



Center for
Scientific Review

CSR Advisory Council Update

March 2019

Noni Byrnes, Ph.D.

Director

Center for Scientific Review

Welcome New CSR Advisory Committee Regular & Ad Hoc Members



Mark Peifer, Ph.D.

1/1/2019 to 12/31/2022

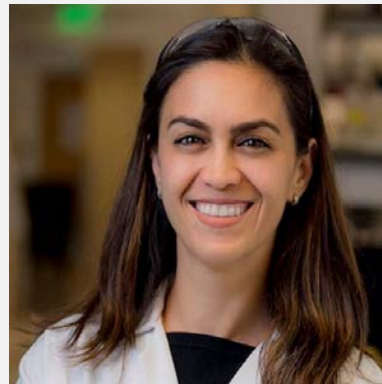
Professor, Department of Biology
Michael Hooker Distinguished Professor
University of North Carolina at Chapel Hill



Denise Wilfley, Ph.D.

4/1/2018 to 12/31/2021

Professor, Psychiatry, Pediatrics,
Psychological and Brain Sciences
Washington University

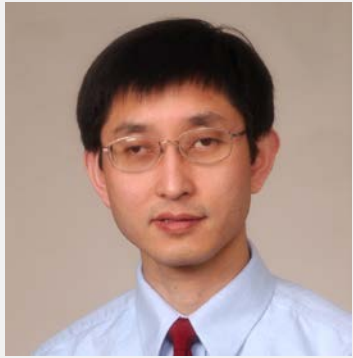


Elizabeth Villa, Ph.D.

Ad-Hoc

Assistant Professor
Division of Biological Sciences
University of California, San Diego

Leadership and Management Transitions



Xiang-Ning Li

Peer Review and
IT Coordinator



Sharon Gubanich



Vonda Smith

DRR Assistant Directors



Michelle Timmerman

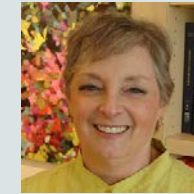
DRR Associate Director
Guide Liaison Officer

Retirement



Robert Freund

Chief
AIDS and Related Research
(AARR) IRG Chief



Karyl Swartz

Associate Director
Diversity & Workforce
Development

Move



Joanna Bare

Former: Executive Officer
Now: Director of Business
Transformation, NHLBI

Underlying Principles



Transparent, data-driven
decision-making

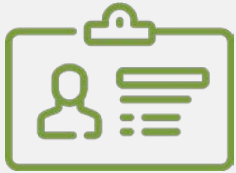


Involvement/engagement
of stakeholders



Open, multi-directional
communication strategies

Plans for Council Membership and Meetings



Membership

- Broaden membership to include all career stages (Early/Mid Career)
- Total number of slots increased by 2 (from 11 to 13)
- Publish council member information on website organization (photos?)

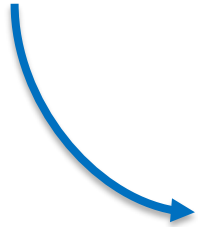


Meeting Content

1. Advice on study section restructuring, initiatives, processes, evaluations (no change)
2. Higher level of engagement between council meetings - council working groups with CSR staff, Council members and external scientific community members
3. Peek under the hood - how does CSR...? Can we do it better?

Engagement with the Scientific Community

Peer Review Notes
sunsetting after April 15



New blog, webinars, social media feeds



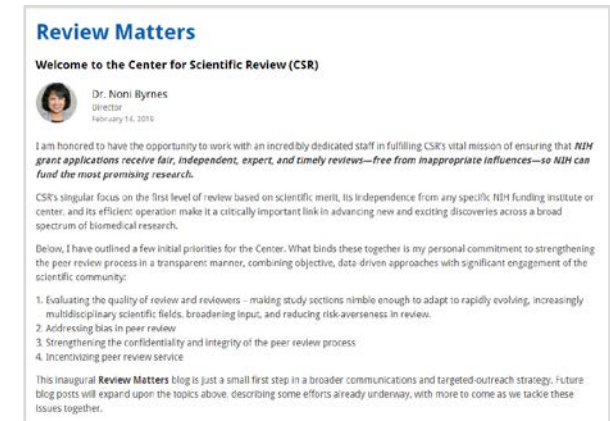
Twitter:
center for scientific review
548 followers



