
Identifying Programs that Impact Teen Pregnancy, Sexually Transmitted Infections, and Associated Sexual Risk Behaviors

**U.S. Department of Health and Human Services and
Mathematica Policy Research, Inc.**

December 2, 2010



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Outline

- **Background**
- **Review Methods and Criteria**
- **Review Findings**
- **Plans for Maintaining and Updating the Review**

Background

Purpose

- **To systematically review evidence on programs to reduce teen pregnancy, sexually transmitted infections, and associated sexual risk behaviors**
- **To identify the program models with strongest evidence of effectiveness**
- **To help advance the evidence base**

Motivation

- **High rates of risky sexual behavior among U.S. adolescents**
 - Nearly half of high school students have had sexual intercourse
 - Adolescents and young adults account for half of new STI cases in the U.S. every year
 - Teen birth rate increased by 5% between 2005 and 2007, then declined by 2% between 2007 and 2008
- **Increased emphasis on evidence-based policymaking**

First Review of the Evidence

- **Conducted in Fall 2009/Winter 2010**
- **Covered research conducted or published from 1989 through 2009**
- **Identified 28 program models meeting HHS criteria for evidence of effectiveness**
- **Released in Spring 2010 in conjunction with:**
 - **Office of Adolescent Health (OAH) Teen Pregnancy Prevention (TPP) Initiative grant announcements**
 - **State Personal Responsibility Education Program (PREP) grant announcement**

Updating the Review

- **New contract awarded to Mathematica Policy Research in Fall 2010 to maintain and update the review on an annual basis**
- **Office of the Assistant Secretary for Planning and Evaluation (ASPE) manages the new contract in partnership with OAH**
- **Annual updates to review**
 - **Focus on new research not covered in previous reviews of the evidence**
 - **Update the program models for inclusion on HHS List of Evidence-Based Programs**

Plans for Next Round of Review

- **December 2010: Identify new studies for review**
 - Includes a new Call for Studies
- **Winter 2011: Review new studies and update list of evidence-based programs**
- **Spring 2011: Release findings**

Future Plans for the Review

- **Disseminate findings**
 - Website materials
 - Research briefs and reports
- **Engage Experts in Evaluation Methodology**
 - Consult with Experts on Review Criteria and Procedures
- **As evidence base expands, consider revisions to review criteria**
 - Possible examples: Requiring more recent evidence of sustained impacts

Questions?

Review Methods and Criteria

Four-Step Process

- 1. Identify potentially relevant studies for review**
- 2. Screen studies against inclusion criteria**
- 3. Assess quality of included studies**
- 4. Assess evidence of program effectiveness among studies passing quality bar**

Step 1. Find Studies

- **Scanned existing research syntheses**
- **Searched websites of research and pregnancy prevention organizations**
- **Distributed public call for papers**
- **Conducted keyword search of electronic databases**

Step 2. Screen Studies

- **To qualify for review, a study must have:**
 - **Examined program impacts using quantitative data and statistical analyses**
 - **Focused on at least one key outcome measure:**
 - Sexual activity
 - Contraceptive use
 - Sexually transmitted infections (STIs)
 - Pregnancies or births
 - **Focused on U.S. youth ages 19 or younger**
 - **Been conducted or published since 1989**

Step 3: Assess Study Quality

- **For each study that met inclusion criteria:**
- **Assessed by teams of two trained reviewers from:**
 - **Mathematica Policy Research**
 - **Child Trends**
 - **Concentric Research and Evaluation**
- **Examined for quality and execution of research design**
- **Assigned to one of three levels: high, moderate, or low**

Features of Study Quality Ratings

- **Developed by Mathematica and approved by HHS**
- **Based on criteria used by other systematic reviews**
- **Focused on internal validity: Does the study provide credible estimates of program impacts?**



Sources Consulted
Advocates for Youth <i>Science and Success</i>
Blueprints for Violence Prevention
CDC HIV/AIDS Prevention Research Synthesis
Child Trends <i>LINKS Database</i>
<i>Emerging Answers 2007</i>
National Registry of Evidence- Based Programs and Practices
Campbell Collaboration
Sociometrics <i>PASHA</i>
What Works Clearinghouse

Criteria for High Study Rating

- **Randomized controlled trial**
 - Participants assigned randomly to research groups
 - Ensures only chance differences between groups
 - Provides strongest evidence of program effects
- **Low sample attrition**
 - Assessed using What Works Clearinghouse standards
 - Accounts for both:
 - Overall level of sample attrition
 - Difference in attrition rates between research groups
 - Larger difference in rates between group requires lower overall level of sample attrition

Criteria for High Study Rating (Continued)

- **No reassignment of sample members**
 - All participants initially assigned to the treatment (or control) group must be analyzed with this group
- **No systematic differences in data collection between groups**
- **At least two subjects or groups in each research condition**
- **Controls for any statistically significant baseline differences**

