



**Adult Tobacco Use and Exposure,  
Colorado 2015**

February 2017

**Community Epidemiology & Program Evaluation Group**

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## Brief summary of findings

This report focuses on changes in tobacco-related attitudes and behaviors during 2012-15 and new or remaining disparities in 2015. The emphasis is on groups that have been identified with disparately large tobacco burdens, including adults with lower socioeconomic status (SES); these populations have been designated for priority attention by the state's tobacco control program. The report also looks closely at men and straight to work young adults (aged 18-24), who also have elevated tobacco burdens. These high-risk groups have been identified in the strategic plan for STEPP with goals focused on prevention and cessation in lower SES populations, especially straight to work young adults, and implementing policy to prevent youth access and secondhand smoke.

Rates in the report represent estimates for the corresponding Colorado adult population group during the year cited. Unless otherwise noted, changes represent 2015 rates compared to 2012 rates. Trends represent 2001, 2005, 2008, 2012, and 2015.

### Significant\* changes since 2012, and disparities in 2015

Some improvements occurred in targeted areas of exposure and advice to smokers on cessation options, but most populations most affected by smoking did not see improvements. High-risk populations continue to be plagued by smoking as a chronic condition.

#### *General population*

- Cigarette smoking prevalence remained unchanged from 17.3% to 17.1%.
- Among current smokers, daily smoking did not change significantly from 69.8% in 2012 to 71.9% in 2015.
- Among smokers who saw a health provider in the past year, advice to quit increased from 68.0% to **76.9%** and referral to cessation treatment increased from 38.6% to **51.1%**.
- The popularity of smokefree rules in homes remained unchanged at 85.9%; however, in personal vehicles, smoke free rules increased from 76.1% to **78.4%**.
- Smokefree home rules remained much less common in 2015 among households with smokers compared to households without smokers (**68.9%** vs. 91.7%).
- A significant decline was noted in adults who reported being bothered by exposure to smoke outside of work and home (**33.6%** from 55.8%); and just under one in four asked someone not to smoke around them or their family.
- Ever-use of a hookah remained unchanged at 10.6% overall and 25.6% among current smokers.
- Ever-use of e-cigarettes increased from 6.9% in 2012 to **22.8%** in 2015; current use of e-cigarettes in 2015 was 5.6% overall and 20.0% among current smokers.

#### *People with low socioeconomic status† (SES)*

- Smoking prevalence remained unchanged in the low SES population between 2012 and 2015.
- In 2015, smoking prevalence among people of low SES was nearly three times as high (**26.2%**) as among the rest of the population (9.0%).
- Low SES smokers continue to be less likely to have a successful quit attempt than non-low SES smokers (**7.2%** vs. 15.9% in 2015).
- Low SES households with smokers had a higher prevalence of smoking in the past 30 days (**31.0%**) than non-low SES (17.0%).

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\* "Significant" means less than 5% likely ( $p < 0.05$ ) to be an accidental difference (sampling error); bold highlight indicates significant difference

† Low SES means uninsured, income below 200% of federal poverty level, no high school diploma (may have GED), or disabled/unable to work. [Nationally and in Colorado, tobacco burdens are similar among GED holders and people who don't complete high school.]

### *Hispanic/Latino population*

- Smoking prevalence was unchanged among English-dominant\* and Spanish-dominant Hispanics† between 2012-2015.
- The quit attempt rate among English-dominant Hispanic smokers decreased marginally from 66.1% in 2012 to **53.6%** in 2015, but in 2015 was not significantly different than other ethnicities.
- Spanish-dominant Hispanic smokers were significantly less likely than other ethnicities to see a healthcare provider in the past year (**31.4%** vs. 71.6% white). Among those who saw a provider, they received equal advice to quit and referral to treatment.

### *Black/African-American (black/AA) population*

- Smoking prevalence was higher among black/AA adults than among Anglo adults (**24.2%** vs. 16.7%) and unchanged from 2012.
- More black/AA households with smokers report smoking inside the home in the past 30 days (**36.5%**) than all other ethnicities except American Indian/Alaska Native.

### *American Indian/Alaska Native (AI/AN) population*

- Smoking prevalence was higher in AI/AN adults than among Anglo adults (**33.0%** vs. 16.7%) and unchanged from 2012.
- Half of AI/AN households with smokers, more than among any other ethnicity, report smoking inside the home in the past 30 days (**51.0%**).

### *Asian American/Pacific Islander (AA/PI) population*

- Smoking prevalence was unchanged in the AA/PI population between 2012 and 2015.
- Smoking prevalence was lower among AA/PI adults than among Anglo adults (**10.2%** vs. 16.7%).

### *People with mental illness‡ and/or mental limitations§(MI/ML)*

- Smoking prevalence decreased in the MI/ML population between 2012 and 2015 (32.9% to **27.4%**).
- Smoking prevalence was almost two times higher among MI/ML adults compared to the rest of the population (**27.4%** vs. 14.9%).
- Among households with smokers, smokefree home rules were the same but past-30 day smoking in the home was more common among MI/ML households with smokers than other households with smokers (**33.3%** vs. 22.9%).
- Among households with smokers, smokefree rules in vehicles were less common among those with MI/ML (**38.0%** vs. 50.1%) and past 30-day smoking in vehicles was more common (**53.3%** vs. 40.4%).

### *Smokeless tobacco use*

- Use of smokeless tobacco did not significantly change between 2012 and 2015.

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\* Represented by Hispanic respondents who were interviewed in English and reported English (or English and Spanish equally) as the primary language at home.

† Represented by Hispanic respondents who were interviewed in Spanish or reported Spanish as the primary language at home.

‡ adults who report having a diagnosed mental illness

§ adults who report that their activity is limited by a mental or emotional condition

- Current use of smokeless tobacco was higher among rural men than among urban men (**11.2%** vs. 7.2%).\*

### ***Lesbian, gay, bisexual, transgender† (LGBT) population***

- Smoking prevalence did not change significantly between 2012 and 2015.
- Smoking in LGBT adults was more than twice as high as among heterosexuals (**33.2%** vs. 16.4%).
- Among households with smokers, smoking in the past 30 days was more common among LGBT households (**40.1%** vs. 24.1%) even through smokefree rules didn't differ.

### ***Men***

- Smoking prevalence in men was one-third higher than among women (**19.0%** vs. 15.1%) and unchanged between 2012-2015.
- Colorado QuitLine calls during the past year among male quit attempters decreased during 2012-15 (**2.1%**, down from 5.4%) and were lower than among women in 2015 (9.0%).
- Use of NRT was significantly lower among men than women in 2015 (**20.2%** vs. 28.5%).
- E-cigarettes ever-use was higher in men than women (**25.4%** vs. 20.2%) as was current use (**6.3%** vs. 4.9%). Hookah ever-use was higher in men than women (**16.7%** vs. 4.5%).
- Outdoor tobacco smoking occurring at work was more common among men compared to women (**57.6%** vs. 43.4%).

### ***Straight to work young adults (STWYA)+***

- In 2015, smoking prevalence was unchanged in the STWYA population at **32.0%** and was over three times higher than student smoking prevalence at 8.8%.
- Among STWYA smokers, quit-attempt prevalence (52.2%) and quit success (8.6%) were unchanged from 2012, and neither rate differed significantly from student rates.
- NRT use increased among STWYA from 6.6% to **28.0%** during 2012-2015.
- STWYA used chewing tobacco more often than students (**8.0%** vs. 2.6%).
- STWYA used cigars more often with **14.4%** of STWYA smoking cigars every day or some days compared to 7.3% of students.

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\* Fewer than one percent of Colorado adult women use smokeless tobacco.

† TABS asked respondents in 2015 to self-identify as gay/lesbian, bisexual, heterosexual/straight, transgender, or other. Transgender was not a prompted option before 2015.

+ Straight to work young adults are defined as: adults aged 18-24 years who are working and have less than a college education and are not currently a student

## The Attitudes and Behaviors Survey on Health

Every three to four years, The Attitudes and Behaviors Survey (TABS) on Health randomly selects and interviews thousands of Colorado adults to learn about the health of the state's population. The most recent wave, administered in 2015, collected information on tobacco use, diabetes, high blood pressure, and e-cigarette and marijuana use. Before 2012, the survey focused on tobacco and was known as the Tobacco Attitudes and Behaviors Survey (TABS); chronic disease conditions were added in 2012. The survey was funded in 2001 by tobacco litigation settlement proceeds and subsequently by revenues from a voter-approved tobacco tax increase.

TABS on Health randomly selects adults (aged 18+) from all Colorado households with telephones and interviews consenting respondents in their choice of English or Spanish. Certain groups are oversampled to obtain better health information about them. Starting with the 2008 wave, TABS has sampled both landline and cell phone numbers, in order to represent the growing number of households that rely mainly or only on cell service. In 2015, an estimated 46.7% of Colorado households had only cell phone service (15.2% did in 2007).<sup>1,2</sup> All responses are weighted estimates, adjusted for selection probability, non-response, and proportional representation of the 2014 Colorado adult population by age, sex, and ethnicity.

The 2015 survey interviewed 8,616 Colorado adults.

### About this report

The current report describes tobacco use in 2015 compared to 2012, identifying areas of progress and current challenges. The report includes some trends since 2001. Topics include cigarette smoking and quitting, attitudes about tobacco-related policies, use of non-cigarette tobacco products, the use of electronic delivery systems, or e-cigarettes, and second-hand smoke exposure.

The report relies on a 95% confidence measure ( $p < 0.05$ ) to identify *significant* changes and differences – the ones that are less than 5% likely to be chance findings caused by sampling error. The rates published in the report represent the Colorado adult population in the respective year for which they are reported.

Where a 2015 rate is significantly different from 2012, it appears in **bold** typeface text and/or denoted with an \* in tables and charts. Other significant differences, i.e., comparing 2001 and 2015 or two population groups, are presented in the narrative or noted in tables and charts. Rates described as “unchanged” or “similar” are not *significantly* different.\*

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\* Comparisons between years are for actual rates and are not standardized on age or other characteristic.

