

# Introducing for public comment: *WWC Procedures and Standards Handbook, Version 5.0*

Ryan Williams, PhD  
Principal Researcher  
What Works Clearinghouse

Natalya Gnedko-Berry, PhD  
Senior Researcher  
What Works Clearinghouse

Jeffrey Valentine, PhD  
Professor, University of Louisville  
What Works Clearinghouse

# Presenters



**Ryan Williams, PhD**

Principal Researcher,  
American Institutes for Research  
What Works Clearinghouse



**Natalya Gnedko-Berry, PhD**

Senior Researcher,  
American Institutes for Research  
What Works Clearinghouse



**Jeffrey Valentine, PhD**

Professor,  
University of Louisville  
What Works Clearinghouse

# Webinar goals



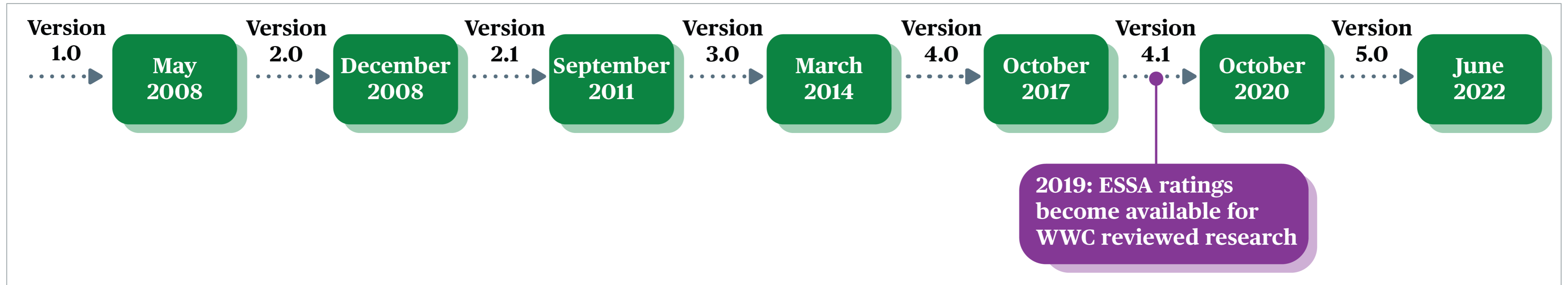
- Announce **public comment period** for the *WWC Procedures and Standards Handbook, Version 5.0*.
- Describe major changes to the **WWC standards** for review of individual studies under version 5.0.
- Describe major changes to the **WWC procedures** for review of individual studies and synthesis products under version 5.0.
- Provide a forum for the audience to **discuss changes and raise questions** about the new version of the *Handbook*.

# Public comment period



**March 14, 2022—April 1, 2022**

# Why is the WWC moving to the new version of procedures and standards?



The WWC refines its procedures and standards based on **improvements in education research** and research synthesis methods.

The WWC also refines its procedures and standards to **meet the needs of education decisionmakers**, such as incorporating into its products the evidence definitions introduced by the Every Student Succeeds Act (ESSA).

# The role of review protocols under version 5.0

- Under version 5.0, all WWC study reviews are conducted according to the *WWC Procedures and Standards Handbook* and complimented by the *Study Review Protocol*.
- The *Study Review Protocol* serves as an umbrella protocol for studies reviewed individually or as part of evidence synthesis products.
- Topic area synthesis protocols will continue to be used to provide criteria for the literature search; guidance on how to identify and prioritize relevant studies for review and inclusion in evidence synthesis products; and guidance on intervention, sample, and outcome eligibility criteria.



