



Teen Pregnancy Prevention Replication Study: Implementing the *Safer Sex Intervention*

IMPLEMENTATION REPORT

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Contents

1.	Introduction.....	1
1.1	The TPP Replication Study.....	1
1.2	The Three Models Replicated.....	2
1.3	Focus of This Report.....	2
2.	The Implementation Study.....	3
2.1	Research Questions.....	3
2.2	OAH Support for Implementation.....	3
3.	The Program Model: <i>Safer Sex Intervention</i>.....	5
4.	Community Context for the Replications of the <i>Safer Sex Intervention</i>.....	9
4.1	Community characteristics.....	9
4.2	Community need.....	9
4.3	Community Support for Services.....	10
5.	Putting the Program into Place.....	12
5.1	Working in Clinic Settings.....	12
5.2	Recruiting, Training and Supporting Staff.....	14
5.2.1	Hiring program staff.....	14
5.2.2	Training Health Educators.....	14
5.2.3	Monitoring and supervising staff.....	16
5.3	Reaching the Target Population.....	17
5.4	Workload and Workflow.....	19
6.	Implementation of the <i>Safer Sex Intervention</i> in the Three Replication Sites.....	21
6.1	Implementing the Program Model as Planned.....	21
6.1.1	Introducing <i>SSI</i>	21
6.1.2	Using the Wheel of Change.....	21
6.1.3	Using Motivational Interviewing (MI).....	22
6.1.4	Hands-on Experiences and Factual Information: Condom Demonstration and Brochures.....	23
6.1.5	Refusal and Condom Negotiation Skills: Role Plays.....	23
6.1.6	Follow-up: Booster Sessions.....	23
6.1.7	Frequency and Duration of Sessions.....	24
6.2	Fidelity of Program Implementation.....	24
6.3	Quality of Program Delivery.....	26
7.	Lessons Learned.....	28

Appendix A: Framework for the Implementation Study.....31

Appendix B: Data Needs, Sources, Data Collection Methods and Analysis Strategy.....33

 B.1 Data Sources.....33

 B.2 Data Collection Strategy34

 B.3 Analysis Strategy.....35

Appendix C: Core Elements.....36

Appendix D: *Safer Sex Intervention* Logic Model.....37

1. Introduction

Reducing rates of unplanned teen pregnancy and of sexually transmitted infections (STIs) are priorities for the Department of Health and Human Services (HHS). The federal Teen Pregnancy Prevention (TPP) Program, administered by the Office of Adolescent Health (OAH), includes funding for interventions that address the issues of teenage pregnancy and STIs by: (1) replicating program models that have shown some evidence of effectiveness in reducing rates of both and related behaviors; and (2) testing innovative strategies aimed at producing the same outcomes.

The TPP Program, authorized in 2010 as part of the larger Teen Pregnancy Prevention Initiative, initially included \$100 million in annual funding to support programming. Of these funds, \$75 million were available annually to support five-year grants for replicating 28 program models that prior rigorous evaluations had shown to be effective. An initial systematic, comprehensive review of the literature on teen pregnancy, STIs, and sexual risk behaviors identified these program models in 2009 (Kappeler & Farb, 2014).¹

Beyond program funding, OAH set out an ambitious research agenda for the whole effort, encompassing both grantee-led evaluations as well as federally funded impact studies. The office saw an opportunity to support new research that would contribute substantially to existing knowledge. One set of research activities comprised rigorous grantee-led impact and implementation evaluations.² A second set of research activities included evaluation studies managed by the federal government. One federally-led study examined the impacts of innovative strategies and untested approaches for preventing teenage pregnancy conducted as part of ACF's Evaluation of Adolescent Pregnancy Prevention Approaches (PPA).³ A second federally-led study, the Teen Pregnancy Prevention (TPP) Replication Study, examined the impacts of several widely-used evidence-based program models.

1.1 The TPP Replication Study

Abt Associates, with its subcontractors Belmont Research Associates, Decision Information Resources (DIR), and CiviCore, conducted the TPP Replication Study under contract with OAH and the Office of the Assistant Secretary for Planning and Evaluation (ASPE). The study has two major components: an Impact Study and an Implementation Study. The Impact Study tested whether three program models, each previously shown to be effective in a single study, continue to demonstrate effectiveness when implemented with fidelity (that is, with adherence to the core components of the program) across different settings and populations. Within the Impact Study there are three independent studies, one for each program model and each using data pooled across three replications of that model.⁴

¹ The initial review was subsequently updated several times to include studies that were released through October 2016, and the number of programs meeting the review criteria for evidence of effectiveness is now 48.

² OAH required TPP grantees—both those that received the largest grant amounts to implement evidence-based program models and those that proposed testing innovative interventions—to conduct rigorous evaluations of the programs they implemented.

³ Additional information about the PPA study can be found at <https://www.acf.hhs.gov/fysb/resource/ppa-study>

⁴ The strategy of using pooled data is a unique contribution to the existing research, in that its findings are stronger and more generalizable than the single-site studies. Additional information about the design of the TPP Replication Study impact and design reports can be found at <https://aspe.hhs.gov/pdf-report/impact-design-report> and <https://aspe.hhs.gov/pdf-report/implementation-study-design-report>.

The Implementation Study describes the contexts in which the evidence-based program models were implemented, and explores the challenges faced in implementing them. Going beyond the goal of documenting and evaluating the implementation of a single program, the study aims to answer questions about the feasibility of consistently replicating evidence-based programs with fidelity to the core elements of the program model and high-quality service delivery.

1.2 The Three Models Replicated

OAH, in partnership with ASPE, selected three program models from the first round of TPP-funded grants to test and replicate. Three of the nine grantees were replicating *Reducing the Risk (RtR)*, a widely used curriculum-based sexuality education program, whose 16 sessions are usually delivered in schools with students aged 14-19 years old. Three other grantees were replicating *¡Cuidate!*, an HIV/AIDS prevention program, culturally tailored to Latino adolescents aged 13-19 years old and delivered over six sessions in small groups that may be either single sex or mixed gender. The third set of grantees were replicating *Safer Sex Intervention (SSI)*, a clinic-based intervention to prevent STIs that targets sexually active females aged 14-19 years old. Trained health educators deliver the program individually to participants using a motivational interviewing process.

Criteria used to select the program models included the breadth and scale of the proposed replication effort and the number of grantees that proposed to replicate a program model. At least five grantees proposed to replicate each model.⁵ In addition, the three models represented a range of targeting and service strategies, as well as some variation in the service delivery settings.

1.3 Focus of This Report

This report focuses on the implementation of *SSI*. Two companion reports examine the implementation of *RtR* and *¡Cuidate!*. The TPP Replication Study also produced reports on the short-term and longer-term impacts of the three program models. In addition, nine site profiles provide an overview of program implementation as well as descriptive information about the study participants at baseline in each site.⁶ All of these site profiles, impact reports and briefs can be accessed from the TPP Replication Study webpage: <https://aspe.hhs.gov/teen-pregnancy-prevention-tpp-replication-study>.

⁵ Of the 28 program models in the TPP Program eligible for funding in 2010, the *Teen Outreach Program (TOP)* was the most frequently replicated. Seven independent evaluations of TOP were conducted as a condition of those grants. For this reason, it was excluded from consideration for the TPP Replication Study. *Becoming a Responsible Teen (BART)*, another widely used model, was also excluded because it had already undergone several evaluations.

⁶ The profiles are available at <https://aspe.hhs.gov/teen-pregnancy-prevention-tpp-replication-study>.

2. The Implementation Study

Across the replications of the three program models, a common set of questions shaped the design of the implementation study, the types of data needed to answer the questions, the strategy and measures used to collect the data, and our approach to analyzing the data.

2.1 Research Questions

Six questions address the feasibility of high-quality replication of evidence-based program models:

1. *To what extent was the program model implemented as planned in the replication sites?*
2. *To what extent was the program model implemented with fidelity in the replication sites?*
3. *What challenges or barriers to implementation did grantees encounter and how did they deal with them?*
4. *To what extent were the services provided under each program model of high quality?*
5. *To what extent were program participants engaged in and responsive to the program?*
6. *To what extent were grantees and partners ready to support high quality implementation of the selected model?*

Appendix A describes the conceptual framework for the study. Appendix B describes the data needs, sources, data collection methods, and analysis strategy.

2.2 OAH Support for Implementation

OAH created an infrastructure to support and sustain implementation (or replication) of program models selected by grantees. Throughout the grant period, the agency provided training sessions at annual grantee meetings. These were supplemented by periodic regional training sessions and webinars. This infrastructure would ensure that program models were implemented as intended by the developer and tested in its earlier evaluation, to the greatest extent possible.

To monitor fidelity, OAH required that fidelity logs be completed after each session, and summary data be submitted every six months. To monitor implementation quality, OAH created a protocol for observers (e.g., local evaluators or grantee supervisory staff) to assess, record, and report on the quality of a sample of 10 percent of program sessions for each health educator. However, given the individualized nature of *SSI* and the heavy reliance on the establishment of a trusting relationship between the health educators and young women, OAH waived this requirement for the grantees implementing *SSI*.

The Implementation Study...

- Describes how the replications were implemented, the contexts in which they were implemented, and the implementation challenges encountered;
- Evaluates the extent to which program models were replicated with fidelity and met quality and performance standards; and
- Identifies lessons for future implementation efforts.

To support fidelity of implementation, OAH:

- Worked with program developers to create fidelity logs when they did not already exist
- Ensured that initial and ongoing training included an emphasis on fidelity
- Stipulated completion of fidelity logs for every program session
- Required reporting data from the logs every six months as part of performance measure reporting

OAH assessed grantee requests to adapt even minor aspects of program implementation, to ensure that adaptations did not affect core program elements.⁷ Finally, OAH required that grantees record attendance at every program session and report it on the same schedule as other performance measure data. In addition to providing accountability, these measures taken together ensured that, in all cases, it would be possible to define exactly what was implemented.

