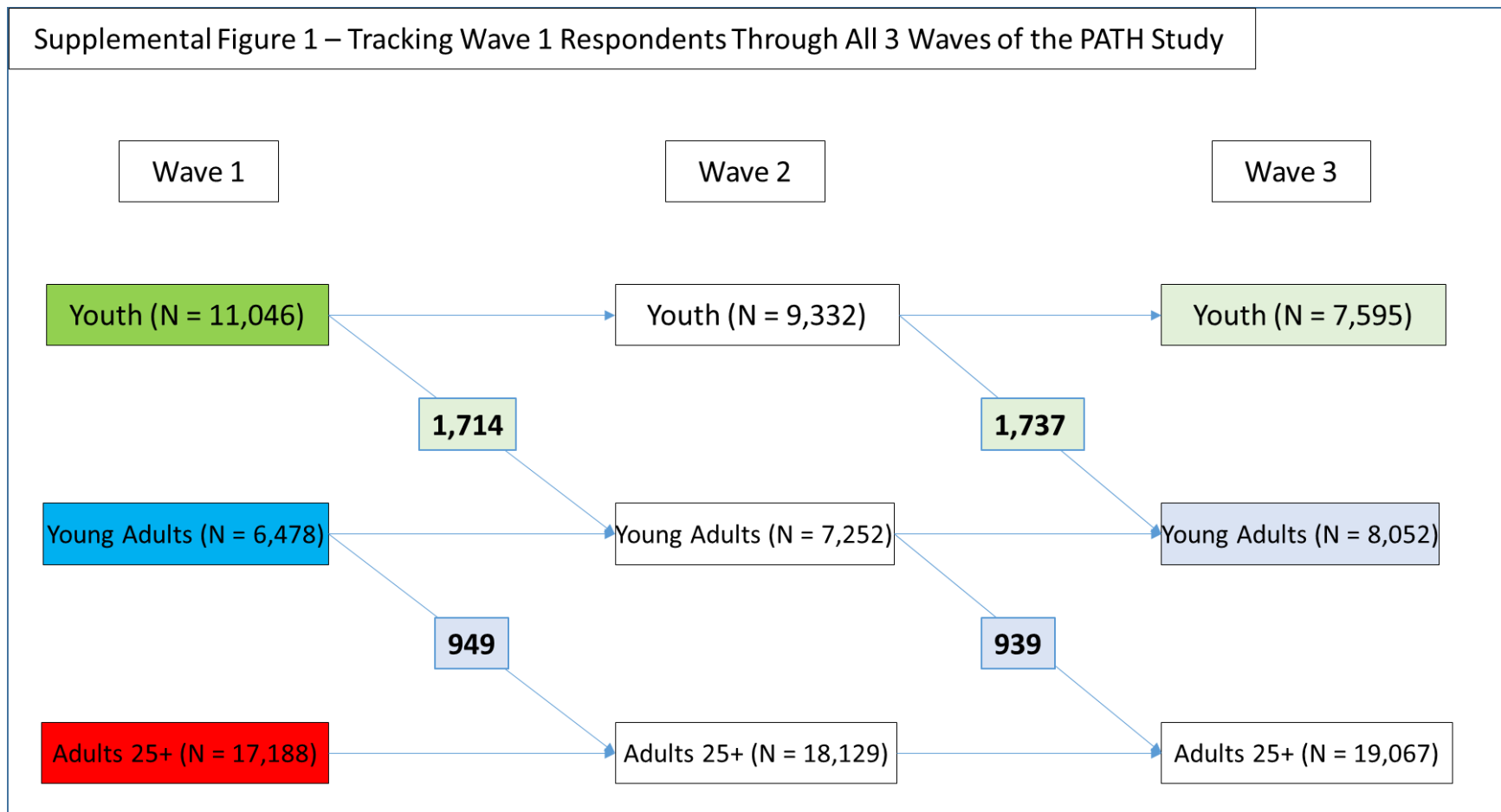


Supplemental Figure 1 – Tracking Wave 1 Respondents Through All 3 Waves of the PATH Study



## Notes:

Supplemental Figure 1 shows the full Wave 1 sample respondents who have data at Waves 1, 2, and 3. There are 2,605 Wave 1 youth (ages 12-17) and 8,650 Wave 1 adult (ages 18 and older) respondents excluded at W2 and W3 because they do not have data at all three waves. The figure illustrates Wave 1 youth and young adults (ages 18-24) who aged up at Wave 2 and Wave 2 youth and young adults who aged up at Wave 3. The boxes at each wave show the total sample size for each age group at each wave.

Supplemental Table 1: Cross-sectional Prevalence Estimates of Individual and Polyproduct Cigar Use Among W1 Cigar Users.

	Ever Cigar Use											
	W1 (2013/14)				W2 (2014/15)				W3 (2015/16)			
	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI
<i>Youth</i>												
<b>Cigar</b>	<b>998</b>	<b>1,813,038</b>	<b>7.5<sup>a,b</sup></b>	<b>(7.0-8.1)</b>	<b>765</b>	<b>1,552,011</b>	<b>6.5<sup>a,c</sup></b>	<b>(5.9-7.0)</b>	<b>586</b>	<b>1,249,148</b>	<b>5.3<sup>b,c</sup></b>	<b>(4.8-5.8)</b>
Exclusive traditional	68	129,708	7.2 <sup>a</sup>	(5.5-9.4)	71	153,429	10.0 <sup>a</sup>	(7.7-13.0)	51	122,663	10.2	(7.6-13.6)
Exclusive cigarillo	494	884,349	48.9	(45.2-52.7)	342	684,576	44.8	(40.8-48.9)	264	532,532	44.5	(40.0-49.0)
Exclusive filtered	51	90,495	5.0	(3.7-6.7)	41	82,046	5.4	(3.9-7.3)	38	81,414	6.8	(4.6-9.8)
Polycigar	381	703,013	38.9	(35.7-42.2)	299	607,501	39.8	(35.9-43.8)	212	461,432	38.5	(34.7-42.5)
<i>Young Adults</i>												
<b>Cigar</b>	<b>5,092</b>	<b>13,760,119</b>	<b>45.4<sup>a,b</sup></b>	<b>(43.5-47.4)</b>	<b>4,328</b>	<b>14,124,287</b>	<b>47.1<sup>a</sup></b>	<b>(45.4-48.9)</b>	<b>4,109</b>	<b>13,587,427</b>	<b>47.2<sup>b</sup></b>	<b>(45.4-49.0)</b>
Exclusive traditional	233	764,578	5.6 <sup>a,b</sup>	(4.6-6.7)	251	1,021,058	7.3 <sup>a</sup>	(6.0-8.7)	274	1,080,776	8.2 <sup>b</sup>	(6.8-9.8)
Exclusive cigarillo	2,051	5,513,251	40.3 <sup>a,b</sup>	(38.6-42.0)	1,377	4,420,907	31.5 <sup>a,c</sup>	(29.6-33.4)	1,124	3,640,249	27.5 <sup>b,c</sup>	(25.6-29.5)
Exclusive filtered	194	552,119	4.0 <sup>a</sup>	(3.4-4.7)	133	458,874	3.3 <sup>a</sup>	(2.6-4.0)	115	421,467	3.2	(2.5-4.0)
Polycigar	2,586	6,855,564	50.1 <sup>a,b</sup>	(48.7-51.5)	2,545	8,153,709	58.0 <sup>a,c</sup>	(56.3-59.7)	2,485	8,101,068	61.2 <sup>b,c</sup>	(59.0-63.3)
<i>Adults 25+</i>												
<b>Cigar</b>	<b>12,128</b>	<b>78,528,952</b>	<b>40.0<sup>a,b</sup></b>	<b>(38.9-41.0)</b>	<b>11,116</b>	<b>83,674,736</b>	<b>41.8<sup>a,c</sup></b>	<b>(40.7-43.0)</b>	<b>11,174</b>	<b>87,003,560</b>	<b>43.8<sup>b,c</sup></b>	<b>(42.6-44.9)</b>
Exclusive traditional	1,706	16,822,114	21.9 <sup>b</sup>	(20.6-23.2)	1,464	17,653,033	21.5	(20.0-23.0)	1,377	17,712,108	20.9 <sup>b</sup>	(19.5-22.4)
Exclusive cigarillo	2,375	13,936,218	18.1 <sup>a,b</sup>	(17.2-19.1)	1,945	13,185,144	16.0 <sup>a,c</sup>	(15.1-17.1)	1,803	12,541,570	14.8 <sup>b,c</sup>	(13.9-15.8)
Exclusive filtered	641	3,728,078	4.8	(4.4-5.3)	559	3,789,203	4.6	(4.1-5.2)	526	3,835,423	4.5	(4.0-5.1)
Polycigar	7,185	42,430,025	55.2 <sup>a,b</sup>	(53.8-56.5)	6,988	47,570,688	57.9 <sup>a,c</sup>	(56.5-59.3)	7,198	50,557,901	59.7 <sup>b,c</sup>	(58.2-61.2)