# Major changes to the WWC standards under version 5.0

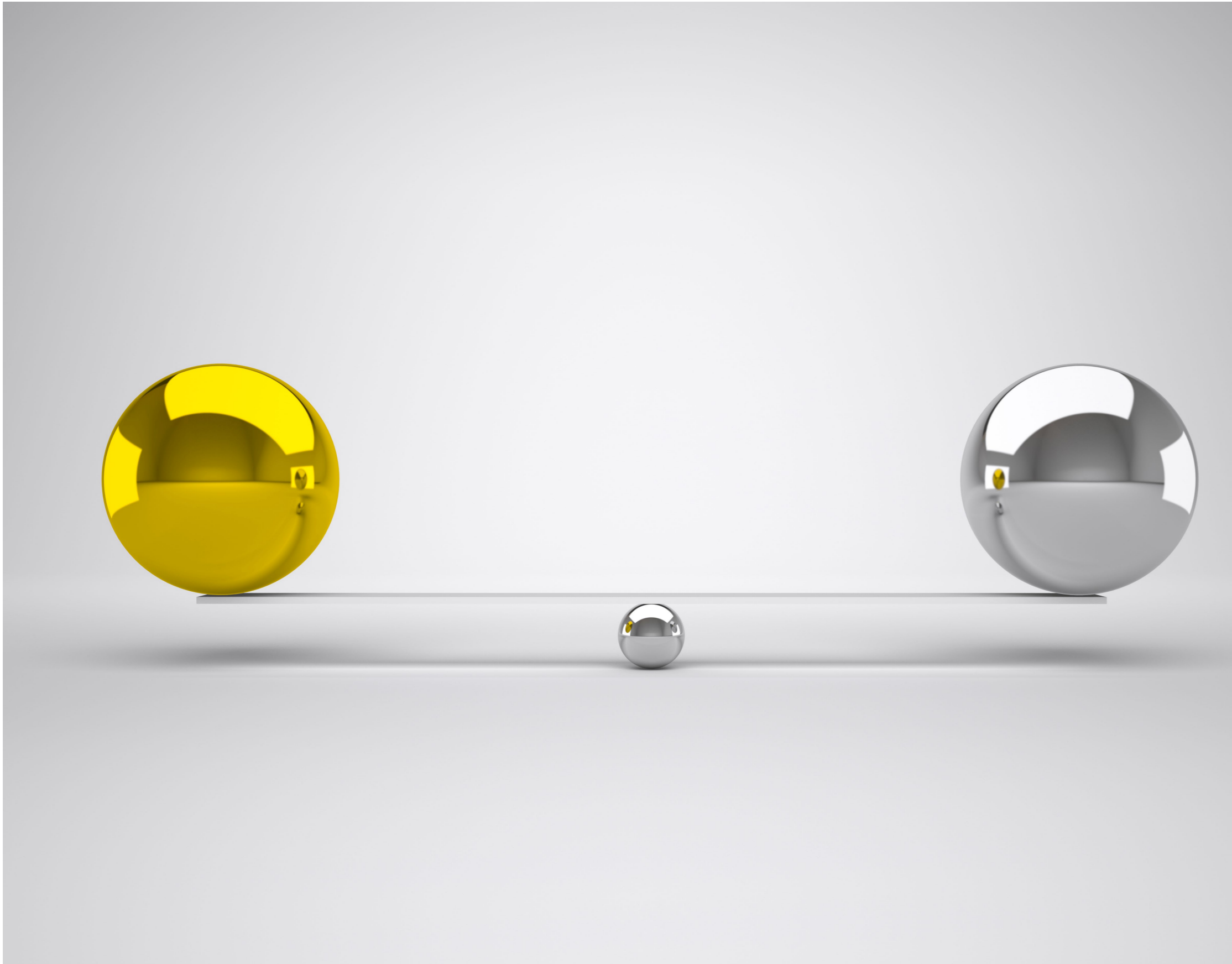
# Changes to applying the WWC attrition boundaries



- Under version 4.1, the *Study Review Protocol* specified the optimistic attrition boundary as the formal default for reviews conducted as part of a systematic review.
- Under version 5.0, review teams are responsible for determining which attrition boundary to use.
  - If review teams find that they cannot determine which attrition boundary to use, then they should use the cautious attrition boundary.