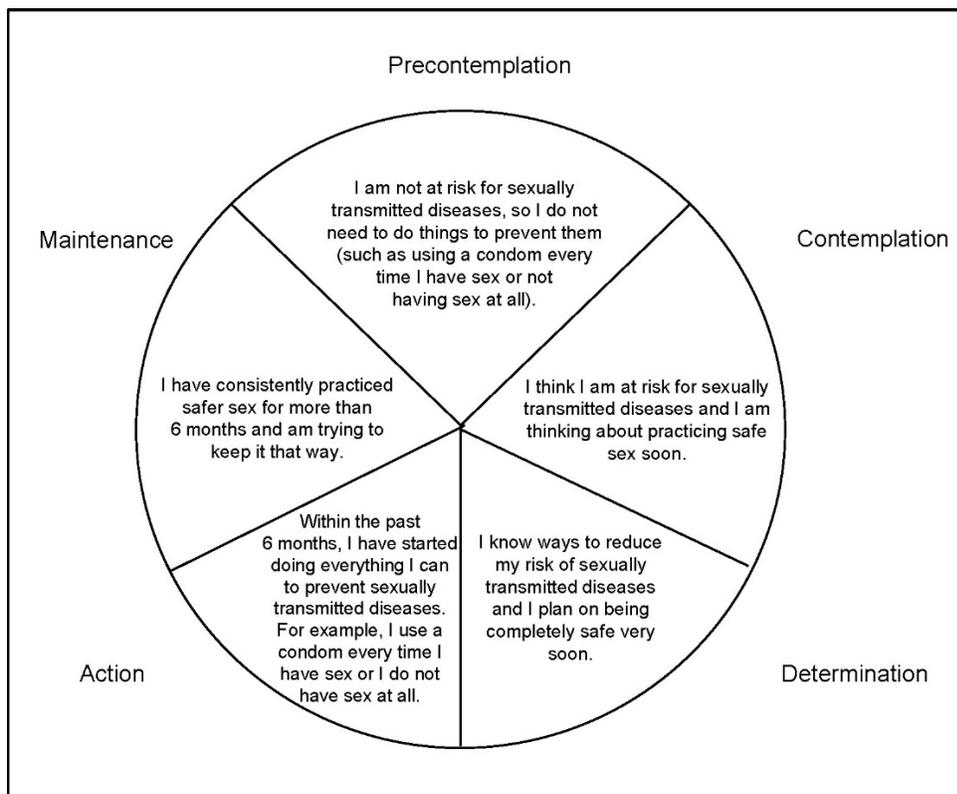
OAH's fidelity and performance measurement requirements standardized the program models to the greatest extent possible and reduced variation in both fidelity and strength of implementation.

⁷ For the 2010 cohort of grants, every adaptation, however minor, required prior approval. This allowed OAH to understand the broad range of minor modifications that were intended to improve attendance or engagement or fill gaps in the curriculum.

3. The Program Model: Safer Sex Intervention

SSI is a clinic-based intervention intended to reduce the incidence of STIs and increase condom use among higher-risk, sexually active female adolescents. A female health educator delivers the intervention in one-on-one, face-to-face sessions. It has two versions: the Pre-Contemplation Stage Module, which emphasizes delivering information and obtaining feedback about safer sex behaviors; and the Contemplation Stage Module, which emphasizes education, skills, self-efficacy, and self-esteem. The health educator chooses which version to use on the basis of the participant’s self-assessment on the Wheel of Change tool (Exhibit 3.1), their subsequent discussion, and the health educator’s assessment of the client.

Exhibit 3.1: Wheel of Change



Source: Shrier et al., 2001.

Using a videotape to introduce information about condom use, the Wheel of Change for self-assessment and reflection, and a motivational interviewing strategy⁸ to encourage participant-directed discussion, the health educator guides the client through a sequence of topics. The sessions allow time for role plays, questions, and feedback. Intervention topics include the consequences of unprotected sex, risk perception, preventing pregnancy and STIs, condoms, where to obtain condoms, secondary abstinence, and talking

⁸ Motivational Interviewing (MI) is a counseling technique that has been effectively used in the treatment of addiction, diabetes, heart disease and asthma. The process takes into account how difficult it is to make life-style changes. Through a collaborative process, the therapist or educator helps an individual client or patient to find the internal motivation he or she needs to change behaviors that threaten their physical health.

about sex (see Appendix C for complete list of core elements and topics for the initial session). After the initial 50- to 60-minute session, three subsequent booster sessions are delivered one, three, and six months later. These booster sessions can vary in length from 10 to 20 minutes, depending on the needs of the participant. The health educator uses them to review information, assess progress, and provide additional information and practice, if needed. Participants are offered condoms and informational materials at each session.

The theoretical framework for *SSI* draws on *social cognitive theory*, the *transtheoretical model of behavior change*, and the technique of *motivational interviewing* (Bandura, 1986; Prochaska & DiClemente, 2005; Prochaska & Velicer, 1997). The two theories underpin many other program models in the field of pregnancy prevention and sexual health education, and stress the dynamic nature of behavior change. Motivational interviewing, while used in other fields and with adolescents, is relatively uncommon in preventing teen pregnancy and addressing reproductive health. It relies on an individual centered style of counseling to facilitate personal motivation for behavior change by exploring and overcoming ambivalence (Miller and Rollnick, 1991).

Essential to the program's strategy is the recognition that individuals face unique barriers to initiating and maintaining behavior change. The role of the health educator is to guide and facilitate personalized counseling sessions that capture the participant's attention and take into account individual needs and challenges. During the initial session, the health educator helps the adolescent identify her needs, motivations, and intentions; gradually identify obstacles to behavior change; and make plans to address them. Through subsequent booster sessions, the health educator tracks the participant's progress through the stages of change, from Pre-contemplation through Maintenance (see Exhibit 3.1).

The program's theory of action suggests that a trained health educator, using motivational interviewing techniques, will establish a positive and trusting relationship with the client. In this context, the educator provides medically accurate information, facilitates self-assessment, encourages a client-directed discussion about risky sexual behavior and relationship issues, demonstrates condom use, and teaches negotiation skills (See Appendix D).

Through question and answer, discussion, role play, and the educator's support for behavioral change, the client is expected to show improved knowledge and understanding of sexual risk behavior and its consequences, become more motivated to avoid risk, and become more able to negotiate safe sex and refuse unwanted sex. Greater understanding of the consequences of risky sexual behavior, improved motivation to avoid risk, and better negotiation skills are intermediate outcomes that are expected to lead to the outcomes of interest: safer sexual behaviors such as consistent and effective use of condoms and other contraceptives, abstaining from or reducing sexual activity, and reducing the number of sexual partners. Ultimately, these safer sexual behaviors are expected to reduce rates of STIs and unplanned pregnancies and births among teens.

For this replication of *SSI* health educators implemented four sessions with participants: an initial session, in which the entire protocol was implemented, and three booster sessions at one, three, and six months in which the health educator used motivational interviewing techniques to customize the protocol.

Three Replications of *Safer Sex Intervention*

The three replications of *SSI* included in this study were implemented between 2010 and 2015 by the following organizations:

- **Hennepin County Human Services and Public Health Department (Minnesota).** The Human Services and Public Health Department provides public health, social services, income assistance, and housing and shelter services to Hennepin County. It partners with community agencies to deliver evidence-based teen pregnancy prevention services.
- **Knox County Health Department (Tennessee).** Knox County Health Department (Knox County) is the local public health agency serving the City of Knoxville and Knox County. The Department provides primary prevention services in the areas of adolescent pregnancy, sexually transmitted diseases, sexual violence, injury, child safety and childhood diseases.
- **Planned Parenthood of Greater Orlando (Florida).** Planned Parenthood of Greater Orlando (PPGO), an affiliate of Planned Parenthood Federation of America, Inc., operates as a community based non-profit 501(c)(3) organization.⁹ Since 1995, the organization has provided reproductive health services (on a fee-for-service basis) and sexual health education in four central Florida counties: Orange, Osceola, Seminole, and Brevard.

In all three replication sites, *SSI* grantees served young women aged 13 to 19 years old who were sexually active or about to become sexually active and not pregnant or parenting at the time of enrollment. This is a broader population than the original intervention (Shrier et al., 2001), which was directed at youth who had just been diagnosed with an STI. The grantees proposed this change in target population, and OAH and *SSI*'s developer approved the adaptation for all three *SSI* grantees.¹⁰ The other approved adaptation implemented in all three replication sites was to replace the original video about condom use with an updated version of their choice as recommended by the developer.¹¹ PPGO and Hennepin also successfully implemented an approved adaptation that enabled educators to conduct booster sessions remotely via video chat (e.g., Skype or FaceTime) instead of in the clinic. Exhibit 3.2 below summarizes the program as implemented in each replication site.

⁹ In July 2015, PPGO merged with another Planned Parenthood affiliate to become Planned Parenthood of Southwest and Central Florida.

¹⁰ In each site, the grantees involved the developer during the grant proposal phase. Upon award, OAH recommended that the developer continue to be involved, and each of the replication sites established consulting agreements for this purpose. The developer provided the initial training, along with responses to frequently asked questions she received from grantees prior to the availability of the curriculum and implementation materials.

¹¹ In each of the three sites, grantees selected a replacement video that updated the material and, in some cases, better reflected the racial/ethnic composition of the population served. The developer provided the following guidance for selection of a substitute: brief, include peers, demonstrate correct condom use, and preferably use humor or otherwise be entertaining (correspondence from Lydia Shrier, September 22, 2011).

Exhibit 3.2: Summary of the Safer Sex Intervention and Its Three Replications

Program Model, Grantee	Study Location	Target Population	Participant Characteristics ¹²	Program Duration and Intensity	Program Setting	Program Delivered By
Original Evaluation Study						
<i>Safer Sex Intervention</i> ¹³	Urban pediatric hospital in Boston, MA	Female adolescents ages 14-17	Sexually active, presenting with cervicitis or pelvic inflammatory disease; 18% Hispanic, 50% Black, 14% White, 18% Other	Initial session of 30-50 minutes; 3 booster sessions – (10-30 minutes each) delivered at 1, 3, and 6 months post-initial session	Children's hospital adolescent clinic	Trained health educators
Grantees Replicating the Program						
Hennepin County Human Services and Public Health Department (Hennepin)	19 clinics urban and suburban in Hennepin County, MN	Female adolescents ages 13-19	Sexually active or contemplating sexual activity; 17% Hispanic, 36% Black, 26% White, 21% Other	Initial session of 30-50 minutes; 3 booster sessions (20-30 minutes each) delivered at 1, 3, and 6 months post-initial session	Clinics	Trained health educators
Knox County Health Department (Knox)	17 clinics rural and urban, across 5 counties in Knox County, TN		Sexually active or contemplating sexual activity; 9% Hispanic, 25% Black, 60% White, 6% Other			
Planned Parenthood of Greater Orlando (PPGO)	2 clinics in urban Orlando, FL		Sexually active or contemplating sexual activity; 28% Hispanic, 46% Black, 21% White, 5% Other			

¹² Data for participant characteristics in each of the replication sites comes from the baseline survey of program participants.

¹³ Shrier, L.A., Ancheta, R., Goodman E., Chiou, V.M., Lyden, M.R., & Emans, S. (2001). *Randomized controlled trial of a safer sex intervention for high-risk adolescent girls*. Archives of Pediatrics & Adolescent Medicine, 155(1), 73-79.