Facebook:
CSRpeerreview
19 followers

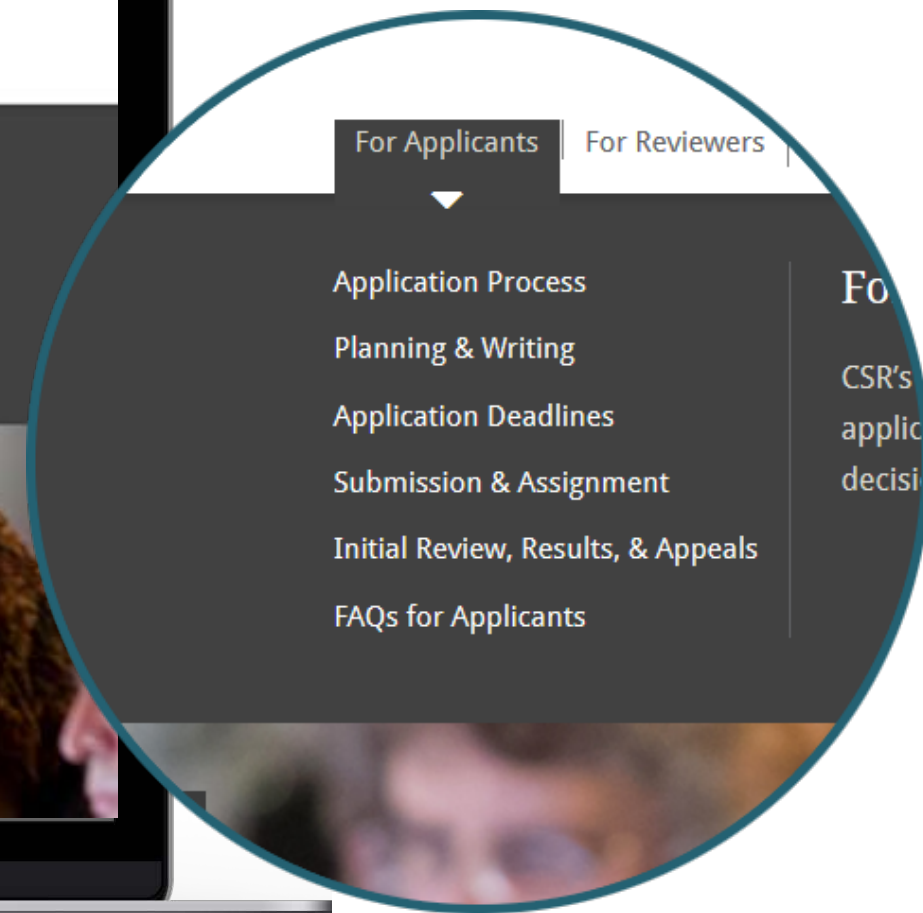
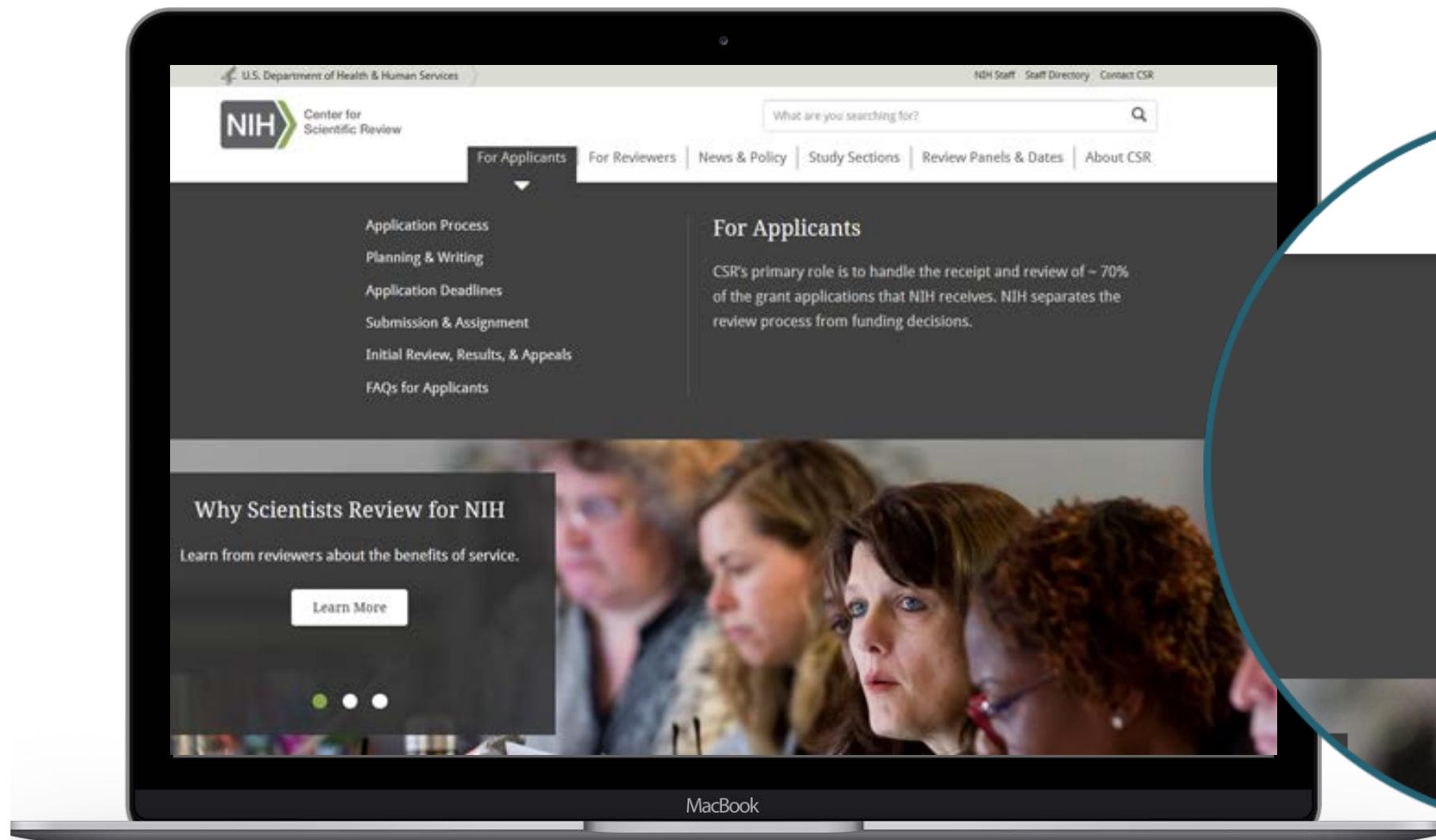


Blog:
<https://www.csr.nih.gov/reviewmatters>



Acknowledgment: Kristin Kramer & IMB

Redesigned CSR Website

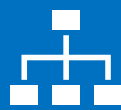


Acknowledgment: Kristin Kramer & IMB

Scope of Review Operations



77%
NIH Applications
(62,000 of 81,000)



>200
Chartered or Recurring
Study Sections



245
Scientific Review Officers



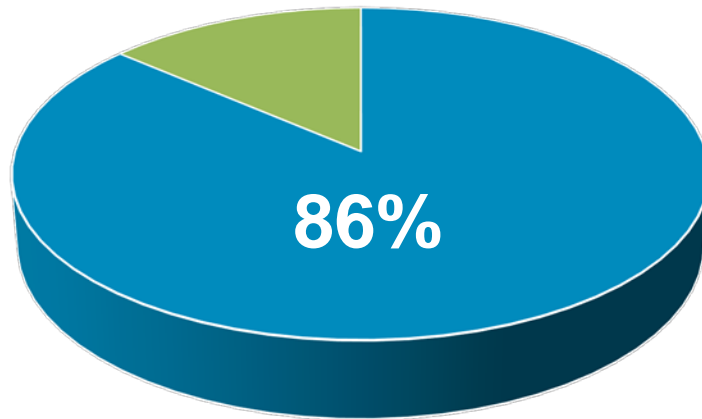
>18,000
Distinct Reviewers



>1,600
Annual Review Meetings

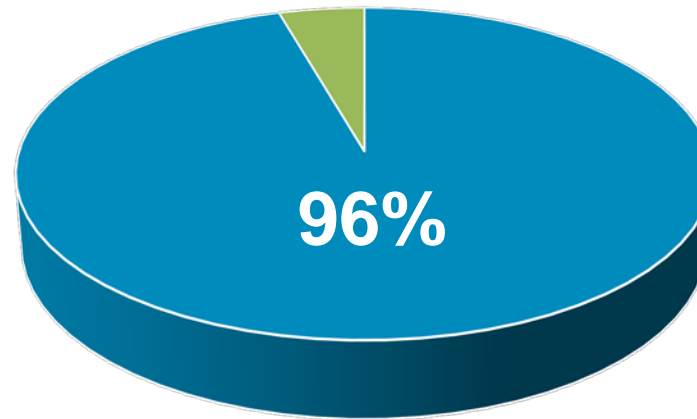
CSR Continues to Review ~75% of all NIH Applications