	P12M Cigar Use											
	W1 (2013/14)				W2 (2014/15)				W3 (2015/16)			
	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI
<i>Youth</i>												
<b>Cigar</b>	<b>791</b>	<b>1,426,017</b>	<b>5.9<sup>a,b</sup></b>	<b>(5.4-6.4)</b>	<b>570</b>	<b>1,165,747</b>	<b>4.7<sup>a,c</sup></b>	<b>(4.3-5.3)</b>	<b>394</b>	<b>860,527</b>	<b>3.5<sup>b,c</sup></b>	<b>(3.2-3.9)</b>
Exclusive traditional	53	96,283	6.8	(5.1-8.9)	50	108,886	9.5	(7.0-12.8)	33	87,653	10.3	(7.4-14.2)
Exclusive cigarillo	414	733,654	51.7 <sup>a</sup>	(48.1-55.4)	246	503,649	43.9 <sup>a</sup>	(39.3-48.6)	191	394,506	46.5	(41.3-51.8)
Exclusive filtered	30	52,915	3.7 <sup>a</sup>	(2.5-5.5)	40	80,903	7.1 <sup>a</sup>	(5.1-9.6)	30	65,707	7.7	(4.9-11.9)
Polycigar	288	535,064	37.7	(34.3-41.3)	224	453,792	39.6	(34.9-44.5)	135	300,917	35.5	(30.9-40.3)
<i>Young Adults</i>												
<b>Cigar</b>	<b>3,725</b>	<b>9,718,431</b>	<b>32.2<sup>a,b</sup></b>	<b>(30.5-33.9)</b>	<b>2,665</b>	<b>8,339,776</b>	<b>27.6<sup>a,c</sup></b>	<b>(26.3-28.8)</b>	<b>2,250</b>	<b>7,096,679</b>	<b>23.9<sup>b,c</sup></b>	<b>(22.8-25.1)</b>
Exclusive traditional	342	1,041,272	10.8 <sup>a,b</sup>	(9.4-12.4)	397	1,540,359	18.5 <sup>a,c</sup>	(16.2-21.1)	406	1,497,738	21.1 <sup>b,c</sup>	(18.5-24.0)
Exclusive cigarillo	1,554	3,952,776	41.0 <sup>a,b</sup>	(39.1-43.0)	787	2,277,418	27.3 <sup>a</sup>	(25.3-29.4)	722	2,116,768	29.9 <sup>b</sup>	(27.7-32.1)
Exclusive filtered	164	462,835	4.8	(4.1-5.7)	104	307,916	3.7	(3.0-4.5)	87	294,030	4.1	(3.3-5.3)
Polycigar	1,634	4,183,114	43.4 <sup>a</sup>	(41.6-45.2)	1,374	4,208,734	50.5 <sup>a,c</sup>	(48.1-52.9)	1,033	3,180,482	44.9 <sup>c</sup>	(42.2-47.5)
<i>Adults 25+</i>												
<b>Cigar</b>	<b>5,179</b>	<b>24,179,206</b>	<b>12.4<sup>a,b</sup></b>	<b>(12.0-12.9)</b>	<b>3,892</b>	<b>22,151,196</b>	<b>10.6<sup>a,c</sup></b>	<b>(10.3-11.0)</b>	<b>3,430</b>	<b>20,491,323</b>	<b>9.8<sup>b,c</sup></b>	<b>(9.3-10.2)</b>
Exclusive traditional	1,331	7,210,895	30.6 <sup>a,b</sup>	(28.9-32.3)	1,242	8,700,638	39.3 <sup>a</sup>	(37.4-41.3)	1,044	7,660,758	37.4 <sup>b</sup>	(35.0-39.9)
Exclusive cigarillo	1,138	5,034,495	21.3 <sup>a,b</sup>	(20.2-22.5)	633	3,068,747	13.9 <sup>a,c</sup>	(12.6-15.3)	652	3,523,914	17.2 <sup>b,c</sup>	(15.6-19.0)
Exclusive filtered	400	1,767,136	7.5	(6.7-8.4)	329	1,670,190	7.5	(6.6-8.6)	300	1,648,371	8.1	(6.7-9.6)
Polycigar	2,190	9,586,997	40.6 <sup>b</sup>	(38.9-42.3)	1,683	8,684,539	39.3	(37.3-41.2)	1,430	7,628,860	37.3 <sup>b</sup>	(35.1-39.5)

	P30D Cigar Use											
	W1 (2013/14)				W2 (2014/15)				W3 (2015/16)			
	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI
<i>Youth</i>												
<b>Cigar</b>	<b>340</b>	<b>608,612</b>	<b>2.5<sup>a,b</sup></b>	<b>(2.2-2.8)</b>	<b>180</b>	<b>367,099</b>	<b>1.5<sup>a</sup></b>	<b>(1.3-1.8)</b>	<b>136</b>	<b>289,891</b>	<b>1.2<sup>b</sup></b>	<b>(1.0-1.4)</b>
Exclusive traditional	26	52,074	8.6	(5.5-13.2)	26	56,069	16.3	(11.3-23.1)	14	34,396	12.7	(7.8-20.1)
Exclusive cigarillo	204	360,701	59.6 <sup>a</sup>	(53.9-65.0)	72	142,423	41.5 <sup>a</sup>	(32.8-50.7)	66	135,931	50.4	(40.4-60.3)
Exclusive filtered	14	24,627	4.1 <sup>b</sup>	(2.5-6.4)	14	28,402	8.3	(4.8-14.0)	17	35,719	13.2 <sup>b</sup>	(8.0-21.2)
Polycigar	94	168,232	27.8	(22.3-34.0)	55	116,406	33.9	(26.2-42.6)	29	63,790	23.6	(17.2-31.5)
<i>Young Adults</i>												
<b>Cigar</b>	<b>1,933</b>	<b>4,737,429</b>	<b>15.7<sup>b</sup></b>	<b>(14.7-16.6)</b>	<b>1,649</b>	<b>4,889,385</b>	<b>16.2<sup>c</sup></b>	<b>(15.3-17.1)</b>	<b>1,379</b>	<b>4,155,293</b>	<b>14.0<sup>b,c</sup></b>	<b>(13.1-14.9)</b>
Exclusive traditional	206	569,176	12.1 <sup>a,b</sup>	(10.6-13.8)	221	776,984	15.9 <sup>a</sup>	(13.6-18.5)	190	670,544	16.1 <sup>b</sup>	(13.9-18.6)
Exclusive cigarillo	949	2,255,404	47.9 <sup>a</sup>	(45.5-50.4)	705	2,008,302	41.1 <sup>a</sup>	(38.3-44.0)	639	1,861,290	44.8	(41.9-47.8)
Exclusive filtered	105	269,823	5.7	(4.6-7.1)	85	256,395	5.3	(4.1-6.7)	55	170,651	4.1	(3.0-5.6)
Polycigar	660	1,611,411	34.2	(32.1-36.4)	635	1,840,013	37.7	(35.3-40.1)	494	1,450,771	34.9	(31.9-38.0)
<i>Adults 25+</i>												
<b>Cigar</b>	<b>2,640</b>	<b>11,540,336</b>	<b>5.9</b>	<b>(5.6-6.2)</b>	<b>2,401</b>	<b>13,059,740</b>	<b>6.3</b>	<b>(6.0-6.6)</b>	<b>2,207</b>	<b>12,395,025</b>	<b>5.9</b>	<b>(5.6-6.2)</b>
Exclusive traditional	691	3,246,283	28.7	(26.5-30.9)	627	4,150,552	32.0	(29.7-34.4)	523	3,556,325	28.8	(26.2-31.5)
Exclusive cigarillo	736	3,133,746	27.7 <sup>a,b</sup>	(25.9-29.5)	578	2,773,308	21.4 <sup>a</sup>	(19.5-23.5)	584	2,943,000	23.8 <sup>b</sup>	(21.8-26.0)
Exclusive filtered	297	1,271,614	11.2	(9.8-12.8)	300	1,488,446	11.5	(9.8-13.4)	285	1,526,707	12.4	(10.6-14.3)
Polycigar	864	3,678,236	32.5	(30.4-34.6)	888	4,548,672	35.1	(32.6-37.6)	810	4,330,966	35.0	(32.4-37.8)

