REPLICATION: *Safer Sex Intervention (SSI)*

GRANTEE PROFILE

Knox County Department of Health

KNOXVILLE, TN

Grantee:	Knox County Health Department
Partners:	Cherokee Health Systems Inc.; Rural Medical Services
Setting:	*17* health clinics in Knox, Cocke, Hamblen, and Jefferson counties
Target Population:	Sexually active females ages 13-19 who are not pregnant
Curriculum & Delivery:	One-on-one intervention with three subsequent booster sessions delivered at one, three and six months after the initial session. Curriculum is delivered by female health educators hired by the grantee and partner agencies and trained by Knox County Health Department supervisory staff.

Programmatic Context

Knox County Health Department

Knox County Health Department (KCHD) is one of nine organizations selected to participate in the Teen Pregnancy Prevention Replication Study. The study is a rigorous five-year evaluation of replications of evidence-based interventions aimed at preventing teen pregnancy, sexually-transmitted infections (STIs), and other sexual risk behaviors. The interventions are funded by the Office of Adolescent Health (OAH) through the federal Teen Pregnancy Prevention (TPP) Program. A brief overview of the study design and a description of the TPP program can be found on the OAH website (http://www.hhs.gov/ash/oah/oah-initiatives/for-grantees/evaluation/#Federal-LedEvaluation).

Knox County Health Department is the local public health agency serving the City of Knoxville and Knox County; its Director reports directly to the Mayor of Knox County. With approximately 280 fulltime employees, KCHD serves more than 50,000 individuals each year. More than 3,000 women receive family planning services annually at its four clinics. Its Communicable Disease Clinic provides almost 19,000 individuals annually with confidential testing for HIV/AIDS and other STIs. The Department's Community Assessment and Health Promotion unit, with nine full-time health educators, provides primary prevention services in the areas of adolescent pregnancy, sexually transmitted infections, sexual violence, injury, child safety and childhood diseases. In addition, the department includes the Epidemiology Program with four fulltime staff.

KCHD has a strong clinic-based teen pregnancy prevention program, providing family planning services to more than 1,000 adolescent females annually at each of its three clinics. In addition, the department provides testing and treatment for STIs to more than 800 female teens each year. Many of the female teens served by KCHD are at high risk; teens in state custody are referred to KCHD for services by the Department of Children's Services, Juvenile Detention Services, and the Florence Crittenton Agency. Since 1991, KCHD has coordinated community-wide efforts to prevent teen pregnancy through the Knox Adolescent Pregnancy Prevention Initiative (KAPPI), a coalition of more than 30 agencies and organizations committed to preventing teen pregnancy and other risk behaviors. The collaborative effort is part of a state-wide program to address the problems of teen pregnancy and teen parenting among youth 10 to 17 years of age. KAPPI has developed a range of programs for implementation in public schools in the community, including: The Traveling Trunk Program, which provides classroom teachers with curriculum and materials to teach about healthy life choices; Reality Works: Baby Think It Over, an infant simulator and life skills curriculum; and T-TOPS, an annual conference and workshops for pregnant and parenting teens.

Cherokee Health Systems

Cherokee Health Systems Inc. (CHS), a partner with KCHD for the TPP grant, has provided health services to medically needy, geographically isolated, and uninsured or underinsured individuals and families in rural east Tennessee for more than 50 years. It is a leader in the development and delivery of integrated behavioral and primary health care services. The agency employs more than 500 staff members in 20 locations across 12 counties, and is a Federally Qualified Community Health Center, Homeless Community Health Center, and Migrant Health Center.

Rural Medical Services

Rural Medical Services (RMS), a partner with KCHD for the TPP grant, is a Community and Migrant Health Center with five freestanding clinics in Cocke and Jefferson counties, and one mobile clinic. Since 1981, the agency has been the main provider of primary health care services, including family planning, STI testing, acute and chronic care, and prenatal care and deliveries to families and individuals in the area. With 73 employees, RMS serves approximately 11,000 individuals annually. Its Federally Qualified Migrant Program is an outreach program that serves Hispanic/Latino communities in Cocke, Hamblen, Sevier, Greene, Jefferson, and Grainger counties.

