

NIH Peer Review: Continuity and Change

Toni Scarpa

**Center for Scientific Review
National Institutes of Health
Department of Health and Human Services**

Advisory Committee to the Director
Bethesda, MD -- December 2, 2005



Center for Scientific Review

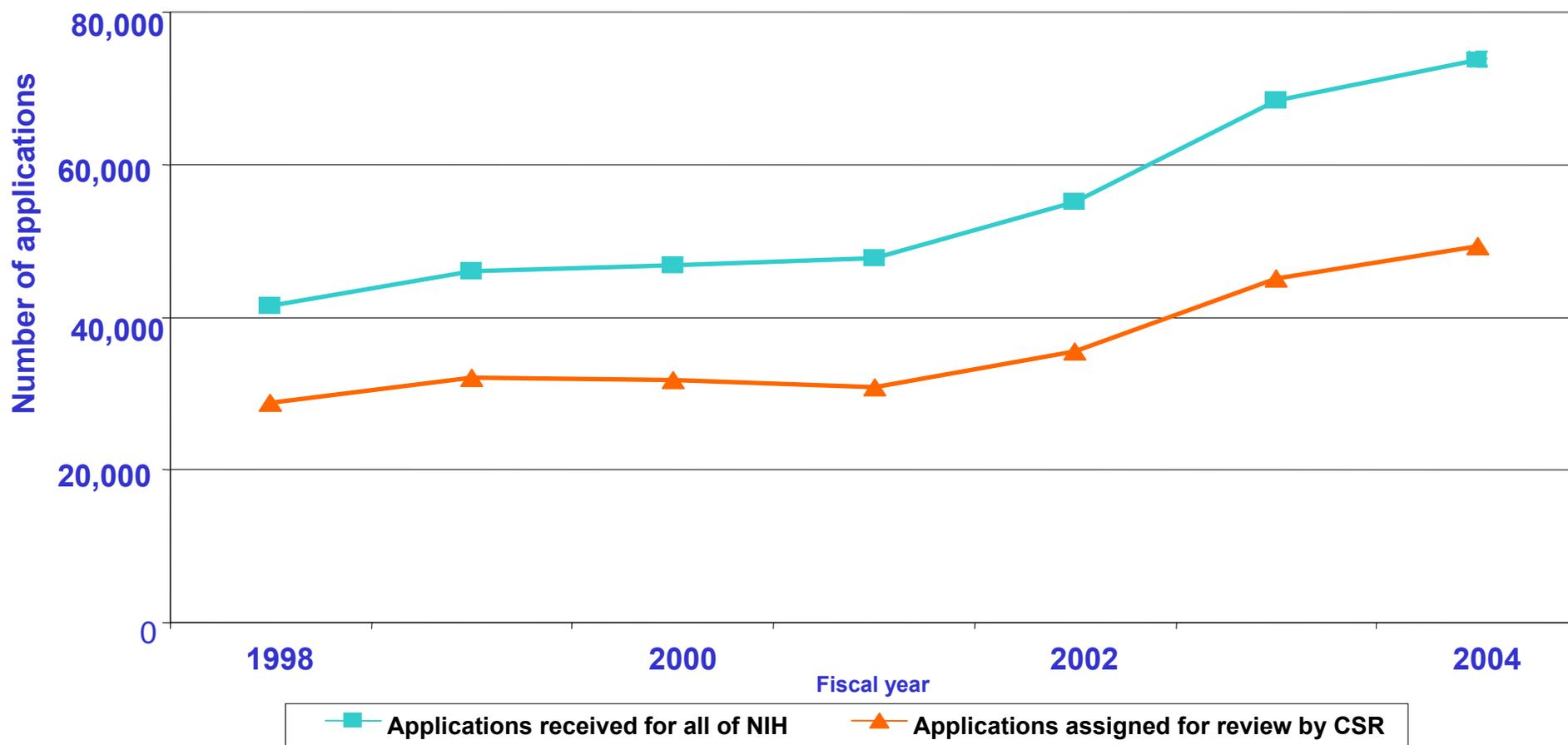
This Is Not Amazon.com



This is
CSR



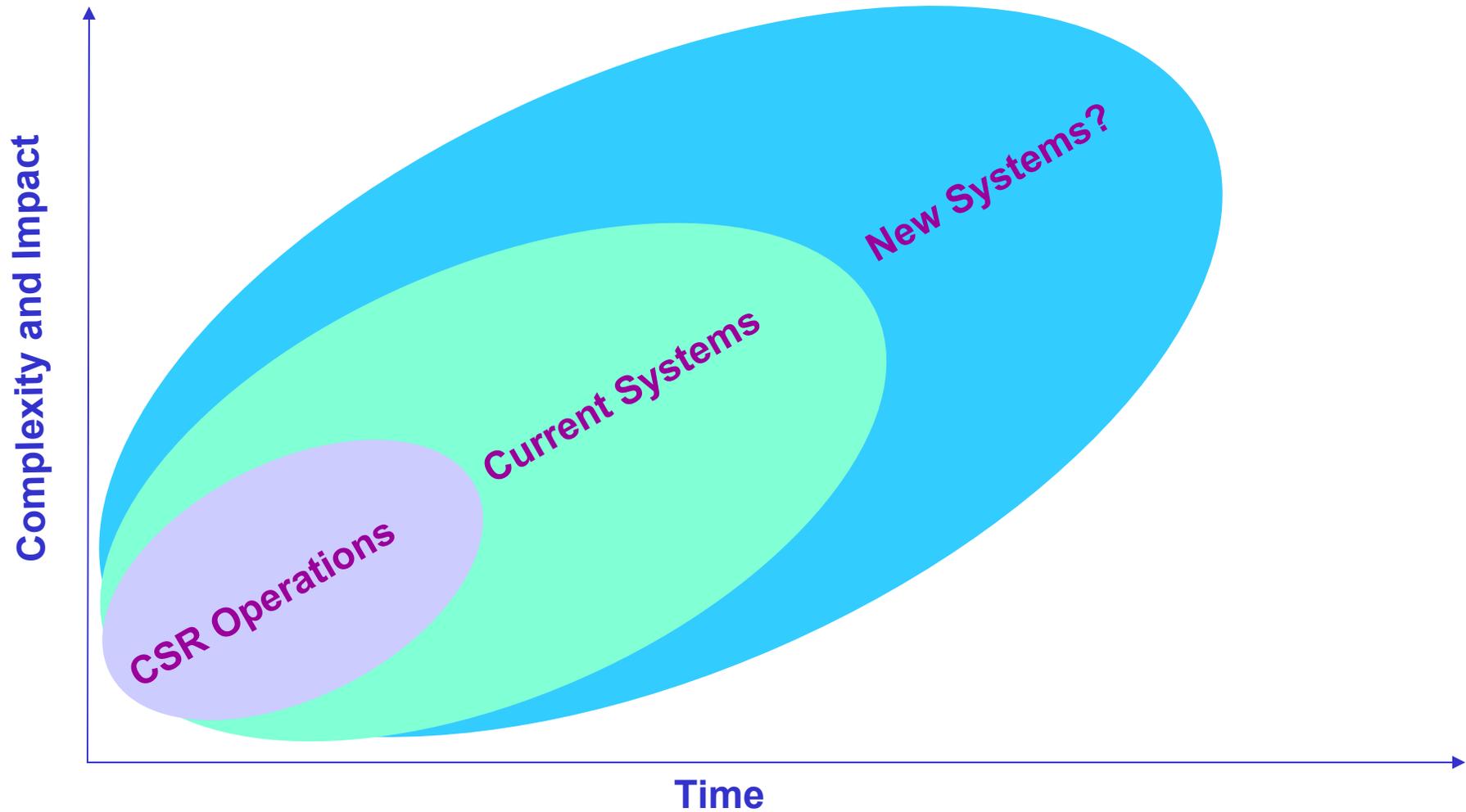
Applications received for all of NIH and applications referred for CSR review, FY 1998-2004



CSR Mission Statement

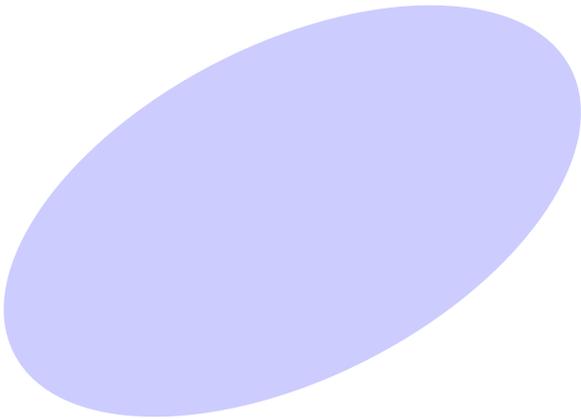
To see that NIH grant applications receive fair, independent, expert, and timely reviews -- free from inappropriate influences -- so NIH can fund the most promising research.

Necessary Changes in CSR Peer Review Operations



Possible Changes in CSR Operations

- Increase communications between CSR, the ICs, our reviewers and applicants
- Increase uniformity
- Increase efficiency



Potential of Knowledge Management Tools for Peer Review

Collexis Software

- Knowledge management solutions
- Fingerprinting and text retrieving
- Disease coding

