

Smoking Cessation in Young Adults

The theme of this issue is the critically important topic of young adult smoking cessation. Young adulthood is a time of many transitions, including changes in smoking behavior. Adolescents who experiment or smoke intermittently often progress to daily smoking in young adulthood.¹ For example, Tercyak et al.² reported that among 12th grade ever smokers (defined as persons who have ever smoked in their lifetimes), 39% were smoking more frequently or intensely by the following year. Some adults smoke their first cigarettes after the age of 18, but little initiation occurs after age 25.¹ There is evidence that smoking initiation has increased among young adults in recent years.³ Consistent with this, Tercyak et al. noted that among never smokers in high school, 25% initiated smoking in the year after 12th grade.² Young adulthood is also a time when some smokers make quit attempts. Unfortunately, young people who try to quit are likely to relapse, similar to older adults.¹ Often, it is with their first quit attempt that young smokers realize that they have become addicted to tobacco and will not be able to quit easily.

TOBACCO USE AMONG YOUNG ADULTS

Smoking prevalence among young adults (aged 18–24 years) in 2005 was 24%,⁴ a major decline from the 45.5% prevalence in 1965.⁵ Increases in both the number of never smokers (defined using the National Health Interview Survey definition as

persons who have never smoked 100 cigarettes in their lifetimes) and the number of ever smokers (defined using the National Health Interview Survey definition as persons who have smoked 100 cigarettes in their lifetimes) who have quit account for this decline.⁶ The prevalence of never smoking among young adults increased from 47.6% to 68.4% from 1965 to 2005. The percentage of young adult ever smokers who have quit increased from 13.1% in 1965 to 23.9% in 1980 and was essentially unchanged (22.7%) in 2005.^{5,6} Despite these improvements, in 2005 there were still 6.8 million smokers aged 18 to 24 years.⁶

In assessing tobacco use or planning cessation interventions, we must keep in mind that young adults, particularly men, use forms of tobacco other than cigarettes. The prevalence of current tobacco use among young adults in 2005 was 33% for men and 21.5% for women.⁶ Our cessation messages and interventions must encompass all tobacco products.

Although cessation rates among young adults may have been flat recently, the proportion of heavy smokers (defined as smoking 25 or more cigarettes per day) declined from 15.1% in 1965 to 5.4% in 2005.^{5,6} In addition, young adults are nondaily smokers in higher proportions (24% in 2005) than are older adults (ranging from 18% among persons aged 65 years and older to 21% among persons aged 25–44 years).⁶ However, many young adults who do not smoke daily or who smoke

only a few cigarettes per day do not consider themselves to be smokers and therefore may not be receptive to the usual cessation messages, particularly those highlighting the health hazards of smoking.⁷

It is clear that there are significant differences in the prevalence of tobacco use and quitting behavior among different groups of young adults. National survey data suggest that White young adults have smoking rates more than 50% higher than Black or Hispanic young adults (National Health Interview Survey, unpublished data, 2005). Solberg et al.⁸ and Green et al.⁹ both found that smoking rates among non-college-educated young adults were at least double the rates of college educated young adults, a finding consistent with national data (National Health Interview Survey, unpublished data, 2005). Solberg et al.⁸ found that quit attempts, serious interest in quitting, and relapse rates did not vary by education level, whereas Green et al.⁹ found lower quit attempts among non-college-educated young adults. Fagan et al.¹⁰ reported that differences in quit attempts and intention to quit among young adults were explained by demographic (e.g., age, race) and social (e.g., income) factors in nondaily smokers and by nicotine dependence in daily smokers (with smokers who are more dependent less likely to make a quit attempt). Gruskin et al.¹¹ found that the lesbian, gay, and bisexual population had a higher smoking prevalence than the general

population, but that there is little literature on cessation interventions in this population.

Smoking cessation before or early in pregnancy is critical for reducing infant mortality rates and the number of babies born each year with low birthweight. Although smoking during pregnancy appears to be declining, adolescents and young women are more likely to smoke during pregnancy than are older women.¹² Pregnant women who smoke may not tell their physicians,^{13,14} making it difficult to ensure that they receive help in quitting. Researchers continue to explore interventions to reduce smoking during pregnancy, but preventing postpartum relapse is also critical.

