

## **Randomized Controlled Trial of the Teen Options to Prevent Pregnancy (TOPP) Program**

Jack Stevens, Robyn Lutz, Ngozi Osuagwu, Dana Rotz, and Brian Goesling, “A randomized trial of motivational interviewing and facilitated contraceptive access to prevent rapid repeat pregnancy among adolescent mothers,” *American Journal of Obstetrics and Gynecology*, available online June 12, 2017.

### **Overview:**

This was a well-conducted randomized controlled trial (RCT) of the Teen Options to Prevent Pregnancy (TOPP) program—an 18-month program for low-income adolescent mothers that aims to reduce rapid repeat pregnancy and promote healthy birth spacing. The study, which had a sample of 598 mothers ages 10 to 19, found that TOPP produced sizable, statistically-significant reductions in repeat pregnancy during the 20 months after random assignment. Specifically, 21 percent of the TOPP group experienced a repeat pregnancy versus 39 percent of the control group. In addition, based on state birth records obtained for the subsample of mothers ages 18 or 19 at the start of the study, who comprised 72 percent of the total sample, 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). These effects may have been driven by the TOPP group’s being significantly more likely to use a long-acting reversible contraceptive (LARC). Forty percent of the TOPP group reported using a LARC in the three months prior to the 20-month survey versus 27 percent of the control group. The study’s main limitation is that it was conducted within a single health system in Ohio; thus, a replication RCT at a different site would be desirable to confirm the results and establish that they generalize to other settings.

### **Description of the program:**

The 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.<sup>1</sup>

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.

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<sup>1</sup> The study summarized here does not provide information on the program’s cost.

### **Study design:**

The study recruited 598 low-income adolescent mothers between the ages of 10 and 19 (average age 18) who (i) were 28 or more 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 benefits under the Supplemental Nutrition Assistance Program or Women, Infants, and Children program 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 ages 18 or 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.

### **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 ages 18 or 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 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. There were no statistically significant differences between the two groups in likelihood of being sexually active, number of sexual partners, or educational attainment (*i.e.*, current school enrollment and/or high school completion).

### **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 between ages 18 or 19 at the start of the study. 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.

**Additional source:**

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 ([linked here](#)).