## Introduction

In 2015, an estimated 36.5 million U.S. adults currently smoked cigarettes.<sup>3</sup> Although smoking prevalence decreased significantly nationally from 2014 to 2015 (16.8% to 15.1%,  $p < 0.05$ ),<sup>4</sup> cigarette smoking remains the leading cause of preventable death in the United States.<sup>5</sup> Each year, approximately 480,000 premature deaths are attributed to cigarette smoking, and annual cost of \$130 billion dollars for direct medical care of adults attributable to smoking.<sup>6</sup>

In 2012, the Colorado Tobacco Program Review Committee adopted a strategic plan for the period 2012-2020.<sup>7</sup> The plan was based on a review of available data and identified five imperatives:

- Ensure quitters maintain long-term abstinence (turn more quit attempts into cessation successes).
- Decrease initiation and prevalence among all populations, particularly those disparately affected by tobacco use.
- Influence the sale and marketing of tobacco, including new products.
- Reduce exposures from secondhand smoke, particularly among low-income populations.
- Continue to promote the recognition that tobacco is still the leading preventable cause of death for Coloradans.

The data also indicated a need to focus on low SES populations of all ages and ethnicities, with seven goals for the year 2020:

- The cessation success gap affecting low SES youth and adult smokers decreases by 50 percent.
- A majority of people and health care systems in Colorado recognize and treat tobacco dependence as a chronic condition.
- A majority of Coloradans live, learn, work and play in communities that have effective policies and regulations that reduce youth and adult use and access to tobacco.
- Tobacco prevalence and initiation among young adults, especially straight-to-work, decreases by 50 percent.
- Initiation among youth, especially high burden and low SES populations, decreases by 50 percent.
- Exposure to secondhand smoke with an emphasis on low SES populations decreases by 50 percent.
- Colorado is among the 10 states with the highest price for tobacco products.

The current report presents a status update on many of these strategic plan indicators and other tobacco-related indicators and behaviors.

Since the last TABS report in 2012, a relatively new and highly popular tobacco product has emerged on the scene, the electronic cigarette (“e-cigarette”). The CDC’s National Health Interview Survey, which has monitored the health of the nation since 1957, first started collecting data on e-cigarettes in 2014 and found 12.6% of adults had ever tried an e-cigarette and 3.7% were current users.<sup>8</sup> Other studies show that use has increased rapidly over the past few years, with higher prevalence among current smokers.<sup>9</sup> Some smokers may use e-cigarettes to help with cessation, and e-cigarette use may pose less risk than continuing to smoke cigarettes,<sup>10,11</sup> but occasional e-cigarette use also may contribute to continued smoking among many smokers<sup>32</sup> and may lead smoking-resistant adolescents into smoking regular cigarettes.<sup>12, 13, 14, 15, 16</sup>

### Current smoking prevalence

Adult smoking prevalence\* in 2015 was unchanged from 2012, but not uniformly across population groups (Table 1). Compared with 2001, prevalence has declined significantly, although the number of smokers has increased with the increasing population. Patterns are similar for both socioeconomic groups, 18-24 year olds (young adults), women, and Anglos, except the number of young adult smokers also declined.

Smoking prevalence rates across demographic groups (Table 1) include several groups with continued significant declines since 2001, but little significant change occurred after 2012. Little or no progress occurred toward closing prevalence gaps between low- vs. non-low-SES populations and young adult students vs. non-students. In the past 15 years, prevalence remained basically unchanged among men, adults aged 25+, and the state's largest nonwhite populations. SES patterns of smoking were recognized during a period when Colorado's population was growing through migration but losing socioeconomic ground, with 32.2% classified as low SES in 2001 compared with 51.0% in 2015. The SES population trend converged with a lack of meaningful cessation progress among low SES smokers. As a result, while roughly half (52.5%) of Colorado smokers had low SES in 2001, three-fourths (75.1%) did in 2015. Smoking in Colorado is now fundamentally a low-SES problem.

Progress against the tobacco epidemic requires a commitment to figure out how to engage low SES smokers and support them in cessation efforts. Both national and Colorado evidence suggests that new strategies are needed, including ways to reach and serve a large population that shares low SES but represents the broad spectrum of American ethnic and sexual cultures and identities. In 2015, there was a sharp decline in the uninsured, most likely due to the Affordable Care Act, but the proportion living in poverty continued to rise and be the dominant characteristic of the low SES population (highlight box).

**Colorado's low SES population grows poorer**  
Colorado's low SES population has steadily grown, from one-third of adults in 2001 to one-half in 2015. And, low SES Coloradans are increasingly likely to report multiple low SES conditions.

	Percent of low SES adults in Colorado with ...				
	2001	2005	2008	2012	2015
<200% FPL	69.9%	68.1%	72.1%	80.3%	85.2%
no insurance	43.1%	53.1%	49.2%	43.4%	28.3%
no HS grad	23.1%	29.1%	34.4%	35.2%	30.8%
disability	7.8%	8.3%	8.5%	11.9%	10.1%

FPL = federal poverty level

\* Current smoking prevalence = percentage of a population that smoked 100+ cigarettes in lifetime and now smokes cigarettes daily or some days.

**Table 1. Changing and unchanged burdens:  
Current cigarette smoking among Colorado adults, 2001-05-08-12-15**

group	number that smoked					% that smoked				
	2001	2005	2008	2012	2015	2001	2005	2008	2012	2015
all adults	613,984	585,035	701,980	667,500	673,832	19.7	17.3	19.1	17.3	<b>17.1</b>
<b>LOW SOCIOECONOMIC STATUS (SES)*</b>										
no	250,982	213,499	211,567	145,203	131,523	14.2	12.0	12.6	9.4	<b>9.0</b>
yes	277,875	307,100	426,619	413,578	397,600	33.1	27.9	28.9	27.1	<b>26.2</b>
<b>SEX</b>										
women	296,187	254,686	313,604	286,866	299,579	19.1	15.0	17.1	14.8	<b>15.1</b>
men	317,798	330,348	388,376	380,634	374,252	20.3	19.5	21.1	19.8	19.0
<b>AGE GROUP</b>										
18-24	126,710	110,311	132,160	114,448	98,665	30.2	24.5	26.3	21.5	<b>18.4</b>
student	26,284	33,990	49,348	34,078	19,080	21.9	16.7	19.3	12.3	<b>8.8</b>
STWYA+	74,901	55,202	53,862	56,081	60,123	36.0	35.1	38.4	34.8	32.0
25-44	285,981	249,424	296,551	301,706	285,398	20.9	17.7	20.9	21.5	20.0
45-64	164,568	190,522	228,125	209,343	238,021	17.8	17.7	18.2	15.4	17.4
65+	36,725	34,777	45,144	42,003	51,748	9.2	7.8	9.2	7.4	8.4
<b>ETHNICITY</b>										
Anglo	459,915	405,147	505,765	473,593	483,497	19.1	15.6	18.4	16.7	<b>16.7</b>
Latino (English-dominant)‡	88,547	96,144	93,302	91,843	87,224	22.1	24.4	24.9	21.8	20.4
Latino (Spanish-dominant)‡	10,354	30,798	34,216	23,103	33,186	18.4	18.9	13.4	9.0	12.3
Black/African American	19,713	24,387	30,208	33,080	35,537	17.8	19.4	23.9	23.7	24.2
American Indian	15,445	11,590	13,283	15,084	15,809	36.4	34.9	44.6	29.3	33.0
Asian American	9,731	5,841	9,606	7,549	10,125	16.4	14.4	14.8	10.7	10.2
All Other	10,279	11,128	15,601	23,248	8,453	29.0	29.9	22.8	26.6	<b>12.8</b>
<b>SEXUAL ORIENTATION**</b>										
heterosexual	n/a	382,363	613,759	597,763	521,875	n/a	16.8	18.9	17.2	16.4
LGB	n/a	12,384	36,289	43,565	46,636	n/a	35.8	39.7	33.4	33.2
LGBT	n/a	n/a	n/a	n/a	48,766	n/a	n/a	n/a	n/a	33.2
<b>MENTAL ILLNESS and/or LIMITATIONS***</b>										
no	n/a	n/a	572,137	464,772	468,489	n/a	n/a	17.7	14.8	14.9
yes	n/a	n/a	110,803	172,008	157,716	n/a	n/a	34.3	32.9	<b>27.4</b>

**bold:** significantly lower % in 2015 than 2012.

**yellow:** significantly lower % in 2015 than 2001.

\* Low SES includes uninsured, income below 200% of federal poverty level, no high school diploma (may have GED), or disabled/unable to work. [Nationally and in Colorado, tobacco burdens are similar among GED holders and people who don't complete high school.]

