



A Pilot Study for Linking Adolescent Patients to an Interactive Tobacco Prevention Program

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Abstract

Context: The American Academy of Pediatrics and professional guidelines recommend intervening with adolescents about avoiding tobacco use in the health-care setting. Barriers in the clinical setting limit consistent provision of this critical service.

Objectives: This pilot study compared 2 approaches for referring adolescents to an evidence-based tobacco prevention and cessation program in the outpatient setting. Secondary aims assessed tobacco use, knowledge, and program evaluation.

Design, Setting, and Participants: The study setting was a medical and dental clinic. Participants aged 13 to 18 received tobacco advice and instructions to work through “A Smoking Prevention Interactive Experience.” The program addresses health concerns of adolescents about tobacco use and is founded on behavioral change theories. The link to access it is featured on the website of the National Cancer Institute’s Research-Tested Interventions. Participants (N = 197) were randomized to 1 of 2 approaches (ie, a program link via e-mail or referral by a printed card).

Results: The program was accessed by 57% (112 of 197) of participants. Both referral approaches were equally effective. Non-Hispanics were twice as likely to access the program as Hispanics (adjusted odds ratio = 2.1, 95% confidence interval = 1.2-3.8, $P < .05$). Over 95% of participants identified themselves as nonusers of tobacco and evaluated the program as beneficial in increasing knowledge and motivation to remain tobacco-free.

Conclusion: Linking adolescent patients to an evidence-based tobacco prevention/cessation program at a community health clinic was highly promising and feasible. We present conclusions for future research.

Keywords

community health centers, pediatrics, smoking, prevention, health promotion, tobacco use, clinical preventive services, prevention initiation, link to intervention

Introduction

Smoking cigarettes remains the leading cause of preventable disease and death worldwide.¹ Data about the past 30-day use of cigarettes among US students in grades 6 to 12 were 9.2%, with 14.7% using 1 or more tobacco products.^{2,3} Adolescence is a critical time for prevention because 88% of initiation of tobacco use occurs before age 18.⁴ Most young daily smokers become adult smokers, with half experiencing premature mortality from cigarette use.⁴ Proven strategies for preventing initiation and achieving cessation among adolescents are critical.⁴

Despite widespread knowledge about consequences of smoking,⁵ delivery of the advice has not been provided routinely.⁶⁻¹⁶ Health-care agencies recommend anticipatory guidance about tobacco during checkups.^{8,10,14,17-19} Barriers

about addressing it have included insufficient clinician time and training, inadequate reimbursement,¹⁴ and lack of privacy because some parents wish to be present during interviews with patients.²⁰ Further, 75% of pediatricians perceived adolescents

