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Updated Findings from the HHS Teen Pregnancy Prevention Evidence Review: October 2016-May 2022

April 2023

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Since 2009, the U.S. Department of Health and Human Services (HHS) has sponsored a systematic review of research on teen pregnancy prevention to identify programs with evidence of effectiveness in favorably impacting (1) teen pregnancy and sexually transmitted infections (STIs) and (2) sexual behaviors. The HHS Teen Pregnancy Prevention (TPP) Evidence Review was created in response to the 2010 Consolidated Appropriations Act, which states that teen pregnancy prevention programs must be “proven effective through rigorous evaluation to reduce teenage pregnancy, behavioral risk factors underlying teenage pregnancy, or other associated risk factors.” Mathematica conducts the TPP Evidence Review (TPPER), which is sponsored by the HHS Office of the Assistant Secretary for Planning and Evaluation, the Office of Population Affairs (OPA) within the HHS Office of the Assistant Secretary for Health, and the Family and Youth Services Bureau (FYSB) within HHS’s Administration for Children and Families.

As of April 2018, when the last findings were released, the HHS Teen Pregnancy Prevention Evidence Review had identified 48 programs meeting the [review criteria for evidence of effectiveness](#) based on a review of studies released from August 2015 to October 2016. These criteria **require programs to show evidence of at least one favorable, statistically significant impact on at least one outcome of interest** reflecting sexual behavior (for example, whether teens have ever had sex) or reproductive health (for example, teens’ sexual activity, number of sexual partners, contraceptive use, STIs or HIV, or pregnancy). In addition, the supporting research studies **must meet established criteria for the quality and execution of their research designs**. The review team follows pre-specified criteria to assess study design, sample attrition, baseline equivalence, reassignment of sample members, and confounding factors. We detail the review procedures later in this brief.

Mathematica has recently updated the review findings to include research released from October 2016 to May 2022. Due to resource constraints, we identified more studies than we reviewed. We used a prioritization process (described in the review protocol) to determine which studies to include in this round of the review. As part of this update, the review team identified and assessed studies of 18 programs that were not reviewed before and assessed studies for 7 programs that were previously reviewed but also had more recent studies identified in this round. Of these 25 programs, 9 were new programs with evidence of effectiveness, 4 were previously reviewed programs with past evidence of effectiveness that have maintained their standing, and

12 were programs (both new and previously reviewed) without evidence of effectiveness (Table 1). One additional program was reviewed during this round and found to have evidence of effectiveness. However, the developer indicated that this program is not being disseminated or available to the public. It is available on the TPPER website list of inactive programs. Two other programs reviewed in previous rounds have also been moved to the list of inactive programs (Table 6).


The **total number of programs meeting the review criteria for evidence of effectiveness is now 52: [43 programs](#)** identified in earlier rounds of the review (that have current evidence of effectiveness and are still currently available) plus the 9 programs identified in the most recent update to the review findings.

Table 1. Overview of the 25 programs reviewed during this round of the TPP Evidence Review

New programs with evidence of effectiveness
Girl2Girl
High-school FLASH, version 3.0
IN·clued
LeadHer
Linking Families and Teens (LiFT)
Peer Group Connection-High School (PGC-HS)
Plan A
Pulse (two studies reviewed)
Vision of You
Previously reviewed programs with past and new evidence of effectiveness
Making Proud Choices! (MPC)
Power Through Choices (PTC)
Families Talking Together (FTT)
Previously reviewed programs with past evidence of effectiveness and no new evidence of effectiveness
Generations
New and previously reviewed programs without evidence of effectiveness
Achieving Condom Empowerment (ACE)-Plus
Ateyapi Identity Mentoring Program
Play Forward
Steps to Success
TEMPO
Decisions, Responsibility, Empowerment, Accountability, Motivation and Success (DREAMS)
Non-faith-based, abstinence-only intervention
Faith-based, abstinence-only intervention
In the Know
Becoming a Responsible Teen ¹
Choosing the Best
Respecting the Circle of Life

¹ Becoming a Responsible Teen did have evidence of effectiveness; however, the study that presents this evidence has a publication date that is now outside the 20-year eligibility window.

New programs with evidence of effectiveness

We reviewed studies for 18 newly identified programs (Table 2) that varied in terms of their focus, target population, setting, and content. Studies of 9 of these 18 programs met the review criteria for evidence of effectiveness, having a rating of high or moderate and showing evidence of a favorable, statistically significant impact on at least one outcome of interest regarding sexual behavior or reproductive health (as designated by  in Table 2). A high or moderate study rating is necessary for the findings to be deemed as having sufficiently credible evidence of program effectiveness.

For five other programs, the supporting impact studies met the review criteria for a study quality rating of high or moderate, but the study findings did not show favorable, statistically significant program impacts. For the remaining four programs, the supporting impact studies did not meet the review criteria for a high or moderate quality rating.

Fifteen of the 18 newly identified programs were developed and tested with federal grant funding from FYSB or OPA. Federally funded studies were prioritized for review.

