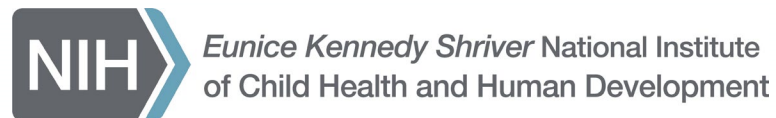


NICHD Extramural Training & Career Development Working Group (WG)

Overview, Charge, and Recommendations

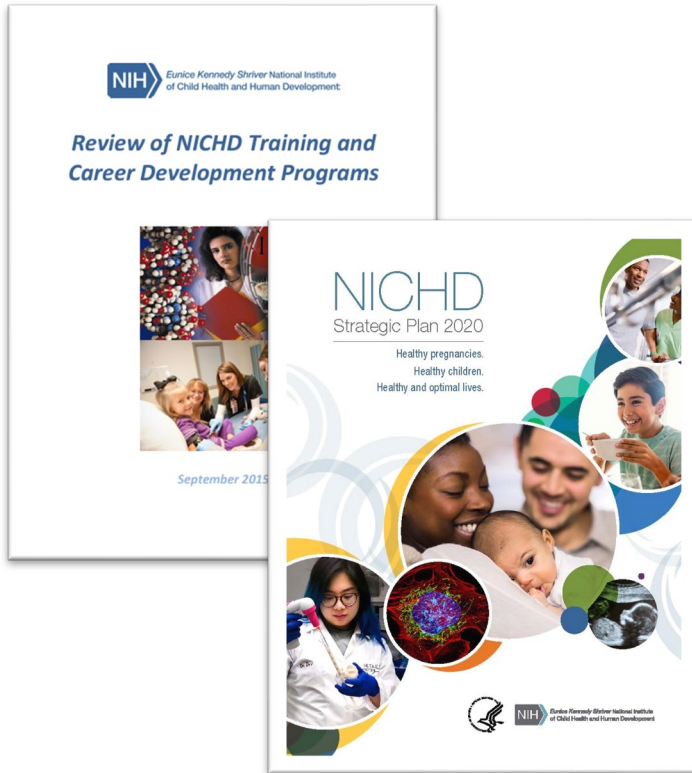
January 2024



Background



As part of overall scientific stewardship, NICHD periodically examines various programs for unmet opportunities and select areas of improvement.



2016

NICHD completes an evaluation of the extramural career development and training programs. In response to this evaluation, several changes were made, including reducing the support for institutional awards and supporting more individual awards.

2020

NICHD develops and releases a Strategic Plan and has affirmed a commitment to addressing extramural workforce diversity through STRIVE.

2023

A new, time-limited working group was charged with helping NICHD identify opportunities in our training programs to prepare the future research workforce to address NICHD's mission.