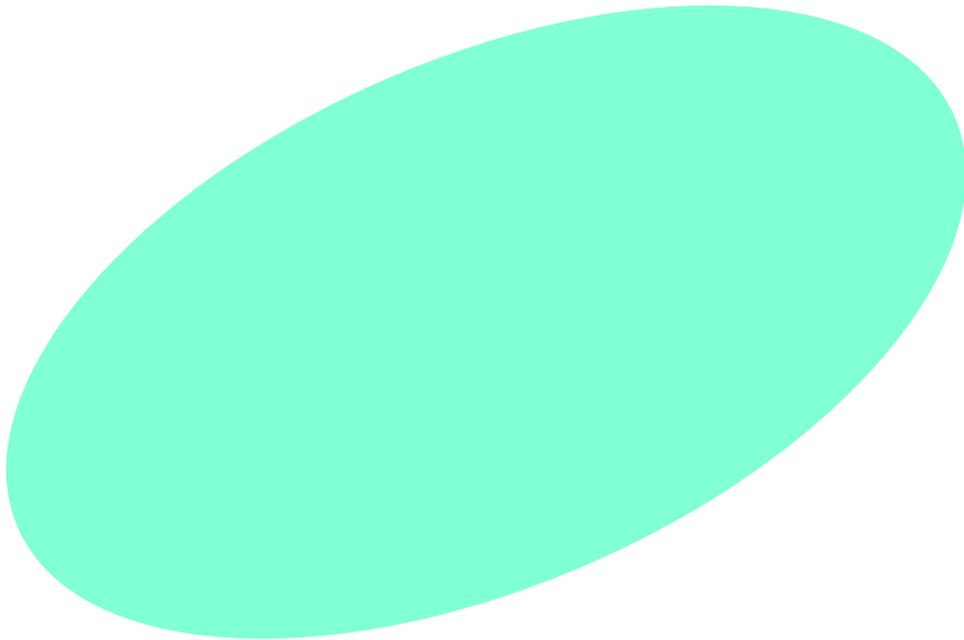
Benefits for Peer Review

- Assigning applications to Integrated Review Groups
- Selecting reviewers (one application, multiple applications)

Four pilots are underway to begin to assess these benefits

Required Changes in Current Systems

- **Shorten the review cycle**

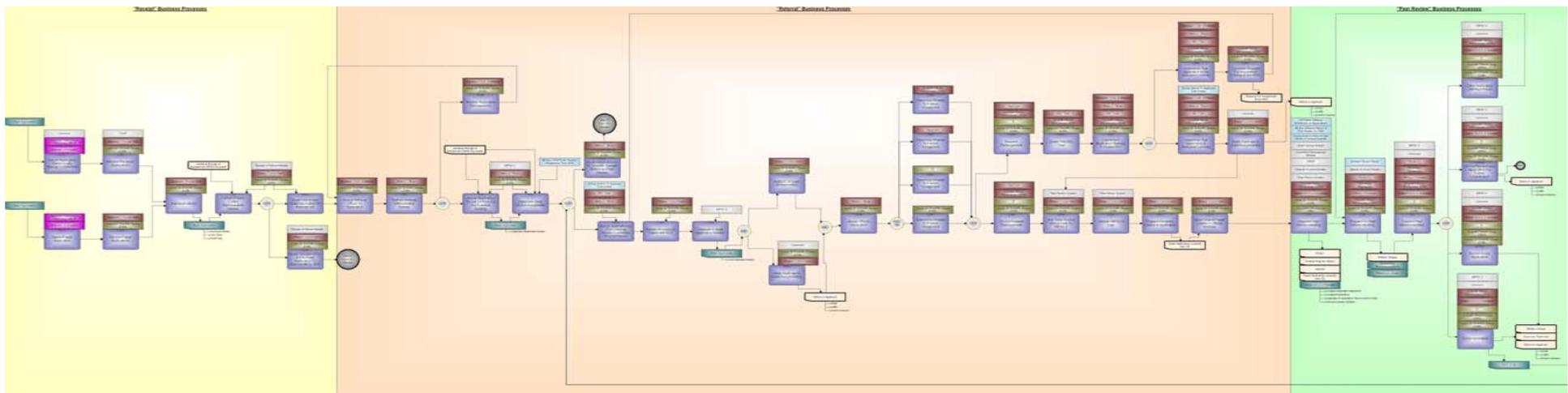


This is Not an Ford Assembly Line

Receipt

Refer

Evaluate Scientific Merit of Applications



EnterpriseArchitecture@mail.nih.gov

Contact: enterprisearchitecture@mail.nih.gov

Shortening the NIH Review Cycle, Initial Steps

For most research grants, we are posting summary statements within one month after the study section meeting instead of two to three months after the meeting (effective Oct 05)

We are conducting a pilot study to speed the review process for new investigators so they may revise and resubmit for the very next review cycle 4 months earlier than before (effective Feb 06)

Possible Changes in Current Systems

- Shorten the review cycle
 - Address concern that clinical research is not properly evaluated
 - Improve the assessment of innovative, high-risk/high-reward research
- 

“The judging of grants has become a charade.”

The American Society for Cell Biology

PRESIDENT'S Column



Research Funding in the Time of Flat Budgets

The US Federal budget looks like it is in for a rough spell, especially for “discretionary” spending. After the recent doubling of the NIH budget, biomedical research funding is clearly a lower priority for Congress, the ability of which to increase funding for the NIH is severely limited in any case.

