



Center for
Scientific Review

Strengthening Peer Review through Training: An Update

Miriam Mintzer, Ph.D.

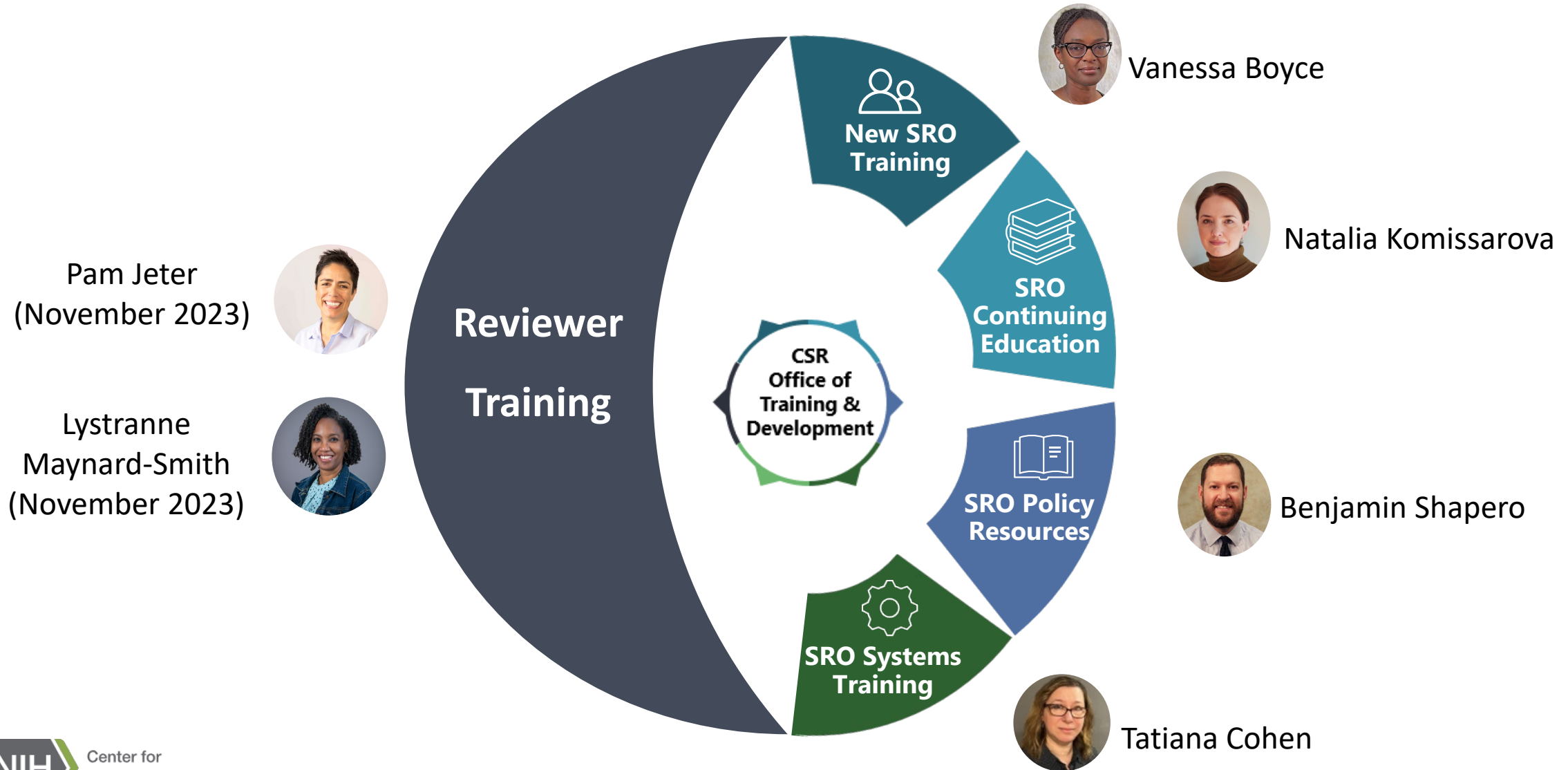
Director, CSR Office of Training and Development
September 23, 2024