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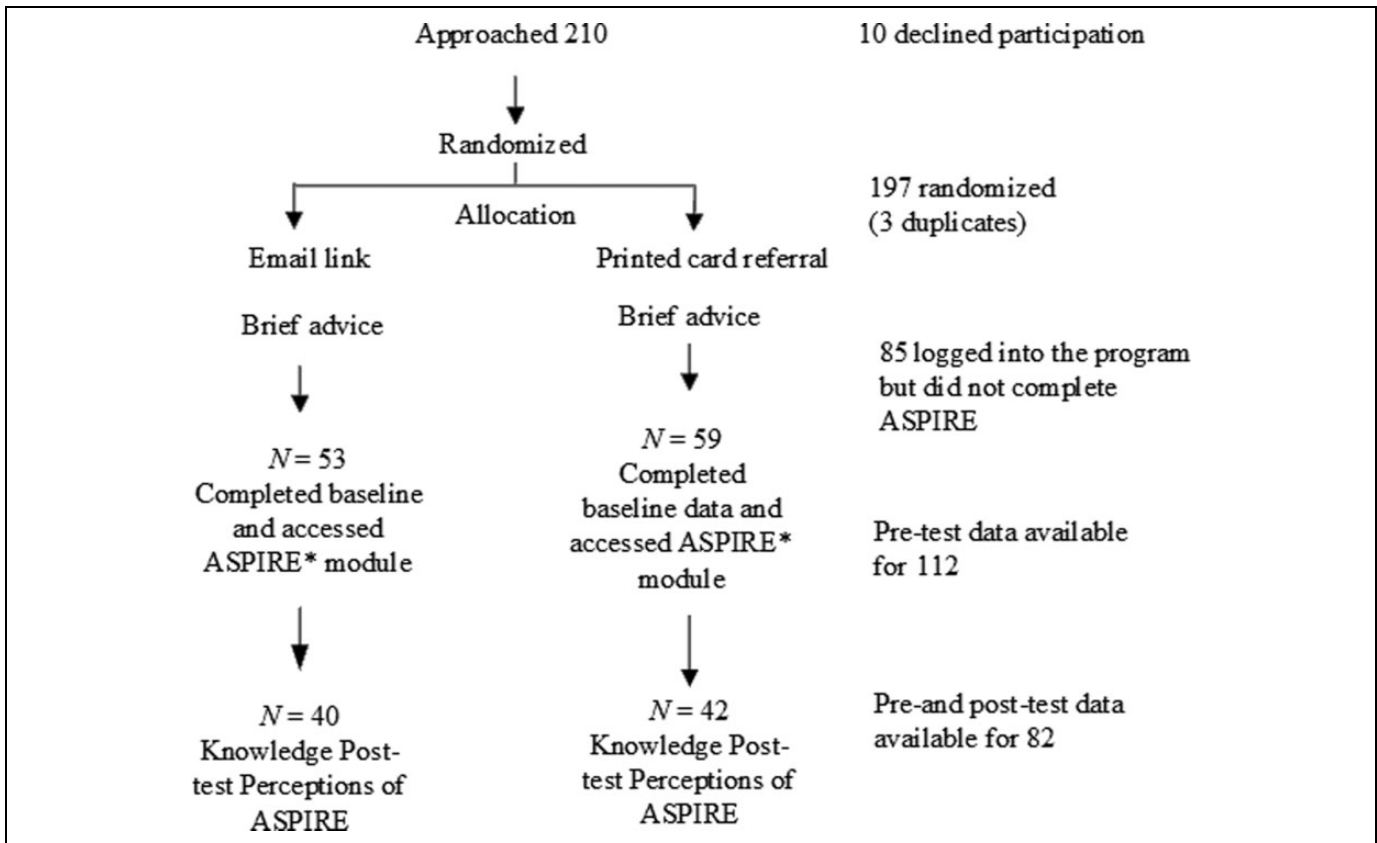


Figure 1. Consort-like diagram. *A Smoking Prevention Interactive Experience (ASPIRE) evidence-based program delivered via the Internet.

were unlikely to acknowledge smoking because of negative reactions from parents.¹⁴ In a national sample, two-thirds of adolescents at checkups did not recall receiving advice delivered about the prevention of tobacco use.¹⁶ The US Preventive Services Task Force described computer-delivered tobacco prevention programs during office visits may facilitate delivery of anticipatory guidance.²¹ If a new and innovative tool leveraged technology and minimized time when delivering preventive counseling about tobacco use, it could make a difference in helping adolescents to lead tobacco-free lives.

We describe a process to facilitate delivery of tobacco counseling. For the primary aim, we compare 2 approaches for referring outpatients to a program delivered by the Internet titled “A Smoking Prevention Interactive Experience (ASPIRE).” Originally tested in a group randomized trial, ASPIRE demonstrated a significant reduction in the initiation of tobacco use among participants presenting with the greatest number of risk factors²² for predicting uptake of smoking.²³ The first tested referral approach is termed “e-mail link” and involves e-mailing the ASPIRE URL via personal e-mail. The second tested approach is “card referral,” where clinicians handed a printed card with the URL to participants. In both approaches, clinicians provide a message to avoid tobacco with instructions to work through the program at a location with access to high-speed Internet. Secondary aims were to assess tobacco use, measure whether tobacco-related knowledge among participants was compromised, report evaluation of the

program by participants, and describe whether refinements were needed to enhance future implementation.

