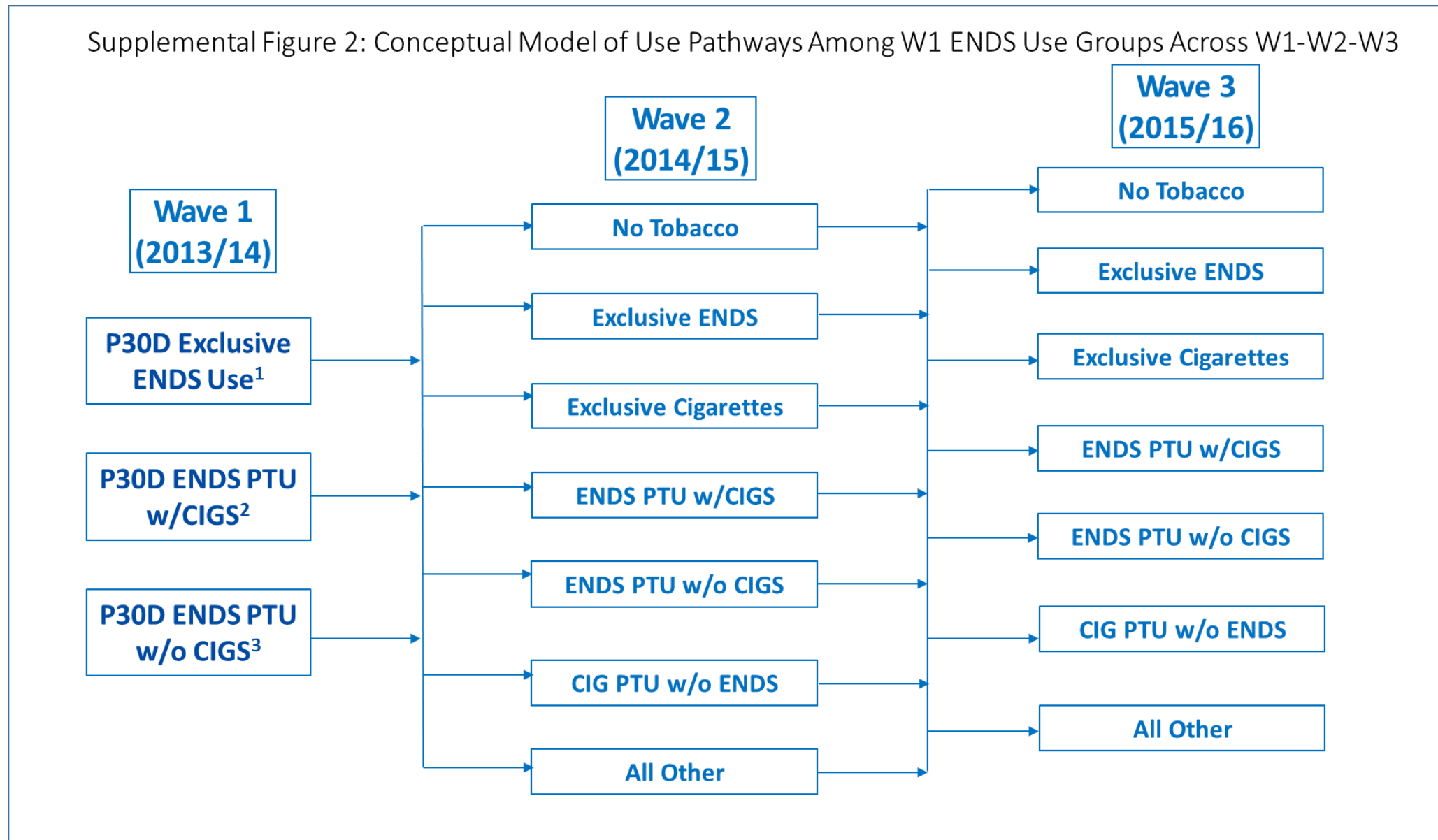


## Notes:

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



## Notes:

Abbreviations: W1 = Wave 1; ENDS\* = electronic nicotine delivery system; 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 ENDS users among any P30D ENDS users: youth (ages 12-17), 36.2% (31.5-41.2), N=112/311; young adults (ages 18-24), 12.7% (10.7-15.0), N=138/1074; adults 25+ (ages 25 and older), 13.8% (12.3-15.5), N=289/2128

