

Quitting Smoking Among Adults — United States, 2000–2015

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Quitting cigarette smoking benefits smokers at any age (1). Individual, group, and telephone counseling and seven Food and Drug Administration–approved medications increase quit rates (1–3). To assess progress toward the *Healthy People 2020* objectives of increasing the proportion of U.S. adults who attempt to quit smoking cigarettes to ≥80.0% (TU-4.1), and increasing recent smoking cessation success to ≥8.0% (TU-5.1),* CDC assessed national estimates of cessation behaviors among adults aged ≥18 years using data from the 2000, 2005, 2010, and 2015 National Health Interview Surveys (NHIS). During 2015, 68.0% of adult smokers wanted to stop smoking, 55.4% made a past-year quit attempt, 7.4% recently quit smoking, 57.2% had been advised by a health professional to quit, and 31.2% used cessation counseling and/or medication when trying to quit. During 2000–2015, increases occurred in the proportion of smokers who reported a past-year quit attempt, recently quit smoking, were advised to quit by a health professional, and used cessation counseling and/or medication ($p < 0.05$). Throughout this period, fewer than one third of persons used evidence-based cessation methods when trying to quit smoking. As of 2015, 59.1% of adults who had ever smoked had quit. To further increase cessation, health care providers can consistently identify smokers, advise them to quit, and offer them cessation treatments (2–4). In addition, health insurers can increase cessation by covering and promoting evidence-based cessation treatments and removing barriers to treatment access (2,4–6).

NHIS is an annual, nationally representative, in-person survey of the noninstitutionalized U.S. civilian population. The NHIS Sample Adult core questionnaire is administered to a randomly selected adult (referred to as the sample adult) aged ≥18 years in

* Objectives TU-4.1 and TU-5.1. <https://www.healthypeople.gov/2020/topics-objectives/topic/tobacco-use/objectives>.

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each sampled family. NHIS sample sizes and final response rates for sample adults for 2000, 2005, 2010, and 2015 were 32,374 (response rate = 72.1%), 31,428 (69.0%), 27,157 (60.8%), and 33,672 (55.2%), respectively. Current and former smoking were defined according to *Healthy People 2020* measures.[†] Persons attempting to quit included current smokers who stopped smoking for >1 day during the 12 months before the interview because they were trying to quit and former smokers who had quit during the past year. Former smokers who last smoked 6–12 months ago were considered to have achieved recent cessation success. Every 5 years, a supplemental cancer-control questionnaire is administered to NHIS sample adult respondents; the questionnaire contains questions on interest in quitting smoking, receipt of a health professional's advice to quit, and use of cessation counseling and/or medication. Data were adjusted for differences in the probability of selection and nonresponse, and were weighted to provide nationally representative estimates. Logistic regression was conducted to analyze trends during 2000–2015. Both linear and quadratic terms were initially applied to all models. If the quadratic term was not significant, the linear model was used.

[†]To determine smoking status, respondents were asked, "Have you smoked at least 100 cigarettes in your entire life?" Those who answered "yes" were asked, "Do you now smoke cigarettes every day, some days, or not at all?" Current smokers were those who had smoked at least 100 cigarettes during their lifetime and, at the time of the interview, reported smoking every day or some days. Former smokers were those who reported smoking at least 100 cigarettes during their lifetime but currently did not smoke. <http://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm>.

In 2015, 68.0% of all current smokers reported that they wanted to stop smoking completely. Smaller proportions of smokers aged ≥65 years (53.7%) and 18–24 years (62.3%) were interested in quitting than were smokers aged 25–44 years (72.7%) (Table 1). The prevalence of past-year quit attempts increased during 2000–2015 ($p<0.05$ based on quadratic trend analysis), and was 55.4% in 2015, which was the time point when prevalence was highest (Figure). Past-year quit attempts decreased with increasing age. Higher prevalences of past-year quit attempts were reported by Asians (69.4%) and blacks (63.4%) than by whites (53.3%) (Table 1).

The prevalence of recent cessation increased during 2000–2015 ($p<0.05$ based on linear trend analysis), and was 7.4% in 2015 (Figure). Recent cessation generally increased with increasing level of educational attainment, and smokers with private health insurance (9.4%) reported a higher prevalence of recent cessation than did smokers who were uninsured (5.2%) or enrolled in Medicaid (including persons with dual Medicaid/Medicare eligibility)[§] (5.9%) (Table 1). As of 2015, among adults who had ever smoked, 59.1% (52.8 million) had quit.

During 2000–2015, increases were reported in receipt of advice from a health professional to quit: prevalence was 57.2% in 2015 ($p<0.05$ based on quadratic trend analysis); prevalence was highest in 2005 and 2015, with a decrease observed in 2010

[§]A secondary analysis found that the prevalence of reported cessation behaviors for Medicaid enrollees did not change substantially when persons with dual Medicaid/Medicare eligibility were removed from the Medicaid coverage category.