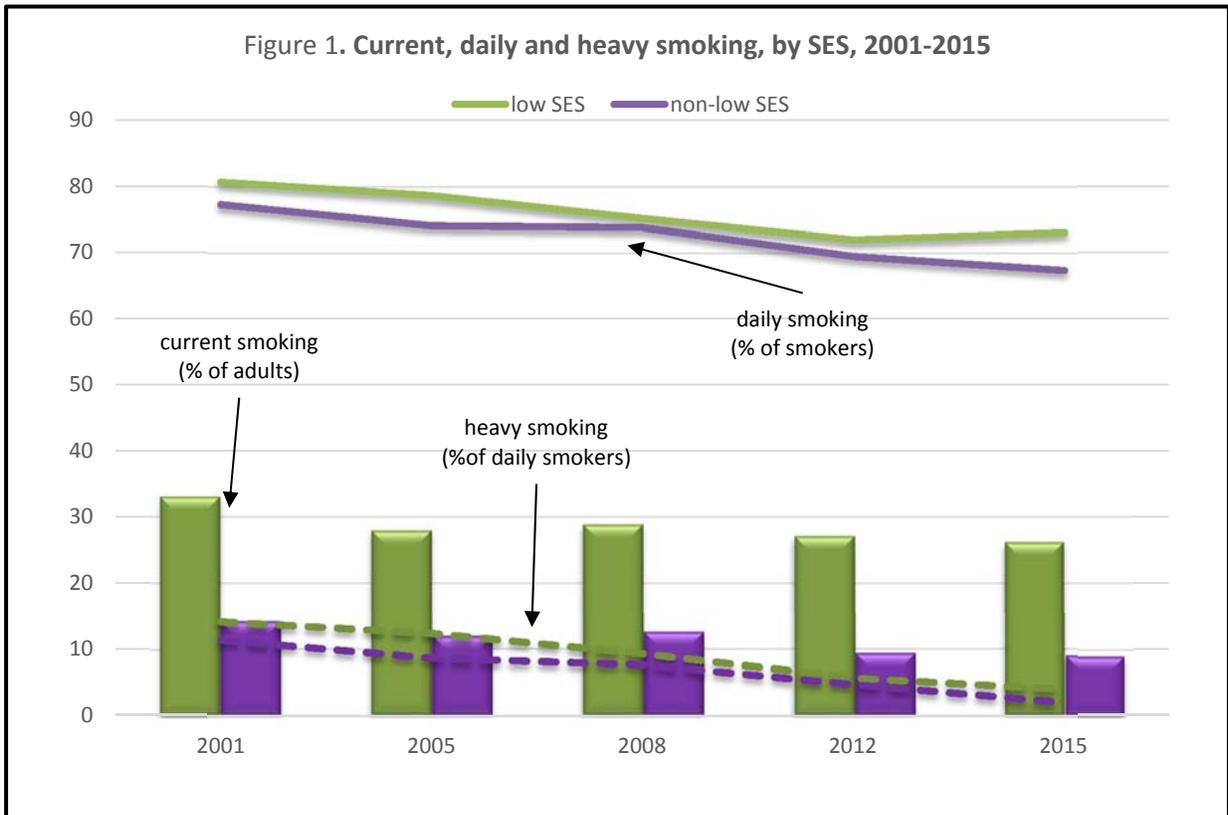
\*\* Sexual orientation includes lesbian, gay, and bisexual (LGB) in 2005-2012; in 2015, the combination also includes transgender (LGBT). The report presents LGBT estimates for 2015 and LGB estimates for multi-year comparisons.

+ Nonstudent young adults, also called "straight-to-work young adults," are employed, are not enrolled in school, and have no college degree.

± Dominant language is the one the respondent chose for the interview or reported as the primary language spoken at home. English-dominant Hispanics include those who speak English and Spanish equally at home.

\*\*\*Adults who report a diagnosed mental illness or activity limited by a mental or emotional condition.

The SES gap in smoking behaviors is shown in Figure 1. SES gaps have persisted since 2001 in current smoking prevalence, proportions of smokers who smoke daily, and proportions of heavy smokers.

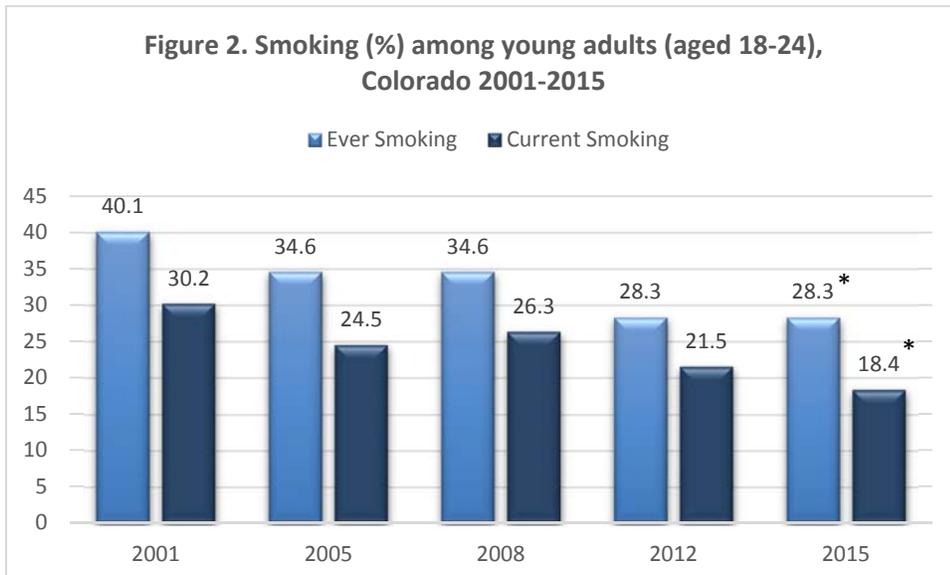


The low-SES-and-smoking link holds for each low SES condition – lower income, no health insurance, no high school diploma, and disability (Table 2). The biggest SES difference between smokers and nonsmokers was in household income: More than half of smokers were poor or near-poor, compared to less than one-third of nonsmokers. Smokers were also more often male; straight to work young adults (STWYA) or aged 25-44; English-dominant Hispanic, black/AA or AI/AN adults; lesbian/gay/ bisexual/transgender (LGBT) adults; those reporting mental illness and/or mental limitations (MI/ML); disabled; those without health insurance, and adults who did not graduate high school.

<b>Table 2. Characteristics of Colorado adults, 2015, by smoking status</b>		
	percent of ...	
	nonsmokers	smokers
	with ...	
<b><u>Low SES indicators</u></b>		
<b><i>poverty status</i></b>		
<100% FPL	12.7	22.0
100-199% FPL	21.2	33.8
200% FPL or above	66.0	44.2
<b><i>health insurance*</i></b>		
no	9.7	20.1
yes	90.3	79.9
<b><i>high school diploma</i></b>		
no	10.8	23.1
yes	89.2	76.9
<b><i>disabled/unable to work</i></b>		
yes	3.3	8.1
no	96.7	91.9
<b><u>Other characteristics</u></b>		
<b><i>sex</i></b>		
men	48.6	55.5
women	51.4	44.5
<b><i>age</i></b>		
18-24	13.4	14.6
STWYA	39.3	75.9
Student	60.7	24.1
25-44	34.9	42.4
45-64	34.4	35.3
65+	17.3	7.7
<b><i>ethnicity</i></b>		
Anglo	73.5	71.8
Hispanic (English- dominant)	10.4	12.9
Hispanic (Spanish-dominant)	7.2	4.9
Black/AA	3.4	5.3
American Indian	1.0	2.3
Asian American	2.7	1.5
all other	1.8	1.3
<b><i>sexual orientation</i></b>		
heterosexual	96.5	91.5
gay, lesbian, bisexual, trans	3.5	8.5
<b><i>mental illness and/or limitations</i></b>		
yes	13.5	25.2
no	86.5	74.8
FPL=federal poverty level		
*includes Medicaid		
STWYA=straight to work young adult		
All characteristics in the table are significantly different by smoking status		

Young adulthood (ages 18-24) is a period when smoking patterns are often not yet established. Most regular (dependent) smokers try their first cigarette before age 18, but one-third<sup>17</sup> to one-half<sup>18</sup> started smoking *regularly* only during their young adult years. The young adult group thus represents an important indicator of trends in smoking initiation.

During 2001-15, both ever-smoking\* and current smoking declined significantly among Colorado's young adults (Figure 2). A gap within the young adult population remained highly evident, however, as declines were limited to students; the current report looks more closely at young adult nonstudents on page **Error! Bookmark not defined.**



\* Smoked at least 100 cigarettes in lifetime.

### Continuing smokers extended the trend of smoking less

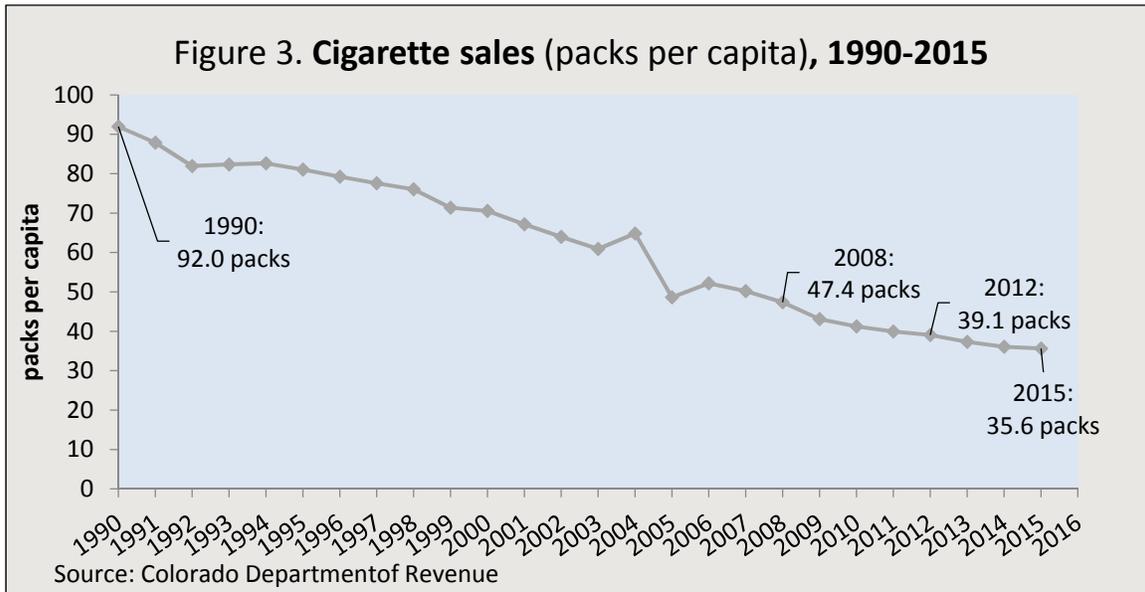
Three measures of cigarette consumption – daily smoking, number of cigarettes per day, and heavy smoking – did not detectably change during 2012-15.

**Daily smoking.** Daily smoking among current smokers did not significantly change in 2015 (71.9%) from 2012 (69.8%). In 2015, across subgroups, there were significant differences. People aged 65+ had the highest rate of daily smoking (**78.2%**), AI/AN had a higher rate of daily smoking than Hispanic/Spanish-speaking (**71.2%** vs. 41.5%), women had a significantly higher rate of daily smoking than men (**77.1%** vs. 67.7%), and LGBT had a significantly higher rate of daily smoking than heterosexuals (**85.3%** vs. 71.1%).

