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OPA BRIEF

Teen Pregnancy Prevention Programs for American Indian and Alaska Native Youth

The health and well-being of American Indian (AI) and Alaska Native (AN) adolescents remains a national priority, as AI/AN youth face disproportionate risk for many adverse health and social outcomes. Teen birth rates among AI/AN populations were the highest among all ethnic groups in 2017, with 32.9 births per every 1,000 AI/AN adolescent females ages 15 to 19.[1] The teen birth rate among AI/AN adolescent females was two and a half times the rate for white adolescent females. AI/AN youth also face higher risk for rates of sexually transmitted diseases (STDs) and infections (STIs). In 2015, AI/AN youth ages 15 to 24 had the second highest rates of chlamydia and gonorrhea among racial-ethnic groups in the United States, with both surpassing the national average.[2] Despite declining rates of teen births and progress toward preventing, diagnosing, and treating STIs, risky sexual behavior continues to have public health implications for AI/AN youth. The U.S. Department of Health and Human Services, through the Office of Adolescent Health's (now Office of Population Affairs) teen pregnancy prevention (TPP) Program and the Family and Youth Services Bureau's Tribal Personal Responsibility Education Program, is working to identify effective programs that address these issues by funding the development and evaluation of targeted TPP programming for AI/AN youth.

To identify programs shown to improve these outcomes, the Office of Population Affairs contracted with Mathematica to conduct a systematic review of evidence on TPP programs for AI/AN youth. First, we assessed the quality or rigor of the research. Then we examined each program's effectiveness on behavioral outcomes, such as sexual activity and contraceptive use, as well as factors that might be predictive of future sexual risk behavior,[3] such as knowledge about the risks of HIV/STIs, self-efficacy to prevent risky behavior, and intentions to engage in risky behavior. In this brief, we highlight the programs that research has shown to be effective on any of these outcomes (see box on systematic review methods), identify elements these programs have in common, and discuss some promising programs that have some suggestive evidence of effectiveness but need rigorous research to confirm these results.

We identified 15 studies that examined program effectiveness for AI/AN youth. Among those, only four studies of three programs met evidence standards (two studies assessed the same program). None of the programs reduced sexual risk behaviors of AI/AN youth. However, these three programs had favorable effects on predictors of future risky sexual behavior: Circle of Life (COL), Multimedia Circle of Life (mCOL), and Respecting the Circle of Life (RCL). Of note, mCOL is an adaptation of COL that was modified for a younger population (preteens) and translated to an online, multimedia format. We also identified three promising programs worthy of further study that showed favorable effects on either behavioral outcomes or knowledge and attitudes about sex but need additional research to confirm the findings: Discovery Dating, Native Students Together Against Negative Decisions (Native STAND), and Unzip the Truth.

Programs that had favorable effects on predictors of future risky sexual behavior

Program	Behavioral outcomes	Increased knowledge about HIV/STI risks	Improved self-efficacy	Increased intent to use condoms
Respecting the Circle of Life (RCL)	0	✔	✔	✔
Circle of Life (COL)	0	✔	–	–
Multimedia Circle of Life (mCOL)	0	✔	✔	–

Note: ✔ = improved outcomes; 0 = did not improve outcomes; blank cells indicate the outcome was not measured.

All three programs with rigorous evidence improved knowledge about HIV/STI risks. Two of the three programs also found that improved knowledge persisted six to nine months after the end of the program, which suggests that effects on knowledge might be sustained.

Two programs with rigorous evidence improved self-efficacy. One of the programs improved self-efficacy to resist peer pressure and self-efficacy to avoid sexual risk. A second program improved condom use self-efficacy.

One program with rigorous evidence improved intention to use condoms. No other programs looked at outcomes related to sexual intentions.

None of the effective programs changed behavioral outcomes. Two programs were designed for youth ages 14 or younger. These studies might have had challenges detecting effects on behavioral outcomes as the rates of sexual activity for the study populations were relatively low—ranging from 4.5 to 7 percent. The third program studied slightly older youth, with an age range of 13 to 19 and a mean age of 15. The population in this study had higher rates of sexual activity, yet the study did not find effects on behavioral outcomes either immediately after program completion or at a 6- and 12-month follow-up.

The three effective programs all focused on both preventing teen pregnancy and reducing HIV/STI risk. All three programs focused heavily on developing knowledge about reducing HIV risk, increasing condom use self-efficacy, influencing youth attitudes and behavioral intentions, and empowering youth to make informed decisions. All programs strongly emphasized understanding the facts about the risk of transmitting HIV and STI but also included an emphasis on teen pregnancy.