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TABLE 1. Prevalence of interest in quitting smoking,* past-year quit attempt,[†] and recent smoking cessation[§] among adult smokers aged ≥18 years, by selected characteristics — National Health Interview Survey, United States, 2015

Characteristic	Interested in quitting % (95% CI)	Past-year quit attempt % (95% CI)	Recent smoking cessation [¶] % (95% CI)
Overall	68.0 (65.9–70.0)	55.4 (53.5–57.3)	7.4 (6.5–8.3)
Sex			
Men	66.7 (63.8–69.6)	55.3 (52.7–57.9)	7.2 (6.0–8.5)
Women	69.4 (66.7–72.1)	55.6 (53.0–58.1)	7.6 (6.2–8.9)
Age group (yrs)			
18–24	62.3 (55.7–69.0)	66.7 (61.0–72.4)	9.9 (6.1–13.8)
25–44	72.7 (69.7–75.7)	59.8 (57.3–62.3)	8.9 (7.3–10.5)
45–64	68.7 (65.8–71.6)	49.6 (46.8–52.5)	5.7 (4.6–6.7)
≥65	53.7 (48.4–58.9)	47.2 (42.2–52.3)	5.4 (3.4–7.5)
Race/Ethnicity**			
White, non-Hispanic	67.5 (65.0–70.0)	53.3 (50.8–55.7)	7.1 (6.0–8.2)
Black, non-Hispanic	72.8 (68.2–77.4)	63.4 (59.0–67.9)	4.9 (3.2–6.6)
Hispanic	67.4 (61.9–72.8)	56.2 (51.6–60.9)	8.2 (5.5–10.9)
AI/AN, non-Hispanic	55.6 (35.8–75.4)	52.1 (32.1–72.2)	— ^{††}
Asian, non-Hispanic ^{§§}	69.6 (59.5–79.8)	69.4 (62.1–76.7)	17.3 (10.1–24.5)
Multiple race, non-Hispanic	59.8 (45.7–73.9)	57.8 (47.2–68.4)	— ^{††}
Education^{¶¶}			
≤12 yrs (no high school diploma)	68.0 (63.7–72.2)	50.4 (46.2–54.5)	4.4 (2.7–6.1)
GED certificate	65.7 (58.0–73.4)	48.1 (40.1–56.0)	— ^{††}
High school diploma	65.5 (61.9–69.1)	52.2 (48.3–56.2)	6.8 (4.9–8.7)
Some college (no degree)	70.2 (66.1–74.4)	57.8(53.6–61.9)	7.2 (5.4–9.1)
Associate degree	70.6 (65.3–76.0)	57.4 (52.2–62.7)	9.2 (6.3–12.0)
Undergraduate degree	73.3 (67.7–78.8)	57.6 (51.5–63.8)	11.2 (7.4–15.0)
Graduate degree	74.0 (65.1–82.9)	55.8 (46.0–65.6)	10.8 (4.9–16.7)
Poverty status^{***}			
At or above poverty level	68.2 (65.9–70.4)	55.5 (53.3–57.7)	7.9 (6.8–8.9)
Below poverty level	67.3 (63.4–71.1)	55.2 (51.6–58.8)	5.6 (3.8–7.3)
U.S. Census regions^{†††}			
Northeast	74.5 (69.0–80.1)	58.8 (54.6–63.0)	8.6 (5.9–11.3)
Midwest	67.1 (63.1–71.1)	54.0 (49.7–58.4)	6.4 (4.8–8.0)
South	67.2 (64.0–70.4)	54.3 (51.6–57.0)	7.6 (6.1–9.0)
West	65.5 (60.7–70.2)	56.9 (52.5–61.3)	7.6 (5.7–9.6)
Health insurance coverage^{§§§}			
Private	69.0 (66.1–71.8)	57.2 (54.6–59.9)	9.4 (7.9–10.9)
Medicaid and dual eligibles ^{¶¶¶}	69.2 (65.3–73.2)	56.3 (52.5–60.1)	5.9 (4.1–7.7)
Medicare-Advantage	40.6 (29.9–51.3)	42.6 (32.2–53.0)	— ^{††}
Medicare-only (excluding Advantage)	53.0 (42.5–63.6)	42.0 (32.2–51.8)	— ^{††}
Other coverage	63.6 (57.2–69.9)	50.7 (43.9–57.4)	5.5 (2.4–8.7)
Uninsured	69.5 (65.2–73.9)	53.5 (49.7–57.2)	5.2 (3.3–7.0)
Disability/Limitation^{****}			
Yes	66.4 (61.4–71.3)	55.1 (49.6–60.6)	5.8 (3.8–7.7)
No	66.8 (63.5–70.2)	56.3 (53.6–59.0)	7.9 (6.2–9.5)

See table footnotes on page 1460.

