Background

The asynchronous electronic discussion (AED) project explores the use of a web-based protocol for peer review.

- Initially commissioned by the CSR Director in the fall of 2005.
- Early results had strongly suggested that the software was inadequate for NIH-style peer review.
- A prototype application intended to eliminate many of the software problems was developed in less than six months.
- Beta testing began in June 2006; the software was then used in AED reviews involving 38 different Special Emphasis Panels through December 2006.

Survey of Reviewers

As part of the evaluation of the success of this effort, reviewers who participated in AED reviews between June and December 2006 were asked via email to respond to a web-based survey.

- 414 reviewers invited to respond.
- 232 reviewers responded.
- 56% response rate.

Key findings

- 83% were satisfied with their experience using the AED technology.
- 73% felt sufficiently well-informed to make a rigorous and fair evaluation of applications assigned to them.
- Impact on the review process appeared mixed – meaningful discussion and decision making was possible, but a significant percentage of respondents only somewhat agreed with those statements.
- 84% of reviewers felt the AED format was either less of a burden or about the same.
- 63% either preferred reviewing using the AED format or indicated no preference; 31% preferred the face to face format. However, if submitting an application of their own, 45% preferred that it be reviewed in a face to face meeting.

Assessment

- These results are preliminary but very encouraging for the introduction of a new technology.
- We anticipate that future surveys will show an increasing rate of acceptance as we refine procedures and guidance for electronic review and as the reviewer and applicant communities become more familiar with it.

Overall Experience

Overall AED experience was satisfactory

No opinion 2%
No 15%
Yes 83%
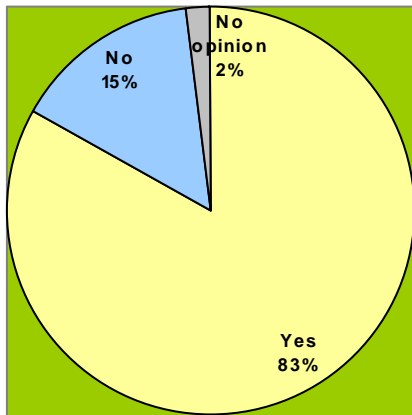
### The AED technology provided adequate support for the review

Technology and support
- 83% were satisfied with their experience using AED.
- 75% said they received adequate instruction and support.

Impact on review process
- time – *positive impact* – a significant majority (73%) said the duration of the discussion phase allowed meaningful consideration of applications.
- individual applications – *mixed impact* – 40% said meaningful discussions were possible with AED, while 44% only somewhat agreed.
- decision making – *mixed impact* – 43% said AED format helped inform decision making, while 30% agreed to some extent.
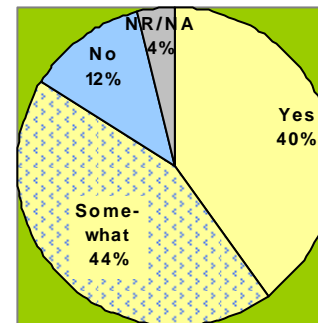
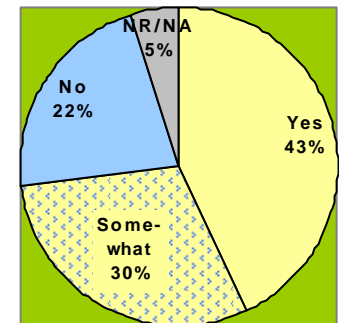**Received adequate instructions and support**
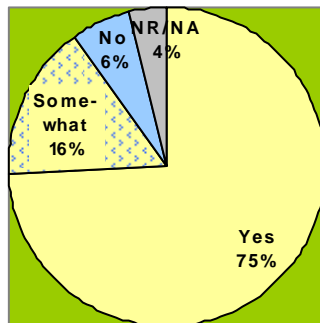
No 6%
NR/NA 4%
Some-what 16%
Yes 75%

Duration of the discussion phase allowed meaningful consideration of applications

No 3%
NR/NA 5%
Some-what 19%
Yes 73%
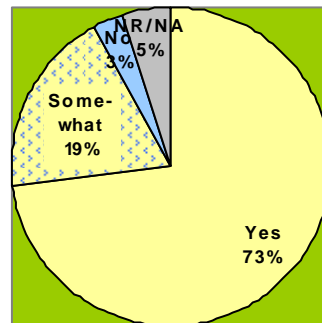
AED allowed meaningful discussion of individual applications

NR/NA 4%
No 12%
Yes 40%
Some-what 44%

AED format helped inform decision making

NR/NA 5%
No 22%
Yes 43%
Some-what 30%

Evaluating and Scoring Applications

Assigned applications: reviewer sufficiently informed to make rigorous, fair evaluation

- NR/NA 5%
- No 3%
- Some-what 19%
- Yes 73%
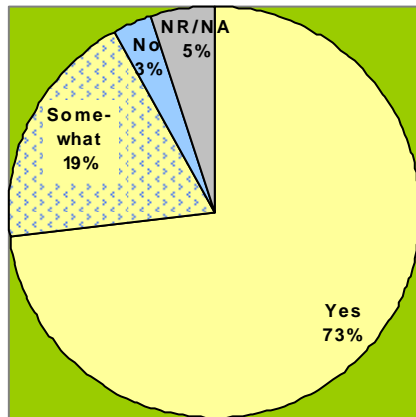
Reviewers felt sufficiently well-informed to make decisions

