



**E-Cigarette Use,  
Colorado 2015**

Preliminary Estimates

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**Community Epidemiology & Program Evaluation Group**

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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); 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. 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.

**The current preliminary estimates of electronic nicotine delivery systems (ENDS) use in the state of Colorado, represent the Colorado adult population in 2015. Cells listed with a '----' indicates no presented data due to denominator being less than 25.**

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\* 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. Available from: <http://www.cdc.gov/nchs/nhis.htm>.

Table 1. E-Cigarette Use and Behaviors among Colorado Adults, 2015

Category		Ever Use % (95% CI)	Current Use % (95% CI)	Daily Use, % of current users (95% CI)
Age Group	18-24	44.7 (40.3, 49.1)*	11.8 (9.0, 14.6)*	33.0 (20.8, 45.2)
	25-44	28.0 (25.6, 30.4)*	6.3 (5.0, 7.6)*	37.6 (27.3, 47.8)
	45-64	16.5 (14.8, 18.2)*	4.4 (3.5, 5.3)*	31.6 (21.9, 41.3)
	65+	5.7 (4.6, 6.7)*	1.4 (0.9, 1.8)*	33.4 (17.0, 49.7)
Ethnicity	White	22.1 (20.7, 23.5)*	5.7 (4.9, 6.5)*	33.7 (26.5, 41.0)
	Hispanic English-dominant	33.1 (28.8, 37.3)*	7.1 (4.9, 9.3)*	34.9 (20.0, 49.7)
	Hispanic Spanish-dominant	9.4 (6.0, 12.8)*	1.4 (0.2, 2.7)*	-----
	Black/African American	27.0 (20.1, 34.0)*	6.2 (2.6, 9.7)*	-----
	American Indian/Native American	24.7 (14.4, 35.0)*	9.9 (3.4, 16.5)*	-----
	Asian American	18.4 (10.9, 26.0)*	5.0 (1.6, 8.4)*	-----
	Other	36.2 (23.7, 48.7)*	5.8 (0.7, 11.0)*	-----
Socioeconomic Status	Low	31.9 (29.6, 34.1)*	8.6 (7.2, 10.0)*	35.6 (27.4, 43.9)
	Non-Low	14.5 (12.9, 16.2)*	3.1 (2.3, 3.9)*	35.8 (23.2, 48.4)
Sex	Male	25.4 (23.5, 27.3)*	6.3 (5.2, 7.4)*	34.1 (25.8, 42.4)
	Female	20.2 (18.6, 21.8)*	4.9 (4.1, 5.8)*	35.0 (26.2, 43.8)
Sexual Orientation	Heterosexual	22.3 (20.9, 23.6)*	5.3 (4.5, 6.0)*	36.1 (29.2, 43.0)
	LGBT	48.1 (40.2, 56.0)*	20.1 (13.3, 26.9)*	31.2 (12.4, 50.1)
Among 18-24 year olds	Non-STWYA	44.9 (38.1, 51.7)	11.5 (7.0, 15.9)	40.2 (18.2, 62.1)
	STWYA	54.6 (47.1, 62.2)	16.9 (11.5, 22.3)	29.1 (12.0, 46.3)
	Student	44.9 (38.1, 51.7)	11.5 (7.0, 15.9)	40.2 (18.5, 61.8)
	Non-Student working	52.1 (45.2, 58.9)	15.3 (10.5, 20.0)	29.2 (12.9, 45.6)