**Cigarettes per day (CPD).** In daily smokers the number of cigarettes consumed per day did not significantly change from 2012 to 2015 (13.7 to 12.7). Among nondaily smokers, CPD was unchanged overall (4.5) but declined significantly among college graduates (from 4.3 to **3.3**). Smoking frequency among nondaily smokers remained unchanged overall (13.9 days out of the past 30) but increased among 45-64 year olds (12.0 to **16.6** days).

**Heavy smoking (25+ CPD).** The proportion of daily smokers who smoked heavily continued to decline, from 12.5% in 2001, 10.8% in 2005, 8.6% in 2008 to 5.1% in 2012 and **3.2%** in 2015. It remained most common among adults aged 65+ (**8.1%**) and men (**4.2%**).

**Cigarette sales.** Cigarette excise tax collections continued to decline, and the number of cigarettes sold per Coloradan (Figure 3) fell by 9.0% between 2012 and 2015. At the same time, the decline has been slowing since 2009, which suggests that the tax increase adopted by voters in 2004 is losing its power to encourage cessation and lower consumption.<sup>\*19</sup>



States with successful tobacco control programs have seen cigarette consumption decline among continuing smokers, even though current smoking prevalence has leveled out.<sup>20</sup> Smokers who cut down often negatively compensate by inhaling more deeply or more often, or smoking each cigarette further down, but cutting down also encourages cessation<sup>21,22,23</sup> and may reduce harm.<sup>24,25</sup>

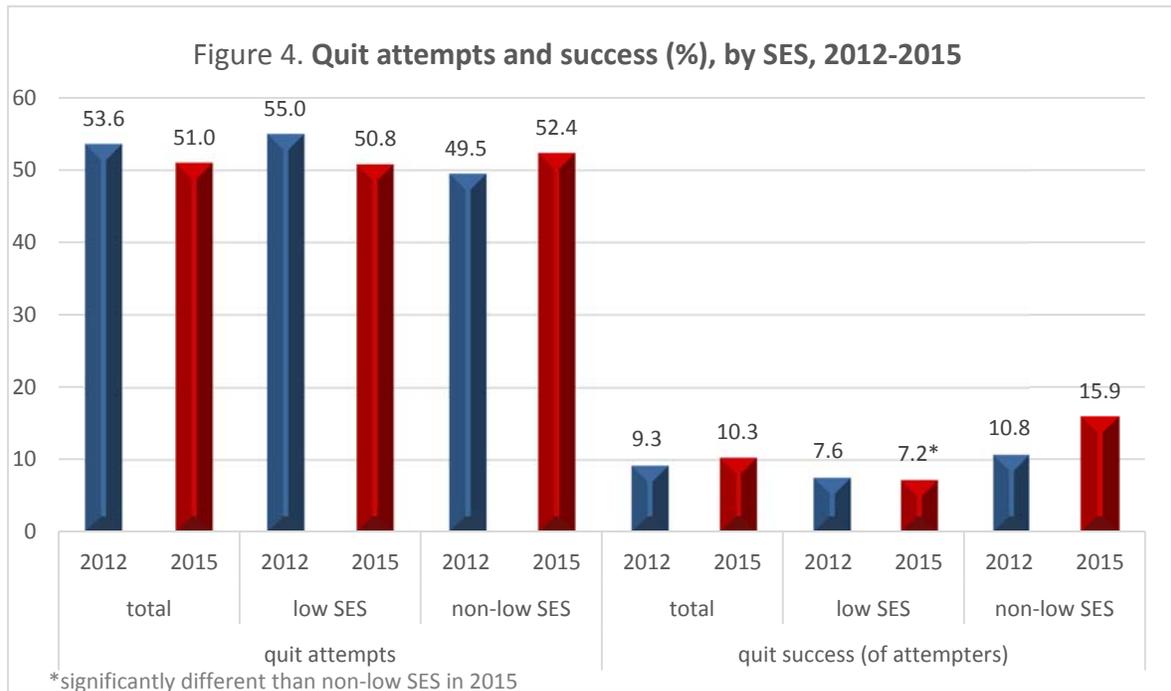
\* After TABS 2015 data were collected, per capita cigarette sales rose in 2016, to 36.1, erasing the 2015 decline.

### Cessation attempts, success, strategies

Prevention of smoking initiation has the greatest long-term potential to end the tobacco epidemic, but cessation by current smokers has the largest immediate impact on smoking prevalence. Quit attempts often end in relapse, but many smokers try repeatedly before achieving lasting abstinence.<sup>26</sup>

**Quit Attempts and success.** During 2012-15, past-year quit attempts (at least one day without smoking because trying to quit) remained steady, at 51.0% in 2015. However, the quit attempt rate among English-dominant Hispanic smokers decreased from 66.1% to **53.6%**. There were no other significant changes in quit attempt rates across demographic characteristics or SES. Since 2001, quit attempts have decreased overall, primarily between 2008 and 2012, when the quit attempt measure was revised to include only at-tempters who intended to quit smoking.

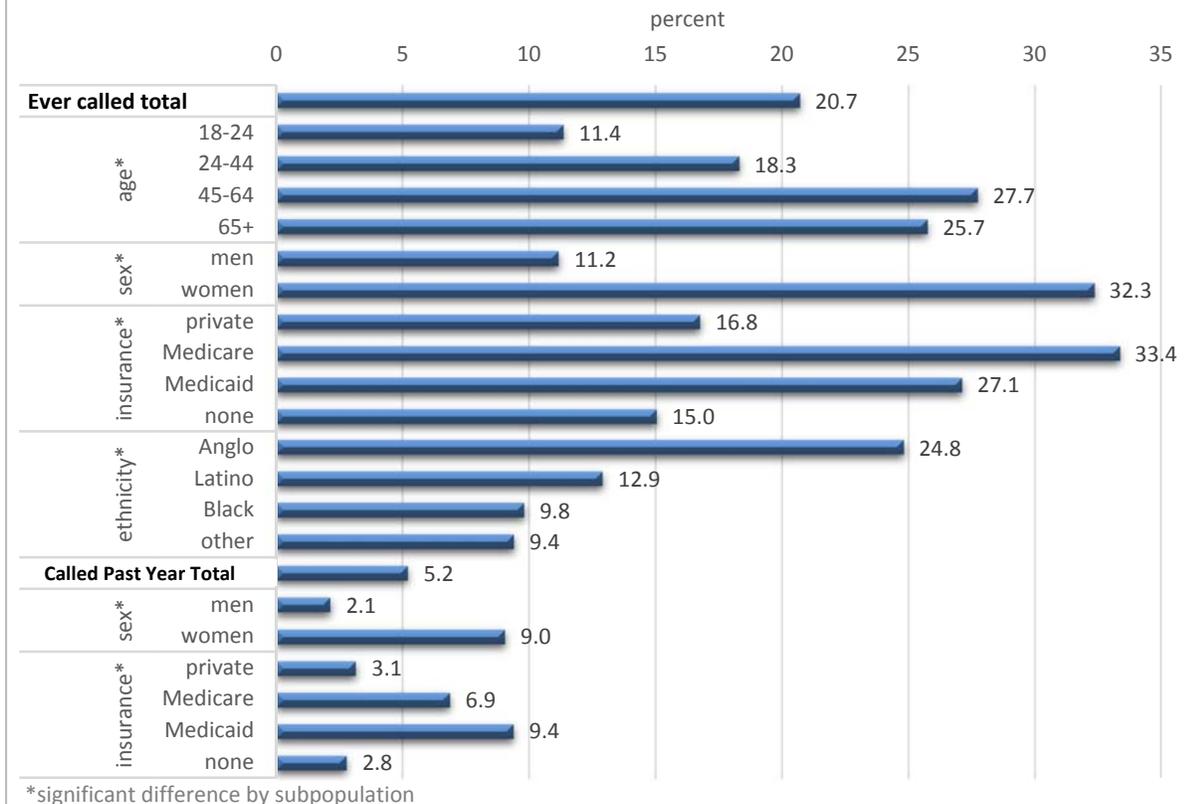
Among smokers who tried to quit, the average number of quit attempts did not change, with no significant differences by demographic characteristics or SES. Successful quit rates (at least three months abstinent at interview) remained unchanged at 10.3% of quit-attempters, except the rate improved among Medicaid smokers, from 2.3% to **7.2%**. Low SES smokers experienced lower quit success rates than higher SES smokers (**7.2%** vs. 15.9% in 2015) (Figure 4). Since 2001, quit attempt success rates have not changed significantly.



Several evidence-based treatment methods increase the likelihood that a quit attempt will succeed. Such treatments include medicinal nicotine products (patch, gum, lozenge, etc.), counseling (in person or through a telephone quitline), and prescription medicines (bupropion and varenicline).<sup>27</sup> The next portion of the narrative describes use of these treatments by Colorado smokers.