4. Community Context for the Replications of the Safer Sex Intervention

Awareness of the community context helps us to understand the challenges that organizations face as they attempt to put in place a strong intervention that adheres to the core elements of the program model. This section describes the demographic characteristics of the communities in which SSI was delivered, the extent to which teen pregnancy and sexual risk behaviors were seen as important issues by the community, and the readiness of partnerships or infrastructure to support implementation.

4.1 Community characteristics

The three replications of SSI were implemented in very different communities in terms of race/ethnicity and urbanicity.

As part of their TPP Initiative, **Hennepin** proposed to focus the program in eight communities with the highest teen birth rates, including Minneapolis. Hennepin County's clinics were located in a mix of urban and suburban locations and served youth from different racial and ethnic backgrounds and household income levels, and youth who were college-bound and not college-bound. There was no clear majority race or ethnicity among participants; just over one-third were African American, just over one-quarter were White, and nearly one-fifth were Hispanic.

Knox proposed to deliver the program in clinics in Knox County and several adjacent counties (including Jefferson, Hamblen and Cocke). With the exception of Knoxville, these areas are predominantly White and rural. Hamblen and Cocke counties have childhood poverty rates that are higher than the state and U.S. average, and have a higher percentage of adults who have not graduated high school. Limited transportation routes and geography present barriers to accessing health care. The Latino population has grown significantly in recent years, doubling in Hamblen and Knox Counties between 2000 and 2008. At the time of the grant, 19 percent of females ages 15 to 19 years old in Hamblen County were Latina; the majority were White.

PPGO's two clinics were located on the east side and the west side of Orlando. Within the clinics, there was a range of age and level of risk of the populations served, but generally they served more high school-aged students at the West clinic and more college-aged students at the East clinic. Among youth visiting the clinic, 90 percent were sexually active and coming to the clinic for reproductive health services. Although the clinics varied in accessibility, many clients lived in the neighborhoods and were able to walk to the clinic. Nearly half of the PPGO participants were African American with roughly one-quarter White and one-quarter Hispanic.

4.2 Community need

All three grantees targeted communities with teen birth rates above the national average, high rates of sexually transmitted infections (STIs), and racial/ethnic health disparities.

Hennepin provided services in communities with teen birth rates ranging from 43.3 to 85.6 per 1,000 females aged 15 to 19 years old, more than double the average U.S. rate in 2008. Moreover, teen birth rates for White females in Hennepin County were 9.2 per 1,000 while those for African American and Latina teen females were 94.6 and 108.7 per 1,000, respectively. Hennepin County also had higher rates for STIs than the average Minnesota rates.

COMMUNITY CONTEXT FOR THE REPLICATIONS OF THE SAFER SEX INTERVENTION

Knox selected four nearby counties with female teen birth rates ranging from 42.9 to 84.7 per 1,000. As in Hennepin County, teen birth rates varied by race/ethnicity with the rate for White teens in Knox County at 43.9 per 1,000 females compared with 107 per 1,000 females for African American teens. In Hamblen County, the teen birth rate for Hispanic females was 243.4 per 1,000. Knox County also had higher STI rates than the average U.S. rates. Racial/ethnic disparities with Black females accounted for over three-quarters of the Gonorrhea cases and over half of the Chlamydia cases.

PPGO targeted three ZIP codes with teen birth rates ranging from 60.1 to 78.5 per 1,000 females. Orange County's (Orlando) STI rates were not much higher than the national average in 2008, but the rates of Chlamydia infections among African American residents were nine times higher than among White residents.

Exhibit 4.1 Teen birth rates (TBR) and STI rates in the three replication sites

Replication Site	TBR of targeted area per 1,000 females (2008)	TBR by race/ethnicity (per 1,000) (County)	STI rates per 100,000 (County)
Hennepin County	43.3 – 85.6	White: 9.2 Black: 94.6 Hispanic: 108.7	Chlamydia: 2,171 Gonorrhea: 319
Knox County	42.9 – 84.7	White (Knox County): 43.9 Black (Knox County): 107 Hispanic (Hamblen County): 243.4	Chlamydia: 3,338 Gonorrhea: 1,126
PPGO	60.1 – 78.5	White: 35.1 Black: 62.7 Hispanic: 55.0	Chlamydia: 510 Gonorrhea: 182
United States	40.2	White: 37.3 Black: 60.1 Hispanic: 70.3	Chlamydia: 3,005 Gonorrhea: 124

<http://www.flhealthcharts.com/charts/DataViewer/BirthViewer/BirthViewer.aspx>;

<http://www.flhealthcharts.com/charts/OtherIndicators/NonVitalSTDDataViewer.aspx?cid=0145>

4.3 Community Support for Services

Readiness and preparation on the part of the community and the grantee may be critical to implementing the program as planned, and may affect the extent to which grantees are able to establish partners and find settings for the program.

The three replications experienced different levels of support for their services within the communities they served.

The program in Hennepin County experienced the most community support; the county had been operating teen pregnancy prevention programs, as well as other interventions designed to reduce teen risk behavior, for many years and had strong relationships with schools and community agencies. The director of sexual health education at one clinic noted that it was rare for the community to oppose such efforts.

"Teens see people living with HIV and managing it, so there is not so much alarm or concern about risky sex as there was a decade ago."

--PPGO staff

COMMUNITY CONTEXT FOR THE REPLICATIONS OF THE SAFER SEX INTERVENTION

In Orlando the school system had welcomed PPGO's education services within the schools for a number of years and the community was welcoming of *SSI*. However, PPGO staff noted the African American community's historical distrust of clinic services, and lack of community concern about the dual challenges of teen pregnancy and STIs. Staff further noted that there was reduced community concern about teen pregnancy since the number of pregnancies had decreased significantly early in the grant period. With respect to STIs, there was less community concern than there was ten years ago because of medical advances in HIV treatment.

The communities served by Knox typically did not support sexual health education in schools. Although *SSI* is not delivered in schools, there was some concern with the program's messages and mission within the communities served.

Each of the grantees capitalized on existing partnerships and coalitions within the community to implement *SSI* through a TPP grant.

Several Hennepin County departments had offered teen pregnancy prevention programming over the 30 years preceding the TPP grant, but they were funded through discretionary budgets and thus tended to be short-lived. In 2007, the Hennepin County Board of Commissioners passed a resolution creating what became the Better Together Hennepin: Healthy Communities, Healthy Youth Initiative. Better Together Hennepin implemented teen pregnancy prevention pilot projects in two cities in the county where teen birth rates were among the highest. The initiative launched 12 unique program models in 14 locations in the two target communities, partnering with public schools and CBOs. This experience laid the groundwork for Hennepin County's application for the TPP grant in 2010.

Similarly, Knox County had been facilitating community-wide efforts for teen pregnancy prevention through the Knox Adolescent Pregnancy Prevention Initiative (KAPPI) for many years prior to the 2010 grant funding. KAPPI, a coalition of schools, parents, health care providers, and other youth-serving agencies, is part of a statewide program of the Tennessee Department of Health to address the problem of teen pregnancy and parenting among youth 10 to 17 years old. The state plan focuses on three primary efforts: 1) Promoting total community involvement in the problem of adolescent pregnancy; 2) Reducing adolescent pregnancy in Tennessee; and 3) Improving coordination and the services available for pregnant adolescents and adolescent parents. Knox County Health Department, as facilitator of the coalition, is seen as a leader in the community for this issue.

Planned Parenthood of Greater Orlando has a long history of providing sex education in school and community settings (group homes, residential treatment centers, juvenile justice centers). The established relationship with Orange County Public Schools has enabled them to deliver workshops and provide education in school settings. They are often seen as a leader and asked to fill specific gaps or needs in the community related to teen pregnancy or STI testing and prevention. For this grant, they proposed to partner with the Orange County Health Department to deliver evidence-based programs in school and clinic settings.

5. Putting the Program into Place

Shrier et al. (2001) initially tested the intervention with hospitalized patients being treated for a sexually-transmitted infection in a clinic located in a major city hospital. For the three replications of *SSI*, each of the grantees implemented the program in clinic settings, but unlike the original implementation, they chose a variety of clinic settings. The populations served also differed from the original implementation; grantees proposed to serve sexually active, or about to become sexually active, young women, rather than sexually active young women being treated for an STI. This section explores variation in clinics (e.g., the heterogeneity of the populations served, sponsorship, urbanicity, size, and the extent to which their focus was specifically on reproductive health) and the implications for hiring and training staff, recruiting participants, and supporting program delivery.

5.1 Working in Clinic Settings

Each of the replication sites implemented *SSI* in clinics. In each of the clinics, the intervention was seen as a separate educational offering from the standard of care. Health educators were given office space or spare exam rooms within the clinic, and in many cases clinicians identified and referred eligible young women to the program. There was variation across the replications in terms of the scope of the implementation and the configuration and types of clinics. PPGO differed from the other two replications in that the intervention was confined to two reproductive health clinics serving different areas of greater Orlando and operated directly by Planned Parenthood. By contrast, Hennepin County and Knox County delivered the intervention in a wide variety of urban and suburban settings, namely: health department clinics, school-based clinics; community health centers; teen health clinics; a hospital-based pediatric clinic; a public health clinic focusing on STI diagnosis and treatment; and a clinic serving the needs of homeless youth. Knox County's replication also included rural counties.

Grantees implemented *SSI* in a wide variety of clinic settings.

Hennepin County (Hennepin), the largest replication site, offered *SSI* in 19 different clinics during the study enrollment period. The county contracted with provider agencies to deliver *SSI* to young women in areas with the highest teen birth rates in the County. The clinics included seven school-based clinics, five community-based clinics, four teen clinics, one hospital-based pediatric clinic, one STI/public health clinic, and one clinic for homeless and runaway youth. Clinics were located throughout the county in eight cities encompassing the Minneapolis metropolitan area. The clinics varied in urbanicity and the populations served.

Knox County Health Department (Knox) offered *SSI* in 17 clinics across four counties in eastern Tennessee. The Health Department partnered with two large health agencies (Cherokee Health Systems and Rural Medical Services) to deliver *SSI*. Cherokee Health Systems, which oversaw four clinics implementing *SSI*, is a Federally Qualified Community Health Center providing services to rural, poor, and underinsured populations throughout Tennessee, including Knoxville and outlying areas. Rural Medical Services is a Community and Migrant Health Center with five freestanding clinics and a mobile clinic in rural eastern Tennessee counties.

Planned Parenthood of Greater Orlando (PPGO) was the smallest replication, offering *SSI* in two clinics located on the west side and the east side of Orlando, respectively. The clinics varied slightly in accessibility and by the age and risk level of the populations that each served.

Aspects of the setting, such as clinic environment, privacy and accessibility, affected both the appeal of SSI to youth and the ease of service delivery for staff. These factors affected recruitment and retention of participants, as well as the efficiency of service delivery.