(Figure). Smokers aged 45–64 years (65.7%) and ≥65 years (65.7%) reported a higher prevalence of receiving advice to quit than did smokers aged 18–24 years (44.4%) and 25–44 years (49.8%) (Table 2). Lower prevalences of receiving advice to quit were reported by Asian (34.2%), American Indian/Alaska Native (38.1%), and Hispanic (42.2%) smokers than by white smokers (60.2%); and by uninsured smokers (44.1%) than by smokers with any type of insurance (range = 56.8%–69.2%). Smokers reporting a disability/limitation or serious psychological distress reported a higher prevalence of receiving advice to quit than did smokers without these conditions (71.8% and 70.2%, respectively, vs 53.6% and 55.7%).

Use of cessation counseling and/or medication among smokers who were trying to quit increased during 2000–2005 from 21.9% to 29.1%, with no change in 2010 (31.7%) or 2015 (31.2%) ($p < 0.05$ based on quadratic trend analysis) (Figure). The prevalence of use of counseling and/or medication increased with age through age 64 years (Table 2). Hispanics and Asians reported a lower prevalence of using counseling and/or medication (19.2% and 20.5%, respectively) than did whites (34.3%), as did uninsured smokers (21.4%) compared with smokers with any type of insurance other than Medicare and Medicare Advantage (range = 32.1%–36.0%). The prevalence of using counseling and/or medication was higher

TABLE 1. (Continued) Prevalence of interest in quitting smoking,* past-year quit attempt,[†] and recent smoking cessation[§] among adult smokers aged ≥18 years, by selected characteristics — National Health Interview Survey, United States, 2015

Characteristic	Interested in quitting % (95% CI)	Past-year quit attempt % (95% CI)	Recent smoking cessation [¶] % (95% CI)
Serious Psychological Distress (Kessler Scale)^{†††}			
Yes (Kessler score ≥13)	67.4 (61.3–73.5)	53.0 (46.9–59.1)	— ^{††}
No (Kessler score <13)	68.2 (66.0–70.3)	55.5 (53.5–57.5)	8.1 (7.1–9.1)
Sexual orientation^{¶¶¶¶}			
Straight	68.1 (65.9–70.2)	55.4 (53.5–57.3)	7.6 (6.7–8.6)
Gay/Lesbian/Bisexual	66.7 (56.9–76.6)	48.4 (39.4–57.3)	— ^{††}

Abbreviations: AI/AN = American Indian/Alaska Native; CI = confidence interval; GED = General Educational Development.

* Current smokers who reported that they wanted to stop smoking completely.

[†] Current smokers who reported that they stopped smoking for >1 day during the past 12 months because they were trying to quit smoking and former smokers who quit during the past year.

[§] Former smokers who quit smoking for ≥6 months during the past year.

[¶] Among current smokers who smoked for ≥2 years and former smokers who quit during the past year.

** Excludes 63 respondents of non-Hispanic unknown race. Hispanics can be of any race.

^{††} Data not reported because sample size is <50 or the relative standard error of the estimate is >30%.

^{§§} Does not include Native Hawaiians or Other Pacific Islanders.

^{¶¶} Among persons aged ≥25 years. Excludes 144 persons whose education level was unknown.

^{***} Family income was reported by the family respondent, who might or might not be the same as the sample adult respondent from whom smoking information was collected. Missing values were imputed. Because the weighted Census poverty thresholds for 2014 were not available when the 2015 National Health Interview Survey (NHIS) instrument was created, the poverty thresholds used in the 2015 NHIS were estimated from several sources: weighted average Census poverty thresholds from 2013; the average Consumer Price Index from 2013; actual Consumer Price Index values for January–July 2014; and projected Consumer Price Index values for August–December 2014.

^{†††} *Northeast:* Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. *Midwest:* Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. *South:* Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. *West:* Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

^{§§§} Health insurance coverage was from NHIS-recoded data using a hierarchical assignment. Excludes 155 persons whose coverage was unknown.

^{¶¶¶} A secondary analysis found that the prevalence of reported cessation behaviors for Medicaid enrollees did not change substantially when persons with dual Medicaid/Medicare eligibility were removed from the Medicaid coverage category.

