CEPEG
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Tobacco Use Behaviors in the Workforce, Colorado 2015

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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). The survey was funded in 2001 by tobacco litigation settlement proceeds and subsequently by revenues from a voter-approved tobacco tax increase through the Colorado Department of Public Health and Environment's State Tobacco Education and Prevention Program (STEPP).

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. TABS has sampled both landline and cell phones since 2008; in 2015, an estimated 46.7% of Colorado households had only cell phone service.[*] The 2015 survey interviewed approximately Colorado 8,500 adults.

Estimates in the current report are weighted to represent the Colorado adult population in 2015. The data are not standardized to the employed population, because the working adult cohort is dynamic and an accurate census of the workforce is unavailable.

Introduction

Tobacco use continues to a leading behavioral risk factor for chronic disease and other adverse health outcomes in Colorado. Even though the cigarette smoking rate declined during 2001-15 (19.7% to 17.1%), no progress was evidence in the past three years (2012: 17.3%, 2015: 17.1%) and per capita cigarette sales increased; use of electronic nicotine delivery systems (ENDS) also increased. These trends are similar to national slowing in the decline of smoking prevalence.[1-5]

Workplaces can play an important role in promoting and supporting smoking cessation through evidence-based interventions such as smoke-free environments, cessation counseling, coverage of cessation treatment programs, and incentive programs.

The current report describes tobacco use among the Colorado workforce based on secondary analysis of TABS 2015 survey data, focused on respondents who indentified as employed and self-employed (n=4,622). Estimates are weighted to represent Colorado's adult workforce. The report presents findings by major industry classifications as defined by the North American Industry Classification System (20 major industrial groups; Tables 1-3). Industries with the highest tobacco use and exposure are presented in more detail by job titles. (Tables 4-7).

[*] Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, January–June 2015. National Center for Health Statistics. December 2015. Accessed at http://www.cdc.gov/nchs/nhis.htm.

The Colorado workforce

The workforce represented by TABS 2015 includes 2.4 million adults. Table 1 presents the workforce by sex, ethnicity, age group, and geographic region. Notable findings from Table 1 include:

- men disproportionately work in mining, construction, transportation, manufacturing, and information;
- women are more likely to be employed in education and health care;
- agriculture, professional/scientific, and real estate industries have the highest percentages of non-Hispanic whites;
- postal/warehousing and waste management positions have the highest percentages of Hispanics;
- young adults (18-24 years) comprise approximately one-third of the sales and food/hospitality workforce; seniors (aged 65+) comprise the highest percentage in agriculture/forestry/hunting.

Table 1. **Demographic characteristics (%) of the Colorado workforce, by industry, working adults, 2015**