Youth friendly environment. In all these settings, the area within the clinic where the program took place needed to be youth-friendly. Because space in clinics is often very limited, health educators frequently had to share space with other clinic staff. In all three replications, health educators were able to modify at least some spaces by painting walls in cheerful colors, replacing exam tables with low round tables and comfortable chairs, and hanging posters with information about STIs and birth control. Teen clinics had a built-in advantage, since they were already dedicated to attracting and catering to the program's target population. Hennepin County, where program participants had the widest range of ethnic and racial backgrounds, and the widest variety of settings, hired consultants to help increase the youth friendliness of the clinics. In addition, they assembled a task force of adolescent health care specialists to create a tool that clinics could use to assess their own youth friendliness and identify areas where improvement was needed. Clinics used the measure, adapted from one developed by the New York City Health department,¹⁴ during the program's pilot year.

Privacy. Protecting the privacy of potential participants was a challenge for some clinics, especially those located in very small towns where staff might know young women and their family members. Health educators in school-based clinics had similar concerns about how young women visiting the clinic would be perceived if the clinics were seen as focusing on sexual health. To address these issues, clinic staff were diligent about advertising the whole range of services offered, from flu shots to sports physicals. In the schools, health educators also tried to ensure that program appointments did not coincide with hall passing times.

Accessibility of clinic settings. School-based clinics had advantages in both recruiting and retaining participants: the target population was at hand and easily reachable; clinic staff schedules matched school schedules; and participants had easy access to program services. In other settings, ease of access to clinic services posed a challenge. Transportation to and from the clinic was sometimes a problem, notably in rural areas of Knox County, where participants often had to rely on a parent or caregiver to drive them to clinic appointments. Even in more urban areas of Knox county, public transportation was limited. For PPGO, even though both of the clinics were relatively close to their target populations, concerns about the lack of public transportation and the expense of taxis led them to include taxi vouchers or transportation stipends in their budget. Hennepin County alone could rely on good public transportation

In some clinics, operating hours imposed constraints on the program. Some clinics had very limited hours of operation, others had limited schedules for school-aged youth. Some Knox county clinics addressed this issue by having extended hours several evenings and on Saturdays.

¹⁴ See Labor, N., Kaplan, D., and Graff, K. Healthy Teens Initiative: Seven Steps to Comprehensive Sexual and Reproductive Health Care for Adolescents in New York City New York: New York City Department of Health and Mental Hygiene, 2006. Resource accessed online at: <https://www1.nyc.gov/assets/doh/downloads/pdf/ms/ms-hti-guide.pdf> on July 29, 2016

5.2 Recruiting, Training and Supporting Staff

Staff who deliver the program are one of the “drivers” of implementation. While their background and skills are especially important for addressing sensitive topics with vulnerable young people, their success also depends on the extent to which they receive training, monitoring, feedback, and support.

5.2.1 Hiring program staff

While each of the grantees had similar criteria for the health educator positions, they differed in the processes used to find, screen, and interview staff, reflecting differences in program size and structure. The two larger grantees relied on their subcontractor agencies to recruit and hire health educators who, to the greatest extent possible, met the written criteria provided by the grantee program manager or coordinator. The subcontractor agencies posted the job and interviewed internal and external candidates. PPGO, by contrast, established quickly that no current employees would be suitable for the position and focused on external candidates. Ultimately, both of the larger grantees ended up with a mix of existing and new employees.

Initial qualifications for a health educator included: prior experience working with youth in a health or social services environment, comfort with sexual health topics and teen sexuality, and a bachelor’s degree or higher in a related field. Over time, supervisory staff recognized the primacy of personal qualities such as interpersonal skills and emotional intelligence.

At the outset, the qualifications and skills that program managers were looking for were remarkably similar across the three grantees. All three specified prior experience working with youth and a non-judgmental attitude toward youth sexuality. They did not necessarily expect to find staff with prior motivational interviewing (MI) experience, and were prepared to provide training. Individuals with clinical backgrounds, such as nursing staff, were initially viewed as having a built-in advantage, given their understanding of sexual health issues. However, program managers found that MI can be challenging for clinical staff (including doctors), because typically they are more prescriptive in their interactions with patients and less used to the active listening and client-centered approach required by MI. Overall, program managers agreed that the use of non-clinical staff was a better fit for this reason.

Ultimately, all three program managers prioritized three personal qualities that were essential for health educators. Most frequently cited was **open-mindedness**. It is important for health educators not to be judgmental about young people’s sexual activities and experiences and to be able to listen without judging when *SSI* participants articulate their beliefs about family planning and contraceptive methods.

Flexibility and persistence are important qualities for health educators working with teens. Retaining participants in the program after the initial session was a constant challenge. Successful health educators were both accommodating and tenacious as they strove to keep young women engaged in the program for six months. **Emotional intelligence** is an essential component of the interpersonal skills needed by a health educator, allowing her to establish and maintain rapport and trust with teens, and be a good and empathetic listener.

“You are not hiring educators; you need people who have strong counseling skills.”

Program manager

5.2.2 Training health educators

Prior to implementation, program managers and other supervisory staff traveled to Boston for a three-day intensive training by the program developer. The developer designed the training as a “train-the-trainer” so they would be prepared to train health educators as needed throughout the grant period.

The initial training for health educators was an extensive process; it was several weeks before health educators were ready to deliver the program.

SSI supervisory staff stressed the need to allow sufficient time to prepare health educators for their role. Health educators needed to practice listening and eliciting information rather than delivering it, as well as to develop the ability to cover all the required topics within the time constraints of the initial session. In addition to the complexity of the SSI curriculum and the need to develop MI skills, there were many other aspects of direct service to adolescents in which most health educators needed training. These included current contraceptive information, mandated reporting, and healthy relationships.

Although role-playing is an important part of the training for SSI, grantees struggled with the challenge of making the role-plays sufficiently realistic that staff could really learn from the experience. One solution devised by an SSI program manager was to hire youth actors for training purposes. An observation tool was developed for these mock sessions with the youth actors. The first observations immediately revealed gaps in the training; sessions did not flow well, and some health educators provided incorrect information. After adjustments to the training sessions, a second set of observations showed that most but not all health educators had improved their performance. For those whose skills still lagged, program managers connected them with external training resources.

Examples of in-service trainings across the grantees:

- mandated reporting
- LGBTQ inclusion
- HIPAA regulations
- Electronic Health Records
- Intimate partner violence
- sex-trafficking
- new trends in STI risk
- clinic-specific topics.

During the course of the grant, each grantee provided in-service training for staff that built upon and reinforced the initial training and filled gaps that supervisors had identified.

All three grantees provided regular in-service training sessions after the initial training, but the content and format of these sessions varied to meet specific grantee needs. For example, in monthly community of practice meetings facilitated by Hennepin County, supervisory staff usually took a section of the curriculum and had the health educators role-play or talk it through and then discuss the section. Health educators were able to ask questions and engage in peer learning. To complement this training, the program manager set up optional MI practice sessions.

"In a perfect world, it would have been beneficial to have ongoing MI practice sessions ... Every month if you could practice, that would be helpful."

Health educator

To address gaps identified in the initial training, the other two grantees encouraged their health educators to take advantage of relevant training opportunities in their communities or settings (e.g., MI conferences, conferences on sexual health topics organized by community partners). Attendance was generally voluntary.

Throughout the grant period, OAH invested heavily in training, using annual conferences, regional training sessions, webinars and other strategies to cover topics of importance to all grantees.

Toward the end of the pilot year, OAH held a grantee conference that included workshops on a wide variety of topics (awareness of cultural, racial and ethnic issues, understanding how populations shift, understanding of LGBTQ concerns and issues, and more information about fidelity and adaptations). These grantee conferences continued annually throughout the grant period. Grantees appreciated the

opportunity to learn about different interventions, contexts, challenges, and strategies for overcoming barriers to implementation.

OAH supplemented these annual conferences with regional training sessions and webinars throughout the grant period. Topics covered included: classroom management; LGBTQ and diversity issues; time management; engaging youth; and working with youth with special needs. Because not all health educators could attend every conference or regional training session, project coordinators for all three grantees used a teach-back strategy in which staff who attended an event provided training on the topic to other staff when they returned.

5.2.3 Monitoring and supervising staff

As noted earlier, OAH required that fidelity checklists be completed by health educators for every session, and that summary data be reported to the agency every six months. The data collection requirements imposed by OAH were originally perceived as somewhat onerous, but supervisors and, perhaps more importantly, the health educators themselves recognized their utility for identifying training needs and for self-monitoring.

Grantees collected and reported performance measure data required by OAH and used them to support continuous quality improvement where possible.

In all three replications, staff used fidelity checklists created by *SSI*'s developer to document their adherence to the *SSI* protocol. All three relied on an electronic Participant Tracking System (PTS) to monitor enrollment/intake, fidelity, and session attendance. These data were entered separately for each health educator and clinic, enabling Program Managers to look across their entire project to track enrollment, fidelity, and attendance and identify opportunities for improvement.

Program managers developed strategies for assessing and correcting where necessary actual delivery of the program. To protect client privacy, these grantees were exempted from the OAH requirement that 10 percent of every health educator's sessions be independently observed and assessed. Nevertheless, supervisors wanted independent information on how the intervention was being delivered and health educators wanted feedback on their performance. The solutions designed to address the issue varied across replications: Hennepin County supervisors observed health educators conducting mock sessions with young actors hired for the purpose; the PPGO program manager had health educators record for each segment of a session who was talking and for how long, arguing that, if MI were being correctly implemented, the client rather than the health educator should be doing most of the talking. Knox County periodically observed mock sessions conducted with the health educator and clinic staff who were not part of the program delivery. Feedback on their performance was provided by program managers in individual meetings with health educators.

Feedback on recruitment success, attendance, and the extent to which all program elements were being delivered (summarized from the fidelity log data) was provided at regular staff meetings either by the program manager (PPGO and Hennepin County) or by the local evaluator (Knox County) or a combination of the two. These meetings were held weekly at first, in Orlando and Knox County; as health educators became more confident, the interval was lengthened to a month. In Hennepin County, staff meetings were held monthly with the *SSI* Program Manager. These meetings provided an opportunity for health educators to raise questions about *SSI* and its implementation, and to brainstorm solutions, as well as receive feedback.

5.3 Reaching the Target Population

Efforts to attract participants often began with obtaining support from school districts, community-based organizations, and clinics whose staff could provide referrals or access to potential participants. The work of cultivating partners and sustaining relationships with them was ongoing throughout the project. Once partners were on board, grantees developed processes for identifying and recruiting program participants.

Each of the grantees employed a range of recruitment strategies that focused on the target population and clinic staff.