Working Group Members

Theresa Cruz (Co-Chair)
Director, NCMRR

Joseph Gindhart
Deputy Director, DEA

Brett Miller
*Health Scientist
Administrator, CDDB*

Chris Belter
Program Analyst, DER

Tessie October (Co-Chair)
Medical Officer, PTCIB

Leigh Allen
Program Officer, CRB

Ronna Popkin
Program Director, PDB

Ying Liu
Program Analyst, CRB

Susan Taymans (Co-Chair)
Deputy Branch Chief, FIB

Sujata Bardhan
Program Director, IDDB

Denise Russo
*Deputy Branch Chief,
MPIDB*

Amanda Sztejn
Analyst, DER

Aaron Pawlyk (former Co-Chair)
Chief, OPPTB

Guillermina Girardi
*Health Scientist Program
Officer, PPB*

Lesly Samedy-Bates
Program Officer, OPPTB

Rohan Hazra
Director, DER

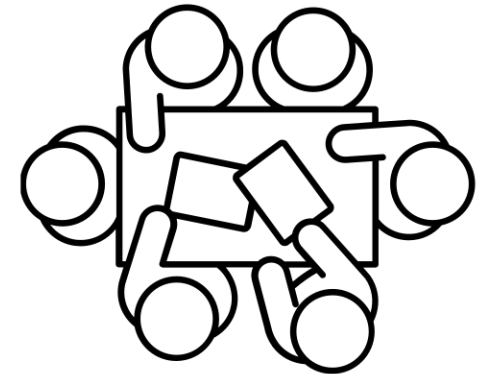
Deborah Henken
Program Officer, DBCAB

Dennis Twombly
Deputy Director, OEP


Rebekah Rasooly
Director, DEA

Tracy King
Medical Officer, IDDB

Karen Winer
Medical Officer, PGNB

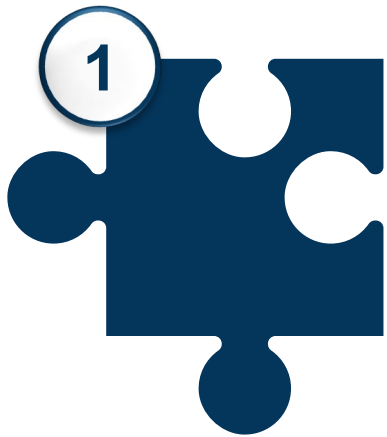


Working Group Mission and Breakdown

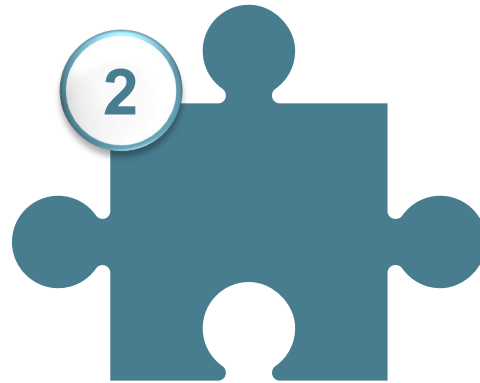


Mission: Develop a set of recommendations for the future of NICHD training and career development programs to maximize alignment with the Strategic Plan and NICHD priorities, including a focus on addressing scientific workforce diversity.

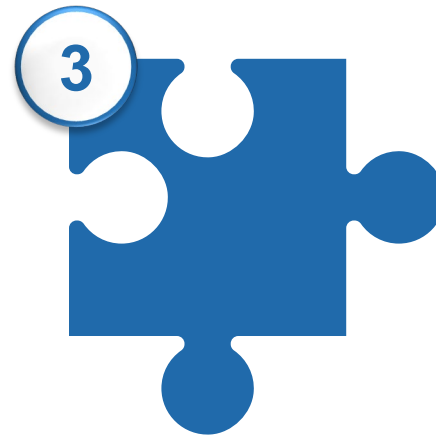
Workstream Goals



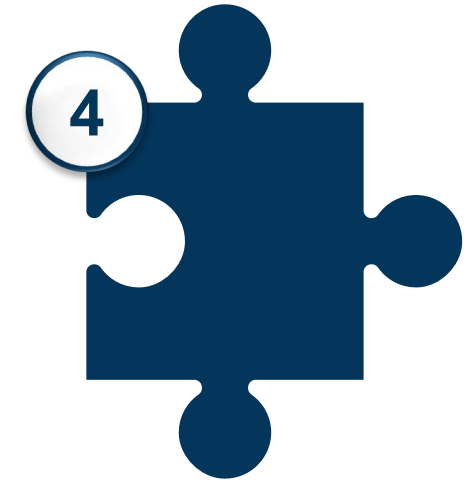
Understanding the landscape of NICHD's current training & career development programs