	Non-student not working	43.3 (26.9, 59.7)	10.3 (0.0, 21.6)	-----
Mental Illness or limitation	Yes	38.1 (34.3, 41.9)*	11.9 (9.4, 14.5)*	38.2 (26.6, 49.8)
	No	20.0 (18.7, 21.4)*	4.5 (3.8, 5.2)*	32.2 (24.7, 39.7)
Geographic location 2 categories	Urban	23.1 (21.6, 24.7)	5.8 (5.0, 6.7)	36.6 (29.1, 44.2)
	Rural	21.5 (18.8, 24.1)	5.6 (4.0, 7.2)	31.5 (18.0, 45.0)
Geographic location 3 categories	Urban	23.4 (21.8, 24.9)	6.0 (5.2, 6.9)	35.9 (28.7, 43.0)
	Rural	20.1 (17.0, 23.2)	4.4 (2.9, 6.0)	35.0 (17.2, 52.8)
	Frontier	18.1 (12.2, 23.9)	3.2 (0.2, 6.1)	32.6 (0.0, 73.9)
Housing type	Multi-unit	29.9 (26.8, 32.9)*	5.7 (4.8, 6.5)	41.4 (27.8, 54.9)
	Non-MUH	21.1 (19.6, 22.5)*	6.5 (4.8, 8.2)	32.3 (25.1, 39.5)
Kids in Household	Yes	24.4 (22.0, 26.9)	5.6 (4.3, 6.9)	33.9 (22.2, 45.7)
	No	22.5(20.8, 24.1)	5.9 (4.9, 6.9)	36.2 (28.1, 44.4)
Education	0-8 years	14.6 (8.9, 20.2)*	4.6 (1.7, 7.5)*	-----
	9-11 years	39.6 (32.6, 46.5)*	11.6 (6.6, 16.5)*	32.1 (9.2, 54.9)
	GED	36.7 (28.0, 45.4)*	15.0 (8.0, 21.9)*	-----
	12 years/unknown HS grad	23.1 (8.2, 37.9)*	---	-----
	HS Grad	25.7 (22.7, 28.8)*	7.2 (5.4, 9.0)*	35.5 (22.6, 48.3)
	Post HS	34.4 (25.7, 43.0)*	7.7 (2.5, 12.8)*	-----
	Some College	29.0 (26.6, 31.4)*	6.1 (4.9, 7.3)*	36.3 (26.5, 46.0)
	College Graduate	13.5 (11.7, 15.3)*	3.1 (2.2, 3.9)*	29.0 (16.2, 41.8)
Insurance	MA/PhD or higher	7.3 (5.3, 9.3)*	1.7 (0.7, 2.7)*	-----
	Private	21.2 (19.4, 23.0)*	4.7 (3.8, 5.6)*	31.4 (22.4, 40.4)
	Medicare	8.7 (7.1, 10.3)*	2.3 (1.5, 3.2)*	44.9 (25.7, 64.0)
	Medicaid	41.3 (36.7, 45.9)*	13.1 (9.8, 16.3)*	36.2 (22.9, 49.5)
Federal Poverty Level	none	32.1 (27.5, 36.8)*	7.9 (5.2, 10.6)*	32.1 (15.9, 48.4)
	< 100% FPL	33.8 (29.3, 38.4)*	8.4 (5.8, 11.0)*	33.0 (18.1, 48.0)
	100-199% FPL	30.5 (27.2, 33.8)*	8.6 (6.4, 10.8)*	34.7 (21.8, 47.6)
Smoking Status	200% FPL	18.0 (16.4, 19.6)*	4.3 (3.4, 5.1)*	38.1 (27.8, 48.4)
	Current Smoker	63.8 (60.5, 67.2)*	20.0 (17.1, 22.9)*	25.8 (18.6, 32.9)*
	Former Smoker	21.9 (19.4, 24.4)*	5.1 (3.8, 6.3)*	72.2 (61.7, 82.8)*
Smoking Frequency	Non-Smoker	11.3 (10.0, 12.6)*	1.7 (1.2, 2.3)*	18.6 (7.0, 30.1)*
	Daily	67.4 (63.6, 71.2)*	20.1 (16.7, 23.5)	22.6 (14.6, 30.5)
Ever Use of Other Tobacco	Non-Daily	54.6 (47.8, 61.3)*	19.7 (14.2, 25.1)	34.1 (19.3, 48.9)
	Yes	35.6 (32.9, 38.4)*	4.3 (3.6, 5.0)*	33.2 (24.2, 42.2)
	No	17.9 (16.5, 19.2)*	9.1 (7.4, 10.8)*	35.6 (27.5, 43.7)