Grantees leveraged marketing campaigns to raise awareness of clinics and to create ways to talk about sexual health that were accessible to youth and the community as a whole. These campaign methods included bus wraps, billboards, radio, internet radio, and the Internet. Project staff worked with clinics and clinic staff to involve them in the identification and recruitment process and integrate it into clinic flow.

Clinic staff needed to be convinced of the program’s value, but were valuable referral sources.

Integrating *SSI* into the standard set of clinic services was initially challenging. It took time to engage clinic staff and convey the value of an educational intervention on top of the existing clinical services. While clinic administration was supportive of *SSI*, clinic staff needed to be convinced that *SSI* was necessary and to recognize their role in identifying and referring young women to the program.

*“It has been a process to get the support of nurses and clinic staff. It took time for staff to appreciate that *SSI* was a different way to educate and a way of support that nurses don’t always have time to supply.”*
Teen clinic staff member

To address this challenge, one health educator sent a monthly update to the nurses at her clinic about who she had served, thanking them for referring potential participants. The nurses came to view her as part of the team. Nevertheless, individual clinicians across clinics differed in their enthusiasm for *SSI* itself, as they were divided in their attitude towards youth and sexual health. Some enjoyed working with youth and others were more interested in the etiology of disease and treating STIs. The health educators were continually working to maintain clinicians’ cooperation.

Knox County had mixed success in obtaining buy-in at clinics. They held quarterly meetings with clinic partners, at which health educators provided updates on the number of referrals made and follow-ups conducted. High-volume clinics did not always have space for health educators on a given day, which prevented them from screening youth or holding sessions. By contrast, a clinic that had a more integrated approach to begin with, such as integrating delivery of reproductive and behavioral health services, was more open to including *SSI* and yielded more effective recruitment efforts.

One health educator would approach young women in the clinic waiting room and make small talk to understand them better so that she could tailor her recruitment. She maintained a good relationship with clinic staff, encouraging them to refer eligible young women. Staff at this clinic were already in the habit of making behavioral health referrals, so introducing *SSI* did not require a culture change.

Face-to-face recruitment was labor-intensive but effective.

Knox County devoted most of its recruitment effort to individualized recruitment: direct contact in three urban clinics offering the program; outreach at large public health events (either through the clinic or in the community); and directly approaching young women in clinics in surrounding

rural towns, at the local university student health center, and at centers for young women. This recruiting strategy was effective but required a great deal of effort.

For rural clinics in Knox County, the health educator would drive great distances to distribute brochures, talk with clinicians about referrals, and talk with eligible young women at the clinics about participating. This approach was time-consuming both because of the amount of preparation needed (reviewing the list of eligible women with clinic appointments) and the amount of driving required.

Combining face-to-face recruitment, social media, and a media campaign allowed grantees to reach a broader and potentially more at-risk population.

Like Knox, Hennepin County health educators played a key role in recruitment through face-to-face contact in the clinics. Hennepin County also used posters promoting awareness of the clinics throughout Minneapolis, and brochures and posters about *SSI* inside the clinics, to interest them in participating. In the school-based clinics, young women would most commonly come to the clinic for one of two reasons: sports physicals and Depo Provera shots (quarterly), providing a predictable source of potential participants. Information about the program was spread by word of mouth, both by teens and by teachers. Health educators also set up a table in the lunch room to promote awareness of the clinic.

For non-school-based clinics, staff still engaged in general clinic outreach, and used flu clinics or other medical appointments as opportunities for eligibility screening. In clinics with *SSI* program champions, clinicians were proactive about recruiting patients to participate in *SSI*. In other clinics, it was difficult to change or interrupt the flow to conduct the necessary screening. Several clinics developed a brief form that girls could fill out while waiting for their appointment; the form was the basis for the nurse to use in deciding whether or not to further screen the patient for *SSI* participation and refer her to the health educator.

In addition, Hennepin County's media campaign had at its center a website (<http://myselfmyhealth.org/>), which they advertised through bus wraps and Pandora internet radio spots. The campaign was not specifically for the *SSI* intervention, but was intended to raise awareness and increase access to youth-friendly clinics for youth across a wide geographic area. The website included information about specific clinics and what clinic appointments would be like.

PPGO's main recruitment strategy was a multi-faceted media campaign. Multiple strategies included: radio spots, a TV ad, and geo-targeting. The radio spot was broadcast on a local hip-hop station that provided PPGO with free spots between midnight and 3:00 a.m. PPGO also engaged in outreach activities like those in Hennepin and Knox. For example, the program manager attended a large Hispanic-centered festival with over 150,000 attendees, where she was able to meet with prospective participants face-to-face and make appointments on the spot for the next day. Additionally, PPGO had a staff person dedicated to recruitment and enrollment who recruited directly at the clinics and at the nearby university campus, in partnership with a campus student group.

Following the success of the radio spot, PPGO created a promotional spot for television to air in geographic areas where they thought they could reach the target audience. Although the media campaign was highly successful in generating interest in *SSI*, the in-clinic recruitment resulted in a greater proportion of completed enrollments because enrollment could be done on the spot.

5.4 Workload and Workflow

Initially, most health educators struggled with managing downtime in the clinic settings as well as responding to the needs of clinic managers.

As in any new program, the staff implementing the intervention faced initial and ongoing challenges in time management. In the early stages, recruitment moved slowly and staff were faced with how to use downtime. Once recruitment was proceeding as planned, they were often fully occupied, either in a session or calling people to remind them about appointments, or recruiting new participants.

In other instances, health educators continued to have some downtime, even when the program was operating as planned. In all three replications, health educators were encouraged to help clinic staff in appropriate ways, such as delivering information about birth control to clients or helping at the front desk.

"Clinics are demanding places, so they want to pull the educator into other stuff – but the health educators have to be available to stop what they're doing to see young women when they come in. It would be great to expand their roles.... if they were pulled in to do birth control education that would make a lot of sense. I have told them that they can help at the front desk if they can step away [to do SSI] – it helps them meet patients and build rapport with the front desk staff."

program manager

After the start-up period, the caseload for a full-time health educator was very similar across the three replications. At any given time, full-time caseloads ranged from 48 to 60 participants in urban areas, and about half of that in rural areas of Knox County.

Hennepin County provided clinics with target enrollment numbers and expectations of number of participants; health educators working full-time were expected to recruit 12 young women per month; those working part-time were expected to recruit half that number. After the first few months, health educators settled into a routine in which their work included recruiting new participants and providing the initial intervention to them, conducting one-month, three-month and six-month booster sessions with those recruited earlier, as well as making reminder calls about upcoming booster sessions. In this steady state, the monthly caseload was about 48 clients in various stages of the intervention. Overall, Hennepin health educators felt that the caseloads were lower than they expected and would have liked to be able to balance work on SSI with perhaps a half-time position in the clinic to provide health care or health care information.

PPGO's health educators reported a caseload of 50 to 60 participants each but felt that 60 was too many. Nevertheless, they felt that they had the right number of staff. In order to maintain continuity, the three health educators would rotate intake sessions but ensure that the health educator who conducted the initial session with a participant continued with her through the final booster.

Knox County also set enrollment targets or expectations for their clinic partners. The caseload range for Knox County educators was wider; those in rural areas managed caseloads of approximately 30 participants while, for those in more urban areas, average caseloads were closer to the PPGO averages of 50 to 60 participants.

The need to travel between clinics created inefficiency, especially in rural areas where travel times were longer and the visit might involve a single participant, who might or might not show up.

Each site faced its own challenges in balancing workload: in PPGO, with only two clinics, the challenge for health educators was to meet the target numbers while maintaining high quality service delivery. For some Knox County health educators, travel to and between rural clinics, combined with constrained hours of operation, created logistical obstacles. Hennepin County's range of settings created some initial challenges but tight project oversight provided some guidance to create workable schedules.

In Hennepin County, it was not uncommon for health educators to split their time between two clinics; travel time between clinics was not reported as a problem. However, there was some feedback that traveling to more than two clinics created some stress. Knox County health educators serving rural areas spent a good deal of time traveling among clinics, often finding when they arrived that a participant had failed to show up for her appointment. Across all three replications, health educators spent a lot of time texting participants to remind them to show up for their booster sessions.

6. Implementation of the *Safer Sex Intervention* in the Three Replication Sites

In this chapter we address the following questions: how was *SSI* implemented in the three replication sites? Was the program implemented as planned and, if not, what were the reasons for change or modification? What challenges did staff encounter and how did they respond? To answer these questions, we describe: the program model as it was implemented in each site; the extent to which program staff were able to implement the core elements of the program; and the extent to which they were able to retain and engage participants.

6.1 Implementing the Program Model as Planned

For each of the TPP grantees, the first year of the grant was a pilot year. One purpose of the pilot year was to allow grantees to assess how realistic their original replication plans were, and to allow for more detailed implementation planning. For this reason, our assessment of their ability to implement the program as planned was anchored in the decisions made at the end of the pilot year.

Key components and activities in the *SSI* included: using a brief video to introduce *SSI* and the Wheel of Change (Exhibit 3.1), having the participant use the Wheel of Change to conduct a self-assessment, discussing the Wheel of Change, and using MI techniques to engage in discussion of the topics to be covered (see description in Chapter 3 and Exhibit 3.2). Discussions included conducting a condom demonstration and distributing brochures, and possibly engaging in a role play (for participants who were not in the Pre-Contemplation stage) and viewing a video. The three booster sessions were also key components; their content depended on the participant's stage of change and content covered in the initial session.

6.1.1 Introducing *SSI*

The introductory video is intended to provide a quick overview of the intervention, to help portray condom use as normative,¹⁵ and to set the stage for participants to engage in discussion during the intervention.

The video, developed in the late 1980s as part of the original test of the intervention, was viewed as outdated by many of the health educators and need to be replaced.

Although one health educator noted that the younger participants liked the video, other health educators found that participants would “check out” during the first seven minutes of the session watching the video, and therefore found it less useful. Each of the grantees chose to replace the video, working with the developer to ensure the replacements were of the appropriate length and content.

6.1.2 Using the Wheel of Change

The Wheel of Change is the cornerstone of the intervention in that it directly engages the participant in self-assessing her stage of readiness to change and reflecting upon her self-assessment with the health educator. Through this conversation, the participant and health educator arrive at a stage determination that then guides the rest of the sessions.

¹⁵ Shrier et al., 2001, p. 75.

All of the health educators reported using the Wheel of Change, although some reported difficulties in using it.

Several health educators wanted the Wheel of Change to be more fine-grained (i.e., have more than five stages), as it was not always clear in which stage participants fell. Other health educators found it valuable, even if they used it in slightly different ways. For example, one health educator would read each stage of the Wheel out loud to the young woman and then ask her whether she had been in each stage in the last six months. She said that 70 to 80 percent of her participants would change their answer after she had explained it to them in this way. The participant and health educator were still able to determine the stage of change together through this alternative discussion format.