			sex		ethnicity			age group				location	
Industry	population*	total	male	female	white	Hispanic	all other	18-24	25-44	45-64	65+	urban	rural
All	2,381,305	100.0	53.5	46.5	74.0	17.4	8.7	15.2	42.9	37.6	4.4	82.6	17.4
Health Care	347,259	14.6	25.0	75.0	72.8	16.0	11.2	12.6	41.0	41.5	4.8	85.0	15.0
Construction	251,361	10.6	91.8	8.2	67.3	26.9	5.8	9.6	45.3	41.9	3.2	81.6	18.4
Professional, Scientific	230,967	9.7	54.8	45.2	85.0	8.3	6.7	7.4	45.3	41.0	6.3	87.4	12.6
Sales	197,510	8.3	55.4	44.6	76.1	15.5	8.4	32.5	34.7	27.5	5.3	80.6	19.4
Hospitality and Food	187,885	7.9	44.4	55.6	61.3	29.0	9.7	34.3	45.8	19.6	0.3	76.6	23.4
Education	179,258	7.5	25.0	75.0	82.0	9.9	8.1	10.4	39.9	43.6	6.0	83.0	17.0
Public Administration	165,641	7.0	60.1	39.9	81.3	10.1	8.6	9.9	41.5	45.2	3.4	81.7	18.3
Other services	134,648	5.7	48.8	51.2	78.4	15.1	6.5	18.6	39.6	38.2	3.6	87.0	13.0
Waste Management	103,315	4.3	48.3	51.7	50.3	38.0	11.7	10.1	52.7	34.9	2.3	87.5	12.5
Transportation	93,673	3.9	78.8	21.2	70.6	12.8	16.6	16.7	35.7	42.6	5.0	81.6	18.4
Finance and Insurance	84,030	3.5	44.5	55.5	79.5	15.1	5.4	12.9	47.9	35.2	4.0	89.8	10.2
Manufacturing	82,683	3.5	75.3	24.7	64.7	30.6	4.7	16.1	50.2	31.7	2.1	89.2	10.8
Arts and Entertainment	74,270	3.1	54.6	45.4	80.8	8.7	10.5	26.0	31.8	35.1	7.1	79.6	20.4
Mining, Oil and Gas	58,147	2.4	82.2	17.8	78.9	19.4	1.6	8.7	58.2	30.1	3.0	71.8	28.2
Agriculture, Forestry, Hunting	52,039	2.2	68.9	31.1	86.7	6.2	7.1	8.5	41.7	37.1	12.7	47.2	52.8
Information	51,998	2.2	74.6	25.4	72.6	14.4	13.0	1.7	54.6	42.9	0.8	89.0	11.0
Real Estate	43,717	1.8	47.2	52.8	84.8	7.3	8.0	8.2	30.9	53.3	7.6	85.1	14.9
Postal Service/Storage/Warehousing	15,425	0.6	62.6	37.4	46.6	37.6	15.7	5.5	57.2	34.9	2.4	77.3	22.7
Industry not reported	27,479	1.2	38.5	61.5	66.9	18.4	14.7	13.3	43.2	32.9	10.7	82.2	17.8

* weighted to the Colorado population

Current tobacco use in the workforce

Cigarette Smoking: Current smoking prevalence is defined as the percentage of a population that smoked 100+ cigarettes in lifetime and now smokes cigarettes daily or some days. Prevalence differs among industries, and Colorado rates resemble the distributions at the national level. The five industries in Colorado with the highest cigarette smoking rates are postal service/storage/warehousing (31.7%), manufacturing (27.9%), other services (26.1%), construction (25.8%), and hospitality and food (25.0%) (Tables 2, 2a). 'Other services' includes industries such as automotive, electronic, household repair and maintenance; personal care services, and religious, civic and social organizations. These rates are in line with results from the National Health Interview Survey (NHIS), which found high smoking prevalence rates in hospitality and food service (30%), construction (29.7%), and mining (30%)[5-7] (Colorado mining rate, 20.4%). Colorado education workers had the lowest smoking rate (3.7%), as do national education workers (9.7%).

From a public health perspective, the potential impact of smoking cessation initiatives depends on population size as well as smoking prevalence. The health care industry is Colorado's largest, with 347,259 workers and 13.5% smoking prevalence, or approximately 47,000 smokers; the postal/ warehouse/storage sector has the highest smoking prevalence rate, 31.7%, and 15,245 workers, including approximately 4,800 smokers. Public health planners should consider both prevalence and total numbers to maximize potential impact of cessation and prevention funding.

ENDS Use: Current e-cigarette use is defined as the percentage of the population that has used e-cigarettes or other electornic vaping device in the past 30 days on a daily basis or on some days. Two industries with the highest smoking prevalence also have the two highest ENDS use rates: postal/storage/warehousing (14.9%) and hospitality and food(14.0%) (Table 2b). This may reflect smoke-free policies in these industries, which operate indoors and have customers visiting the premises.[14] Other high prevalence smoking industries, such as construction and mining, have lower ENDS use (7.0% and 5.7% respectively), possibly because these industries have smaller proportions of smoke-free worksites.[9,14] The education industry has the lowest prevalence of ENDS use (2.1%).