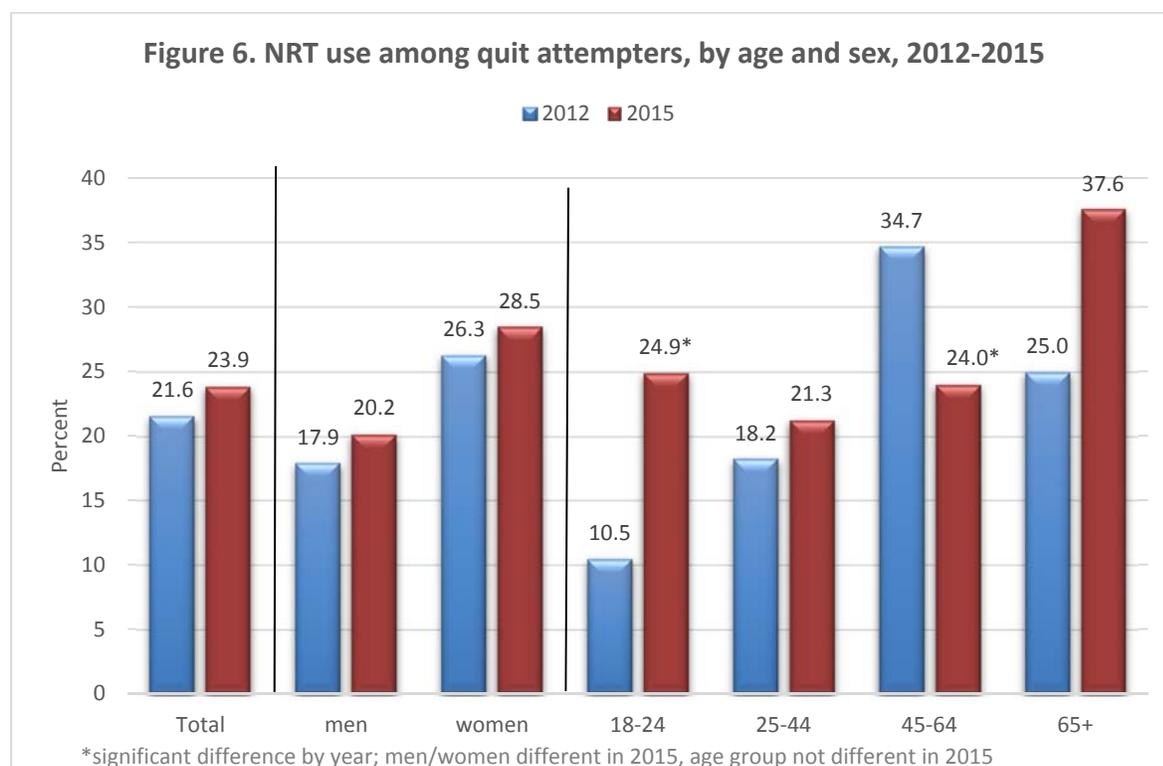
**Colorado QuitLine.** More smokers during the past year had heard of the Colorado QuitLine (telephone cessation counseling service) in 2015 than in 2012 (**84.8%**, up from 74.0%). Awareness of the QuitLine did not increase among those without insurance, remaining at fewer than three-fourths (72.7%). Among all smokers in the past year (not just quit attempters), Colorado QuitLine ever-use stayed the same among almost all demographic groups, with about one in five smokers during the past year ever having called the Colorado QuitLine (19.4%). Smokers aged 65+ and non-low SES smokers were more likely to have ever called the QuitLine in 2015 compared to 2012. In 2015, younger and male smokers remained less likely to have ever called the QuitLine, while Anglo smokers were most likely to have ever-called (21.8%).

Figure 5. QuitLine use among quit attempters, 2015



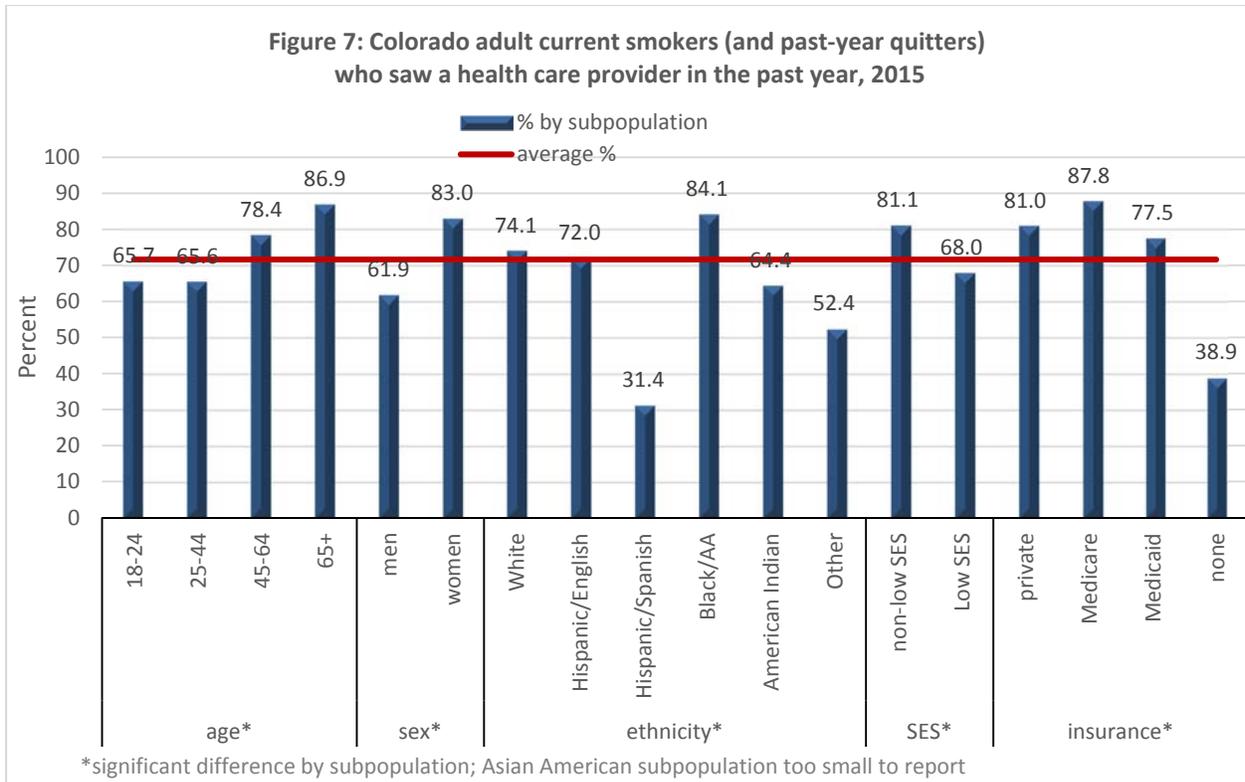
Among quit-attempters, an unchanged 20.7% have ever called the QuitLine, with differences by age, sex, insurance status, and ethnicity (Figure 5). Also among quit attempters, an unchanged 5.2% called the QuitLine in the past year, with no change among priority populations except that fewer male quit-attempters called (2.1%, down from 5.4% in 2012). In 2015, men and smokers with private insurance or no insurance were less likely than their counterparts to have called (Figure 5). When smokers without a quit attempt are included, an unchanged 4.8% of all smokers called the QuitLine in the past year. Older smokers were more likely to call the QuitLine in 2015 than in 2012 (6.5% vs. 2.0%). A similar percent of quit-attempters and total smokers called the QuitLine, suggesting that about half of callers did not make a quit attempt. Rates of awareness and calling the QuitLine are low among uninsured smokers, a group that may be in greatest need of QuitLine services, since cessation treatment may be unavailable for them elsewhere.

**Nicotine replacement therapy (NRT).** Among Colorado smokers who made a past-year quit-attempt, nearly one-quarter (23.9%) used nicotine replacement therapy, unchanged from 2012 (Figure 6). Since 2001, NRT use has increased significantly, from 16.5% to **23.9%**. In 2015, use was significantly higher among women than men in 2015 (**28.5%** vs. 20.2%) and virtually equal among low- and higher-SES smokers (22.6% vs. 21.7%). During 2012-2015, use increased among young adults, from 10.5% to **24.9%** and decreased among 45-64 year olds, from 34.7% to **24.0%**, eliminating a previous age disparity of younger smokers not using NRT as frequently. There were no significant differences in NRT use by ethnicity, insurance, or sexual orientation.



**Varenicline (Chantix®).** Use of varenicline stayed the same in 2015, with 6.7% of quit attempters reporting its use during their last quit attempt. Use varied only by age group, with quit attempters aged 65+ most likely to have used varenicline (**13.2%**, up from 5.3%).

**Health care visits, provider advice to quit, and cessation referral.** Almost three-fourths (71.6%) of smokers saw a health care provider in the previous 12 months (Figure 7), unchanged from 2012; about half saw a dentist in the past year (52.9%), unchanged from 2012. Younger, men, nonwhite and nonblack (Spanish-dominant Hispanic, AI/AN, other), low SES, and uninsured smokers were less likely than others to see a health care provider in the past year. Men, low SES and uninsured smokers were the least likely to have seen a dentist in the past year.



More than three-fourths (**76.9%**) of smokers who did see a healthcare provider were advised to quit, up from 68.0% in 2012. Increases occurred among a range of subpopulations, and no statistically significant disparities remained in advice to quit by age, sex, ethnicity, SES, insurance, sexual orientation, or STWYA.