Reimagining NICHD's pre- and post-doctoral (F, T, Supplement) programs



Reimagining NICHD's career development (K) programs



Aligning training and career development goals with NICHD's strategic priorities

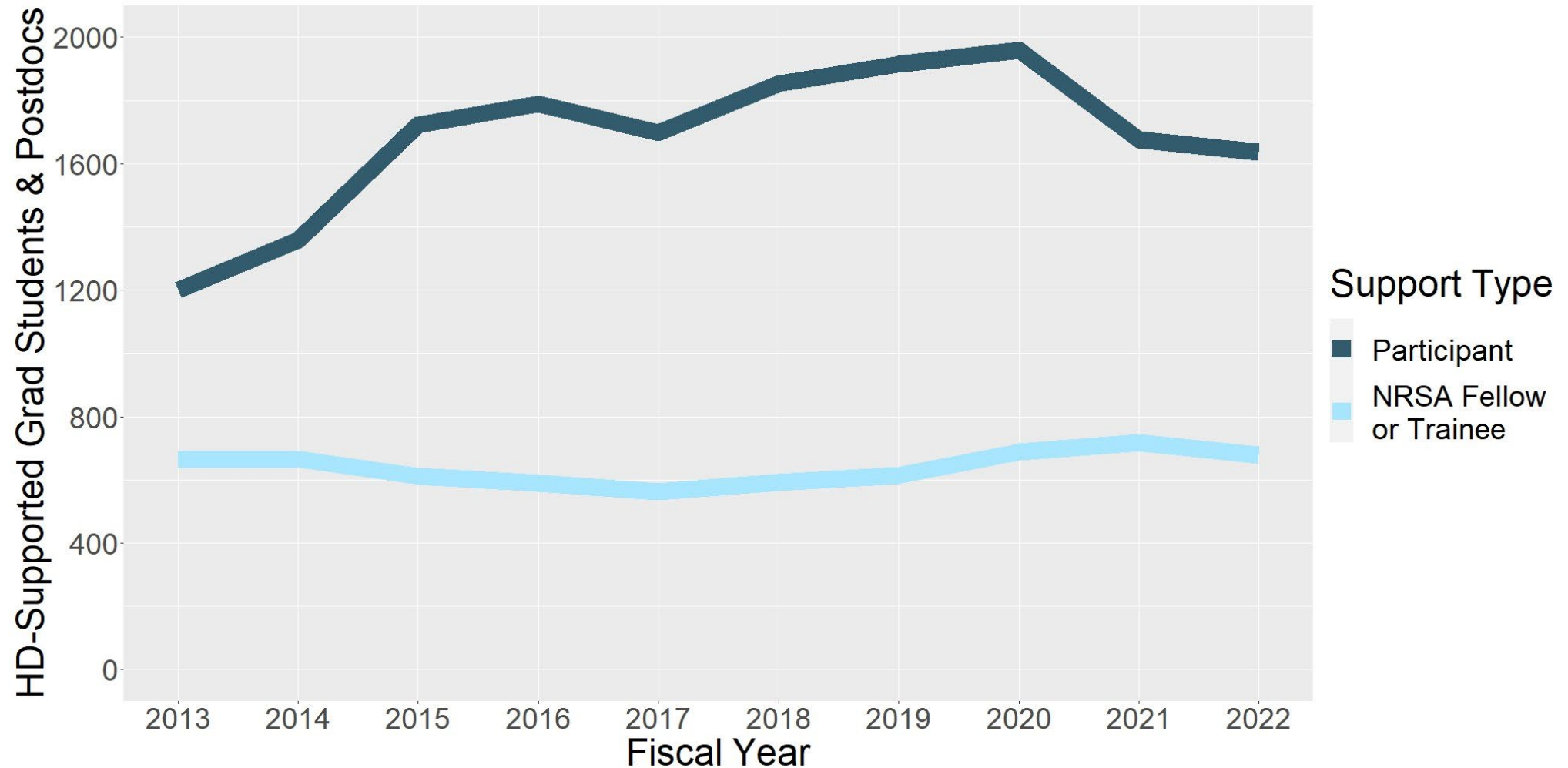


Acknowledgements and Limitations

- 1.** Program Officers and other staff who manage training and career development awards put in additional time and effort in managing applications.
- 2.** The WG's recommendations are meant to be viewed as opportunities for improvement to a largely successful program.
- 3.** More graduate students and postdocs supported by NICHD are paid through Research Project Grants (RPGs), not Training and Career Development Awards. The citizenship requirements of the NRSA preclude applications from many trainees.
- 4.** The WG's recommendations will not be implemented in a vacuum. There are other efforts to address the training and the WG has chosen to focus on actionable items for NICHD and not issues that will necessitate action by groups outside NICHD to implement.



HD-Supported Grad Students and Postdocs



Acknowledgements and Limitations

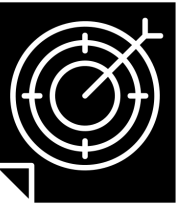
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Recommendations from the ACD working group on Postdoctoral Training (12/15/2023)

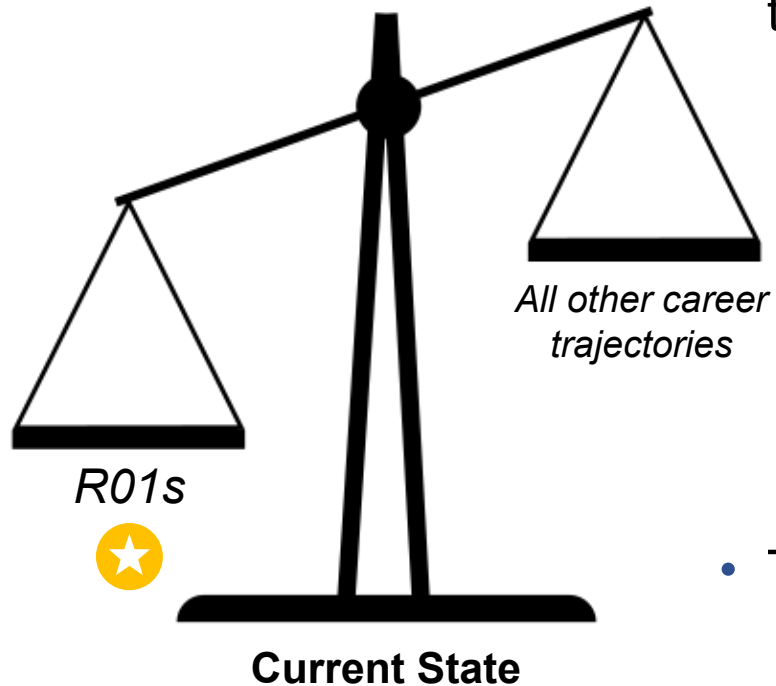
1. Increase Pay and Benefits for all NIH-supported postdoctoral scholars.
2. Create and expand mechanisms to support the full talent pool of postdoctoral scholars.
3. Facilitate transition of postdoctoral scholars into their next career stage, including roles beyond academic faculty.
4. Promote training and professional development of postdoctoral scholars and their mentors.
5. Support safe and diverse perspectives and research environments within institutional research programs.
6. Improve means to measure and share postdoctoral scholars' career progression.





