



Office of Adolescent Health Teen Pregnancy Prevention Evidence Review: The Standards

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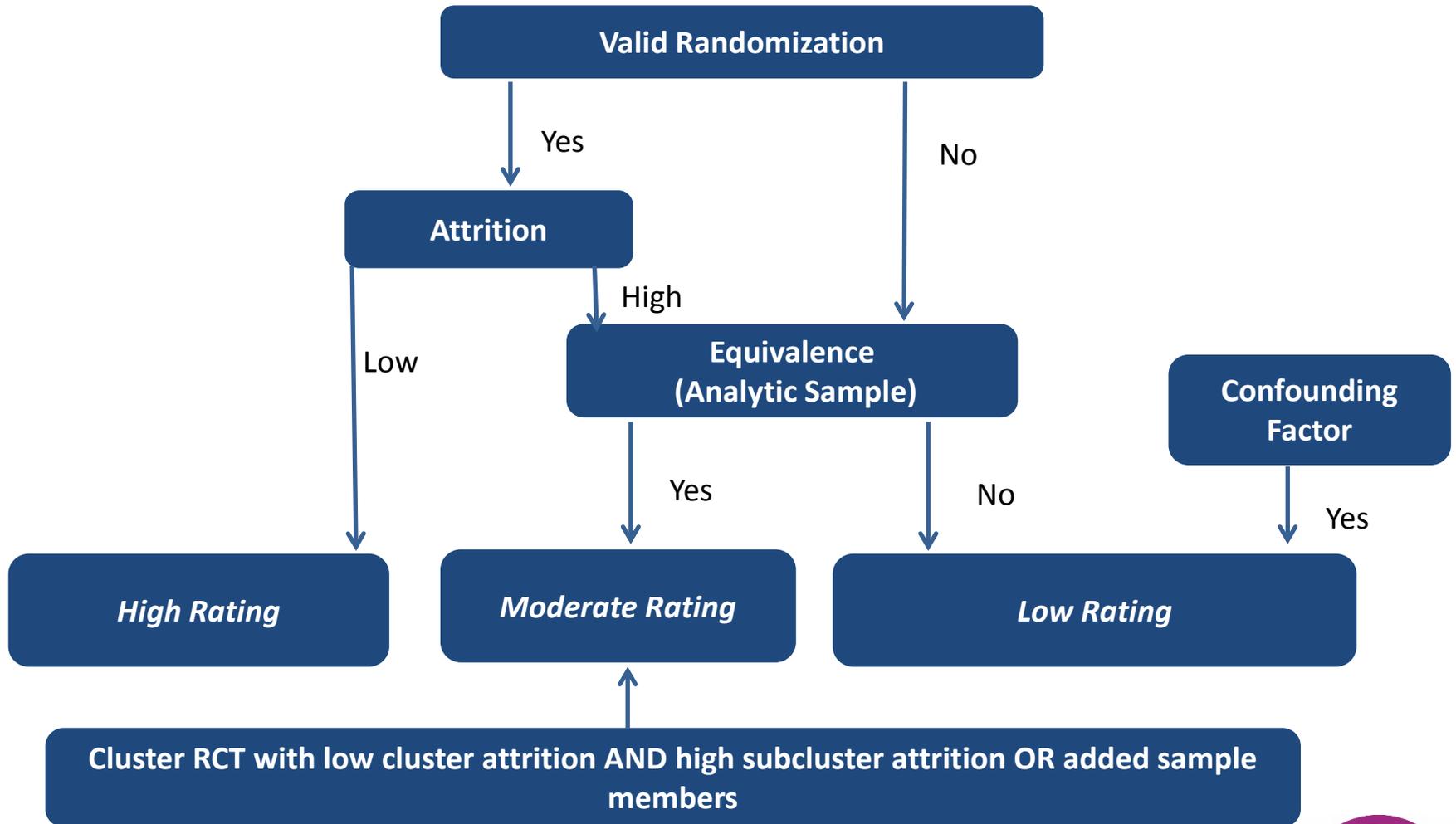
Presentation at the TPP Tier 2 Orientation Meeting
November 10, 2015