RPGs



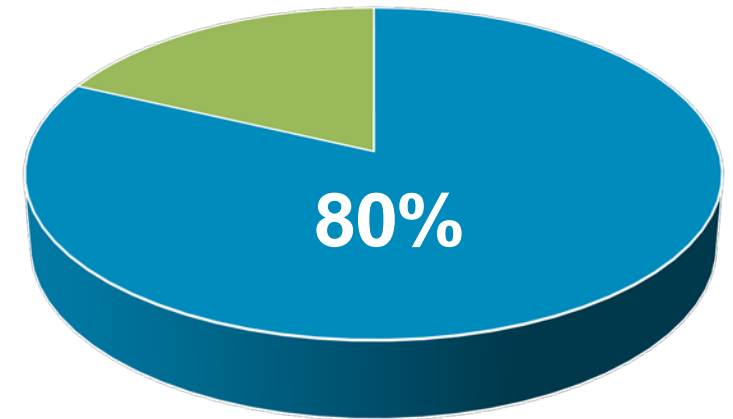
55,046

SBIRs/STTRs



6,265

Fellowships



4,702

FY18 Applications

Types of Review – A Variety of Special Initiatives and Inter-agency Collaborations



NIH All-of-Us Program Reviews, plus Other Transaction Authority Reviews



Brain Research through Advancing Innovative Neurotechnologies (BRAIN)



NIGMS Maximizing Investigators' Research Awards (MIRA)



Native American Research Centers for Health (NARCH)



All Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI)/Common Fund review



Many IC PARS and multi-IC RFAs



FDA/Tobacco



Global Alliance for Chronic Disease



Investigation of Co-occurring conditions across the Lifespan to Understand Down syndrome (INCLUDE)



Cancer Moonshot



Alzheimer's Disease (AD)



Office of Research on Women's Health (ORWH) at NIH - Specialized Centers of Research Excellence (SCORE) on Sex Differences



All Fogarty International Center Reviews

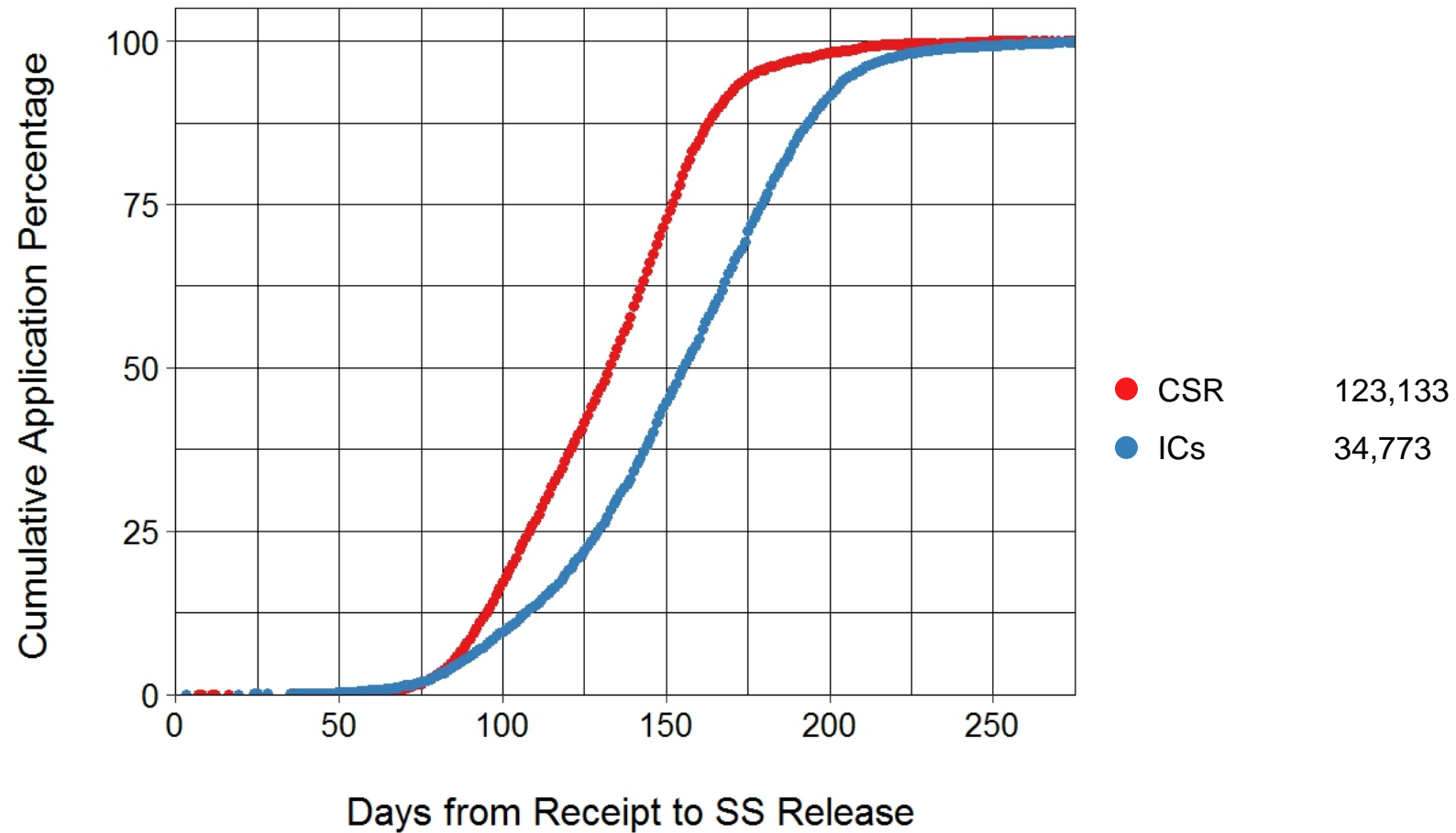


All Office of the Director (OD)/Office of Research Infrastructure Programs (ORIP) Reviews