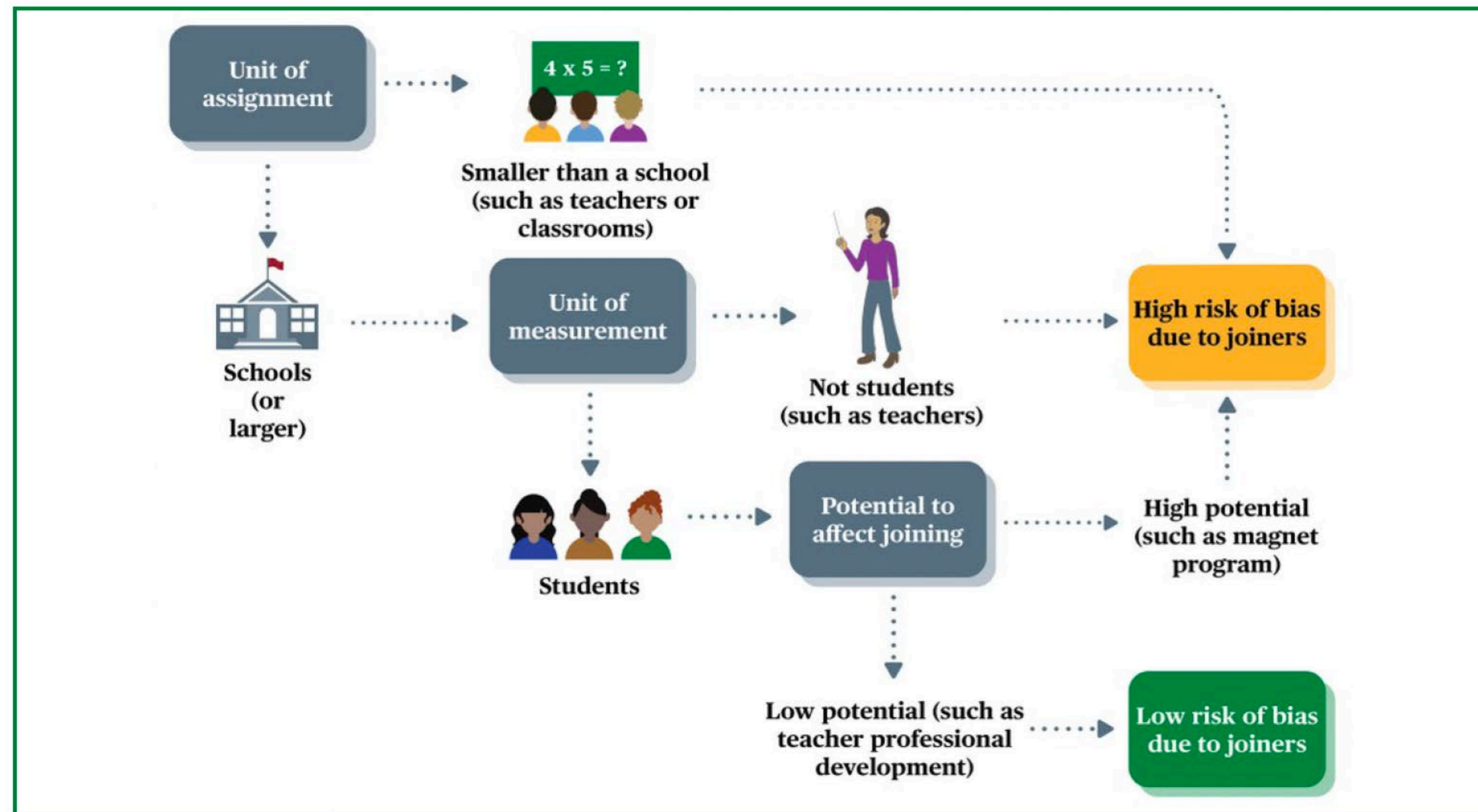


# Changes to baseline equivalence requirements



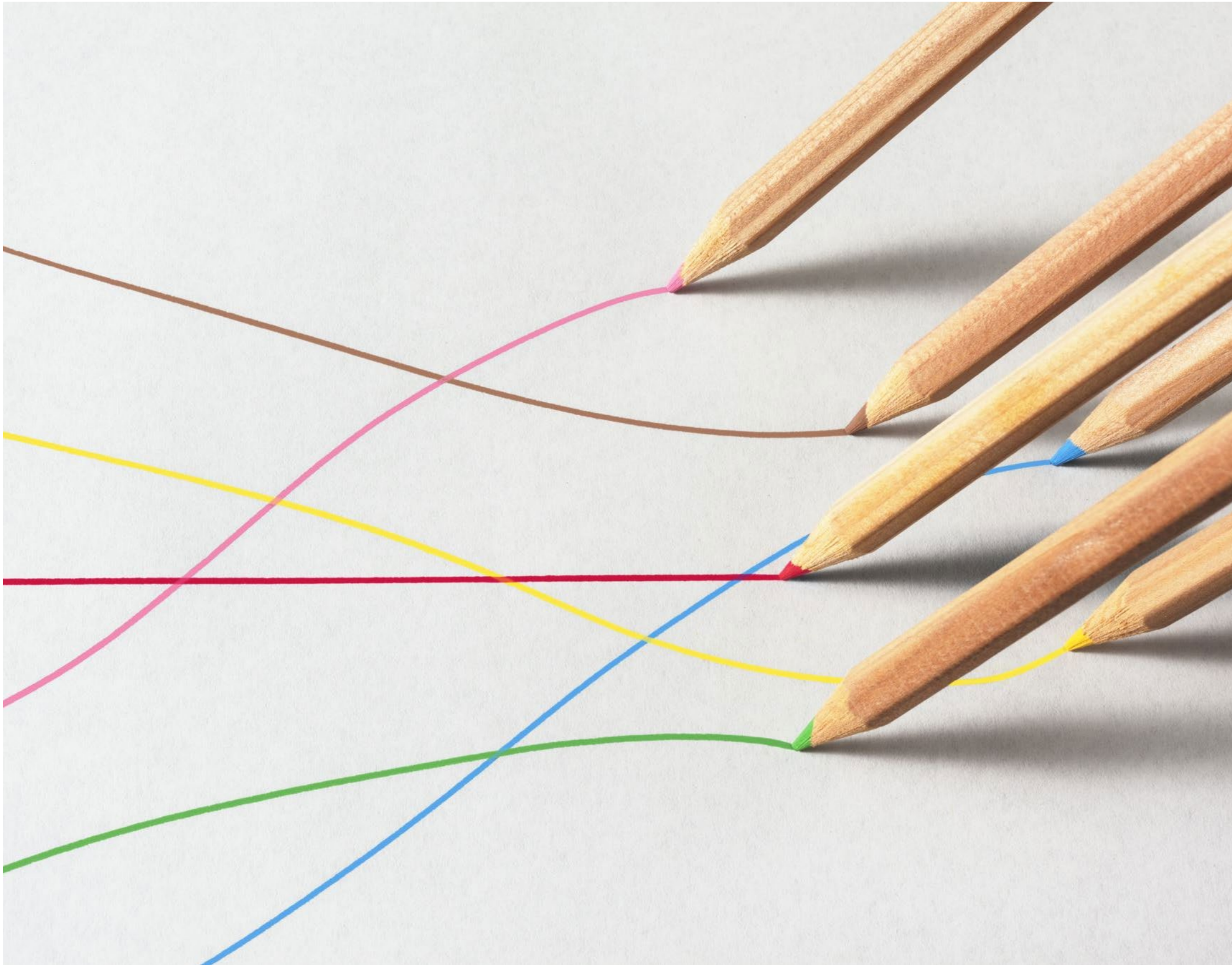
- Under version 4.1, randomized controlled trials (RCTs) and regression discontinuity design (RDD) studies with a risk of bias due to attrition (or compositional change, broadly) were required to demonstrate baseline equivalence on protocol-specified covariates.
- Under version 5.0, only RCTs and RDDs that have a **high risk of bias** due to compositional change using the **cautious boundary** are required to demonstrate baseline equivalence.