There was some confusion among participants in placing themselves in a particular stage – for example, young women with only one partner thinking they are not at risk for STIs – but that is expected confusion: uncovering doubts, uncertainties, and lack of clarity is one of the objectives of the intervention. Health educators adhered to the protocol of working out the stage of change in collaboration with the participant, eliciting and discussing rather than simply telling her which stage they thought she was in.

6.1.3 Using Motivational Interviewing (MI)

The MI method, described in an earlier section, builds upon what participants know, want to know, or are confused about by emphasizing listening to the participant and responding accordingly. It is built on three key concepts: **collaboration** between counselor and client; **drawing out** the client’s own ideas, rather than imposing the counselor’s ideas; and the **autonomy** of the client rather than the authority of the counselor. For medical professionals (e.g. nurses), the approach requires changing behaviors and communication strategies that they may have used for many years.

At all three replication sites, health educators reported finding MI to be beneficial, especially for engaging the young women in SSI.

The initial session tended to be driven more by the health educators, trying to ensure that they covered all of the topics in the intervention protocol. For the booster sessions, health educators used MI to elicit the participants’ concerns and focus on issues that were of direct relevance to each participant’s needs at that time. Health educators reported that the more experienced they became in implementing SSI, the more they were able to use MI techniques in the initial session without worrying that they were leaving out topics. One health educator noted that by the time she had been using the curriculum for two years, she was no longer referring to the manual. Nevertheless, for the initial session, health educators reported that young women appreciated the structure and that they used MI at the end of the session to frame and encourage discussion about the participant’s goals.

“It takes time to develop rapport. When they’re ready to tell you, it takes asking the right questions and letting them talk. You have to really listen and not push too hard, determine if it’s time to use MI – are they ready for change?”

Health educator

With MI, health educators build on what the young women bring to the conversation and collaboratively generate a plan for safer sexual activity. In this way, events such as an STI diagnosis can become an opportunity to apply MI techniques during a session.

6.1.4 Hands-on experiences and factual information: Condom demonstration and brochures

SSI includes two possible hands-on experiences with anatomical models and printed factual information about transmission of STIs and the effectiveness of various techniques, including secondary abstinence, in preventing transmission. The first hands-on practice opportunity is the male condom demonstration, in which the health educator demonstrates correct use of a male condom on a penis model, and the participant has the opportunity to practice doing it herself. The second is a demonstration of the use of the female condom, with opportunity for practice on an anatomical model. After demonstrations and practice, the health educator elicits from the participant the pros and cons of condom use, has her write them down, and then discusses what she has written. Finally, the health educator gives the participant brochures that provide information about safer sex, use of condoms and spermicide, and a gift of a condom key chain or a condom packaged in an appealing way, and discusses these topics, answering questions that the participant has in the process. Several health educators commented that the hands-on materials, specifically the condom demonstrations, were engaging. However, fidelity logs indicate that not everyone did the demonstration.

Brochures provided good reinforcement, but participant responses to brochures were mixed:

"Most of the young women weren't interested in the brochure about communicating with your partner...it's hard for the kids to talk about building trust,... but they liked the 101 Ways to Say No brochure, even though they felt it was 'corny'."

health educators

6.1.5 Refusal and condom negotiation skills: Role plays

Participants in the Pre-contemplation or Determination stage were encouraged to role play condom use negotiation with the health educator as a way of helping practice negotiation and refusal skills. In one replication site, however, these role plays were often omitted because (according to notes in fidelity logs) some health educators felt that the participants were uncomfortable about doing them, or even refused outright to do them. One strategy to make them more accessible was to tailor the dialogue for the role plays using the participant's earlier contributions.

6.1.6 Follow-up: Booster sessions

After the initial session, participants were expected to return for booster sessions at one month, three months, and six months after the initial session. Incentives were provided at each follow-up consistent with the original study). Booster sessions were intended to last 10 to 20 minutes and, during the session, the health educator was supposed to revisit the Wheel of Change and ask the participant to identify her current stage, discuss sexual activity since they last met, and review the relevant content of the curriculum.

The booster sessions provided both an opportunity for the health educator to continue building the relationship of trust with the participant that they had begun to establish in the initial session, and an opportunity for the participant to ask questions that had arisen since the previous conversation.

To encourage participation, health educators were able to conduct the booster sessions remotely via Skype or another video chat application (such as Tango or Google Hangout) rather than in-person face-to-

face meetings. This option was most frequently used by PPGO, where transportation posed a significant challenge.¹⁶ When feasible, this option provided additional flexibility, and was well received.

6.1.7 Frequency and duration of sessions

The developer believed that about 30 minutes would be required to cover all of the content in an *SSI* initial session, but in practice, some initial sessions seemed to take more time and the boosters could vary considerably, depending on how many questions or topics the participant wanted or needed to discuss. Because the boosters' structure was more open-ended (the content was driven by the participants' needs), they typically lasted about 20 to 30 minutes.

The intervals for booster sessions were predetermined by the developer to correspond with clinic protocols at the time. In practice, health educators had mixed experiences with the timing. The first booster conducted roughly one month after the initial session tended to be a good check-in point. The three and six month boosters, however, were more variable. The longer intervals meant that if the three month session was missed, the opportunity for addressing issues and supporting change occurred much later.

6.2 Fidelity of Program Implementation

The *SSI* logic model (see Appendix D) specifies a set of **inputs**: trained female health educators conduct up to four one-on-one face-to-face sessions, using motivational interview techniques, and ensure that participants receive accurate information about sexual risk avoidance and have access to safe, reliable contraceptives. In an individualized **process**, during initial and booster sessions, health educators establish a trusted relationship in which frank, open, and productive conversations about safer sex can take place. In these sessions, health educators facilitate a self-assessment of motivational status, provide medically-accurate information, demonstrate condom use, teach negotiation and refusal skills and provide support for behavioral change. To assess the extent to which the process of delivering the intervention was faithful to the specifications of the program model, OAH required grantees to complete Fidelity Checklists (part of a Toolkit provided by the developer) and report aggregated data on a regular schedule.

A detailed fidelity checklist served multiple purposes: it captured health educator's adherence to the content and processes specified by program model but also supported their work in the early stages of program implementation.

The fidelity checklist that is part of the *SSI* toolkit lists the topics and activities for the two types of initial sessions (pre-contemplation or contemplation).¹⁷ The checklist also includes a place for facilitators to indicate challenges that arose in the session, modifications or changes made, and recommendations for the future. Health educators entered these checklists into the participant tracking system after each session and used the notes area to record detailed notes to help them prepare for the follow-up sessions. The local evaluator at one site reported that she used the notes to help her understand why activities were missing (e.g., the role play) or unusual events. Health educators relied heavily on the checklist in early implementation of *SSI*; however, by the time of our visits, health educators at all three replication sites

¹⁶ Knox faced a similar transportation challenge but the remote option for booster sessions was not viable because of application compatibility problems with Health Department issued phones.

¹⁷ For young women who were in a stage other than pre-contemplation, they were considered to be in the contemplation stage for facilitating program delivery for the initial session as well as booster sessions.

IMPLEMENTATION OF THE SAFER SEX INTERVENTION IN THE THREE REPLICATION SITES

felt that they knew the curriculum so well that they didn't even refer to the checklist until after the session. If, at the point of completing the checklist, they noticed they'd missed something, they would plan to include it at the next session.

All three grantees implemented SS/ with a high degree of retention and fidelity to the program model.

Grantees were required to collect and report participant attendance (by session). Attendance rates differed slightly by replication site, but were generally high. Roughly 60 percent of participants in Knox County and Hennepin County attended 75 percent or more of the sessions. The mean number of sessions attended for Hennepin was 2.99 (out of 4) and for Knox it was 2.72. The numbers were slightly higher in PPGO, where 67 percent attended 75 percent or more of the sessions, and the mean number of sessions was 3.0 (out of 4). All participants across the replication sites received the initial session, and attendance for booster sessions remained high but varied slightly (Exhibit 6.1).

Exhibit 6.1: Attendance by session

Grantee/site	Initial Session	1 month booster	3 month booster	6 month booster	Mean # of sessions per participant	Median # of sessions per participant
Hennepin	100%	73%	65%	62%	2.99	3
Knox	100%	63%	55%	53%	2.72	3
PPGO	100%	67%	65%	68%	3.00	3

Source: Participant Tracking System.

As Exhibit 6.2 shows, health educators in all three replications were diligent in touching on all of the topics spelled out in the curriculum and reported using MI techniques. All health educators in all sessions used the Wheel of Change to begin the conversation and direct the session. The role play was not always appropriate for all participants. It was intended to be conducted in non-Pre-contemplation sessions, but in some cases health educators indicated in notes that the participant was not comfortable engaging in the role play. In those cases, health educators substituted another activity (such as discussing the topic). Participants in Knox County were particularly resistant to engaging in the role plays, for reasons that are not well-understood, but may reflect cultural differences between urban and rural participants. Participants and health educators also found doing the role play awkward in booster sessions conducted via Skype or another application and would instead discuss the topic.

Exhibit 6.2: Fidelity Checklist Mean Values

Grantee/site	% of activities completed in Initial session	Wheel of Change used*	Role Play used (when appropriate)**
Hennepin	>99%	100%	82%
Knox	>99%	100%	26%
PPGO	>99%	100%	93%

*Note: In both the initial sessions and the booster sessions, data across all three grantees show that health educators used the Wheel of Change in 100% of the sessions.

**Note: The role play was appropriate for Contemplation stage sessions, optional for the booster sessions.

IMPLEMENTATION OF THE SAFER SEX INTERVENTION IN THE THREE REPLICATION SITES

According to fidelity checklist data, facilitators used motivational interviewing (>99%), including using open-ended questions (>99%) and focusing discussions on participants' concerns/issues (>99%) in booster sessions, resulting in sessions that were responsive rather than being uniform check-ins. In one of the sites, for example, over 70% of booster sessions included discussion of preventing the consequences of unprotected sex (i.e., pregnancy and risk of contracting/transmitting STIs), over 80% included discussions about obtaining condoms (i.e., places where condoms could be obtained), and about half of sessions included discussion about condoms (i.e., pros and cons, how to use them, demonstration), but the distribution of topics varied depending upon the participant's status in the change process. This suggests that health educators were implementing the intervention as intended, tailoring the conversations to the young women's needs and concerns.