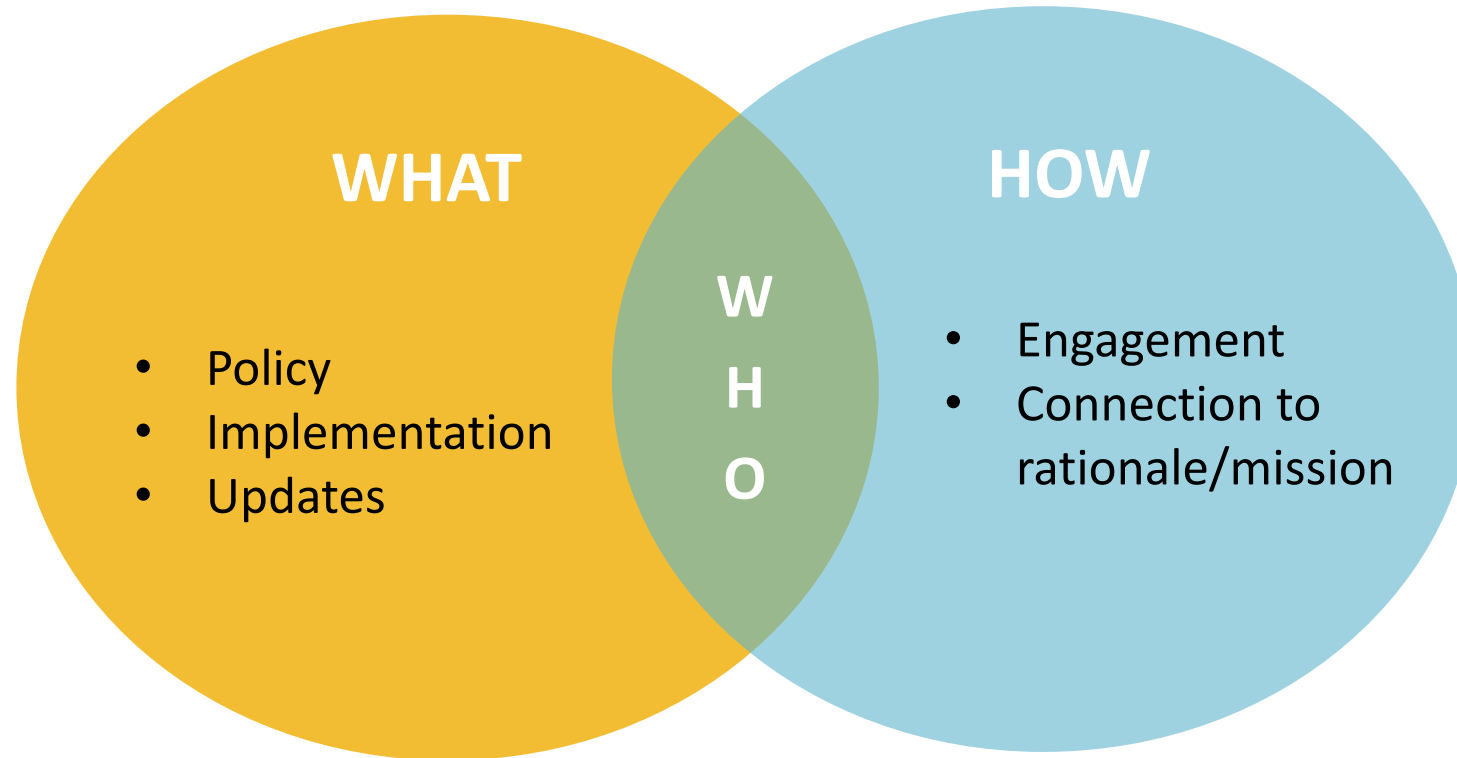
Scope of the Office of Training and Development



Structure of the Office of Training and Development



How do we strengthen peer review through training?



Integration of training development across participants is key to high quality review and positive culture change.

Outline

- Reviewer training
 - Reviewers
 - Chairs

- SRO training
 - Overview
 - Example of HOW we train: Simplified Review Framework

- Integration across participants
 - Example: Simplified Review Framework
 - Example: Quality of Review

Outline

- **Reviewer training**
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Reviewer training has two integrated components

1. Centralized online modules on high priority topics (30 min., every 3 yrs.)



Review Integrity and Bias Awareness Training will be Required for NIH Reviewers Effective May 2024
Council Round

Notice Number:
NOT-OD-23-156

Key Dates

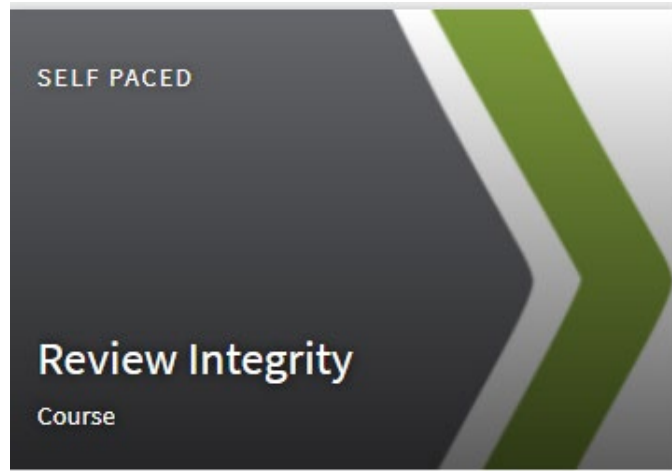
Release Date: July 11, 2023



2. Tailored, SRO-led (every round)

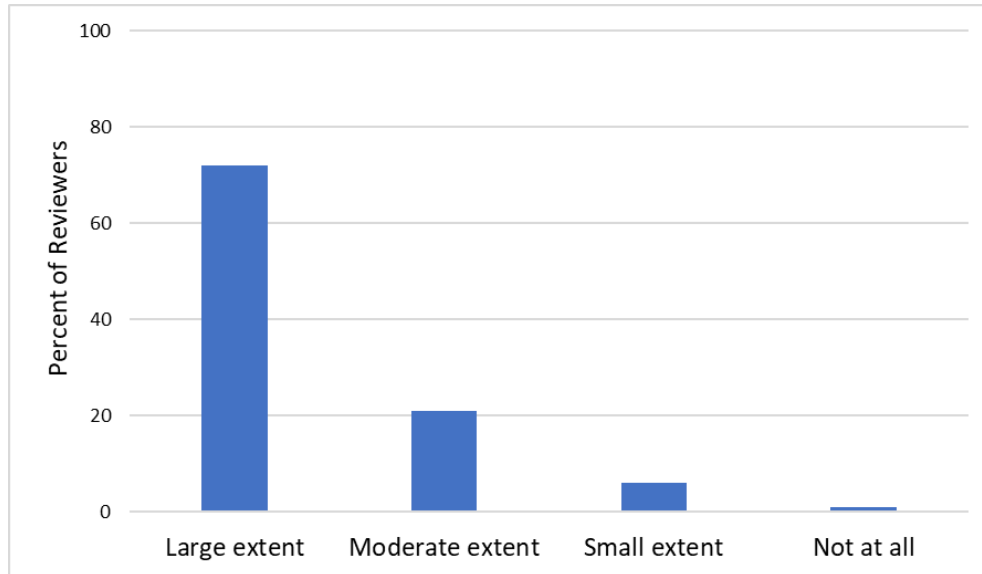
Centralized online modules

1. Centralized online modules on high priority topics (30 min., every 3 yrs.)



Bias awareness and mitigation training: Update

- As of September 2024, 39,000 reviewers completed version 1.0.