^{****} Based on proxy or self-reported presence of selected impairments, including vision, hearing, cognition, and movement and limitations in performing activities of daily living and instrumental activities of daily living. Limitations in performing activities of daily living was defined based on response to the question "Does [person] have difficulty dressing or bathing?" and limitations in performing instrumental activities of daily living was defined based on response to the question, "Because of a physical, mental, or emotional condition, does [person] have difficulty doing errands alone, such as visiting a doctor's office or shopping?" Any disability/limitation was defined as a "yes" response pertaining to at least one of the disabilities/limitations listed (i.e., vision, hearing, cognition, movement, activities of daily living, or instrumental activities of daily living). In 2015, the American Community Survey questions were asked of a random half of the respondents from the 2015 Person File. Excludes four persons whose disability status was unknown.

^{††††} The Kessler Psychological Distress Scale is a series of six questions that asks about feelings of sadness, nervousness, restlessness, worthlessness, hopelessness, and feeling like everything is an effort during the past 30 days. Participants were asked to respond on a Likert Scale ranging between 'None of the Time' (score = 0) and 'All of the time' (score = 4). Responses were summed over the six questions; respondents with a score ≥13 were coded as having serious psychological distress, and respondents with a score <13 were coded as not having serious psychological distress. Excludes 1,416 persons whose psychological distress was unknown. Additional information available at <https://www.cdc.gov/nchs/data/databriefs/db203.pdf>.

among smokers reporting a disability/limitation (39.0%) or serious psychological distress (41.6%) than among smokers without these conditions (28.5% and 30.1%, respectively). Gay, lesbian, or bisexual smokers reported a lower prevalence of counseling and/or medication use (14.5%) than did straight smokers (31.7%).

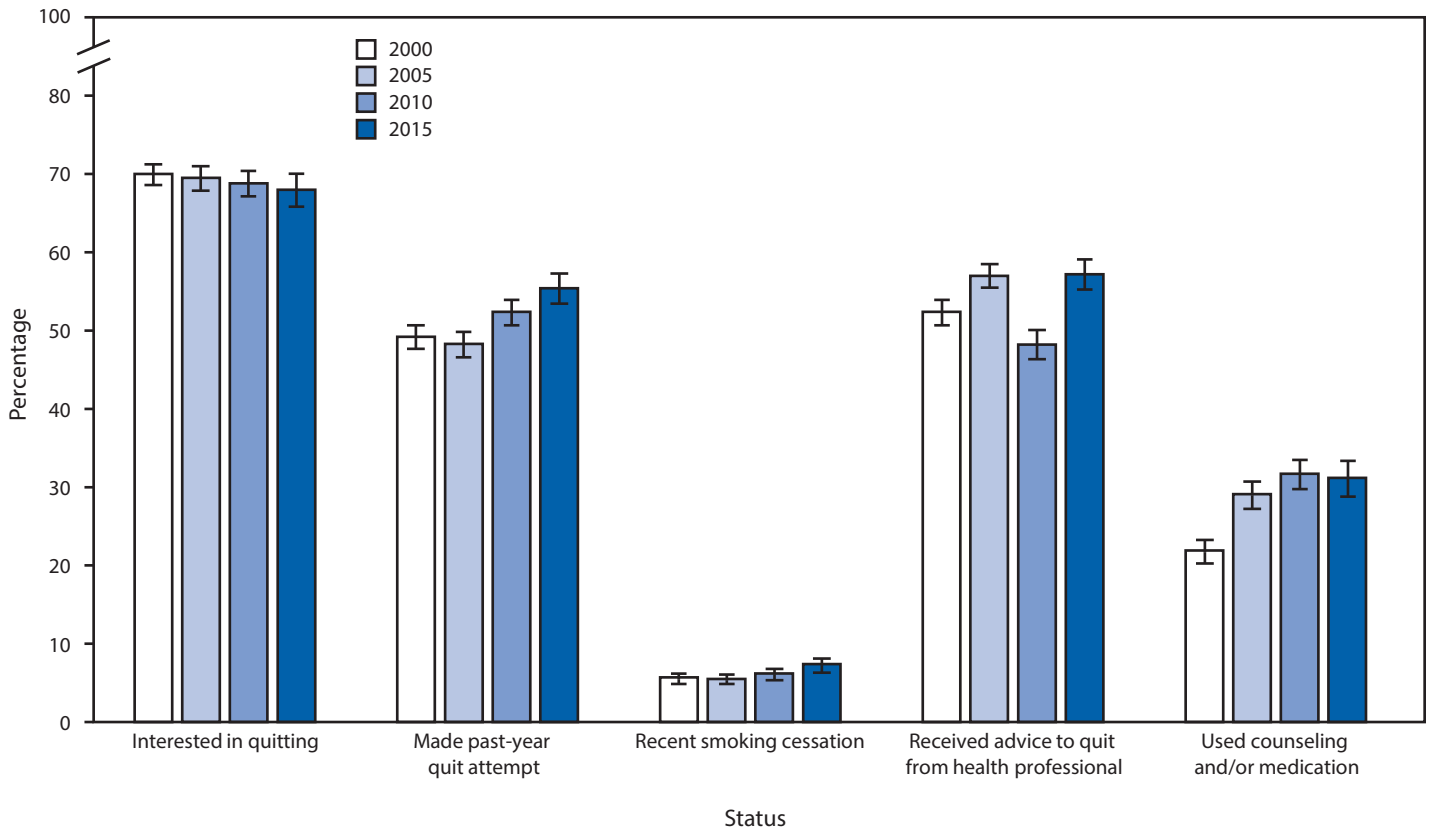
Among smokers who made quit attempts, 6.8% reported using counseling, 29.0% medication, and 4.7% both. Among smokers who used counseling, 4.1% used a telephone quitline, 2.8% used one-on-one counseling, and 2.4% used a stop smoking clinic, class, or support group. Among smokers who used medications, 16.6% used a nicotine patch, 12.5% used nicotine gum or lozenges, 7.9% used varenicline, 2.7% used bupropion, and 2.4% used nicotine spray or inhaler.