Program-level findings

In this brief (Table 2) and on the review website (<https://tppevidencereview.youth.gov/EvidencePrograms.aspx>) we summarize the findings (favorable, potentially favorable, indeterminate, conflicting, potentially unfavorable, and unfavorable) *across* identified studies of a particular newly-identified program model assessed in each of five outcome domains: (1) sexual activity; (2) number of sexual partners; (3) contraceptive use; (4) STIs or HIV; and (5) pregnancies. The strength of the body of evidence for a program model across individual studies is represented by the color, quantity, and size of the icons (Key 1). The symbols and ratings descriptions for the program models represent categories of evidence defined by TPPER and some categories do not apply to the newly identified programs in this round of review (e.g., none of the program models in Table 2 have “favorable evidence” or “conflicting evidence”). The size of the icon reflects the number of studies that have high or moderate quality study ratings, not necessarily stronger or weaker evidence of effectiveness.

Categorization of Findings

This round of the TPP Evidence Review introduces a new categorization scheme for findings, which includes three key changes:

1. The addition of “potentially favorable” and “potentially unfavorable” findings categories
2. The replacement of the label “mixed impacts” with “inconsistent findings”
3. The use of two types of domain ratings labels, one for individual studies (Key 2) and one for programs (Key 1), which reflects results pooled across studies of each program

Key 1. Strength of the body of evidence behind a given program model as illustrated by color, quantity, and size of icons



















Symbol	Description	Criteria
	Favorable evidence: Strong evidence of favorable findings with no overriding contrary evidence	<ol style="list-style-type: none"> Two or more studies show favorable findings and No studies have inconsistent findings, potentially unfavorable findings, or unfavorable findings
	Potentially favorable evidence: Evidence of a favorable finding with no evidence of adverse findings	<ol style="list-style-type: none"> At least one study shows favorable findings or potentially favorable findings and No studies have inconsistent findings, potentially unfavorable findings, or unfavorable findings
	Indeterminate evidence: No affirmative evidence of findings; uniformly null findings	<ol style="list-style-type: none"> All of the studies show indeterminate findings
	Conflicting evidence: Evidence of both favorable and unfavorable findings	<ol style="list-style-type: none"> At least one study shows inconsistent findings, or At least one study shows favorable findings or potentially favorable findings, and at least one study shows unfavorable findings or potentially unfavorable findings
	Potentially unfavorable evidence: Evidence of unfavorable findings with no overriding contrary evidence	<ol style="list-style-type: none"> At least one study shows unfavorable findings or potentially unfavorable findings and No studies have inconsistent findings, potentially favorable findings, or favorable findings
	Unfavorable evidence: Strong evidence of unfavorable findings with no overriding contrary evidence	<ol style="list-style-type: none"> Two or more studies show unfavorable findings and No studies have inconsistent findings, potentially favorable findings, or favorable findings
Symbol	Size	Indication
Applies to all program ratings	   	1 study with a moderate or high study rating that examines outcomes in the domain
Applies to all program ratings	   	2–4 studies with moderate or high study ratings that examine outcomes in the domain
Applies to all program ratings	   	5 or more studies with moderate or high study ratings that examine outcomes in the domain

Table 2. Newly identified programs: evidence by outcome domain and study rating

Program	Outcome domains					Study rating ^a	FYSB or OPA funded ^b
	Sexual activity	Number of sexual partners	Contraceptive use	STIs or HIV	Pregnancy		
Programs with evidence of effectiveness							
Girl2Girl	<div><div></div></div>		<div><div></div></div>		<div><div></div></div>	High	Yes
High-school FLASH, version 3.0	<div><div></div></div>		<div><div></div></div>			High	Yes
IN·cluded	<div><div></div></div>		<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	High	Yes
LeadHer			<div><div></div></div>		<div><div></div></div>	High	Yes
Linking Families and Teens (LiFT)	<div><div></div></div>		<div><div></div></div>		<div><div></div></div>	High	Yes
Peer Group Connection-High School (PGC-HS)	<div><div></div></div>		<div><div></div></div>			High	Yes
Plan A			<div><div></div></div>	<div><div></div></div>		High	Yes
Pulse (two studies reviewed)			<div><div></div></div>		<div><div></div></div>	High	Yes
Vision of You	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>			High	Yes
Programs for which all studies reviewed meet standards, but have no positive effects							
Achieving Condom Empowerment (ACE)-Plus			<div><div></div></div>			High	Yes
Ateyapi Identity Mentoring Program	<div><div></div></div>					Moderate	Yes
Play Forward	<div><div></div></div>					High	No
Steps to Success	<div><div></div></div>				<div><div></div></div>	High	Yes
TEMPO			<div><div></div></div>			High	Yes
Programs for which all studies reviewed do not meet evidence standards							
Decisions, Responsibility, Empowerment, Accountability, Motivation and Success (DREAMS)	n.a.	n.a.	n.a.	n.a.	n.a.	Low	Yes
Non-faith-based, abstinence-only intervention	n.a.	n.a.	n.a.	n.a.	n.a.	Low	No
Faith-based, abstinence-only intervention	n.a.	n.a.	n.a.	n.a.	n.a.	Low	No
In the Know	n.a.	n.a.	n.a.	n.a.	n.a.	Low	Yes

Note: Refer to Key 1 for information about symbols in this table. Empty cells indicate that the study or studies did not examine program impacts on measures within that outcome domain. Programs are listed alphabetically within each evidence category.