Selection of Safer Sex Intervention

In September 2010, the Knox County Health Department was competitively awarded a federal Teen Pregnancy Prevention Replication grant, administered by OAH. The grant is to implement the *Safer Sex Intervention (SSI)* with sexually-active females ages 13-19, as a collaborative multi-county intervention.[1]

In selecting *SSI*, KCHD and its partners considered both the needs of their communities and the constraints imposed on activities in schools. The areas of East Tennessee served by KCHD and its partners have higher rates of births to teens, as well as higher percentages of second births to teens who have already experienced a pregnancy compared to the national averages. Even in counties with lower rates of teen pregnancy, rates of chlamydia and other STIs continue to rise. At the same time, youth receive limited exposure to sexuality education because of legislative constraints and a conservative social climate that makes it challenging to implement programs in community settings. For these reasons, many evidence-based programs could not be considered. KCHD and partner staff were anxious to find an

[1] A summary of the curriculum and citations for the original research are provided in the Study Overview.

intervention that would allow them to fill this gap and address the issue directly themselves. *SSI* was the only appropriate clinic-based program on the list of eligible programs.

Implementation of the Program Model

Settings for the Program

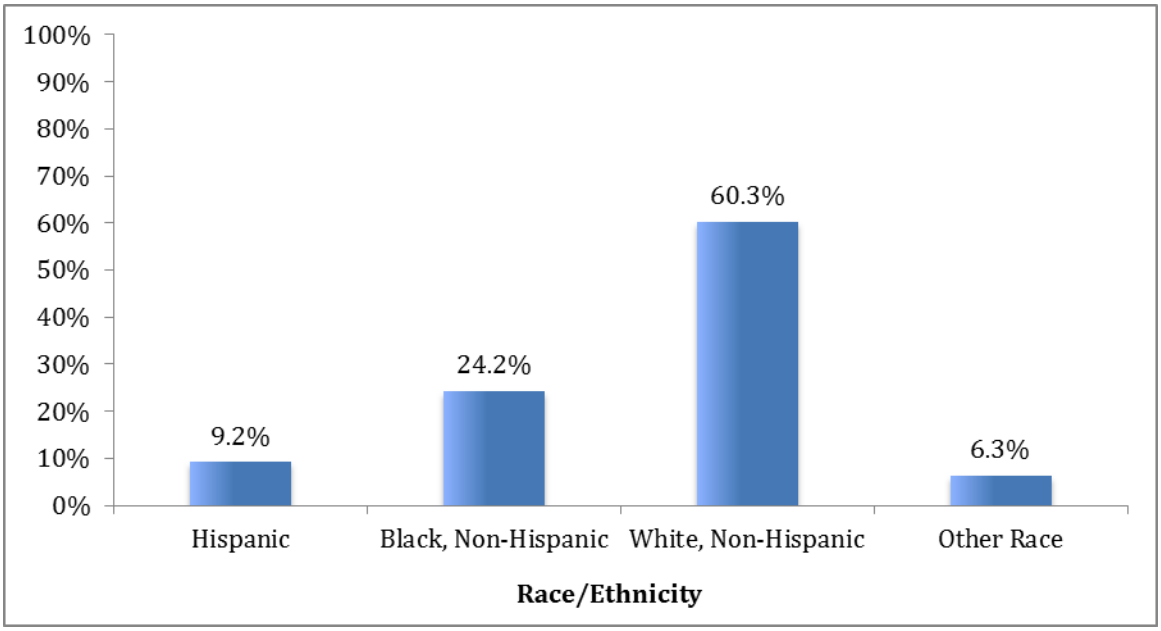
SSI is being implemented in 17 clinics in Knox, Cocke, Hamblen and Jefferson counties. KCHD health educators deliver the program in 6 of these clinics throughout Knoxville. Partners at Cherokee Health Systems and Rural Medical Services deliver the program in community health centers in outlying areas of Knox and in three rural counties. The populations served by the clinics are predominantly White Non-Hispanic; only one clinic serves a significant proportion of Hispanic/Latino families.

Population Served

The data described below are drawn from a baseline student survey completed before the intervention was implemented. Enrollment for the study began in the fall of 2012.

Demographic Profile: By design, *SSI* is specifically intended for females. In this replication, the average age of young women was just over 17 years. As a group, participants had diverse racial and ethnic backgrounds, with the sample consisting of 9% Hispanic, 60% White, Non-Hispanic, and almost one quarter Black, Non-Hispanic women (Exhibit 1).[2]

Exhibit 1: Race/Ethnicity of the Knox County Study Sample at Baseline



[2] The total sample size for Knox County is 491. The sample sizes for each of the risk variables vary depending on individual item non-response. The percentages shown in the figures are for those who responded. The percentages of missing responses range from 1%-5%, depending on the risk variable. More detailed tables with sample sizes can be found in the Appendix

Risk Profile: Sexual Behavior

The program targets sexually active young women (or those contemplating sexual activity). On entry into the study, just over 90% of the young women reported that they had ever been sexually active (defined as sexual intercourse and/or oral sex); nearly 80% were sexually active in the three months preceding the survey, and just over three quarters had engaged in sexual intercourse during that same period (Exhibit 2).