# Cluster assignment designs: Risk of bias due to joiners



- Under version 4.1, risk of bias due to joiners involved determining whether joiners posed no risk of bias, only late joiners posed a risk, or all joiners posed a risk.
- Under version 5.0, the risk of bias due to joiners is simplified so that reviewers need only determine whether joiners pose a low or high risk of bias, with attention to the unit of assignment, the unit of measurement, and the potential of the intervention to affect joining.

# Cluster assignment designs: Attrition boundary flexibility for cluster studies



- Under version 4.1, review teams applied a single attrition boundary to assess the risk of compositional change at three different points:
  - Cluster-level attrition
  - Individual-level attrition
  - Cluster representativeness
- Under version 5.0, review teams may apply either the cautious or optimistic attrition boundaries in evaluating each of these compositional threats to validity.

# Confounding factors and bundled interventions

- Under version 4.1, bundled—or combined—interventions were considered to have a confounding factor.
- Under version 5.0, bundled interventions are no longer considered to have a confounding factor (that is, intervention packages are eligible for review).
- For RDD studies, review teams will still need to review the study for the presence of “popular” forcing variable cutoffs, such as eligibility for free or reduced-price lunch.



# Outcome requirements

- Under version 4.1, the WWC required outcome measures to meet four requirements: (1) face validity, (2) reliability, (3) not overlapped with the intervention, and (4) consistent data collection procedures.
- Under version 5.0, the WWC will consider measure independence for certain outcome domains to be specified in the *Study Review Protocol*.
  - A measure will be considered nonindependent if either (a) it was developed by study authors and is not documented as in use by different study authors and apart from the intervention or (b) it was developed by the intervention's developers.



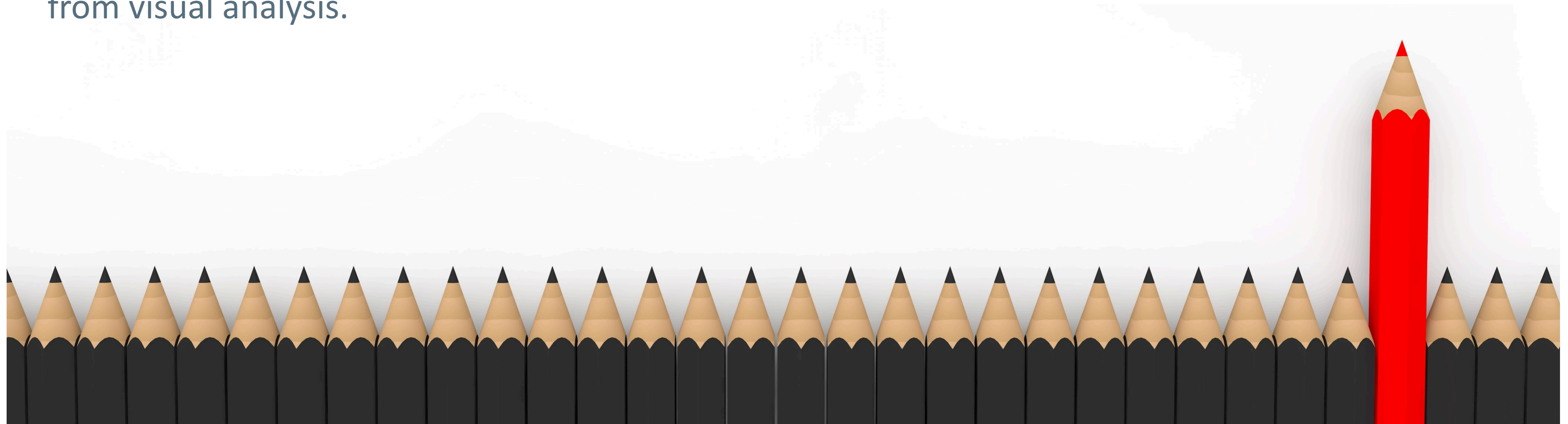
# Single-case design reliability requirements



- Under version 4.1, the interobserver agreement requirements applied separately to each phase.
- Under version 5.0, the interobserver agreement requirements now apply across all the data in a study.