1. Rethink How We Talk About Outcomes

Background



- A **heavy reliance on R01s** as the gold standard outcome for training programs excludes the following:
 - Careers that contribute to the scientific workforce such as teaching, non-NIH funded research, government, science communication, and industry (SBIR)
 - Work accomplished by research staff on RPGs
 - Non-traditional scholars such as data scientists or engineers
- There is a **scarcity of positions at R1 institutions**
 - NICHD trains more people than it can fund at the R01 level





1. Rethink How We Talk About Outcomes

Action Items



1. Track and encourage **important career trajectories** in the future and describe them all as valid and successful outcomes
 - Do not refer to other career trajectories as “**alternative careers.**” This may require additional administrative support at NICHD.



2. **Redefine success** of training awards as a “career that uses the training and educational experiences of the training award to advance biomedical research, clinical care, and scientific literacy”





2. Reinvigorate Institutional Training and Career Development Programs (T32 and K12)

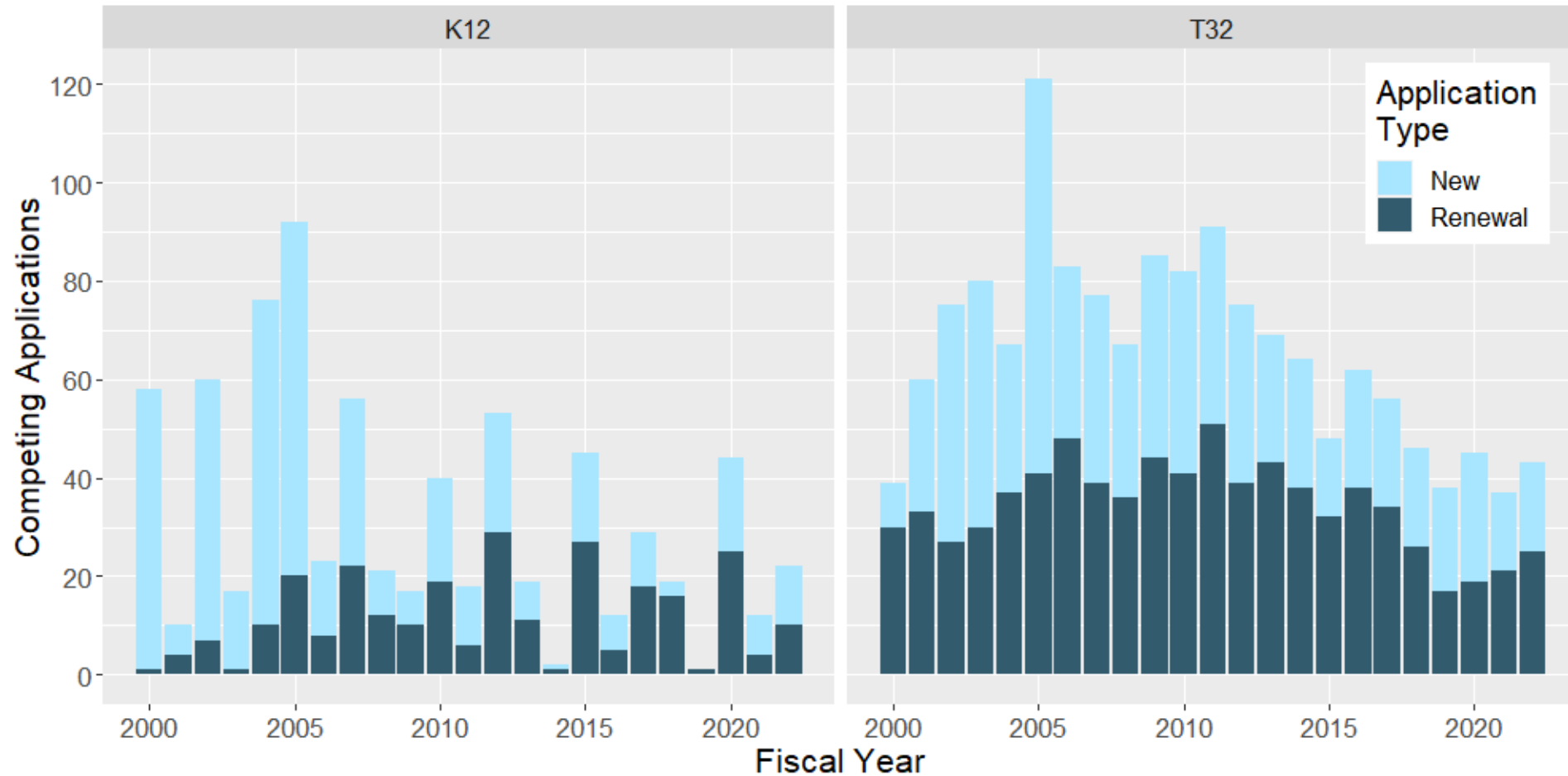
Background



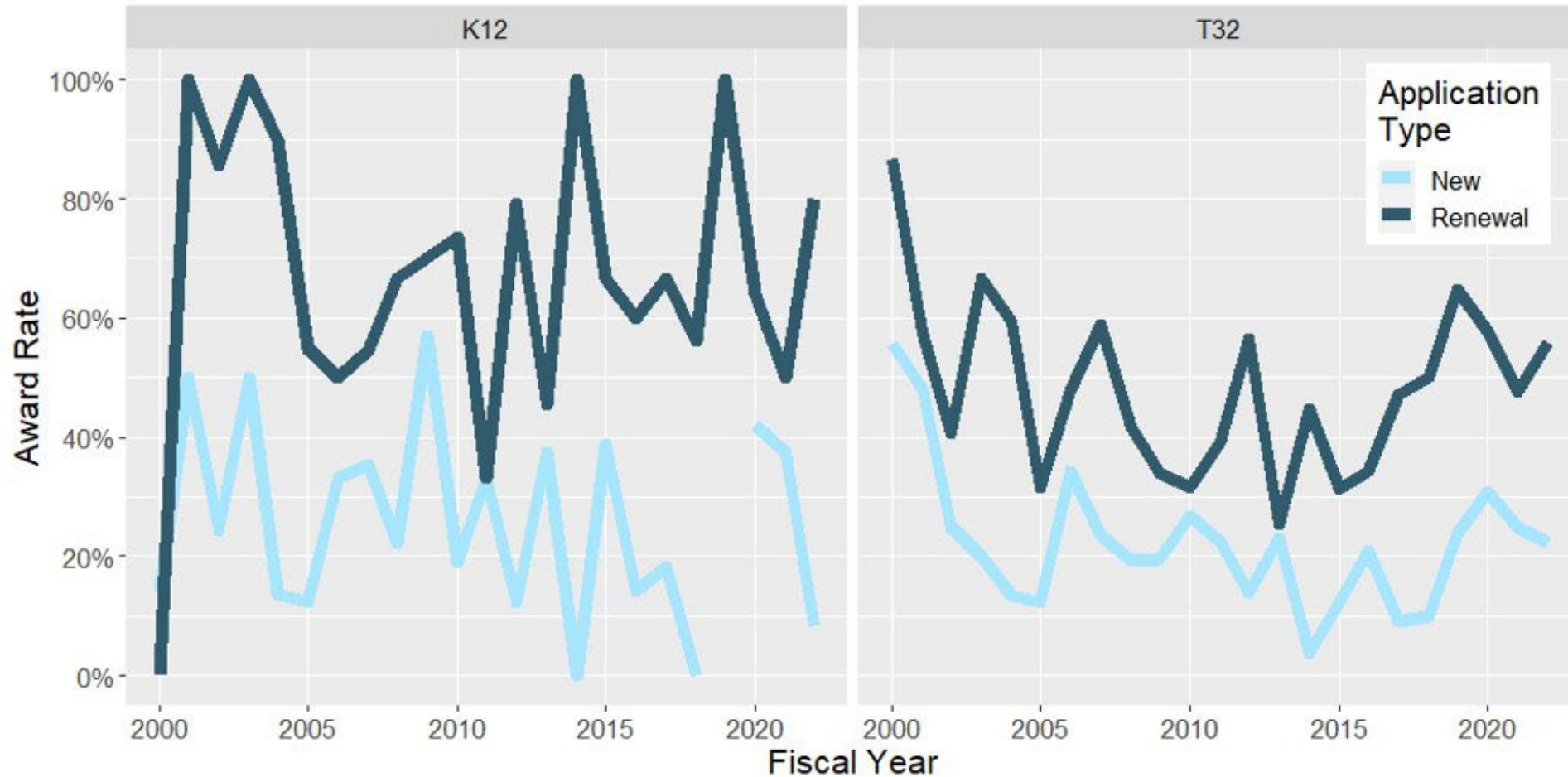
- NICHD's T32 and K12 programs have become **deeply entrenched**, making it difficult for new programs to launch
- Many established K12 programs only have one or two applications, decreasing the competitiveness
- Established programs have **little need to adapt** even as NICHD's funding priorities change
- Overlap in K12 and T32 institutions is high, with **~20 institutions having both types of awards** continuously for 20 years