Smokeless/Chewing Tobacco: Current chewing/smokeless tobacco use is defined as past thirty day use of chewing tobacco, snus, or snuff daily or some days. Four industries dominate use of smokeless/ chewing tobacco: mining (18.8% prevalence), construction (13.6%), transportation (13.0%), and agriculture/forestry/hunting (11.4%). Workers who did not report their industry also had higher prevalence, 16.4% (Table 2c). In national studies, mining has the highest use prevalence (18.8%).[15] The use of smokeless/chewing tobacco has shown no significant changes nationally over time, suggesting that targeted prevention and cessation policies in these industries may be an important opportunity.[1]

Table 2. **Tobacco use current behaviors by industry, Colorado working adults, 2015**						
	current smoking		current e-cigarette use		current chewing tobacco use*	
industry	**%**	**LCL, UCL**	**%**	**LCL, UCL**	**%**	**LCL, UCL**
All Industries	17.5	16.0, 19.0	6.5	5.5,7.5	4.9	4.1, 5.8
Agriculture, Forestry, Hunting	17.0	8.3, 25.7	4.7	0.0, 9.3	11.4	4.8, 17.9
Mining, Oil and Gas	20.4	9.8, 31.1	5.2	0.0, 10.6	18.8	8.3, 29.2
Construction	25.8	20.5, 31.1	7.0	3.6, 10.5	13.6	9.2, 18.0
Manufacturing	27.9	17.8, 38.1	12.5	5.3, 19.8	2.1	0.0, 5.1
Sales	22.7	17.0, 28.5	12.7	7.9, 17.6	3.1	0.5, 5.7
Transportation	21.0	12.6, 29.4	2.8	0.4, 5.2	13.0	5.7, 20.3
Postal Service/Storage/Warehousing	31.7	10.4, 53.1	14.0	0.0, 28.6	0.9	0.0, 2.6
Information	15.5	6.7, 24.3	2.2	0.0, 5.6	0.6	0.0, 1.8
Finance and Insurance	13.8	7.0, 20.7	6.5	1.6, 11.4	5.4	0.6, 10.3
Real Estate	13.9	4.1, 23.8	3.0	0.0, 7.8	4.4	0.0, 9.9
Professional, Scientific	11.1	7.4, 14.8	2.9	1.2, 4.7	3.8	1.3, 6.2
Waste Management	19.7	12.1, 27.3	5.4	1.4, 9.4	1.7	0.0, 3.9
Education	3.7	1.3, 6.0	2.1	0.0, 4.3	0.5	0.0, 1.2
Health Care	13.5	10.3 16.8	3.9	2.2, 5.5	0.9	0.0, 1.7
Arts and Entertainment	12.1	5.3, 19.0	2.2	0.0, 4.9	0.6	0.0, 1.7
Hospitality and Food	25.0	18.7, 31.3	14.9	9.4, 20.5	2.7	0.6, 4.7
Other services	26.1	18.6, 33.6	10.5	5.1, 15.9	4.4	1.0, 7.7
Public Administration	10.9	6.3, 15.6	5.9	2.3, 9.4	5.8	2.9, 8.7
Industry not reported	14.0	2.8, 25.1	5.3	0.0, 12.4	16.4	0.0, 35.3