If funds allocated for research do not increase by at least the inflation rate for science, which is higher than general inflation, then a flat budget or even a small increase translates into a decrease in funds for new grants and



Zena Werb

The judging of grants has become a charade. To be funded, the experimental plan has become a litany of experiments already accomplished so that everything is feasible. When grants come back with unfundable scores, new investigators may not have sufficient resources to do the experiments that “show feasibility”.

What can we do to reverse this trend? New investigators should be encouraged to apply for extramural funding as early as possible, even when they have start-up funds. They should find

“The judging of grants has become a charade. To be funded, the experimental plan has become a litany of experiments already accomplished so that everything is feasible. When grants come back with unfundable scores, new investigators may not have sufficient resources to do the experiments that “show feasibility.”

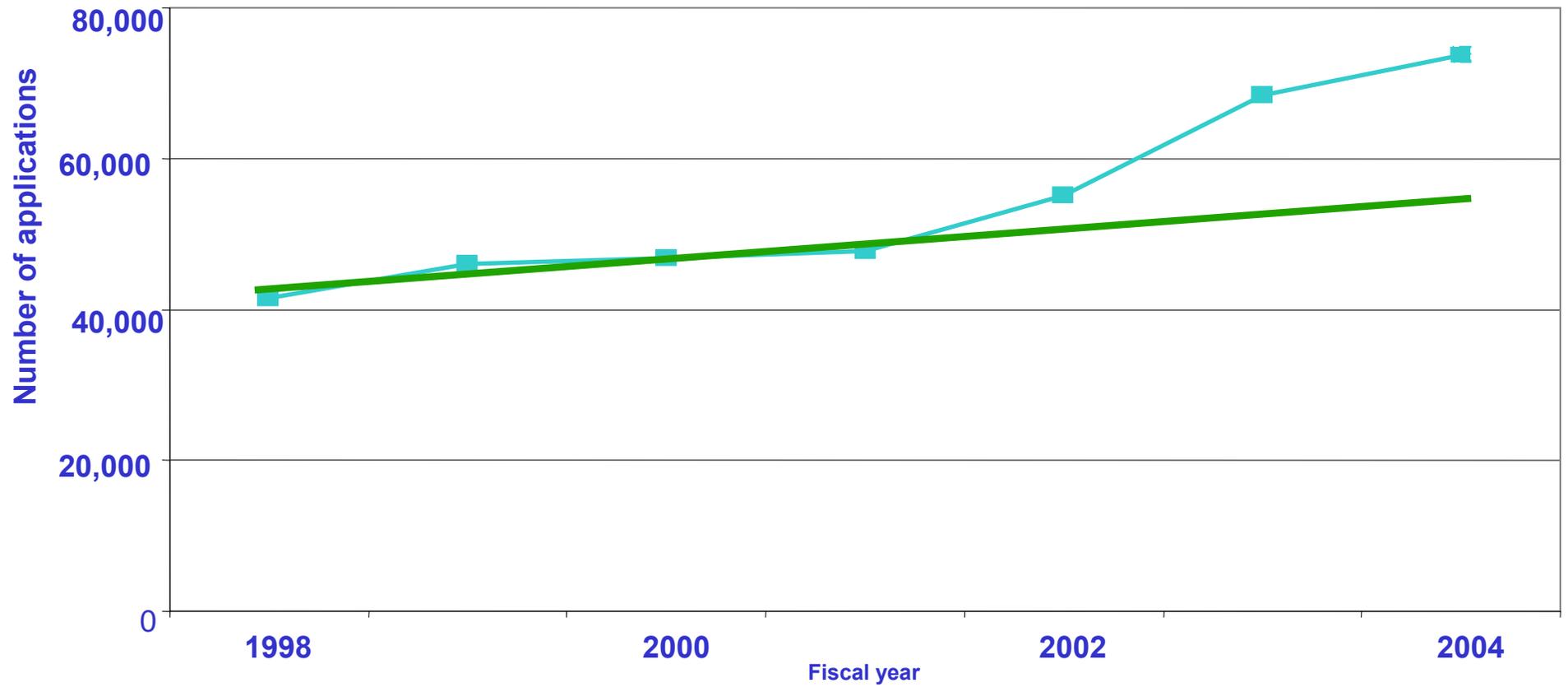
Newsletter August 2005

**Zena Werb
President, ASCB**

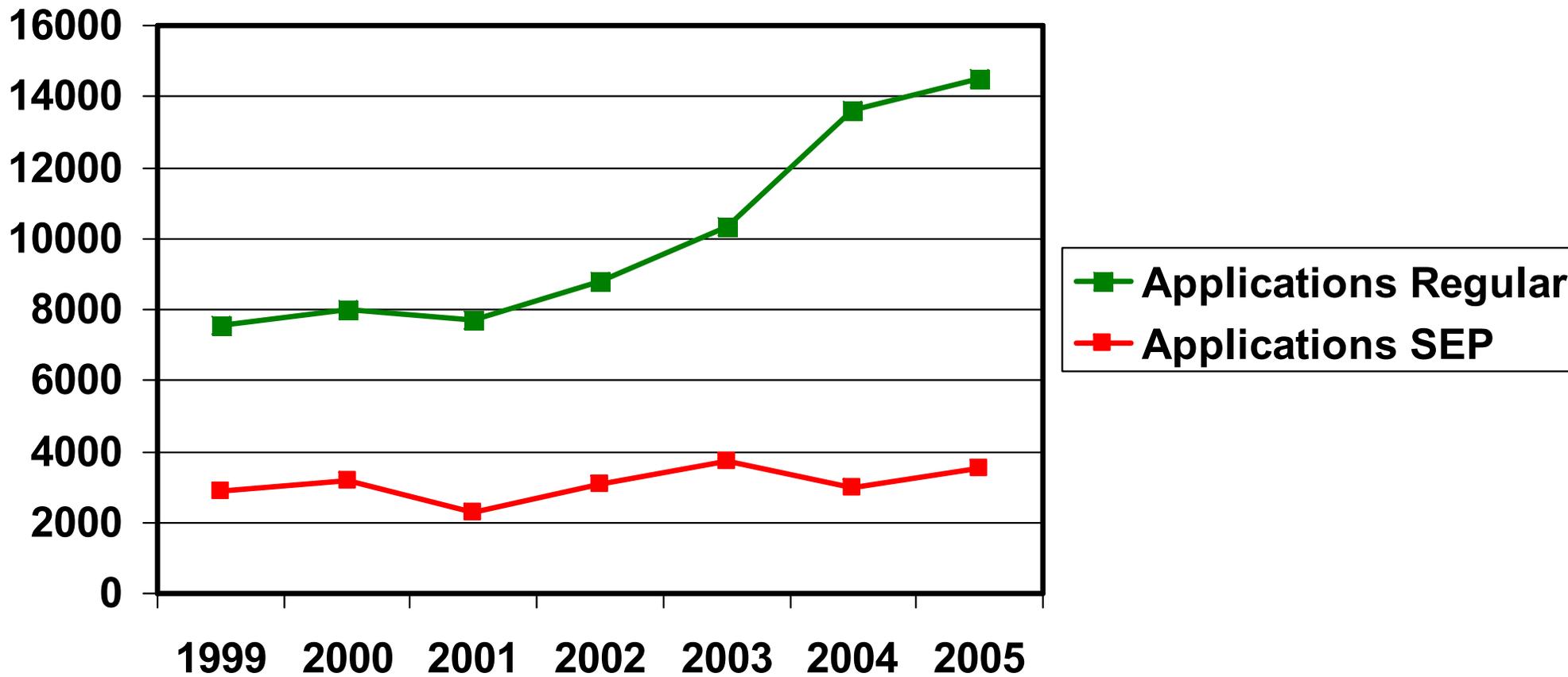
Possible Changes in Current Systems

- Shorten the review cycle
- Address concern that clinical research is not properly evaluated
- Improve the assessment of innovative, high-risk/high-reward research
- Do more to recruit and retain more high-quality reviewers