- Introduction to the HHS Teen Pregnancy Prevention Evidence Review
- How the TPP Evidence Review affects you
- How the TPP Evidence Review does its work
 - General process
 - Standards
 - How evaluation TA liaisons will help you

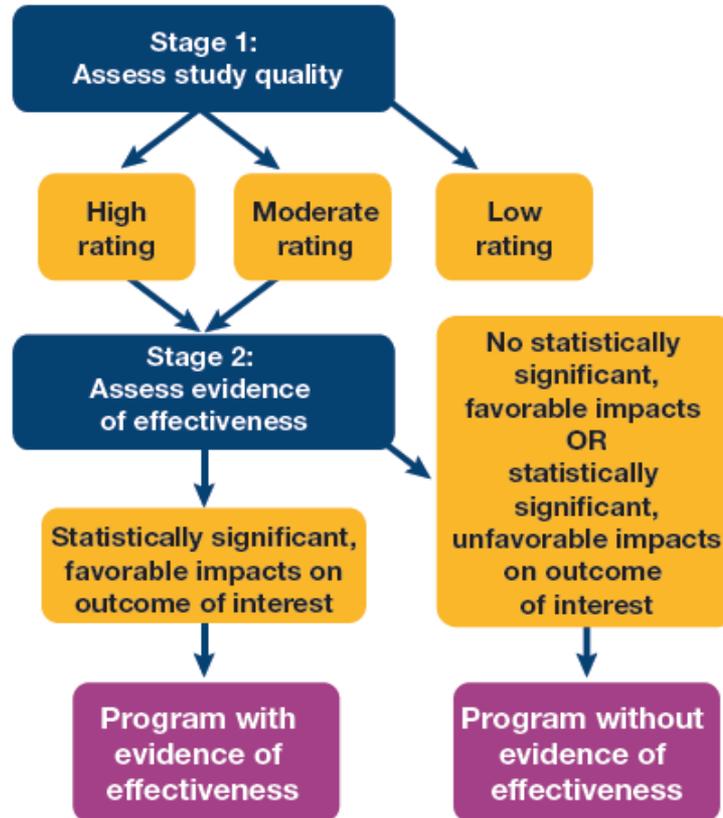
- Started in 2009 by U. S. Department of Health & Human Services
- High-stakes systematic review
 - Identify evidence-based teen pregnancy prevention programs
 - Used by federal government to determine federal grant funding for teen pregnancy prevention
- Broader resource for states and local communities

Overview of Ratings



- Grantees with rigorous evaluation requirement (Tier 2B) will receive technical assistance to help design and implement evaluations that will be reviewed positively by the Evidence Review
- First cohort of grantees are being reviewed by Evidence Review

Figure 1. Stages for determining programs with evidence of effectiveness

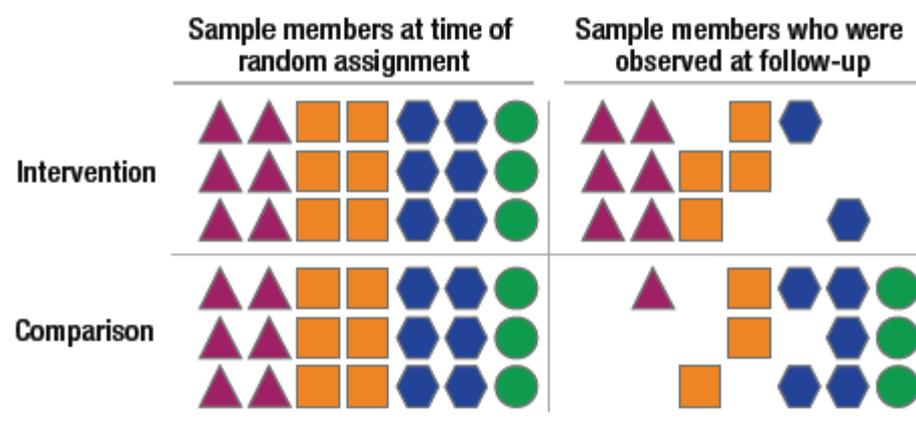


[Understanding the HHS Teen Pregnancy Prevention Evidence Review](#), Brief 8, June 2015