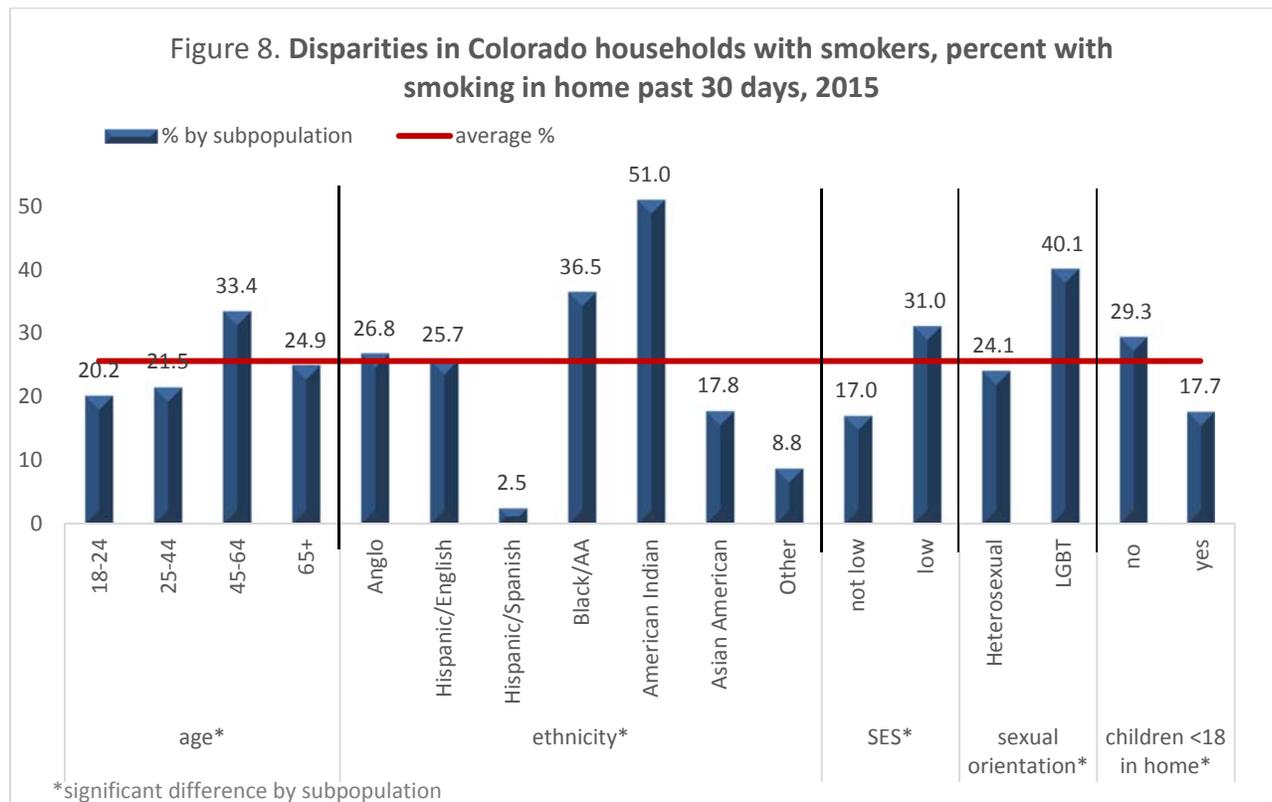
Half (**51.1%**) of adults who received provider advice to quit were referred to smoking cessation treatment, a one-third increase from 38.6% in 2012. There were no significant differences among subpopulations in referral to treatment. Quitline referrals continued to increase, to **67.4%** from 45.6% of all referrals; NRT/prescription referrals decreased, from 25.8% to **11.3%** of referrals. Referrals to a class (4.6%) or the internet (1.0%) remained low; about one in nine (11.7%) were referred to their insurance plan or the hospital.

Colorado's substantially improved rates of health care provider advice to quit and referral to cessation treatment may reflect a local or national trend, given provisions of the Affordable Care Act and the Centers for Medicare and Medicaid Service's Meaningful Use program for adoption of electronic health records in providers' offices. Some populations may still need education or intervention to consider seeing their health provider about quitting smoking.

**Secondhand smoke (SHS): More vehicle rules, higher outdoor work exposure, continuing disparities**

**Household smoking rules and behaviors.** During 2012-15, homes with smokefree rules stayed the same among households with smokers at 68.9%. Among households without smokers, rules decreased significantly from 93.3% to **91.7%**. Overall, smokefree home rules stayed the same, with 85.9% of households not allowing smoking in 2015.

Smoking inside the home in the past 30 days was significantly more common among households with resident smokers, with **25.6%** reporting smoking in the home compared to those without smokers (2.5%). Past 30-day home smoking rates did not change during 2012-15 for either group. Among households with smokers, smoking in the past 30 days varied by age, ethnicity, SES, sexual orientation, and having kids in the house (Figure 8). Smokefree rules varied by the same characteristics except did not reach significance for sexual orientation.

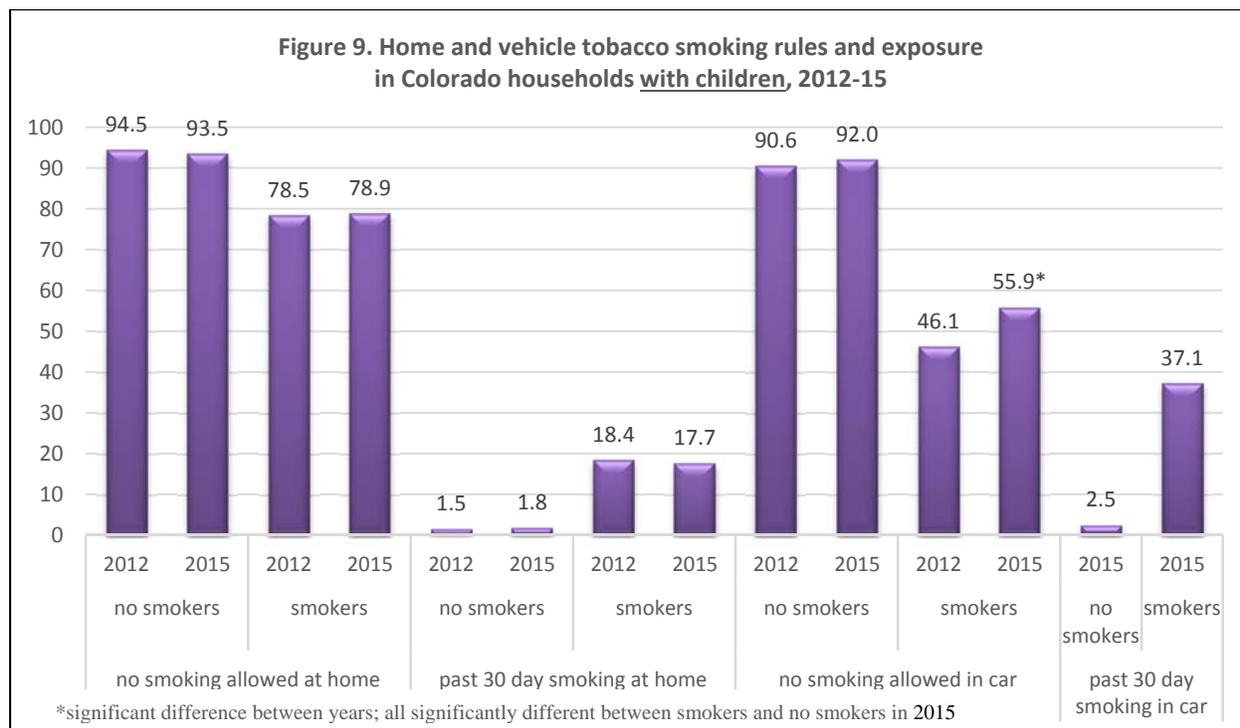


**Personal vehicle smoking rules.** Colorado vehicle owners were more likely in 2015 than in 2012 to keep their vehicles smokefree (**78.4%**, up from 76.1%). Most vehicle owners in non-smoking households (89.1%) continued to have smokefree vehicles in 2015; among households with smokers, almost half (**46.8%**) had a smokefree vehicle, up from 40.8% in 2012. Overall in 2015, 13.2% of respondents reported somebody smoking in their car in the past 30 days, 43.7% of households with smokers and 2.9% of households without smokers. Among households with smokers, Anglos (**49.0%**), American Indians (**51.3%**) and low SES (**46.7%** vs. 34.9%) were more likely to report 30-day smoking in their vehicles compared to their respective demographic counterparts.

**SHS exposure of children.** Reporting of smokefree home rules in households with smokers and children did not change significantly during 2012-15, remaining at 78.9% (Figure 9). In 2015, 17.7% of households with smokers and children report smoking in the home in the past 30 days, unchanged from 2012 and significantly higher than the 1.8% smoking rate in homes with children but no smokers.

Not allowing smoking in vehicles in households with smokers and children became more common in 2015, with **55.9%** reporting never allowing smoking, up from 46.1% in 2012. A much higher **92.0%** of

children in families without smokers were protected by smokefree vehicle rules, unchanged from 2012. In 2015, more than a third of households with smokers and children report past 30-day smoking in cars (37.1%), compared to 2.5% past 30-day smoking in cars without household smokers.

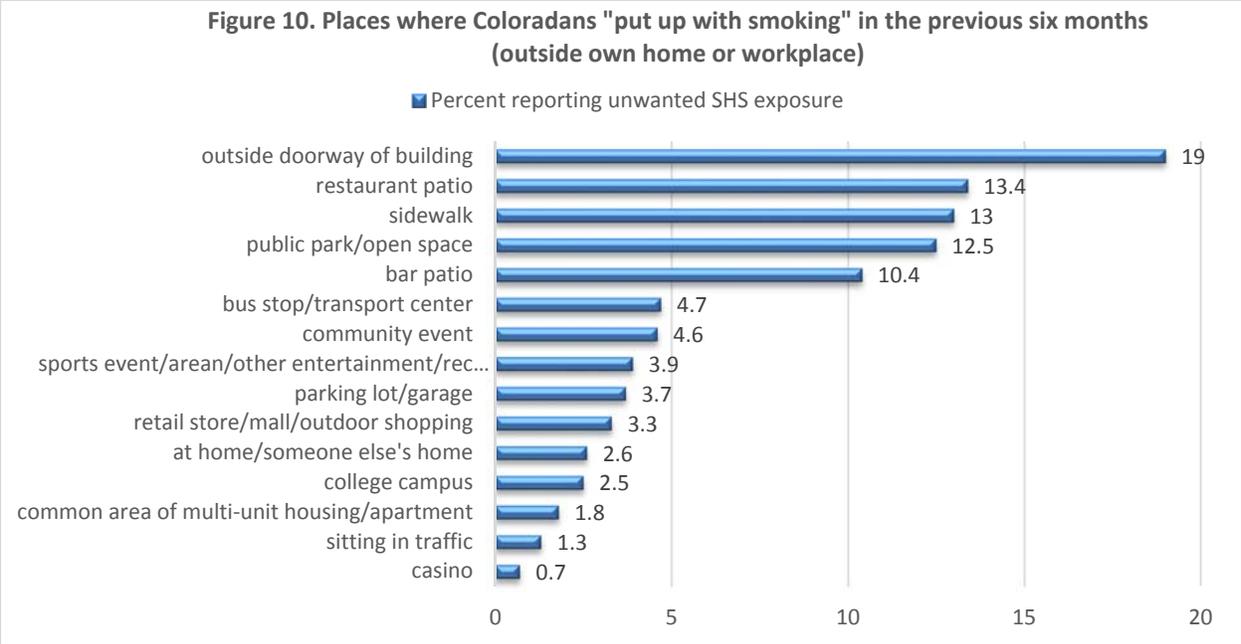


**Indoor workplace smoking.** Workers with mostly indoor jobs who reported smoking in the past-30-days stayed the same at 3.0% of workers with mostly indoor jobs. The percentage did not vary significantly by current smoking status but remained twice as high among low SES workers (4.8% vs. 2.0%) compared to non-low SES workers. Men were more than twice as likely as women to report indoor smoking at work (4.6% vs. 1.7%).

