

Pediatrics 2025: The AMSPDC Workforce Initiative

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Over the past 2 decades important discussions and organizational efforts have focused on the topic of the pediatric workforce. Concerns have been raised about our ability to provide comprehensive care to children as models have predicted physician shortages, geographic maldistribution of both general and subspecialty pediatricians, and raised important concerns regarding access to pediatric care in rural communities.

The Federation of Pediatric Organizations offered a number of recommendations, which included aligning our educational programs with the emerging health needs of children and families, preparing trainees for leadership roles within multidisciplinary teams, strengthening the support of child health researchers, addressing workforce diversity challenges, and assessing the financial challenges of trainees, including debt burden.¹ In their policy statement, the American Academy of Pediatrics stated that “the current pediatrician workforce is not meeting the primary care, subspecialty or surgical needs to provide quality health care for US children and that critical workforce shortages exist in pediatric medical subspecialties and pediatric surgical specialties.”² The behavioral needs of children are not being met by our current workforce, a situation that has been further exacerbated during the coronavirus disease 2019 pandemic.³

In addition to providing comprehensive clinical care, pediatricians provide important leadership within a health care system that requires advocacy to raise awareness of the impact of policies on the nation’s children. Although our complex health care system must meet the growing needs of an aging population, we must also recognize the role of pediatricians in providing the foundational care that not only improves child health but may mitigate the long-term consequences of antecedents of adult disease, including addressing poverty and the social determinants of health.⁴

Developing the pediatric workforce to meet the many challenges faced by our pediatric patients and their families is one of our most important priorities and will require a collaborative effort by organizations that impact the care of children. An initial step in this challenge is to understand the pediatric workforce data and to address the trends that are occurring within our categorical and subspecialty training programs. In February 2020, the Association of Medical School

Pediatric Department Chairs (AMSPDC) convened a multi-organizational Workforce Summit that brought together leaders from many of the organizations that have important roles in caring for children across the domains of advocacy, clinical care, education, policy, and research. The goal was to begin the necessary dialogue required to strengthen the pediatric workforce and has led to an ongoing project we now call Pediatrics 2025: The AMSPDC Workforce Initiative.

February 2020 Workforce Summit

The Summit focused on 2 important long-term goals for the pediatric community:

(1) Identify strategies to increase the number of high-quality medical students who pursue training in categorical Pediatrics, Medicine-Pediatrics, and combined Pediatric Subspecialty training programs and (2) Improve the recruitment of pediatric residents into pediatric fellowship programs, with an emphasis on fellowship programs that struggle to fill their training positions.

To accomplish these goals the following objectives were developed: (1) Understand current pediatric workforce data and recent trends related to categorical pediatric residency training and subspecialty fellowship programs; (2) Identify the gaps in our current data system and the challenges with reviewing workforce data; (3) Identify questions, for subsequent data analysis, that will add important information to the dialogue regarding the pediatric workforce; (4) Develop potential action steps that focus on key strategies to strengthen the pediatric workforce; and (5) Articulate a timeline for our work, subsequent meetings and topics for future consideration.

The AMSPDC Workforce Summit began with a comprehensive review of data from the National Residency Matching Program (NRMP), the American Board of Pediatrics, and the Association of American Medical Colleges.⁵⁻⁷ In particular, the data discussion focused on recent trends (2015-2020) that highlight important changes in our workforce. A careful review of data from the NRMP demonstrates that while pediatrics has seen a 7% growth in the number of positions available in the Match, other disciplines have more dramatic

AMSPDC	Association of Medical School Pediatric Department Chairs
APP	Advanced practice provider
NRMP	National Residency Matching Program

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increases in the number of available positions. In the 2020 NRMP Main Residency Match, pediatrics constituted only 8.4% of all first-year training positions that were offered in the Match, compared with 2010 when pediatrics constituted 10.6% of all first-year training positions. The demonstrable notable decline in graduates of MD granting medical schools matching into pediatrics was among the most significant decreases across all disciplines. Pediatrics, similar to other disciplines, has benefitted from an important increase in the number of graduates of DO granting medical schools who are pursuing careers in pediatrics. The number of International Medical Graduates entering pediatric training programs is at an all-time high. Over the past 4 years, there has been an increase in the number of pediatric programs that have not filled in the Match with the number of unfilled positions in the 2019 Match being the highest in 10 years. Adding more concern is that an important number of pediatric specialties continue to struggle to fill their training positions during the Pediatric Subspecialty Match. Child abuse, developmental and behavioral pediatrics, endocrinology, infectious disease, nephrology, pulmonology, and rheumatology filled less than 70% of available positions in the 2020 Match and each of these programs continue to have far fewer applicants than positions available in the Match.⁸

While recognizing the potential biases that are inherent when reviewing workforce data, the summit highlighted the need to address more than just the actual numbers of trainees as the only marker for interpreting this data.⁹ Consideration must be given to other important factors that need to be included such as the impact of part-time practitioners, the percent clinical effort provided by practitioners, and the administrative burdens currently faced by generalist and subspecialty pediatricians. The role of advanced practice providers (APPs), including nurse practitioners and physician assistants will be important to include in this dialogue, especially with recent data suggesting a profound shortage of nurse practitioners.¹⁰

The data discussion led to identifying 4 domains that we believe warrant further discussion and strategic planning and represent the initial areas of focus for this project.

