

Social Programs That Work Review

Evidence Summary for Teen Options to Prevent Pregnancy

HIGHLIGHTS:

- **PROGRAM:** An 18-month program for low-income adolescent mothers, delivered by nurse educators and a social worker, that aims to reduce rapid repeat pregnancy and promote healthy birth spacing.
- **EVALUATION METHODS:** A well-conducted randomized controlled trial (RCT) with a sample of 598 mothers, ages 10 to 19.
- **KEY FINDINGS:** For the full sample, the program reduced the rate of repeat pregnancy during the 20 months after random assignment by about half (21 percent of the treatment group became pregnant versus 39 percent of the control group). Based on state birth records obtained for the subsample of mothers ages 18 or 19 at the start of the study, the program reduced the rate of new births during the 30 months after random assignment by about one-third (24 percent of the treatment group gave birth versus 36 percent for the control group). Both effects were statistically significant.
- **OTHER:** The study's main limitation is that it was conducted within a single health system in Ohio; thus, a replication RCT in a different site would be desirable to confirm the results and establish that they generalize to other settings.

[Disclosure: Arnold Ventures funded a long-term follow-up of the TOPP RCT, discussed herein, that examined the program's effect on mothers' enrollment and persistence in college.]

I. Evidence rating: **NEAR TOP TIER**

The standard for Near Top Tier is:

Programs shown to meet almost all elements of the Top Tier standard, and which only need one additional step to qualify. This category primarily includes programs that meet all elements of the Top Tier standard in a single study site, but need a replication RCT to confirm the initial findings and establish that they generalize to other sites. This is best viewed as tentative evidence that the program would produce important effects if implemented faithfully in settings and populations similar to those in the original study.

II. Description of the Program:

The Teen Options to Prevent Pregnancy (TOPP) program was developed by OhioHealth, a large faith-based health system in Columbus, Ohio, and enrolled adolescent mothers from seven outpatient clinics and five hospital postpartum units serving seven counties in Central Ohio. TOPP's main goal is to reduce rapid repeat pregnancy and promote healthy birth spacing among adolescent mothers. The program, delivered by nurse educators and a social worker over an 18-month period, includes the following recommended components:

- Monthly one-on-one motivational interviewing sessions delivered by a nurse educator by telephone to help the young mothers identify a birth control plan that meets their needs;
- Free transportation to a local health care provider or a TOPP clinic to receive contraceptive services (*e.g.*, LARCs);
- At least one in-person visit from the nurse educator in the young mother's home or a community setting; and
- Access to a program social worker who, based on an initial psychosocial assessment of the participating mother and subsequent identification of service needs by the nurse educators, could refer her to appropriate support services.

The program developers emphasize two aspects of program implementation as essential to successful delivery of the above components: (i) initial training and rigorous ongoing coaching of the nurse educators in motivational interviewing, and (ii) the nurses' discussion of both contraceptive and non-contraceptive topics with the adolescent mothers.

The program's cost is approximately \$5,800 per participant (in 2020 dollars). This includes the cost of some items, such as contraceptives, that are generally covered by Medicaid.

[Click here for the Teen Options to Prevent Pregnancy website.](#)

III. Evidence of Effectiveness:

Study Design:

This program was evaluated in an RCT with a sample of 598 low-income adolescent mothers between the ages of 10 and 19 (average age 18) who (i) were over 28 weeks pregnant or less than nine weeks post-partum, (ii) enrolled in Medicaid, and (iii) spoke English. Fifty-three percent of sample members were non-white (*i.e.*, black, Hispanic, or other/multiracial) and 91 percent lived in households that had received Supplemental Nutrition Assistance Program (SNAP) or Women, Infants, and Children (WIC) benefits in the 30 days prior to enrollment. Approximately half of the sample members (297) were randomly assigned to receive the TOPP program and half (301) were assigned to a control group that did not receive the program.

Post-program follow-up surveys were conducted via telephone, on average, 20 months after random assignment. State birth certificate records were obtained for the subsample of mothers who were age 18-19 at the start of the study, to measure births during the 30 months after random assignment. This subsample comprised 72 percent of the total sample. Based on the study's findings of sizable effects on repeat pregnancies and births, a longer-term follow-up was conducted to determine if these effects led to an increase in mothers' enrollment and persistence in college during the eight years after study entry, as measured with National Student Clearinghouse data.

Key Findings:

TOPP significantly reduced the likelihood of rapid repeat pregnancies and births. Approximately 20 months after random assignment, 21 percent of the TOPP group reported a repeat pregnancy versus 39 percent of the control group, and 10 percent of the TOPP group reported a repeat birth versus 21 percent of the control group. Both effects were statistically significant at the 0.01 level. In addition, based on state birth certificate records obtained for the subsample of mothers age 18-19 at the start of the study, TOPP had a sizable, statistically-significant effect on their subsequent births during the 30 months after random assignment (24 percent of the TOPP group gave birth versus 36 percent of the control group, $p=0.01$).

The effects on pregnancies and births may have been driven, in part, by increases in LARC usage—40 percent of the TOPP group reported using a LARC in the three months preceding the 20-month survey versus 27 percent of the control group; this difference was statistically significant at the 0.01 level. At the 20-month mark, there were no statistically significant differences between the two groups in likelihood of being sexually active, number of sexual partners, public assistance receipt, financial hardship, housing instability, health insurance coverage, or educational attainment (*i.e.*, current school enrollment and/or high school completion).

TOPP's effects on repeat pregnancies and births did not lead to longer-term effects on mothers' rates of college enrollment or persistence. Specifically, 24% of the TOPP group enrolled in a two- or four-year college within the eight years after study entry, versus 29% of the control group – a difference that was not statistically significant. The rates of college persistence (*i.e.*, enrollment for three consecutive semesters) were 6% in each group.

Summary of Study Quality:

This was a well-conducted RCT. Members of the TOPP and control groups were highly similar in their pre-program household and demographic characteristics and sexual behaviors. Sample attrition on the follow-up survey was low and balanced between the two groups, with 80 percent of TOPP group members and 78 percent of control group members completing the survey. The staff collecting survey data were appropriately kept unaware ("blinded") as to which individuals were assigned to the TOPP versus control groups. The effect on self-reported births was corroborated with official birth certificate records for the subsample of mothers age 18-19 at the start of the study. The study had virtually no sample attrition in measuring TOPP's long-term effects on mothers' college enrollment and persistence using National Student Clearinghouse data.

The researchers found that the program’s effects were consistent across a range of analyses that statistically controlled for different combinations of pre-program characteristics (*i.e.*, impacts were “robust to different covariate specifications”). All sample members were appropriately analyzed within the group to which they were originally assigned, consistent with an intention-to-treat analysis.

The study’s main limitation is that it was conducted within a single health system in Ohio; thus, a replication trial in a different health system would be desirable to confirm that these findings are valid and that they generalize to other settings.

IV. References:

Alicia Demers, Brian Goesling, Andrew Wen, and Jennifer Spiegel, *Longer-Term Educational Impacts of a Program to Promote Healthy Birth Spacing Among Adolescent Mothers*, Mathematica Policy Research, November 30, 2022.

Dara Lee Luca, Jack Stevens, Dana Rotz, Brian Goesling, and Robyn Lutz, “Evaluating teen options for preventing pregnancy: Impacts and mechanisms,” *Journal of Health Economics*, vol. 77, May 2021.

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Dana Rotz, Dara Lee Luca, Brian Goesling, Elizabeth Cook, Kelly Murphy, and Jack Stevens, *Final Impacts of the Teen Options to Prevent Pregnancy Program*, Mathematica Policy Research, July 2016.