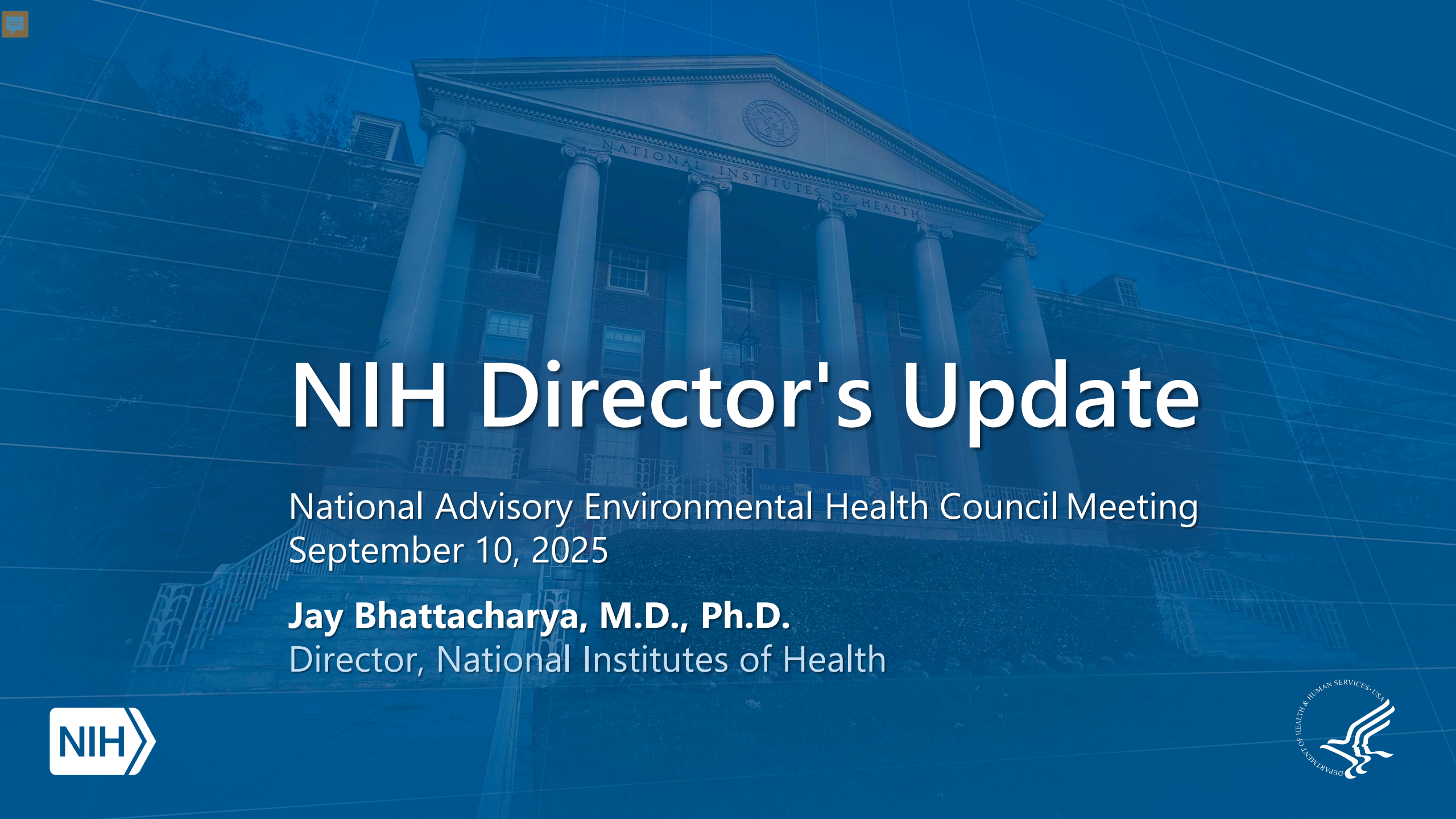




NIH Director's Update

National Advisory Environmental Health Council Meeting
September 10, 2025

Jay Bhattacharya, M.D., Ph.D.