*Chewing tobacco use includes chewing tobacco, snuff and snus

Table 2a. **Current cigarette smoking by industry, highest to lowest prevalence, Colorado, 2015**			
industry	smokers (N)	%	LCL, UCL
Postal Service/Storage/Warehousing	4,892	31.7	10.4, 53.1
Manufacturing	23,092	27.9	17.8, 38.1
Other services	34,777	26.1	18.6, 33.6
Construction	64,806	25.8	20.5, 31.1
Hospitality and Food	46,980	25.0	18.7, 31.3
Sales	44,535	22.7	17.0, 28.5
Transportation	19,336	21.0	12.6, 29.4
Mining, Oil and Gas	11,835	20.4	9.8, 31.1
Waste Management	20,371	19.7	12.1, 27.3
All-industry average	415,156	17.5	16.0, 19.0
Agriculture, Forestry, Hunting	8,858	17.0	8.3, 25.7
Information	8,055	15.5	6.7, 24.3
Industry not reported	3,844	14.0	2.8, 25.1
Real Estate	6,097	13.9	4.1, 23.8
Finance and Insurance	11,592	13.8	7.0, 20.7
Health Care	46,967	13.5	10.3 16.8
Arts and Entertainment	8,920	12.1	5.3, 19.0
Professional, Scientific	25,583	11.1	7.4, 14.8
Public Administration	18,067	10.9	6.3, 15.6
Education	6,548	3.7	1.3, 6.0

Table 2b. **Current e-cigarette use by industry, highest to lowest prevalence, Colorado, 2015**			
industry	e-cigarette users (N)	%	LCL, UCL
Hospitality and Food	28,033	14.9	9.4, 20.5
Postal Service/Storage/Warehousing	2,158	14.0	0.0, 28.6
Sales	24,958	12.7	7.9, 17.6
Manufacturing	10,361	12.5	5.3, 19.8
Other services	14,095	10.5	5.1, 15.9
Construction	17,628	7.0	3.6, 10.5
All-industry average	155,480	6.5	5.5, 7.5
Finance and Insurance	5,469	6.5	1.6, 11.4
Public Administration	9,729	5.9	2.3, 9.4
Waste Management	5,556	5.4	1.4, 9.4
Industry not reported	1,452	5.3	0.0, 12.4
Mining, Oil and Gas	3,023	5.2	0.0, 10.6
Agriculture, Forestry, Hunting	2,424	4.7	0.0, 9.3
Health Care	13,372	3.9	2.2, 5.5
Real Estate	1,315	3.0	0.0, 7.8
Professional, Scientific	6,787	2.9	1.2, 4.7
Transportation and Warehousing	2,624	2.8	0.4, 5.2
Information	1,137	2.2	0.0, 5.6
Arts and Entertainment	1,611	2.2	0.0, 4.9
Education	3,747	2.1	0.0, 4.3

Table 2c. **Current chew/snuff/snus use by industry, highest to lowest prevalence, Colorado, 2015**			
industry	chew/snuff/snus users (N)	%	LCL, UCL
Mining, Oil and Gas	10,921	18.8	8.3, 29.2
Industry not reported	4,513	16.4	0.0, 35.3
Construction	34,224	13.6	9.2, 18.0
Transportation	12,190	13.0	5.7, 20.3
Agriculture, Forestry, Hunting	5,907	11.4	4.8, 17.9
Public Administration	9,569	5.8	2.9, 8.7
Finance and Insurance	4,576	5.4	0.6, 10.3
All-industry average	117,725	4.9	4.1, 5.8
Other services	1,922	4.4	1.0, 7.7
Real Estate	5,861	4.4	0.0, 9.9
Professional, Scientific	8,651	3.8	1.3, 6.2
Sales	6,177	3.1	0.5, 5.7
Hospitality and Food	5,011	2.7	0.6, 4.7
Manufacturing	1,763	2.1	0.0, 5.1
Waste Management	1,781	1.7	0.0, 3.9
Postal Service/Storage/Warehousing	136	0.9	0.0, 2.6
Health Care	2,957	0.9	0.0, 1.7
Information	309	0.6	0.0, 1.8
Arts and Entertainment	424	0.6	0.0, 1.7
Education	835	0.5	0.0, 1.2

Smoking at work and scondhand smoke exposure

Colorado clean indoor air policies reduce smoking at work and secondhand smoke (SHS) exposure, but SHS continues to plague every industry, some more so than others. To examine smoking at work and SHS exposure in the workplace, we excluded self-employed workers and focused on work environments affected by smoking policies and employer cessation programs. Adult workers were asked whether anyone (including themselves) in the past 30 days had smoked cigarettes, cigars, or pipes in the workplace, either indoors or outdoors.