Criteria for Moderate Study Rating

- **Quasi-experimental design**
 - Establishes baseline equivalence of groups on age, race, gender, and at least one outcome measure
 - Analysis controls for baseline differences in outcome measures
 - No systematic differences in data collection between groups
 - At least two subjects or groups in each research condition
- **Randomized controlled trial**
 - High sample attrition or reassignment of sample members
 - Meets all other criteria for high or moderate rating

Step 4: Assess Evidence of Effectiveness

- **Collected information on impact findings reported in high or moderate quality studies**
 - Direction and statistical significance
 - Outcome measures
 - Length of follow up
 - Analysis samples
- **Studies with low quality rating dropped out of the review**
- **Identified programs meeting HHS criteria for evidence of effectiveness**

HHS Criteria for Evidence-Based Program

- **Evidence of a positive, statistically significant impact:**
- **On at least one key outcome:**
 - Sexual activity
 - Contraceptive use
 - Sexually transmitted infections (STIs)
 - Pregnancy or birth
- **For either:**
 - Full analytic sample
 - Subgroup defined by (1) gender or (2) sexual experience measured at baseline

Range of Evidence Categories Meeting HHS Criteria

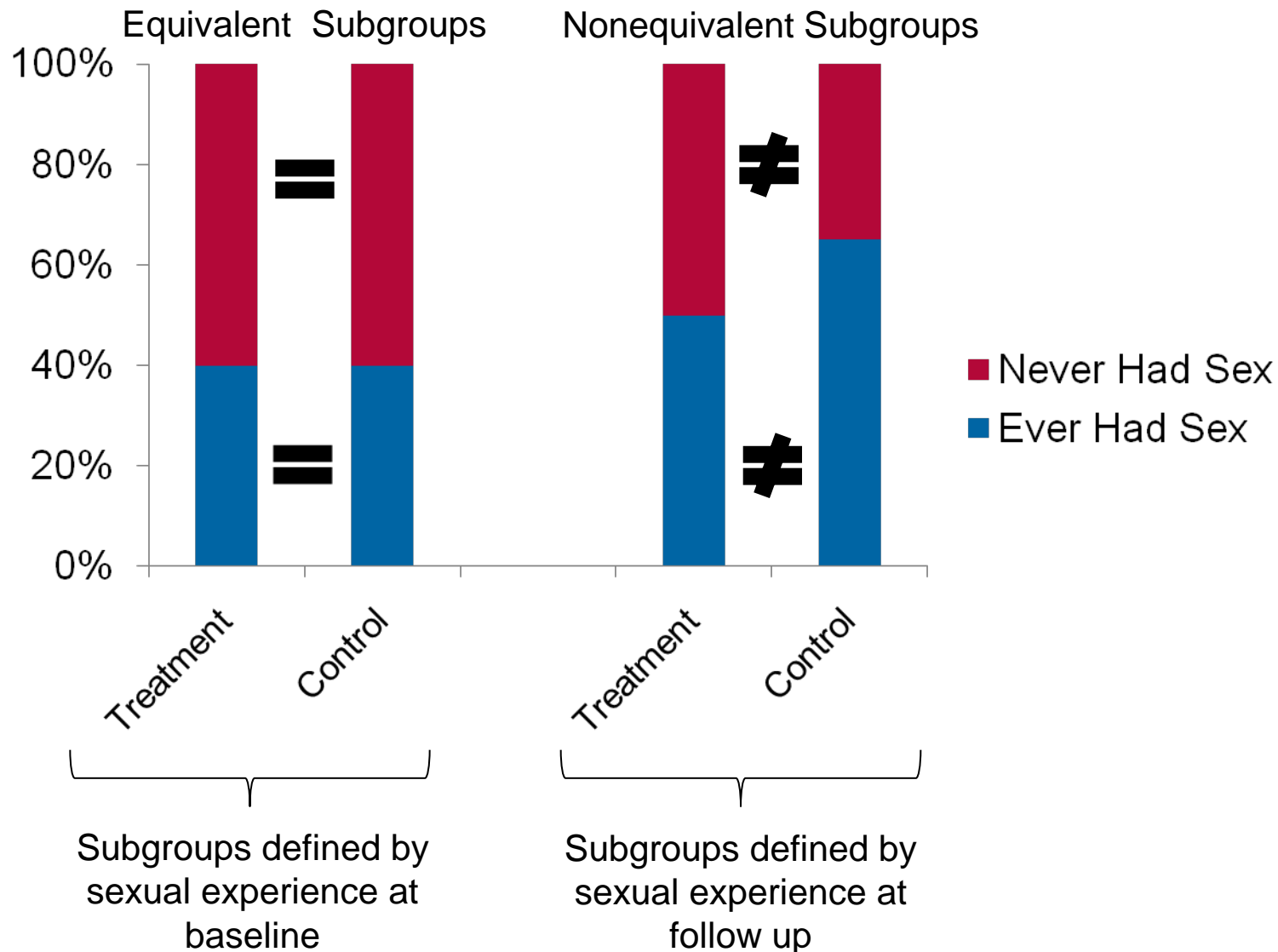
Evidence Category	High quality study, replicated impact	High quality study, sustained impact	High quality study, short-term impact	High quality study, subgroup impact
Study Quality	High	High	High	High
Sample with Positive Impacts	Full sample	Full sample	Full Sample	Subgroup
Duration of Impacts	Year or more	Year or more	Less than year	Any
Replicated	Yes	No	Yes or no	Yes or no