Exhibit 2: Sexual Risk Behavior of the Knox County Study Sample at Baseline[3]

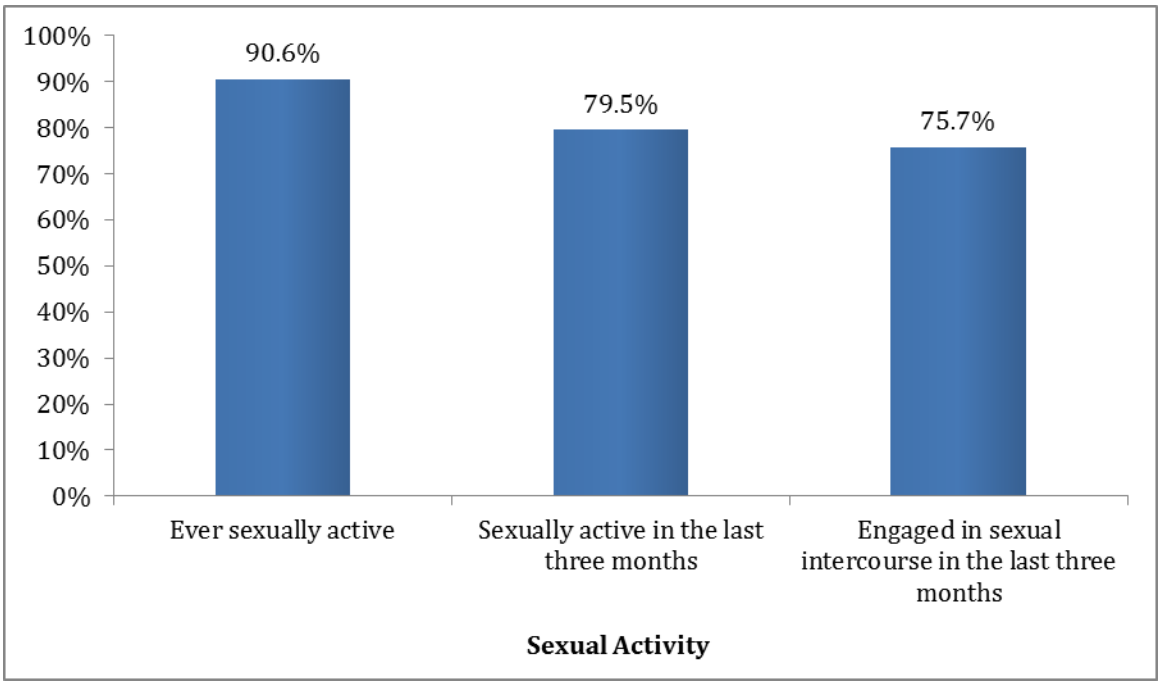
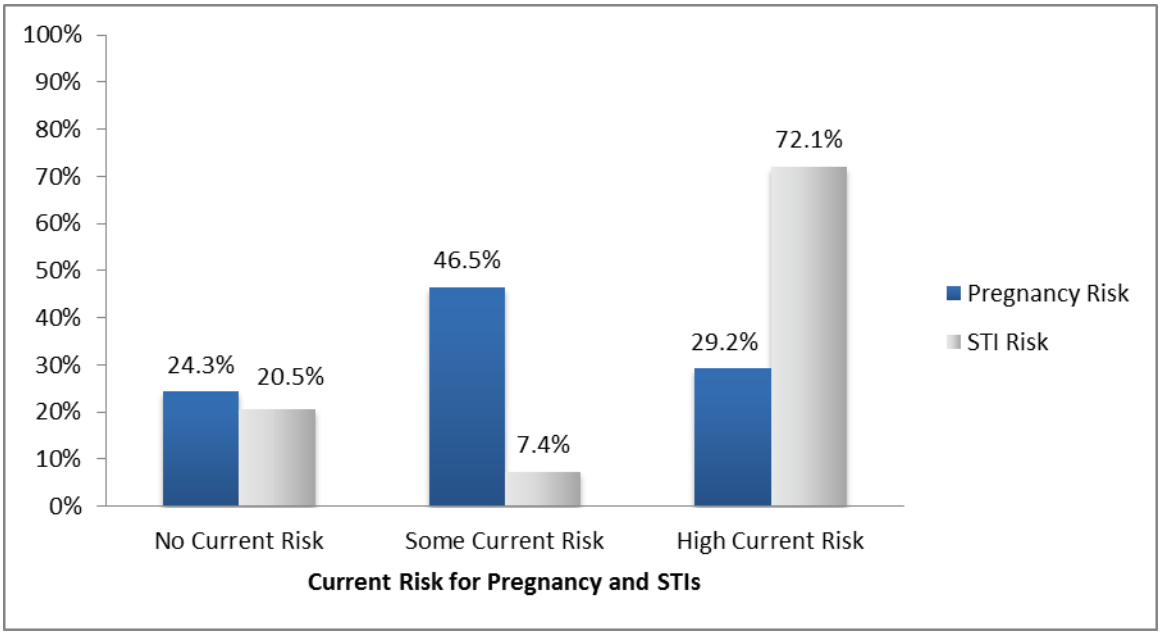