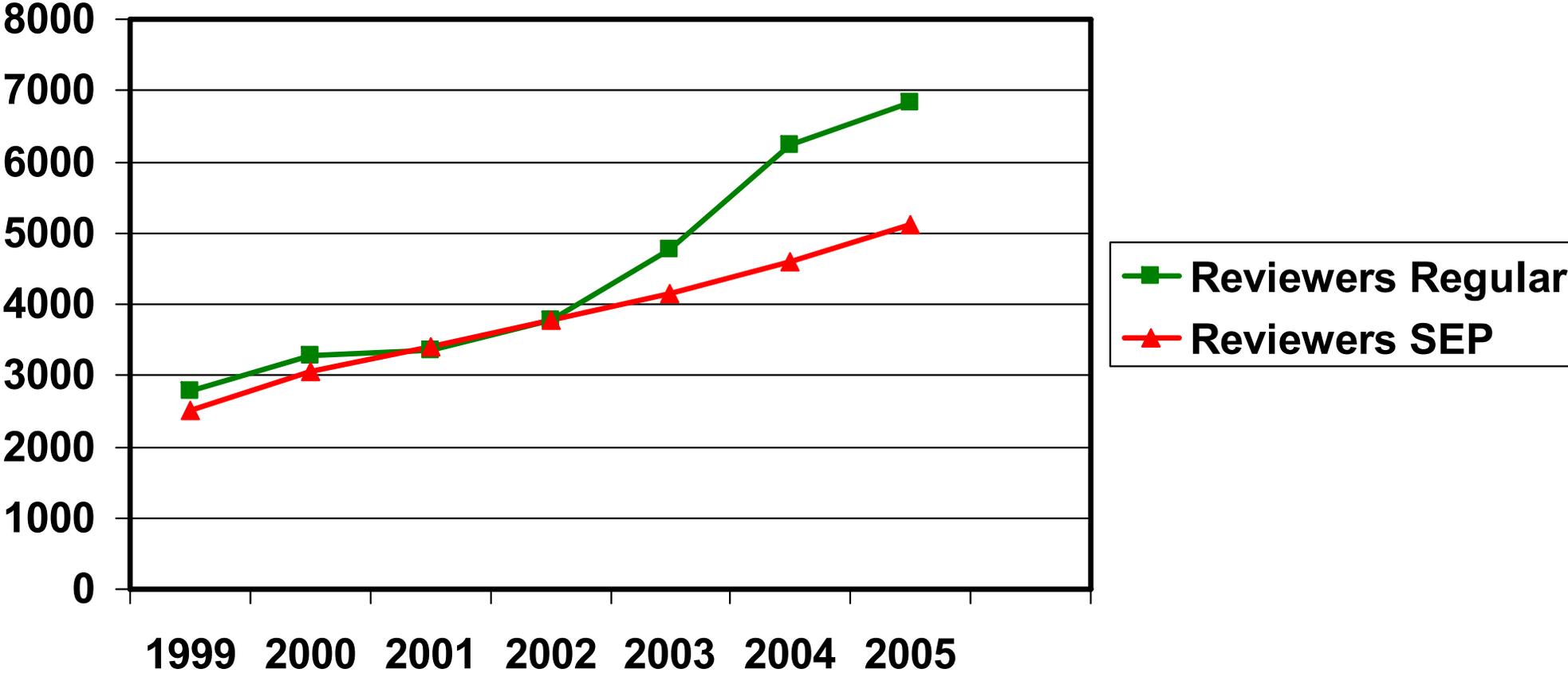
Applications received for all of NIH FY 1998-2004