Director, National Institutes of Health



Importance of Environmental Health Sciences

- Effects of environmental exposures on biological systems **across the lifespan**
- Early intervention empowers disease prevention strategies



The NIH Vision & NIEHS

- **Exposomics**
Measure, analyze & identify exposures over the **lifespan**
- **Precision Environmental Health**
Tailored **prevention & intervention** strategies
- **Mechanistic biology & toxicology**
Pave the way for improved hazard testing, predictive models that **inform public health policy**

Vision for NIH



Improve population health
Ensure reliable results
and reproducible science
Make big advances
Maintain safety and transparency
Encourage academic freedom





NIH Priorities

- Novel Alternative Methods (NAMs)
- Gold Standard Science Plan
- Support for early career investigators
- Unified Strategy to fund projects

Novel Alternative Methods (NAMs)

Novel Alternative Methods (NAMs)

Key Aspects

- **End Exclusive Animal Research Funding**
No longer seeking research proposals that exclusively involve animal testing
- **Incorporating NAMs**
All new NOFOs related to animal model system now also support human-focused approaches, including NAMs
- **Focus on Human Health**
New policy aims to ensure research models are aligned with human biology



Gold Standard Science Plan

NIH priority: raising the bar for research excellence

GOLD STANDARD SCIENCE IS...

- * Reproducible
- * Transparent
- * Communicative of Error and Uncertainty
- * Collaborative and Interdisciplinary
- * Skeptical of Its Findings and Assumptions
- * Structured for Falsifiability of Hypotheses
- * Subject to Unbiased Peer Review
- * Accepting of Negative Results as Positive Outcomes
- * Without Conflicts of Interest

NIH's new **Gold Standard Science** implementation plan

- Comprehensive plan to embed Gold Standard Science—defined by scientific integrity— across the agency
- Building upon NIH's longstanding commitment to rigorous, credible research, aligning with broader **HHS and government frameworks** for scientific excellence