	Daily P30D Cigar Use											
	W1 (2013/14)				W2 (2014/15)				W3 (2015/16)			
	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI	Unweighted Sample Size	Weighted Sample Size	Weighted %	95% CI
<i>Youth</i>												
<b>Cigar</b>	<b>11</b>	<b>22,981</b>	<b>0.1</b>	<b>(0.1-0.2)</b>	<b>4</b>	<b>8,278</b>	<b>0.0 †</b>	<b>(0.0-0.1)</b>	<b>8</b>	<b>12,743</b>	<b>0.1 †</b>	<b>(0.0-0.1)</b>
Exclusive traditional	0	N/A	N/A	N/A	1	1515	18.3†	(1.6-75.9)	1	1122	8.8†	(1.3-41.7)
Exclusive cigarillo	9	19,810	86.2† <sup>a</sup>	(57.0-96.7)	1	1691	20.4† <sup>a</sup>	(1.9-77.5)	4	6883	54.0†	(19.7-84.9)
Exclusive filtered	1	1,604	7.0†	(0.8-40.2)	2	5072	61.3†	(15.5-93.2)	1	1720	13.5†	(1.6-60.5)
Polycigar	1	1,567	6.8†	(0.9-37.3)	0	N/A	N/A	N/A	2	3018	23.7†	(5.0-64.5)
<i>Young Adults</i>												
<b>Cigar</b>	<b>202</b>	<b>428,256</b>	<b>1.4<sup>a,b</sup></b>	<b>(1.2-1.7)</b>	<b>92</b>	<b>236,816</b>	<b>0.8<sup>a</sup></b>	<b>(0.6-1.0)</b>	<b>97</b>	<b>263,492</b>	<b>0.9<sup>b</sup></b>	<b>(0.7-1.2)</b>
Exclusive traditional	14	30,377	8.2	(5.0-13.0)	15	33486	16.5	(9.7-26.7)	16	46560	20.2	(11.2-33.6)
Exclusive cigarillo	124	262,340	70.4 <sup>a,b</sup>	(63.9-76.2)	36	95758	47.2 <sup>a</sup>	(35.3-59.4)	41	111551	48.4 <sup>b</sup>	(36.9-60.1)
Exclusive filtered	6	11,259	3.0† <sup>a,b</sup>	(1.5-5.9)	21	55723	27.5 <sup>a</sup>	(17.9-39.8)	14	39757	17.2 <sup>b</sup>	(9.5-29.2)
Polycigar	32	68,509	18.4	(13.6-24.4)	7	17836	8.8†	(4.1-17.7)	13	32779	14.2	(7.7-24.7)
<i>Adults 25+</i>												
<b>Cigar</b>	<b>485</b>	<b>1,975,652</b>	<b>1.0<sup>a,b</sup></b>	<b>(0.9-1.1)</b>	<b>338</b>	<b>1,682,154</b>	<b>0.8<sup>a</sup></b>	<b>(0.7-0.9)</b>	<b>331</b>	<b>1,717,505</b>	<b>0.8<sup>b</sup></b>	<b>(0.7-1.0)</b>
Exclusive traditional	65	270,641	15.3	(11.7-19.9)	48	221621	14.7	(10.6-20.1)	41	250563	16.4	(10.7-24.3)
Exclusive cigarillo	128	515,908	29.3	(24.7-34.3)	84	403139	26.8	(21.7-32.7)	88	417788	27.3	(21.5-34.0)
Exclusive filtered	142	565,041	32.0 <sup>a,b</sup>	(26.9-37.7)	134	665631	44.3 <sup>a</sup>	(36.3-52.6)	127	653330	42.7 <sup>b</sup>	(35.7-50.1)
Polycigar	99	411,986	23.4 <sup>a,b</sup>	(18.8-28.6)	45	212506	14.1 <sup>a</sup>	(10.6-18.7)	39	207931	13.6 <sup>b</sup>	(9.8-18.5)

## Notes:

Abbreviations: Wave 1 = W1 = Wave 1; Wave 2 = W2 = Wave 2; Wave 3 = W3 = Wave 3; CI = confidence interval; P12M = past 12-month; P30D = past 30-day; N/A = not applicable

Analysis included W1, W2, and W3 youth (ages 12-17), young adults (ages 18-24), and adults 25+ (ages 25 and older) at each wave. All respondents with data at one wave are included in the sample for that wave's estimate and do not need to have complete data at all three waves. The PATH Study cross-sectional (W1) or single-wave weights (W2 and W3) were used to calculate estimates at each wave.

For exclusive product use, a respondent could only use that specific product, and for polycigar use, a respondent needed to use two or more products. For overall cigar use, a respondent could use any of the products, exclusively or combined. The exclusive cigar product Ns combined with the polycigar N does not add up to the overall cigar N due to missing data. It is possible for one respondent to have valid data for one product and missing data for another, making it impossible to determine exclusive or polyproduct use, but allowing them to be in the overall cigar group.

Ever cigar use is defined as having ever used a traditional cigar, cigarillo, and/or filtered cigar, even once or twice in lifetime. P12M cigar use is defined as any traditional cigar, cigarillo, and/or filtered cigar use within the past 12-months. P30D cigar use is defined as any traditional cigar, cigarillo, and/or filtered cigar use within the past 30 days. Daily P30D cigar use is defined as use of traditional cigars, cigarillos, and/or filtered cigars on all 30 of the past 30 days.

<sup>a</sup>denotes significant difference at  $p < 0.0167$  (Bonferroni corrected for three comparisons) between W1 and W2

<sup>b</sup>denotes significant difference at  $p < 0.0167$  (Bonferroni corrected for three comparisons) between W1 and W3

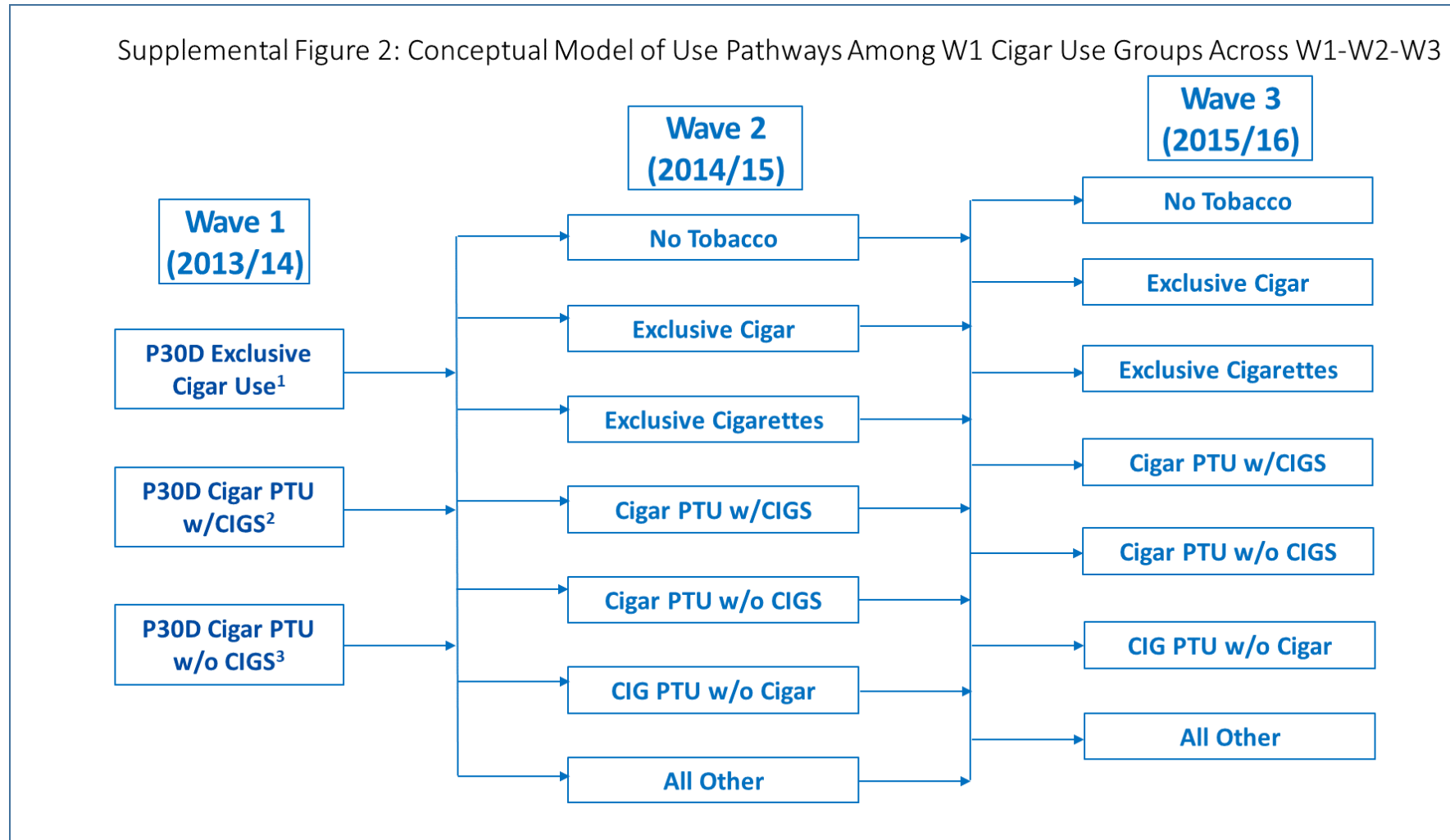
<sup>c</sup>denotes significant difference at  $p < 0.0167$  (Bonferroni corrected for three comparisons) between W2 and W3

The logit-transformation method was used to calculate the 95% CIs.

†Estimate should be interpreted with caution because it has low statistical precision. It is based on a denominator sample size of less than 50, or the coefficient of variation of the estimate or its complement is larger than 30%.

Analyses were run on the W1, W2, and W3 Public Use Files (<https://doi.org/10.3886/ICPSR36498.v8>).