<sup>2</sup>Weighted percentages (95% confidence interval) and unweighted sample sizes of W1 P30D ENDS PTU w/CIGS among any P30D ENDS users: youth, 45.0% (39.4-50.8), N=146/311; young adults, 74.0% (71.2-76.6), N=803/1074; adults 25+, 81.7% (79.7-83.6), N=1750/2128

<sup>3</sup>Weighted percentages (95% confidence interval) and unweighted sample sizes of W1 P30D ENDS PTU w/o CIGS among any P30D ENDS users: youth, 18.8% (14.5-23.9), N=53/311; young adults, 13.4% (11.4-15.7), N=133/1074; adults 25+, 4.5% (3.5-5.7), N=89/2128

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

2) Exclusive ENDS: Defined as use of only ENDS within the past 30 days.

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

4) ENDS PTU w/CIGS: Defined as use of ENDS and cigarettes within the past 30 days and possibly one or more of the following: traditional cigars, cigarillo, filtered cigars, hookah, pipe, or any smokeless tobacco.

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

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

7) All other: Defined as use of one or more of the following in the past 30 days: any cigars, hookah, pipe, or any smokeless tobacco, but without cigarettes or ENDS.

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

These pathways have been enumerated in Supplemental Tables 1a-1c.

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 1a: Transitions in P30D Product Use at W2 (2014/15) and W3 (2015/16) Among W1 (2013/14) P30D Exclusive ENDS 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 ENDS | No Tobacco           | No Tobacco           | 37           | 86,330     | 34.6       | (26.8-43.4) | 45           | 153,065    | 33.9       | (25.7-43.3) | 71           | 359,381    | 23.0       | (18.2-28.7) |
| 2    | Exclusive ENDS | No Tobacco           | Exclusive ENDS       | 9            | 18,182     | 7.3†       | (3.6-14.2)  | 2            | 5,510      | 1.2†       | (0.3-4.9)   | 11           | 56,125     | 3.6        | (2.0-6.4)   |
| 3    | Exclusive ENDS | No Tobacco           | Exclusive Cigarettes | 1            | 1,653      | 0.7†       | (0.1-5.0)   | 2            | 5,977      | 1.3        | (0.9-2.0)   | 1            | 5,006      | 0.3†       | (0.0-2.5)   |
| 4    | Exclusive ENDS | No Tobacco           | ENDS PTU w/CIGS      | 3            | 6,595      | 2.6†       | (0.8-8.6)   | 4            | 14,131     | 3.1†       | (1.2-8.1)   | 0            | N/A        | N/A        | N/A         |
| 5    | Exclusive ENDS | No Tobacco           | ENDS PTU w/o CIGS    | 1            | 1,894      | 0.8†       | (0.1-5.4)   | 3            | 10,531     | 2.3†       | (0.7-7.7)   | 1            | 4,380      | 0.3†       | (0.0-2.0)   |
| 6    | Exclusive ENDS | No Tobacco           | CIG PTU w/o ENDS     | 1            | 2,392      | 1.0†       | (0.1-7.7)   | 0            | N/A        | N/A        | N/A         | 1            | 5,597      | 0.4†       | (0.0-2.6)   |
| 7    | Exclusive ENDS | No Tobacco           | All Other            | 0            | N/A        | N/A        | N/A         | 5            | 16,251     | 3.6†       | (1.3-9.3)   | 4            | 18,213     | 1.2†       | (0.4-3.5)   |
| 8    | Exclusive ENDS | Exclusive ENDS       | No Tobacco           | 5            | 10,905     | 4.4†       | (1.9-10.0)  | 2            | 4,605      | 1.0†       | (0.2-4.5)   | 16           | 104,289    | 6.7        | (4.2-10.5)  |
| 9    | Exclusive ENDS | Exclusive ENDS       | Exclusive ENDS       | 3            | 9,282      | 3.7†       | (1.1-11.7)  | 5            | 20,514     | 4.5†       | (1.6-12.1)  | 95           | 541,766    | 34.7       | (29.6-40.2) |
| 10   | Exclusive ENDS | Exclusive ENDS       | Exclusive Cigarettes | 0            | N/A        | N/A        | N/A         | 1            | 2,767      | 0.6†       | (0.1-4.2)   | 2            | 14,004     | 0.9†       | (0.2-4.2)   |
| 11   | Exclusive ENDS | Exclusive ENDS       | ENDS PTU w/CIGS      | 2            | 4,851      | 1.9†       | (0.4-8.3)   | 3            | 11,508     | 2.5†       | (0.7-8.4)   | 9            | 41,955     | 2.7†       | (1.3-5.5)   |