Colorado mining/oil and gas (11.2%) and construction (15.1%) industries have the highest percentage of workers reporting indoor smoking at work in the past 30 days. A high percentage (10.2%) of waste management workers also report someone smoking indoors. Industries with the lowest reported rates of indoor smoking are finance (0.2%), professional/scientific (0.3%), real estate (0%), and arts and entertainment (0.2%). Nationally, industries with fewer smokefree workplace policies include agriculture, forestry, fishing, mining, and construction; professional and similar industries tend to have smokefree workplace policies.[12]

Outdoor smoking at work was very common in Colorado: between 40 percent and 80 percent of workers in most industries reported someone smoked outdoors at work in the past 30 days (Table 3). An exception was the education industry, most likely due to smokefree policies around schools and higher education campuses, although nearly a quarter of education employees reported someone smoking outdoors at work. Nationally, smoking exposure still occurs at work, especially outdoors.[10,11,13]

Table 3. **Smoking in the workplace, indoors and outdoors, by industry, Colorado 2015**

industry	indoors, past 30 days		outdoors, past 30 days	
	%	LCL, UCL	%	LCL, UCL
Construction	15.1	9.8, 20.3	72.6	66.7, 78.6
Mining, Oil and Gas	11.2	2.1, 20.3	67.3	55.6, 79.1
Waste Management	10.2	3.1, 17.4	53.9	42.9, 64.9
Transportation	8.5	3.2, 13.7	67.2	57.9, 76.4
Agriculture, Forestry, Hunting	6.7	0.0, 14.2	63.9	48.1, 79.8
Postal Service/Storage/Warehousing	5.5	0.0, 13.6	79.3	62.3, 96.3
Other services	5.5	0.8, 10.1	64.6	55.4, 73.8
Hospitality and Food	3.5	0.6, 6.5	65.2	58.0, 72.3
Manufacturing	3.5	0.0, 7.0	65.6	54.4 , 76.8
Sales	3.0	0.1, 5.9	63.5	56.0, 71.0
Information	2.4	0.0, 6.2	70.5	58.8, 82.2
Public Administration	2.1	0.0, 4.4	63.3	56.6, 69.9
Health Care	1.4	0.4, 2.4	42.2	37.0, 47.4
Education	0.8	0.0, 1.9	24.5	18.7, 30.2
Professional, Scientific	0.3	0.0, 0.7	54.8	48.2, 61.3
Arts and Entertainment	0.2	0.0, 0.6	51.4	38.1, 64.7
Finance and Insurance	0.2	0.0, 0.5	63.4	54.1, 72.7
Real Estate	0	0	56.2	39.9, 72.4
Industry not reported	0	0	39.0	21.0, 57.1

In addition to observed smoking at work, we asked participants about breathing someone else's tobacco smoke at work, both indoors and outdoors. These items specifically measure SHS exposure rates in the workplace. Industries with the highest reported rates of indoor SHS exposure indoors at the workplace were waste management (17.9%), construction (16.1%), and agriculture (12.6%) (Table 3a); professional/scientific (3.2%), information (2.9%), and finance and insurance (1.4%) industries all reported the lowest exposure indoors. Every industry reported more than zero SHS exposure indoors at the workplace, although Colorado law prohibits indoor workplace smoking.

Outdoor exposure to tobacco smoke: SHS exposure rates outdoors in the workplace were between 9 percent and 57 percent, with postal service/storage/warehousing reporting the most exposure at 57.4% followed by construction at 49.8%; education reported the lowest at 17.6%, likely related to tobacco-free policies on school property.