^a The review team established ratings for the supporting impact studies by following pre-specified criteria to assess study design, attrition, baseline equivalence, reassignment of sample members, and confounding factors. Table 2 has a more detailed description.

^b This column indicates which programs were developed and tested with federal grant funding from FYSB or OPA. n.a. = not applicable; following the procedures specified in the review protocol, the review team did not assess evidence of effectiveness for programs with a supporting impact study that received a quality rating of low

A description of the 9 new programs meeting the review criteria for evidence of effectiveness, along with a summary of the research evidence around these programs, follows:

Girl2Girl

Program summary: Girl2Girl is a 20-week, text-messaging–based program to prevent teen pregnancy. The program is designed for cisgender² female youth ages 14–18 identifying as not exclusively heterosexual and provides information about unintended pregnancy prevention, different types of birth control, how to use contraception, and STI prevention. Some program content is tailored to participants’ self-reported sexual experiences and sexual orientation. Most texts simply provide information, whereas some are interactive, including links to videos. The program also offers an on-demand advice text line called G2Genie that provides information about sex, relationships, and the LGBTQ community. Finally, Girl2Girl participants are paired with another program participant, a “text buddy,” to give each other mutual support and help them practice skills they learn in the program.

Research summary: The program was evaluated using a randomized controlled trial involving 948 cisgender lesbian, bisexual, or queer women ages 14–18 recruited across the United States through Facebook and Instagram advertisements (Ybarra et al. 2021). The study found that at program end (20 weeks), teen girls participating in the program reported having used condoms in the past three months while having sex significantly more often than the control group in the past three months (effect size = 0.03) and reported significantly fewer sex acts without a condom in the past three months (effect size = -0.05). Those program effects were larger in magnitude for the subgroup of girls who reported being sexually active at baseline (effect sizes = 0.05 and -0.29, respectively). The study showed no statistically significant impacts on any other sexual behavior outcomes assessed. The study met the review criteria for a high quality rating.

High School FLASH, version 3.0

Program summary: High School FLASH (FLASH) is a school-based comprehensive sexual health education program for youth in high school. The 15-session curriculum covers pregnancy, the reproductive system, healthy relationships, sexual orientation and gender identity, coercion and consent, abstinence, birth control, online safety, condoms, preventing HIV and STIs, STD testing, decision making, and communication. FLASH is delivered in schools by sexuality educators trained by FLASH curriculum developers on program implementation, curriculum components, and how to answer student questions.

Research summary: FLASH was evaluated using a randomized controlled trial involving 1,734 9th and 10th grade youth recruited from seven school districts in the midwestern and southern United States (Coyle et al. 2021). The study found that among the subgroup of youth who were sexually inexperienced at baseline, youth participating in FLASH were significantly less likely to report having had vaginal sex without condoms or other birth control in the prior three months than youth in the control group were (effect size = -0.67). This impact was measured three

² Cisgender is a term that describes individuals whose current gender identity is the same as the sex they were assigned at birth (CDC, n.d.).

months after the program ended. The study showed no statistically significant impacts on any of the other sexual behavior outcomes that were assessed. The study met the review criteria for a high rating.

IN·clued

Program summary: The IN·clued: Inclusive Healthcare – Youth and Providers Empowered Program is a program focused on reducing STIs and unintended pregnancies among LGBTQ youth ages 14–19. IN·clued provides a one-time, in-person, three-hour workshop to LGBTQ youth and two 90-minute youth-led workshops for health care providers and clinic staff. Program content can be delivered in various community settings including schools and community-based organizations, and at conferences. It is delivered by trained youth peer educators and adult sexuality educators. The content emphasizes health disparities, safer sex practices, health care self-efficacy, exam room interactions, and patient rights. Youth can also opt into a text message component that sends texts once a week for 12 weeks to reinforce information from the program.

Research summary: IN·clued was evaluated using a cluster randomized controlled trial involving 1,401 LGBTQ youth ages 14–22 who were recruited through Planned Parenthood affiliates in 16 states: Alaska, California, Connecticut, Iowa, Massachusetts, Michigan, Minnesota, Montana, Nebraska, North Carolina, Oregon, Rhode Island, Texas, Utah, Washington, and Wisconsin (Philliber 2021). The study found that 12 months after program end, participating youth were significantly less likely to report having had vaginal sex without using a condom in the past three months (effect size: -0.20). The study also found that, 12 months after program end, participating youth reported a significantly lower frequency of vaginal sex without using a condom in the past three months (effect size: -0.15). The study showed no statistically significant impacts on any of the other sexual behavior outcomes that were assessed. The study met the review criteria for a high rating.