**Outdoor workplace smoking.** In 2015, 56.9% of workers reported that someone, including themselves, has smoked tobacco outdoors at work in the past 30 days. Significantly more current smokers, 84.8%, reported outdoor smoking, which could be during their own work breaks. However, 50.8% of nonsmokers still report outdoor exposure to tobacco smoking at work. Among nonsmokers, outdoor exposure to smoking at work was less common among Hispanics (44.3%); more common among young adults (55.8%); and more common among men than women (57.6% vs. 43.4%). Among nonsmokers and smokers separately, there was no difference in outdoor work exposure by SES. More than one-third (36.8%) of all respondents reported outdoor exposure to tobacco smoke at work from someone other than themselves at least one day in the past month; the average frequency was 9.9 days in the past 30 days.

**Smoking rules in work vehicles.** Among those who drive for work more than half the time, smokefree work-vehicle rules decreased slightly, from 78.8% to 76.0% during 2012-15, and absence of any policy increased from 0.7% to 4.4%. Smokefree policies were half as common among the smokers in the drive-for-work population (42.8% vs. 84.2%); growth of the “transportation network” industry (e.g., Uber, Lyft) may play a role as more drivers for hire use their own vehicles to carry passengers and presumably set their own smoking rules.

**Other SHS exposure.** No long-term trend appeared in proportions who reported putting up with tobacco smoke away from home or work. The rate increased during 2008-2012 but declined in 2015 to 33.6%, similar to the 2008 rate (39.5%) and considerably lower than the 2012 rate (55.8%). The most common exposure location in 2015 was outside the doorway of a building (19.0%; Figure 10). In 2015, 22.9% of respondents asked someone not to smoke around them or their family, down from 29.1% in 2012.



**SHS policy.** Overall, more than half of Coloradans support prohibiting smoking in some places, including inside cars when children are traveling in them (88.0%), outdoor restaurant dining patios (69.3%), multi-unit housing (60.6%), and outdoor public places (57.3%). Approximately half as many smokers as non-smokers supported all of the policies prohibiting smoking with one exception: the difference was still significant but much closer for smokers (82.3%) and non-smokers (89.1%) supporting prohibiting smoking inside cars when children are traveling in them. Fewer than half of Coloradans support prohibiting smoking in outdoor workplaces (40.3%).

**Multi-Unit Housing**

The US Surgeon General declared 10 years ago that there is no risk-free level of secondhand smoke exposure; indoor smoking policies must be complete smokefree to be effective.<sup>28</sup> Residents of multi-unit housing (MUH), many of whom live in government-subsidized housing, may be exposed to SHS from other units. A recent review found that a majority of MUH residents (50% to more than 95%) voluntarily prohibited smoking in their own unit, but 26%-64% reported exposure to SHS from somewhere outside their unit.<sup>29</sup> A recent study concluded that Colorado could save \$4.5 million annually by having all subsidized housing smokefree (savings from SHS-related health care, renovation of smoking-permitted units, and smoking-attributable fires).<sup>30</sup>

**Smoking and cessation.** Current smoking prevalence among Colorado MUH residents was significantly higher in 2015 than among those who do not live in MUH, **21.4%** vs. 15.5%. Ever-smoking rates were similar, and there were no differences by MUH status in past-year quit attempts, past-year success of quit attempts, or cessation treatment use. Among those who tried to quit, the number of quit attempts in the past year was higher among MUH residents (mean 8.9 attempts) than non-MUH residents (mean 5.4 attempts).

MUH daily smokers were less likely than non-MUH daily smokers to smoke heavily (**1.4%** vs. 4.3%). Daily smoking rates were similar between the groups.

MUH residents were more likely than non-MUH residents to ever use e-cigarettes (**29.9%** vs. 21.1%), but current e-cigarette use rates were similar (6.5% vs. 5.7%). Use rates were similar for chewing tobacco, cigars, and hookah.

**SHS exposure.** MUH residents were significantly less likely to report smokefree home rules (**82.3%** vs. 86.9%) and significantly more likely to report smoking in the home in the past 30 days (**10.4%** vs. 7.9%)

than non-MUH residents. MUH residents were also more likely to report having smokers in the household (**30.2%** vs. 25.1%); among households with a smoker, smokefree home rules and past-30-day smoking in the home were not different by MUH status.

MUH residents were more likely to have asked someone not to smoke around them or their family (**28.9%** vs. 21.2%). This difference may indicate greater objection to SHS exposure among MUH residents, since prevalence of SHS exposure outside home and workplace is similar for MUH and non-MUH residents (36.2% among MUH residents). Common areas in MUH were cited by only 3.7% of residents as the most recent place where they breathed someone else's tobacco smoke. Majorities of both MUH and non-MUH residents support smokefree MUH policies (59.5% and 60.5%, respectively).

### Other forms of tobacco

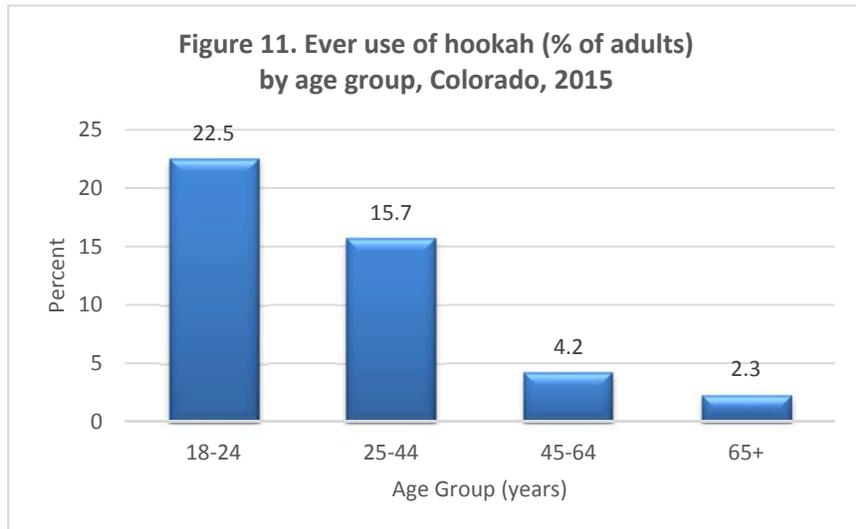
About one-fourth of adults (27.8%) had ever used a non-cigarette tobacco product (cigar, chewing tobacco/snuff, hookah) in 2015, unchanged from 2012.

*Cigar Smoking:* Current cigar smoking (every day or some days) increased from 2012 (2.5%) to 2015 (4.2%). Few men (0.5%) smoked cigars daily. Current use was higher among men aged 18-24 years (15.2%), and did not vary by ethnicity, sexual orientation, or SES. Of concern is the increase in 18-24 year olds from 2012 to 2015 (4.2% to **15.2%**), which could be explained by the increased presence of flavored little cigars or cigarillos. Cigar smoking was more common among men younger than 45 than men aged 45+ and in the young men.

*Chewing tobacco:* No evidence suggests that Colorado cigarette smokers are switching to smokeless products. There was no difference by smoking status in use of chewing tobacco or snuff use in men (current smoker: 7.8% vs. former/non-smoker: 7.1%). Chewing tobacco/snuff use was more common among men younger than 64 than men aged 65+. Current use of chewing tobacco or snuff was also unchanged (3.7% in 2015) and remained a predominantly male behavior (7.3%), with more daily users in the male population (4.1%) than some-day users (3.2%). Current use was more common among rural than non-rural men (11.1% vs. 7.1%); Anglo (8.2%), AI/AN (11.4%) and Asian (10.3%) men, and heterosexual men (8.0%). Use was significantly less prevalent among men aged 65+ (1.5%).

*Hookah:* Ever use of a hookah (waterpipe) to smoke tobacco did not change from 2012 to 2015 (9.9% vs. 10.6%). Although advertised as safe, hookah smoke exposes users to both tobacco toxins and toxic chemicals from fuel used to burn the tobacco. Communicable diseases can be transmitted among users of shared mouthpieces or multiple mouthpieces connected to a single water bowl.<sup>31</sup>

Ever use of a hookah was significantly higher among men than women (**16.7%** vs. 4.5%), younger adults (Figure 11), those with low SES (**14.5%** vs. 7.6%), and LGBT vs. heterosexual adults (**22.6%** vs. 10.7%). Of those who have ever smoked a hookah pipe, very few adults used hookah daily (0.8%) compared to some days (15.0%); the pattern did not differ across demographic groups. Among Colorado cigarette smokers, roughly one in four (25.6%) has ever smoked a hookah.



### Electronic smoking devices\*

E-cigarette ever-use increased substantially during 2012-15 across all demographic and SES groups, with overall ever-use more than tripling, from 6.9% to **22.8%**. There were significant differences in ever-use across almost all demographic groups (Table 3). Young (aged 18-24), low SES, English-speaking Hispanic and LGBT adults had the highest rates; rates also varied significantly by gender and insurance status, and were similar in rural and non-rural areas.

In 2015, the first year that TABS measured current and daily e-cigarette use, 5.6% of adults reported current e-cigarette use, with dramatic differences across demographic groups that essentially mirrored ever-use patterns. About one-third (34.5%) of current e-cigarette users were daily users, with consistency across demographic characteristics.

Current e-cigarette use was substantially more prevalent among current smokers (20.0%) than former smokers (5.1%) and nonsmokers (1.7%).