\*Difference across group is statistically different

Table 2: Characteristics of E-Cigarette Users, Colorado, 2015

Category		Ever Users (%)		Current Users (%)		Daily Use (% of current users)	
		Yes	No	Yes	No	Yes	No
Age Group	18-24	26.7*	9.7	28.6*	12.7	27.3	29.2
	25-44	44.3*	33.7	40.7*	35.9	44.4	38.8
	45-64	25.1*	37.4	26.9*	35.0	24.6	28.1
	65+	3.9*	19.2	3.8*	16.4	3.7	3.8
Ethnicity	White	71.0*	73.8	74.3*	73.1	72.6	75.1
	Hispanic English-dominant	15.7*	9.4	13.7*	10.7	13.9	13.7
	Hispanic Spanish-dominant	2.8*	8.0	1.8*	7.1	2.3	1.5
	Black/African American	4.4*	3.5	4.1*	3.7	3.5	4.4
	American Indian/Native American	1.3*	1.2	2.1*	1.2	3.7	1.3
	Asian American	2.0*	2.7	2.2*	2.5	1.3	2.7
	Other	2.7*	1.4	1.8*	1.7	2.8	1.2
Socioeconomic Status	Low	69.5*	45.3	74.2*	49.5	74.1	74.2
	Non-Low	30.5*	54.7	25.8*	50.5	25.9	25.8
Sex	Male	55.5*	48.1	55.8*	49.4	55.2	56.2
	Female	44.5*	51.9	44.2*	50.6	44.8	43.8
Sexual Orientation	Heterosexual	91.0*	97.0	85.1*	96.3	86.9	84.2
	LGBT	9.0*	3.0	14.9*	3.7	13.1	15.8
Among 18-24 year olds	Non-STWYA	48.4	58.1	43.7	54.9	51.6	39.6
	STWYA	51.6	41.9	56.3	45.1	48.4	60.4
	Student	42.6	48.4	39.8	46.5	50.4	34.9
	Non-Student working	50.2	42.8	53.9	45.2	49.6	55.8
	Non-student not working	7.3	8.8	6.3	8.3	-----	9.2
Mental Illness or limitation	Yes	25.8*	12.4	32.8	14.4	36.7	30.8
	No	74.2*	87.6	67.2	85.6	63.3	69.2
Geographic location 2 categories	Urban	82.6	81.2	82.1	81.5	84.2	80.9
	Rural	17.4	18.8	17.9	18.5	15.8	19.1
Geographic location 3 categories	Urban	87.6	85.1	89.6	85.4	89.9	89.4
	Rural	10.2	12.0	8.9	11.7	8.7	9.0
	Frontier	2.2	3.0	1.5	2.9	1.4	1.6
Housing type	Multi-unit	31.2*	22.2	26.9	24.1	67.9	75.8
	Non-MUH	68.8*	77.8	73.1	75.9	32.1	24.2
Kids in Household	Yes	36.6	34.1	33.4	34.8	31.9	34.2
	No	63.4	65.9	66.6	65.2	68.1	65.8
Education	0-8 years	2.3*	3.9	2.9	3.6	2.5	3.1
	9-11 years	9.2*	4.2	11.0	5.0	10.2	11.4
	GED	4.7*	2.4	7.8	2.6	10.5	6.3
	12 years/unknown HS grad	1.2*	1.1	----	1.2	----	----
	HS Grad	22.3*	19.0	25.4	19.4	26.1	25.0
	Post HS	4.8*	2.7	4.3	3.1	2.2	5.4
	Some College	37.9*	27.4	32.4	29.7	34.0	31.5
	College Graduate	14.5*	27.5	13.3	25.2	11.2	14.5
MA/PhD or higher	3.1*	11.8	2.9	10.2	3.3	2.8	
Insurance	Private	54.3*	58.4	48.4*	58.0	44.8	50.2
	Medicare	7.5*	22.6	8.0*	19.8	10.5	6.6
	Medicaid	21.9*	9.0	27.6*	11.0	29.5	26.6
	none	16.4*	10.0	16.1*	11.2	15.2	16.5
Federal Poverty Level	< 100% FPL	20.9*	12.3	20.4*	13.9	18.8	21.3
	100-199% FPL	30.8*	21.1	34.3*	22.7	33.1	34.9
	200% FPL	48.3*	66.5	45.3*	63.4	48.1	43.8

