



## EXECUTIVE SUMMARY

October 2012

# Evaluation of Adolescent Pregnancy Prevention Approaches: Design of the Impact Study

## What is the Evaluation of Adolescent Pregnancy Prevention Approaches?

The Evaluation of Adolescent Pregnancy Prevention Approaches (PPA) is a major federal effort to expand available evidence on effective ways to prevent and reduce pregnancy and related sexual risk behaviors among teens in the United States. The eight-year (2008–2016) evaluation is being conducted by Mathematica Policy Research and its partners, Child Trends and Twin Peaks Partners LLC, under contract to the Office of Adolescent Health (OAH) in the Office of the Assistant Secretary for Health of the U.S. Department of Health and Human Services (HHS). The evaluation will document and rigorously test promising pregnancy prevention approaches in seven sites across the United States, each of which will implement a different program.

The PPA evaluation has two components: (1) an in-depth implementation analysis of the seven selected programs and (2) a rigorously designed impact study of each program. The implementation analysis will examine the context and delivery of each program and provide a basis for interpreting estimates of program impacts. The impact studies will use experimental designs and longitudinal survey data in all sites and focus on assessing the effectiveness of each selected program on its own, compared to a control group in the same site. In each of the seven evaluation sites, the PPA evaluation team is working closely with the local organization(s) implementing the programs to ensure successful execution of the study designs.

The evaluation is related to recent federal efforts focused on preventing risky sexual behavior and pregnancy among adolescents, including the Teen Pregnancy Prevention (TPP) Initiative and the Personal Responsibility Education Innovative Strategies (PREIS) programs. Six of the seven programs in the PPA evaluation are being implemented by local organizations with TPP or PREIS grant funding. In these six sites, the PPA evaluation team is collaborating closely with the independent

## About this Summary

This executive summary provides a brief overview of the design of the PPA impact evaluation. The full design report provides more detail on the overall evaluation and the site-specific impact study designs.

local evaluators, funded as part of each TPP or PREIS grant, on the design and implementation of the PPA impact and implementation studies.

## Selection and Description of Sites

The selection of evaluation sites involved two interrelated components: (1) identifying promising program approaches and (2) identifying program sites that would allow for a high quality evaluation of the program. In collaboration with HHS, the evaluation team developed criteria for assessing the fit of program models and sites with the goals of the PPA evaluation.

To be considered for the evaluation, a program approach had to meet three criteria: (1) it had to be policy-relevant and offer a chance to fill gaps in the existing research literature on new program approaches, underserved populations, and/or program settings; (2) it had to be grounded in a theory-based logic model linking the services delivered to sexual risk outcomes of central interest in the PPA evaluation; and (3) it had to be of sufficient intensity and duration that it is plausible to expect the program could affect these behaviors. Assessment of potential program sites also involved determining the feasibility of successful implementation of a rigorous experiment.

The seven selected programs represent a range of program approaches, target populations, and evaluation settings, reflecting the diversity of the current program landscape (Table 1).

Two of the programs—*Aim 4 Teen Moms* and *T.O.P.P.*—focus on delaying repeat pregnancy among low-income pregnant and parenting teens. Another program, *WAIT Training*, is a school-based abstinence-until-marriage curriculum delivered in middle schools. Three programs represent various comprehensive sex education approaches, each targeting and tailored to very different populations. These include (1) an enhanced

*HealthTeacher* curriculum implemented in middle schools; (2) *POWER Through Choices*, a sex education curriculum developed for foster care youth; and (3) *Teen PEP*, a high school-based peer-led sex education curriculum. Finally, *GEN.M* is a youth development program that recruits youth applying for a summer employment program and is delivered the week after the employment program ends.