Domain 1 - Changing the Educational Paradigm, with Impact on Attracting Diverse Trainees into Pediatrics and Undersubscribed Pediatric Subspecialties

Pediatric training experiences and requirements for undergraduate and graduate medical education programs are directed by the Liaison Committee on Medical Education, the Commission on Osteopathic College Accreditation, and the Accreditation Council for Graduate Medical Education. Traditional approaches to training must be reconsidered by thought leaders in medical education with an emphasis on creative approaches that provide learners with a comprehensive and stimulating work environment. Specific strategies include the following.

Advocacy

Pediatric leaders must engage organizations that provide oversight to our undergraduate and graduate medical education programs. Thoughtful dialogue must drive change in our educational requirements that can generate the excitement needed for high quality applicants to consider career opportunities in pediatrics.

Curricula

It is imperative to redesign our undergraduate and graduate medical education learning environments to better position pediatrics as an attractive discipline for trainees. We need to advocate for optimizing the depth and duration of medical school training in Pediatrics, especially with many schools decreasing the length of third year pediatric clerkships. Reviewing curricula and experiences from both DO and MD granting medical schools that have been successful at attracting graduates to pursue careers in pediatrics may highlight “best practices” for others to emulate. It may be time to consider additional training pathways that can add further depth to the already established programs such as the Integrated Research Pathway and the Accelerated Research Pathway of the American Board of Pediatrics. Any curricula change that re-examines existing residency program components (length of training, flexibility of inpatient and outpatient training, subspecialty rotations) must incorporate novel training experiences that prepare trainees to address the challenges pediatric patients are likely to experience in future years.

Subspecialty Exposure

Creative approaches to increasing subspecialty exposure early in training (especially in undersubscribed subspecialties) must take advantage of models that will allow for sharing subspecialty experiences across training programs at different institutions.¹¹ Enhancing residents exposures and interactions with subspecialty fellows and faculty are important priorities and should be designed to supplement the experiences on clinical electives.

Positive Role Modeling

The value of sponsorship and mentoring must be emphasized with our faculty. We need to develop innovative approaches to enhancing engagement between faculty and trainees by celebrating the unique aspects of careers in pediatrics, including science, clinical care, advocacy, public health, and administration.

Workforce Diversity

In addition to increasing diversity in our medical schools, we must partner with organizations such as the Student National Medical Association and the Latino Medical Student Association to both support their activities and stimulate discussion regarding careers in pediatrics. Understanding the role of sponsorship is important. Departments must support the career development of our underrepresented in medicine workforce by nominating colleagues for well-established

programs such as the New Century Scholars program and the Frontiers in Science Program.¹² We must be intentional in developing and using evidence-based models for recruiting and retaining a diverse pediatric workforce.¹³

Domain 2 - Workforce Data/Needs and Access

Centralizing and collating the data will provide data that can be benchmarked and monitored throughout the duration of this project.

Data

It is important to understand recent trends in pediatric workforce data with an analysis that prioritizes diversity and inclusion as a core component of all important data elements, including the physician scientist workforce, the important contributions of doctors of osteopathic medicine in pediatrics, APPs, and work profiles of our pediatric subspecialists. Our data must be reviewed with an equity lens to ensure the workforce is aligned with the diversity of the patients we serve.

Needs and Access

Our partnership with other academic organizations must address important questions that relate to the utilization patterns of the pediatric workforce, especially the subspecialty workforce. Access to care will be an important component of our work, especially as we consider team-based multidisciplinary approaches to child health. Our discussions must consider possible changes in care models (role of APPs, psychologists, social workers), changes in referral patterns, changes in growth of the pediatric and adult population, and the impact of the coronavirus disease 2019 pandemic on pediatric models of care, especially with the expansion of telehealth.

Domain 3 - Economic Strategy

The economics of pediatric health care is complex and has been discussed in the literature for many decades.¹⁴ We can no longer ignore the policy decisions that negatively impact the economics of providing health care to children. Strategies that improve the financial health of pediatrics must consider the economic dilemmas that may impact the choice of pediatrics as a discipline. Targeted incentives may be an important part of this dialogue. Specific strategies include the following.