Exhibit 3 shows the distribution of study participants with respect to two kinds of risk, based on their sexual behavior in the 90 days prior to the survey: current risk of pregnancy, and current risk of sexually transmitted infection (STI). Those who did not engage in sexual activity in the 90 days preceding the survey are categorized as at "no current risk" for either. In addition, those who did not engage in sexual intercourse are categorized as at "no current risk" for pregnancy (although they may be at some level of risk for infection). Youth are categorized as being at "some current risk" of pregnancy if they reported consistent use of birth control during sexual intercourse and at "some current risk" of infection if they reported consistent use of condoms during any sexual activity. At "high current risk" for infection are those who did not use condoms during intercourse or oral sex. At "high current risk" for pregnancy are those who did not use either condoms or birth control during sexual intercourse.

Just over 20% of the study participants are considered not currently at risk for pregnancy or infection (i.e., they had not engaged in sexual intercourse or other sexual activity in the 90 days prior to the survey). Of those who engaged in sexual intercourse, over 60% reported consistent use of a contraceptive; the remainder, who failed to use birth control consistently were at higher risk for pregnancy. Almost three-quarters of those who were sexually active failed to use condoms consistently to protect against infection when they engaged in any sexual activity (i.e., sexual intercourse or oral sex).

[3] Sexual activity is defined as sexual intercourse and/or oral sex.

Exhibit 3: Current Risk of Pregnancy or Infection for the Knox County Study Sample at Baseline



Risk Profile: Perceptions about Sex

While very few participants reported pressure from peers to have sex (Exhibit 4), more than three-quarters believed that most or all of their peers were engaging in sexual intercourse. A smaller percentage believed that their peers were engaging in oral sex. In the case of oral sex, almost 20% of youth reported no knowledge of peers' sexual behavior (Exhibit 5).

Exhibit 4: Extent of Peer Pressure to Have Sex for the Knox County Study Sample at Baseline