93% of reviewers reported the training made them substantially more **comfortable intervening on bias**.

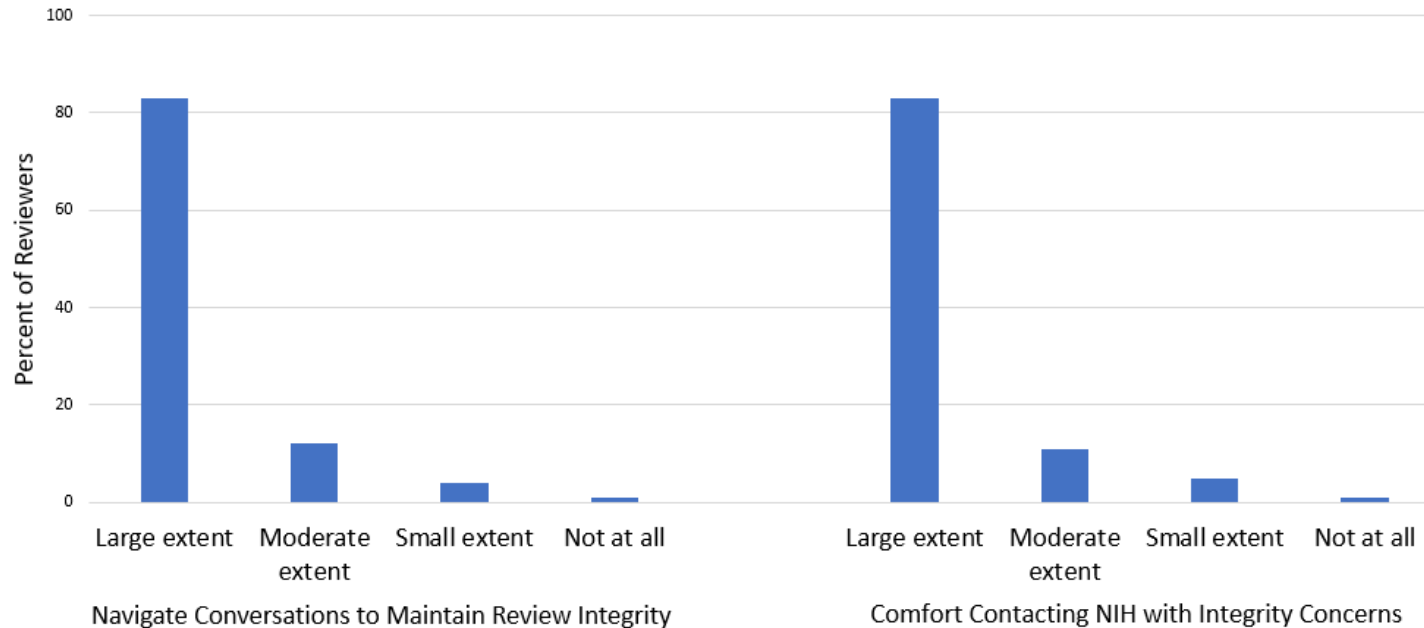
“This training has given me the confidence to step up and say something when I believe I am seeing bias in the review process.”

Chiefs/SROs observe reviewers speaking up more at meetings, challenging each other, asking questions.

- Bias version 2.0 development underway
 - Content informed by both external and internal input
 - Roll-out designed to coincide with launch of the Simplified Review Framework (2025/10 CR) to reinforce messaging

Review integrity training: Update

- As of September 2024, 34,499 reviewers completed version 2.0.



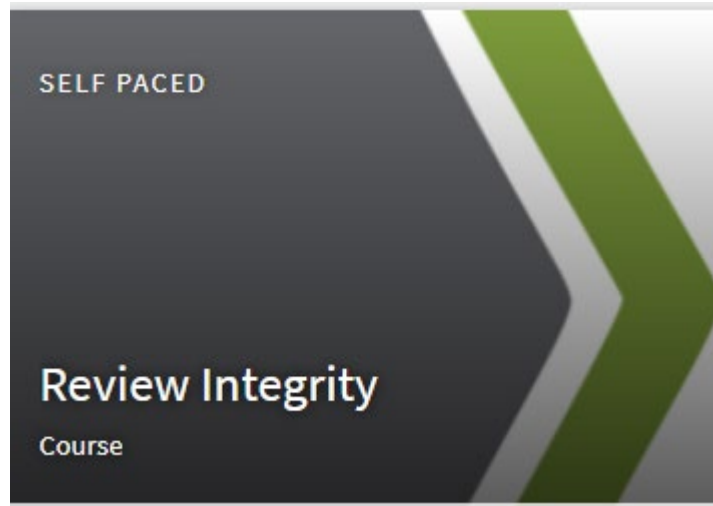
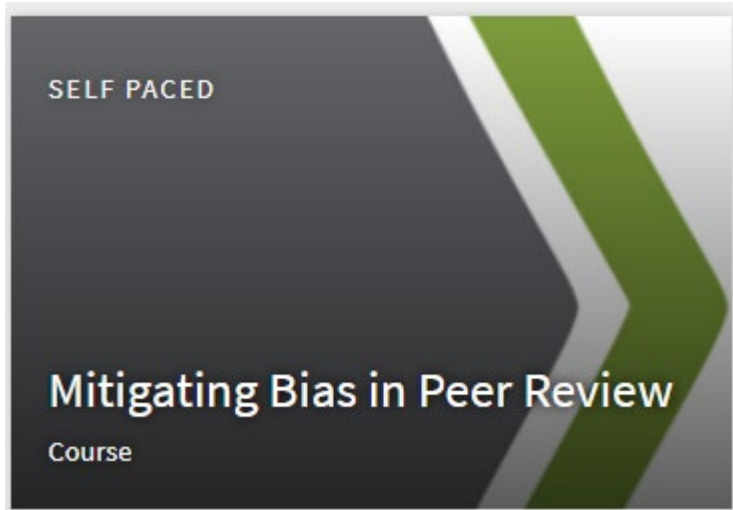
Over 90% of reviewers reported that the training **substantially increased** their knowledge of tools to prevent and report integrity breaches, and comfort contacting NIH with concerns.