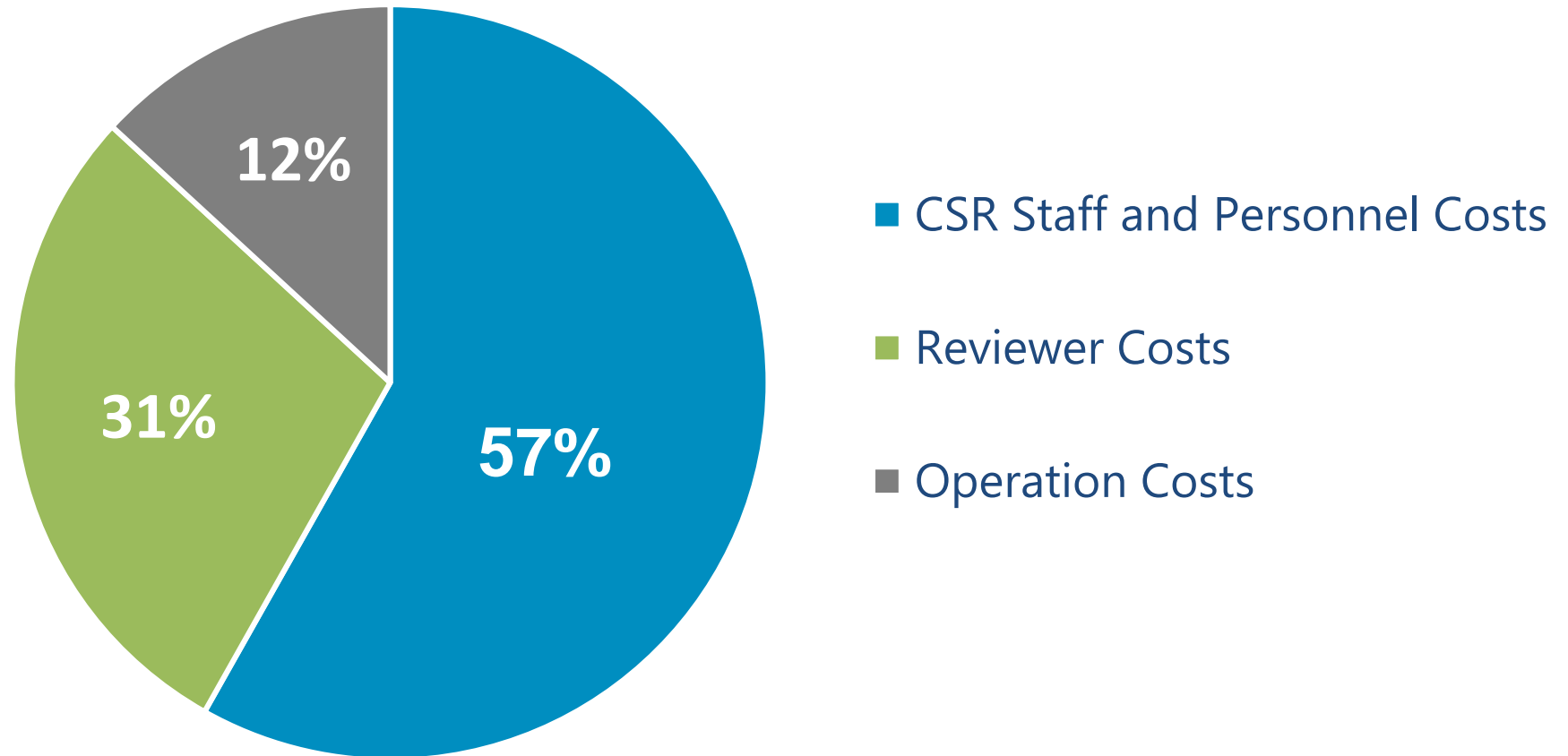


NIH-NSF and NIH-DOE All USA-China Reviews

CSR Continues to Lead in Efficiency/Timeliness



CSR Budget: FY19 \$138 million

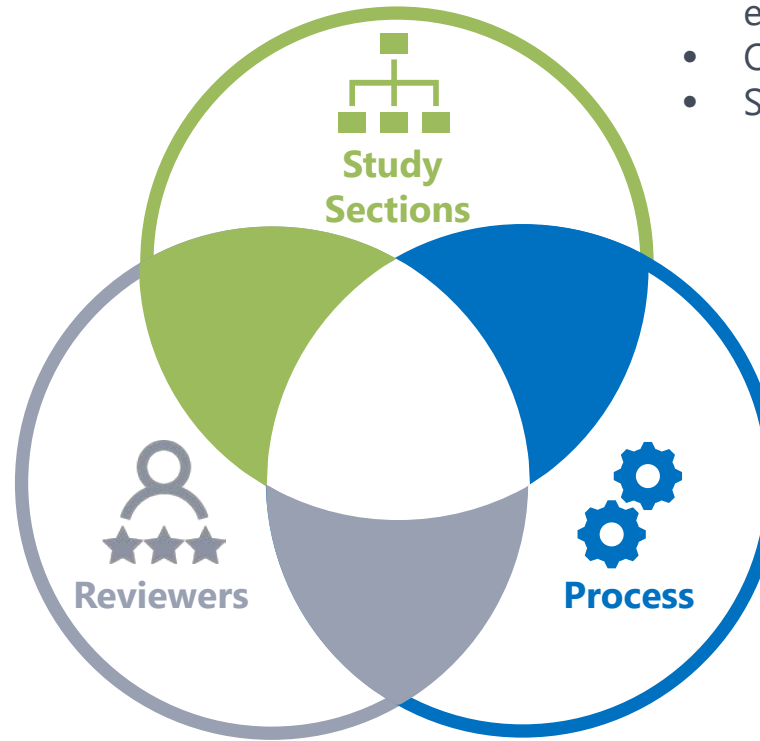


Less than 0.4% of the \$39.3B NIH budget

Quality of Peer Review

Reviewers

- Training reviewers/Chairs – consistent, transparent
- Review Service – Overuse vs. broadening pool, incentivizing service
- Evaluating reviewers – qualifications/expertise, scoring patterns, critiques



Study Sections

- Scientific boundaries (relevance, adapting to emerging areas, perpetuating stale science)
- Output (identification of meritorious science)
- Size – appropriate for competition and breadth?

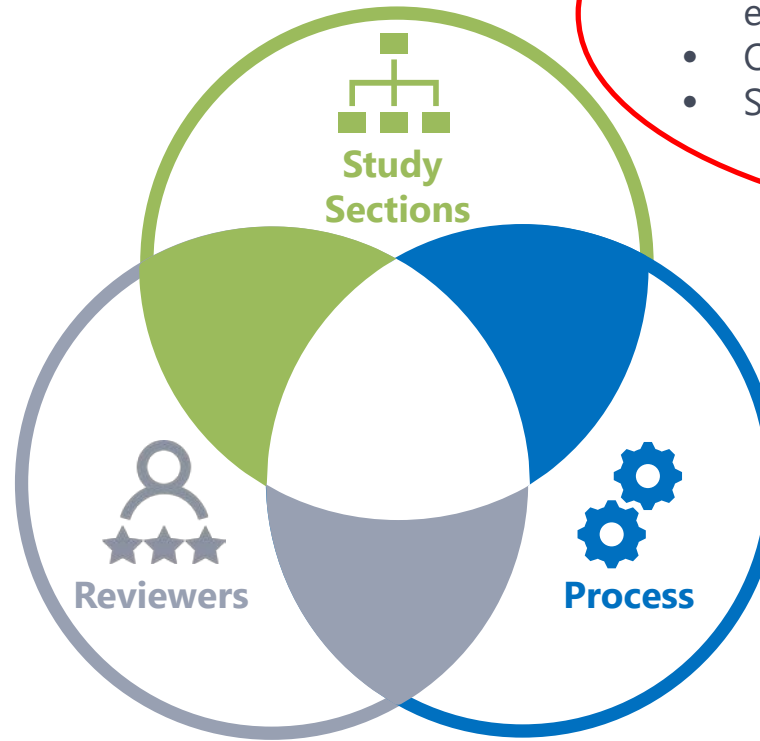
Process

- Confidentiality/Integrity in review
- Bias in review
- Assignment/Referral of Applications
- Review Criteria
- Scoring system

