

EXHIBIT 21

NIH Director Remarks

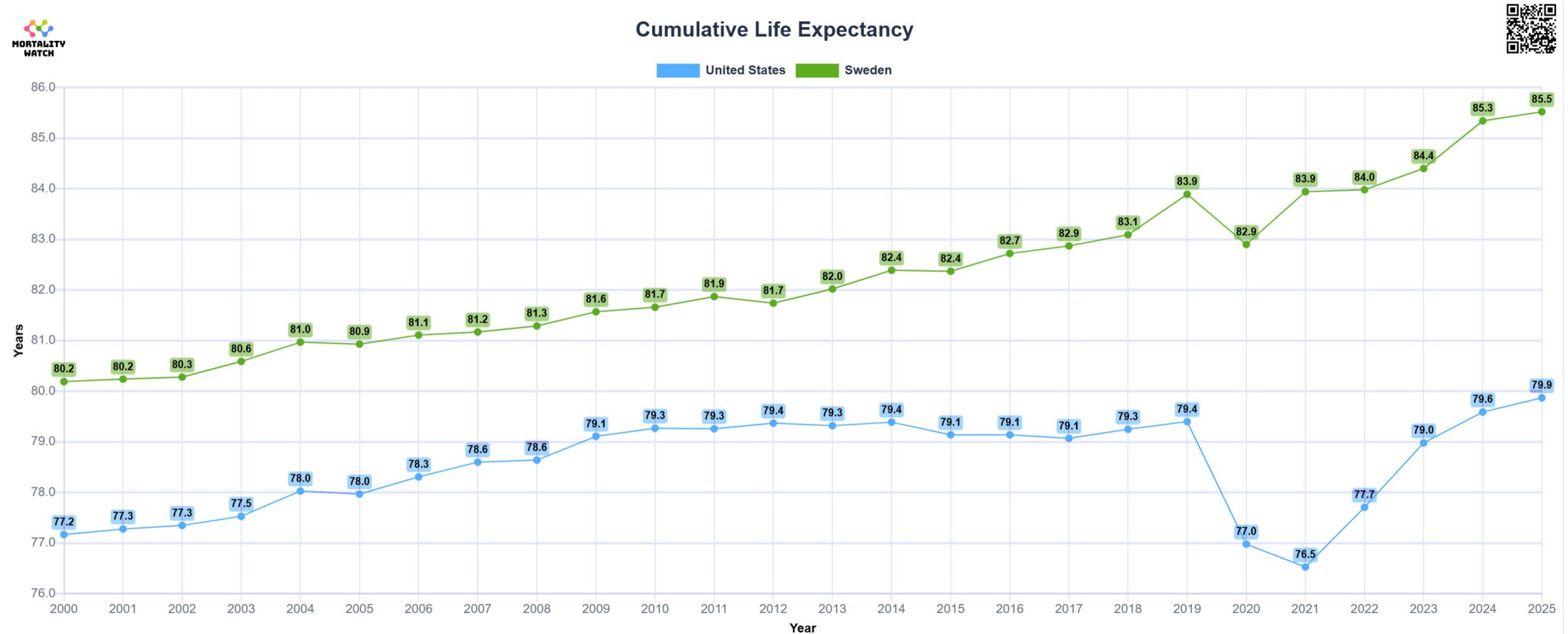
*NBER Coordinating Center on the Economics of AD/ADRD Prevention,
Treatment, and Care
June 18, 2026*

Jay Bhattacharya, M.D., Ph.D.
Director, National Institutes of Health



NIH's mission is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to **enhance health, lengthen life, and reduce illness and disability**

U.S. Longevity Progress is Too Slow



Source: Mortality Watch

<https://www.mortality.watch/explorer/?c=USA&t=le&ct=yearly&e=0&cs=line&df=2001&bf=2011&sb=0&ce=1&m=0&sl=1&lg=0>



America's Longevity Gap





Why Aren't We Making More Progress?