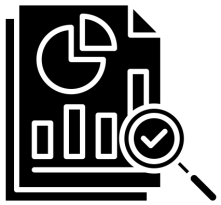


2. Supporting Data: Competing applications per year








2. Supporting Data: Competing applications per year



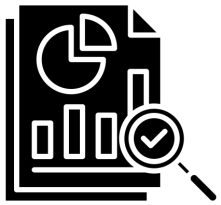


2. Reinvigorate Institutional Training and Career Development Programs (T32 and K12)

Action Items (T32)






-  1. Cluster Type 1 and Type 2 T32s **separately** in peer review
-  2. Establish a **differential payline** for new vs. renewal programs
-  3. List **high priority areas** prior to funding decisions, especially multidisciplinary training programs or those that would support more general training, that will be paid with IC funds
-  4. If the previous three action items do not improve success rates, consider **term limits** for awards (e.g., 2 cycles, per PI, per program)
-  5. Hold PIs accountable to **diversity recruitment plans** in Terms and Conditions of awards



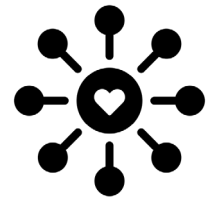


2. Reinvigorate Institutional Training and Career Development Programs (T32 and K12)

Action Items (K12)

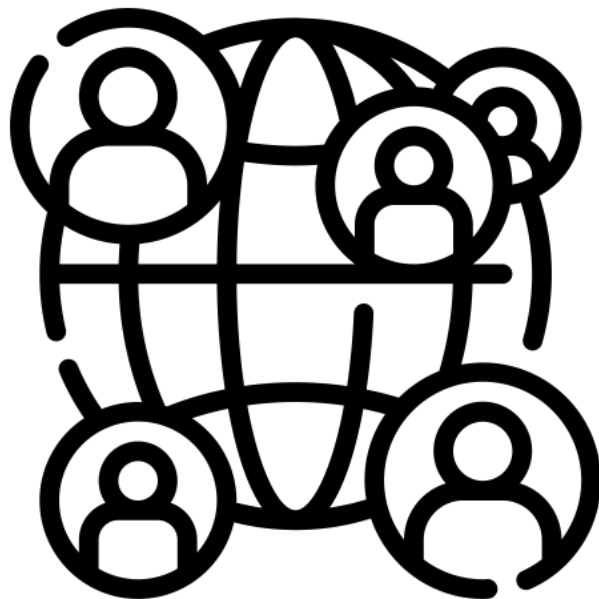
-  1. Create **metrics** to determine when a K12 program has achieved its goal or to indicate that another tactic for growing a workforce should be attempted
-  2. Add **language for term limits** in new NOFOs which may include ending programs entirely or limiting the number of cycles one PI or institution may hold a K12 program
-  3. Where appropriate, add language to **funding announcements** for National K12s indicating NICHD will fund one to three awards, depending on availability of funding
-  4. In the NOFO, require **diversity recruitment plans** where diversity includes geography of institutions
-  5. In the NOFO, indicate that **renewal applications** are required to provide **metrics** addressing how programs have evolved throughout the funding cycle in response to relevant scientific and technical knowledge or educational practices