LeadHer

Program summary: LeadHer, a female leadership and sexual health program, is designed for African American and Latina girls ages 14–19. LeadHer is composed of 30 hours of in-person group learning, two hourlong individual sessions with a case planner, and a smartphone app to reinforce program concepts. An adult facilitator and several peer educators (also youth) provide six five-hour lessons weekly for six weeks. LeadHer is implemented at schools (after school) or at community centers. The program focuses on more than a dozen topics including positive self-esteem, healthy relationships, birth control use, and STIs.

Research summary: LeadHer was evaluated using a randomized controlled trial involving 501 female--identifying youth ages 14–19 recruited through various events held by Alternatives For Girls (AFG) in the Wayne County, Michigan metro area (Malofeeva et al. 2022). The study found that 12 months after program end, girls participating in LeadHer reported a statistically significant reduction in unprotected sex compared with participants assigned to the control group (effect size = 0.50). The study showed no statistically significant impacts on any other assessed sexual behavior outcomes. The study met the review criteria for a high rating.

Linking Families and Teens (LiFT)

Program summary: LiFT is a family-based positive youth development program for families with youth ages 13-19 years old. In this six-hour in-person and text-based program, youth and their adult caregivers receive curriculum lessons both together and separately about communication skills, contraception, and how to effectively access sexual health care resources in the community. The program is completed in one or two sessions. At program end, youth can opt into receiving 12 text messages meant to reinforce program content. Adult participants can receive a booster phone call three to five weeks after the workshop to receive additional resources and support.

Research summary: LiFT was evaluated using a cluster randomized controlled trial involving 786 high school youth ages 13–19 and the adults parenting them (Brown et al. 2021). Recruitment spanned 21 rural community sites (such as schools and health care settings) across nine states. The study found that three months after program end, youth participating in the program were significantly less likely than youth who were not offered the program to report a pregnancy (effect size = 0.37). The study showed no statistically significant impacts on any of the other sexual behavior outcomes it assessed. The study met the review criteria for a high rating.

Peer Group Connection-High School (PGC-HS)

Program summary: PGC-HS is a school-based positive youth development program designed to support 9th grade youth with their transition into high school. The program focuses on topics related to youth development, such as goal setting, decision making, school attachment, resisting peer pressure, relationship skills, and motivation. PGC-HS program content is delivered by peer leaders in 18 45-minute sessions over the course of one semester or a whole school year.

Research summary: PGC-HS was evaluated using a randomized controlled trial involving 1,523 ninth grade youth in 18 high schools in New York City and rural North Carolina (Walsh et al. 2022). The study found that 12 months after baseline, youth participating in the program were significantly less likely to report ever having had vaginal sex (effect size = -0.14). The study showed no statistically significant impacts on any of the other sexual behavior outcomes that were assessed. The study met the review criteria for a high rating.

Plan A

Program summary: Plan A is a clinic-based teen sexual health education program for Black and Latina women ages 18 and 19. The content is delivered using a 23-minute video shown to clients in private or semi-private areas as they wait for their clinical appointment with a reproductive health provider. The video encourages effective contraceptive use, including long-acting reversible contraception and dual method use to protect against STIs and HIV.

Research summary: Plan A was evaluated using a randomized controlled trial involving 1,770 Black and Latina women recruited from eight health centers in California's Central Valley and the greater Oakland area (Jenner et al. under review). The study found that at nine months after

study enrollment, women who were offered the Plan A video as they waited for an appointment reported significantly fewer instances of vaginal sex without a condom (effect size = -0.10) and sex of any type without a condom (effect size = -0.09) in the preceding three months. The study showed no statistically significant impacts on any other assessed sexual behavior outcomes. The study met the review criteria for a high rating.

Pulse

Program summary: Pulse is a self-paced mobile health app designed for Black and Latina women ages 18–20. Pulse has six interactive modules covering reproductive health topics such as birth control, healthy relationships, consent, anatomy and physiology, STIs, and pregnancy and pregnancy testing. Within the app, there are 16 core activities available to users through text messages, interactive graphics, videos, and quizzes. Pulse also includes a clinic locator and calendar tools to facilitate accessing reproductive care. Six weeks after starting the program, Pulse delivers 16 pre-programmed text messages to reinforce program content.

Research summary: The program was evaluated using two randomized controlled trials. The first study involved 1,304 mostly Black or Latina women between the ages of 18 and 20 living in the United States or U.S. territories (Manlove et al. 2020). Participants were recruited online through social media. The study found that women participating in the program were significantly less likely to report having had sex without using a hormonal or long-acting contraceptive method in the past six weeks (effect size = -0.24). The study showed no statistically significant impacts on any of the other sexual behavior outcomes that were assessed. The study met the review criteria for a high rating.

The second study involved 1,013 Black and Latina women ages 18–20 living in the United States (Manlove et al. 2021). The study also recruited participants through social media advertisements. The study showed no statistically significant impacts on any assessed sexual behavior outcomes. It met the review criteria for a high rating.

Vision of You (VOY)

Program summary: VOY is a comprehensive sexual education program for youth ages 13-19. VOY is a self-paced, interactive, online curriculum that consists of nine 45-minute modules completed over a period of four to six weeks. The program focuses on topics related to abstinence and contraception, anatomy, STIs, consent, communicating with adults, healthy life skills and relationships, and future goals.