Too much **safe,**
incremental science

Research doesn't
replicate

Funding
concentrated in few
institutions

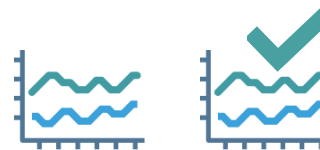
Solution: Democratizing Science

Too much **safe, incremental science**



Unified Funding Strategy

Research doesn't **replicate**



Replication initiative

Funding concentrated in few institutions



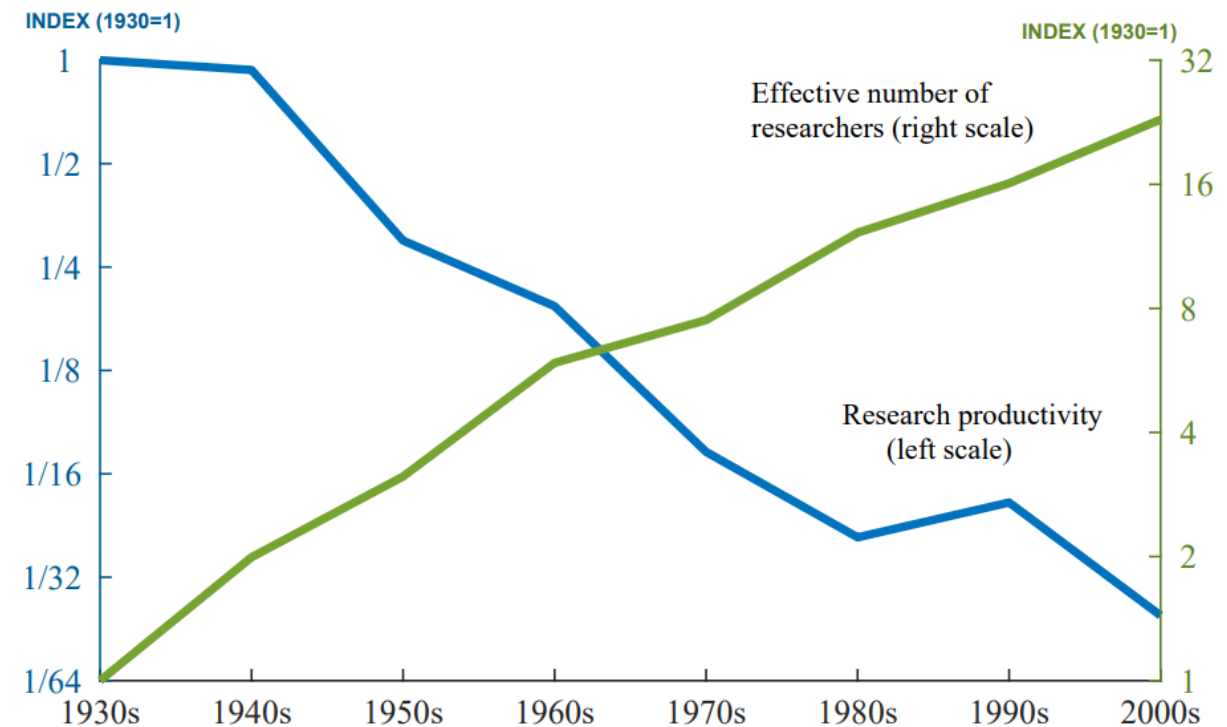
Competitive infrastructure support

Catalyzing Discovery

Two overarching strategies for improving research productivity

- Build opportunities for mission-driving research
- Rewire incentive structures

Figure 2: Aggregate Evidence on Research Productivity



Bloom et al. (2017) "Are Ideas Getting Harder to Find" NBER Working Paper #23782



Building Opportunities for Mission-Driving Research

Unified Funding Strategy



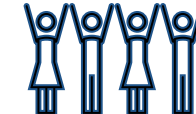
Peer review stays

Scientific merit remains the primary standard. Nothing about that changes.



More inputs considered

Score + critiques + portfolio balance + IC priorities + public health needs.



Better outcomes

High-risk ideas, emerging fields, and new investigators get fairer consideration.

✓ **Expanding** how NIH uses peer review.

✓ **Applying** a fuller picture of merit.

✓ **Not** just about paylines. It's a framework shift.