“My favorite part was the examples of how to get out of those tough situations. I now have useful tools to use for any future problematic interactions. Thank you!”

- Review Integrity version 3.0 will be developed for roll-out in 2026.

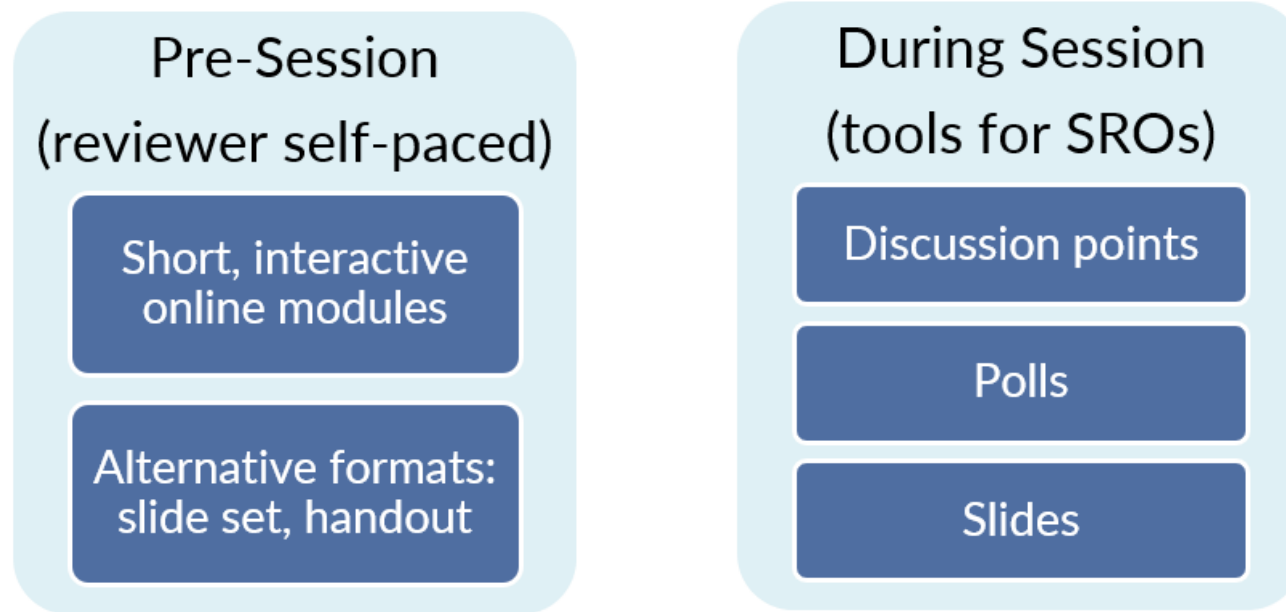
Reviewer training has two integrated components

1. Centralized online modules on high priority topics (30 min., every 3 yrs.)



2. Tailored, SRO-led (every round)

We're developing flexible tools for SRO-led reviewer training



Content:

- Priority: Peer review process, principles, roles (**Why?**) - **Completed**
- Next: Scoring, review criteria, writing/presenting critique, specialized topics

CSR orients ~ 90 new chartered study section chairs annually

Small-group, facilitated, interactive discussion on high-level topics:

- Promoting quality discussion
- Chair's role in intervening during discussion
- Chair summaries

Chiefs/SROs serve as facilitators.

SROs encouraged to view, use recording to train chairs/reviewers. SRO/Chair partnership emphasized.

