
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



Click "Q&A"
to type in a
question.

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



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

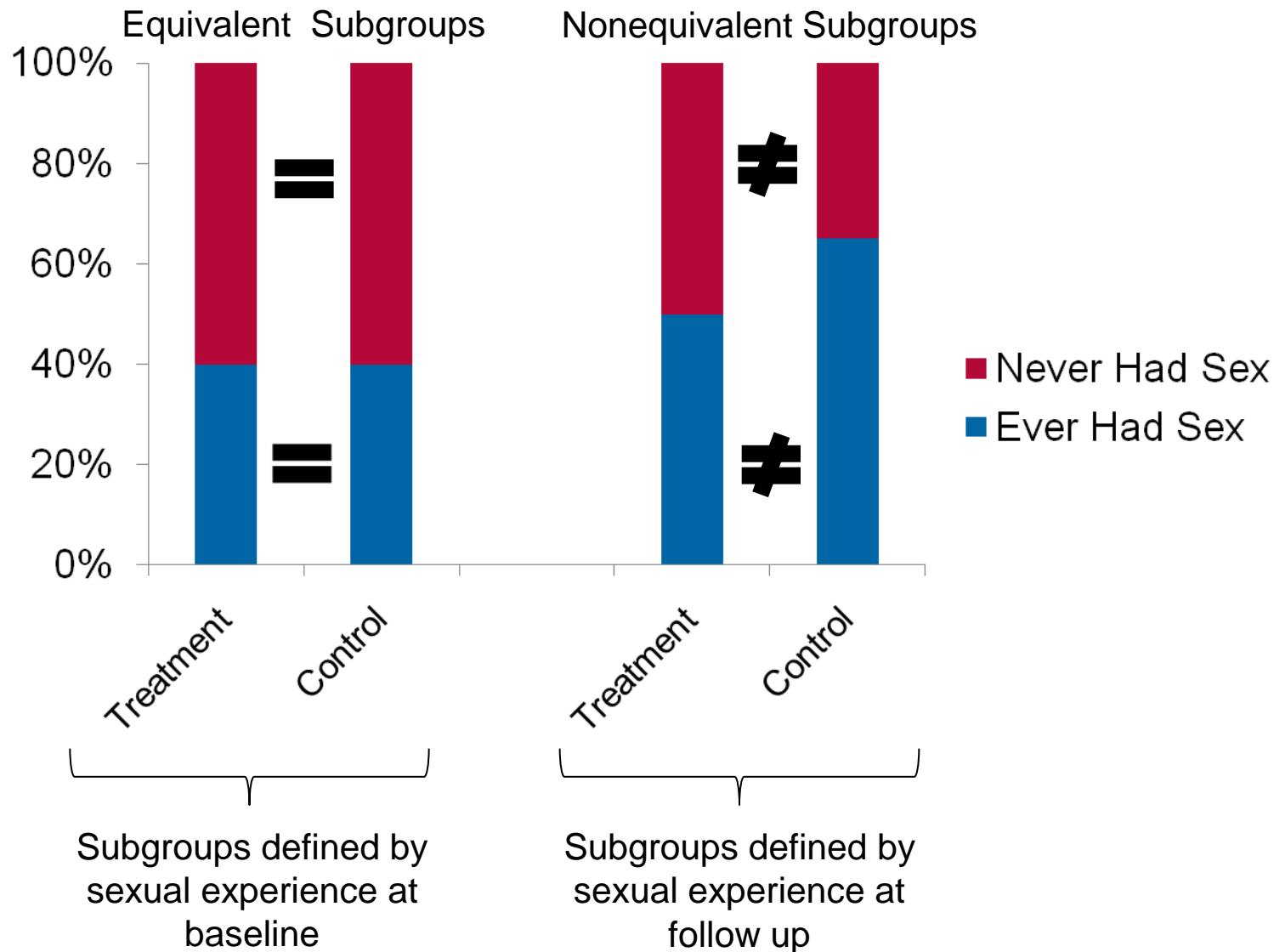
| Evidence Category | High quality study, replicated impact | High quality study, sustained impact | High quality study, short-term impact | High quality study, subgroup impact |
|------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|-------------------------------------|
| 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?