



Infectious Diseases Workforce

As we work to bring the COVID-19 pandemic under control in the coming months, we have a tremendous opportunity to drive the national conversation about lessons learned from the pandemic response, and preparations for future global infectious disease threats. One of those lessons is the importance of an ID workforce for research, clinical care, and public health.

IDSA and HIVMA would like to partner with NIAID to help shape this conversation and advance investments and policies that will help strengthen and diversify the research workforce. While the current pandemic has reportedly increased interest in infectious diseases as a career, translating increased interest into recruitment and retention remains a challenge. Infectious diseases as a specialty only filled 88% of positions and 75% of programs in the recent match; further, 80% of counties in the US do not have an ID specialist¹. This challenge is driven by factors such as low salaries relative to other medical specialties (and low reimbursement for cognitive specialties more generally); high medical school debt combined with the requisite extra years of fellowship training; and the need to obtain funding for scientific faculty positions. We greatly appreciate that NIAID convened a 2019 workshop with scientific society partners to develop solutions for these challenges, and we support the recommendations that emerged. Strong NIAID support for career development through funding and other initiatives is critical to maintaining and improving the pipeline of physician scientists committed to a career in ID. We recommend additional measures below to help revitalize the research training pipeline and optimize the workforce to tackle future challenges:

Junior Faculty/Early Stage Investigators

- Increase collaboration between federal agency, university, and specialty society partners to incentivize physician-scientist programs in areas that intersect with infectious diseases.
- Build additional mentor support into NIH training awards (K23, K08, K01) and consider increasing the number of training grants and career development awards that help support mentorship, such as institutional K12 awards to support the career development of junior faculty. For multi-center studies, investigators have more opportunities for mentorship and can make training opportunities part of application requirements. Increase salary support available for K awards: the current formula requiring 75% time at a salary cap of

¹ <https://www.acpjournals.org/doi/full/10.7326/M20-2684>

\$100K limits institutional support, thereby increasingly limiting K awards to a selection of academic medical centers (and consequently decreasing recipient diversity).

- Incorporate K-type funding into major NIH-funded network awards in order to help train the next generation of clinical trialists. This would be cross-cutting with the clinical trials goals listed below.
- Create grant award incentives to spur more established researchers to lead program projects or other multi-project grants in which early stage and mid-career investigators can serve as PIs on subprojects.
- Expand loan repayment program (LRP) access for ID trainees. This is important because the NIH LRP directly reduces financial burden on trainees, potentially minimizing the costs of lower compensation for ID physicians.
- Increase and prioritize K99 awards, which are essential to impacting physician-scientist recruitment and retention at an early stage. In 2020, the National Cancer Institute (NCI) ranked first in budget size and was the leader in funding K99 awards (N=41) while the NIAID, which ranked second in budget size, was seventh among Institutes for K99 awards, funding only 21.
- Redefine the Early Stage Investigator (ESI) definition for physician-scientists. The current definition is: “a new investigator who has completed his or her terminal research degree or medical residency—whichever date is later—within the past 10 years and has not yet competed successfully for a substantial, competing NIH research grant.” For those completing clinical training and fellowship, it would be advantageous to extend the definition to completion of fellowship to allow for an adequate window. Given that many trainees go on to a KL2 or departmental fellowship (or both) following their three-year clinical fellowships, the 10-year ESI cutoff is often premature.
- Provide innovative opportunities for clinical community-based ID practitioners to participate in clinical trials via feasible programs.

Fellow/Resident Trainees

- Explore ways to strengthen and facilitate the transition from training to faculty (e.g., separate mechanisms for physician-scientists with dedicated study sections that account for the unique demands and timing of clinical training). Consider specific study sections dedicated to K award review.
- Develop initiatives like the NIH R38 StARR program to offer research support during fellowship training as part of a research pathway. The current program misses an opportunity for those choosing careers in internal medicine subspecialties to benefit maximally and to make a potentially greater impact in the physician scientist workforce. Additionally, alternative resources to support more diverse areas of research (e.g., implementation science, public health, stewardship, hospital epidemiology) are needed. The current structure only provides research support for fellows through the T mechanism, which is competitive and often narrowly focused, limiting opportunities for potential trainees.

If you have additional questions or would like further information, please contact Jaclyn Levy, IDSA Director of Public Policy, at jlevy@idsociety.org.

- Allow R38 recipients at the resident or fellow level to also enroll in degree-granting programs like the MSc which are critical to funded clinical or clinical/translational research and predict success as an independent investigator.

Diversity Efforts

- Strengthen focus on scientific workforce diversity, including programs for midcareer awards (e.g., K24) to cultivate diverse mentors at this critical stage of the pipeline.
- Provide more funding opportunities for ESIs from underrepresented groups. NIH does this at the predoctoral level with the F31 NRSA Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research mechanism. NIAID could establish an F32, K08, or K23 equivalent to promote diversity and targeted support for physician scientist workforce development.
- Expand NIAID's Primary Caregiver Technical Assistance Supplement Program to include K awardees as eligible individuals.
- Provide a supplement to NIAID K awardees who are primary caregivers (e.g., for children or ailing parents) to include a technician to help them with their research pursuits.
- Open eligibility for T32 awards to physicians in the U.S. on J1 or H1B waivers who are promising research scientists without a clear pathway to pursue research careers.
- Foster increased collaboration among federal agencies, research institutions and community-based organizations with expertise in health disparities to develop and inform strategies to improve mentorship programs and career support for underrepresented minorities during MD and/or PhD training.
- Ensure that study section participants include individuals from underrepresented backgrounds and clinician scientists who understand the unique challenges encountered by trainees.

Outstanding Questions

- In terms of the Antibacterial Resistance Leadership Group (ARLG) and clinical trials, the 2020 National Action Plan for Combating Antibiotic-Resistant Bacteria calls for 60 new investigators by end of 2021. What is the status of that effort and what plans are being considered beyond 2021?
- Is NIAID providing the maximum \$50K/year in loan repayment to all eligible individuals? How could the LRP be strengthened to further incentivize physicians to pursue ID research careers and reduce trainee attrition?

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