Discussion

In 2015, approximately two thirds of cigarette smokers were interested in quitting, and slightly more than half reported receiving advice to quit from a health professional and making a past-year quit attempt. However, fewer than one third of smokers who tried to quit used proven cessation treatments, and fewer than one in 10 smokers overall quit successfully in the past year. Approximately three in five adults who had ever smoked had quit. To enhance cessation rates, it is critical for health care providers to consistently identify smokers, advise them to quit, and offer evidence-based cessation treatments, and for insurers to cover and promote the use of these treatments and remove barriers to accessing them (2–6).

During 2000–2015, modest but statistically significant increases occurred in the prevalence of past-year quit attempts

FIGURE. Prevalence of and change* in interest in quitting,[†] past-year quit attempt,[‡] recent smoking cessation,[§] receiving a health professional's advice to quit smoking,^{**} and use of counseling and/or medication for cessation^{††} among adult smokers aged ≥18 years — National Health Interview Survey, United States 2000–2015



* Based on linear and quadratic trend analyses using logistic regression models controlling for sex, race/ethnicity, and age, $p < 0.05$. There was no change for "interested in quitting," a quadratic trend for "made past-year quit attempt," a linear trend for "recent smoking cessation," a quadratic trend for "received advice to quit from health professional," and a quadratic trend for "used counseling and/or medication."

[†] Current smokers who reported that they wanted to stop smoking completely.

[‡] Current smokers who reported that they stopped smoking for >1 day in the past 12 months because they were trying to quit smoking and former smokers who quit in the past year.

[§] Former smokers who quit smoking for ≥6 months in the past year, among current smokers who smoked for ≥2 years and former smokers who quit in the past year.

^{**} Received advice from a medical doctor, dentist, or other health professional to quit smoking or to quit using other kinds of tobacco, among current and former cigarette smokers who quit in the past year or used when stopped smoking among former smokers who quit in the past 2 years. The analysis was limited to current and former cigarette smokers who had seen a doctor or other health professional in the past year.

^{††} For 2010 and 2015, used one-on-one counseling, a stop smoking clinic, class, or support group, and/or a telephone help line or quitline; and/or the nicotine patch, nicotine gum or lozenge, nicotine-containing nasal spray or inhaler, varenicline (U.S. trade name Chantix) and/or bupropion (including trade names Zyban and Wellbutrin) in the past year among current smokers who tried to quit in the past year or used when stopped smoking among former smokers who quit in the past 2 years. For 2005, the list included a nicotine tablet and excluded varenicline, as it was not approved by the Food and Drug Administration until 2006. For 2000, the list included a stop smoking program and excluded a stop smoking class or support group, nicotine lozenge (not approved by the Food and Drug Administration until 2002), and varenicline.

(from 49.2% to 55.4%), recent smoking cessation (5.7% to 7.4%), receipt of health professional advice to quit smoking (52.4% to 57.2%), and use of cessation counseling and/or medication (21.9% to 31.2%). However, recent smoking cessation remains low, and little progress has been made since 2005 toward increasing receipt of advice to quit and use of counseling and/or medication. Use of cessation counseling and medication increases quit rates, especially when they are combined (2,3,7): combined behavioral and pharmacotherapy interventions increase cessation by 82%, compared with minimal intervention or usual care (7). Use of cessation

medications is appropriate for most adult smokers, with the exception of pregnant women, light smokers (i.e., persons who smoke < 5-10 cigarettes daily), and persons with specific medical contraindications (2,3). The low prevalence of recent cessation likely is related in part to low use of evidence-based cessation treatments. Because approximately 70% of smokers see a physician annually, and even brief physician advice to quit increases quit rates (2), opportunities exist to increase cessation rates through health care system changes and other population-based strategies (2-4).