**Table I. Key Features of the Programs Being Evaluated**

Program Model (implementing organization)	Program Description	Study Location	Program Duration and Intensity	Study Target Population
<b>AIM 4 Teen Moms</b> (Children’s Hospital Los Angeles)	Individual- and group-based youth development program that encourages parenting teens to delay repeat pregnancies	Los Angeles, CA	Seven 60-minute sessions and two 90-minute sessions delivered over 12 weeks	Low-income mothers ages 15 to 19 with a child between the ages of 1 and 6 months
<b>Gender Matters (GEN.M)</b> (EngenderHealth)	Community-based youth development program that aims to challenge traditional views on gender and incorporates comprehensive sex education	Austin, TX	Five 4-hour sessions delivered over five consecutive days, plus a text messaging campaign and community event	Youth ages 14 to 16 enrolled in the Travis County Summer Youth Employment Program
<b>HealthTeacher™ Curriculum, Enhanced</b> (Chicago Public Schools)	Internet-accessible, school-based comprehensive sex education curriculum	Chicago, IL	Twelve 45- to 90-minute sessions delivered over a semester	7th-grade students
<b>POWER Through Choices</b> (Oklahoma Institute for Child Advocacy)	Group-based sex education program targeting foster care youth in group homes	CA, IL, MD, and OK	Ten 1.5-hour sessions over 4–12 weeks	Foster care youth ages 13 to 18
<b>Teen Options to Prevent Pregnancy (T.O.P.P.)</b> (OhioHealth Research and Innovation Institute)	Clinic-based program providing telephone-based care coordination and mobile contraceptive services	Central OH	Monthly 1-hour telephone calls and periodic home visits over 18 months	Low-income Ohio-Health patients ages 10 to 19 who are currently pregnant or recently delivered
<b>Teen PEP</b> (Princeton Center for Leadership Training)	School-based peer-led comprehensive sex education workshops	NC and NJ	Five 1.5-hour workshops delivered over a semester (NC) or school year (NJ)	9th-grade students
<b>WAIT Training</b> (Live the Life)	School-based abstinence-until-marriage curriculum	Central and northern FL and southern GA	Sixteen 1-hour sessions—8 hours in each of two consecutive school years	7th-grade students

## Overview of Impact Study Designs

The designs of the individual impact studies are customized to the unique characteristics of each site. Research questions and the outcomes of greatest interest build on the overall evaluation goals and design, but reflect the specific program approaches, logic models, and target populations of each site. Because programs differ in their duration, and the trajectory of expected sexual activity varies with the age of the target populations, the schedules of data collection to support impact analysis also vary by site.

### 1. Research Questions and Key Outcomes

In each site, the impact analysis will address the following primary research question: “Was the program successful at

reducing teen pregnancy, sexually transmitted diseases (STDs), or associated sexual risk behaviors?” As a formal test of this question, a confirmatory analysis will be conducted in each site that focuses on two sexual risk outcomes that are central to the program model and can be rigorously evaluated. The “confirmatory” outcomes that are the focus of this analysis vary by site and are tailored to each program’s theory of change and the evaluation setting. Although all of the tested programs ultimately aim to reduce teen pregnancies and related teen risk behaviors, the specific objectives within the study period vary with the program model and target population. Some programs focus more on promoting abstinence, others on sexual risk behaviors and use of contraceptives. Several programs (*HealthTeacher*, *Teen PEP*, and *WAIT Training*) target young populations in which

pregnancy can be expected to be a rare outcome during the study period. In these sites, a confirmatory impact analysis focused on the outcome of pregnancy would not have sufficient statistical power to measure program impacts within the study period, so instead the confirmatory analysis will focus on sexual risks closely tied to pregnancy, such as initiation of sexual intercourse and prevalence of unprotected intercourse.

Table II presents the confirmatory sexual risk outcomes that will be examined in each site. The impact studies in each site are designed to ensure sufficient statistical power to detect differences between the treatment and control group in these key outcomes of a magnitude seen in prior studies of teen pregnancy prevention programs.

**Table II. Confirmatory Sexual Risk Outcomes, by Site**

Program Model (Implementing Organization)	Confirmatory Outcomes
<b>AIM 4 Teen Moms</b> (Children’s Hospital Los Angeles)	<ul style="list-style-type: none"> <li>• Prevalence of unprotected sex</li> <li>• Repeat pregnancy</li> </ul>
<b>Gender Matters (GEN.M)</b> (EngenderHealth)	<ul style="list-style-type: none"> <li>• Prevalence of sexual intercourse</li> <li>• Prevalence of unprotected sex</li> </ul>
<b>HealthTeacher™ Curriculum, Enhanced</b> (Chicago Public Schools)	<ul style="list-style-type: none"> <li>• Prevalence of sexual intercourse</li> <li>• Prevalence of unprotected sex</li> </ul>
<b>POWER Through Choices</b> (Oklahoma Institute for Child Advocacy)	<ul style="list-style-type: none"> <li>• Prevalence of sexual intercourse</li> <li>• Prevalence of unprotected sex</li> </ul>
<b>Teen Options to Prevent Pregnancy (T.O.P.P.)</b> (OhioHealth Research and Innovation Institute)	<ul style="list-style-type: none"> <li>• Prevalence of unprotected sex</li> <li>• Repeat pregnancy</li> </ul>
<b>Teen PEP</b> (Princeton Center for Leadership Training)	<ul style="list-style-type: none"> <li>• Prevalence of sexual intercourse</li> <li>• Prevalence of unprotected sex</li> </ul>
<b>WAIT Training</b> (Live the Life)	<ul style="list-style-type: none"> <li>• Prevalence of abstinence from sexual intercourse</li> <li>• Prevalence of unprotected sex</li> </ul>