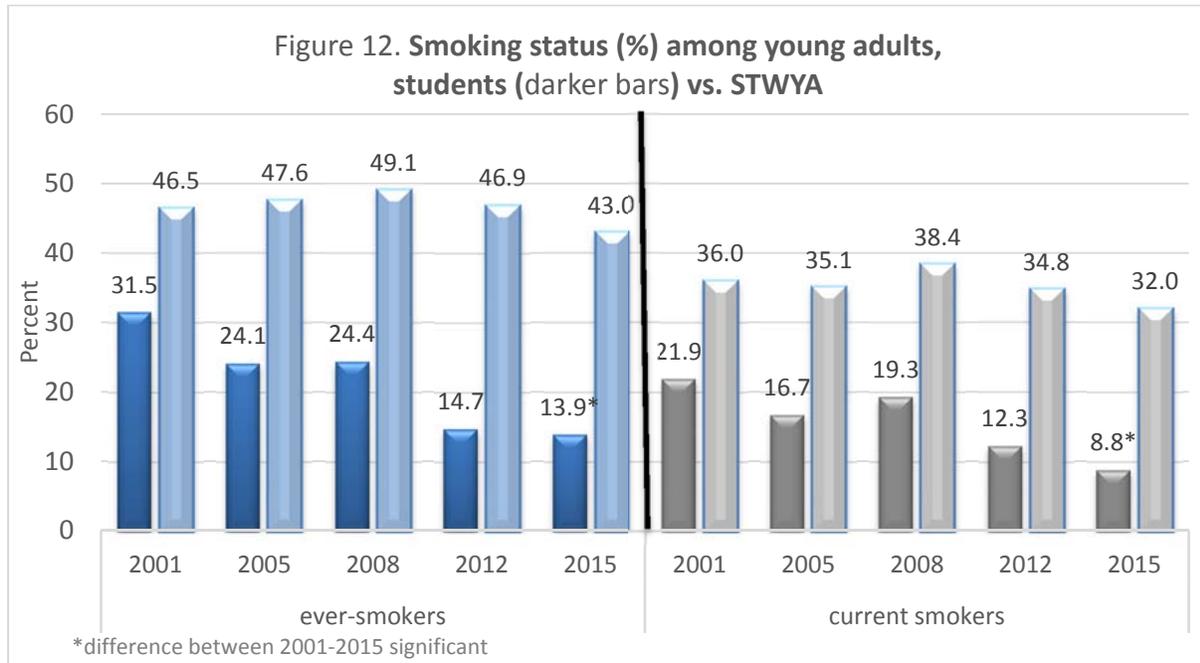
Table 3. Ever and current e-cigarette use (%), Colorado 2015				
	ever use	current use among...		
		<i>all adults</i>	<i>smokers</i>	<i>nonsmokers</i>
<b>All</b>	<b>22.8</b>	<b>5.6</b>	<b>20.0</b>	<b>2.7</b>
<b>Sex</b>				
men	<b>25.4</b>	<b>6.3</b>	19.5	<b>3.2</b>
women	<b>20.2</b>	<b>4.9</b>	20.6	<b>2.2</b>
<b>Age group</b>				
18-24	<b>44.7</b>	<b>11.8</b>	<b>30.2</b>	<b>7.7</b>
25-44	<b>28.0</b>	<b>6.3</b>	<b>19.7</b>	<b>3.0</b>
45-64	<b>16.5</b>	<b>4.4</b>	<b>18.6</b>	<b>1.4</b>
65+	<b>5.7</b>	<b>1.4</b>	<b>8.8</b>	<b>0.7</b>
<b>Low SES</b>				
no	<b>14.5</b>	<b>3.1</b>	18.2	<b>1.6</b>
yes	<b>31.9</b>	<b>8.6</b>	22.0	<b>3.9</b>
<b>Ethnicity</b>				
Anglo	<b>22.1</b>	<b>5.7</b>	21.1	2.6
Hispanic/English	<b>33.1</b>	<b>7.1</b>	18.4	4.3
Hispanic/Spanish	<b>9.4</b>	<b>1.4</b>	6.4	n/a
Black/African American	<b>27.0</b>	<b>6.2</b>	17.9	2.5
American Indian/AN	<b>24.7</b>	<b>9.9</b>	n/a	n/a
Asian American/PI	<b>18.4</b>	<b>5.0</b>	n/a	2.2
Other	<b>36.2</b>	<b>5.8</b>	n/a	n/a
<b>Sexual orientation</b>				
heterosexual	<b>22.3</b>	<b>5.3</b>	<b>19.4</b>	<b>2.5</b>
lesbian/gay/bisexual/transgender	<b>48.1</b>	<b>20.1</b>	<b>35.4</b>	<b>12.5</b>
<b>Bold</b> estimates are significantly different within characteristic. All subpopulations are significantly different for ever-use and current total use. AN: Alaska Native; PI: Native Hawaiian/other Pacific Islander				

\* Electronic smoking devices include: e-cigarettes and other electronic “vaping” products, including electronic hookahs (e-hookahs), vape pens, e-cigars, and others

### Straight to work young adults: a closer look

Straight-to-work young adults (STWYA) are a priority population for the state tobacco control program. In the current report, STWYA are those who have completed less than a college degree, are not currently students, and are currently working; in this section they are compared to young adult students ('students').

In 2015, smoking prevalence remained unchanged in the STWYA population at 32.0%, more than three times the rate among students (8.8%). During 2012-15, current smoking did not decrease significantly among STWYA or students. Ever smoking rates were also unchanged from 2012 among both groups and remained higher among STWYA (43.0%) than students (13.9%). However, during 2001-2015, student smoking decreased significantly while STWYA did not (Figure 12). Almost two-thirds of STWYA smokers smoked daily (63.1%), unchanged from 2012 and similar to student daily smoking.



Among STWYA smokers, quit-attempt prevalence (52.2%) and quit success (8.6%) were unchanged from 2012, and neither rate differed significantly from student rates. There was no significant difference by STWYA status in mean number of quit attempts. NRT use significantly increased among STWYA, from 6.6% to **28.0%** (based on fairly small numbers). STWYA smokers were almost significantly less likely than students to see a doctor in the past year (57.0% vs. 81.2%,  $p=0.06$ ); among those who did see a doctor, there was no statistically significant difference in advice to quit (65.9% among STWYA). More than half of STWYA saw a dentist in the past year (55.6%), similar to students.

	STWYA (%)	students (%)
Current chewing tobacco use*	8.0	2.6
Current cigar use*	14.4	7.3
Past 30-day smoking in home	10.5	10.7
Past 30-day smoking in vehicle*	26.4	14.8

\*significant difference between STWYA and student

STWYA were no more likely than students to have ever used e-cigarettes (54.6%) or to currently use e-cigarettes (16.9%). STWYA used chewing tobacco (**8.0%** vs. 2.6%) and cigars (**14.4%** vs. 7.3%) more often than students (Table 4). Current hookah use was the same (33.4% among STWYA).

Where the STWYA sample was large enough for further analysis, there were no significant differences by other demographic characteristics in smoking prevalence, quit attempts, successful quitting, or ever or current use of e-cigarettes.

STWYA and students had a similar prevalence of smokefree homes (78.3% among STWYA) and similar rates of past 30 day smoking in the home (10.5% in STWYA), with no change during 2012-15. STWYA

reported past 30 day smoking in the car more often than students (**26.4%** vs. 14.8%), despite having similar rates of smokefree vehicle rules (**59.7%** of STWYA have smokefree auto rule, increased from 44.8% in 2012). The difference is likely due to higher smoking prevalence among STWYA.

At work, 66.7% of STWYA report outdoor smoking and 5.9% of STWYA report indoor smoking. Significantly fewer STWYA than students reported putting up with smoking outside of their home or workplace (**38.2%** vs. 56.2%); prevalence of asking others not to smoke around them or their family was similar between the two groups (36.3% of STWYA).

### Smoking and mental illness\* / mental limitations†

About one in seven Colorado adults (15.5%) reported a diagnosed mental illness (MI) or mental limitation (ML). These adults were more likely than those not reporting an MI/ML to be ever-smokers and current smokers (**51.6%** vs. 38.6% and **27.4%** vs. 14.9%, respectively). However, the MI/ML adult population showed a decrease in current smoking prevalence during 2012-2015 (32.9% to **27.4%**). Daily smoking increased among smokers with MI/ML during 2012-2015, from 68.0% to **80.1%**, while CPD among daily smokers significantly declined from 15.3 to **12.6**. In 2015, the MI/ML population had a significantly higher rate of daily smoking than other adults (**80.1%** vs. 69.5%).

In 2015, MI/ML smokers were more likely than non-MI/ML smokers to have seen a health care provider in the past 12 months (**81.6%** vs. 68.3%); called the QuitLine in the past year (**7.5%** vs. 3.6%); used Chantix in the last quit attempt (**11.5%** vs. 4.9%); and ever used e-cigarettes (**38.1%** vs. 20.0%). The groups had similar rates of provider advice to quit smoking, making a quit attempt, referral to cessation assistance, QuitLine awareness, NRT use, quit success in the past year, and daily e-cigarette use. There was no significant change during 2012-2015 among MI/ML smokers in seeing a provider, getting advice to quit, making a quit attempt, using Chantix or NRT, calling the QuitLine, or successfully quitting. Referral to cessation services increased among MI/ML smokers as it did in the whole population. In households with a smoker, smokefree home rules were similarly common among MI/ML and non-MI/ML households, but past 30 day smoking in the home was more common in MI/ML households (**33.3%** vs. 22.9%). Among households with smokers, smokefree rules in vehicles were less common among those with MI/ML (**38.0%** vs. 50.1%) and past 30-day smoking in vehicles was more common (**53.3%** vs. 40.4%). There was no change during 2012-2015 in smokefree auto rules or smokefree home rules among MI/ML households with smokers.

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\* adults who report having a diagnosed mental illness

† adults who report that their activity is limited by a mental or emotional condition

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