Keeping participants engaged over time took both persistence and incentives

Health educators used a variety of methods to encourage participants to complete four sessions over six months. To get teens to return for their booster sessions, health educators needed to be tenacious but not aggressive. While texting was essential, health educators regularly checked the clinic schedule to know when participants were coming in for appointments. Some health educators relied on social media as well as relationships with other adults (such as guidance counselors at schools) to stay connected with youth. Program incentives (both monetary and non-monetary) served as both a recruitment and retention tool. Incentives got youth in the door and helped with the initial recruitment. Two of the three replication sites offered transportation subsidies such as bus passes and a van service. Non-monetary incentives (e.g., sunglasses, nail polish and lip balm) also helped with making the experience fun and memorable.

6.3 Quality of Program Delivery

The nature of the *SSI* intervention (private one-on-one communication) made it impossible for supervisors to observe directly the interactions between health educators and program participants. Thus, they were unable to use fidelity measures to obtain an objective measure of adherence to the program model. For the same reason, they could not observe these interactions to develop a sense of the quality of the interactions.

Supervisory staff developed effective strategies to assess the extent to which health educators were able to use motivational interviewing techniques in sessions with participants.

In the absence of any existing tools (or indeed the requirement to conduct observations of individual sessions), program supervisory staff developed strategies to assess how well health educators were employing MI. A program manager in one replication site created a detailed 30-item observation checklist that focused on the key activities as well as the way they were conducted (e.g., "counselor uses empathetic listening statements when the participant talks about the topic").

In training (and retraining) sessions, health educators conducted mock sessions with youth volunteers recruited for the purpose, or practiced with each other or the trainer. Supervisors rated and provided feedback to the health educators. In one replication site, the grantee recruited youth actors from a local university medical school who typically worked with medical residents to provide experience in how to conduct patient interviews with adolescents. These youth were also trained to provide feedback to the interviewers, so that they were able to supplement the feedback provided by supervisory staff.

Across the board, supervisory staff and health educators acknowledged the benefits of ongoing training, but stressed the need for more training in MI techniques.

However imperfect the strategies for assessing the quality of the sessions conducted by health educators, they provided a solid basis for ongoing training. Across the board, all three grantees would have liked to be able to provide more training in MI because of the importance of the approach in both delivering the content and building relationships between health educators and participants that would increase the likelihood of retention through the three booster sessions. In interviews, health educators echoed these views; they perceived the value of MI and felt the need to constantly upgrade their skills.

7. Lessons Learned

This study of *SSI* is an important contribution to what we know about the implementation of clinic-based teen pregnancy prevention programs for young women. The study represents the first concerted effort to examine multiple replications of a model that had initial evidence of effectiveness. The two other program models evaluated as part of the TPP Replication Study were both widely known and had been implemented extensively. As a result, both came equipped with well-developed training protocols and manuals provided by the developer. By contrast, *SSI* had been implemented and evaluated just once before OAH and ASPE selected it for replication and testing. This situation posed a challenge for both the developer and for the grantees. The implementation study increases our understanding of the extent to which grantees replicated *SSI* with fidelity in different settings with a different population.

Successfully putting the program into place required a comprehensive support structure that was not in place at the outset.

The three grantees worked collaboratively with the developer, supported by OAH, to refine existing training protocols and identify training needs (for MI, for example) and develop creative solutions to the challenge of assessing quality of program delivery in the absence of observations of live sessions with participants. Beyond these initial supports, each of the grantees established their own procedures for ensuring strong implementation. These included communities of practice for health educators to share lessons learned and mentor one another; professional development opportunities and trainings; opportunities to practice skills; and oversight and supervisory support. Each of the replication sites determined the best ways to ensure participant retention over the six month program period. Where feasible, grantees used smartphones or video-conferencing to make booster sessions more accessible and all relied on persistent individualized outreach.

As grantees worked through these challenges, they established a collaborative relationship in which they shared experiences and solutions with each other. Firm and consistent oversight by supervisory staff ensured that the program was implemented consistently and with fidelity across the multiple sites and setting types.

All three grantees successfully integrated strong interventions into a wide variety of clinic types.

Both Knox and Hennepin proposed to replicate the program in multiple clinic types and on a much larger scale than previously tested. Each of the clinic types had advantages and disadvantages, calling for different strategies to address recruitment (including referrals to *SSI*), determining eligibility for the program, ensuring participants' privacy and comfort in medical settings that were sometimes crowded, balancing clinic and program demands, and ensuring that participants remained with the program through the sequence of booster sessions.

All three grantees implemented *SSI* with fidelity and achieved high rates of retention.

Health educators successfully established connections with young women over the course of the six month intervention period. Across the three replication sites, all participants received the initial session of *SSI*, and a majority participated in the booster sessions. In each of the replication sites, a majority of participants received at least three-quarters of the intervention (or 3 sessions out of 4). This is a big accomplishment, particularly given the brief, individualized nature of the intervention. It is even more

notable given the chaotic and unpredictable schedules of adolescents, limited transportation options, and various clinic constraints (space, hours of operation, receptivity of staff).

Recruitment for SSI was time-consuming and more complex than grantees initially estimated.

Broadening the eligibility for the program created recruitment challenges for the grantees in ways that were not anticipated. School-based clinics and teen clinics had an advantage in terms of access to the population as well as accessibility for program recipients. The majority of young women coming into these clinics were potentially eligible. For other clinics that served a broader population, eligible young women were a relatively small part of the daily clinic flow, and it required additional procedures for identification of eligible participants. All clinics, however, relied on a broader set of recruitment strategies, including face to face recruitment within the clinic population, public awareness campaigns and networks of referrals to bring young women into the clinic. Direct recruitment, while labor-intensive, was most effective, but also reliant on buy-in from clinicians/staff. Each of the grantees worked within the clinic settings to increase buy-in by establishing of relationships with clinicians and educating them on the value and benefits of the program. Once the value was recognized, it was easier to integrate the program into the regular clinic flow.

Youth-friendly environments facilitated recruitment and retention.

Many of the barriers that youth face in accessing health services are unique to young people because of their stage in life and the associated needs, perceptions, and abilities. Youth-friendly environments that recognize these barriers and address issues of accessibility and privacy are more conducive to getting young people in the door. To the extent possible, each of the replication sites attempted to situate SSI delivery in clinic environments that attracted young people and that met their needs comfortably and responsively.

Teen clinics had a built-in advantage, since they were already dedicated to attracting and catering to the program's target population. School-based clinics had advantages in both recruiting and retaining participants: the target population was at hand and easily reachable; clinic staff schedules matched school schedules; and participants had easy access to program services. In other settings, lack of access to clinic services posed a challenge. Transportation and clinic hours were among the most common issues identified.

Criteria for hiring health educators evolved over time, as grantees gained experience with the intervention and understanding of population needs and setting constraints.

Over time, grantees identified key qualities and skills that were essential for health educators. Beyond the required education, there were intangible qualities that grantees were looking for. It became apparent that open-mindedness was very important. Given the nature of the intervention, health educators needed to be non-judgmental about the sexual activities that SSI participants engage in and to be open to all beliefs about family planning and contraceptive methods. Health educators also needed to possess strong interpersonal skills, such as the ability to listen, to exhibit empathy and be trustworthy.

Grantees learned that sales and marketing skills are critical to effectively recruit young women to engage in the program. Being able to relate to youth, build rapport quickly, and “get them in the door” were also important skills that grantees were looking for in a health educator. Once young women were in the program, retaining participants required flexibility and persistence. More successful health educators tended to be both accommodating and tenacious in efforts to keep young women attached to the SSI program over time.

Aside from these personal qualities, consensus across the three replication sites was that the background of effective health educators mattered. Individuals with clinical backgrounds, such as nursing staff, were initially viewed as having an advantage, given their understanding of sexual health issues. However, grantees discovered that what worked best for incorporating MI was a non-clinical background. Unlike clinical staff (i.e., nurses or doctors), non-clinical staff are typically more comfortable with MI techniques and the less directive approach to working with youth. It was very important that health educators have the ability to balance being knowledgeable and ‘meeting the youth where they are.’

Motivational interviewing and the individualized nature of the intervention are essential elements of the intervention.

Motivational interviewing is a widely recognized counseling strategy for addressing behavioral change. The individualized approach is essential to changing deeply personal habits. This seems to have been the case with sexual behavior. Practitioners seem to be in agreement that MI and individualized delivery are effective strategies. In this study, we found a consensus among the front line staff that this was an effective approach for engaging and eliciting behavior change among sexually active young women.

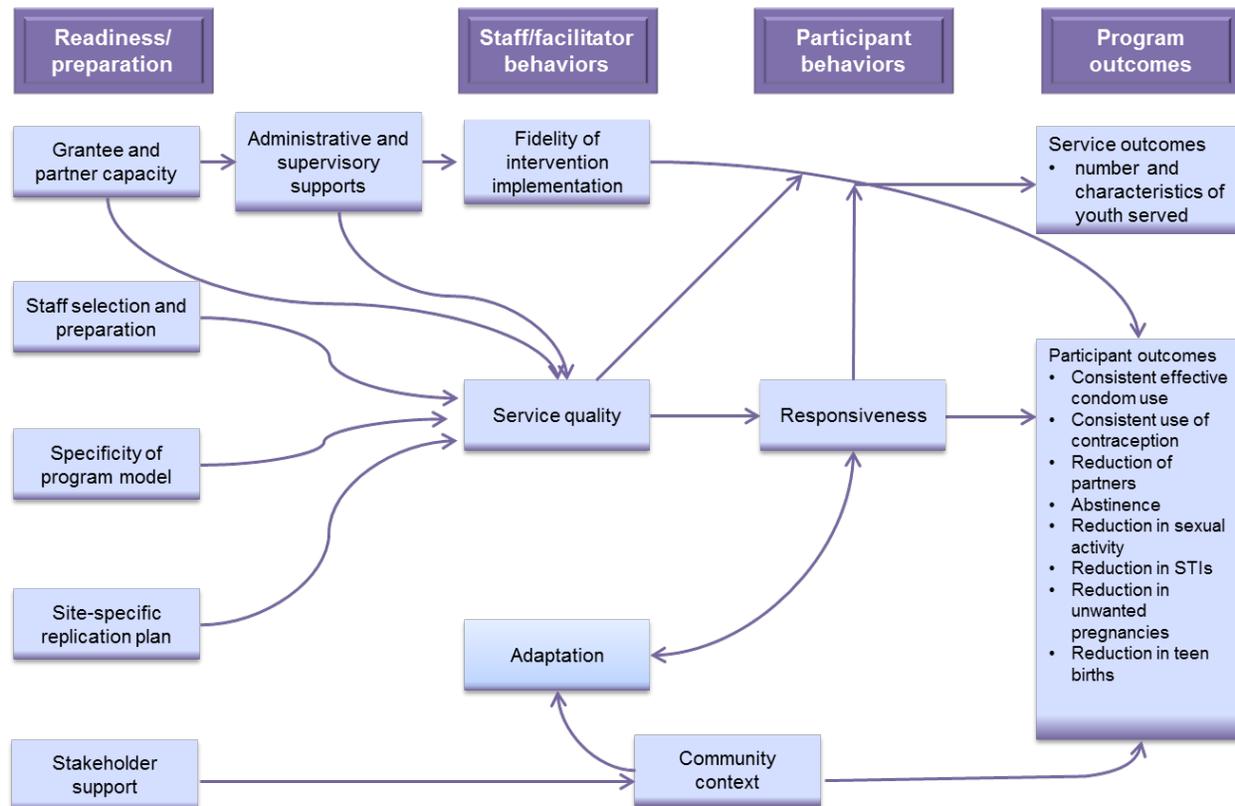
Finally, the fidelity and quality of the replications, achieved in spite of the challenges faced by the three grantees, are a testament to the commitment of grantee staff and of the OAH staff who guided, supported and monitored them. In the three replication sites, grantee efforts resulted in replications that accurately reflected the essential elements of the program model and provided a strong test of its effectiveness.