Beyond the narrow confirmatory analysis, a comprehensive exploratory analysis will estimate and assess impacts across the range of sexual risk outcomes of central interest to the overall PPA evaluation. These “core” outcomes—some of which will serve as confirmatory outcomes and therefore not be part of the exploratory analysis in all sites—include initiation of sexual activity; sexual activity (frequency of sexual activity and number of partners); unprotected sex (use of condoms and other birth control methods); and pregnancy. In some cases, the core outcomes examined as part of the exploratory analysis will not be a focus of a particular program but they may nevertheless be

affected, and examination of them will provide a more complete picture of potential program effects on teen sexual risk behaviors and their consequences.

The exploratory analysis will also examine program impacts on key intermediate outcomes, or mediating variables, identified in the site-specific program logic models. In most sites, these include measures of knowledge about and attitudes toward sexual risk behavior and its potential consequences, and may also include measures of peer influences, communication and decision-making skills, perceived behavior control, and/or access to services. Although the analysis of mediating variables will be entirely exploratory, it will provide valuable insight on the sources of program impacts detected in the confirmatory analysis.

## 2. Experimental (Random Assignment) Design

In all sites, program impacts will be estimated using a rigorous experimental design. Individual youth or groups of youth are randomly assigned to either a program (“treatment”) group that can participate in the intervention or a control group that cannot participate. The diversity of program models and delivery settings necessitates varied random assignment approaches across sites. For four of the seven focal programs—*HealthTeacher*, *POWER Through Choices*, *Teen PEP*, and *WAIT Training*—the evaluation in that site will use a design in which clusters of youth (in schools or foster care agencies) are randomly assigned. To minimize potential differences at baseline between the experimental groups in each of these clustered designs, the clusters will be matched into small groups or pairs prior to random assignment, based on characteristics that might affect youth outcomes. For two other programs—*AIM 4 Teen Moms* and *T.O.P.P.*—the evaluation will follow a rolling random assignment design; individuals are randomly assigned on an ongoing or rolling basis over many months. Finally, the evaluation of *GEN.M* will use an individual-level random assignment approach, but random assignment of youth will occur at one time prior to each program cycle.

## 3. Data Collection and Timeline

The analysis of program impacts will rely primarily on survey data collected as part of the PPA evaluation. In most sites, data will be collected from the study sample through a baseline and two follow-up surveys. For the *POWER Through Choices* and *T.O.P.P.* evaluations, three follow-up surveys will be administered. The timing of the follow-up surveys will vary across sites in accordance with each program’s theory of change and implementation schedule. The timing of the final follow-up surveys ranges from 13 to 30 months after baseline, or from 12 to 24 months after program completion.

## 4. Analytic Approach

Given the random assignment design being used in each site, valid impacts can be estimated by simply comparing unadjusted mean outcomes between the treatment and control group. However, to improve precision of the impact estimates, we will use regression models to control for covariates, especially baseline measures of outcomes. Regression adjustment can also account for any strata or blocking variables used in random assignment, or for any differences between the program and control group in baseline characteristics that arise by chance or from survey nonresponse.

The main impact estimates will be based on an intent to treat (ITT) analysis that includes all sample members, regardless of their participation in the program. This approach will yield an estimate of the program's average impact among youth given the opportunity to participate in the program. For exploratory analyses, estimates of program impacts that take into account variation in program participation will also be calculated, including estimates of the treatment on the treated (TOT) and, where possible, estimates of program impacts for youth with different levels of program attendance.

## Reporting

An impact analysis report will be produced for each PPA evaluation site. These independent, site-specific reports will address the key impact evaluation questions, synthesize findings from the impact and implementation analyses, and provide interpretations of the findings that are useful and accessible to a broad audience. Due to differences in the program implementation and data collection schedules across sites, the timing of the impact reports will vary by site, but will follow the completion of survey data collection in each site. The first impact report—for the evaluation of *HealthTeacher*, the first site to begin program implementation—will be completed in winter 2013. The impact reports for the other sites will be completed between roughly spring 2015 and 2016.

In addition to this final round of analysis and reporting, an interim impact analysis will be conducted in each site that draws on the baseline and first round of follow-up data. The findings from the site-specific interim analyses will be combined into a single report tentatively scheduled for completion in late 2014. In some sites, data collection will not be complete at the time of this interim analysis and, therefore, the findings will be based on only a partial sample and preliminary in nature.