Input into decision making
- Most relied on reviewer-based primary resources such as:
  - discussion (84%), assigned reviewer score (80%), critiques (72%)
- Roughly one-third felt that the discussions were not as rigorous or there were compromises in the review process.
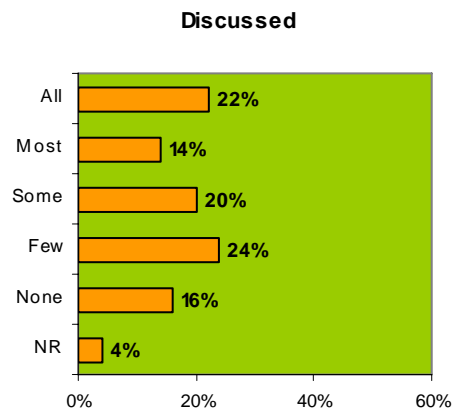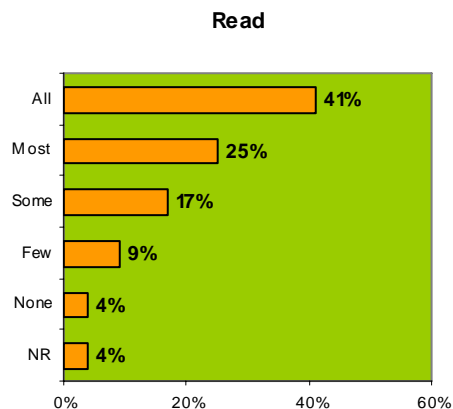
Assigned applications
- A significant majority (73%) felt sufficiently well-informed to make a rigorous and fair evaluation of applications assigned to them.
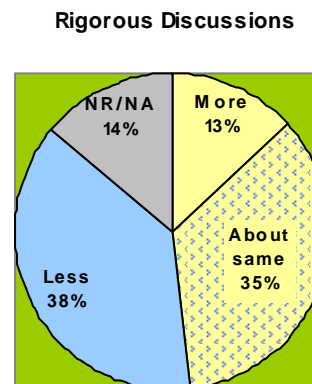
Other applications
- 66% read most or all other applications, but only 36% discussed most or all.
- However, 84% used discussions as one primary resource to develop score.
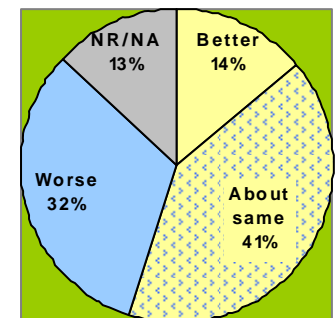
Other Applications: read critiques vs. participated in discussions

Quality of deliberation, any compromises

Read

- All 41%
- Most 25%
- Some 17%
- Few 9%
- None 4%
- NR 4%

Discussed

- All 22%
- Most 14%
- Some 20%
- Few 24%
- None 16%
- NR 4%

Rigorous Discussions

- NR/NA 14%
- More 13%
- About same 35%
- Less 38%

Compromises: was the review process ...

- NR/NA 13%
- Better 14%
- About same 41%
- Worse 32%

Reviewer Format Preference

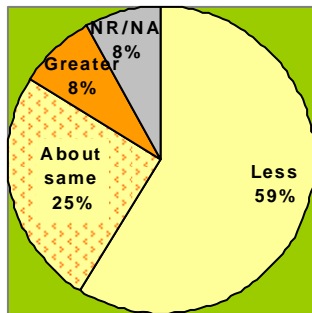> ### Reviewer responses differed based on perspective
>
> **Reviewer burden vs. reviewer preference**
> - Less burden did not correlate with greater preference for reviewing using the AED format.
> - 84% of reviewers felt the AED format was either less of a burden or about the same, but only 63% either preferred the AED format or had no preference.
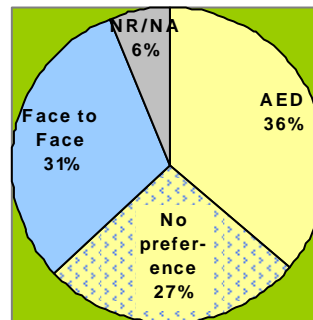>
> **Format preferences**
> - When asked their preference from the perspective of a reviewer, 63% either preferred reviewing using the AED format or indicated no preference; only 31% preferred the face to face format.
> - However, when asked their preference if they were submitting an application of their own for review, 45% preferred that it be reviewed in a face to face meeting.

Reviewer Burden

NR/NA 8%
Greater 8%
About same 25%
Less 59%

Preference - as reviewer

NR/NA 6%
Face to Face 31%
AED 36%
No prefer-ence 27%

Preference - as applicant

NR/NA 6%
AED 25%
Face to Face 45%
No prefer-ence 24%