Supplemental Figure 2: Conceptual Model of Use Pathways Among W1 Cigar Use Groups Across W1-W2-W3



## Notes:

Abbreviations: W1 = Wave 1; W2 = Wave 2; W3 = Wave 3; P30D = past 30-day; PTU = polytobacco use; w/ = with; CIG(S) = cigarette(s); w/o = without

<sup>1</sup>Weighted percentages (95% confidence interval) and unweighted sample sizes of W1 P30D exclusive cigar users among P30D cigar users: youth (ages 12-17), 23.3% (18.4-29.1), N = 64/265; young adults (ages 18-24), 18.7% (16.6-21.0), N = 245/1351; adults 25+ (ages 25 and older), 29.0% (26.1-32.0), N = 476/1934

<sup>2</sup>Weighted percentages (95% confidence interval) and unweighted sample sizes of W1 P30D cigar PTU w/CIGS among P30D cigar users: youth, 55.0% (47.6-62.3), N = 151/265; young adults, 68.0% (64.8-71.0), N = 945/1351; adults 25+, 63.9% (60.9-66.9), N = 1320/1934

<sup>3</sup>Weighted percentages (95% confidence interval) and unweighted sample sizes of W1 P30D cigar PTU w/o CIGS among P30D cigar users: youth, 21.6% (15.7-29.0), N = 50/265; young adults, 13.3% (11.0-16.1), N = 161/1351; adults 25+, 7.1% (5.9-8.5), N = 138/1934

1) No tobacco: Defined as no use of any tobacco products within the past 30 days.

2) Exclusive cigar: Defined as use of only traditional cigars, cigarillos, and/or filtered cigars within the past 30 days.

3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.

4) Cigar PTU w/CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and cigarettes within the past 30 days and possibly one or more of the following: hookah, electronic nicotine delivery system (ENDS\*), pipe, or any smokeless tobacco.

5) Cigar PTU w/o CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but not cigarettes.

6) CIG PTU w/o cigar: Defined as use of cigarettes and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco but not traditional cigars, cigarillos, or filtered cigars.

7) All other: Use of one or more of the following in the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but without cigarettes, traditional cigars, cigarillos, or filtered cigars.

\*Respondents were asked about P30D use of “e-cigarettes” at W1 and W2 and “e-products” (e-cigarettes, e-cigars, e-pipes, and e-hookah) at W3.

These pathways have been enumerated in Supplemental Tables 2a-2c.

The logit-transformation method was used to calculate the 95% confidence intervals.

Analyses were run on the W1, W2, and W3 Public Use Files (<https://doi.org/10.3886/ICPSR36498.v8>).



Supplemental Table 2a: Transitions in P30D Product Use at W2 (2014/15) and W3 (2015/16) Among W1 (2013/14) P30D Exclusive Cigar Users.

Rows	W1	W2	W3	Youth				Young Adults				Adults 25+			
				Unweighted N	Weighted N	Weighted %	95% CI	Unweighted N	Weighted N	Weighted %	95% CI	Unweighted N	Weighted N	Weighted %	95% CI
1	Exclusive Cigar	No Tobacco	No Tobacco	15	31,470	24.3	(15.3-36.4)	56	244,023	28.1	(21.8-35.4)	115	880,465	27.5	(23.4-32.1)
2	Exclusive Cigar	No Tobacco	Exclusive Cigar	1	2,141	1.7 <sup>†</sup>	(0.3-10.0)	15	48,794	5.6	(3.2-9.7)	28	187,193	5.9	(4.1-8.4)
3	Exclusive Cigar	No Tobacco	Exclusive Cigarettes	1	1,321	1.0 <sup>†</sup>	(0.1-8.8)	3	11,043	1.3 <sup>†</sup>	(0.5-3.4)	2	12,085	0.4 <sup>†</sup>	(0.1-1.5)
4	Exclusive Cigar	No Tobacco	Cigar PTU w/CIGS	1	1,620	1.3 <sup>†</sup>	(0.2-8.5)	4	16,235	1.9 <sup>†</sup>	(0.6-5.8)	4	21,851	0.7 <sup>†</sup>	(0.2-1.9)
5	Exclusive Cigar	No Tobacco	Cigar PTU w/o CIGS	2	3,724	2.9 <sup>†</sup>	(0.6-12.2)	0	N/A	N/A	N/A	2	7,483	0.2 <sup>†</sup>	(0.1-1.0)
6	Exclusive Cigar	No Tobacco	CIG PTU w/o Cigar	0	N/A	N/A	N/A	1	2,953	0.3 <sup>†</sup>	(0.0-2.5)	0	N/A	N/A	N/A
7	Exclusive Cigar	No Tobacco	All Other	5	10,520	8.1 <sup>†</sup>	(3.0-20.2)	5	19,173	2.2 <sup>†</sup>	(0.8-5.7)	7	57,610	1.8 <sup>†</sup>	(0.9-3.6)
8	Exclusive Cigar	Exclusive Cigar	No Tobacco	2	4,988	3.9 <sup>†</sup>	(0.9-14.8)	23	80,761	9.3	(5.7-14.9)	51	304,969	9.5	(7.1-12.7)
9	Exclusive Cigar	Exclusive Cigar	Exclusive Cigar	4	6,930	5.4 <sup>†</sup>	(1.9-14.3)	15	44,092	5.1	(2.9-8.8)	148	974,595	30.5	(25.7-35.7)
10	Exclusive Cigar	Exclusive Cigar	Exclusive Cigarettes	1	1,363	1.1 <sup>†</sup>	(0.1-7.4)	0	N/A	N/A	N/A	3	16,048	0.5 <sup>†</sup>	(0.1-1.8)
11	Exclusive Cigar	Exclusive Cigar	Cigar PTU w/CIGS	1	1,628	1.3 <sup>†</sup>	(0.2-8.3)	2	6,049	0.7 <sup>†</sup>	(0.2-2.7)	6	41,616	1.3 <sup>†</sup>	(0.5-3.3)
12	Exclusive Cigar	Exclusive Cigar	Cigar PTU w/o CIGS	1	1,579	1.2 <sup>†</sup>	(0.2-8.8)	6	20,620	2.4 <sup>†</sup>	(1.0-5.3)	6	36,382	1.1 <sup>†</sup>	(0.4-2.9)
13	Exclusive Cigar	Exclusive Cigar	CIG PTU w/o Cigar	0	N/A	N/A	N/A	2	5,570	0.6 <sup>†</sup>	(0.2-2.5)	2	9,867	0.3 <sup>†</sup>	(0.1-1.3)
14	Exclusive Cigar	Exclusive Cigar	All Other	1	2,633	2.0 <sup>†</sup>	(0.3-12.3)	1	5,739	0.7 <sup>†</sup>	(0.1-4.6)	1	7,698	0.2 <sup>†</sup>	(0.0-1.8)
15	Exclusive Cigar	Exclusive Cigarettes	No Tobacco	1	2,331	1.8 <sup>†</sup>	(0.2-12.2)	2	8,673	1.0 <sup>†</sup>	(0.2-4.1)	6	41,717	1.3 <sup>†</sup>	(0.5-3.3)
16	Exclusive Cigar	Exclusive Cigarettes	Exclusive Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	1	3,637	0.1 <sup>†</sup>	(0.0-0.7)
17	Exclusive Cigar	Exclusive Cigarettes	Exclusive Cigarettes	0	N/A	N/A	N/A	7	27,774	3.2 <sup>†</sup>	(1.3-7.7)	2	17,297	0.5 <sup>†</sup>	(0.1-2.2)
18	Exclusive Cigar	Exclusive Cigarettes	Cigar PTU w/CIGS	0	N/A	N/A	N/A	1	2,646	0.3 <sup>†</sup>	(0.0-2.2)	1	10,270	0.3 <sup>†</sup>	(0.0-2.2)
19	Exclusive Cigar	Exclusive Cigarettes	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
20	Exclusive Cigar	Exclusive Cigarettes	CIG PTU w/o Cigar	0	N/A	N/A	N/A	1	3,840	0.4 <sup>†</sup>	(0.1-3.2)	1	8,163	0.3 <sup>†</sup>	(0.0-1.9)
21	Exclusive Cigar	Exclusive Cigarettes	All Other	1	2,025	1.6 <sup>†</sup>	(0.2-11.2)	0	N/A	N/A	N/A	0	N/A	N/A	N/A
22	Exclusive Cigar	Cigar PTU w/CIGS	No Tobacco	1	1,923	1.5 <sup>†</sup>	(0.2-10.1)	6	17,021	2.0 <sup>†</sup>	(0.7-5.2)	3	19,189	0.6 <sup>†</sup>	(0.2-2.0)
23	Exclusive Cigar	Cigar PTU w/CIGS	Exclusive Cigar	1	4,477	3.5 <sup>†</sup>	(0.5-20.8)	8	24,537	2.8 <sup>†</sup>	(1.4-5.5)	21	144,335	4.5	(2.7-7.3)
24	Exclusive Cigar	Cigar PTU w/CIGS	Exclusive Cigarettes	1	2,542	2.0 <sup>†</sup>	(0.3-12.7)	3	7,993	0.9 <sup>†</sup>	(0.3-3.2)	3	13,509	0.4 <sup>†</sup>	(0.1-1.4)
25	Exclusive Cigar	Cigar PTU w/CIGS	Cigar PTU w/CIGS	1	2,443	1.9 <sup>†</sup>	(0.3-12.3)	24	68,974	7.9	(5.4-11.5)	18	111,926	3.5	(2.0-6.0)
26	Exclusive Cigar	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	1	5,367	4.2 <sup>†</sup>	(0.5-25.4)	8	24,743	2.8 <sup>†</sup>	(1.3-6.0)	3	15,896	0.5 <sup>†</sup>	(0.2-1.5)
27	Exclusive Cigar	Cigar PTU w/CIGS	CIG PTU w/o Cigar	1	3,713	2.9 <sup>†</sup>	(0.4-18.2)	1	3,203	0.4 <sup>†</sup>	(0.0-2.9)	2	11,715	0.4 <sup>†</sup>	(0.1-1.5)
28	Exclusive Cigar	Cigar PTU w/CIGS	All Other	1	5,732	4.4 <sup>†</sup>	(0.5-28.4)	1	6,806	0.8 <sup>†</sup>	(0.1-5.5)	2	20,435	0.6 <sup>†</sup>	(0.1-3.2)
29	Exclusive Cigar	Cigar PTU w/o CIGS	No Tobacco	0	N/A	N/A	N/A	11	36,370	4.2	(2.4-7.3)	2	8,181	0.3 <sup>†</sup>	(0.1-1.1)
30	Exclusive Cigar	Cigar PTU w/o CIGS	Exclusive Cigar	0	N/A	N/A	N/A	6	18,806	2.2 <sup>†</sup>	(0.9-5.1)	11	93,015	2.9 <sup>†</sup>	(1.3-6.4)
31	Exclusive Cigar	Cigar PTU w/o CIGS	Exclusive Cigarettes	0	N/A	N/A	N/A	0	N/A	N/A	N/A	1	3,842	0.1 <sup>†</sup>	(0.0-1.0)
32	Exclusive Cigar	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	1	2,957	2.3 <sup>†</sup>	(0.3-15.0)	4	12,169	1.4 <sup>†</sup>	(0.5-4.1)	3	25,702	0.8 <sup>†</sup>	(0.2-3.0)
33	Exclusive Cigar	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	2	5,282	4.1 <sup>†</sup>	(1.0-15.1)	4	11,933	1.4 <sup>†</sup>	(0.5-4.0)	5	34,238	1.1 <sup>†</sup>	(0.4-2.9)
34	Exclusive Cigar	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	0	N/A	N/A	N/A	3	9,752	1.1 <sup>†</sup>	(0.3-3.6)	0	N/A	N/A	N/A
35	Exclusive Cigar	Cigar PTU w/o CIGS	All Other	1	484	0.4 <sup>†</sup>	(0.1-2.7)	1	2,537	0.3 <sup>†</sup>	(0.0-1.9)	0	N/A	N/A	N/A
36	Exclusive Cigar	CIG PTU w/o Cigar	No Tobacco	0	N/A	N/A	N/A	3	6,238	0.7 <sup>†</sup>	(0.2-2.3)	2	11,841	0.4 <sup>†</sup>	(0.1-1.6)
37	Exclusive Cigar	CIG PTU w/o Cigar	Exclusive Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
38	Exclusive Cigar	CIG PTU w/o Cigar	Exclusive Cigarettes	1	1,963	1.5 <sup>†</sup>	(0.2-11.2)	1	4,840	0.6 <sup>†</sup>	(0.1-3.9)	1	5,325	0.2 <sup>†</sup>	(0.0-1.2)
39	Exclusive Cigar	CIG PTU w/o Cigar	Cigar PTU w/CIGS	1	1,581	1.2 <sup>†</sup>	(0.2-8.1)	1	3,385	0.4 <sup>†</sup>	(0.1-2.8)	0	N/A	N/A	N/A
40	Exclusive Cigar	CIG PTU w/o Cigar	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	1	4,441	0.5 <sup>†</sup>	(0.1-3.7)	1	9,203	0.3 <sup>†</sup>	(0.0-2.2)
41	Exclusive Cigar	CIG PTU w/o Cigar	CIG PTU w/o Cigar	1	1,416	1.1 <sup>†</sup>	(0.1-8.3)	1	5,578	0.6 <sup>†</sup>	(0.1-4.7)	0	N/A	N/A	N/A
42	Exclusive Cigar	CIG PTU w/o Cigar	All Other	0	N/A	N/A	N/A	1	3,603	0.4 <sup>†</sup>	(0.1-2.5)	0	N/A	N/A	N/A
43	Exclusive Cigar	All Other	No Tobacco	1	2,894	2.2 <sup>†</sup>	(0.3-15.3)	0	N/A	N/A	N/A	2	14,870	0.5 <sup>†</sup>	(0.1-2.2)
44	Exclusive Cigar	All Other	Exclusive Cigar	1	2,601	2.0 <sup>†</sup>	(0.3-13.3)	1	6,130	0.7 <sup>†</sup>	(0.1-5.2)	1	7,029	0.2 <sup>†</sup>	(0.0-1.7)
45	Exclusive Cigar	All Other	Exclusive Cigarettes	0	N/A	N/A	N/A	1	2,514	0.3 <sup>†</sup>	(0.0-1.9)	0	N/A	N/A	N/A
46	Exclusive Cigar	All Other	Cigar PTU w/CIGS	1	1,998	1.5 <sup>†</sup>	(0.2-11.2)	0	N/A	N/A	N/A	0	N/A	N/A	N/A
47	Exclusive Cigar	All Other	Cigar PTU w/o CIGS	2	2,868	2.2 <sup>†</sup>	(0.5-8.9)	4	15,675	1.8 <sup>†</sup>	(0.6-5.3)	0	N/A	N/A	N/A
48	Exclusive Cigar	All Other	CIG PTU w/o Cigar	0	N/A	N/A	N/A	1	3,057	0.4 <sup>†</sup>	(0.0-2.6)	1	2,619	0.1 <sup>†</sup>	(0.0-0.7)
49	Exclusive Cigar	All Other	All Other	2	4,775	3.7 <sup>†</sup>	(0.8-15.4)	5	20,390	2.3 <sup>†</sup>	(0.8-6.9)	1	5,623	0.2 <sup>†</sup>	(0.0-1.3)