Methods

Setting

This randomized pilot study was conducted at a medical and dental clinic in Houston, Texas. Patients served cannot have access to health insurance. The clinic is located in close proximity to the most ethnically diverse county in the United States.²⁴ Data collection occurred from October 1, 2014, through June 1, 2015. The protocol was approved by the institutional review board at MD Anderson Cancer Center (2014-0023).

Data Collection

Researchers who were not employed at the clinic briefed pediatric clinicians about procedures. The recruitment goal was 200, determined by a sample size calculation set a priori. Written parental consent and adolescent assent were obtained for participants under age 18. Eligible participants had e-mail, high-speed Internet access, and the ability to read or speak English or Spanish. Participants were not required to use tobacco. Two hundred ten patients were eligible (Figure 1). Those who declined participation commented it was due to lack of time. Three participants were found to be duplicates, leaving a total sample of 197. At enrollment,

participants completed sociodemographics and tobacco use surveys.²⁵ Participants were randomized via a computer program to 1 of the 2 approaches (ie, e-mail link or card referral).

Description of ASPIRE

Participants were referred to ASPIRE.^{23,26} Its electronic link is posted on the website of the National Cancer Institute's Research-Tested Interventions.²⁷ The program addresses health concerns of adolescents about tobacco use prevention and cessation. It combines interactivity and entertainment to engage users through animations, videos of high school students, and task-oriented activities. It is a self-administered, 4-hour activity with 5 modules that can be completed in several sessions.²³ Module 1 is for committed nonsmokers, describing education about remaining tobacco-free. The other 4 modules are intended for smokers, with one of the modules describing benefits of quitting for smokers disinterested in quitting. Three modules provide practical strategies encountered during quitting that facilitate the likelihood of successful cessation. Because clinic outpatients would be completing activities unsupervised, the full-length program was modified to give participants the option of selecting the most relevant modules to work through. To receive compensation of a US \$30 gift card, they were required to work through one 20- to 30-minute standalone module and complete pre- and post-tests. Those who did not access the program within 6 days of registering could have received up to 13 reminders (ie, 10 e-mails and 3 telephone calls).

Pre- and Post-tests—Report of Program Evaluation by Participants

Knowledge questions were generated based on materials from the module selected by participants with multiple-choice responses. No feedback was provided to participants whether they answered correctly. Those scoring $\geq 70\%$ on knowledge were considered program graduates. After post-tests, participants were asked whether they learned new facts from the program, whether it influenced decisions not to use tobacco, and whether they would recommend it to family and friends.

Data Analysis

Descriptive analyses and the proportion of participants accessing the program by referral approach were computed. Logistic regression was used since accessing ASPIRE was a binary outcome. The likelihood ratio test was used to determine the overall statistical and numerical differences between referral methods. The analysis was adjusted for age, gender, and ethnicity. The percentage scoring $\geq 70\%$ between the 2 referral strategies was determined using logistic regression models. Covariates were adjusted for baseline differences between groups. Results were summarized with odds ratios (ORs) and 95% confidence intervals (CIs). The statistical significance level was set at $P < .05$.

Post hoc power was calculated for sample size based on access rates by referral strategy. A 2-group χ^2 test with a 0.050 2-sided

Table 1. Baseline Characteristics for Participants.