CSR Applications Reviewed, Regular and SEP May Council Only

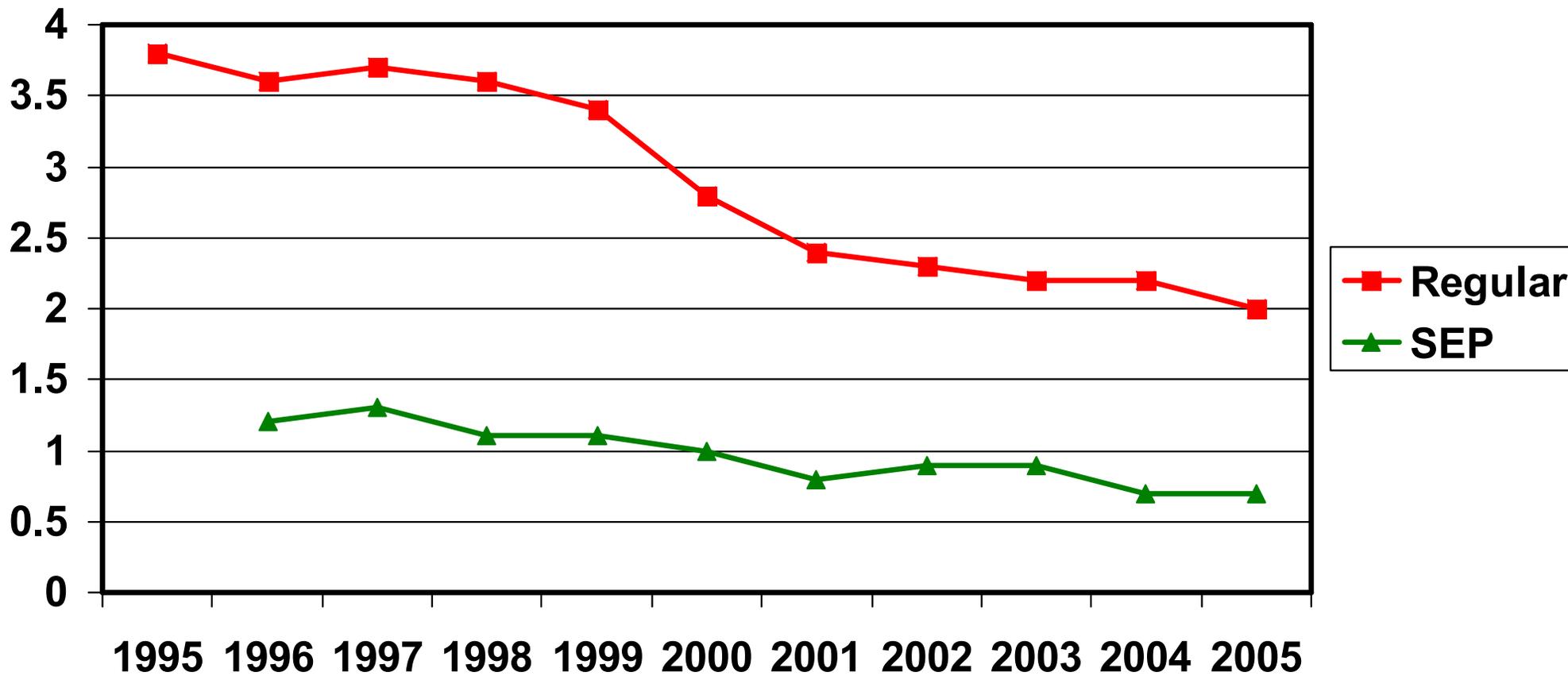


Reviewers for CSR, May Council Only



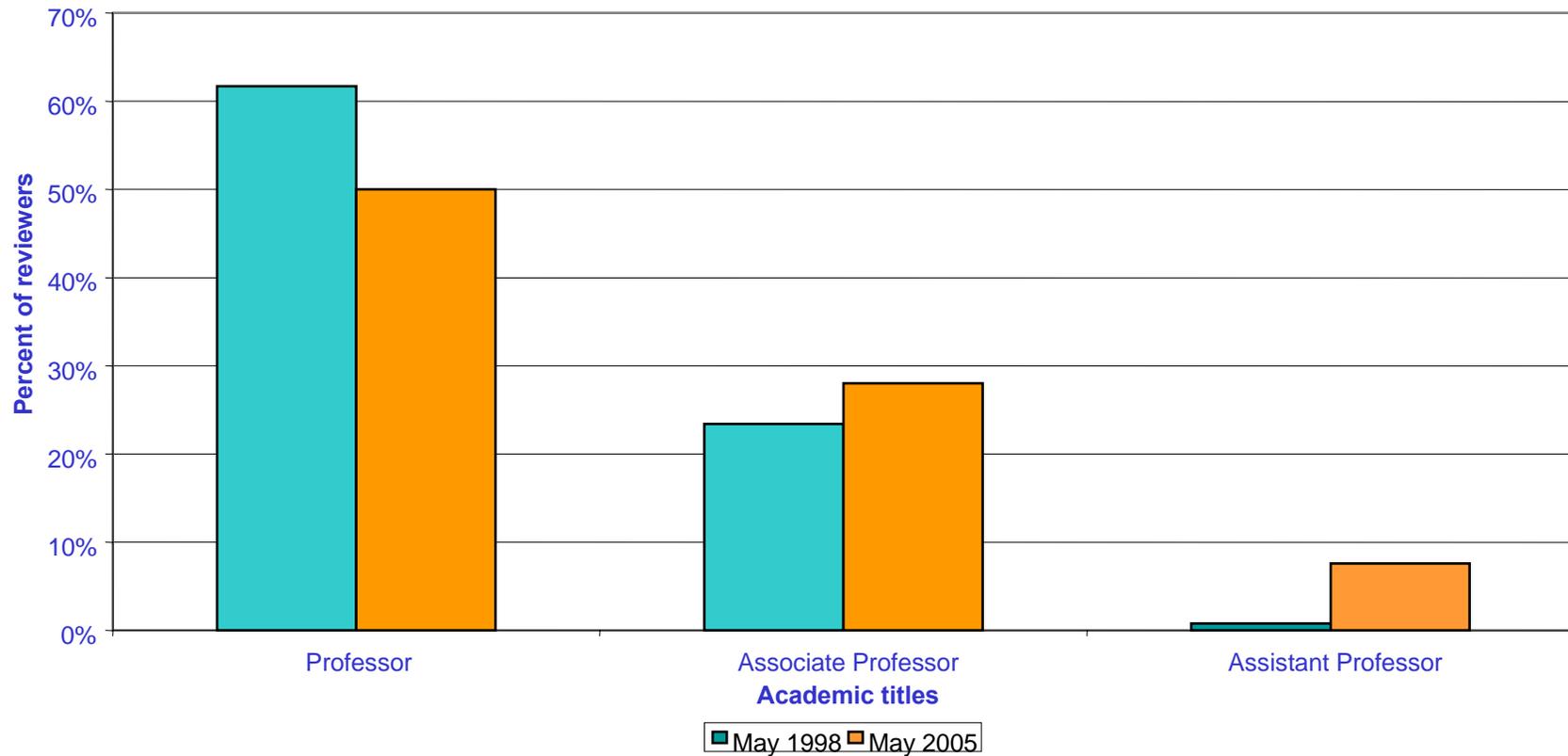
Applications / Reviewers Ratio

October Council Only



Distribution of Reviewer Academic Titles in May 1998 and May 2005

Reviewers in Chartered CSR Study Section Meetings



Expanding Peer Review's Platforms

Study Sections

Electronic Reviews

- Telephone Enhanced Discussions
- Video Enhanced Discussions
- Asynchronous Electronic Discussions

Necessity

- Clinical reviewers

Preference

- Physicists, computational biologists

New Opportunities

- Fogarty, International Reviewers

Possible New Systems

If we didn't have any peer-review system and we had to design one from scratch, what would it look like?