Appendix A: Framework for the Implementation Study

Conceptual Framework for the Implementation Study

Fidelity to a program model is not the only aspect of implementation that might affect participant outcomes. The framework shown in Exhibit 2.1 builds on the work of Berkel et al. (2011) and others to identify aspects of implementation that have been shown to affect program outcomes, as well as the factors, internal and external to the grantee, that affect implementation. **Readiness**, both of the grantee and partners and of the program model itself; the **context** in which the program is implemented; and the extent to which **supervisory staff** monitor and support staff who deliver the program may all affect the **fidelity** and **quality** of program implementation and force **adaptations** that strengthen or weaken the program. In turn, the strength and quality of program implementation influence its ability to attract and retain participants and their **responsiveness** to the program's messages—critical antecedents of program impact.

Exhibit A.1: Implementation Framework



Beginning from the right-hand side of the diagram, the participant outcomes shown are a set of behavioral outcomes that are necessary precursors of reductions in STIs, teen pregnancies and teen births. They are: abstinence from sexual intercourse or reduction in sexual risk behaviors (i.e. consistent effective condom use, consistent use of contraception, reduction in number of partners, reduction in sexual activity).

Next, Berkel et al. (2011) propose four behavioral mediators linked to participant outcomes in reviews of prior research (e.g., Dane & Schneider, 1998; Durlak & DuPre, 2008; Dusenbury et al., 2003). Three are

in the category of staff behaviors; one is participant behavior. The three staff behaviors are fidelity, service quality, and adaptation. The participant mediating behavior is responsiveness.

Fidelity of intervention implementation is the extent to which staff deliver key program components as prescribed by the program developer, in terms of content, delivery methods and the amount of time spent on each component. **Service Quality** refers to the instructional approach and the skill with which facilitators or health educators deliver program material and interact with participants. **Adaptation** refers to changes made to the program as planned, such as, for example, changing recruitment and retention strategies, adding materials that are relevant to participants' lives or that fill a gap in the existing curriculum. **Responsiveness** is indicated by: participant's attendance at program sessions; active participation and engagement in program activities; and satisfaction with the program. Participant responsiveness and quality of service interact with fidelity to produce the desired outcomes, in terms of *service outcomes* (the number and characteristics of youth served) and *participant outcomes* (reduction in STIs, teen pregnancy, and teen births).

The actions and processes that program administrators put in place to support the work of front-line staff are crucial to successful implementation. The **administrative and supervisory supports** that foster positive staff behaviors include: decision-making and problem solving processes that involve front-line staff; clear rules and performance standards; in-service training, consultation and coaching that is responsive to staff needs; fidelity and performance monitoring; regular feedback to improve performance; and effective work with external systems and agencies to ensure needed support for the program.

Although **readiness and preparation** are not always part of the discussion of implementation, they are crucial to the ability of organizations to implement the program as planned.¹⁸ Indeed, the requirements of the funding opportunity announcement and the provision of a planning and pilot year for all grantees made it clear that OAH also perceived the importance of these precursors of implementation.

Finally, the **community context** in which the program operates (e.g., a community, one or more neighborhoods, or a school district) affects the ability to fully implement a program and may also directly influence outcomes.

¹⁸ <http://ctndisseminationslibrary.org/PDF/nirnmonograph.pdf>

Appendix B: Data Needs, Sources, Data Collection Methods and Analysis Strategy

The conceptual framework for the Implementation Study guided our identification of the information needed to address the study's research questions and to identify the challenges. We grouped the information needed under four major elements drawn from the framework: *readiness, implementation, community context; and participant responsiveness*. Within each of these categories we identified a number of topics (constructs). Then within the constructs we grouped the data elements needed to build them and assessed the extent to which existing materials and documents could provide the data needed. For the many gaps left, we developed measures and a strategy for data collection. Below we describe these steps in more detail.

B.1 Data Sources

Existing Sources. For some of the information needed, *existing materials and documents* constituted a rich resource. These fall into six categories:

- **Materials prepared by the grantee.** These included the original grant proposal and revisions to it; semi-annual progress reports; adaptation and modification requests made in writing to OAH; and materials developed to publicize the program and explain its purpose to community members and potential participants. These provided background information on the grantee, its partners and the community context, as well as the original plan for program implementation and subsequent revisions.
- **Materials developed and provided by OAH.** These included guidance on adaptation and modification; and fidelity checklists, attendance logs, and quality observation protocols,¹⁹ with guidance for their use and reporting. These provided information about OAH's strategy for shaping and controlling changes to the original program model, as well as an understanding of the agency's plans for recording and monitoring the strength, fidelity, and quality of the program implementation in a systematic way.
- **Information collected by Abt staff as part of the recruitment site visits and subsequent weekly calls to grantees.** Although the principal focus of these conversations was the TPP Replication Study itself and the progress of the evaluation in each replication site, they inevitably touched on challenges the grantees encountered in working with partners, school districts and individual schools; challenges in reaching out to parents and community members to explain and justify the program; and modifications they needed to make to their original plans.
- **Extant data on community and population characteristics.** Existing national, state, and local databases provided information on community demographics, socio-economic indicators, and teen births.
- **Performance data collected by grantees and reported to OAH.** As noted earlier, OAH required grantees to record and report data drawn from the fidelity checklists, quality observations, and attendance logs. These data, specifically for the two-year period when grantees were recruiting and

¹⁹ The *Safer Sex Intervention (SSI)* sessions were conducted one-on-one between a clinician/health educator and participant, so no observations were required.

serving study participants, provided systematic and comprehensive information on the strength, fidelity, and quality of program implementation.

- **Data from the Impact Study baseline survey.** The initial survey conducted for the Impact Study provided demographic and other information on program participants that allowed us to characterize the population served by the program.

New Sources. Although existing resources provided essential information, there were substantial gaps that necessitated the creation of *new measures* for the study.

Interview topic guides. These were intended for use with agency, program, partner and school staff as well as stakeholders. Interviews updated and expanded on information drawn from written materials and provided unique information on the process and challenges of implementing the program from multiple perspectives. We developed interview protocols for six roles:

- Project Director;
- Grantee agency representative (person listed as contact person on proposal), if different from project director;
- Project coordinator or program manager;
- Frontline staff (health educators/facilitators);
- Supervisory staff;
- School, school/community stakeholders, and partner staff.

Group interview guides. These were intended for use with health educators (if they were interviewed in a group rather than, or in addition to, individually). The group interviews gathered information similar to that gathered in individual interviews, but in a more informal way.

B.2 Data Collection Strategy

The strategy for gathering data from these sources differed depending on the type of information. Information from materials prepared by the grantees or by OAH was extracted at intervals as it became available. Information from extant databases was extracted early in the study and updated over its course. Performance data (attendance, fidelity, and quality) were collected from grantees over an eighteen month period (May 2013, November 2013, and May 2014) when grantees were recruiting and serving study participants.

Information from agency and program staff was collected twice during the period of full program implementation: by telephone in 2012 -13 and face-to-face during site visits in 2014. Both telephone and in-person interviews were conducted by two-person teams, composed of study staff members who were familiar to grantee staff.

Information from partner and school staff and other community members was collected once during the same site visits.

Unlike the other two interventions, *SSI* was implemented one-on-one between the clinician or health educator and a participant in a confidential setting. For this reason we were not able to observe the intervention sessions directly or conduct focus groups with participants and instead rely on health educator report of implementation.

B.3 Analysis Strategy

Because the data gathered for the study came from multiple sources, the interview notes and other data were coded and entered into NVivo, a software package designed for this purpose. The software allows search and retrieval of information by code (i.e., topic or question), so that we were able to extract information from all sources to address, for example, questions such as “How appropriate/relevant was the curriculum for the population served? What gaps, if any, were identified?” We generated reports for each implementation framework subtopic (“node”), and then analyzed for themes within major implementation topics, checking for triangulation across both extant data sources and interviews within sites. We also looked across replication sites for common themes and unique characteristics.

In addressing each topic, we first looked across the replication sites to identify a common theme or finding, and then examined variation among the three. Our descriptive analysis was followed by an evaluative analysis that answered questions such as “How effective were health educators in ensuring participation in interactive components such as role-plays?”

Appendix C: Core Elements

Exhibit C.1: SSI: Initial Session, Topics and Core Element(s) Covered

Core Element	Topics/Activities
Introduction and Overview	<ul style="list-style-type: none"> • Introductions and discussion of SSI goals
Stage of Change Determination	<ul style="list-style-type: none"> • Wheel of Change explanation • Wheel of Change stage chosen
Consequences of Unprotected Sex	<ul style="list-style-type: none"> • Elicit examples of consequences of unprotected sex • Review STI facts • Female anatomical model used to discuss STI risk to females and demonstrate the ascension of infection
Risk Perception	<ul style="list-style-type: none"> • Discuss participant's personal risk of STI • Discuss symptoms of STIs and importance of protection every time • Elicit change talk around STI risk
Preventing the Consequences	<ul style="list-style-type: none"> • STI/pregnancy prevention activity • "Birth Control Choices" brochure
About Condoms	<ul style="list-style-type: none"> • Discuss participant's use of condoms • "Condoms: How to Use Them" brochure • Male condom review and condom demonstration • Female condom demonstration • Condom keychain
Obtaining Condoms	<ul style="list-style-type: none"> • Discuss with participant where to obtain condoms • Elicit motivation to obtain condoms
Secondary Abstinence	<ul style="list-style-type: none"> • Engage in discussion about not having sex and assess interest/motivation from participant • Brochures
Talking About Sex	<ul style="list-style-type: none"> • Discussion about talking with your partner • Brochures
Role play	<ul style="list-style-type: none"> • For contemplation stage only

Source: Firpo-Triplett, Rex, & Shrier (2011).

Appendix D: Safer Sex Intervention Logic Model