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Evaluating Panel Quality in Review (ENQUIRE) A New Evaluation Framework for CSR Study Sections

Previous Study Section Evaluations at CSR (2003-2015)



By CSR's internal organizational/management groupings (IRG)

- Input from CSR management only (2004-8)
- Input from chairs/selected reviewers (2008 -11)
- Input from blue-ribbon external scientific working group, given data re: application, workload, bibliometric, (2011 –15)



Output: Comments about use of surveys, exit interviews, ranking, H-indices, bibliometrics, should Chairs be used to recruit new members, % ND, private discussion with SROs without management to assess IRG function, NIH A2 policy.

** Only **scientific** changes recommended were endorsement of proposals made by the CSR IRG Chief during his/her presentation of the science



Problems:

- 1) Reviews by study sections clustered by CSR organizational structure
- 2) Too much info, too broad a scope including both science and process

CSR “**SRG Reviews**” 2015 - 2018

- Review by **scientific clusters**, not by management/organizational clusters or IRGs (10-20 SRGs)
- **Assemble blue-ribbon Working Group (WG)** of scientifically broad, senior scientists (with interest in more than one SRG)
- Ask 1 **question** designed to focus discussion on science, not process

“How well does the scientific scope of the study sections align with the current state of the science?”

Multiple Possible Actions for Restructuring Study Sections



Change in scientific guidelines



Merge study sections



Create new study sections



Eliminate study sections



Move an area of science from one study section to another/others



Add emerging areas of science



Study Sections

Example: SRG Review

HIV/AIDS: 9 study sections eliminated, science reorganized into 6 new study sections



Study Sections

HIV Coinfections and HIV Associated Cancers

HCAC
Starts 01/2019 Council

HIV Comorbidities and Clinical Studies

HCCS
Starts 01/2019 Council

HIV Immunopathogenesis and Vaccine Development

HIVD
Starts 01/2019 Council

HIV Molecular Virology, Cell Biology, and Drug Development

HVCD
Starts 01/2019 Council

HIV/AIDS Intra- and Inter-personal Determinants and Behavioral Interventions

HIBI
Starts 01/2019 Council

Population and Public Health Approaches to HIV/AIDS

PPAH
Starts 01/2019 Council

HIV/AIDS Fellowship Special Emphasis Panels (AARR Fellowship SEP)

F17

HIV/AIDS Small Business Applications: AARR Small Business Special Emphasis Panels (AARR Small Business SEPs)

AARR (10)

HIV/AIDS Small Business Applications: AARR Small Business Special Emphasis Panels

AARR (11)

AIDS Clinical Studies and Epidemiology

ACE
Ends 10/2018 Council

AIDS Molecular and Cellular Biology

AMCB
Ends 10/2018 Council

AIDS-Associated Opportunistic Infections and Cancer

AOIC
Ends 10/2018 Council

AIDS Immunology and Pathogenesis

AIP
Ends 10/2018 Council

AIDS Discovery and Development of Therapeutics

ADDT
Ends 10/2018 Council

Behavioral and Social Consequences of HIV/AIDS

BSCH
Ends 10/2018 Council

Behavioral and Social Science Approaches to Preventing HIV/AIDS

BSPH
Ends 10/2018 Council

NeuroAIDS and other End-organ Diseases

NAED
Ends 10/2018 Council

HIV/AIDS Vaccines

VACC
Ends 10/2018 Council



<https://public.csr.nih.gov/StudySections/DABP/AARR>



Center for
Scientific Review

Scientific Reorganizations of Study Sections Thus Far...

"SRG Reviews" completed (scientific restructuring only):

16 Bioengineering

5 Imaging

11 Basic Cancer Biology cluster

9 HIV/AIDS

3+ Visual Sciences

ENQUIRE (Evaluating Panel Quality in Review) New Framework/Process for Study Section Evaluation (2019)

- Largely **builds on CSR's existing successful model of scientific SRG Reviews** - external panel to evaluate science by examining workload trends, guidelines, random sample abstracts/specific aims, **adds in publication/bibliometric data.**
- **Adds in a process evaluation component** - internal NIH panel to look at process issues e.g. IC distributions, scoring patterns, reviewer/PO surveys, discussions, rosters, ESI application/award rates, etc.

SRG Reviews (2015-2018)

“SRG Reviews” completed (scientific restructuring only):

12 Bioengineering

11 Imaging

15 Basic Cancer Biology cluster

15 HIV/AIDS

3+ Visual Sciences

to

ENQUIRE...(2019-)

ENQUIRE (Scientific restructuring, adding in bibliometrics, process evaluation)

10 In progress: Health delivery/patient outcomes

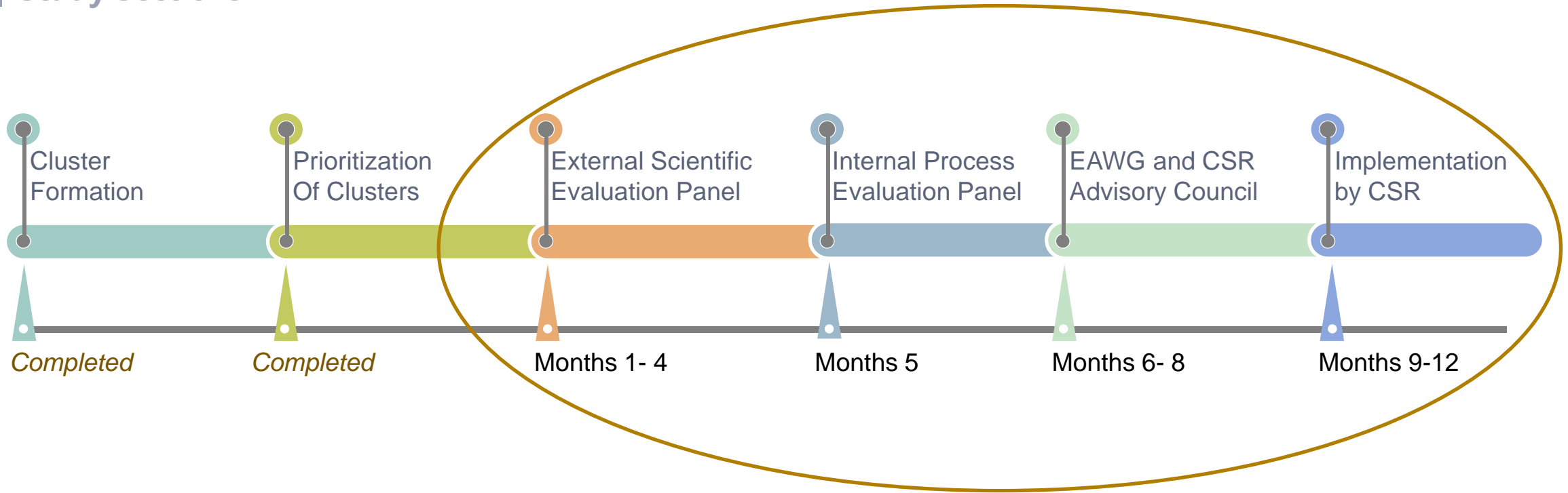
11 In progress: GI/renal and endocrine/metabolism