✓ **Still** investigator-initiated — **that's core to the purpose.**

Rewire Incentive Structures

Invest in the Science of Replication



Fund replication research



Establish a replication platform



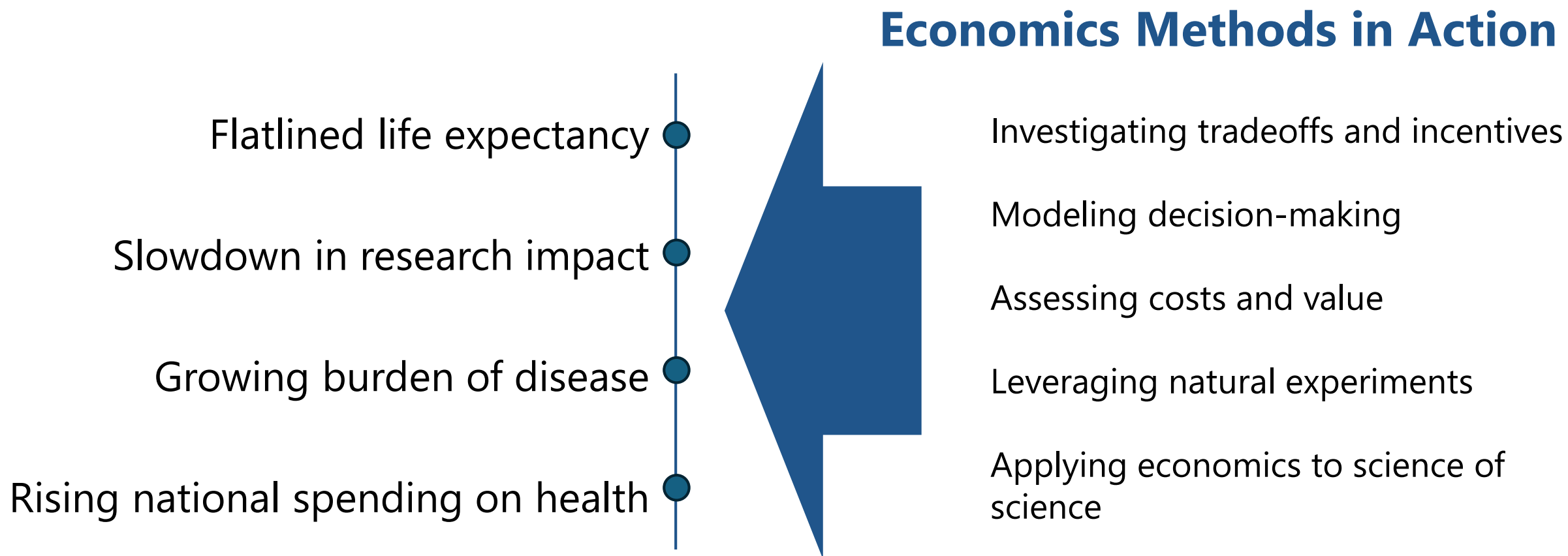
Enhanced visibility through PubMed



New metrics for scientific contribution

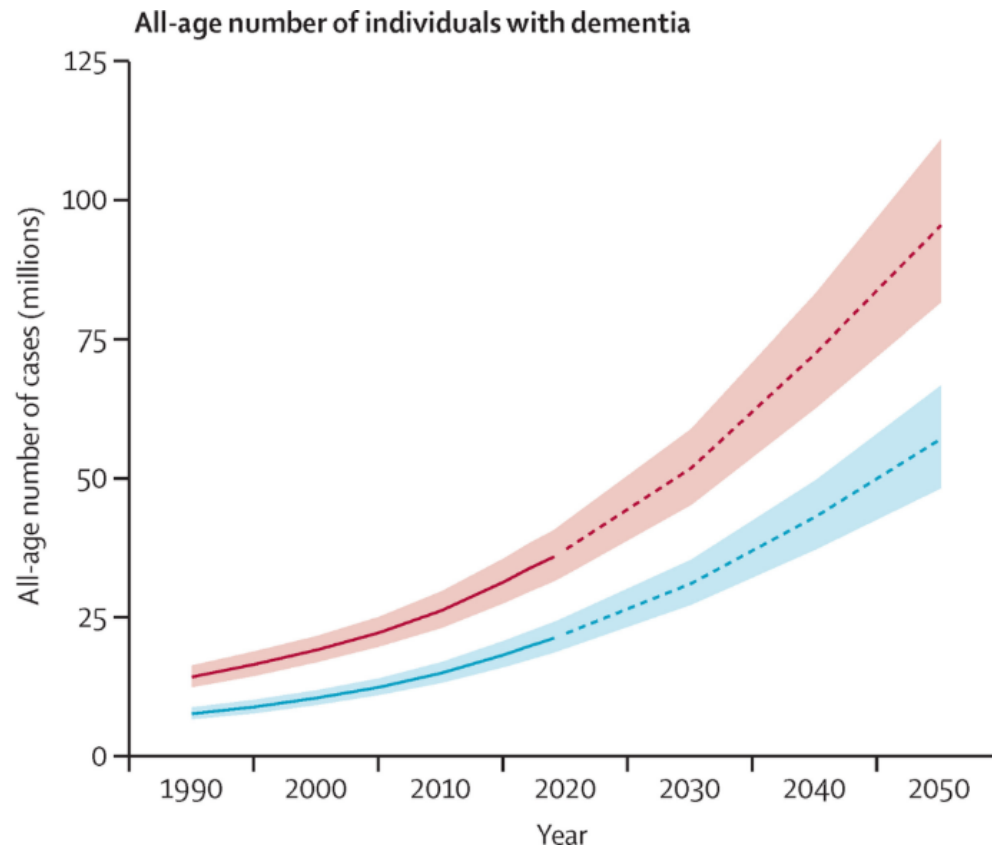
Deploying Health Economics Methods to Drive Forward NIH's Mission