<https://public.csr.nih.gov/ForReviewers/MeetingOverview/NewChairOrientation>



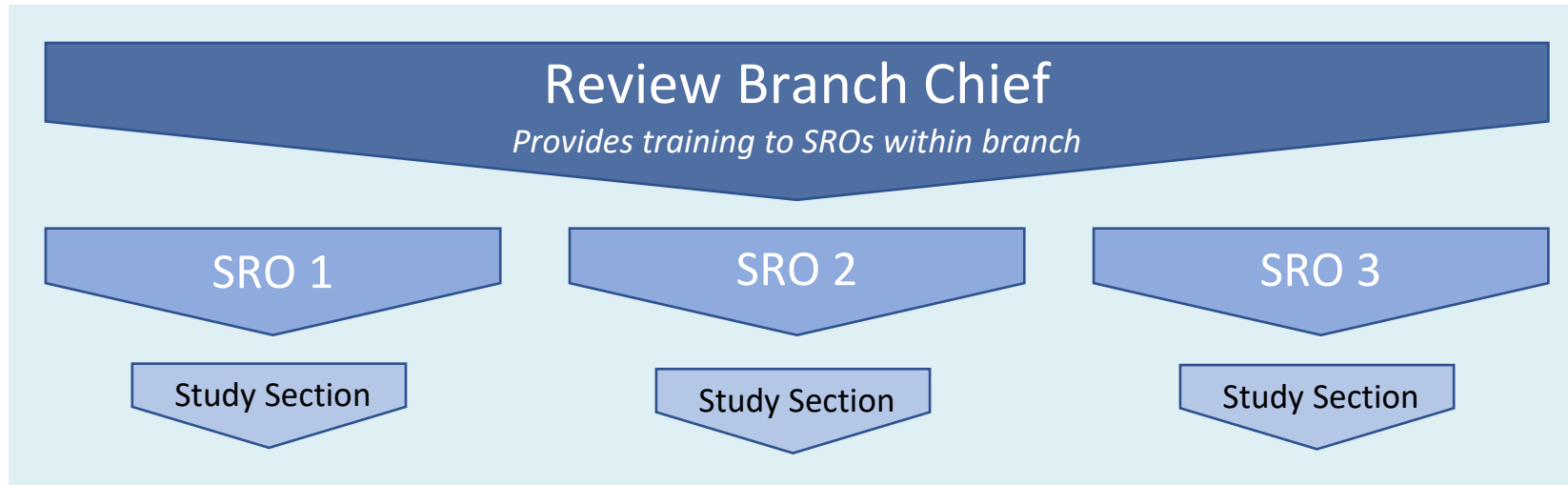
CSR provided orientation and guidance

to incoming study section chairs. While the material is geared towards chairs, others in the community might find it useful in better understanding the review process and how meetings are conducted.

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Office of Training partners with review branch chiefs



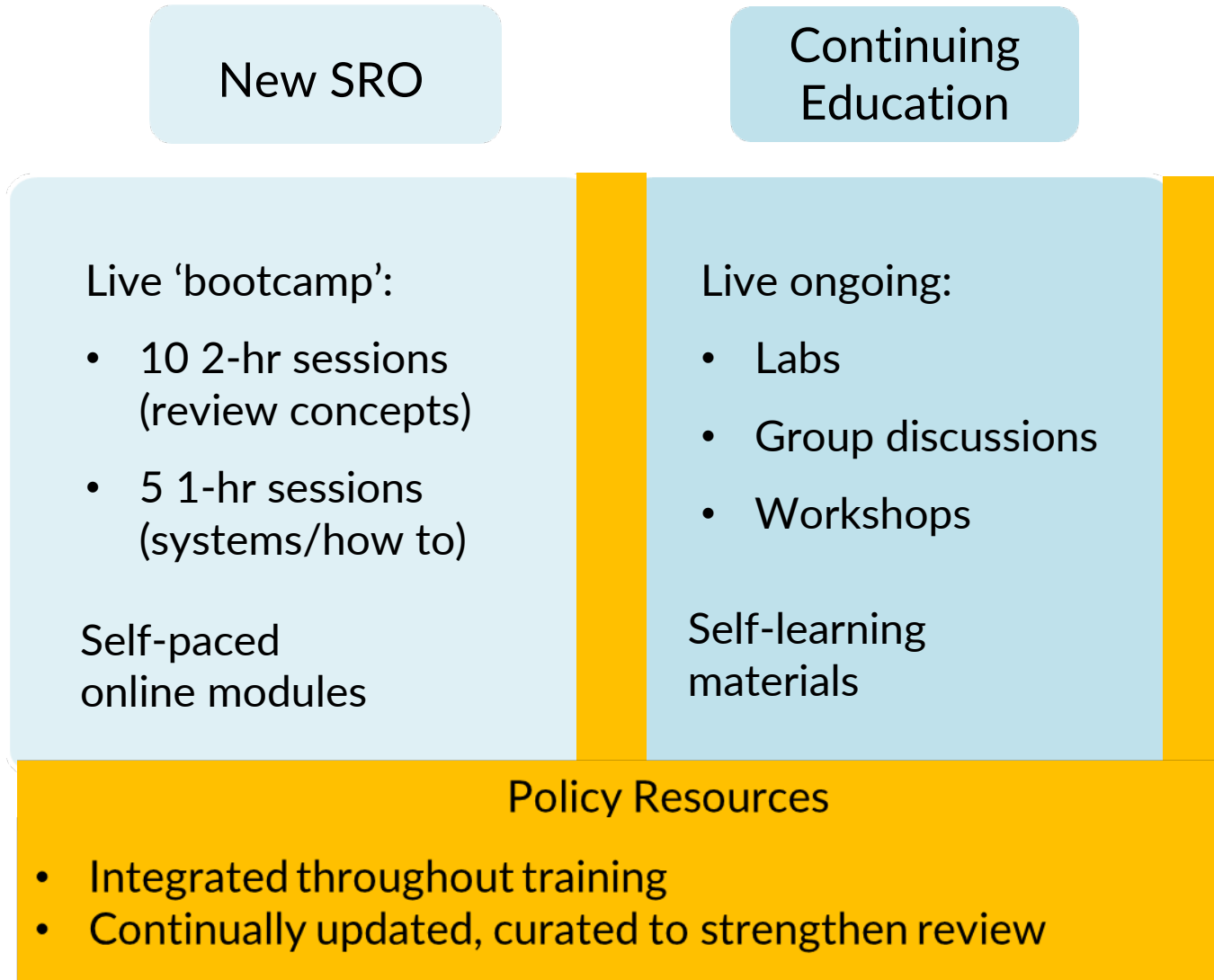
Office of Training provides:

- **Consistency** across CSR
- **Efficiency** in resource development
- **Engagement** with diverse colleagues

SRO role is complex, and development is progressive, iterative

	Becoming Operational	Strategic Improvements/Optimization	Full Integration of NIH Mission Goals
SRG Structure	<p>the scientific scope of the assigned SRG</p> <p>SRG expertise: Assesses and evaluates the current balance of reviewer expertise</p> <p>Reviewer recruitment: Understands the importance of diversity, including professional stature, gender, racial/ethnic/cultural backgrounds, scientific perspectives</p> <p>Reviewer integrity: Appreciates concerns of undue influence and the potential for reviewer misconduct</p> <p>Customers and Key Stakeholders: Understands NIH's 2 stage review process, responsibilities to stakeholders (including IC staff and external scientific community)</p>	<p>Understands the scope of related study sections and can identify those which may be a <i>best fit</i> for applications</p> <p>SRG expertise: Ability to generate slates which align with SRG guidelines and current scientific trends</p> <p>Reviewer recruitment: Able to expand the pool of qualified and effective reviewers</p> <p>Reviewer integrity: Can generate and implement strategies to identify potential issues of reviewer misconduct</p> <p>Customers and Key Stakeholders: Provides transparency through appropriate and effective communication with stakeholders, demonstrates a clear understanding of their role in <i>Peer Review</i></p>	<p>scientific trends evolve, will both consider and recommend updates to study section guidelines</p> <p>SRG expertise: Engages in long-term planning for future slates; considers scientific trends (increasing / decreasing), strives to maintain even rotations (~25% retirement/yr)</p> <p>Reviewer recruitment: Maintains consistent reviewer ratios, including consideration for optimal diversity</p> <p>Reviewer integrity: Able to identify instances of potential reviewer misconduct; applies sound judgment through swift and defensible actions</p> <p>Customers and Key Stakeholders: For network of stakeholders, proactively promotes ideas and practices that increase effectiveness, efficiency and integrity</p>
	<p>Scientific and Admin Review: Evaluation of applications for <u>scientific goals</u> and <u>technical expertise</u> required to review</p> <p>Reviewer assignment: Understands reviewer <i>balance</i>; the need for broad-</p>	<p>Scientific and Admin Rev: Ability to identify non-compliant applications, as well as suggest that an application may not be a good fit for their study section</p> <p>Reviewer assignment: Able to consider</p>	<p>Scientific and Admin Review: Ability to evaluate appropriate study section assignments; has the ability to clearly communicate rationale regarding assignments to applicants and other</p>

Training is tailored to different developmental stages



SRO training: Update on activities since 2023

- **New SRO:** 33 bootcamp sessions, including 3 mock study sections for intervening practice; 12 'bridge' sessions (between bootcamp offerings)
- **Continuing SRO:** 21 small-group case study discussion sessions (conflict of interest, human subjects protections); 32 small-group hands-on summary statement labs; 4 all SRO workshops (working with reviewers on quality critiques, human subjects protections, clinical trials, introduction to Simplified Review); 6 small-group Simplified Review labs; 7 peer review open forums; 5 bias listening sessions; multiple specialized workshops (e.g., Fellowships, SBIR, R15)
- **Policy Resources:** Multiple updates/clarifications to SRO Handbook (ongoing); SRO Handbook/policy portal searchability enhancement; 14 small-group case study discussions
- **SRO Systems:** 10 integrated new SRO sessions; 8 small-group hands-on labs; 1 joint SRO/support staff workshop; 32 office hour sessions; multiple specialized demonstrations; development of: 5-session self-paced course, SRO how-to guide, QVR user guide, video tutorial
- **Special initiatives:** Development of multiple guidance documents/resources for NIH-wide use
- **Organizational:** Development of 1-stop webpage (accessible NIH-wide); leveraging of Learning Management System for enrollment in live activities and self-paced learning

Office of Training page for 1-stop access to training resources



Office of Training and Development

Upcoming Events (CSR SROs)

SEP 24

New SRO Training: Session 4 (CSR SROs Only)
Tue, Sep 24, 1:00 PM

[Add to my calendar](#)

SEP 25

Miriam Mintzer, Director
Christina Johnson, Program Analyst

The mission of the CSR Office of Training and Development is to expand, coordinate and integrate learning activities and resources for reviewers, scientific review officers and extramural support staff across levels of experience to easily access to support their own learning; and to develop, keep current, and make accessible core policy and practice resources.

[NIH Staff Resources for the Simplified Review Framework \(SRF\)](#) - For due dates on or after Jan 25, 2025, changes are coming to how most research grant applications will be reviewed.