Notes:  
Abbreviations: P30D = past 30-day; W2 = Wave 2; W3 = Wave 3; W1 = Wave 1; CI = confidence interval; PTU = polytobacco use; w/ = with; CIG(S) = cigarette(s); w/o = without; N/A = not applicable

The analysis included youth (ages 12-17), young adult (ages 18-24), and adult 25+ (ages 25 and older) W1 P30D exclusive cigar users with data at all three waves. Age was calculated based on age at W1. W3 longitudinal (all-waves) weights were used to calculate estimates.

The weighted percentages for some constructs such as discontinued tobacco and persistent use in this table may not match exactly with those presented in Table 1. This is the result of different denominators. In this table there can be no missing values on tobacco use variables at any wave. Table 1 does not require this restriction since some outcomes reflect behaviors at W3 (e.g. discontinued use by W3), regardless of missing data at Wave 2.

For transitions between waves:

- 1) No tobacco: Defined as no use of any tobacco products within the past 30 days.
- 2) Exclusive cigar: Defined as use of only traditional cigars, cigarillos, and/or filtered cigars within the past 30 days.
- 3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.
- 4) Cigar PTU w/CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and cigarettes within the past 30 days and possibly one or more of the following: hookah, electronic nicotine delivery system (ENDS<sup>†</sup>), pipe, or any smokeless tobacco.
- 5) Cigar PTU w/o CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but not cigarettes.
- 6) CIG PTU w/o cigar: Defined as use of cigarettes and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco but not traditional cigars, cigarillos, or filtered cigars.
- 7) All other: Use of one or more of the following in the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but without cigarettes, traditional cigars, cigarillos, or filtered cigars.

\*Respondents were asked about P30D use of “e-cigarettes” at W1 and W2 and “e-products” (e-cigarettes, e-cigars, e-pipes, and e-hookah) at W3.

The logit-transformation method was used to calculate the 95% CIs.

† Estimate should be interpreted with caution because it has low statistical precision. It is based on a denominator sample size of less than 50, or the coefficient of variation of the estimate or its complement is larger than 30%.

Analyses were run on the W1, W2, and W3 Public Use Files (<https://doi.org/10.3886/ICPSR36498.v8>).

Supplemental Table 2b: Transitions in P30D Product Use at W2 (2014/15) and W3 (2015/16) Among W1 (2013/14) P30D Cigar Polytobacco Users w/CIGS.