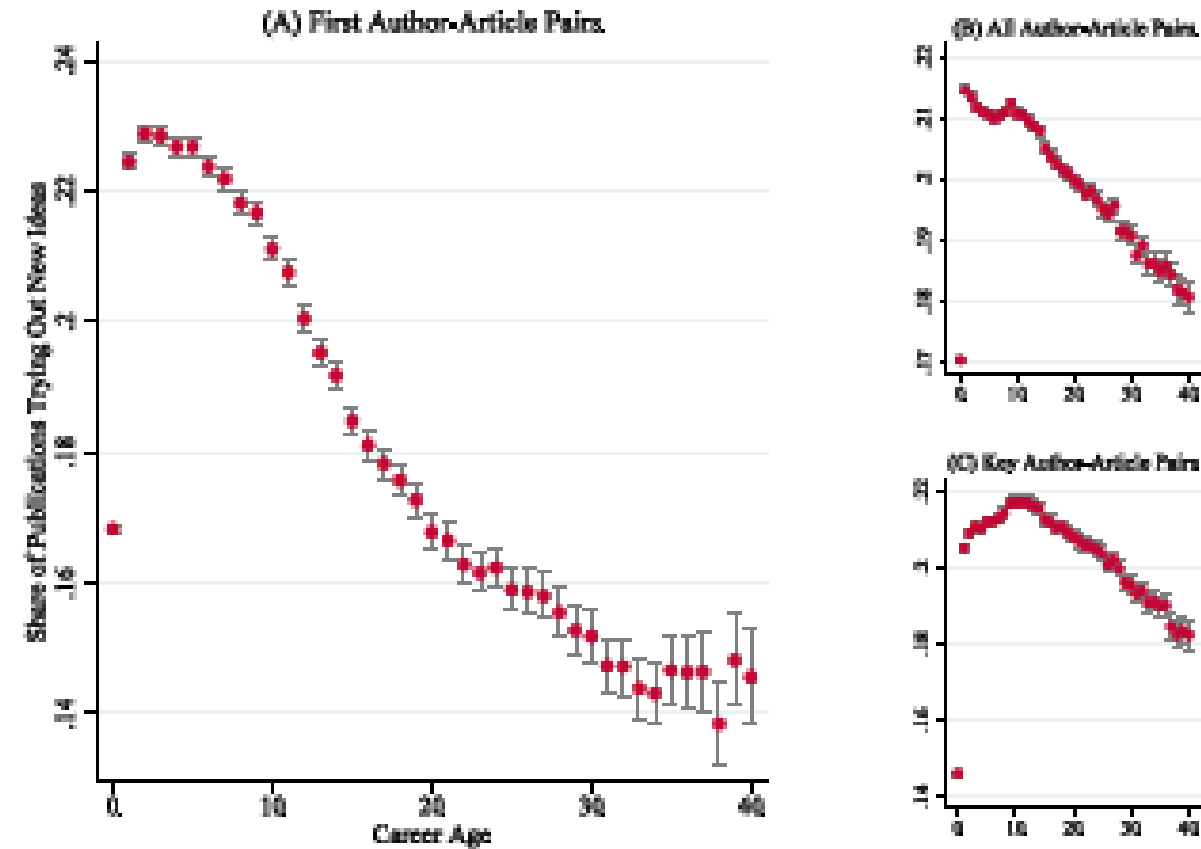
Strategic actions & next steps

Gold Standard Science Implementation highlights

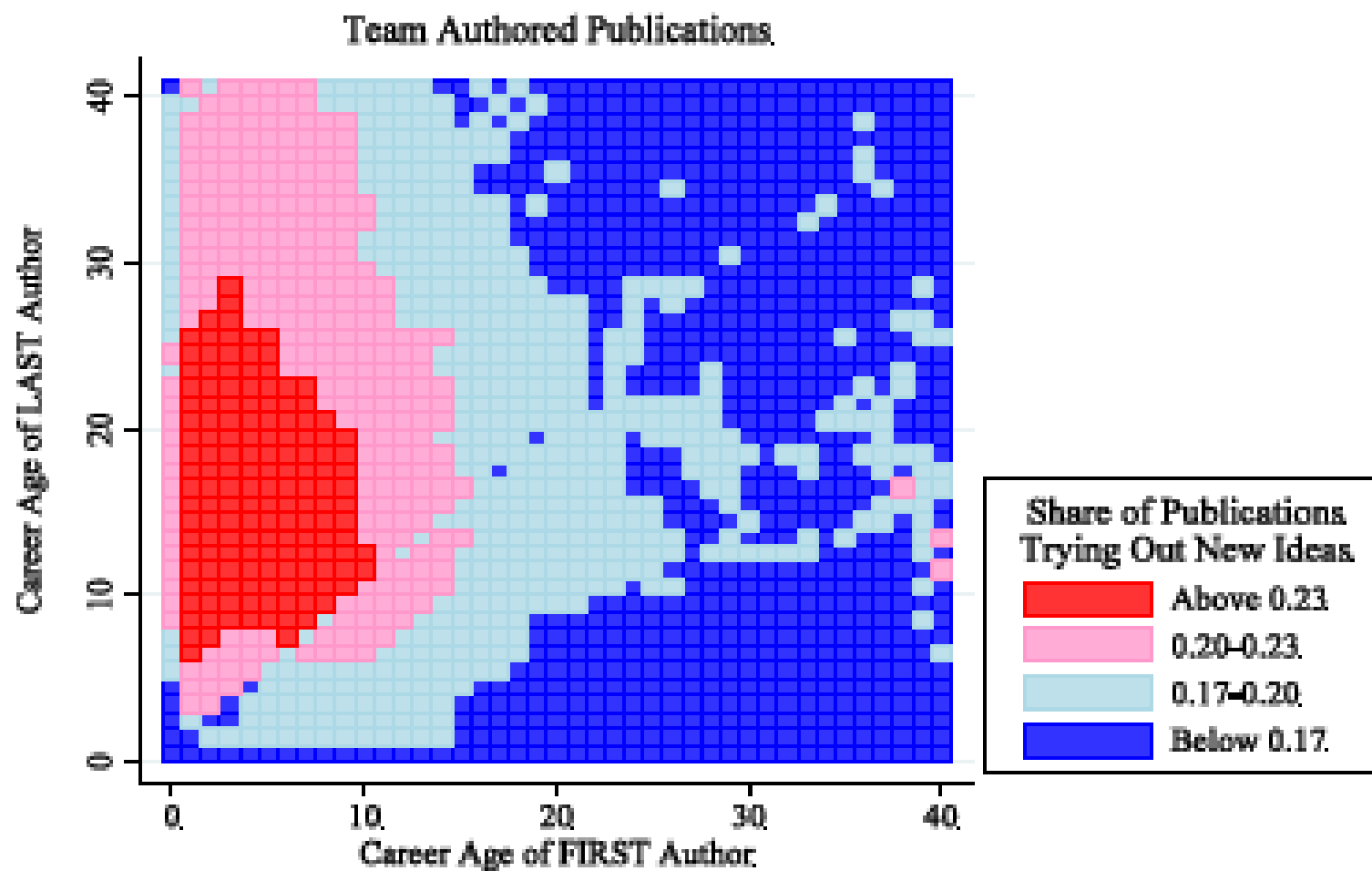
- Expanded training on rigor & reproducibility
- Launch replication initiative (NIH Common Fund)
- Provide regular public updates