- Necessary components of randomization
 - Assign youth entirely by chance
 - Each youth has a non-zero probability of being assigned to each condition
- Actions that bring randomization into question
 - Moving youth from their assigned condition
 - Adding youth who were not randomly assigned
 - Removing youth from the sample after randomization
 - If CRCT with assignment of class to condition, selection of youth after assignment of class to condition

- Attrition introduces threat to unbiased impact estimate because it may cause differences in distribution of characteristics in the intervention and comparison group.

Figure 1. Illustration of non-equivalence of baseline characteristics due to sample attrition



[Sample Attrition in Teen Pregnancy Prevention Impact Evaluations](#), Brief 5, November 2014

Example of Calculating Attrition

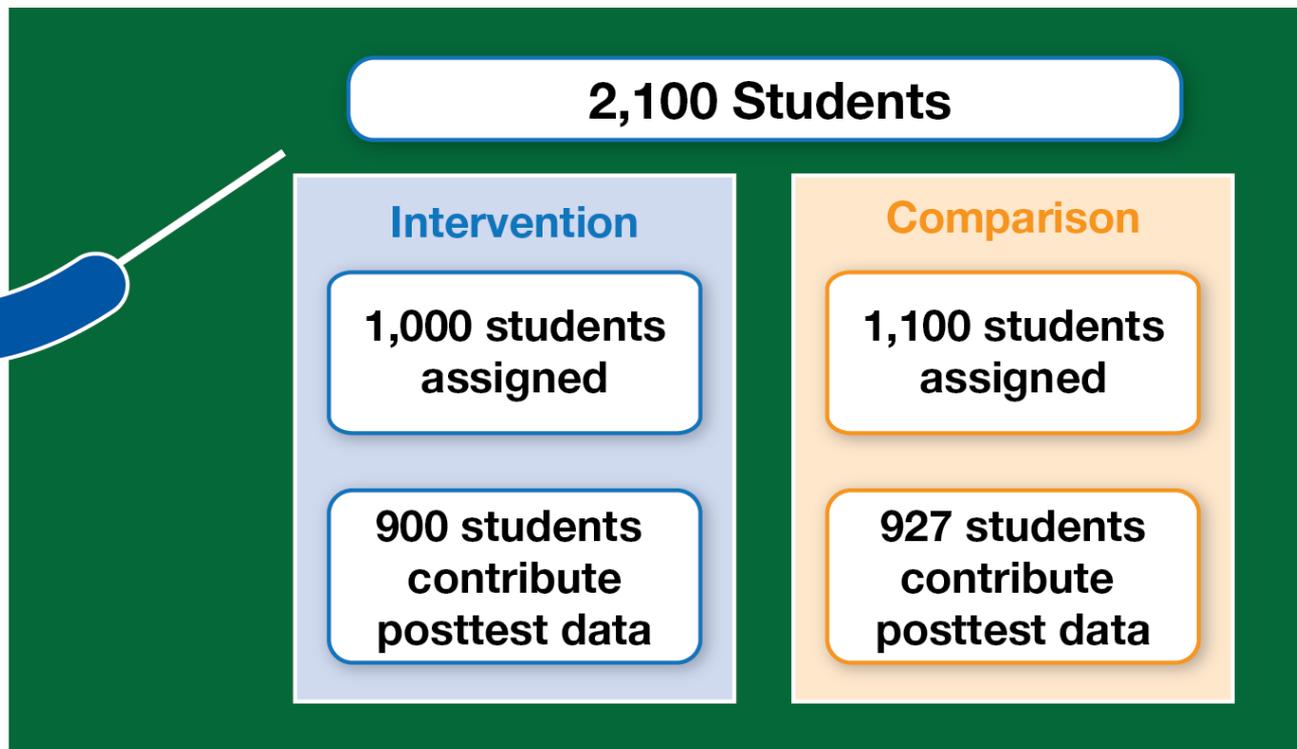
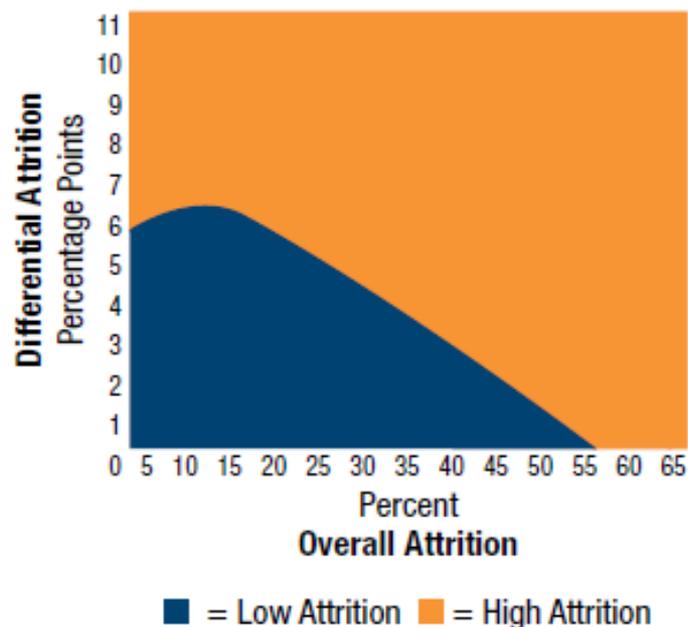