	ASPIRE Participants		
	Total (N = 112), n (%)	E-Mail Link (n = 53), n (%)	Card Referral (n = 59), n (%)
Demographics			
Age in years			
13	18 (16.1)	9 (17)	9 (15.3)
14	33 (29.5)	19 (35.8)	14 (23.7)
15	16 (14.3)	6 (11.3)	10 (16.9)
16	14 (12.5)	4 (7.5)	10 (16.9)
17	21 (18.8)	11 (20.8)	10 (16.9)
18	10 (8.9)	4 (7.5)	6 (10.2)
Gender			
Female	64 (57.1)	31 (58.5)	33 (55.9)
Male	48 (42.9)	22 (41.5)	26 (44.1)
Race/ethnicity			
White	5 (4.5)	2 (3.7)	3 (5.1)
Hispanic/Latino	42 (37.5)	21 (39.7)	21 (35.6)
Asian	38 (33.9)	17 (32)	21 (35.6)
American Indian	3 (2.7)	1 (1.8)	2 (3.4)
Black	20 (17.8)	10 (18.9)	10 (16.9)
Other	4 (3.6)	2 (3.8)	2 (3.4)
Tobacco use (yes)	2 (1.8)	0 (0)	2 (3.4)

Abbreviation: ASPIRE, A Smoking Prevention Interactive Experience.

Table 2. Logistic Regression Predicting Access to ASPIRE by Referral Approach.

Variable	Odds Ratio	95% CI	P Value
Referral approach (card vs e-mail link)	1.3	0.8–2.4	.312
Gender (female vs male)	1.6	0.9–2.9	.107
Age	1.0	0.9–2.9	.897
Ethnicity (non-Hispanic vs Hispanic)	2.1	1.2–3.8	.012

Abbreviations: ASPIRE, A Smoking Prevention Interactive Experience; CI, confidence interval.

test level would have 80% power to detect differences between a group 1 proportion, π_1 , of 0.535 and a group 2 proportion, π_2 , of 0.602 (OR: 1.31) when each group had 857 participants. A 2-group χ^2 test with 0.050 2-sided test level would have 15% power to detect the difference between a group 1 proportion, π_1 , of 0.535 and a group 2 proportion, π_2 , of 0.602 (OR: 1.31) when the sample size in each group had 99 participants.

Results

Participants were those working through a module and completing pre- and post-tests. We considered noncompleters as those completing enrollment but no other activities. Those completing pre-tests, accessing ASPIRE but were not completing the post-tests after reminders were dropouts. Baseline information and tobacco use were available for 197, however, 85 (43%) of the 197 did not login to the program (ie, noncompleters; Table 1 and Figure 1).

Table 3. Knowledge Questions and Mean Pre- and Post-test Scores for Those Completing Module About Remaining Tobacco-Free.^a

Item	Multiple-Choice Questions With Correct Responses	Pre-test Mean% Correct Responses	Post-test Mean% Correct Responses	P Value
1	Which statement about influences that encourage young people to smoke is false? A. The movie industry does not allow glamorous Hollywood movie stars to smoke in films. (Correct answer); B. Fun and flavorful cigarettes with tobacco are marketed to young people; C. There are candy-flavored tobacco products; D. Best friends who smoke often encourage friends to smoke tobacco	54	65	.664
2	Cigarettes can affect nonsmokers in the following ways: A. Breathing secondhand smoke can kill nonsmokers; B. Nonsmokers with asthma can experience flare-ups from breathing cigarette smoke; C. Parents and grandparents pass away from diseases caused by smoking; D. Smokers who are careless with cigarettes can burn holes in furniture; E. Cigarette smoke from a burning cigarette may irritate the eyes of nonsmokers; F. Includes A, B, C, D, and E (F is correct answer)	78	77	1.0
3	Reasons to never start smoking and stop smoking include: A. Smoking increases medical costs; B. American smokers inhale a total of 11 million pounds of tar into their lungs each year; C. Smoking harms babies during pregnancy; D. None of the above; E. All of the above (correct answer)	88	82	.302
4	There are several reasons not to smoke. Select the 1 best answer. A. Smoking can affect future happiness; B. Cars and clothing smell fresher; C. Have more money; D. B and C; E. A, B, and C (correct answer)	40	60	.000
5	What percentage of smokers wants to quit? A. 70% (correct answer); B. 10%; C. 50%; D. 20%	53	53	1.000
6	The facts about snus are: A. It can only be purchased in Canada; B. It can cause high-blood pressure, cancer, and pancreatic disease (correct answer); C. One pouch lasts all day; D. It is an illegal drug	77	68	.189
7	On average, smokers take ___ percent more sick days per year. A. 100%; B. 75%; C. 50%; D. 25% (correct answer).	22	30	.238
8	Cancer can affect: A. Young smokers; B. Old smokers; C. Athletes; D. Actresses; E. All of the above (correct answer).	96	94	.687
9	On average, worldwide each day ____ young people become addicted to tobacco. A. 80 000 to 100 000 (correct answer); B. 1 million to 2 million; C. 1 million to 500 000; D. 500 000 to 200 000	44	42	1.0
10	Other terms for hookahs are A. Water pipe; B. Hubble-bubble; C. Plumbing; D. Bong; E. All of the above (correct answer).	62	71	.189