Financial Burden

While the debt burden of our medical students continues to grow, we must begin to mitigate impact with programs such as loan repayment, scholarships, and other financial incentives or subsidies.

Equalizing Compensation

Pediatrics has a well-deserved reputation for not being as financially secure when compared with other disciplines. To allow careers in pediatrics to be considered more financially viable, we must work with payers to equalize reimbursement between adult and pediatric care providers, prioritizing equal payments between Medicare and Medicaid. We must develop strategies that change our compensation models and begin to equalize pediatric salaries with benchmarks established for adult providers. The negative impact of unequal compensation for health care services leads to substantial inequities in salaries for pediatricians, which can lag behind colleagues in adult disciplines by as much as 20% or more.¹⁵

Revenue Streams

We must advocate for increased reimbursement for pediatric care. The disparity between adult and pediatric care providers is especially troublesome between public insurance plans where Medicaid reimbursement for pediatrics can be as low as 64% of Medicare and 53% of private insurers.¹⁶ With over 36 million children enrolled in Medicaid and an additional 9.5 million enrolled in Children's Health Insurance Program (fiscal year 2018 data), the importance of this challenge cannot be overstated.¹⁷ An analysis of data after passage of the Accountable Care Act demonstrated a significant increase in the number of pediatricians who provided care to Medicaid recipients after equalization of payments between Medicare and Medicaid.¹⁶ In addition, we must develop strategies to create greater parity in reimbursement for the range of pediatric subspecialists, considering the current differential between nonprocedural based subspecialties, procedural subspecialties, and intensivists.

Domain 4 - Other Considerations for Attracting High Quality Medical Students into Pediatrics

It will be important to review and understand the process by which career decisions are made by trainees.¹⁸ The factors that impact career decisions will change throughout a trainee's educational journey. A recent study of medical students highlights the interaction of intrinsic factors, such as perceived personal happiness with a career in pediatrics and extrinsic factors, such as exposures to pediatrics both before and during their clerkship training as contributing to the complex process of making career decisions.¹⁹ Specific strategies to consider include the following.

Advocacy

Provide medical schools/department chairs and clerkship directors with a tool kit for promoting pediatrics, through the use of pediatric interest groups, increased incorporation of pediatric faculty and pediatric case-based presentations into the preclinical curriculum, increased shadowing/research/other experiences for preclinical medical students with pediatric faculty, tracking pediatric specific metrics (eg, percent of

graduates matching in categorical pediatrics and combined pediatric programs), and creative approaches to highlighting the importance of our discipline. It may be necessary to work with our health systems or pediatric organizations to identify funding sources to finance implementation of these strategies.

Marketing Strategy

Develop strategies to market the field of pediatrics to medical students utilizing approaches that identify and respond to factors important in their decision-making process. We should emphasize the impact of pediatricians on early child development and subsequently on the entire life course.

Early Exposure

Work toward increasing and implementing early exposure to the pediatric discipline at various critical touch points, including high school and college, medical school preclinical and clinical curricula, early in residency training, and possibly other key times.

Recruitment/Outreach

Improve the pediatric pipeline by creating strategies that engage high school students, college students, and preclinical medical students, eg, early exposure to pediatric specific STEM programs, enhanced work with organizations such as the Student National Medical Association and partnering with Council on Medical Student Education in Pediatrics. Efforts to produce a diverse workforce must remain a priority area for all organizations involved in the care of children.

Next Steps

Previous efforts to strengthen the pediatric workforce have struggled with identifying actionable next steps that lead to meaningful change. We must commit to those efforts that highlight the creativity and career opportunities available in pediatrics. The work ahead of us will require a multifaceted approach involving the many organizations that were present at the February AMSPDC Workforce Summit. As we move forward, other organizations that align with these efforts will be asked to partner in this work, as we divide and conquer the implementation plan. Although we have identified 4 domains as the foundation of our current work, there will be further revisions, new topics, and revised priorities as we work together to respond to this important challenge.

Conclusions

We must place a high priority on developing strategies to strengthen the pediatric workforce. The data discussed at the summit raised many important questions that must be addressed in a collaborative and comprehensive approach. Emphasizing the important contributions of pediatricians as clinicians, scientists, educators, and public health advocates will allow trainees to see the potential opportunities and career paths within pediatrics. As we advance this work, we must establish pediatrics as a leader in social justice and a discipline that creates a culture that emphasizes diversity and a commitment to equity and inclusiveness. Developing action steps within the domains established at the summit will require the participation of the many organizations invested in meeting the needs of our nation's children. ■

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