CESSATION INTERVENTIONS IN YOUNG ADULTS

Focusing cessation interventions on young adults is critically important. Although never starting to smoke is the optimal end point, quitting before age 35 has been shown to result in a life expectancy comparable to that of never smokers.¹⁵ Yet as Lee and Kahende¹⁶ noted, most smokers quit after age 35, when the adverse health impacts of smoking are not completely reversible.

As noted by Solberg et al.,⁸ 73% of young adults who attempt to quit smoking in the previous year did not use any assistance. Similarly, Curry et al.¹⁷ found that young adults are more likely than older adults to make a quit attempt but are less likely than older smokers to use assistance when trying to quit. This study also reports that young adults who were heavier smokers or had greater educational attainment were more likely than other young adult smokers



Glamorized image of smoking designed to appeal to young adults.
Source. Photograph used with the permission of Getty Images.

to use pharmacotherapy when trying to quit.

Although cessation interventions are effective and highly cost-effective,¹⁴ health care professionals are not consistently providing these treatments. Solberg et al.⁸ found that only 2% to 13% of young adults reported receiving cessation assistance or follow-up from a physician's office, and Curry et al.¹⁷ found that young adult smokers were less likely than older smokers to have received advice to quit and to use pharmacotherapy. A correlate of use of pharmacotherapy was having received advice from a health care provider. Taken together, these studies suggest that young adults are less likely than older adults to be appropriately treated in the health care system.

By contrast to trials among adults, trials of various cessation interventions among adolescents have been largely disappointing. Young adults are the transition point between these 2 groups. However, as noted by Bader et al.,¹⁸ a review of the literature shows that the efficacy of most interventions has not been specifically tested in young adults, so the relative efficacy of the standard interventions in this group compared with older adults is unclear.

However, there is some reason to believe that interventions targeted to adults reach young adults. Cummins et al.¹⁹ reported that young adult daily smokers use quit line services in proportion to their population and that they respond to mass media promotion, even if the campaigns do

not focus on young adults. In an upcoming issue, Nelson et al.²⁰ suggest that smokers are heavier users of television and radio than nonsmokers are, with one third of smokers being regular daytime or late-night television viewers. These findings suggest opportunities for marketing cessation services to this population. Bader's focus group findings suggest that, not surprisingly, young adults want the interventions to be relevant to young adults, to respect individual choice, and to highlight the positive aspects of quitting.¹⁸

Macy et al.,²¹ in their prospective study of sustained abstinence among persons who quit smoking as young adults, found that 67% who had quit for at least 1 year maintained long-term abstinence (defined as more than 5 years). The strongest predictor of

avoiding relapse was becoming married to a nonsmoker (odds ratio=0.07). Other predictors were making 1 lifetime quit attempt, having as a young adult no more than 1 parent who smoked, and working in a smoke-free building. This study highlights the importance of the social environment in maintaining abstinence among smokers who make quit attempts.

MOVING FORWARD WITH A COMPREHENSIVE APPROACH

In theory, it should be somewhat easier for young adults to quit because of their potentially lower levels of addiction and fewer years living with tobacco use as a regular part of their daily lives. However, too few young adults try to quit, too few get assistance in quitting, and too many relapse. It is clear that we must increase their interest in quitting through media campaigns and other venues that reach young adults, increase their quit attempts, and improve their access to existing cessation interventions so that more quit attempts are assisted ones. We need to convey a strong message about cessation of all tobacco products, not just cigarettes, particularly for men. We also need to support young adults' quit attempts with environmental changes, such as increasing the price of tobacco products; making all workplaces and public places smoke free; encouraging smoke-free homes; and improving insurance coverage of pharmacotherapy approved by the US Food and Drug Administration and individual, group, and telephone cessation counseling. Only through a comprehensive approach to tobacco prevention and control can we prevent the onset

of tobacco use and ensure that cessation occurs as early in life as possible, thus averting the overwhelming burden of disease and death caused by tobacco use. ■

Corinne G. Husten, MD, MPH

About the Author

Corinne G. Husten is with the Office on Smoking and Health at the Centers for Disease Control and Prevention, Atlanta, Ga.