Table 3a. **SHS exposure in the workplace, indoors and outdoors, by industry, Colorado 2015**

industry	indoors, past 30 days		outdoors, past 30 days	
	%	LCL, UCL	%	LCL, UCL
Waste Management	17.9	6.7, 29.2	41.3	30.7, 51.9
Construction	16.1	7.9, 24.3	49.8	42.5, 57.1
Agriculture, Forestry, Hunting	12.6	0.0, 27.9	40.4	24.8, 56.0
Hospitality and Food	10.8	6.3, 15.4	48.1	40.5, 55.7
Postal Service/Storage/Warehousing	9.3	0.0, 22.0	57.4	32.7, 82.1
Sales	9.0	4.4, 13.6	40.2	32.8, 47.7
Mining, Oil and Gas	8.1	0.0, 17.7	36.4	23.2, 49.6
Transportation	7.9	1.8, 14.0	41.4	30.8, 51.9
Other services	7.9	2.5, 13.3	41.8	31.9, 51.8
Health Care	6.8	3.8, 9.7	28.9	24.0, 33.8
Arts and Entertainment	6.3	0.0, 13.1	39.3	25.5, 53.1
Manufacturing	6.3	1.5, 11.1	36.3	24.6, 47.9
Public Administration	5.1	1.1, 9.2	44.2	37.0, 51.5
Industry not reported	4.7	0.0, 11.6	9.1	1.8, 16.4
Education	4.6	1.7, 7.6	17.6	12.9, 22.2
Real Estate	4.4	0.0, 9.7	29.7	14.6, 44.8
Professional, Scientific	3.2	0.6, 5.8	32.2	25.9, 38.4
Information	2.9	0.0, 6.2	33.2	21.3, 45.1
Finance and Insurance	1.4	0.0, 3.9	33.2	23.4, 43.1

A closer look at industries with higher tobacco-use rates

Smoking: Examination by job title (Table 4) of industries with the top five smoking rates found that:

- (construction industry): workers in residential construction, finishers, and exterior contractors had the highest smoking rates (39.3%, 27.5%, and 26.0% respectively);
- (manufacturing): animal food and metal works workers had the highest rates (36.1%);
- (hospitality): restaurant workers had the highest rate (26.5%);
- (other services) automotive repair workers had the highest rate (36.0%).

Table 4. **Current smoking prevalence, by job title in industries with higher prevalence, Colorado 2015**

industry	job title	%	LCL, UCL
Construction	Residential Construction	39.3	27.1, 51.4
	Construction Finisher	27.5	12.7, 42.3
	Exterior Contractors	26.0	9.3, 42.8
	Foreman/director	24.1	11.7, 36.5
	Other	20.5	9.3, 31.7
	Construction Equipment	15.7	3.7, 27.8
	Delivery	7.8	0.0, 16.6
Manufacturing	Animal food and Metal	36.1	12.2, 60.0
	Other	28.9	17.1, 40.7
Postal Service/Storage/Warehousing	Postal Service/Storage/Warehousing	31.7	10.3, 53.1
Hospitality and Food	Restaurants	26.5	19.6, 33.5
	Travel Accomodation	16.9	1.8, 32.0
Other Services	Automotive Repair	36.0	22.8, 49.2
	Other Personal Services	31.8	11.4, 52.3
	Personal Care Services	26.9	8.4, 45.4
	Religious Organizations	13.3	0.0, 36.8
	Other Services	6.3	0.0, 12.6

ENDS use: Table 5 shows job titles with high ENDS use rates in the two industries with the highest prevalence of ENDS use. The use of ENDS is rising among all types of smokers and non-smokers[14] and an understanding of why workers are using ENDS (substitution for cigarettes in smokefree environments, cessation aid, primary nicotine source) will help in determining how to engage with workplaces to reduce use.