| 12   | Exclusive ENDS | Exclusive ENDS       | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 4            | 17,371     | 1.1†       | (0.4-3.1)   |
| 13   | Exclusive ENDS | Exclusive ENDS       | CIG PTU w/o ENDS     | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         |
| 14   | Exclusive ENDS | Exclusive ENDS       | All Other            | 0            | N/A        | N/A        | N/A         | 1            | 3,016      | 0.7†       | (0.1-4.8)   | 0            | N/A        | N/A        | N/A         |
| 15   | Exclusive ENDS | Exclusive Cigarettes | No Tobacco           | 3            | 10,130     | 4.1†       | (1.3-11.6)  | 2            | 5,108      | 1.1†       | (0.3-4.6)   | 3            | 22,811     | 1.5†       | (0.4-4.7)   |
| 16   | Exclusive ENDS | Exclusive Cigarettes | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 1            | 15,739     | 1.0†       | (0.1-6.9)   |
| 17   | Exclusive ENDS | Exclusive Cigarettes | Exclusive Cigarettes | 2            | 3,210      | 1.3†       | (0.3-5.2)   | 11           | 42,708     | 9.5†       | (4.9-17.6)  | 10           | 45,988     | 2.9†       | (1.5-5.7)   |
| 18   | Exclusive ENDS | Exclusive Cigarettes | ENDS PTU w/CIGS      | 2            | 3,824      | 1.5†       | (0.4-6.4)   | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         |
| 19   | Exclusive ENDS | Exclusive Cigarettes | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 1            | 2,145      | 0.5†       | (0.1-3.0)   | 0            | N/A        | N/A        | N/A         |
| 20   | Exclusive ENDS | Exclusive Cigarettes | CIG PTU w/o ENDS     | 1            | 3,231      | 1.3†       | (0.2-8.9)   | 3            | 13,630     | 3.0†       | (0.9-10.1)  | 0            | N/A        | N/A        | N/A         |
| 21   | Exclusive ENDS | 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   | Exclusive ENDS | ENDS PTU w/CIGS      | No Tobacco           | 2            | 5,532      | 2.2†       | (0.5-9.3)   | 2            | 7,224      | 1.6†       | (0.4-6.3)   | 3            | 14,119     | 0.9†       | (0.3-2.8)   |
| 23   | Exclusive ENDS | ENDS PTU w/CIGS      | Exclusive ENDS       | 4            | 11,716     | 4.7†       | (1.7-12.2)  | 5            | 16,538     | 3.7†       | (1.6-8.3)   | 11           | 69,803     | 4.5†       | (2.4-8.1)   |
| 24   | Exclusive ENDS | ENDS PTU w/CIGS      | Exclusive Cigarettes | 0            | N/A        | N/A        | N/A         | 1            | 4,383      | 1.0†       | (0.1-6.1)   | 5            | 29,147     | 1.9†       | (0.4-8.8)   |
| 25   | Exclusive ENDS | ENDS PTU w/CIGS      | ENDS PTU w/CIGS      | 6            | 13,437     | 5.4†       | (2.2-12.4)  | 7            | 19,090     | 4.2†       | (1.9-9.1)   | 12           | 54,996     | 3.5        | (2.0-6.1)   |
| 26   | Exclusive ENDS | ENDS PTU w/CIGS      | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 1            | 1,785      | 0.4†       | (0.1-2.3)   | 1            | 4,573      | 0.3†       | (0.0-2.1)   |
| 27   | Exclusive ENDS | ENDS PTU w/CIGS      | CIG PTU w/o ENDS     | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 1            | 5,109      | 0.3†       | (0.0-2.7)   |
| 28   | Exclusive ENDS | ENDS PTU w/CIGS      | All Other            | 0            | N/A        | N/A        | N/A         | 1            | 2,381      | 0.5†       | (0.1-3.4)   | 1            | 6,287      | 0.4†       | (0.0-3.7)   |
| 29   | Exclusive ENDS | ENDS PTU w/o CIGS    | No Tobacco           | 1            | 1,971      | 0.8†       | (0.1-5.7)   | 1            | 3,877      | 0.9†       | (0.1-5.4)   | 0            | N/A        | N/A        | N/A         |
| 30   | Exclusive ENDS | ENDS PTU w/o CIGS    | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 1            | 2,542      | 0.6†       | (0.1-4.4)   | 3            | 27,122     | 1.7†       | (0.5-5.6)   |