Rows	W1	W2	W3	Youth				Young Adults				Adults 25+			
				Unweighted N	Weighted N	Weighted %	95% CI	Unweighted N	Weighted N	Weighted %	95% CI	Unweighted N	Weighted N	Weighted %	95% CI
1	Cigar PTU w/CIGS	No Tobacco	No Tobacco	10	20,973	6.7 <sup>†</sup>	(3.5-12.6)	37	124,305	4.0	(2.6-6.0)	32	186,863	2.7	(1.9-3.8)
2	Cigar PTU w/CIGS	No Tobacco	Exclusive Cigar	0	N/A	N/A	N/A	1	3,737	0.1 <sup>†</sup>	(0.0-0.9)	5	31,157	0.4 <sup>†</sup>	(0.2-1.2)
3	Cigar PTU w/CIGS	No Tobacco	Exclusive Cigarettes	2	4,112	1.3 <sup>†</sup>	(0.3-5.1)	13	48,694	1.6 <sup>†</sup>	(0.8-3.1)	6	33,956	0.5 <sup>†</sup>	(0.2-1.2)
4	Cigar PTU w/CIGS	No Tobacco	Cigar PTU w/CIGS	5	10,875	3.5 <sup>†</sup>	(1.2-9.5)	12	37,326	1.2 <sup>†</sup>	(0.6-2.3)	8	56,962	0.8 <sup>†</sup>	(0.4-1.8)
5	Cigar PTU w/CIGS	No Tobacco	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	2	7,501	0.2 <sup>†</sup>	(0.1-1.0)	1	6,867	0.1 <sup>†</sup>	(0.0-0.7)
6	Cigar PTU w/CIGS	No Tobacco	CIG PTU w/o Cigar	2	3,952	1.3 <sup>†</sup>	(0.3-5.3)	5	15,746	0.5 <sup>†</sup>	(0.2-1.3)	2	15,446	0.2 <sup>†</sup>	(0.0-1.1)
7	Cigar PTU w/CIGS	No Tobacco	All Other	5	16,375	5.3 <sup>†</sup>	(2.7-10.0)	12	43,379	1.4 <sup>†</sup>	(0.7-2.6)	4	25,571	0.4 <sup>†</sup>	(0.1-1.2)
8	Cigar PTU w/CIGS	Exclusive Cigar	No Tobacco	2	4,351	1.4 <sup>†</sup>	(0.3-5.8)	8	20,407	0.7 <sup>†</sup>	(0.3-1.4)	2	10,303	0.1 <sup>†</sup>	(0.0-0.7)
9	Cigar PTU w/CIGS	Exclusive Cigar	Exclusive Cigar	0	N/A	N/A	N/A	5	16,838	0.5 <sup>†</sup>	(0.2-1.4)	7	39,789	0.6 <sup>†</sup>	(0.3-1.3)
10	Cigar PTU w/CIGS	Exclusive Cigar	Exclusive Cigarettes	0	N/A	N/A	N/A	2	5,495	0.2 <sup>†</sup>	(0.0-0.7)	2	8,246	0.1 <sup>†</sup>	(0.0-0.5)
11	Cigar PTU w/CIGS	Exclusive Cigar	Cigar PTU w/CIGS	4	7,316	2.4 <sup>†</sup>	(0.8-6.4)	3	10,592	0.3 <sup>†</sup>	(0.1-1.0)	5	30,335	0.4 <sup>†</sup>	(0.1-1.4)
12	Cigar PTU w/CIGS	Exclusive Cigar	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	1	2,524	0.1 <sup>†</sup>	(0.0-0.6)	3	10,888	0.2 <sup>†</sup>	(0.0-0.5)
13	Cigar PTU w/CIGS	Exclusive Cigar	CIG PTU w/o Cigar	0	N/A	N/A	N/A	1	2,961	0.1 <sup>†</sup>	(0.0-0.7)	1	3,798	0.1 <sup>†</sup>	(0.0-0.4)
14	Cigar PTU w/CIGS	Exclusive Cigar	All Other	0	N/A	N/A	N/A	0	N/A	N/A	N/A	1	8,513	0.1 <sup>†</sup>	(0.0-0.9)
15	Cigar PTU w/CIGS	Exclusive Cigarettes	No Tobacco	1	3,391	1.1 <sup>†</sup>	(0.1-8.4)	12	40,397	1.3 <sup>†</sup>	(0.7-2.5)	16	88,120	1.3	(0.7-2.2)
16	Cigar PTU w/CIGS	Exclusive Cigarettes	Exclusive Cigar	0	N/A	N/A	N/A	2	6,210	0.2 <sup>†</sup>	(0.0-0.9)	2	11,957	0.2 <sup>†</sup>	(0.0-0.7)
17	Cigar PTU w/CIGS	Exclusive Cigarettes	Exclusive Cigarettes	5	12,507	4.0 <sup>†</sup>	(1.7-9.0)	59	202,271	6.5	(4.9-8.4)	189	1,059,706	15.2	(13.1-17.6)
18	Cigar PTU w/CIGS	Exclusive Cigarettes	Cigar PTU w/CIGS	5	9,980	3.2 <sup>†</sup>	(1.3-7.5)	42	149,831	4.8	(3.6-6.4)	74	403,217	5.8	(4.4-7.6)
19	Cigar PTU w/CIGS	Exclusive Cigarettes	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
20	Cigar PTU w/CIGS	Exclusive Cigarettes	CIG PTU w/o Cigar	2	4,148	1.3 <sup>†</sup>	(0.3-5.5)	30	93,209	3.0	(1.9-4.6)	32	160,043	2.3	(1.6-3.3)
21	Cigar PTU w/CIGS	Exclusive Cigarettes	All Other	0	N/A	N/A	N/A	6	22,473	0.7 <sup>†</sup>	(0.3-1.8)	2	10,057	0.1 <sup>†</sup>	(0.0-0.6)
22	Cigar PTU w/CIGS	Cigar PTU w/CIGS	No Tobacco	8	15,708	5.0 <sup>†</sup>	(2.4-10.2)	31	94,530	3.0	(2.1-4.3)	16	83,088	1.2	(0.7-2.0)
23	Cigar PTU w/CIGS	Cigar PTU w/CIGS	Exclusive Cigar	0	N/A	N/A	N/A	8	26,736	0.9 <sup>†</sup>	(0.4-1.8)	20	119,482	1.7	(1.0-3.0)
24	Cigar PTU w/CIGS	Cigar PTU w/CIGS	Exclusive Cigarettes	4	6,993	2.2 <sup>†</sup>	(0.8-6.1)	89	309,945	9.9	(8.0-12.2)	123	717,594	10.3	(8.4-12.5)
25	Cigar PTU w/CIGS	Cigar PTU w/CIGS	Cigar PTU w/CIGS	35	77,987	25.1	(17.3-34.9)	234	721,868	23.0	(20.3-26.1)	412	2,107,586	30.3	(27.7-33.0)
26	Cigar PTU w/CIGS	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	1	1,658	0.5 <sup>†</sup>	(0.1-3.8)	14	44,384	1.4	(0.8-2.5)	5	27,748	0.4 <sup>†</sup>	(0.2-1.0)
27	Cigar PTU w/CIGS	Cigar PTU w/CIGS	CIG PTU w/o Cigar	11	23,501	7.6	(4.4-12.7)	68	220,117	7.0	(5.3-9.3)	78	425,820	6.1	(4.9-7.6)
28	Cigar PTU w/CIGS	Cigar PTU w/CIGS	All Other	2	4,205	1.4 <sup>†</sup>	(0.3-5.3)	8	33,310	1.1 <sup>†</sup>	(0.5-2.2)	13	85,265	1.2	(0.7-2.2)
29	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	No Tobacco	2	3,998	1.3 <sup>†</sup>	(0.3-5.7)	4	13,933	0.4 <sup>†</sup>	(0.1-1.3)	0	N/A	N/A	N/A
30	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	Exclusive Cigar	0	N/A	N/A	N/A	4	9,272	0.3 <sup>†</sup>	(0.1-0.8)	3	16,821	0.2 <sup>†</sup>	(0.1-0.7)
31	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	Exclusive Cigarettes	0	N/A	N/A	N/A	1	4,446	0.1 <sup>†</sup>	(0.0-1.3)	2	8,780	0.1 <sup>†</sup>	(0.0-0.5)
32	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	0	N/A	N/A	N/A	7	21,530	0.7 <sup>†</sup>	(0.3-1.5)	9	49,337	0.7 <sup>†</sup>	(0.3-1.9)
33	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	2	6,006	1.9 <sup>†</sup>	(0.5-7.8)	7	26,164	0.8 <sup>†</sup>	(0.4-1.8)	3	18,923	0.3 <sup>†</sup>	(0.1-0.9)
34	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	2	5,179	1.7 <sup>†</sup>	(0.4-6.8)	2	8,568	0.3 <sup>†</sup>	(0.1-1.1)	0	N/A	N/A	N/A
35	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	All Other	0	N/A	N/A	N/A	2	5,687	0.2 <sup>†</sup>	(0.0-0.8)	4	24,529	0.4 <sup>†</sup>	(0.1-1.0)
36	Cigar PTU w/CIGS	CIG PTU w/o Cigar	No Tobacco	3	6,453	2.1 <sup>†</sup>	(0.6-6.7)	13	44,555	1.4	(0.8-2.4)	7	40,320	0.6 <sup>†</sup>	(0.2-1.4)
37	Cigar PTU w/CIGS	CIG PTU w/o Cigar	Exclusive Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	1	8,162	0.1 <sup>†</sup>	(0.0-0.9)
38	Cigar PTU w/CIGS	CIG PTU w/o Cigar	Exclusive Cigarettes	3	7,313	2.3 <sup>†</sup>	(0.7-8.0)	42	146,074	4.7	(3.4-6.4)	53	292,077	4.2	(3.1-5.7)
39	Cigar PTU w/CIGS	CIG PTU w/o Cigar	Cigar PTU w/CIGS	4	8,022	2.6 <sup>†</sup>	(1.0-6.6)	41	157,194	5.0	(3.6-6.9)	40	222,043	3.2	(2.3-4.4)
40	Cigar PTU w/CIGS	CIG PTU w/o Cigar	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	2	11,289	0.4 <sup>†</sup>	(0.1-1.4)	1	3,556	0.1 <sup>†</sup>	(0.0-0.4)
41	Cigar PTU w/CIGS	CIG PTU w/o Cigar	CIG PTU w/o Cigar	11	26,038	8.4 <sup>†</sup>	(4.5-15.1)	44	162,664	5.2	(3.8-7.0)	59	334,847	4.8	(3.5-6.5)
42	Cigar PTU w/CIGS	CIG PTU w/o Cigar	All Other	2	4,258	1.4 <sup>†</sup>	(0.3-6.7)	12	60,040	1.9 <sup>†</sup>	(1.0-3.8)	5	20,814	0.3 <sup>†</sup>	(0.1-0.8)
43	Cigar PTU w/CIGS	All Other	No Tobacco	2	4,884	1.6 <sup>†</sup>	(0.4-5.9)	9	36,395	1.2 <sup>†</sup>	(0.5-2.6)	3	13,761	0.2 <sup>†</sup>	(0.1-0.6)
44	Cigar PTU w/CIGS	All Other	Exclusive Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	1	3,852	0.1 <sup>†</sup>	(0.0-0.4)
45	Cigar PTU w/CIGS	All Other	Exclusive Cigarettes	0	N/A	N/A	N/A	4	14,196	0.5 <sup>†</sup>	(0.2-1.3)	3	14,724	0.2 <sup>†</sup>	(0.1-0.7)
46	Cigar PTU w/CIGS	All Other	Cigar PTU w/CIGS	1	1,734	0.6 <sup>†</sup>	(0.1-4.4)	5	15,681	0.5 <sup>†</sup>	(0.2-1.3)	3	14,993	0.2 <sup>†</sup>	(0.1-0.7)
47	Cigar PTU w/CIGS	All Other	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	5	18,648	0.6 <sup>†</sup>	(0.2-1.5)	2	6,859	0.1 <sup>†</sup>	(0.0-0.4)
48	Cigar PTU w/CIGS	All Other	CIG PTU w/o Cigar	3	6,777	2.2 <sup>†</sup>	(0.7-7.0)	5	15,291	0.5 <sup>†</sup>	(0.2-1.2)	7	36,736	0.5 <sup>†</sup>	(0.3-1.1)
49	Cigar PTU w/CIGS	All Other	All Other	1	2,545	0.8 <sup>†</sup>	(0.1-4.7)	17	55,585	1.8	(1.1-2.9)	13	66,896	1.0 <sup>†</sup>	(0.5-1.9)