Research summary: VOY was evaluated using a randomized controlled trial involving 790 youth ages 13-19 who were recruited from nontraditional education settings in several rural regions in Virginia (Dainis 2021). The study found that nine months after the program ended, youth participating in the program were significantly less likely to report having had vaginal intercourse without using a condom or birth control in the past three months (effect size = -0.41). Nine months after the program ended, youth participating in the program also reported having significantly fewer sexual partners in the past three months (effect size = -0.19). The study

showed no statistically significant impacts on any of the other sexual behavior outcomes that were assessed. The study met the review criteria for a high rating.

Previously reviewed programs with past evidence of effectiveness and new studies reviewed

In this most recent update to the review findings, we sought to identify and assess any new evidence for programs examined in previous rounds of review. Many of the 43 previously-reviewed programs have been evaluated only once. However, a growing number of studies have sought to test how these programs perform when implemented on a broader scale, in different settings, or with different populations (Goesling 2015). In addition, a number of studies have extended their evaluations to incorporate other outcomes and time points.

As part of this update to the review findings, we identified nine new publications on seven programs examined in previous rounds of the review (Table 3).

- Two programs (Making Proud Choices! and Power Through Choices) had new evidence of longer-term impacts and/or youth outcomes that were not examined in publications we had reviewed before.
- One program (Families Talking Together) had new evidence of youth outcomes examined in previously assessed publications.
- One of these programs, Generations, has recent evidence of effectiveness but a new study did not meet quality standards so the assessment of Generations did not change.
- For the other three programs (Becoming a Responsible Teen, Choosing the Best, and Respecting the Circle of Life) examined in previous rounds of the review, the new publications did not meet the review criteria for evidence of effectiveness and did not change the conclusions of the previous reviews' assessments.
 - Becoming a Responsible Teen (BART) has evidence of effectiveness from data that was collected more than 20 years ago. Therefore, it exceeds the 20-year eligibility window to be considered “recent” and eligible to be included in the TPP Evidence Review list of programs with evidence of effectiveness.

Three of the nine new publications are reports or journal articles presenting the findings from studies funded through FYSB or OPA.

Summary of updated review findings

The programs that have been reviewed during both the previous and current rounds of review have more than one supporting impact study. Therefore, we present their findings both at the study level (Table 3) and at the program level, which pools the findings across studies for a given program (Table 4). Program-level ratings reflect the strength of findings from one or more studies that present findings on the same or different eligible outcomes. The program-level ratings are presented separately for each of the outcome domains on which a program has been evaluated.

Study-level findings

In this brief (Table 3) and on the review website (<https://tppevidencereview.youth.gov/EvidencePrograms.aspx>), we summarize the findings (favorable, potentially favorable, indeterminate, conflicting, potentially unfavorable, and unfavorable) *within* new studies of a particular program model assessed in both current and previous rounds in each of five outcome domains: (1) sexual activity; (2) number of sexual partners; (3) contraceptive use; (4) STIs or HIV; and (5) pregnancies. The strength of the body of evidence within the study is represented by both the color and quantity of the icons (Key 2).

Key 2. Strength of the findings from individual studies of programs by color and quantity of icons

















Symbol	Description
	Favorable findings: Two or more favorable impacts and no unfavorable impacts, regardless of null findings
	Potentially favorable findings: At least one favorable impact and no unfavorable impacts, regardless of null findings
	Indeterminate findings: Uniformly null findings
	Conflicting findings: At least one favorable and at least one unfavorable impact, regardless of null findings
	Potentially unfavorable findings: At least one unfavorable impact and no favorable impacts, regardless of null findings
	Unfavorable findings: Two or more unfavorable impacts and no favorable impacts, regardless of null findings

Table 3. Individual study ratings by outcome domain for new publications on programs assessed in the current and previous rounds of the review

Program and publication	Outcome domains						Study rating ^a	FYSB or OPA funded ^b
	Sexual activity	Number of sexual partners	Contraceptive use	STIs or HIV	Pregnancy			
Programs with evidence of longer-term impacts and/or youth outcomes not examined in previously assessed publications								
Making Proud Choices! (MPC)								
Cole et al. (2022)						High	Yes	
Power Through Choices (PTC)								
Oman et al. (2018)						High	Yes	
Programs with evidence of effectiveness; new publications did not change that assessment								
Families Talking Together (FTT)								
Guilamo-Ramos et al. (2020)						High	No	
Santa Maria (2020)						High	No	
Generations								
Lewin et al. (2019)	n.a.	n.a.	n.a.	n.a.	n.a.	Low	No	
Programs with no evidence of effectiveness, new publications did not change that assessment								
Becoming a Responsible Teen ³								
Shepherd et al. (2017)	n.a.	n.a.	n.a.	n.a.	n.a.	Low	No	
Choosing the Best								
Floren et al. (2022)	n.r.					High	No	
Shepherd et al. (2017)	n.a.	n.a.	n.a.	n.a.	n.a.	Low	No	
Respecting the Circle of Life								
Tingey et al. (2021)						High	Yes	

Note: Refer to Key 2 for icon descriptions. Empty cells indicate that the study did not examine program impacts on measures within that outcome domain. Programs are listed alphabetically within each evidence category. Becoming a Responsible Teen had evidence of effectiveness previously, but the study that presents this evidence has a publication date that is now outside of the 20-year eligibility window.