9 Coming up: Cardiovascular

Key Aspects of ENQUIRE

- Combines strength of **expert opinion** and **objective metrics**
- **Stakeholder** engagement – external scientific community, Council and ICs
- **Continuous and systematic** approach - Evaluate ~20% of the study sections each year (i.e. a study section is evaluated every 5 years).
- Addresses both **NIH Strategic Plan** element “Optimize approaches to inform funding decisions” and **CSR’s mandate** to continuously examine the function

Timeline

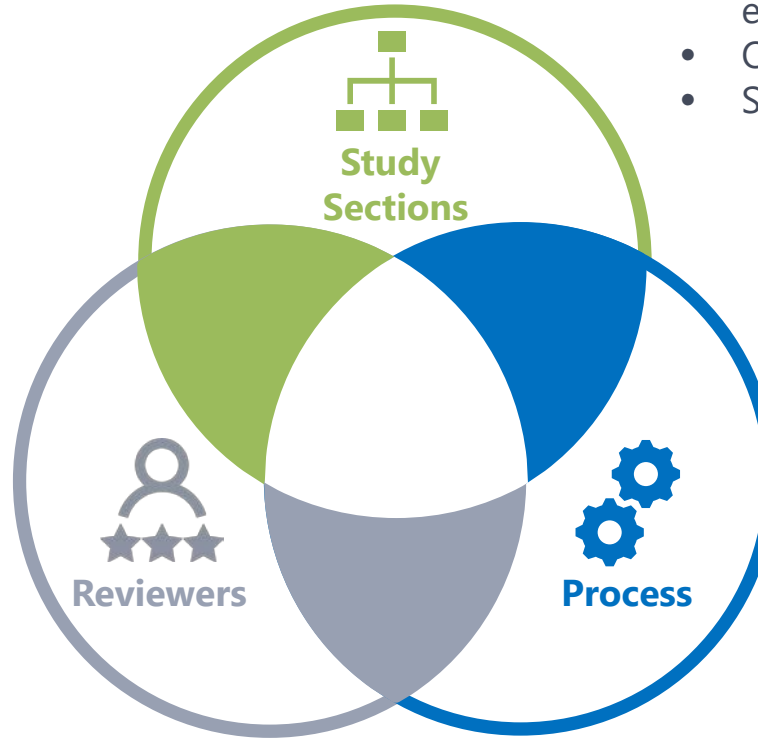


- One year per cluster
- 3-4 clusters per year (20% of study sections)
- Iterative Approach – Continuous refinement/modification of process based on experience and feedback
- **Critical to success – matching referral of applications and reviewer expertise to redefined scientific content of study section**

Quality of Peer Review

Reviewers

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Study Sections

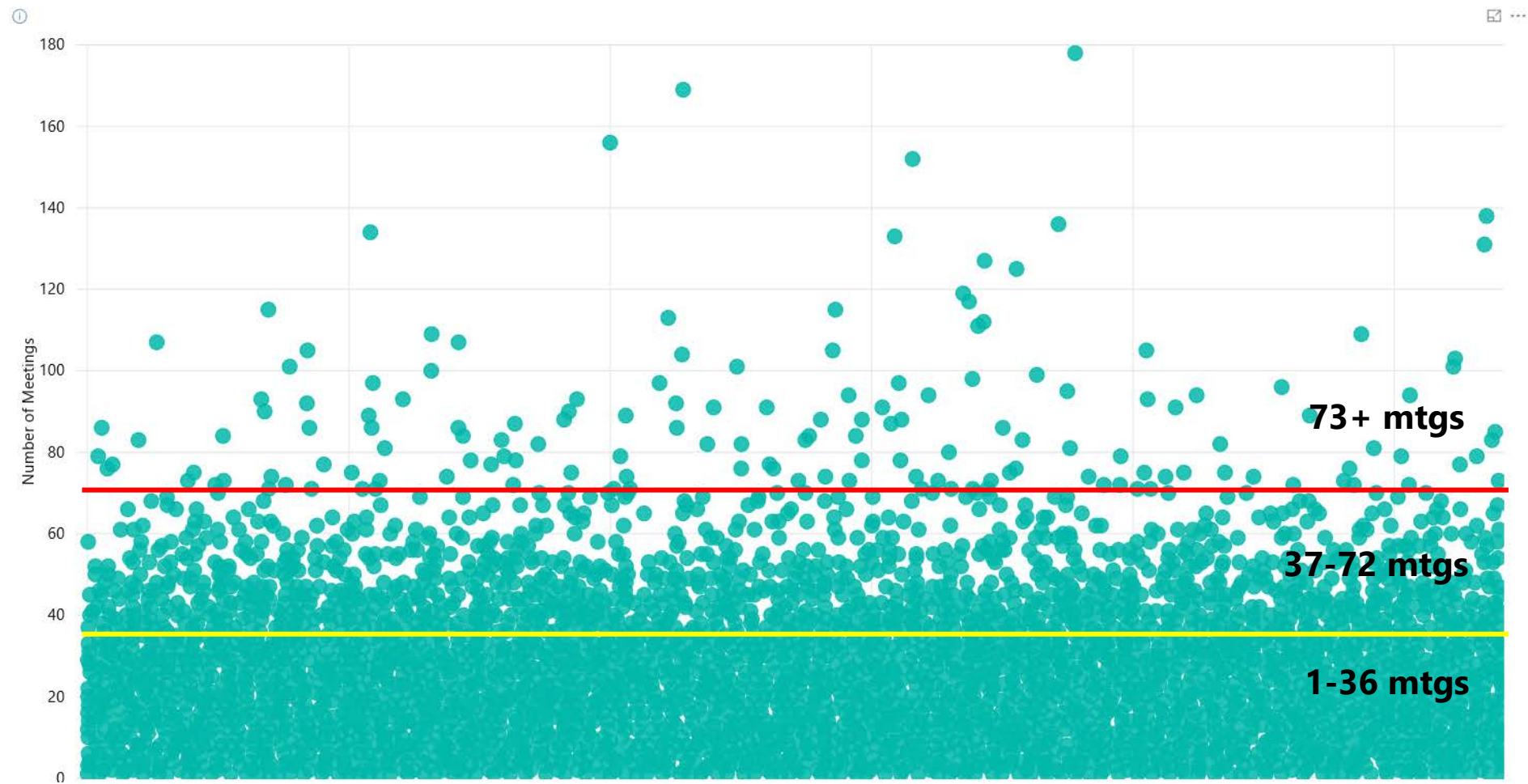
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Process