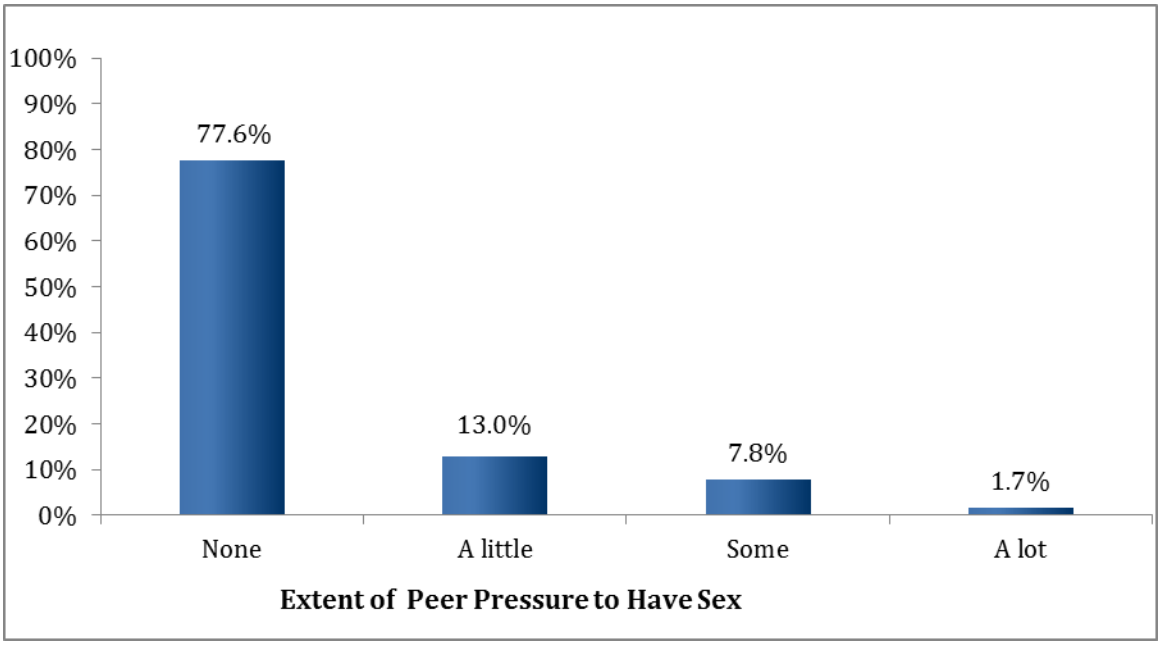
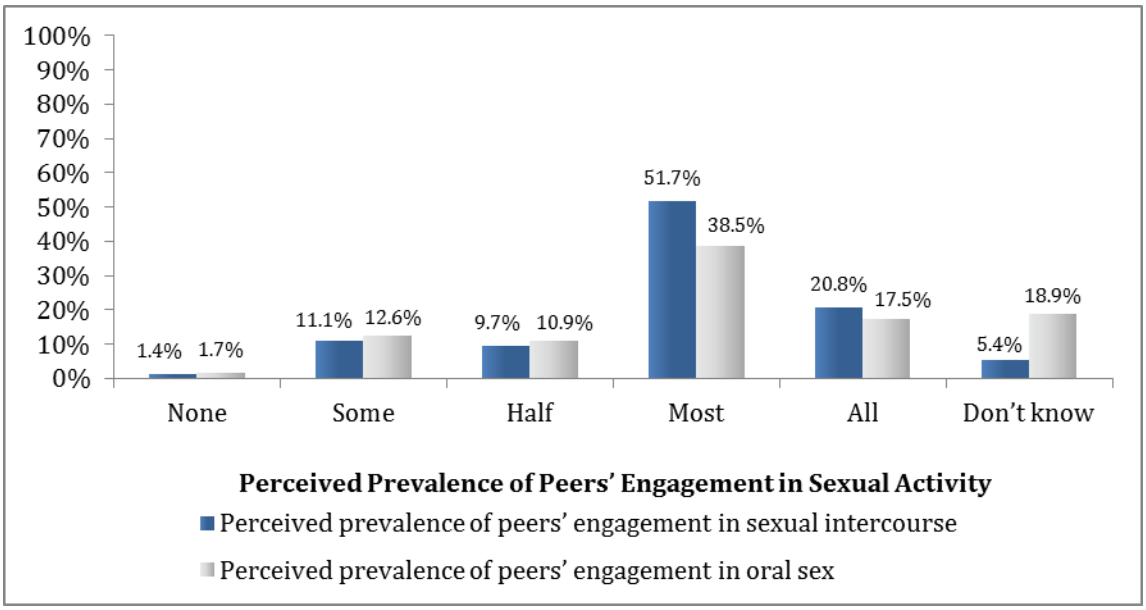


Exhibit 5: Perceived Prevalence of Peers' Engagement in Sexual Activity for the Knox County Study Sample at Baseline