Notes:  
Abbreviations: P30D = past 30-day; W2 = Wave 2; W3 = Wave 3; W1 = Wave 1; w/ = with; CIG(S) = cigarette(s); CI = confidence interval; PTU = polytobacco use; w/o = without; N/A = not applicable

The analysis included youth (ages 12-17), young adult (ages 18-24), and adult 25+ (ages 25 and older) W1 P30D cigar polytobacco users w/CIGS with data at all three waves. Age was calculated based on age at W1. W3 longitudinal (all-waves) weights were used to calculate estimates.

The weighted percentages for some constructs such as discontinued tobacco and persistent use in this table may not match exactly with those presented in Table 1. This is the result of different denominators. In this table there can be no missing values on tobacco use variables at any wave. Table 1 does not require this restriction since some outcomes reflect behaviors at W3 (e.g. discontinued use by W3), regardless of missing data at Wave 2.

For transitions between waves:

- 1) No tobacco: Defined as no use of any tobacco products within the past 30 days.
- 2) Exclusive cigar: Defined as use of only traditional cigars, cigarillos, and/or filtered cigars within the past 30 days.
- 3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.
- 4) Cigar PTU w/CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and cigarettes within the past 30 days and possibly one or more of the following: hookah, electronic nicotine delivery system (ENDS<sup>®</sup>), pipe, or any smokeless tobacco.
- 5) Cigar PTU w/o CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but not cigarettes.
- 6) CIG PTU w/o cigar: Defined as use of cigarettes and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco but not traditional cigars, cigarillos, or filtered cigars.
- 7) All other: Use of one or more of the following in the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but without cigarettes, traditional cigars, cigarillos, or filtered cigars.

\*Respondents were asked about P30D use of "e-cigarettes" at W1 and W2 and "e-products" (e-cigarettes, e-cigars, e-pipes, and e-hookah) at W3.

The logit-transformation method was used to calculate the 95% CIs.

† Estimate should be interpreted with caution because it has low statistical precision. It is based on a denominator sample size of less than 50, or the coefficient of variation of the estimate or its complement is larger than 30%.

Analyses were run on the W1, W2, and W3 Public Use Files (<https://doi.org/10.3886/ICPSR36498.v8>).

Supplemental Table 2c: Transitions in P30D Product Use at W2 (2014/15) and W3 (2015/16) Among W1 (2013/14) P30D Cigar Polytobacco Users w/o CIGS.