The First NIH Study Section

1945



The Last NIH Study Section

2005





Questions—Applications

- If there were only 30 in-class or 20 reviewers, should applications (RAs) be shortened? Should reading 25-page applications or 10-15 reviewers appendices be eliminated or reduced in size? reading 5-page applications?

Questions—Study Section Meetings

- **What is the intellectual contribution of a study section with 60 reviewers? Do we have individual reviewers in large study sections? efficient?**

Questions—Scoring

- Is it proper or advisable to have 50-70 reviewers voting on priority scores for each application referred to their study section?

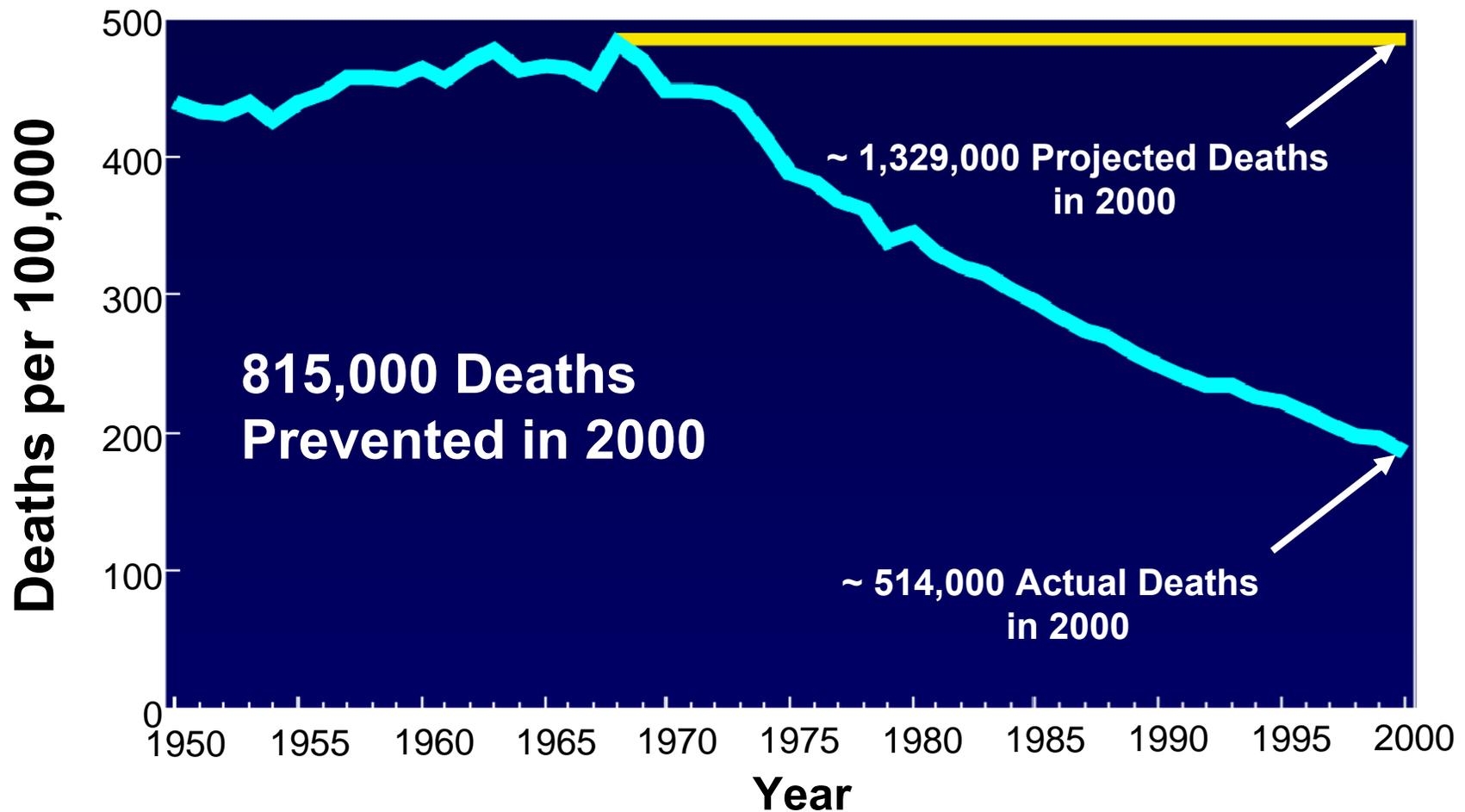
This is CSR



Coronary Heart Disease

Age-Adjusted Death Rates in U.S.:

Actual (blue) vs Expected (yellow)



The True Value of Peer Review



Finding the Best Biomedical Research and Cures