TABLE 2. Prevalence of receiving a health professional's advice to quit smoking,* and use of counseling† and medication‡ for cessation among adult smokers aged ≥18 years, by selected characteristics — National Health Interview Survey, United States, 2015

Characteristic	Received health professional's advice to quit % (95% CI)	Used counseling % (95% CI)	Used medication % (95% CI)	Used counseling and/or medication % (95% CI)
Overall	57.2 (55.3–59.1)	6.8 (5.7–7.9)	29.0 (26.8–31.2)	31.2 (28.9–33.5)
Sex				
Men	55.2 (52.5–57.9)	5.8 (4.3–7.4)	27.0 (24.0–30.0)	29.1 (26.0–32.2)
Women	59.3 (56.6–61.9)	7.9 (6.4–9.5)	31.3 (28.2–34.3)	33.6 (30.5–36.6)
Age group (yrs)				
18–24	44.4 (37.1–51.6)	—¶	15.6 (9.5–21.7)	16.8 (10.6–23.0)
25–44	49.8 (46.6–53.0)	6.1 (4.5–7.8)	25.5 (22.2–28.7)	27.4 (24.1–30.8)
45–64	65.7 (62.9–68.4)	8.8 (6.9–11.1)	37.7 (34.0–41.4)	40.2 (36.4–43.9)
≥65	65.7 (61.4–70.0)	9.2 (5.3–13.1)	33.7 (27.7–39.7)	37.0 (31.0–43.1)
Race/Ethnicity**				
White, non-Hispanic	60.2 (58.0–62.4)	6.9 (5.5–8.3)	32.6 (29.8–35.4)	34.3 (31.4–37.2)
Black, non-Hispanic	55.7 (50.2–61.1)	7.6 (4.5–10.8)	25.2 (20.1–30.3)	28.9 (23.5–34.4)
Hispanic	42.2 (37.0–47.5)	5.1 (2.4–7.7)	16.6 (12.4–20.9)	19.2 (14.4–24.0)
AI/AN, non-Hispanic	38.1 (21.4–54.8)	—¶	—¶	—¶
Asian, non-Hispanic††	34.2 (24.2–44.3)	—¶	17.4 (9.4–25.4)	20.5 (12.2–28.8)
Multiple race, non-Hispanic	69.6 (59.2–80.1)	—¶	22.1 (10.5–33.6)	24.6 (12.7–36.4)
Education§§				
≤12 yrs (no high school diploma)	60.8 (56.6–65.1)	5.4 (3.1–7.6)	26.5 (21.8–31.2)	28.7 (23.8–33.6)
GED certificate	61.6 (52.4–70.7)	—¶	30.8 (21.5–40.1)	31.4 (22.0–40.7)
High school diploma	58.1 (53.9–62.3)	7.0 (4.7–9.4)	30.3 (25.5–35.1)	33.1 (28.1–38.1)
Some college (no degree)	59.1 (55.3–63.0)	8.6 (6.0–11.1)	32.5 (28.1–36.9)	34.6 (30.1–39.2)
Associate degree	61.6 (56.4–66.8)	8.6 (5.1–12.2)	33.2 (27.4–39.0)	36.0 (29.8–42.3)
Undergraduate degree	52.6 (46.6–58.5)	7.4 (3.7–11.1)	33.2 (26.5–39.8)	35.1 (28.4–41.7)
Graduate degree	57.7 (48.5–66.8)	—¶	32.8 (22.9–42.6)	35.9 (25.7–46.0)
Poverty status¶¶				
At or above poverty level	57.8 (55.6–60.1)	6.8 (5.6–8.1)	29.5 (27.1–31.8)	31.7 (29.2–34.2)
Below poverty level	54.7 (50.7–58.7)	6.7 (4.6–8.9)	27.0 (21.6–31.6)	29.0 (24.2–33.7)
U.S. Census regions***				
Northeast	65.1 (60.2–70.1)	8.2 (4.9–11.5)	34.7 (27.9–41.5)	37.6 (30.9–44.2)
Midwest	60.0 (56.1–63.9)	4.9 (3.0–6.8)	28.9 (24.9–32.8)	30.2 (26.1–34.4)
South	55.2 (52.2–58.2)	7.2 (5.3–9.0)	27.2 (23.8–30.6)	29.3 (25.7–33.0)
West	50.6 (46.9–54.4)	7.5 (5.1–9.9)	28.0 (23.1–32.8)	30.7 (25.5–35.9)
Health insurance coverage†††				
Private	56.8 (54.0–59.5)	6.8 (5.3–8.3)	29.9 (27.0–32.7)	32.1 (29.1–35.1)
Medicaid and dual eligibles§§§	59.9 (55.7–64.1)	8.0 (5.3–10.7)	32.2 (27.3–37.2)	34.5 (29.3–39.6)
Medicare-Advantage	66.6 (56.5–76.6)	—¶	26.5 (15.5–37.4)	31.6 (19.7–43.4)
Medicare-only (excluding Advantage)	62.0 (51.7–72.3)	—¶	28.5 (15.5–41.5)	35.9 (22.6–49.1)
Other coverage	69.2 (62.8–75.7)	5.2 (2.7–7.7)	34.9 (26.2–43.6)	36.0 (27.3–44.7)
Uninsured	44.1 (38.8–49.3)	4.3 (2.2–6.4)	20.0 (15.6–24.6)	21.4 (17.0–25.8)
Disability/Limitation¶¶¶				
Yes	71.8 (67.4–76.2)	12.6 (8.3–16.9)	35.7 (29.1–42.3)	39.0 (32.1–45.9)
No	53.6 (50.5–56.8)	5.1 (3.8–6.4)	26.3 (22.9–29.6)	28.5 (25.1–31.9)