Emerging and Growing Health Challenges Motivate the Deployment of Economic Methods



Use Case of Deploying Economic Methodology

Assessing Value of Lecanemab



GBD 2019 Dementia Forecasting Collaborators. (2022). "Estimation of the global prevalence of dementia in 2019 and forecasted prevalence in 2050: an analysis for the Global Burden of Disease Study". *The Lancet Public Health*.

Economics can identify high value treatments

Long-term value of lecanemab to individuals and families

[Bryan Tysinger](#)¹, [Yifan Wei](#)², [Hanke Heun-Johnson](#)¹, [Julie M Zissimopoulos](#)^{1,✉}

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PMCID: PMC12394178 PMID: [40895811](#)

Alzheimer's & Dementia
Translational Research
& Clinical Interventions

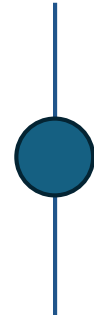
"Over time, lecanemab treatment reduced medical costs, hours of care required from care partners, and improved quality of life."



Use Case of Deploying Economic Methodology

Econometric Analysis Provides Causal Evidence

NIA and NINDS
Multidisciplinary Workshop
June 2026



"Zoster Vaccine and Dementia Risk
Reduction: Evidence and Mechanisms"

Featured Paper:

Article | [Open access](#) | Published: 02 April 2025

**A natural experiment on the effect of herpes zoster
vaccination on dementia**

[Markus Eytting](#), [Min Xie](#), [Felix Michalik](#), [Simon Heß](#), [Seunghun Chung](#) & [Pascal Geldsetzer](#) 

[Nature](#) **641**, 438–446 (2025) | [Cite this article](#)

622k Accesses | **177** Citations | **7406** Altmetric | [Metrics](#)

*"By taking advantage of the fact that the unique way in which the zoster vaccine was rolled out in Wales constitutes a natural experiment, and examining each possible remaining source of bias, our study **provides evidence that is more likely to be causal in nature** than the existing, exclusively associational, evidence on this topic."*

Three Principles for NIH-Funded Research



NIH Research Must Adhere to Three Principles



In-Scope



Rigorous



Actionable

Three Principles: In-Scope



In-Scope

Research relates to (1) NIH's mission, goals, or priorities, and (2) variables that could be **influenced by biomedical research, healthcare, or public health.**

Considerations for economists

Clearly explain how your research **builds evidence for stakeholders within scope of the NIH mission**, which include:

- Individuals making health decisions.
- Patient populations.
- Healthcare professionals.
- Hospitals.
- Scientists and engineers/developers driving forward biomedical research and technology.

Note that research whose primary aim is to inform policymakers is **not in-scope** for NIH funding.

Three Principles: Rigorous



Rigorous

Methodological rigor includes testing falsifiable hypotheses, assessing outcomes that are clearly measurable, delineating between cause and correlation, and taking a collaborative approach.

Considerations for economists

Continue deploying research methods designed to **identify cause** and clearly emphasize the mechanism of interest.

This Coordinating Center is a beacon for **interdisciplinary applications of economic methods**. Connecting with other fields to collaboratively tackle health challenges is encouraged.

Three Principles: Actionable



Actionable

High-impact and takes a **solutions-oriented approach** to generating evidence.

Considerations for economists

Emphasize the ways in which findings may be **meaningfully deployed** to improve health.

Ensure that data, documentation, and code **enable replication**, which is essential for translating accurate evidence into action.

Principles Provide a Foundation for Advancing NIH's Mission



Actionable

Builds findings that can be readily deployed.



Rigorous

Propels forward discovery through gold-standard methods.



In-Scope

Ensures evidence is relevant for NIH objectives.



Questions? Ideas?

Contact us:

Health_Economics@nih.gov



National Institutes of Health
Turning Discovery Into Health