^a The review team established quality ratings for the publications listed in this table by following pre-specified criteria to assess study design, attrition, baseline equivalence, reassignment of sample members, and confounding factors. Table 4 has a detailed description.

^b This column indicates which publications are reports or journal articles presenting the findings from studies of programs that were developed and tested with federal grant funding from FYSB or OPA.

n.a. = not applicable; following the procedures specified in the review protocol, the review team did not assess evidence of effectiveness for programs with a supporting impact study that received a quality rating of low.

n.r. = no findings presented that meet TPPER reporting standards.

³ Becoming a Responsible Teen did have evidence of effectiveness before; however, the study that presents this evidence has a publication date now outside the 20-year eligibility window.

Detailed descriptions of the new evidence of positive impacts available for three programs follow: (1) Families Talking Together (FTT), (2) Making Proud Choices! (MPC), and (3) Power Through Choices (PTC).

Families Talking Together (FTT)

Program summary: Families Talking Together is a single-session, 45-to-60-minute parent-based program that aims to increase parents' effective communication and parenting skills, build parent-adolescent relationships, and teach adolescents assertiveness and refusal skills. The program is designed for African American and Hispanic caregivers of youth ages 10–14 and can be delivered by a health care professional to caregivers, individually or in small group settings. The caregivers receive a follow-up check-in call placed one month after the session.

Research summary: FTT was evaluated in two previous studies, which were reviewed in earlier rounds of the HHS TPP Evidence Review. The first study was a randomized controlled trial involving 264 African American and Hispanic youth recruited in the waiting room of a community-based pediatric health clinic in New York City (Guilamo-Ramos et al. 2011a). This first study found that nine months after the program ended, youth in the treatment group were significantly less likely to report ever having engaged in vaginal intercourse and reported significantly lower frequency of sexual intercourse in the past 30 days than youth in the control group. The second study was a randomized controlled trial involving 2,016 African American and Hispanic youth recruited from New York City middle schools (Guilamo-Ramos et al. 2011b). This study did not show statistically significant impacts on any assessed sexual behavior outcomes. Both of these studies met the review criteria for a high rating.

In the current round of review, we assessed two more recent studies of FTT. The first evaluated FTT in a randomized controlled trial involving 900 mother-child dyads from a pediatric clinic in New York City (Guilamo-Ramos et al. 2020). The study found that 12 months after study enrollment, youth in the program group were significantly less likely to report having had vaginal sex (effect size = -0.84) and having had their sexual debut in the past 12 months (effect size = -0.76). This study did not show statistically significant impacts on any other assessed sexual behavior outcomes. The study met the review criteria for a quality rating of high.

The second study evaluated a different version of FTT that included an education program on HPV vaccination (FTT + HPV) in a randomized controlled trial involving medically underserved youth ages 11–14 (Santa Maria 2020). Parents and their children were recruited as dyads from 22 after-school programs and 19 charter schools in the Houston, Texas, area. The study found at both one month and six months after study enrollment that youth who had received FTT + HPV and those in the control group were not significantly different in their reports of ever having had oral, vaginal, or anal sex. This study met the review criteria for a high quality rating.

Making Proud Choices! (MPC)

Program summary: Making Proud Choices! is a comprehensive sexuality education program that aims to provide youth with the knowledge, confidence, and skills necessary to abstain from sex

or use condoms if they choose to have sex. The MPC program has been revised five times over the past two decades, but the overall goals and messages of the curriculum have not changed. At the time of the current round of review, there were three versions of the MPC curriculum for different implementation settings or populations: original, school, and out-of-home. The original edition consisted of eight one-hour lessons implemented in community settings; the school edition consisted of 14 40-minute lessons implemented in classroom settings; and the out-of-home edition consisted of 10 75-minute lessons implemented in juvenile justice settings, foster homes, or independent and transitional living facilities.

Research summary: The original version of the program was evaluated in one study, which was reviewed in a previous round of the HHS TPP evidence review. That study, published in 1998, examined the effectiveness of MPC using an individual-level random assignment design involving 6th- and 7th-grade African American youth in Philadelphia (Jemmott et al. 1998). The study found that three months after the end of the program, youth participating in MPC who were sexually experienced at baseline were significantly less likely to report having had sexual intercourse without a condom in the past three months, and reported a lower frequency of sexual intercourse without a condom. The study met the review criteria for a high rating. In the current round of review, we assessed a more recently published study of the current version of MPC that involved 2,035 male and female youth recruited from 15 high schools in Mobile, Alabama; Detroit, Michigan; St Louis, Missouri; and Cincinnati, Ohio (Cole et al. 2022). In this study, researchers examined the effectiveness of the MPC school edition using a cluster randomized controlled trial. The study found that six months after the end of the program, youth participating in MPC reported having had sex significantly fewer times in the past three months compared with youth in the control group (effect size = -0.10). The study met the review criteria for a high rating.