\*Difference across group is statistically different

Table 3: E-Cigarette Use and Behaviors Among Adult Current Smokers, Colorado 2015

	Current Use % (95% CI)		Daily Use (among current users) % (95% CI)	
	Yes	No	Yes	No
Smokers Trying to Quit	52.8 (44.9, 60.6)	50.6 (46.9, 54.4)	69.3* (56.8, 81.9)	45.9* (36.6, 55.2)
Smokers Successfully Quit	8.1 (2.5, 13.7)	10.8 (7.4, 14.2)	17.7* (4.1, 31.3)	2.0* (0.0, 4.3)
Smoker Trying to Quit who Used NRT	31.1 (21.2, 41.1)	22.0 (17.6, 26.4)	34.1 (16.8, 51.3)	29.3 (17.8, 40.8)
Smokers who Called the QuitLine in past year	4.5 (1.2, 7.9)	4.9 (3.3, 6.4)	5.6 (0.0, 11.9)	4.1 (0.2, 8.0)

\*Difference across group is statistically different

Table 4. Mean Quit Attempts in the Past Year, Adult Current Smokers by E-Cigarette Use, Colorado, 2015

	Current E-cigarette Use Mean (95% CI)		Current Daily E-Cigarette Use Mean (95% CI)	
	Mean	(95% CI)	Mean	(95% CI)
Quit Attempts in the Past Year by Adults who Smoked	6.4	(4.8, 8.0)	5.7	(3.3, 8.1)

Table 5. Mean Cigarettes Smoked per Day by Smoking Status and Current E-Cigarette Use, Colorado, 2015

	Current E-Cigarette Use	Number of Cigarettes per Day Mean (95% CI)	
		Mean	(95% CI)
Daily Cigarette Smoker	Yes	12.5	(11.1, 13.9)
	No	13.0	(12.3, 13.7)
Non-Daily Cigarette Smoker	Yes	4.8	(3.4, 6.3)
	No	4.6	(3.8, 5.4)

Table 6. Smoking Cessation Intentions and Confidence, by E-Cigarette Use, Colorado, 2015

	Current E-Cigarette Use % (95% CI)		Daily E-Cigarette Use % (95% CI)	
	Yes	No	Yes	No
<b>Quit Intent:</b>				
Never	12.1 (7.2, 17.1)	9.6 (7.3, 11.9)	4.6 (0.3, 8.8)*	14.8 (8.3, 21.4)
Might quit in the future but not next 6 months	27.3 (19.7, 34.9)	38.4 (34.4, 42.4)	23.5 (11.5, 35.6)*	28.6 (19.2, 38.0)
Will quit in the next 6 months	39.8 (31.7, 48.0)	35.7 (31.8, 39.5)	39.0 (23.1, 54.9)*	40.1 (30.5, 49.8)
Will quit in the next month	20.8 (13.5, 28.0)	16.3 (13.3, 19.4)	32.9 (14.8, 51.0)*	16.4 (9.5, 23.3)
<b>Confidence in quitting:</b>				
Very sure of ability to quit	45.7 (37.6, 53.9)	50.3 (46.3, 54.3)	53.7 (37.7, 69.8)	42.9 (33.6, 52.3)
Not very sure of ability to quit	54.3 (46.1, 62.4)	49.7 (45.7, 53.7)	46.3 (30.2, 62.3)	57.1 (47.7, 66.4)

\*Difference across group is statistically different