# Design requirements for single-case designs

- For multiple baseline/multiple probe, treatment reversal/withdrawal, and changing criterion designs under version 5.0:
  - The requirements for the number of data points within a phase have changed.
  - There is a new step in the review process intended to incorporate internal reliability checks drawn from visual analysis.



# Major changes to the WWC procedures under version 5.0



# Application of WWC standards



- Under version 4.1, topic area review teams had the ability to customize certain aspects of the standards.
- Under version 5.0, the *Handbook* and the *Study Review Protocol* will govern the application of the standards.
- Topic area operationalization of some standards under earlier versions of WWC procedures has resulted in the same study having multiple and sometimes different WWC ratings, creating inconsistency and confusion.

# Effectiveness ratings

- An effectiveness rating signals whether an intervention did or did not affect a change in outcomes.
- The WWC only reports effectiveness ratings for studies rated *Meets WWC Standards Without Reservations* or *Meets WWC Standards With Reservations*.

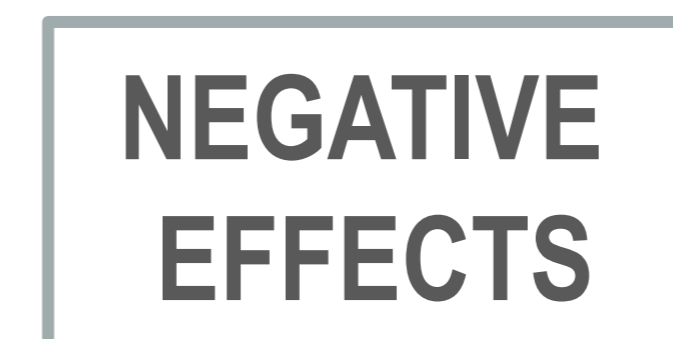


# Effectiveness ratings (continued)

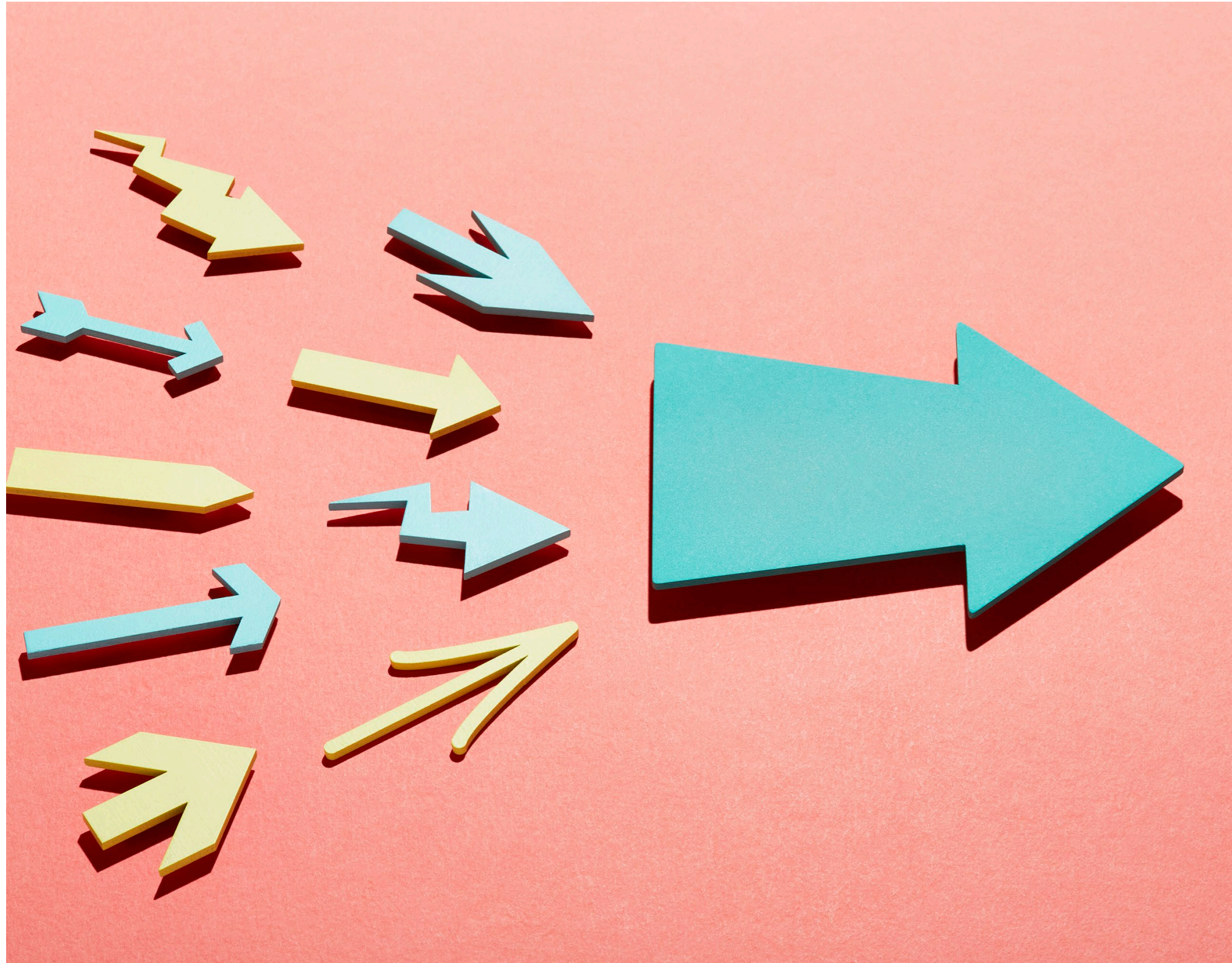
- Under version 5.0, the WWC’s effectiveness ratings are aligned with U.S. Department of Education evidence definitions.
- Previously separate “extent of evidence” criteria are included in the effectiveness rating (for example, multiple settings, sample size).



Practice guides only



## Effectiveness ratings (continued)



- Under version 4.1, the effectiveness rating was the highest rating obtained from individual main findings.