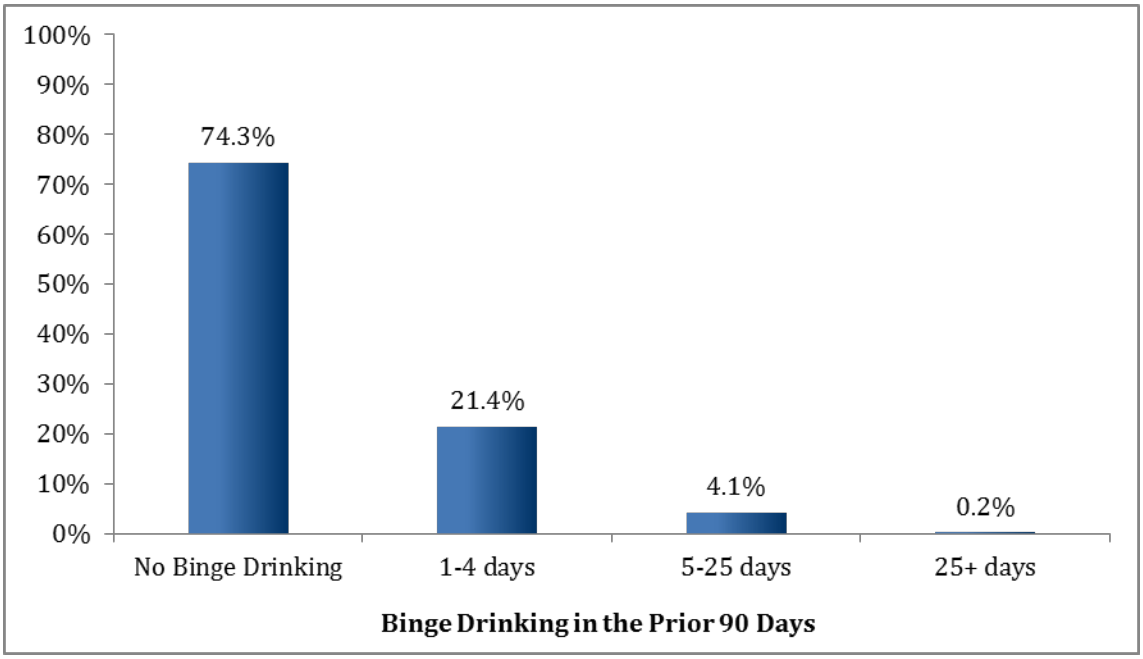


Risk Profile: Other Risk Behaviors

Nearly two-thirds of youth reported that they had not smoked cigarettes at all in the prior 30 days. Most of the others were occasional smokers. Fourteen percent reported smoking essentially daily during the same period (see Appendix, Table 9).

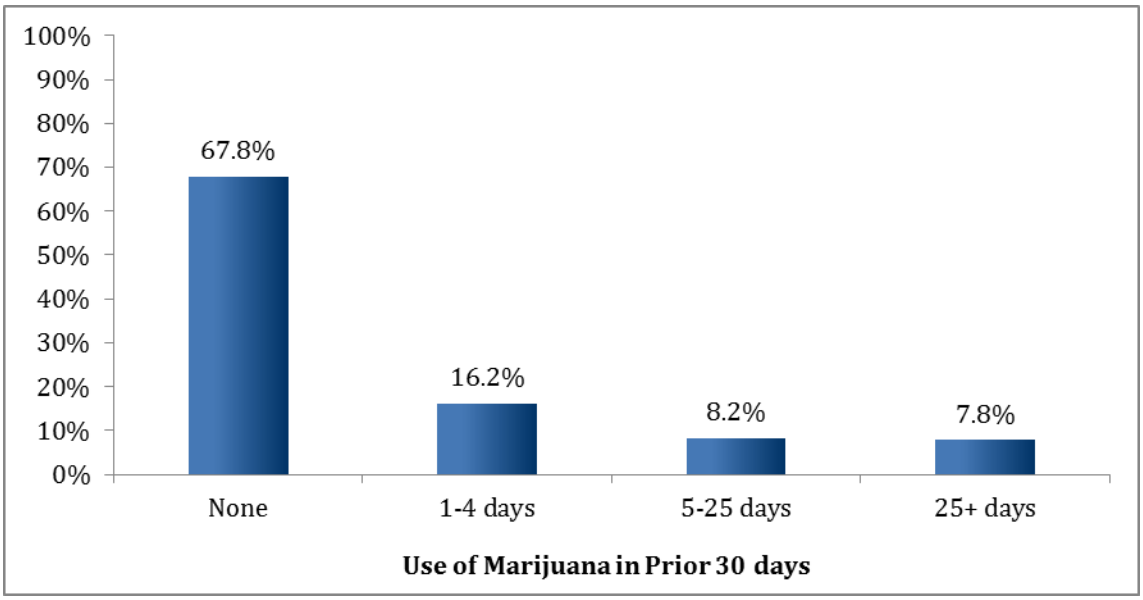
Just over half reported using any alcohol during the prior 30 days (See Appendix, Table 10); just over one-quarter reported binge drinking (five or more alcoholic drinks in a row) during the same period (Exhibit 6).

Exhibit 6: Binge Drinking for the Knox County Study Sample at Baseline



More than two-thirds of youth reported no use of marijuana in the prior 30 days, while nearly 8% reported frequent use (Exhibit 7).

Exhibit 7: Marijuana Use for the Knox County Study Sample at Baseline



The Appendix provides data tables for Knox County and for the three *SSI* replications combined.