See table footnotes on page 1463.

Observed disparities were consistent with those reported in previous studies (8). In 2015, smokers who were aged <45 years, Hispanic, Asian, with an Associate's or higher degree, lived in the Northeast, had private health insurance, or had no serious psychological distress met the *Healthy People 2020* target for recent cessation (≥8.0%). Disparities in cessation behaviors by race/ethnicity might be partly explained by differences in tobacco use behaviors, health care utilization, access to cessation treatments, and knowledge about these treatments (1,2,4). Disparities by insurance status in receipt of advice to

quit (44.1% for uninsured smokers versus 56.8% for smokers with private insurance), use of cessation counseling and/or medication (21.4% for uninsured smokers versus 32.1% for smokers with private insurance), and recent cessation (5.2% for uninsured smokers versus 9.4% for smokers with private insurance) are likely attributable, in part, to a lack of access to cessation treatments among the uninsured (2,4,5). Higher prevalence of receiving a health professional's advice to quit and use of counseling and/or medication among smokers with serious psychological distress might be related to greater use

TABLE 2. (Continued) Prevalence of receiving a health professional's advice to quit smoking,* and use of counseling† and medication‡ for cessation among adult smokers aged ≥18 years, by selected characteristics — National Health Interview Survey, United States, 2015

Characteristic	Received health professional's advice to quit % (95% CI)	Used counseling % (95% CI)	Used medication % (95% CI)	Used counseling and/or medication % (95% CI)
Serious Psychological Distress (Kessler Scale)****				
Yes (Kessler score ≥13)	70.2 (64.5–75.8)	12.4 (6.3–18.4)	40.1 (32.5–47.8)	41.6 (33.7–49.5)
No (Kessler score <13)	55.7 (53.7–57.7)	6.3 (5.3–7.4)	27.9 (25.6–30.1)	30.1 (27.8–32.5)
Sexual orientation††††				
Straight	57.1 (55.1–59.1)	6.9 (5.7–8.0)	29.4 (27.2–31.7)	31.7 (29.3–34.1)
Gay/Lesbian/Bisexual	57.7 (48.5–66.9)	—¶	14.4 (7.8–21.0)	14.5 (7.9–21.1)

Abbreviations: AI/AN = American Indian/Alaska Native; CI = confidence interval; GED = General Educational Development.

* Received advice from a medical doctor, dentist, or other health professional to quit smoking or to quit using other kinds of tobacco, among current and former cigarette smokers who quit in the past 12 months. The analysis was limited to current and former cigarette smokers who had seen a doctor or other health professional in the past year.

† Used one-on-one counseling, a stop smoking clinic, class, or support group, and/or a telephone help line or quitline during the past year among current smokers who tried to quit during the past year or used when stopped smoking among former smokers who quit during the past 2 years.

‡ Used nicotine patch, nicotine gum or lozenge, nicotine-containing nasal spray or inhaler, varenicline (U.S. trade name Chantix), and/or bupropion (including trade names Zyban and Wellbutrin) during the past year among current smokers who tried to quit during the past year or used when stopped smoking among former smokers who quit during the past 2 years.

¶ Data not reported because sample size is <50 or the relative standard error of the estimate is >30%.

** Excludes 63 respondents of non-Hispanic unknown race. Hispanics can be of any race.

†† Does not include Native Hawaiians or Other Pacific Islanders.

§§ Among persons aged ≥25 years. Excludes 144 persons whose education level was unknown.

¶¶ Family income was reported by the family respondent, who might or might not be the same as the sample adult respondent from whom smoking information was collected. Missing values were imputed. Because the weighted Census poverty thresholds for 2014 were not available when the 2015 National Health Interview Survey (NHIS) instrument was created, the poverty thresholds used in the 2015 NHIS were estimated from several sources: weighted average Census poverty thresholds from 2013; the average Consumer Price Index from 2013; actual Consumer Price Index values for January–July 2014; and projected Consumer Price Index values for August–December 2014.