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- Review Criteria
- Scoring system
- Current review process

12 Year Service History of Reviewers

Participated in meetings in last 2 Years

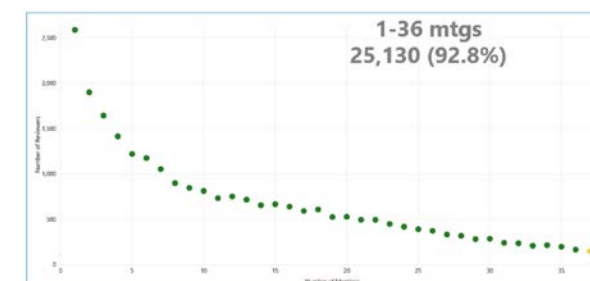
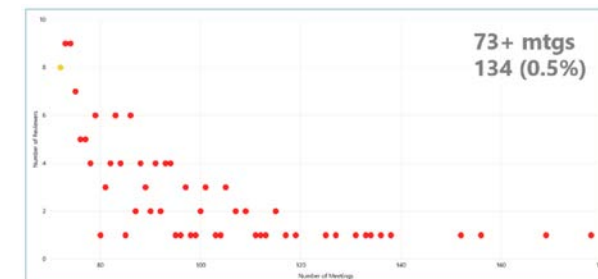
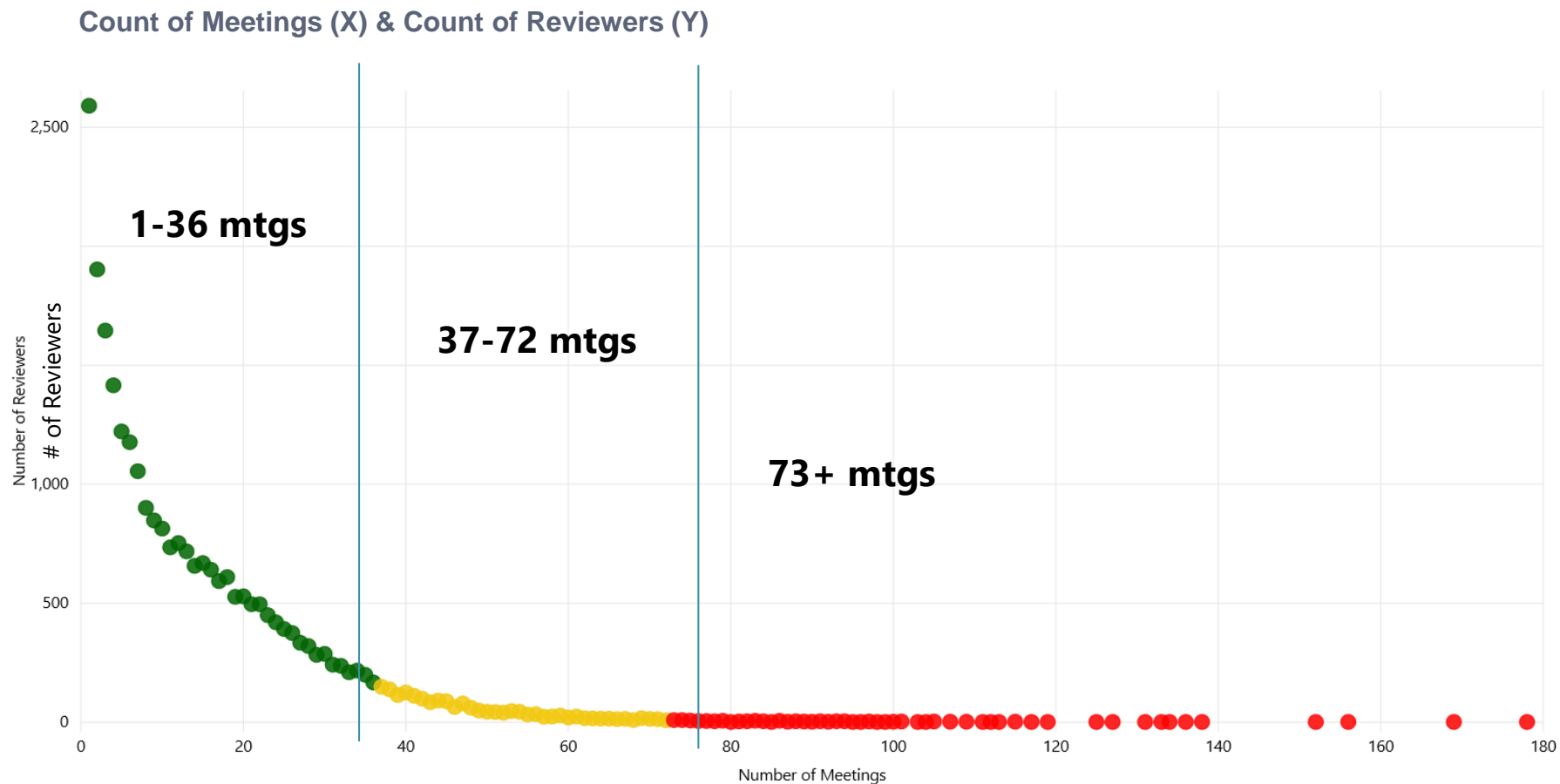