^an = 77.

A total of 112 (57%) of the 197 connected to ASPIRE: 47.3% in e-mail link and 52.6% in card referral. At baseline, mean age was 15 years (standard deviation = 1.6). More females (57%) accessed the program than males. For breakdown by race/ethnicity, 37.5% were Hispanic/Latino, 33.9% were Asian, 17.8% were black, 4.5% white, and the remainder were "others." No use of tobacco or nicotine products was reported by 98% (Table 1). Among 82 completers, 94% (n = 77) selected the ASPIRE module for committed nontobacco users. Those remaining (n = 5; 6%) selected the ASPIRE module intended for smokers related to managing stress when trying to quit.

Process Evaluation: Comparison by Referral Approach

Using baseline characteristics, participants were compared to noncompleters. After adjusting for age, gender, and ethnicity, the e-mail link group did not differ from card referral (adjusted OR = 1.3, 95% CI = 0.8-2.4, *P* = .312; Table 2).

Non-Hispanics were more likely to connect than Hispanics (64% vs 48%, adjusted OR = 2.1, 95% CI = 1.2-3.8, *P* = .012).

Completers Versus Dropouts

Eighty-two (73%) of 112 were completers. We compared completers and dropouts on baseline sociodemographic characteristics and pre-test scores on knowledge. Using χ^2 and 2-sample *t* tests, significant association for differences by age or gender was determined between completers and noncompleters. However, those who completed had higher scores on pre-tests compared to dropouts at post-test (*P* = .03).

Pre-and Post-test Knowledge Scores and Report of Program Evaluation by Participants

Fifty percent scored $\geq 70\%$ on the pre-tests and maintained similar or higher scores on post-tests. Hence, those scoring $\geq 70\%$ on knowledge either at pre- or post-test were compared

between referral approaches. Seventy percent graduated in the e-mail link compared to 64% in the card referral. Adjusted logistic regression analysis indicated that the e-mail link group did not differ from card-referral group (adjusted OR = 1.4, 95% CI = 0.5-3.5, $P = .517$). Age, ethnicity, and gender were not significantly associated with knowledge scores (data not shown).

A secondary aim was to identify participants with compromised knowledge about tobacco use. We provide results for the 94% who selected the module covering education and support for those committed to remain tobacco-free (Table 3). At pre-test, 40% or more had compromised knowledge on questions 1, 4, 5, 7, and 9. Mean percent correct responses were compared between pre- and post-tests with McNemar test for related samples. Improvement at post-test was found for most items with statistical significance for item 4. Participants rated the program favorably: up to 97% learned new facts, 95% indicated the program influenced them about abstinence, and 95% would recommend to family and friends (data not shown).

Discussion

The 2 tested referral approaches to ASPIRE were equally effective, an encouraging finding supported by 57% of participants accessing ASPIRE. With a majority accessing ASPIRE, this can be considered an advancement in consistent delivery of tobacco prevention education to outpatients. Organizations interested in improving health-care quality are encouraged to use e-mail-based links and/or printed cards to refer patients to education about tobacco use. Unfortunately, 43% who enrolled did not access the program. They may have joined because of social desirability, parental influence, and monetary compensation but reconsidered their participation afterward. After the study, when clinic providers were asked for their thoughts about noncompleters of the study, they suggested some may not trust researchers. A possibility suggested by providers about facilitating future program dissemination could be to involve case workers employed at the clinic with whom patients have professional, trusting relationships.