POWER Through Choices (PTC)

Program summary: POWER Through Choices is a comprehensive sexual health education program focused on teen pregnancy, HIV, and STI prevention, and is designed to serve youth in out-of-home care settings such as foster care and juvenile justice facilities. The program is 10 sessions long, with each session lasting 90 minutes and delivered once or twice a week for 5 to 10 weeks. The sessions include interactive skill-building activities that emphasize self-empowerment and the impact of choices.

Research summary: The results of an evaluation of PTC were presented in two publications, one of which met the review criteria and was reviewed in a previous round of the HHS TPP evidence review. That manuscript, published in 2016, documented an evaluation of PTC using a cluster randomized controlled trial involving 885 youth from 44 residential group homes in California, Maryland, and Oklahoma (Covington et al. 2016). Twelve months after the program ended, youth participating in PTC were significantly less likely to report having ever been pregnant or gotten someone pregnant. The study met the review criteria for a high rating. In the current round of review, we assessed a publication that presented six-month outcome data from the same study (Oman et al. 2018), which had not previously been reported. According to the study, six months

after the end of the program the youth participating in PTC were significantly less likely to have had sex without using birth control in the preceding three months (effect size = -0.20). In addition, when making slightly different analytic decisions, this study confirmed the 12-month findings for youth being significantly less likely to have ever been pregnant or gotten someone pregnant. The manuscript met the review criteria for a high rating.

Program-level findings














Below (Table 4) and on the review website

(<https://tppevidencereview.youth.gov/EvidencePrograms.aspx>), we summarize the available evidence (favorable, potentially favorable, indeterminate, conflicting, potentially unfavorable, and unfavorable) across studies on a particular program model in each of five outcome domains: (1) sexual activity; (2) number of sexual partners; (3) contraceptive use; (4) STIs or HIV; and (5) pregnancies. The strength of the body of evidence behind all studies that meet evidence standards for a given program model is represented by the color, quantity, and size of the icons (Key 1). Visitors to the review website may use this information to compare program models that match their outcome domain of interest, as well as the desired program type, population, age range, or implementation setting. In this brief, we only include program-level findings for the programs assessed in both the current and previous rounds of the review.

As shown in Table 4:

- Making Proud Choices! added data to each outcome domain (the previous study only had evidence in the sexual activity and contraceptive use domains). It now has a potentially favorable rating for the sexual activity domain (changed from a previous rating of indeterminate (null)) and has maintained its potentially favorable rating for the contraceptive use domain.
- Power Through Choices now has a potentially favorable rating for the contraceptive use domain and has maintained its potentially favorable evidence rating for the pregnancy domain.
- Families Talking Together has added data to the sexual activity domain and has maintained its potentially favorable rating for this domain.
- Although we reviewed new research on the Generations program, that research received a rating of low and therefore it did not add data or change the rating of the program.

Table 4. Evidence by outcome domain for programs assessed in the current and previous rounds of the review

Program/publication	Outcome domains				
	Sexual activity	Number of sexual partners	Contraceptive use	STIs or HIV	Pregnancy
Programs with evidence of longer-term impacts and/or youth outcomes not examined in previously assessed publications					
Making Proud Choices! (MPC)					
Power Through Choices (PTC)					
Programs with evidence of effectiveness, new publications did not change that assessment					
Families Talking Together (FTT)					
Generations					
Programs with no evidence of effectiveness, new publications did not change that assessment					
Becoming a Responsible Teen	n.a.	n.a.	n.a.	n.a.	n.a.
Choosing the Best	n.r.				
Respecting the Circle of Life					

Note: Refer to Key 1 for icon descriptions. Empty cells indicate that the study did not examine program impacts on measures within that outcome domain. Programs are listed alphabetically within each evidence category.

n.a. = not applicable; following the procedures specified in the review protocol, the review team did not assess evidence of effectiveness for programs with a supporting impact study that received a low quality rating.

n.r. = no findings presented that meet TPPER reporting standards.

Review procedures

For this update to the review's findings, the review team followed procedures similar to those used for prior rounds of the review. In March 2022, the team released a public call for studies, requesting new research for consideration. The team also identified studies through a comprehensive literature search that entailed keyword searches of electronic databases, manual searches of relevant academic journals and professional conference proceedings, and reviewed citations in recently published literature reviews and meta-analyses. The team screened the resulting studies against pre-specified eligibility criteria.

For studies that met the eligibility criteria, the team first assessed the quality and execution of each study's research design (Table 5). The reviewers assigned each study a quality rating of high, moderate, or low according to the risk of bias in the study's impact findings. A more detailed description of these ratings is in the version 6.0 review protocol, available online at the review website (<https://tppevidencereview.youth.gov/ReviewProtocol.aspx>). This round of the TPPER did not include a rereview of studies that were previously reviewed under earlier versions of the standards.