Figure 2. Standard for assessing sample attrition in study quality ratings



[Sample Attrition in Teen Pregnancy Prevention Impact Evaluations](#), Brief 5, November 2014

If an RCT, must have low attrition to receive high rating, otherwise must demonstrate equivalence to receive moderate rating.

- Attrition will be assessed at both the cluster and the subcluster levels
- If the analytic sample includes individuals added after randomization, then the cluster RCT may not receive a high rating.

The TA Liaison Support for Attrition

Table 1. Example of assessing youth attrition when there is cluster-level attrition

Cluster attrition calculation			
	Intervention	Comparison	Overall
Number of clusters in initial random assignment	20	20	40
Number of clusters observed at follow-up	19	20	39
Cluster attrition rate	5% = $(20 - 19) / 20$	0% = $(20 - 20) / 20$	2.5% = $(40 - 39) / 40$
Youth Attrition Calculation			
	Intervention	Comparison	Overall
Number of youth randomly assigned in all clusters	2,000	2,000	4,000
Number of youth randomly assigned in clusters that did not attrite	1,900	2,000	3,900
Number of youth observed at follow-up	1,520	1,600	3,120
Youth attrition rate	20% = $(1,900 - 1,520) / 1,900$	20% = $(2,000 - 1,600) / 2,000$	20% = $(3,900 - 3,120) / 3,900$

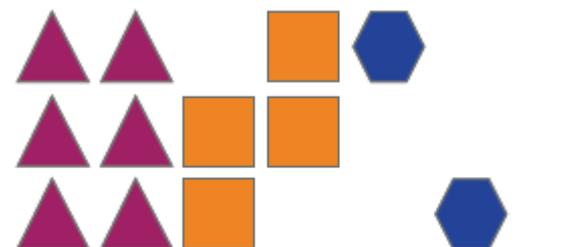
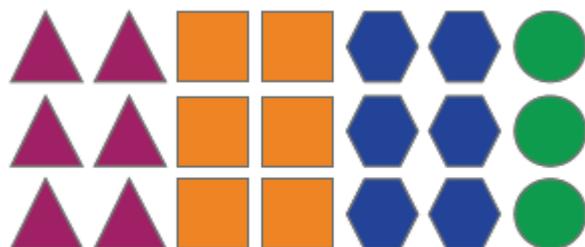
[Sample Attrition in Teen Pregnancy Prevention Impact Evaluations](#), Brief 5, November 2014