| 31   | Exclusive ENDS | ENDS PTU w/o CIGS    | Exclusive Cigarettes | 1            | 3,166      | 1.3†       | (0.2-8.2)   | 1            | 10,049     | 2.2†       | (0.3-15.5)  | 0            | N/A        | N/A        | N/A         |
| 32   | Exclusive ENDS | ENDS PTU w/o CIGS    | ENDS PTU w/CIGS      | 2            | 4,290      | 1.7†       | (0.4-6.8)   | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         |
| 33   | Exclusive ENDS | ENDS PTU w/o CIGS    | ENDS PTU w/o CIGS    | 3            | 8,367      | 3.4†       | (1.0-10.7)  | 0            | N/A        | N/A        | N/A         | 2            | 14,580     | 0.9†       | (0.2-4.0)   |
| 34   | Exclusive ENDS | ENDS PTU w/o CIGS    | CIG PTU w/o ENDS     | 0            | N/A        | N/A        | N/A         | 1            | 4,321      | 1.0†       | (0.1-6.6)   | 0            | N/A        | N/A        | N/A         |
| 35   | Exclusive ENDS | ENDS PTU w/o CIGS    | All Other            | 0            | N/A        | N/A        | N/A         | 1            | 3,577      | 0.8†       | (0.1-5.3)   | 0            | N/A        | N/A        | N/A         |
| 36   | Exclusive ENDS | CIG PTU w/o ENDS     | No Tobacco           | 1            | 2,123      | 0.9†       | (0.1-5.6)   | 1            | 2,405      | 0.5†       | (0.1-4.3)   | 0            | N/A        | N/A        | N/A         |
| 37   | Exclusive ENDS | CIG PTU w/o ENDS     | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 1            | 1,991      | 0.4†       | (0.1-3.0)   | 0            | N/A        | N/A        | N/A         |
| 38   | Exclusive ENDS | CIG PTU w/o ENDS     | Exclusive Cigarettes | 2            | 4,292      | 1.7†       | (0.4-6.7)   | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         |
| 39   | Exclusive ENDS | CIG PTU w/o ENDS     | ENDS PTU w/CIGS      | 2            | 3,745      | 1.5†       | (0.4-6.0)   | 3            | 9,764      | 2.2†       | (0.5-8.5)   | 1            | 8,109      | 0.5†       | (0.1-3.7)   |
| 40   | Exclusive ENDS | CIG PTU w/o ENDS     | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 1            | 6,828      | 0.4†       | (0.1-3.1)   |
| 41   | Exclusive ENDS | CIG PTU w/o ENDS     | CIG PTU w/o ENDS     | 0            | N/A        | N/A        | N/A         | 2            | 6,312      | 1.4†       | (0.3-5.6)   | 0            | N/A        | N/A        | N/A         |
| 42   | Exclusive ENDS | CIG PTU w/o ENDS     | All Other            | 0            | N/A        | N/A        | N/A         | 1            | 2,038      | 0.5†       | (0.1-3.1)   | 0            | N/A        | N/A        | N/A         |
| 43   | Exclusive ENDS | All Other            | No Tobacco           | 7            | 16,089     | 6.5†       | (2.9-13.8)  | 5            | 17,807     | 3.9†       | (1.5-9.8)   | 4            | 19,182     | 1.2†       | (0.4-3.5)   |
| 44   | Exclusive ENDS | All Other            | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 2            | 6,942      | 1.5†       | (0.4-6.0)   | 0            | N/A        | N/A        | N/A         |
| 45   | Exclusive ENDS | All Other            | Exclusive Cigarettes | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 2            | 8,306      | 0.5†       | (0.1-2.2)   |
| 46   | Exclusive ENDS | All Other            | ENDS PTU w/CIGS      | 2            | 5,914      | 2.4†       | (0.6-9.0)   | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         |
| 47   | Exclusive ENDS | All Other            | ENDS PTU w/o CIGS    | 1            | 2,688      | 1.1†       | (0.1-7.7)   | 2            | 5,417      | 1.2†       | (0.3-5.1)   | 1            | 1,934      | 0.1†       | (0.0-0.9)   |
| 48   | Exclusive ENDS | All Other            | CIG PTU w/o ENDS     | 1            | 1,430      | 0.6†       | (0.1-3.4)   | 1            | 2,314      | 0.5†       | (0.1-4.0)   | 2            | 11,399     | 0.7†       | (0.2-3.1)   |
| 49   | Exclusive ENDS | All Other            | All Other            | 1            | 1,987      | 0.8†       | (0.1-6.0)   | 2            | 9,126      | 2.0†       | (0.4-8.7)   | 4            | 27,042     | 1.7†       | (0.6-4.9)   |