Evidence Category	Moderate quality study, replicated impact	Moderate quality study, sustained impact	Moderate quality study, short-term impact	Moderate quality study, subgroup impact
Study Quality	Moderate	Moderate	Moderate	Moderate
Sample with Positive Impacts	Full sample	Full sample	Full Sample	Subgroup
Duration of Impacts	Year or more	Year or more	Less than year	Any
Replicated	Yes	No	Yes or no	Yes or no

Explanation of Subgroup Criteria

- Limiting number of subgroups helps control for multiple hypothesis testing
- To ensure unbiased impact estimates, subgroups must be defined by characteristics that cannot be affected by the intervention
 - Demographics (gender)
 - Characteristics measured prior to random assignment (baseline sexual experience)
- Subgroups defined by characteristics measured after random assignment may be subject to bias

Why Subgroups Must Be Defined at Baseline



Review Findings

Summary of Results

- **Step 1: About 1,000 potentially relevant studies identified through literature search**
- **Step 2: 199 studies met screening criteria**
- **Step 3: 93 studies received high or moderate study rating**
- **Step 4: 28 program models met HHS criteria for evidence of effectiveness**

List of 28 HHS Evidence-Based Programs

Program Name	Program Name	Program Name
Aban Aya Youth Project	FOCUS	Reducing the Risk
Adult Identity Mentoring	HIV Risk Reduction Among Detained Adolescents	Rikers Health Advocacy Program
All4You!	Horizons	Safer Sex
Assisting in Rehabilitating Kids	It's Your Game: Keep it Real	SiHLE
Be Proud! Be Responsible!	Making a Difference!	Sisters Saving Sisters
Be Proud! Be Responsible! Be Protective!	Making Proud Choices!	Teen Health Project
Becoming a Responsible Teen	Project TALC	Teen Outreach Program
Children's Aid Society—Carrera Program	Promoting Health Among Teens! Abstinence-Only Intervention	What Could You Do?
¡Cuídate!	Promoting Health Among Teens! Comprehensive Intervention	
Draw the Line/Respect the Line	Raising Healthy Children	

Strength of Supporting Evidence

- **Quality rating of supporting study:**
 - High = 19 programs
 - Moderate = 9 programs
- **Analysis sample showing impacts:**
 - Full sample = 21 programs
 - Subgroup only = 7 programs
- **Duration of impacts:**
 - Less than 12 months = 14 programs
 - 12 months or more = 14 programs

Strength of Supporting Evidence (Continued)

- **Impacts replicated in more than one high- or moderate-quality study:**
 - Yes = 1 program
 - No = 27 programs
- **Number of programs showing impacts on:**
 - Initiation of sexual activity = 5 programs
 - Other measures of sexual activity (frequency, number of partners, etc.) = 17 programs
 - Contraceptive use = 9 programs
 - STIs = 4 programs
 - Pregnancy or birth = 5 programs

Overlap with Other Evidence-Based Lists

- **National Campaign to Prevent Teen and Unplanned Pregnancy's *What Works 2010***
 - **18 programs in common**
 - **12 programs on *What Works* list not on HHS list**
 - 2 programs were outside scope of HHS review
 - 4 programs did not meet criteria for high or moderate study rating
 - 6 programs showed no impact for full sample or priority subgroup
 - **10 programs on HHS list not on *What Works* list**

Overlap with Other Evidence-Based Lists (continued)

- **CDC's HIV/AIDS Prevention Research Synthesis (PRS) interventions for high-risk youth**
 - **10 programs in common**
 - **7 programs on PRS list not on HHS list**
 - 3 programs were outside scope of HHS review
 - 1 program did not meet criteria for high or moderate study rating
 - 3 programs showed no impact for full sample or priority subgroup
 - **18 programs on HHS list not on PRS list**

Common Reasons for Not Making HHS List

- **Did not meet screening criteria**
 - Sample older than age 19
 - Program not covered (e.g., home visiting programs)
- **Did not meet criteria for high or moderate study rating**
 - Lack of baseline equivalence
 - Only one subject or group in each research condition
- **No evidence of impacts on behavioral outcome measures (attitudes only)**
- **Impacts not shown for full analytic sample or priority subgroup**

Plans for Maintaining and Updating the Review

2010 Call for Studies

- **Limited to studies not previously reviewed**
- **Same inclusion criteria as for first review of the evidence:**
 - Quantitative impact studies
 - Behavioral outcome measures
 - U.S. youth ages 19 or younger
- **Authors may submit new evidence or findings that build on or expand a previously reviewed studies**
 - Must be written as new, stand-alone paper
- **Submissions due January 7, 2011**

For More Information

- **OAH website:**
 - <http://www.hhs.gov/ash/oah/index.html>
- **E-mail:**
 - pprer@mathematica-mpr.com

Questions?