SRO Training	Reviewer Training	Policy and Practice Resources
<p>Outlining the Progression of SRO Development</p> <p>New SRO Education and Development Vanessa Boyce, Coordinator</p> <ul style="list-style-type: none"> New SRO Training Checklist New SRO Training Curriculum: Syllabus for New SRO Training Course CSR LMS: CSR Learning Management System for SRO and reviewer training modules <p>SRO Continuing Education and Development Natalia Komissarova, Coordinator</p> <ul style="list-style-type: none"> SRO Training Workshops: Slides, recordings, handouts from previous events <p>SRO Systems Training Tanya Cohen, Coordinator</p> <ul style="list-style-type: none"> SRO Systems Training page: eRA resources and links to additional review tools and systems <p>Training Materials Developed by Office of Training</p> <ul style="list-style-type: none"> Overview of eRA Modules used for Review Tasks: SRO Cheat Sheet Reviewer Recruitment Checklist SRO Meeting Orientation Guide SRO Guide for Working with Reviewers who are Deaf or Hard of Hearing (D/HH) 	<p>Reviewers Training</p> <p>Coordinators: Pam Jeter, Lystranne Maynard-Smith</p> <ul style="list-style-type: none"> ***Reviewer Training Resources*** <ul style="list-style-type: none"> SRO resources for developing individual SRO-led reviewer training SRO resources related to the centralized online training modules for reviewers New Chair Orientation (for SRO viewing only): Vbrick recordings from all annual New Chair Orientation sessions, by year New Chair Orientation (for public viewing): Slides and recording from one model New Chair Orientation session, updated annually; SROs are encouraged to share the link with their Chairs 	<p>Policy and Practice Resources</p> <p>Ben Shapero, Coordinator</p> <ul style="list-style-type: none"> Current Policy Alert: January 2025 Policy Alert Introduction to Policy and Practice Resources (3 videos; 20 min total): <ul style="list-style-type: none"> Overview of Peer Review Policy Structure Demonstration of SRO Handbook Demonstration of Peer Review Policy and Practice Portal SRO Handbook: Up-to-date guide to peer review policy and process in all areas relevant to the SRO <ul style="list-style-type: none"> Check regularly for Policy Updates! Best Practices (Handbook Appendix): The Best Practices Committee has been disbanded and the content of existing documents is in the process of being integrated into the Handbook and other centralized resources. Peer Review Policy and Practice Portal: Searchable database of policies, practices and guidance related to peer review of NIH grant applications at CSR Peer Review Policy Portal Guide <ul style="list-style-type: none"> Instructions for Using the Portal Glossary of Sources in the Portal Infographic of Sources in the Portal
	<p>Other Training Resources</p> <ul style="list-style-type: none"> QVR Information and Training: Resources developed by the QVR and Reviewer Search Committee CSR Review Point Persons: Point persons in specific review areas (e.g., specific review mechanisms, Human Subjects, Vertebrate Animals) Hybrid Meetings (New): Resources and guidelines for hybrid review meetings Reviewer Technical Assistants (RTA): Program Analysts who provide IMPAC support and training eSlate Training Resources: Resources to help navigate the new nomination slate system RM Support: Microsoft Access based workflow tool (SRO-developed) MA Support: FileMaker-based workflow tool (SRO-developed) 	
	<p>Extramural Support Staff Training</p> <ul style="list-style-type: none"> Extramural Support Staff Resource Center: Training resources for extramural support staff 	

Example of HOW we train: Simplified Review Framework (SRF)

Connection to rationale/mission

SRO labs (case study discussions;

Active SRO practice intervening (SRF-specific: Spring 2025)

With SRF, our review process will align more closely with our mission

The 'Why' of Factor 1

Why combine significance and innovation?

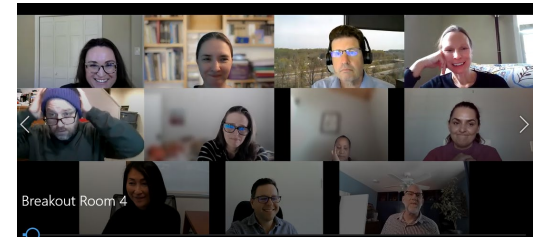
- They overlap considerably
- One place to assess: Should this work be done?
- Innovation is not one-size-fits-all → creates space for reviewer judgement

Why 'Importance of the Research'?

- Plain language
- Clarity on what we need reviewers to evaluate
- Significance is often misinterpreted

This training provides an interactive, facilitated small group discussion on the Simplified Review Framework (SRF). Participants will actively engage in SRF concepts to case studies and addressing frequently asked questions, assessing their understanding of the underlying principles and regulations. By focusing on the three key review factors and their effective integration into overall impact evaluations, reviewers through this change in their perspective, aimed at enhancing scientific and technical merit assessments, and reducing reviewer burden.

rise instances. Select a suitable instance to enroll.



Well-vetted multi-media resources

Evaluating Applications Under NIH's Simplified Review Framework for Research Project Grants

INTRODUCTION

The goal of peer review is to provide expert advice to NIH on the scientific and technical merit of grant applications to inform their funding decisions. Peer review has two important outputs:

1. The written evaluation (for all applications)
2. The impact score, and, if applicable, the percentile (for discussed applications only)

Who is the audience for your critique?

The primary audience for your critique is the funding NIH Institute/Center's Advisory Council and staff. An important secondary audience is the other reviewers who will be reading your critique to understand what drove your assessment of overall impact. The applicant will also need your critique, but this should not diminish your candor, nor lead you to make recommendations for improving the application.

General guidance for writing effective critiques:

- Provide a clear and candid write-up of the strengths and weaknesses of the proposed research project.
- Focus on what drove your assessment, not on minor points.
- Explain the basis for your score.
- Evaluate the application as it is presented. Do not attempt to improve or redesign the application.

General scoring guidance:

- Scores are assigned for Factor 1, Factor 2, and Overall Impact.
- NIH uses a 9-point scale (1= exceptional; 5= average; 9= poor).

Factor Strength/Overall Impact	High	Medium	Low
Score	1 2 3	4 5 6	7 8 9

SRO engagement/collaboration

General Posts Files Staff Webpage Staff FAQs Public Webpage Public FAQs

Fleming, Lia (NIH/CSR) [E] 4/16 3:26 PM Edited

Welcome to the SRF Divisional Liaison Teams Site!