For the subset of studies that achieved a moderate or high quality rating, the review team extracted information on the features of the program being tested, evaluation setting, study sample, and research design, and detailed information on the program impact estimates. The review team then identified programs with evidence of effectiveness, defined as having a statistically significant favorable impact (and no adverse effects) on at least one priority outcome measured for either the full analytic sample or a subgroup defined by (1) gender or (2) sexual experience at baseline. The priority outcomes include sexual activity, number of sexual partners, contraceptive use, STIs or HIV, and pregnancy.

When the study team updated the review findings, we also changed the review criteria. We applied the changes when we reviewed the studies of the 25 programs described above. The first change to the review criteria is the new requirement for baseline equivalence for cluster randomized controlled trials (RCTs) to achieve a moderate rating. The second change is to the baseline equivalence criterion; TPPER now relies on the magnitude, not the statistical significance, of the difference in key characteristics to determine whether baseline equivalence has been satisfied or if a statistical adjustment is necessary to address small underlying differences between a treatment and control group. The third change is increased transparency in TPPER review approaches, as TPPER now provides detailed guidance on aspects of its review process (for instance, allowable imputation of missing data and how baseline equivalence is assessed for categorical data). In addition, TPPER is using a new approach to categorize and present credible evidence. There is an expanded rating scheme for outcome domains and program ratings that pool within outcome domains across studies for specific programs. More details on the review process and criteria are available on the review website.

Table 5. Summary of study quality ratings

Criteria category	Features of studies with the high study rating	Features of studies with the moderate study rating
Study design	Random or functionally random assignment	Random assignment design with high attrition or reassignment; Quasi-experimental design with a comparison group
Attrition	Random assignment studies that do not exceed What Works Clearinghouse standards for overall and differential attrition (cautious assumption)	Random assignment studies that exceed What Works Clearinghouse attrition standards; Attrition is not assessed in quasi-experimental designs
Baseline equivalence	Not assessed – samples are assumed to be equivalent by virtue of random assignment and low levels of sample attrition	The equivalence of the research groups is demonstrated at baseline, and systematically adjusted for in impact analyses
Reassignment	Analysis is based on original assignment to research groups	Not assessed, given the baseline equivalence requirement described above that ensures equivalence of the research groups
Confounding factors	At least two subjects or groups in each research group and no systematic differences in data collection methods	At least two subjects or groups in each research group and no systematic differences in data collection methods
Note:	Studies that do not achieve the high or moderate rating are given a “low” study rating. Refer to the protocol for more details on applying the study quality ratings.	

As described in the introduction, 3 programs with evidence of effectiveness were moved to the inactive programs list on the TPPER website (Table 6). Implementation information and reviewed evidence are still available to view on the website. Inactive programs may become active again in the future, at which point they will be moved to the active list of programs.

Table 6. Summary of programs moved to inactive list

Program name	Reason for inactive classification
Guy2Guy	Program is not being disseminated
Making a Difference!	Program's only evidence is older than 20 years
Respeto/Proteger	Program is not being disseminated

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Appendix

Table A1. Descriptions of studies reviewed that did not change assessments for programs previously reviewed

Program/publication	Quality rating ^a	Description
Programs with evidence of effectiveness, new publications did not change that assessment		
Generations		
Lewin et al. (2019)	Low	This publication presents the findings from a prospective quasi-experimental evaluation of the Generations program, a patient-centered medical home program for families that include teenage parents. This study received a low study quality rating because it is a quasi-experimental design that does not demonstrate that the treatment and control groups were sufficiently similar before the introduction of the program.
Programs with no evidence of effectiveness, new publications did not change that assessment		
Becoming a Responsible Teen¹		
Shepherd et al. (2017)	Low	This publication presents the findings from a study of two programs: Becoming a Responsible Teen, a comprehensive sexuality education program, and Choosing the Best Path, an abstinence-only sexuality education program. This study received a low study quality rating because there was only one school in each condition.
Choosing the Best		
Floren et al. (2022)	High	This publication presents findings from a cluster randomized controlled trial of Choosing the Best, an 8-session sexual risk avoidance program delivered to 9th graders during regular health classes. This study involved 1,143 youth ages 14 to 17 in two school districts in suburban Georgia. The study did not report any findings on sexual initiation that meet TPPER reporting standards – the study findings do not account for the clustered study design.
Shepherd et al. (2017)	Low	This publication presents the findings from a study of two programs: Becoming a Responsible Teen, a comprehensive sexuality education program, and Choosing the Best Path, an abstinence-only sexuality education program. This study received a low study quality rating because there was only one school in each condition.
Respecting the Circle of Life		
Tingey et al. (2021)	High	This publication presents findings from a randomized controlled trial of Respecting the Circle of Life, an eight-lesson comprehensive sexual and reproductive health education program for Native American youth. The study involved 534 youth ages 11–19 in a rural reservation community in the southwestern United States. The study found no evidence of favorable program effects on participants' history of vaginal sex at 9 or 12 months after the program.

^a The review team established quality ratings for the publications listed in this table by following pre-specified criteria to assess study design, attrition, baseline equivalence, reassignment of sample members, and confounding factors. Table 5 has a more detailed description of the study quality ratings.