommendation 7-3** in the report).

2. **Reduce financial and payment disincentives.**

- a. Significant financial disincentives to pursuing a career in a pediatric subspecialty exist, including lower comparative salaries and significant medical education debt. Congress should allocate funding to increase payment for pediatric services, including increasing Medicaid payment rates to achieve or exceed parity with Medicare payment rates within the next five years (see **Recommendation 8-1** in the report). CMS should also prioritize assigning relative value units to pediatric services that accurately reflect time and resource use (see **Recommendation 8-2** in the report). Lastly, Congress should increase funding for the Pediatric Specialty Loan Repayment program to \$30 million, and the Health Resources and Services Administration should focus on loan repayment for high-priority pediatric medical subspecialties and subspecialists from URiM and/or economically disadvantaged backgrounds (see **Recommendation 5-4** in the report).

3. **Enhance education, training, recruitment, and retention.**

- a. Pediatric subspecialty education and training has not evolved to meet the current needs of patients or trainees and does not allow for differentiation of skills in clinical care, research, or education. The Association of Medical School Pediatric Department Chairs should periodically convene relevant organizations to review and adjust education and training curricula for pediatric residents and fellows (see **Recommendation 4-1** in the report), and the American Board of Pediatrics, the American Osteopathic Board of Pediatrics, and the Accreditation Council for Graduate Medical Education should develop,

implement, and evaluate distinct fellowship training pathways, including a 2-year option, tailored to specific career goals (see **Recommendation 5-1** in the report).

- b. Congress should reform graduate medical education formulas and programs to ensure equitable and sufficient support for pediatric graduate medical education. Funding should also be distributed to address priority needs, including increased inclusion of clinicians from URiM backgrounds, high-priority subspecialties, geographic shortages, and training for new models of care (see **Recommendation 5-2** in the report). Pediatric department chairs, medical school deans, and health systems should also publicly report on plans to attract, support, and retain individuals from URiM backgrounds in pediatric subspecialties, including efforts to grow programs aimed at pre-college students (see **Recommendation 5-3** in the report).

4. **Support the pediatric physician-scientist pathway.**

- a. Pediatric physician-scientists are vital to improving outcomes for the nation's children and need extended training with deliberate efforts to encourage and facilitate entry into research careers and foster their early phases of career development, especially for those who are underrepresented in the scientific workforce.

The National Institutes of Health (NIH) Pediatric Research Consortium, in collaboration with other relevant partners and with appropriate funding and input, should create and maintain a publicly available central data repository for quantitative and qualitative data on pediatric physician-scientists' funding and success throughout their careers (see **Recommendation 6-1** in the report). NIH and AHRQ should also increase the number of career development grants in pediatrics, with attention to providing such grants to physician-scientists from backgrounds that are underrepresented in the scientific workforce and for high-priority subspecialties in pediatric research (see **Recommendation 6-2** in the report). Funding should also reflect current salaries and project expenses and include additional explicit funding for mentorship.

CALL TO ACTION

Achieving a robust subspecialty workforce will require a willingness to adapt to the changing needs of children and clinicians and an evolving health care delivery system—while investing in the time and resources to support both primary care and subspecialty care. Concerted and collaborative efforts across a spectrum of partners will result in a health care system that serves the needs of all children, and provides a high-quality experience for patients, families, and clinicians alike.

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FOR MORE INFORMATION

This Consensus Study Report Highlights was prepared by National Academies' staff based on the Consensus Study Report *The Future Pediatric Subspecialty Physician Workforce: Meeting the Needs of Infants, Children, and Adolescents* (2023).

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Copies of the Consensus Study Report are available from the National Academies Press, (800) 624-6242 or <https://www.nap.edu/catalog/27207>.

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