## Notes:

Abbreviations: P30D = past 30-day; W2 = Wave 2; W3 = Wave 3; W1 = Wave 1; ENDS\* = electronic nicotine delivery system; 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 ENDS users with data at all three waves. Age was calculated based on age at Wave 1. Wave 3 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 ENDS: Defined as use of only ENDS within the past 30 days.
- 3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.
- 4) ENDS PTU w/CIGS: Defined as use of ENDS and cigarettes within the past 30 days and possibly one or more of the following: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco.
- 5) ENDS PTU w/o CIGS: Defined as use of ENDS and one or more of the following within the past 30 days: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco, but not cigarettes.
- 6) CIG PTU w/o ENDS: Defined as use of cigarettes and one or more of the following within the past 30 days: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco, but not ENDS.
- 7) All other: Defined as use of one or more of the following in the past 30 days: any cigars, hookah, pipe, or any smokeless tobacco, but without cigarettes or ENDS.

\*Respondents were asked about "e-cigarettes" at W1 and "e-products" (i.e., e-cigarettes, e-cigars, e-pipes, and e-hookah) at 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 Table 1b: Transitions in P30D Product Use at W2 (2014/15) and W3 (2015/16) Among W1 (2013/14) P30D ENDS 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    | ENDS PTU w/CIGS | No Tobacco           | No Tobacco           | 12           | 24,641     | 8.2        | (4.6-14.1)  | 31           | 115,018    | 4.2        | (2.7-6.7)   | 59           | 332,044    | 3.8        | (2.8-5.0)   |
| 2    | ENDS PTU w/CIGS | No Tobacco           | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 5            | 12,439     | 0.5†       | (0.2-1.3)   | 1            | 11,640     | 0.1†       | (0.0-1.0)   |
| 3    | ENDS PTU w/CIGS | No Tobacco           | Exclusive Cigarettes | 1            | 1,774      | 0.6†       | (0.1-4.4)   | 14           | 62,993     | 2.3        | (1.3-4.0)   | 14           | 91,790     | 1.0†       | (0.6-1.9)   |
| 4    | ENDS PTU w/CIGS | No Tobacco           | ENDS PTU w/CIGS      | 3            | 5,933      | 2.0†       | (0.6-6.5)   | 9            | 31,657     | 1.2†       | (0.6-2.4)   | 4            | 22,603     | 0.3†       | (0.1-0.7)   |
| 5    | ENDS PTU w/CIGS | No Tobacco           | ENDS PTU w/o CIGS    | 2            | 4,852      | 1.6†       | (0.4-6.9)   | 2            | 9,539      | 0.4†       | (0.1-1.6)   | 1            | 6,867      | 0.1†       | (0.0-0.6)   |
| 6    | ENDS PTU w/CIGS | No Tobacco           | CIG PTU w/o ENDS     | 0            | N/A        | N/A        | N/A         | 7            | 20,804     | 0.8†       | (0.4-1.7)   | 2            | 11,678     | 0.1†       | (0.0-0.6)   |
| 7    | ENDS PTU w/CIGS | No Tobacco           | All Other            | 1            | 2,520      | 0.8†       | (0.1-5.8)   | 0            | N/A        | N/A        | N/A         | 1            | 3,798      | 0.0†       | (0.0-0.3)   |
| 8    | ENDS PTU w/CIGS | Exclusive ENDS       | No Tobacco           | 0            | N/A        | N/A        | N/A         | 4            | 12,591     | 0.5†       | (0.1-1.7)   | 4            | 16,168     | 0.2†       | (0.1-0.5)   |
| 9    | ENDS PTU w/CIGS | Exclusive ENDS       | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 7            | 22,419     | 0.8†       | (0.4-1.8)   | 42           | 234,957    | 2.7        | (1.9-3.7)   |
| 10   | ENDS PTU w/CIGS | Exclusive ENDS       | Exclusive Cigarettes | 0            | N/A        | N/A        | N/A         | 1            | 5,221      | 0.2†       | (0.0-1.4)   | 3            | 12,294     | 0.1†       | (0.0-0.5)   |
