



Letters

The future of the allergy immunology specialty is in our hands

This year's results are in. In 2021, the number of allergy immunology (AI) fellowship applicants per position (APP) was 1.4.¹ With the exceptions of a 2018 nadir (1 APP) and a 2008 peak (1.7 APP), AI applications have ranged from 1.2 to 1.5 APP since joining the National Resident Matching Program Specialties Matching Service (SMS) in 2008.^{1–3}

Reflecting the general increase in the total number of applicants and positions offered across the specialties participating in the SMS this year, AI had its highest number of applicants (199) and highest number of fellowship positions offered (146) in the last 5 years.¹ Of note, 75% of the AI spots offered were filled by US allopathic medical graduates.¹ Nevertheless, there is still cause to reflect on how to enhance interest in a career in AI. This year's number of AI fellowship APP falls below the national mean of 1.72 for all programs participating in the SMS in 2021.¹ A 2016 survey of AI program directors noted that the greatest challenge to recruiting applicants was “not enough applicants.”⁴

The notable initiatives of the American College of Allergy, Asthma & Immunology and the American Academy of Allergy, Asthma & Immunology have enhanced recognition of our field among some medical students and residents through the SPARK awards and the Chrysalis Project, the offering of free American College of Allergy, Asthma & Immunology and American Academy of Allergy, Asthma & Immunology memberships, the development of rotation curricula, and the production of AI career informational videos. Although these efforts are valued, it is still essential for medical students and residents to first be cognizant of AI as a specialty before seeking out these laudable programs and offerings. Unfortunately, medical students and residents may be unaware of AI as a specialty. Many may never be exposed to AI during their undergraduate or graduate medical education as the specialty is predominately outpatient. Moreover, only 1% of active AI physicians surveyed in 2019 by the Association of American Medical College report teaching as a major professional activity.⁵ Thus, AI may be underrepresented or nonexistent at academic medical centers and, often, there is little inclusion of allergists immunologists in medical student curriculums.⁶

The impact of clinician role models on medical students should not be overlooked. There is a strong association between role models in a particular field and the choice of specialty students will pursue.⁷ Although most medical students surveyed identified role models in the final year of medical school, 11% did so during the first 2 years,⁷ emphasizing the importance of specialists' interactions with students early on in their career trajectory. The impetus of medical school curriculum developers to transition from a horizontal curriculum

(isolated preclinical curriculum followed by clinical curriculum across time) to a vertical or spiral curriculum (integrated basic science and clinical curriculum across all years of medical school)⁸ lends itself to the early interaction of AI clinicians with medical students.

In the 2015 to 2016 academic year, our school of medicine began introducing students to clinical AI. A didactic session for second-year medical students on primary immunodeficiency diseases (PID) was led by our health system's AI division chief. In 2016, a clinical allergist immunologist was hired as core faculty at the medical school, initiating sustained student exposure to an AI specialist. In collaboration with the immunology science course directors, she developed a plan to increase immersion of AI clinicians in the basic science curriculum. Notably, 2 novel AI high-fidelity simulations on anaphylaxis and PID were developed as formative exercises for second-year medical students.⁹ Multiple practicing allergists immunologists were recruited and volunteered to facilitate clinical discussions with students during these simulation sessions. AI clinicians also volunteered to facilitate both a workshop on PID¹⁰ and a “Big Picture of Immunology” session during the immunology course. A clinician-led review session on the diagnosis, work-up, and treatment of common PIDs was implemented. Moreover, an impactful session on “Living with Severe Food Allergies” was developed and jointly led by an allergist immunologist, the parent of a teenager who died of cow's milk allergy anaphylaxis, and individuals with food allergies. All clinicians attested to enjoying the interactions with students and found the experiences gratifying.

Aside from the continued presence of the core AI faculty member, the clinical AI sessions and simulations totaled 9 hours of direct interaction with practicing AI physicians during a preclerkship year. Although seemingly a small amount of time in the overall medical school curriculum, perhaps this exposure had some impact. Beginning with our inaugural class that matriculated in 2011, no students participated in AI electives or selectives, or observed AI clinic sessions before the 2016 to 2017 academic year. However, in the last 5 years, a total of 8 students have participated in either an AI elective or selective. An additional 5 preclerkship medical students attended allergyimmunology clinic sessions within the last 2 years. Certainly, these numbers are not robust, and we are unable to identify at this point whether these students will sustain interest in AI. Nevertheless, it does suggest that exposing students to clinical allergists immunologists during medical schoolinitiated recognition of AI as a specialty and piqued some students' interest and curiosity. Nationally sponsored student opportunities to attend AI meetings have since been included in student communications, and students intrigued by AI have sought insight and resources from our core AI faculty member.

The promotion of our specialty in the next decade rests on growing the awareness and appeal of AI for the future physician workforce as early as possible. It is critical that AI physicians pledge to play an active

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Reprints: Marie Cavuoto Petrizzo, MD, MSEd, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, 500 Hofstra University, Hempstead, NY 11549.

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role in acquainting students with the specialty early on and engage with learners as professional role models. Medical colleges continuously seek ways to infuse clinical medicine within the preclerkship curriculum. I challenge allergists immunologists to pursue teaching opportunities in neighboring medical colleges. I entreat clinicians to seek occasions for curricular or cocurricular presentations for students. I encourage our annual meeting organizers to provide medical educator training for physicians. I appeal to allergist immunologists to mentor and coach early learners who are inquisitive about AI. It is our responsibility to cultivate the specialty. The future of AI is in our hands.

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Marie Cavuoto Petrizzo, MD, MSED*

Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Hofstra University

Hempstead, New York

Marie.C.Petrizzo@hofstra.edu

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