Rows	W1	W2	W3	Youth				Young Adults				Adults 25+			
				Unweighted N	Weighted N	Weighted %	95% CI	Unweighted N	Weighted N	Weighted %	95% CI	Unweighted N	Weighted N	Weighted %	95% CI
1	Cigar PTU w/o CIGS	No Tobacco	No Tobacco	4	10,023	8.3 <sup>†</sup>	(2.8-22.2)	23	78,312	12.6	(8.5-18.3)	12	84,936	11.0 <sup>†</sup>	(5.5-20.8)
2	Cigar PTU w/o CIGS	No Tobacco	Exclusive Cigar	0	N/A	N/A	N/A	2	8,513	1.4 <sup>†</sup>	(0.3-6.3)	0	N/A	N/A	N/A
3	Cigar PTU w/o CIGS	No Tobacco	Exclusive Cigarettes	0	N/A	N/A	N/A	1	4,199	0.7 <sup>†</sup>	(0.1-4.2)	0	N/A	N/A	N/A
4	Cigar PTU w/o CIGS	No Tobacco	Cigar PTU w/CIGS	0	N/A	N/A	N/A	2	9,069	1.5 <sup>†</sup>	(0.3-6.2)	0	N/A	N/A	N/A
5	Cigar PTU w/o CIGS	No Tobacco	Cigar PTU w/o CIGS	2	6,952	5.8 <sup>†</sup>	(1.3-22.2)	2	5,927	1.0 <sup>†</sup>	(0.2-4.1)	0	N/A	N/A	N/A
6	Cigar PTU w/o CIGS	No Tobacco	CIG PTU w/o Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
7	Cigar PTU w/o CIGS	No Tobacco	All Other	5	11,308	9.4 <sup>†</sup>	(3.5-22.8)	2	9,971	1.6 <sup>†</sup>	(0.4-6.3)	0	N/A	N/A	N/A
8	Cigar PTU w/o CIGS	Exclusive Cigar	No Tobacco	1	3,866	3.2 <sup>†</sup>	(0.4-22.2)	7	20,399	3.3 <sup>†</sup>	(1.5-7.2)	6	30,838	4.0 <sup>†</sup>	(1.7-9.1)
9	Cigar PTU w/o CIGS	Exclusive Cigar	Exclusive Cigar	0	N/A	N/A	N/A	6	20,307	3.3 <sup>†</sup>	(1.5-7.0)	11	62,045	8.1 <sup>†</sup>	(3.9-16.0)
10	Cigar PTU w/o CIGS	Exclusive Cigar	Exclusive Cigarettes	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
11	Cigar PTU w/o CIGS	Exclusive Cigar	Cigar PTU w/CIGS	1	2,868	2.4 <sup>†</sup>	(0.4-14.4)	1	2,483	0.4 <sup>†</sup>	(0.1-2.9)	1	4,420	0.6 <sup>†</sup>	(0.1-4.2)
12	Cigar PTU w/o CIGS	Exclusive Cigar	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	4	17,000	2.7 <sup>†</sup>	(0.8-8.8)	2	16,768	2.2 <sup>†</sup>	(0.4-10.5)
13	Cigar PTU w/o CIGS	Exclusive Cigar	CIG PTU w/o Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
14	Cigar PTU w/o CIGS	Exclusive Cigar	All Other	1	2,945	2.4 <sup>†</sup>	(0.3-16.6)	1	2,209	0.4 <sup>†</sup>	(0.0-2.9)	3	18,585	2.4 <sup>†</sup>	(0.7-7.6)
15	Cigar PTU w/o CIGS	Exclusive Cigarettes	No Tobacco	1	2,694	2.2 <sup>†</sup>	(0.3-14.6)	0	N/A	N/A	N/A	0	N/A	N/A	N/A
16	Cigar PTU w/o CIGS	Exclusive Cigarettes	Exclusive Cigar	0	N/A	N/A	N/A	1	5,881	0.9 <sup>†</sup>	(0.1-6.4)	0	N/A	N/A	N/A
17	Cigar PTU w/o CIGS	Exclusive Cigarettes	Exclusive Cigarettes	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
18	Cigar PTU w/o CIGS	Exclusive Cigarettes	Cigar PTU w/CIGS	0	N/A	N/A	N/A	0	N/A	N/A	N/A	2	15,319	2.0 <sup>†</sup>	(0.5-8.3)
19	Cigar PTU w/o CIGS	Exclusive Cigarettes	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
20	Cigar PTU w/o CIGS	Exclusive Cigarettes	CIG PTU w/o Cigar	1	1,798	1.5 <sup>†</sup>	(0.2-10.7)	0	N/A	N/A	N/A	1	4,164	0.5 <sup>†</sup>	(0.1-3.6)
21	Cigar PTU w/o CIGS	Exclusive Cigarettes	All Other	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
22	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	No Tobacco	2	3,172	2.6 <sup>†</sup>	(0.6-10.4)	2	6,936	1.1 <sup>†</sup>	(0.3-4.4)	0	N/A	N/A	N/A
23	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	Exclusive Cigar	0	N/A	N/A	N/A	3	9,151	1.5 <sup>†</sup>	(0.5-4.6)	7	38,996	5.1 <sup>†</sup>	(2.0-12.4)
24	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	Exclusive Cigarettes	1	2,313	1.9 <sup>†</sup>	(0.2-14.4)	1	2,042	0.3 <sup>†</sup>	(0.0-2.5)	1	6,534	0.8 <sup>†</sup>	(0.1-6.1)
25	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	Cigar PTU w/CIGS	4	8,242	6.9 <sup>†</sup>	(2.6-16.9)	14	48,095	7.7	(4.5-13.0)	2	6,496	0.8 <sup>†</sup>	(0.2-3.5)
26	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	Cigar PTU w/o CIGS	2	6,332	5.3 <sup>†</sup>	(1.2-19.9)	3	10,987	1.8 <sup>†</sup>	(0.6-5.4)	4	24,589	3.2 <sup>†</sup>	(1.2-8.3)
27	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	CIG PTU w/o Cigar	0	N/A	N/A	N/A	6	23,737	3.8 <sup>†</sup>	(1.7-8.3)	2	7,030	0.9 <sup>†</sup>	(0.2-3.7)
28	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	All Other	1	2,360	2.0 <sup>†</sup>	(0.3-12.8)	0	N/A	N/A	N/A	0	N/A	N/A	N/A
29	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	No Tobacco	1	1,337	1.1 <sup>†</sup>	(0.1-8.8)	6	33,079	5.3 <sup>†</sup>	(2.4-11.6)	4	18,305	2.4 <sup>†</sup>	(0.8-6.5)
30	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	Exclusive Cigar	0	N/A	N/A	N/A	2	5,818	0.9 <sup>†</sup>	(0.2-4.6)	6	36,171	4.7 <sup>†</sup>	(1.9-10.9)
31	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	Exclusive Cigarettes	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
32	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	Cigar PTU w/CIGS	1	3,352	2.8 <sup>†</sup>	(0.4-15.7)	5	24,254	3.9 <sup>†</sup>	(1.5-9.8)	1	2,958	0.4 <sup>†</sup>	(0.0-3.1)
33	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	1	2,785	2.3 <sup>†</sup>	(0.3-14.4)	18	80,013	12.9	(7.8-20.5)	17	76,967	10.0	(6.7-14.6)
34	Cigar PTU w/o CIGS	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	1	2,859	2.4 <sup>†</sup>	(0.3-14.9)	2	8,949	1.4 <sup>†</sup>	(0.3-6.4)	1	1,850	0.2 <sup>†</sup>	(0.0-1.8)
35	Cigar PTU w/o CIGS	CIG PTU w/o CIGS	All Other	1	3,074	2.6 <sup>†</sup>	(0.3-17.6)	7	32,226	5.2 <sup>†</sup>	(2.3-11.3)	8	44,277	5.7 <sup>†</sup>	(2.3-13.6)
36	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	No Tobacco	0	N/A	N/A	N/A	1	3,875	0.6 <sup>†</sup>	(0.1-4.8)	1	5,738	0.7 <sup>†</sup>	(0.1-5.5)
37	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	Exclusive Cigar	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
38	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	Exclusive Cigarettes	1	2,235	1.9 <sup>†</sup>	(0.2-13.4)	1	3,136	0.5 <sup>†</sup>	(0.1-3.5)	1	9,631	1.3 <sup>†</sup>	(0.2-8.4)
39	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	Cigar PTU w/CIGS	2	10,877	9.0 <sup>†</sup>	(2.1-31.9)	1	1,779	0.3 <sup>†</sup>	(0.0-2.2)	1	7,040	0.9 <sup>†</sup>	(0.1-6.5)
40	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	Cigar PTU w/o CIGS	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
41	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	CIG PTU w/o Cigar	4	9,757	8.1 <sup>†</sup>	(2.6-22.4)	1	4,595	0.7 <sup>†</sup>	(0.1-5.3)	1	6,630	0.9 <sup>†</sup>	(0.1-6.7)
42	Cigar PTU w/o CIGS	CIG PTU w/o Cigar	All Other	1	2,028	1.7 <sup>†</sup>	(0.2-12.6)	1	3,490	0.6 <sup>†</sup>	(0.1-4.3)	0	N/A	N/A	N/A
43	Cigar PTU w/o CIGS	All Other	No Tobacco	3	5,982	5.0 <sup>†</sup>	(1.4-16.6)	8	35,131	5.6 <sup>†</sup>	(2.7-11.4)	10	59,863	7.8 <sup>†</sup>	(4.0-14.5)
44	Cigar PTU w/o CIGS	All Other	Exclusive Cigar	0	N/A	N/A	N/A	2	7,085	1.1 <sup>†</sup>	(0.3-4.7)	2	13,047	1.7 <sup>†</sup>	(0.4-6.8)
45	Cigar PTU w/o CIGS	All Other	Exclusive Cigarettes	0	N/A	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	N/A
46	Cigar PTU w/o CIGS	All Other	Cigar PTU w/CIGS	2	4,473	3.7 <sup>†</sup>	(0.7-17.3)	3	8,534	1.4 <sup>†</sup>	(0.4-4.6)	0	N/A	N/A	N/A
47	Cigar PTU w/o CIGS	All Other	Cigar PTU w/o CIGS	1	2,328	1.9 <sup>†</sup>	(0.3-12.3)	6	25,094	4.0 <sup>†</sup>	(1.5-10.1)	5	39,517	5.1 <sup>†</sup>	(2.0-12.3)
48	Cigar PTU w/o CIGS	All Other	CIG PTU w/o Cigar	0	N/A	N/A	N/A	2	6,464	1.0 <sup>†</sup>	(0.2-4.5)	3	22,895	3.0 <sup>†</sup>	(0.6-14.1)
49	Cigar PTU w/o CIGS	All Other	All Other	1	4,319	3.6 <sup>†</sup>	(0.5-21.8)	14	53,791	8.6	(5.1-14.3)	20	104,768	13.6	(8.7-20.6)

Notes:  
Abbreviations: P30D = past 30-day; W2 = Wave 2; W3 = Wave 3; W1 = Wave 1; w/o = without; CIG(S) = cigarette(s); CI = confidence interval; PTU = polytobacco use; w/ = with; N/A = not applicable

The analysis included youth (ages 12-17), young adult (ages 18-24), and adult 25+ (ages 25 and older) W1 P30D cigar polytobacco users w/o CIGS with data at all three waves. Age was calculated based on age at W1. W3 longitudinal (all-waves) weights were used to calculate estimates.

The weighted percentages for some constructs such as discontinued tobacco and persistent use in this table may not match exactly with those presented in Table 1. This is the result of different denominators. In this table there can be no missing values on tobacco use variables at any wave. Table 1 does not require this restriction since some outcomes reflect behaviors at W3 (e.g. discontinued use by W3), regardless of missing data at Wave 2.

For transitions between waves:

- 1) No tobacco: Defined as no use of any tobacco products within the past 30 days.
- 2) Exclusive cigar: Defined as use of only traditional cigars, cigarillos, and/or filtered cigars within the past 30 days.
- 3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.
- 4) Cigar PTU w/CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and cigarettes within the past 30 days and possibly one or more of the following: hookah, electronic nicotine delivery system (ENDS<sup>†</sup>), pipe, or any smokeless tobacco.
- 5) Cigar PTU w/o CIGS: Defined as use of traditional cigars, cigarillos, and/or filtered cigars and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but not cigarettes.
- 6) CIG PTU w/o cigar: Defined as use of cigarettes and one or more of the following within the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco but not traditional cigars, cigarillos, or filtered cigars.
- 7) All other: Use of one or more of the following in the past 30 days: hookah, ENDS, pipe, or any smokeless tobacco, but without cigarettes, traditional cigars, cigarillos, or filtered cigars.

\*Respondents were asked about P30D use of "e-cigarettes" at W1 and W2 and "e-products" (e-cigarettes, e-cigars, e-pipes, and e-hookah) at W3.

The logit-transformation method was used to calculate the 95% CIs.

† Estimate should be interpreted with caution because it has low statistical precision. It is based on a denominator sample size of less than 50, or the coefficient of variation of the estimate or its complement is larger than 30%.

Analyses were run on the W1, W2, and W3 Public Use Files (<https://doi.org/10.3886/ICPSR36498.v8>).