| 11   | ENDS PTU w/CIGS | Exclusive ENDS       | ENDS PTU w/CIGS      | 2            | 5,024      | 1.7†       | (0.4-6.7)   | 3            | 10,819     | 0.4†       | (0.1-1.4)   | 18           | 87,695     | 1.0        | (0.6-1.6)   |
| 12   | ENDS PTU w/CIGS | Exclusive ENDS       | ENDS PTU w/o CIGS    | 2            | 4,393      | 1.5†       | (0.4-5.7)   | 3            | 11,112     | 0.4†       | (0.1-1.3)   | 1            | 2,993      | 0.0†       | (0.0-0.2)   |
| 13   | ENDS PTU w/CIGS | Exclusive ENDS       | CIG PTU w/o ENDS     | 1            | 3,178      | 1.1†       | (0.1-7.8)   | 0            | N/A        | N/A        | N/A         | 1            | 5,116      | 0.1†       | (0.0-0.4)   |
| 14   | ENDS PTU w/CIGS | Exclusive ENDS       | All Other            | 1            | 1,992      | 0.7†       | (0.1-5.1)   | 0            | N/A        | N/A        | N/A         | 1            | 3,852      | 0.0†       | (0.0-0.3)   |
| 15   | ENDS PTU w/CIGS | Exclusive Cigarettes | No Tobacco           | 2            | 4,605      | 1.5†       | (0.3-6.6)   | 11           | 44,835     | 1.7†       | (0.9-3.0)   | 39           | 208,142    | 2.4        | (1.6-3.5)   |
| 16   | ENDS PTU w/CIGS | Exclusive Cigarettes | Exclusive ENDS       | 2            | 5,010      | 1.7†       | (0.4-6.8)   | 2            | 11,177     | 0.4†       | (0.1-1.9)   | 5            | 34,421     | 0.4†       | (0.1-1.1)   |
| 17   | ENDS PTU w/CIGS | Exclusive Cigarettes | Exclusive Cigarettes | 5            | 10,937     | 3.6†       | (1.2-10.3)  | 95           | 323,328    | 11.9       | (9.4-15.1)  | 391          | 2,079,606  | 23.5       | (21.1-26.0) |
| 18   | ENDS PTU w/CIGS | Exclusive Cigarettes | ENDS PTU w/CIGS      | 6            | 12,085     | 4.0†       | (1.7-9.0)   | 44           | 141,990    | 5.2        | (4.0-6.8)   | 103          | 572,154    | 6.5        | (5.2-8.0)   |
| 19   | ENDS PTU w/CIGS | Exclusive Cigarettes | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 1            | 2,715      | 0.1†       | (0.0-0.7)   | 0            | N/A        | N/A        | N/A         |
| 20   | ENDS PTU w/CIGS | Exclusive Cigarettes | CIG PTU w/o ENDS     | 1            | 2,550      | 0.8†       | (0.1-6.1)   | 24           | 87,547     | 3.2        | (2.0-5.3)   | 47           | 248,454    | 2.8        | (2.0-3.9)   |
| 21   | ENDS PTU w/CIGS | Exclusive Cigarettes | All Other            | 0            | N/A        | N/A        | N/A         | 1            | 4,217      | 0.2†       | (0.0-1.1)   | 1            | 5,162      | 0.1†       | (0.0-0.4)   |
| 22   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | No Tobacco           | 3            | 5,718      | 1.9†       | (0.6-6.1)   | 17           | 49,332     | 1.8        | (1.0-3.2)   | 17           | 100,769    | 1.1        | (0.7-1.9)   |
| 23   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | Exclusive ENDS       | 1            | 2,428      | 0.8†       | (0.1-5.8)   | 6            | 35,775     | 1.3†       | (0.5-3.2)   | 24           | 151,801    | 1.7        | (1.1-2.6)   |
| 24   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | Exclusive Cigarettes | 7            | 14,465     | 4.8†       | (2.2-10.0)  | 75           | 256,953    | 9.5        | (7.2-12.4)  | 238          | 1,258,456  | 14.2       | (12.3-16.4) |
| 25   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | ENDS PTU w/CIGS      | 35           | 79,535     | 26.3       | (18.9-35.4) | 147          | 521,517    | 19.3       | (16.5-22.4) | 308          | 1,668,902  | 18.9       | (16.9-21.0) |