Support for early-career investigators

Team and Solo Authored Publications



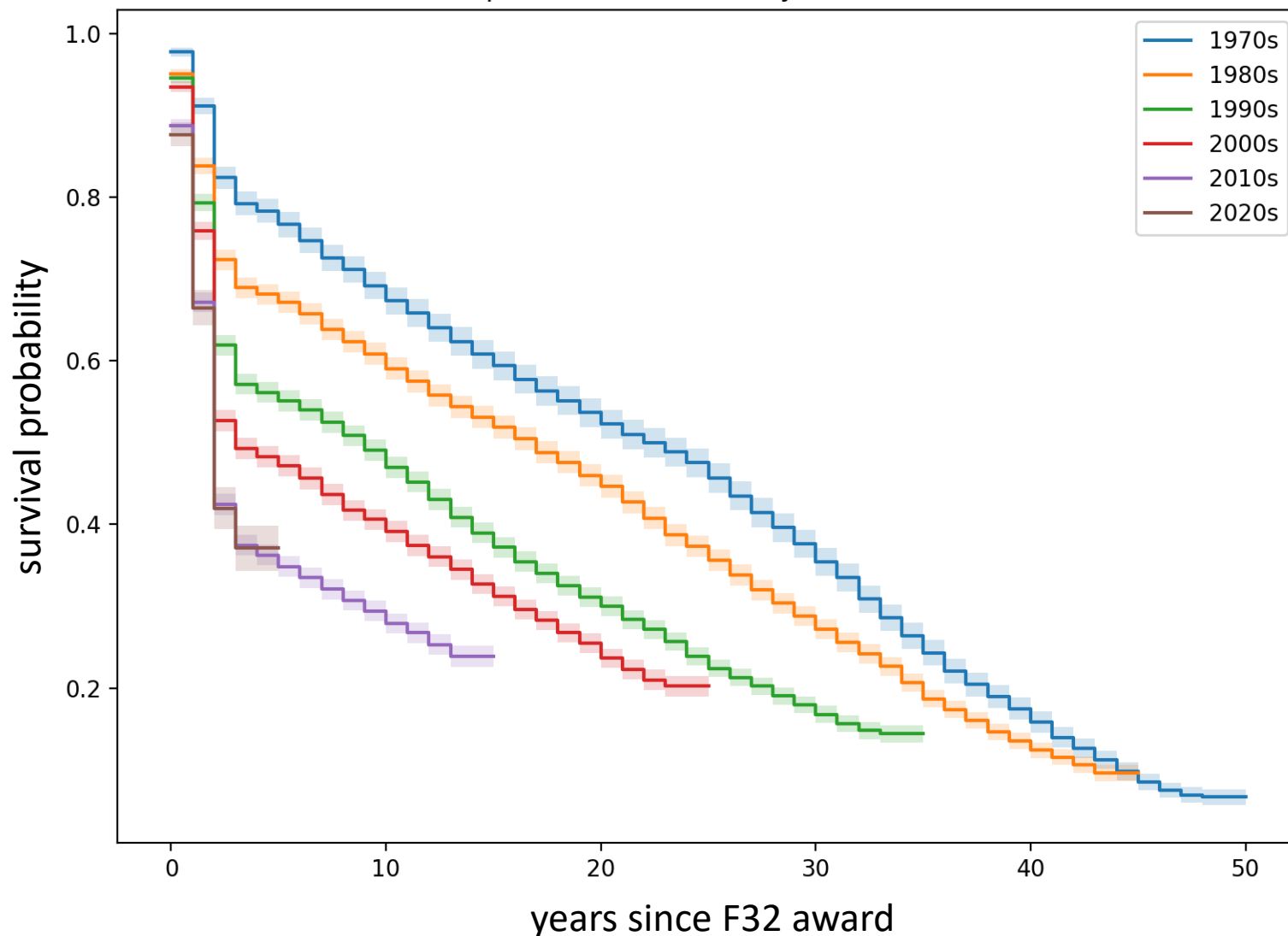
Packalen and Bhattacharya (2019) “Age and the Trying Out of New Ideas.” Journal of Human Capital.



Packalen and Bhattacharya (2019) “Age and the Trying Out of New Ideas.” Journal of Human Capital.

