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Better abstract screening: Theory and Practice

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**Theme**

Methods for impact and implementation evaluation and synthesis

**Objectives/aims**

To provide a brief overview of the “better abstract screening” tool, which includes 10 best practice guidelines.

1. To discuss recent large-scale abstract screening projects and how the guidelines help to encourage reliable and efficient screening.
2. To encourage the discussion of an often used but poorly managed abstract screening process.

**Methods**

Abstract screening is one important aspect of conducting a high-quality and comprehensive systematic review and meta-analysis. Abstract screening allows the review team to conduct the tedious but vital first step to synthesize the extant literature: winnowing down the sometimes overwhelming amalgamation of citations discovered through research databases to the citations that should be “full-text” screened and eventually included in the review. Although it is a critical process, little recent literature has focused on it. The purpose of this presentation, therefore, is to provide a practical set of best practice guidelines to guide future review teams and managers. Each of the ten proposed guidelines are explained using real-world examples or illustrations from applications. We end by delineating our recent experiences where a team of abstract screeners double-screened 14,923 abstracts in 89 days.

**Main findings**

The following is a sample of the ten guidelines I will provide.

1. Create an abstract screening tool with questions that a) are unambiguous and “single-barreled”, b) use the same sentence structure, and c) have yes/no/maybe answers only.
2. Start with the easiest questions; end with the most difficult questions.
3. Conduct introductory abstract screening trainings where screeners learn and pilot test the tool and then screen the same 20-30 abstracts.
4. Meet with the abstract screening team on a weekly or bi-weekly basis.
5. Minimize changes to the screening tool once screening has begun.
6. Use a machine learning abstract screening tool.
7. Double-screen all abstracts and monitor the decision-making.
8. Reconcile disagreement during the middle of the abstract screening process, in addition to the end.
9. Encourage screening through intellectual buy-in and incentives.
10. Analyze the decisions after screening has been completed.