3. Create Community Amongst Trainees

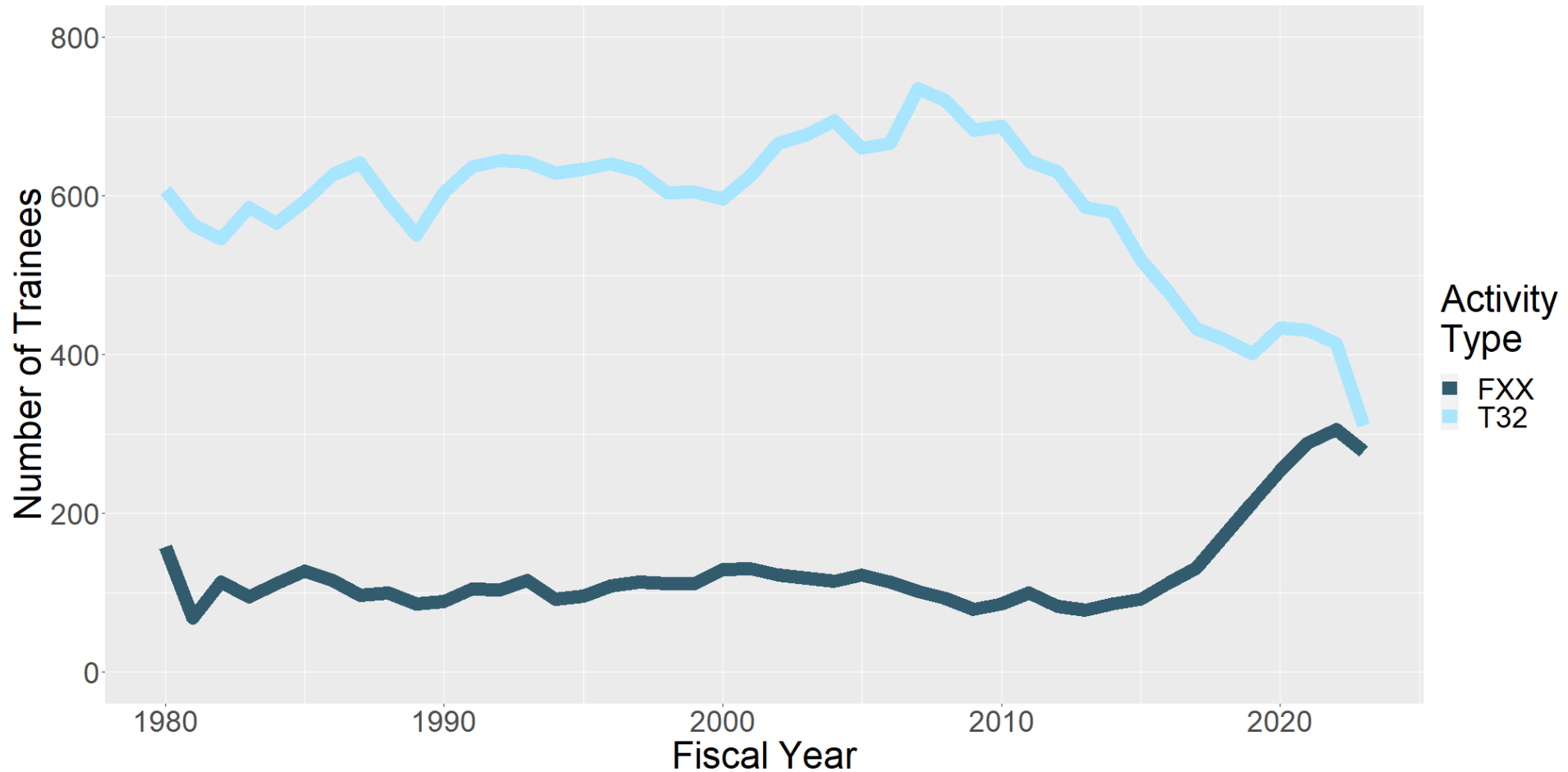
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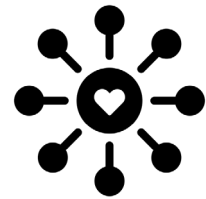


- Pre- and post-doc trainees are shifting **from institutional to individual awards**
- There is a **decline in connection and community** across the trainee population
- Community-building program examples:
 - [Butler](#) Williams Scholars program at NIA
 - [DSPAN](#) Program at NIH Blueprint for Neuroscience
 - [High Risk](#) High Reward Symposium at Common Fund



3. Supporting Data: Number of trainees/LRP recipients per year





3. Create Community Amongst Trainees

Action Items



1. Create a **distribution list** of scholars and fellows to advertise NICHD-wide events



2. Host an annual or biennial **workshop** with fellowship trainees at NICHD



3. Craft **welcome language** and have regular contact with NICHD fellows



4. Include **OHE** to encourage **connection** with fellows from diverse backgrounds



5. Include **highlights** from trainees or mentors in the **NICHD Director's Newsletters**



6. Establish a Trainee or Career Development **representative slot** on Council

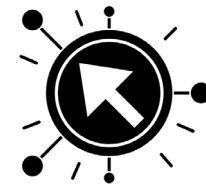


7. Require inclusion of trainees in organizing and presenting at scientific **conferences**



8. Create a **mentorship prize** to recognize excellence in mentorship





4. Use Training and Career Development to Diversify NICHD's Reach

Background






- Fellowship awards represent an **opportunity for early entry** into biomedical research
- It is important to foster research at a **broad variety of institutions and more diverse candidates**, including those without T32/K12 awards or non-R1 institutions
- Upcoming changes to [NIH peer review of fellowship applications](#) presents an opportunity to **broaden the applicant pool**
- The current process for signing on to diversity-focused NOFOs is **not systematic**