The three programs all relied on community support and involvement. All of these programs involved community members, including elders, respected leaders, health professionals, peer educators, and parents, in program development and implementation to build trust and credibility. Two of the programs included a parent component that engaged the youth and a trusted adult in one joint session. Though the third program did not feature a parent component, it relied extensively on parent support and buy-in for participation in the study; parents and guardians were invited to attend an informational meeting hosted by project team members, where parents learned about the project and were able to ask questions.

Only 15 studies have looked at program effectiveness, and among those, only four met evidence standards. Research on TPP for AI/AN youth is still limited.[4] Additional evidence would help policymakers better understand ways to improve outcomes for this at-risk population.

Promising programs

Three additional programs show some promise: Discovery Dating, Native STAND, and Unzip the Truth. The studies of these programs report favorable effects in the domains of knowledge, attitudes, self-efficacy, and sexual risk behaviors. However, these studies did not meet the evidence quality standards for this review,[5] and therefore the findings should not be considered valid. The three promising programs are similar to the programs with evidence of effectiveness in their strong emphasis on community involvement, suggesting that community involvement might be a critical component in improving teen outcomes among this population.

The lack of rigorous research on TPP programs for this population suggests that more rigorous research is needed to add to the knowledge base. Implementing and evaluating these programs for such dispersed and highly mobile populations can be a challenge, often resulting in inconclusive results.[6] However, the field is persisting in trying new strategies for programming and generating rigorous evidence, with evaluations of several AI/AN-focused programs currently underway.

Systematic review methods

The findings presented in this brief reflect a systematic review of TPP programs for AI/AN youth. The search included studies that were published from 2006 to 2018. The search was designed to capture not only the results from impact evaluations, but also articles presenting the results from outcome evaluations, implementation studies, and studies describing the program development process.

The literature search yielded 1,504 references that were screened against a set of eligibility criteria. Studies that were eligible for inclusion in the review had the following characteristics: (1) used randomized controlled trials (RCTs) or quasi-experimental designs (QEDs) or single-group pre-post studies; (2) were published from 2006 to September 2018; (3) focused on AI/AN youth and TPP; and (4) captured baseline data. We identified 15 studies of 11 programs eligible for inclusion in the review.

We assessed the quality of evidence from the 15 studies by applying standards adapted from the TPP Evidence Review.[7] These standards were used to systematically examine features of the study design and evaluation implementation, such as sample attrition (study participants who did not respond) and similarity of comparison groups at baseline. We considered programs to have rigorous evidence if they had evidence from one of three types of studies: (1) RCTs with low levels of sample attrition and statistical controls for any baseline differences between comparison groups, (2) RCTs with high attrition or QEDs that demonstrated comparison groups were similar at baseline on demographic characteristics and a measure of the outcome, or (3) studies that used multiple methods to address both selection bias and confounding factors and conducted sensitivity analyses to demonstrate that the results were robust to alternative design and analytic approaches. We identified four studies of three programs that had rigorous evidence about the effects of TPP programming on the determinants of risky sexual behavior for AI/AN youth.

Studies that did not have rigorous evidence were considered for their ability to contribute evidence as a promising program. A promising program can fall into one of two primary categories: (1) evidence from RCTs with high attrition that lack baseline equivalence, or QEDs that are unable to establish baseline equivalence but demonstrate a pattern of results[8] that are in the right direction and favor the treatment group, or (2) evidence from pre-post studies with no comparison group that demonstrate a pattern of results that show that the program likely influences positive outcomes for participants. Using these criteria, we identified three programs that had evidence that was potentially promising.

Among studies rated rigorous, we categorized effects that were statistically significant ($p < 0.05$) or substantively important ($|\text{effect size}| \geq .25$) as favorable or unfavorable. Favorable effects are in a beneficial direction and unfavorable effects are in a harmful direction. We rated programs as effective on the outcome domain of interest if there was at least one favorable effect and no unfavorable effects. We rated programs as having unfavorable effects on the outcome domain of interest if there was at least one unfavorable effect and no favorable effects. We considered a program to have mixed effects if there was at least one favorable effect and one unfavorable effect within the outcome domain. We rated programs with neither statistically significant nor substantively important effects as not having an effect. The outcome domains of interest were behaviors, knowledge, intentions, and self-efficacy related to contraceptive use and decision making.