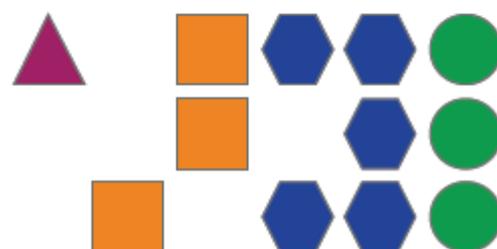
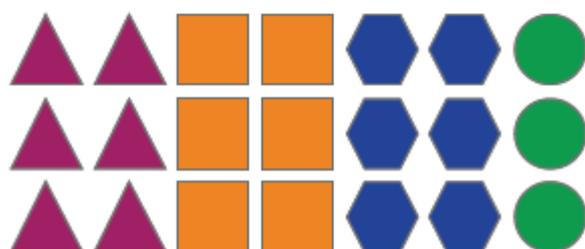
Sample members at time of random assignment

Sample members who were observed at follow-up

Intervention



Comparison



Analytic Sample

[Sample Attrition in Teen Pregnancy Prevention Impact Evaluations](#), Brief 5, November 2014

- Characteristics at minimum: age/grade, gender, race/ethnicity
 - If sample is over 14, or 8th grade or higher, at least one behavioral outcome
 - Recommendation: other key variables that are expected to influence outcomes
- Statistically control for age/grade, gender, race/ethnicity in analyses
- Must demonstrate equivalence for a moderate rating

- Inequivalence if statistically significant difference.
- Use a two-tailed test and if $p < .05$, then statistically significant difference.

- Goal: have non-significant differences between groups
- Method: Matching methods
 - Exact matches
 - Propensity score methods

The TA Liaison Support for Equivalence

Table 1. Analysis Sample ($N_i =, N_c =$): Summary Statistics of Key Baseline Measures, by Study Group

Baseline Measure	Intervention Group		Comparison Group		Baseline Differences	
	Mean (or %)	Standard deviation ^a	Mean (or %)	Standard deviation ^a	Mean difference	p-value of difference
Age or Grade Level						
Gender						
Race/ethnicity						
Behavioral measure, such as sexual initiation (for studies with youth at least 14 years old)						

Table notes: [Describe the analytic procedure used to test the intervention-comparison group difference in baseline means]