NIH career-span of fellowship recipients is increasingly foreshortened

Kaplan-Meier curve shows normalized probability of continued application by chronological cohort

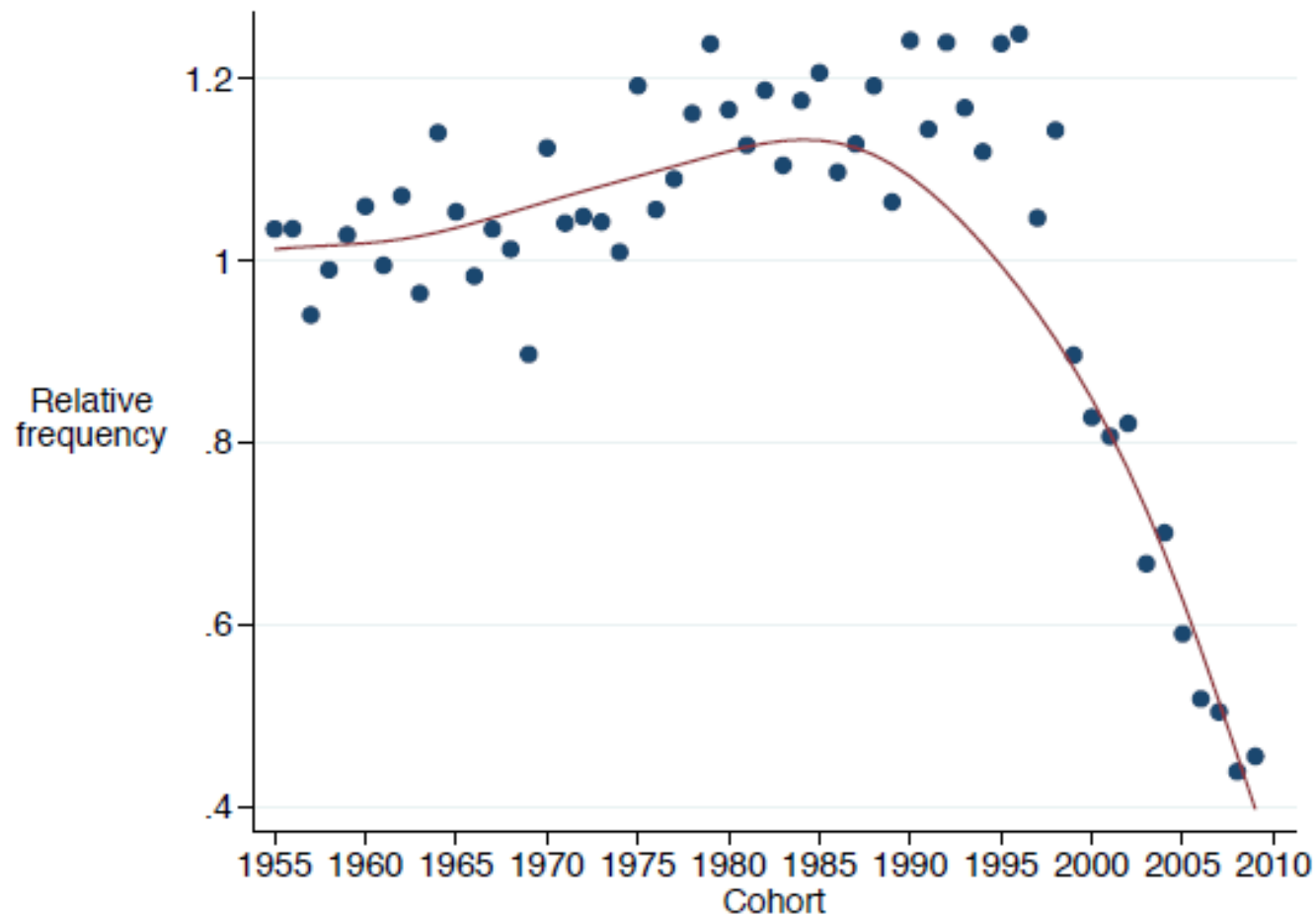


Total cost of training
F32 awardees
who never apply
again:

\$0.9 billion =
28% of total costs
BRDPI- adjusted

Unified strategy to fund projects

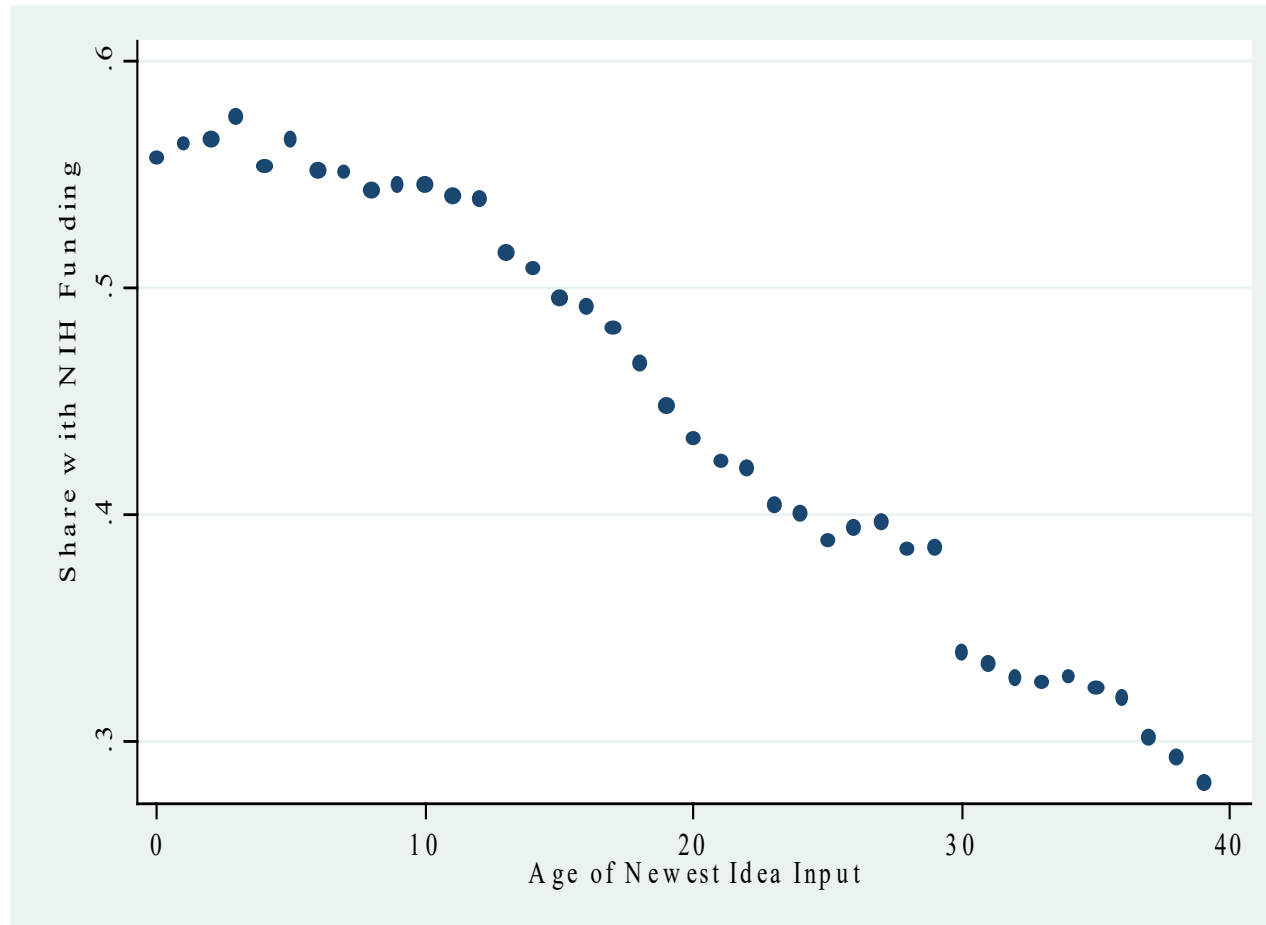
Frequency of NIH-funded vs. Non-NIH funded Papers



Sample: Papers
published
between 2000
and 2009
(inclusive)

Packalen and
Bhattacharya
(2020) NIH
Funding and the
Pursuit of Edge
Science. PNAS

Change Over Time: 1990-1999 Paper Cohort



Packalen and
Bhattacharya
(2020) NIH
Funding and the
Pursuit of Edge
Science. PNAS

New Unified Grant Funding Policy

- Previously, about half of NIH's Institutes and Centers (ICs) used fixed percentile "paylines,"
- Under NIH's updated, unified strategy, paylines are no longer the primary driver of funding decisions.

New Funding Criteria

- ICs still consider scientific scores alongside other critical factors, including:
 - Whether the proposal aligns with the NIH Institute or Center's mission and strategic priorities
 - How the proposal contributes to balance within the ICO's overall research portfolio
 - The investigator's career stage and sustainability of the biomedical research workforce

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National Institutes of Health

Turning Discovery Into Health