Requests for reprints should be sent to Corinne G. Husten, MD, MPH, Chief, Epidemiology Branch, Office on Smoking and Health, Centers for Disease Control and Prevention, 4770 Buford Hwy NE, Mailstop K-50, Atlanta, GA 30341 (e-mail: ch5@cdc.gov).

This editorial was accepted April 24, 2007.

doi:10.2105/AJPH.2007.117358

References

1. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, Ga: Centers for Disease Control and Prevention, Office on Smoking and Health; 1994.
2. Tercyak K, Rodriguez D, Audrain-McGovern J. High school seniors' smoking initiation and progress 1 year after graduation. *Am J Public Health*. 2007;97:.
3. *Results from the 2005 National Survey on Drug Use and Health: National Findings*. Rockville, Md: Substance Abuse and Mental Health Services Administration; 2006. Office of Applied Studies NSDUH Series H-30, DHHS publication SMA 06-4194.
4. Centers for Disease Control and Prevention. Tobacco use among adults—United States, 2005. *MMWR Morb Mortal Wkly Rep*. 2006;55:1145–1148.
5. Giovino GA, Schooley MW, Zhu B-P, et al. Surveillance for selected tobacco-use behaviors—United States, 1900–1994. *MMWR CDC Surveill Summ*. 1994;43:1–43.
6. Malarcher AM, Thorne SL, Asman K, et al. Surveillance for selected tobacco-use behaviors—United States, 1900–2006. *MMWR CDC Surveill Summ*. In press.
7. Husten CG, McCarty MC, Giovino GA, Chrismon JH, Zhu B. Intermittent smokers: a descriptive analysis of persons who have never smoked daily. *Am J Public Health*. 1998;88:86–89.
8. Solberg LI, Ashe SE, Boyle R, McCarty M, Thoele MJ. Toward a better understanding of smoking cessation among young adults. *Am J Public Health*. 2007;97:1421–1426.
9. Green MP, McCausland KL, Ziao H, Duke JC, Vallone DM, Heaton CG. A closer look at smoking among young adults: where should tobacco control focus its attention? *Am J Public Health*. 2007;97:1427–1433.
10. Fagan P, Augustson E, Backinger CL, et al. Quit attempts and intention to quit cigarette smoking among young adults aged 18–30 in the United States. *Am J Public Health*. 2007;97:1412–1420.
11. Gruskin EP, Greenwood GL, Matevia M, Pollack L, Bye LL. Disparities in smoking between the lesbian, gay, and bisexual population and the general population in California. *Am J Public Health*. 2007;97:1496–1502.
12. Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML. Births: final data for 2002. *Natl Vital Stat Rep*. 2003;52(10):1–113.
13. *Women and Smoking: A Report of the Surgeon General*. Rockville, Md: Centers for Disease Control and Prevention, Office on Smoking and Health; 2001.
14. Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence. Clinical Practice Guideline*. Rockville, Md: US Department of Health and Human Services; 2000.
15. Doll R, Peto R, Boreham J, Sutherland I. Mortality in relation to smoking: 50 years' observations on male British doctors. *BMJ*. 2004;328:1519–1527.
16. Lee C-w, Kahende J. Factors associated with successful smoking cessation—United States, 2000. *Am J Public Health*. 2007;97:1503–1509.
17. Curry S, Sporer AK, Pugach O, Campbell RT, Emery S. Use of tobacco cessation treatments among adult smokers: 2005 National Health Interview Survey. *Am J Public Health*. 2007;97:1464–1469.
18. Bader P, Travis HE, Skinner HA. Knowledge synthesis of smoking cessation among employed and unemployed young adults. *Am J Public Health*. 2007;97:1434–1443.
19. Cummins SE, Hebert KK, Anderson CM, Mills JA, Zhu S-H. Reaching young adult smokers through quit lines. *Am J Public Health*. 2007;97:1402–1405.
20. Nelson DE, Gallogly M, Pederson LL, Barry M, McGoldrick D, Maibach EW. Use of consumer survey data to target cessation messages to smokers through mass media. *Am J Public Health*. 2007;98: In press.
21. Macy JT, Seo D-C, Chassin L, Presson CC, Sherman SJ. Prospective predictors of long-term abstinence versus relapse among smokers who quit as young adults. *Am J Public Health*. 2007;97:1470–1475.