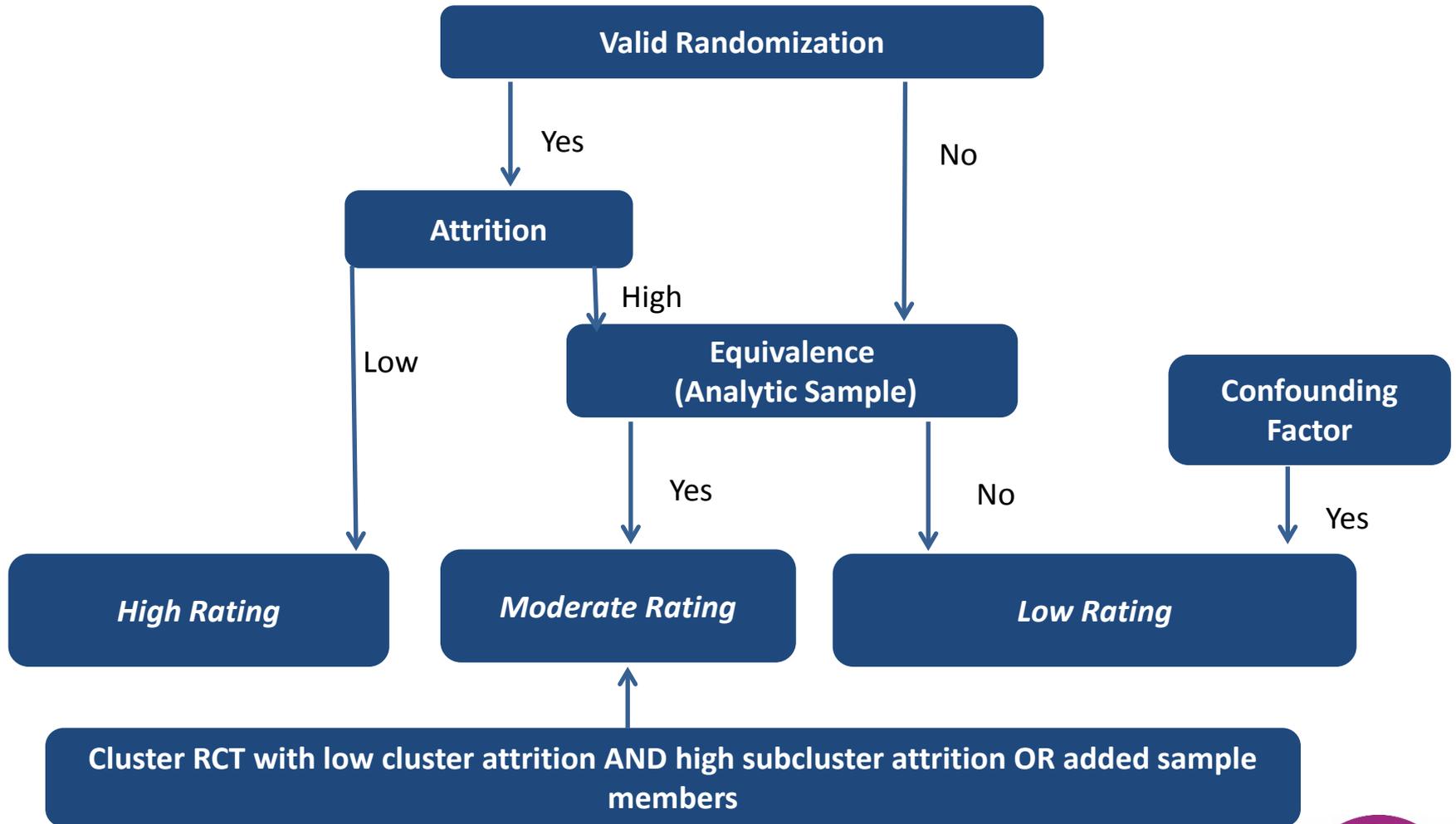
^a Include if a continuous measure.

[Baseline Inequivalence and Matching](#), Brief 4, November 2014

- Included: measures of sexual risk behavior or its health consequences (sexual activity including initiation, frequency, or number of partners); contraceptive use; STIs; pregnancies; or births.
- Excluded: measures with limitations related to quality or interpretation – reports from males of female partners' use of contraception, scales of behavioral risk – combine multiple measures into a single “black box”

- Confounding factors are observed factors that are not a component of the intervention but is completely aligned with one condition.
 - If there are confounding factors, then it is impossible to isolate the effect of the intervention.
 - One of the most common confounding factors: “N = 1” which means there is a single unit in one of the conditions for the analytic sample.
- A study with a confounding factor will receive a low rating.

Overview of Ratings



- Identifying Programs That Impact Teen Pregnancy, Sexually Transmitted Infections, and Associated Sexual Risk Behaviors, Version 4.0
 - <http://tppevidencereview.aspe.hhs.gov/ReviewProtocol.aspx>
- Understanding the HHS Teen Pregnancy Prevention Evidence Review (Brief 8, June 2015)
 - <http://www.hhs.gov/ash/oah/oah-initiatives/assets/tppeval-tabrief8.pdf>
- Sample Attrition in Teen Pregnancy Prevention Impact Evaluations (Brief 5, November 2014)
 - <http://www.hhs.gov/ash/oah/oah-initiatives/assets/attrition-ta-brief.pdf>
- Baseline Inequivalence and Matching (Brief 4, November 2014)
 - <http://www.hhs.gov/ash/oah/oah-initiatives/assets/baselineinequivalence-tabrief.pdf>

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