Program Delivery

In this replication, as in the other two replications of *SSI* that are participating in the federal study, the major adaptations to the model as originally designed are that the participant age range is restricted to 13-

19 years (compared with 12 to 23 years in the original study), and eligibility for the program is expanded to sexually active female adolescents from the originally-studied population of female adolescents hospitalized for sexually transmitted infections. "Sexually-active" includes teens engaging in oral and anal as well as vaginal sex, and also includes parenting but not pregnant teens.

The program is delivered one-on-one by a female health educator in a clinic setting. The initial sessions typically last an hour. The booster sessions last ten to twenty minutes and occur at roughly one, three, and six months after the initial session. KCHD was given permission to conduct booster sessions via Skype, but due to complications with the specific video conferencing software, they were unable to implement this option. Booster sessions are conducted in person.

Staffing

The Program Director is responsible for the overall coordination of the partner. The Program Director also directs KCHD's Community Assessment and Health Promotion Unit and had worked in that position for four years prior to the beginning of the TPP grant. A Program Manager was hired specifically to oversee the day to day work of implementing *SSI*. The primary qualifications of the Program Manager position included: a background in public health, with experience in community-based program management. With the Program Director, the Program Manager was responsible for selecting health educators to deliver the intervention at all of the clinics, training and monitoring the health educators, and ensuring fidelity to the program model.

A senior staff member from each of the two partner agencies serves with the Program Director and the Program Manager on the leadership team, a governance entity created for *SSI* whose members meet quarterly, and which is responsible for the management and control of the program.

> *"They [the health educators] did door-to-door recruiting in housing projects, are willing to come in on Saturdays or stay late, because they know that is when young women are free. They were the ones who pushed for evening/extended clinic hours"*

SSI is delivered by a team of health educators, five employed by KCHD and three employed by the two partner agencies. All of them report to the KCHD Program Manager on issues related to the intervention, but those employed by partner agencies report to the partners' HR departments on other issues. Some health educators were selected from existing staff; others were hired specifically for *SSI*. Though the backgrounds of the health educators differed (e.g. one worked in a sexual assault center, a second for the WIC Program, a third from a women's reproductive health clinic) the Program Director believes it is most important that candidates' philosophies and personal beliefs are aligned with the program and that they are comfortable with its content and approach. For this reason, she and the two other program managers who interviewed candidates for the health educator position went into detail about the explicit content of the conversations they would be expected to conduct with participants.

The Program Manager and one health educator attended a two-day training by the program developer and then trained the other health educators. Most of the health educators had no formal training in motivational interviewing and needed to spend more than two days on the initial training and in role-plays with one another and volunteers. Even after the initial expanded training, there were requests for more training, so the Program Manager set up weekly meetings to refine the implementation plan and provide additional training and practice when needed. Health educators attended OAH technical training sessions

when they were offered, and were encouraged to participate in any training opportunities that focus on working with youth.

Monitoring Program Implementation

The health educators complete fidelity logs after each session. The local evaluator/epidemiologist on the project reviews the fidelity logs bi-weekly to ensure the content is being covered, and provides feedback to the health educators during their monthly meetings. Although the program staff cannot observe individual sessions with participants, the discussions at staff meetings are used as opportunities to provide guidance and feedback.

Summary of Knox County Grantee Profile

Knox County Health Department, with two large partner agencies, is mounting a large-scale replication of *SSI* in 17 health clinics across four counties. The clinic settings for the intervention vary in terms of target population and mission.

The young females in the study sample ranged in age from 13 to 20, with an average age of just over 17 years at baseline. Almost 80% were sexually active in the three months prior to the survey; most of them had engaged in sexual activity without consistently using a condom, placing them at high risk for STIs. In addition, approximately one-third of the participants were at high current risk for pregnancy because they didn't use any form of contraceptive consistently.

This research is supported by the Office of Adolescent Health and the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services under contract number HHSP23320095624WC Order No. HHSP23337011T awarded in September 2011.

Appendix: Knox County Health Department Baseline Data Tables

Table 1. Race/Ethnicity in Knox County and Overall SSI Study Samples at Baseline

	Knox County (n= 491)	Safer Sex Overall (n= 2097)
Hispanic	9.2%	18.3%
Black[1]	24.2%	35.1%
White[1]	60.3%	24.4%
Other Race[2]	6.3%	14.1%

[1] Non-Hispanic
[2] "Other Race" includes Asian, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, Multiracial, and open-ended responses to the question "What is your race?"