Table 5. **Current e-cigarette use prevalence, by job title in industries with higher prevalence, Colorado 2015**

industry	job title	%	LCL, UCL
Postal Service/Storage/Warehousing	Postal Service/Storage/Warehousing	14.0	0.0, 28.6
Hospitality and Food	Travel Accomodation	13.1	0.0, 27.9
	Restaurants	14.1	8.4, 19.7

Smokeless/Chewing tobacco: Table 6 shows prevalence by job title in the two industries that have the highest rates of chewing tobacco use, both in Colorado and nationally. Smokeless/chew use prevalence has remained unchanged over time.[15] In Colorado, the highest use rates by job title are among mining drillers/laborers (31.9%) and construction equipment operators (26.3%). These rates are much higher than in other occupations, offering clear target groups for cessation interventions.

Table 6. **Current chewing tobacco use prevalence, by job title in industries with higher prevalence, Colorado 2015**

industry	job title	%	LCL, UCL
Mining	Driller/Laborer	31.9	12.2, 51.5
	Administrative/Support	4.0	0.0, 11.7
	Foreman/Supervisor	17.1	0.0, 38.7
Construction	Construction Equipment	26.3	11.3, 41.4
	Other	17.4	7.9, 27.0
	Foreman/director	14.7	3.5, 25.8
	Residential Construction	11.6	3.0, 20.1
	Construction Finisher	9.0	0.0, 25.6
	Exterior Contractors	6.8	0.0, 14.9

Smoking at Work and SHS Exposure: The construction industry was analyzed by job title; two other high-exposure industries, postal service/storage/warehousing and agriculture, had too few respondents to support deeper analysis.

Smoking at work: Residential construction (24.3%) had the highest percent reporting someone smoking indoors in the past 30 days. 'Indoor' work for these occupations likely involves a lot of time at indoor job sites in which smoking is likely not always prohibited (rather than indoors at a desk or in a finished building, for example). Foreman and directors had the lowest percent reporting someone smoking indoors in the past 30 days (2.8%) however, had the highest percent reporting someone smoking outdoors at work in the past 30 days (80.1%); perhaps this discrepancy reflects spending less time indoors at construction sites vs. indoors at a desk and/or considering partially finished buildings as outdoors instead of indoors.

Table 7. **Smoking in construction workplaces, indoors and outdoors, Colorado 2015**

job title	indoors, past 30 days		outdoors, past 30 days	
	%	**LCL, UCL**	**%**	**LCL, UCL**
Residential Construction	24.3	11.5, 37.0	67.1	54.2, 80.0
Exterior Contractors	18.0	1.2, 34.8	65.5	45.2, 85.8
Construction Equipment	10.2	0.0, 20.8	78.3	63.0, 93.5
Foreman/Director	2.8	0.0, 8.3	80.1	66.9, 93.3
Other	10.7	0.5, 21.0	76.9	64.7, 89.1

Exposure to smoke at the workplace: Workers in residential construction had the highest percent reporting smoke exposure indoors at the workplace among construction workers (26.6%) (equipment operators and exterior contractors were omitted due to small numbers). This seems relevant given that this job title involves construction inside. Foremen reported no indoor SHS exposure. Outdoor exposure to smoke was highest among foreman/directors and similar across other construction job titles.

Table 7a. **SHS exposure in construction workplaces, indoors and outdoors, Colorado 2015**				
job title	indoors, past 30 days		outdoors, past 30 days	
	%	**LCL, UCL**	**%**	**LCL, UCL**
Residential Construction	26.6	6.6, 46.5	45.4	30.9, 59.9
Other	10.4	0.0, 21.4	53.2	38.4, 68.1
Foreman/Director	0.0		53.4	35.2, 71.6

Conclusion

Smoking rates and use of other tobacco are more pronounced in certain Colorado industries, similar to national studies that identify key industries to target for prevention and cessation programs. Evidence-based workplace interventions include smoke-free workplace policies, telephone based smoking cessation counseling, cessation medications, and insurance coverage for cessation treatments.[2,4,9] These programs should be supported and reinforced in targeted industries and jobs to reduce smoking and tobacco use and smoke exposure in the workplace.

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