Low reports of tobacco use were captured. It is possible participants were a very low-risk group for tobacco use but this is unknowable. Many were of Mexican or Pakistani origin, countries with norms about tobacco use more accepting than in the United States.²⁸ Providers were asked after the study for their explanations about why so few participants reported tobacco use. The providers felt it was logical participants were uneager to reveal tobacco use when accompanied by parents because of desiring to avoid disapproval. Physicians suggested improvements for increasing patient privacy for a future study.

Universally high agreement was indicated by study participants when asked if they learned new facts about tobacco, were influenced not to use tobacco, and would share the program with friends and family. Results indicated participants had relatively high preexisting levels of knowledge. Future research will involve pretesting and refining knowledge tests. Referral

to antitobacco modules such as ASPIRE by providers has potential for great promise, however, fine-tuning is needed.

No adverse impact of the pilot study was revealed. The physicians were appreciative of enhanced prevention activities made possible by research staff (ie, enrolling, tracking, placing follow-up reminders, and mailing compensation). Other health clinics may not be able to adopt the program without similar assistance. One solution could be to use automated systems such as computerized telephone and e-mail messaging approved by the Health Insurance Portability and Accountability Act. This may increase feasibility when scaling-up at additional sites.

Conclusions and Implications

Counseling about nicotine and tobacco use prevention and cessation among adolescents is one of the most meaningful investments in population health that clinicians can implement.²⁹ Additional work is needed to refine implementation and reduce barriers in order to efficiently link adolescents to an evidence-based program encouraging a tobacco-free lifestyle.

Authors' Note

Funders did not participate in the study design.

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Declaration of Conflicting Interests

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References

1. Eriksen M, Mackay J, Schluger N, Islami F, Drope J. *Tobacco Atlas*. 5th ed. Atlanta, GA: American Cancer Society, World Lung Foundation; 2015.
2. Arrazola RA, Singh T, Corey CG, et al; Centers for Disease Control and Prevention (CDC). Tobacco use among middle and high school students—United States, 2011-2014. *MMWR Morb Mortal Wkly Rep*. 2015;64(14):381-385.
3. Lee YO, Hebert CJ, Nonnemaker JM, Kim AE. Youth tobacco product use in the United States. *Pediatrics*. 2015;135(3):409-415.
4. US Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults*. Atlanta, GA: A Report of the Surgeon General; 2012.