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Integration across participants: Simplified Review Framework

- **SRO** training started in Spring 2024, ongoing; supported by divisional liaisons
- Resources for **reviewers** are being developed
 - Centralized materials for SROs to disseminate directly to reviewers (e.g., introductory video, critique writing and scoring guides)
 - Slides for SRO-led reviewer training
- **SROs** are trained on SRF **reviewer** training
 - Materials provided to SROs as they are developed
 - SRO workshop on reviewer training
- **Chiefs** preview SRO trainings and are provided with toolkit to use for additional SRO training.
- **Chair** centralized training planned for Spring 2025 (Chief/SRO involvement)
- **Reviewers** will receive training closer to the first review meeting.

- Integration is key to promoting culture change.

Integration across participants: Quality of Review

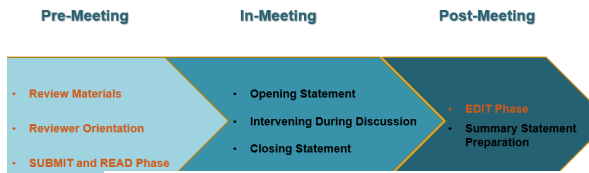
- SRO training on working with reviewers

On quality critiques

Working with Reviewers on Quality Critiques

January 30, 2024
Center for Scientific Review
Wenjuan Wang
Heidi Friedman
Natalie Kravitz

The SRO has an important role in working with reviewers on quality critiques



Evaluate critiques and provide feedback to reviewers *before* the study section meeting:

- To impact core elements of the peer review process
 - Ensure that applications are fairly evaluated
 - Protect review integrity
 - Ensure that the most meritorious applications are discussed at the study section meeting

SRO Handbook

Monitoring Critiques

Guiding Reviewers During the Read Phase



What Makes a Quality Critique?

- Adherence to the review criteria and NIH policy
- Absence of inappropriate/irrelevant/biased comments
- Evaluative and substantive statements
- Score/text alignment
- Completeness

Significance

If the aims of the project are successfully completed, what would be the importance to the field?

Common Issues

- Evaluates importance of the disease/condition rather than the proposed work
- Evaluates the application's fit to the funding opportunity or the mission of the institute
- Does not assume success of the aims
- Does not address rigor of prior research
- Expects direct connection to condition and clinical significance ([translational bias](#))
- Expects mechanistic or hypothesis-driven research ([bias against exploratory/descriptive research](#))

During the meeting discussion

Practice in Breakout Rooms

24 of 27



- Work with a script of a mock study to intervene
- Facilitator reads the script, SROs intervene
- Facilitator continues reading, another SRO intervenes
- Group has a general discussion or critique

Don't be shy but try to give

- SRO training on quality summary statements
- ## Hands-on SRO summary statement labs



NIH Center for Scientific Review

[Best Practices: Resume and Summary of Discussion Preparation Guide](#)
[Best Practices: Resume and Summary of Discussion Preparation Examples](#)

Integration across participants: Quality of Review

- **Reviewer** guide to writing quality critiques
- **Chair** training on promoting quality discussion, intervening during the discussion
- **Chiefs** monitor quality in all phases: rosters, critiques, meeting discussion
- CSRAC working group on reviewer evaluation: Framework for quality reviewer will set expectations and inform training.

Who makes the training possible?

Office of Training and Development



Christina Johnson
Program Analyst



Vanessa Boyce, Ph.D.
New SRO Education and
Development Coordinator



Tatiana Cohen, Ph.D.
SRO Systems Training
Coordinator



Pam Jeter, Ph.D.
Reviewer Training
Coordinator



Natalia Komissarova, Ph.D.
SRO Continuing Education
and Development
Coordinator



Lystranne Maynard-Smith, Ph.D.
Reviewer Training Coordinator



Benjamin Shapero, Ph.D.
SRO Handbook and Policy
Coordinator

Division of Planning, Analysis and Information Management

**Shawn Cook, Rich Hibner, Rashid Shah, Dave
Sweigert, Khalid Ullah, Leo Wu, Lin Yang, Chen
Zhang**



Sharon Isern, Ph.D.
Creative Digital
Technology Det



Maya Jones
Training Team Lead

Survey development/analysis



Hope Cummings, Ph.D.
Senior Social Science Analyst

CSR committees/groups

New SRO Training: Lola Arjona Mayor, Laura Asnaghi, Sulagna Banerjee, Adem Can, Sharon Isern, Tami Kingsbury, Jordan Moore, Angela Thrasher, Wenjuan Wang

Continuing Education/Systems: Rebecca Burgess, Kirk Dineley, Nketi Forbang, Eleni Liapi, Jeanne McCaffery, Victor Panchenko, Suzanne Ryan, Alena Savonenko, Maureen Shuh, Jessica Smith

Reviewer Training: Abu Abdullah, Katie Baker, Aruna Behera, Pablo Blazquez Gamez, Deanna Publitz, Megan Goodall, Brittany Mason-Mah, Karobi Moitra, Kristen Prentice, Joonil Seog, Afia Sultana, Vivian Tang, Cibu Thomas, Mariam Zaka

SRO Handbook: Cristina Backman, Adem Can, Steven Frenk, Jimok Kim, Allison Kurti, John Laity, Bob O'Hagan, Jennifer Sanders, Ian Thorpe

Policy Implementation: Santanu Banerjee, Emily Foley, Tami Kingsbury, Elia Ortenberg, Ian Thorpe, Wenjuan Wang, Anne-Sophie Wattiez

Simplified Review Framework: Lola Arjona Mayor, Santanu Banerjee, Mark Caprara, Janice Duy, Lia Fleming, Helena Gabor, Sharon Isern, Tami Kingsbury, Kristin Kramer, Cynthia McOliver, Jordan Moore, Subhamoy Pal, Karen Seymour, Lisa Steele, Gloria Su, Todd White

100+ CSR staff for training implementation!



Discussion