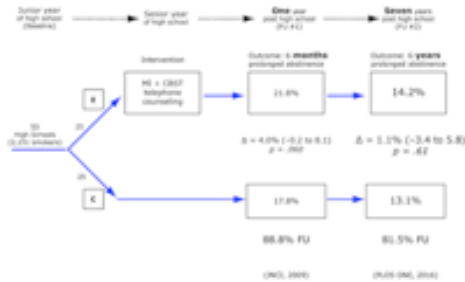


New findings for teen smoking cessation

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Experimental design and results of the Hutchinson study of high school smoking.

Image provided by Dr. Arthur V. Peterson Jr.

Cigarette smoking remains the primary cause of preventable, premature death in the United States today, killing more than 480,000 Americans every year and costing the nation more than \$170 billion annually in health care. Smoking prevalence among teens and young adults places these young individuals at risk for a lifetime of medical problems and premature death.

In 2009, the Hutchinson Study of High School Smoking, a 14-year study involving more than 2,000 teen smokers in 50 Washington state high schools, was the first randomized trial to report beneficial effect in helping teen smokers quit, at one year after high school intervention. The next question was to what extent the positive effects from teen smoking cessation intervention would endure, without additional intervention, into young adulthood. To address this question Dr. Arthur V. Peterson Jr., Patrick Marek, and colleagues in the Public Health Sciences Division at Fred Hutch, undertook the first-ever long-term follow-up of the adolescent study participants into young adulthood, seven years post high school. The results from their study were recently published in *PLoS One*.

The study included 2,151 high school smokers that were identified by a baseline survey of all juniors from 50 randomly selected Washington State high schools. Half of the high schools were randomly assigned to the experimental intervention. The intervention integrated two types of counseling: The first is known as motivational interviewing, a caring, nonjudgmental and respectful approach that emphasizes building motivation and confidence for quitting while the second, cognitive behavioral skills training, gives smokers the tools they need to learn how to quit. All baseline smokers in the 25 experimental high schools were proactively recruited to the intervention (with parental consent obtained prior to first contact for those who were not yet 18). The intervention in the experimental schools was delivered by a team of trained counselors by telephone, when the smokers were high

school seniors. The remaining half of schools served as control/comparison schools; teen smokers from these schools did not participate in the telephone counseling intervention.

Following up on the positive results at one year post-high school, the investigators undertook a new survey of the cohort at seven years post-high school, when most were in their mid-20s. The investigators found no evidence that the intervention impact lasted into young adulthood: among those in the experimental intervention, 14.2% achieved six-year prolonged smoking abstinence vs. 13.1% in the control condition, P value = .61). In addition, there were no differences in smoking abstinence at six years among the subgroups of daily smokers or less-than-daily smokers, nor among any other a priori subgroups. Overall, two-thirds of those who had quit at one-year post high school relapsed.

Despite the intervention's lack of long-term effect, the trial provided new insights. First, teens liked the trial's motivational interviewing-based telephone conversations; two-thirds of those invited participated in the intervention. "To get this large amount of participation by teen smokers was a terrific vote of confidence in telephone counseling that uses the motivational interviewing approach," said Dr. Peterson, lead author of the paper. "This result helped to overcome the long-term problem that teens have been historically difficult to recruit to interventions." Second, this proactive, personalized telephone intervention succeeded in helping teen smokers quit at one-year post high school. According to Dr. Peterson, "this result was a milestone: the first-ever demonstration in a general population of teens of an intervention with a positive impact on teen's quitting smoking."

Overall, the results from this follow-up study suggest that to help teen smokers quit smoking and remain smoke-free, new extended interventions are needed. "It is well known that individual motivations, and pressures to smoke, change substantially in the critical period after high school," Dr. Peterson said. "So, a sustained intervention that sticks with them during this period of change, aimed at helping them address their changing motivations and new situations to help them avoid relapse to smoking, makes good sense."

The National Cancer Institute funded the study, which also involved investigators at Group Health Research Institute in Seattle.

Citation:

[Peterson AV, Jr., Marek PM, Kealey KA, Bricker JB, Ludman EJ, Heffner JL](#). 2016. Does Effectiveness of Adolescent Smoking-Cessation Intervention Endure Into Young Adulthood? 7-Year Follow-Up Results from a Group-Randomized Trial. *PLoS One*. 11(2): e0146459.

See also:

[Kealey KA, Ludman EJ, Marek PM, Mann SL, Bricker JB, Peterson AV](#). 2009. Design and Implementation of an Effective Telephone Counseling Intervention for Adolescent Smoking Cessation. *Journal of the National Cancer Institute*. 101(20): 1393-1405.

[Peterson AV, Kealey KA, Mann SL, Marek PM, Ludman EJ, Liu J, Bricker JB](#). 2009. Group-Randomized Trial of a Proactive, Personalized Telephone Counseling Intervention for Adolescent Smoking Cessation. *Journal of the National Cancer Institute*. 101(20): 1378-1392.