5. Mitchell SG, Schwartz RP, Kirk AS, et al. SBIRT implementation for adolescents in urban federally qualified health centers. *J Subst Abuse Treat*. 2016;60:81-90.
6. Adams SH, Park MJ, Irwin CE Jr. Adolescent and young adult preventive care: comparing national survey rates. *Am J Prev Med*. 2015;49(2):238-247.
7. Akers AY, Davis EM, Jackson Foster LJ, et al. Parental report of receipt of adolescent preventive health counseling services from pediatric providers. *Patient Educ Couns*. 2014;94(2):269-275.
8. Boyle CA, Perrin JM, Moyer VA. Use of clinical preventive services in infants, children, and adolescents. *JAMA*. 2014;312(15):1509-1510.
9. Coker TR, Sareen HG, Chung PJ, Kennedy DP, Weidmer BA, Schuster MA. Improving access to and utilization of adolescent preventive health care: the perspectives of adolescents and parents. *J Adolesc Health*. 2010;47(2):133-142.
10. Hagan JF, Duncan PM, eds. 2008. *Bright Futures: Guidelines for Health Supervision of Children, Infants, and Adults*, Third Edition. Elk Grove Village, IL: American Academy of Pediatrics.
11. King BA, Dube SR, Babb SD, McAfee TA. Patient-reported recall of smoking cessation interventions from a health professional. *Prev Med*. 2013;57(5):715-717.
12. Merenstein D, Green L, Fryer GE, Dovey S. Shortchanging adolescents: room for improvement in preventive care by physicians. *Fam Med*. 2001;33(2):120-123.
13. Ozer EM, Adams SH, Lustig JL, et al. Increasing the screening and counseling of adolescents for risky health behaviors: a primary care intervention. *Pediatrics*. 2005;115(4):960-968.
14. Pbert L, Farber H, Horn K, et al; American Academy of Pediatrics, Julius B. Richmond Center of Excellence Tobacco Consortium. State-of-the-art office-based interventions to eliminate youth tobacco use: the past decade. *Pediatrics*. 2015;135(4):734-747.
15. Pepper JK, Gilkey MB, Brewer NT. Physicians' counseling of adolescents regarding e-cigarette use. *J Adolesc Health*. 2015;57(6):580-586.
16. Schauer GL, Agaku IT, King BA, Malarcher AM. Health care provider advice for adolescent tobacco use: results from the 2011 National Youth Tobacco Survey. *Pediatrics*. 2014;134(3):446-455.
17. Fiore MC, Jaén CR, Baker TB. *Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline*. Rockville, MD: US Department of Health and Human Services. Public Health Service; 2008.
18. Patnode CD, O'Connor E, Whitlock EP, Perdue LA, Soh C, Hollis J. Primary care-relevant interventions for tobacco use prevention and cessation in children and adolescents: a systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2013;158(4):253-260.
19. Farber HJ, Groner J, Walley S, Nelson K; Section on tobacco control. Protecting children from tobacco, nicotine, and tobacco smoke. *Pediatrics*. 2015;136(5):e1439-e1467.
20. Van Hook S, Harris SK, Brooks T, et al; New England Partnership for Substance Abuse Research. The "Six T's": barriers to screening teens for substance abuse in primary care. *J Adolesc Health*. 2007;40(5):456-461.
21. United States Preventive Services Task Force. *Interventions to Prevent Tobacco Use in Children and Adolescents: Recommendation Statement*; 2013.
22. Wellman RJ, Dugas EN, Dutczak H, et al. Predictors of the onset of cigarette smoking: a systematic review of longitudinal population-based studies in youth. *Am J Prev Med*. 2016;51(5):767-778.
23. Prokhorov AV, Kelder SH, Shegog R, et al. Impact of A Smoking Prevention Interactive Experience (ASPIRE), an interactive, multimedia smoking prevention and cessation curriculum for culturally diverse high-school students. *Nicotine Tob Res*. 2008;10(9):1477-1485.
24. Emerson M, Bratter J, Howell J, Jeanty P, Cline M. *Houston Region Grows More Racially/Ethnically Diverse*. Houston, Texas: Kinder Institute; 2012.
25. Rath JM, Villanti AC, Abrams DB, Vallone DM. Patterns of tobacco use and dual use in US young adults: the missing link between youth prevention and adult cessation. *J Environ Public Health*. 2012;2012:679134.
26. Prokhorov AV, Kelder SH, Shegog R, et al. Project ASPIRE: an interactive multimedia smoking prevention and cessation curriculum for culturally diverse high school students. *Substance Use Misuse*. 2008;10(9):1477-1485.
27. National Cancer Institute. Research-Tested Intervention Programs (RTIPs) A Smoking Prevention Interactive Experience (ASPIRE). <http://rtips.cancer.gov/rtips/program>. Accessed March 31, 2017.
28. Hipple B, Lando H, Klein J, Winickoff J. Global teens and tobacco: a review of the globalization of the tobacco epidemic. *Curr Probl Pediatr Adolesc Health Care*. 2011;41(8):216-230.
29. Maciosek MV, LaFrance AB, Dehmer SP, et al. Health benefits and cost-effectiveness of brief clinician tobacco counseling for youth and adults. *Ann Fam Med*. 2017;15(1):37-47.

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