Table 2. Age in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n= 491)	Safer Sex Overall (n= 2097)
Mean (SD)	17.2 (1.6)	17.1 (1.5)
Range	13 - 20	13 -20

Table 3. Grade in School in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n= 491)	Safer Sex Overall (n= 2097)
7th	1.2%	0.9%
8th	3.1%	2.4%
9th	9.0%	8.1%
10th	9.2%	12.2%
11th	14.5%	17.3%
12th	13.0%	23.7%
Ungraded	3.9%	1.9%
College/technical	33.4%	24.3%
Not in school	12.8%	8.6%

Table 4. Sexual Activity in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n=491)	Safer Sex Overall (n=2097)
Ever sexually active[1] (n=490)	90.6%	93.7%
Sexually active in the past 3 months (n=488)	79.5%	83.2%
Engaged in sexual intercourse in the past 3 months (n=490)	75.7%	79.2%

[1] Sexual activity is defined as sexual intercourse and/or oral sex. Respondents were not asked about anal sex.

Table 5. Current Risk of Pregnancy[1] in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n = 490)	Safer Sex Overall (n=2095)
No Current Risk	24.3%	20.8%
Some Current Risk	46.5%	47.3%
High Current Risk	29.2%	31.9%

[1] *No Current Risk* is if the respondent did not have sexual intercourse in the past 90 days; *Some Current Risk* is if the respondent always used condoms or contraceptives during sexual intercourse in the past 90 days; and *High Current Risk* is if respondents engaged in unprotected sexual intercourse in the past 90 days.

Table 6. Current Risk of Infection[1] in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n = 488)	Safer Sex Overall (n=2093)
No Current Risk	20.5%	19.4%
Some Current Risk	7.4%	9.4%
High Current Risk	72.1%	71.2%

[1] *No Current Risk* is if the respondent did not engage in sexual intercourse or oral sex in the past 90 days; *Some Current Risk* is if the respondent always used a condom during sexual activity during the past 90 days; and *High Current Risk* is if respondents engaged in any sexual activity without a condom in the past 90 days.

Table 7. Risk of Infection and/or Pregnancy in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n = 490)	Safer Sex Overall (n=2091)
Sexual Activity and Condom Use		
Not sexually active	20.5%	19.4%
Sexually active with use of condoms	7.4%	9.4%
Sexually active without use of condoms	72.1%	71.2%
Sexual Intercourse and Birth Control Use		
No sexual intercourse	24.3%	20.8%
Sexual intercourse with birth control	46.5%	47.3%
Sexual intercourse without birth control	29.2%	31.9%

Table 8. Peer Pressure to Have Sex and Perceived Norms in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n= 440)	Safer Sex Overall (n= 2091)
Extent of peer pressure to have sex		
None	77.6%	77.7%
A little	13.0%	12.2%
Some	7.8%	8.0%
A lot	1.7%	2.2%
Prevalence of peer sexual intercourse		
None	1.4%	0.77%
Some	11.1%	10.6%
Half	9.7%	11.9%
Most	51.7%	47.0%
All	20.8%	24.6%
Don't Know	5.4%	5.1%
Prevalence of peer oral sex		
None	1.7%	3.2%
Some	12.6%	14.7%
Half	10.9%	12.4%
Most	38.5%	35.2%
All	17.5%	15.0%
Don't Know	18.9%	19.5%

Table 9. Frequency of Cigarette Use (past 30 days) in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n= 487)	Safer Sex Overall (n= 2098)
0 days	66.1%	72.5%
1-4 days	13.8%	11.4%
5-25 days	6.2%	6.3%
> 25 days	14.0%	9.8%

Table 10. Frequency of Alcohol Use (past 30 days) in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n= 487)	Safer Sex Overall (n= 2095)
Any alcohol use (last 30 days)[1]		
0 days	49.5%	48.5%
1-4 days	39.0%	38.7%
5-25 days	11.1%	11.6%
> 25 days	0.4%	1.2%
Binge drinking (last 30 days)[2]		
0 days	74.3%	73.8%
1-4 days	21.4%	21.1%
5-25 days	4.1%	4.6%
> 25 days	0.2%	0.5%

[1] Alcohol use is defined as having an alcoholic drink such as beer, wine, or other liquor ("just a sip" not counted).
[2] Binge drinking is defined as 5 or more alcoholic drinks in a row.

Table 11. Frequency of Marijuana Use (past 30 days) in Knox County and Overall *SSI* Study Samples at Baseline

	Knox County (n= 487)	Safer Sex Overall (n= 2094)
0 days	67.8%	57.6%
1-4 days	16.2%	21.7%
5-25 days	8.2%	11.8%
> 25 days	7.8%	8.8%