4. Use Training and Career Development to Diversify NICHD's Reach

Action Items

-  1. Conduct **equitable outreach** across institutions to increase the number of fellowship applications from institutions without a history of significant NIH funding
-  2. Use **high program priority** to reach for meritorious applications from institutions without T32 awards or who otherwise do not receive significant NIH funding (e.g., IDeA states, MSIs, HBCUs, AREA schools)
-  3. Recommend that OHE develop a **systematic process** for evaluating and signing on to diversity-focused training NOFOs



5. Reinvigorate the Loan Repayment Programs (LRPs)



Background








- The LRPs can be used to **decrease education loan debt** and incentivize trainees to remain in research careers
- LRPs at NICHD are **concentrated with one program officer**
 - Some program officers may possess only basic knowledge of the program and do not consistently advertise it to their grantees
- Funding decisions internally at NICHD are separated from the training and career development program officers



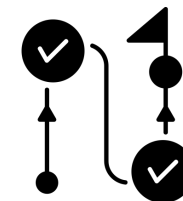
5. Reinvigorate the Loan Repayment Programs (LRPs)



Action Items

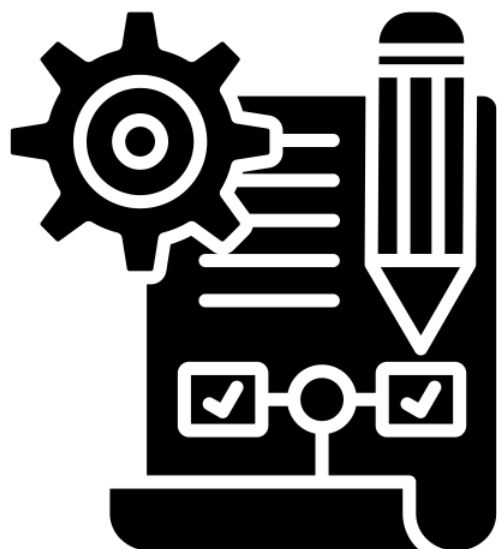
-  1. Expand LRP programs to include the L32 – Clinical Research for Individuals from Disadvantaged Backgrounds (*NICHD joined September 2023*)
-  2. Increase LRP funding to \$10 million per year
-  3. Diversify the team involved in the LRP selection process to include representation from OHE and the training committee team
-  4. Increase outreach of the LRP through automation; contact those who apply for individual Ks, PIs of K12 and T32 programs, and Diversity Supplement recipients to encourage them to apply to LRPs
-  5. Target a higher success rate for the L32 mechanism





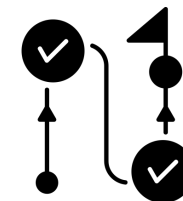
6. Use Training Programs to Support Strategic Research Priorities

Background



- Training and career development **goals are not delineated** in the 2020 NICHD Strategic Plan. The 2025 refresh is an opportunity to reinforce commitment to training the workforce
- Individual fellowship and career development applications **do not receive special consideration** for funding when they address strategic priorities
- Ks are funded solely by **priority score/percentile** with no consideration of whether they address a high priority area





6. Use Training Programs to Support Strategic Research Priorities

Action Items



1. Create a **new cross-cutting theme** in the upcoming Strategic Plan refresh specifically addressing the commitment to and priorities for advancing the careers of trainees and scholars



2. Define NICHD priorities for training in **core competencies**



3. Promote alignment of training and career mechanisms with strategic priorities by making Fs and Ks **eligible for the “Director’s Reserve”** nomination process



4. Use **RPAB coding systems** for individual F and K applications to assess alignment of application research goals with published Branch “high priority” areas and NICHD’s strategic priorities as outlined in the current Strategic Plan



Expected Outcomes



Greater **turnover in T32 and K12 programs**, allowing new programs to begin, diversifying the locations of the training across the country, and casting a broader net for trainees



Greater **community amongst trainees** who feel connected to the NICHD mission and who view NICHD as a resource



Increase **diverse perspectives** and broaden the pool of PIs working on NICHD mission relevant research



Increase the likelihood that **disadvantaged individuals remain in research** career and better identify people who are more likely to remain active in NICHD-funded research careers



Summary of Recommendations



1. Rethink How We Talk About Outcomes



2. Reinvigorate Institutional Training and Career Development Programs (T32 and K12)



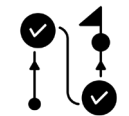
3. Create Community Amongst Trainees



4. Use Training and Career Development Programs to Diversify NICHD's Reach



5. Reinvigorate the Loan Repayment Programs (LRPs)



6. Use Training Programs to Support Strategic Research Priorities





Any Questions?
Thank you!