*** *Northeast:* Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. *Midwest:* Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. *South:* Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. *West:* Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

††† Health insurance coverage was from NHIS-recoded data using a hierarchical assignment. Excludes 155 persons whose coverage was unknown.

§§§ A secondary analysis found that the prevalence of reported cessation behaviors for Medicaid enrollees did not change substantially when persons with dual Medicaid/Medicare eligibility were removed from the Medicaid coverage category.

¶¶¶ Based on proxy or self-reported presence of selected impairments, including vision, hearing, cognition, and movement and limitations in performing activities of daily living and instrumental activities of daily living. Limitations in performing activities of daily living was defined based on response to the question "Does [person] have difficulty dressing or bathing?" and limitations in performing instrumental activities of daily living was defined based on response to the question, "Because of a physical, mental, or emotional condition, does [person] have difficulty doing errands alone, such as visiting a doctor's office or shopping?" Any disability/limitation was defined as a "yes" response pertaining to at least one of the disabilities/limitations listed (i.e., vision, hearing, cognition, movement, activities of daily living, or instrumental activities of daily living). In 2015, the American Community Survey questions were asked of a random half of the respondents from the 2015 Person File. Excludes four persons whose disability status was unknown.

**** The Kessler Psychological Distress Scale is a series of six questions that asks about feelings of sadness, nervousness, restlessness, worthlessness, hopelessness, and feeling like everything is an effort during the past 30 days. Participants were asked to respond on a Likert Scale ranging between 'None of the Time' (score = 0) and 'All of the time' (score = 4). Responses were summed over the six questions; respondents with a score ≥13 were coded as having serious psychological distress, and respondents with a score <13 were coded as not having serious psychological distress. Excludes 1,416 persons whose psychological distress was unknown. Additional information available at <https://www.cdc.gov/nchs/data/databriefs/db203.pdf>.

†††† Response options were "straight, that is, not gay" for men, and "straight, that is, not gay or lesbian" for women. Excludes 1,397 persons whose sexual orientation was unknown.

of health care as well as greater tobacco dependence in this population (1,4).

Changes in the U.S. health care system could have contributed to this report's findings. By increasing the number of adults with health insurance (9) and requiring improved cessation coverage by commercial insurance and Medicaid (5), the Patient Protection and Affordable Care Act[¶] might have contributed to increases in the number of smokers who attempt to quit, use proven cessation treatments, and successfully quit (4,5). Improved cessation insurance coverage,

¶ <http://housedocs.house.gov/energycommerce/ppacacon.pdf>.

together with new health care delivery and payment models and quality measures, might have contributed to increases in health professional advice to quit since 2010 (4,5).

The findings in this report are subject to at least three limitations. First, cigarette smoking and cessation-related measures were self-reported without validation by biochemical testing, and might be subject to social desirability bias. However, self-reported smoking status correlates with serum cotinine levels (10). Second, because NHIS does not include institutionalized populations and persons in the military, results are not generalizable to these groups. Finally, lower NHIS response rates might

Summary**What is already known about this topic?**

Quitting cigarette smoking benefits smokers at any age. Cessation counseling and medications each improve smokers' chances of quitting, and have an even greater effect when combined. However, use of counseling and medications remains low.

What is added by this report?

Approximately two thirds of cigarette smokers are interested in quitting, and in 2015, approximately half of smokers reported receiving advice to quit from a health professional and making a quit attempt in the past year. However, fewer than one third of smokers who tried to quit used evidence-based cessation treatments, and fewer than one in 10 smokers overall successfully quit in the past year. As of 2015, approximately three in five adults who had ever smoked had quit.

What are the implications for public health practice?

Health care professionals can help smokers quit by consistently identifying patients who smoke, advising them to quit, and offering them cessation treatments. Health insurers can help smokers quit by covering proven cessation treatments with minimal barriers and promoting their use. States can help smokers quit by implementing population-based policy interventions and anti-tobacco mass media campaigns, and by funding comprehensive state tobacco control programs, including state quitlines, at CDC-recommended levels.

result in nonresponse bias. The extent to which nonresponse might have affected the results reported here is unknown.

Funding state tobacco control programs, including state quitlines, at CDC-recommended levels, increasing tobacco prices, implementing comprehensive smoke-free policies, conducting anti-tobacco mass media campaigns, and enhancing access to quitting assistance can increase tobacco cessation and reduce tobacco-related disease and death (1,4). Opportunities exist for insurers and employers to improve coverage and increase use of cessation treatments and for health systems to integrate cessation interventions into clinical care (1,4,5).

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