Table 1. Characteristics of programs that had rigorous or promising evidence on teen pregnancy prevention for AI/AN youth

Intervention	Mode of intervention	Primary setting	Length	Type of facilitator	Program description
Programs that had rigorous evidence					
Respecting the Circle of Life (RCL) [Tingey et al. 2015]	Group	Community-based	Short	Trained facilitators	RCL aims to increase condom use self-efficacy and improve knowledge, efficacy, and attitudes about reducing HIV risk. In the study, youth enrolled in a summer camp took part in the intervention, which was implemented over eight consecutive four-hour weekdays. Each day's activities included 90 minutes of basketball, a 30-minute lunch, and a 90-minute educational lesson on the RCL curriculum. Facilitators took part in a one-week, 40-hour training.
Circle of Life (COL) [Kaufman et al. 2014]	Group	School-based	Short	Community members	COL is a targeted health curriculum for HIV and STD prevention with an emphasis on skill building and role-playing. The program is a 30-hour curriculum that is delivered over a three-month period. The curriculum was developed specifically for AI/AN youth in middle school to reflect specific cultural practices. Community members teach the course.
Multimedia Circle of Life (mCOL) [Schwinn et al. 2015; Kaufman et al. 2018]	Individual/ group	Online and community-based	Short	Community members	mCOL is an adaptation of COL that was modified for a younger population of preteens and translated into an online, multimedia format. The program includes seven online sessions lasting 20 to 25 minutes each and seven group discussions lasting one hour each. Trained community members facilitate group discussion.
Programs that had promising evidence					
Unzip the Truth [Rink et al. 2016]	Group	Community-based	Short	Near-peer community members	Unzip the Truth aims to provide information to young men ages 18 to 24 on STIs and HIV, the characteristics of healthy relationships, and effective communication strategies with a partner. The program is a three-session curriculum, with each session lasting 1.5 to 2 hours. The curriculum was developed using the Theory of Reasoned Action as a theoretical foundation. In the study, male outreach workers from the community who were five to six years older than the participants facilitated the sessions.
Discovery Dating [Scow et al. 2011]	Group	School-based	Medium	Program staff	Discovery Dating is a healthy relationship curriculum that intends to prevent teen pregnancy, domestic violence, and sexual assault. The program focuses on exploring one's personal values, the traits of others, and making informed decisions. In the study, middle school students ages 12 to 14 attended a weekly 45-minute Discovery Dating class over one semester. Staff members of the Wise Women Gathering Place co-taught classes for the program.
Native STAND [Smith et al. 2011]	Group	School-based	Medium	Teachers or counselors	Native STAND is a healthy decision-making curriculum that helps youth develop the skills to maintain and promote sexual health, while becoming a peer educator. The program includes 29 sessions held once a week for 1.5 to 2 hours with 9th-grade students. Session topics include healthy relationships, reproductive health, and STI/HIV information, among others. Two or three teachers or counselors served as adult facilitators for the program during the study.

Suggested citation: Knab, Jean, Michael Levere, Diana McCallum, and Susan Zief. "*Teen Pregnancy Prevention Programs for American Indian and Alaskan Native Youth.*" Washington, DC: U.S. Department of Health and Human Services, Office of Population Affairs, January 2020.

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Endnotes

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[2] Indian Health Service, and Centers for Disease Control and Prevention. "Indian Health Surveillance Report — Sexually Transmitted Diseases 2015." Rockville, MD: U.S. Department of Health and Human Services, 2018.

[3] Glassman, J. R., H. M. Franks, E. R. Baumler, and K. K. Coyle. "Mediation Analysis of an Adolescent HIV/STI/Pregnancy Prevention Intervention." *Sex Education*, vol. 14, no. 5, 2014, pp. 497–509; Kirby, D. "Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases." Washington, DC: National Campaign to Prevent Teen and Unplanned Pregnancy, 2007.

[4] For comparison, a recent brief on evidence about programs that help reduce repeat pregnancies considered 60 studies of program effectiveness, 20 of which met standards. Harding, Jessica F., Jean Knab, Diana McCallum, and Susan Zief. "Programs That Help Teen Parents: Delaying Subsequent Children." Washington, DC: U.S. Department of Health and Human Services, Office of Adolescent Health, August 2018.

[5] The study of Discovery Dating (Scow et al. 2011) used a quasi-experimental design that has a confounding factor. The study of Native STAND (Smith et al. 2011) compared outcomes before and after the intervention, but did not have a separate comparison group. The study of Unzip the Truth (Rink et al. 2016) was a randomized controlled trial that did not demonstrate baseline equivalence.

[6] Farb, A. F., and A. L. Margolis. "The Teen Pregnancy Prevention Program (2010-2015): Synthesis of Impact Findings." *American Journal of Public Health*, vol. 106, no. S1, 2016, pp. S9–S15.

[7] Studies were reviewed using a study review guide from the TPP Evidence Review that was modified to include non-behavioral outcomes, including pregnancy and HIV/STI knowledge, intentions, and self-efficacy to avoid risky sexual behavior.

[8] A pattern of results means more than one finding that favors the treatment group. Results do not have to be statistically significant.

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