- Under version 5.0, the WWC will determine an effectiveness rating at the outcome domain level for individual studies and intervention reports.
- If a study has multiple main findings in the same domain, the WWC creates a composite finding and reports the effectiveness rating for the domain-level composite.

## Effectiveness ratings (continued)

- Under version 4.1, to be eligible for the rating “positive effects,” more than 50 percent of the meta-analytic weight had to be attributable to findings rated *Meets WWC Standards Without Reservations*.
- This requirement is the same under version 5.0.
- However, under version 5.0 when a synthesis includes findings rated *Meets WWC Standards With or Without Reservations*, the WWC will attempt to ensure that most of the meta-analytic weight is attributed to findings rated *Meets WWC Standards Without Reservations*.



# Effectiveness ratings (continued)



- When outcome domains have recognized, widely accepted independent measures, the WWC will base the effectiveness rating on those measures.
  - The *Study Review Protocol* will identify outcome domains for which the WWC will use independent measures to assess effectiveness.
- Studies that use nonindependent measures can still meet WWC research standards.

# Timeline for the *Handbook* release and submitting comments

# Tentative timeline





# Submitting comments

- Draft of the *WWC Procedures and Standards Handbook, Version 5.0*, and the summary of changes document are available at <https://ies.ed.gov/ncee/wwc/Handbooks>.
- To provide feedback, send comments by April 1, 2022, to the WWC Help Desk at <https://ies.ed.gov/ncee/wwc/help>.

# Questions?



Additional questions?

Contact us at the **WWC Help Desk**:  
<https://ies.ed.gov/ncee/wwc/help>