27,070 distinct reviewers / 393,433 meetings



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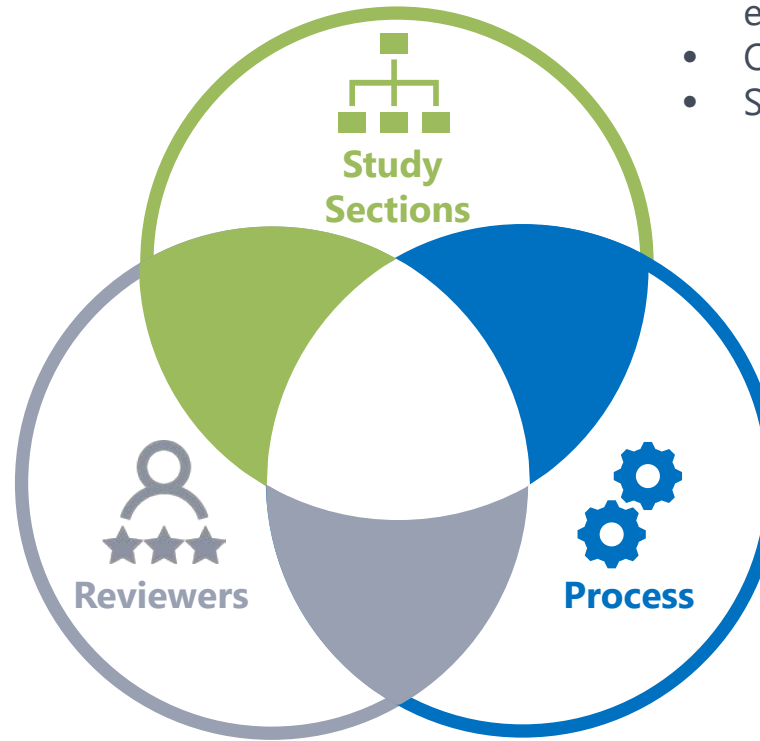
Reviewers: Future Plans

- Broadening the pool of reviewers, limiting overutilization of same reviewers
- Incentivizing peer review – Solicit ideas via social media? Prize?
- Development of online training modules – goals: consistency, adaptability, transparency to applicant community
- Continuation/enhancement of annual incoming chair training
- Systemic Evaluations of Reviewers – scoring behavior, consistency, critique quality

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- Review Criteria
- Scoring system



Process: Future Plans

- Assignment/referral of applications – automation for less complex decisions, transparency of process, enhanced communications
- Scoring System – percentiling versus ranking
- Review Criteria – simplification, focus on scientific input, limit administrative elements (needs NIH-wide discussion)
- Bias – address results of study (fall 2019); Implicit bias training pilot
- Experiment with different designs of peer review process

Review Integrity



ACTIONS

- Following up on every allegation

Actions have included

- Deferral of application
- Withdrawal of application
- Removal from serving on peer review committees
- Notifying the institution of the PI or reviewer which has led to personnel actions
- Pursuing government-wide suspension and disbarment, or referral to other agencies for criminal violations

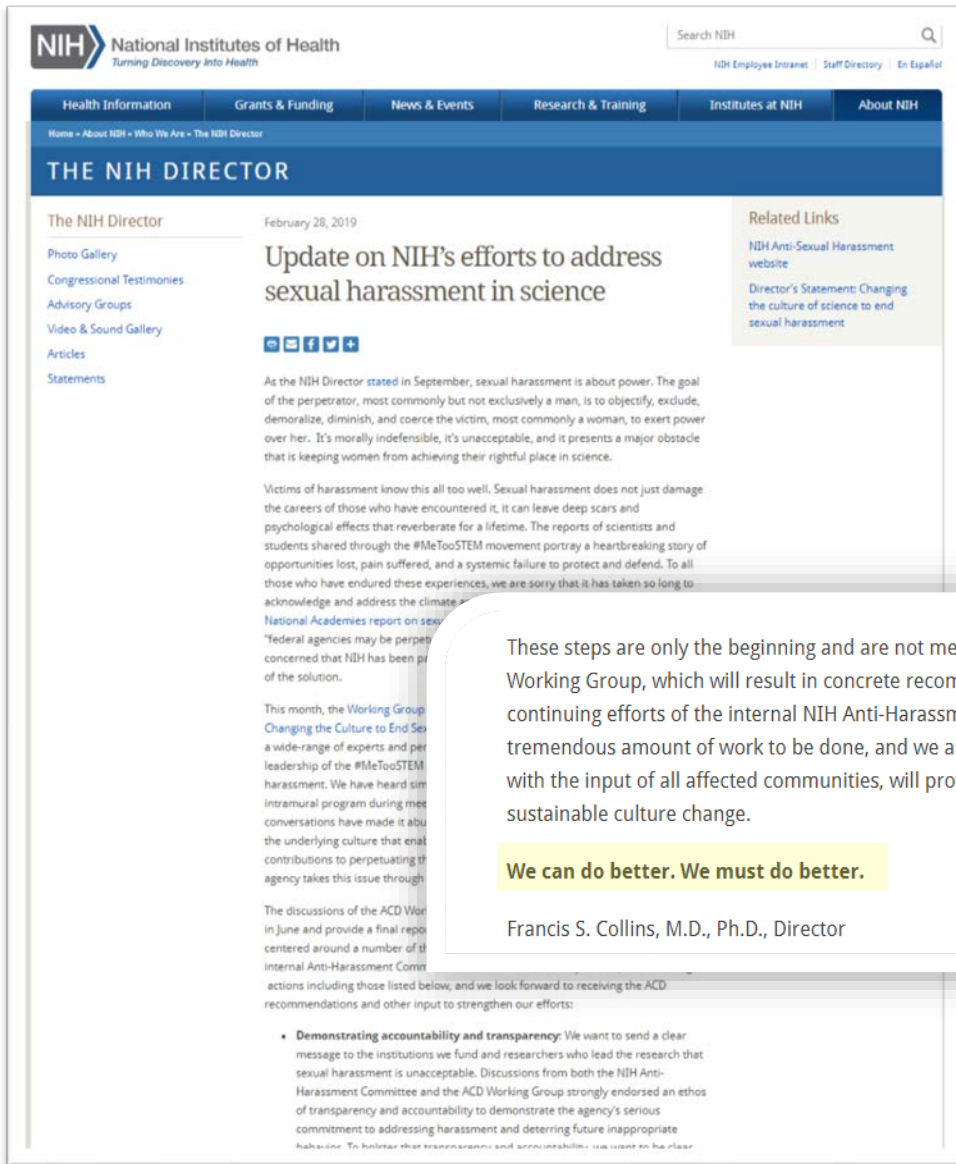


PRO-ACTIVE MEASURES

- Review Integrity Officer
- Enhanced Reporting – SRO signature
- Enhanced SRO Awareness and Training
- Reviewer/Chair Targeted Training, Case Studies
- Tighter IT controls
- Outreach to scientific community – culture change

Coming: Loop back to informant

Sexual Harassment



Peer Review

- **At agency discretion**
- **Not arbitrary**
- **Protection of impartiality/integrity of review, not implying guilt**
- **CSR will exercise its discretion to exclude individuals about whom we have concerns, until concerns are resolved**
- **More on CSR blog later this week: csr.nih.gov/reviewmatters**

This Is CSR



We want to hear from you: feedback@csr.nih.gov

DISCUSSION