| 26   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | ENDS PTU w/o CIGS    | 3            | 6,287      | 2.1†       | (0.6-6.6)   | 6            | 25,565     | 0.9†       | (0.4-2.3)   | 3            | 16,021     | 0.2†       | (0.1-0.6)   |
| 27   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | CIG PTU w/o ENDS     | 10           | 20,256     | 6.7†       | (3.6-12.2)  | 31           | 100,197    | 3.7        | (2.5-5.4)   | 56           | 288,504    | 3.3        | (2.4-4.3)   |
| 28   | ENDS PTU w/CIGS | ENDS PTU w/CIGS      | All Other            | 1            | 3,212      | 1.1†       | (0.1-7.5)   | 5            | 15,847     | 0.6†       | (0.2-1.6)   | 4            | 28,573     | 0.3†       | (0.1-0.9)   |
| 29   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | No Tobacco           | 2            | 5,048      | 1.7†       | (0.3-7.8)   | 4            | 10,911     | 0.4†       | (0.1-1.3)   | 0            | N/A        | N/A        | N/A         |
| 30   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 1            | 4,127      | 0.2†       | (0.0-1.1)   | 4            | 29,975     | 0.3†       | (0.1-1.0)   |
| 31   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | Exclusive Cigarettes | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 1            | 5,219      | 0.1†       | (0.0-0.4)   |
| 32   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | ENDS PTU w/CIGS      | 0            | N/A        | N/A        | N/A         | 6            | 19,395     | 0.7†       | (0.3-1.6)   | 1            | 3,289      | 0.0†       | (0.0-0.3)   |
| 33   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | ENDS PTU w/o CIGS    | 2            | 5,758      | 1.9†       | (0.5-7.1)   | 3            | 15,747     | 0.6†       | (0.2-1.9)   | 1            | 9,729      | 0.1†       | (0.0-0.8)   |
| 34   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | CIG PTU w/o ENDS     | 0            | N/A        | N/A        | N/A         | 1            | 1,445      | 0.1†       | (0.0-0.4)   | 1            | 7,014      | 0.1†       | (0.0-0.6)   |
| 35   | ENDS PTU w/CIGS | ENDS PTU w/o CIGS    | All Other            | 0            | N/A        | N/A        | N/A         | 1            | 4,903      | 0.2†       | (0.0-1.5)   | 1            | 4,606      | 0.1†       | (0.0-0.4)   |
| 36   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | No Tobacco           | 2            | 5,061      | 1.7†       | (0.4-6.8)   | 17           | 56,083     | 2.1        | (1.2-3.4)   | 6            | 26,473     | 0.3†       | (0.1-0.7)   |
| 37   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 4            | 15,731     | 0.6†       | (0.2-1.6)   | 5            | 23,577     | 0.3†       | (0.1-0.7)   |
| 38   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | Exclusive Cigarettes | 3            | 6,861      | 2.3†       | (0.7-6.9)   | 39           | 125,772    | 4.6        | (3.2-6.8)   | 54           | 304,969    | 3.4        | (2.5-4.7)   |
| 39   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | ENDS PTU w/CIGS      | 10           | 24,529     | 8.1†       | (4.0-15.9)  | 51           | 162,828    | 6.0        | (4.4-8.2)   | 59           | 328,372    | 3.7        | (2.7-5.1)   |
| 40   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 2            | 4,919      | 0.2†       | (0.0-0.8)   | 0            | N/A        | N/A        | N/A         |
| 41   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | CIG PTU w/o ENDS     | 6            | 10,994     | 3.6†       | (1.4-9.0)   | 63           | 223,025    | 8.2        | (6.3-10.6)  | 84           | 428,252    | 4.8        | (3.9-6.0)   |
| 42   | ENDS PTU w/CIGS | CIG PTU w/o ENDS     | All Other            | 0            | N/A        | N/A        | N/A         | 4            | 23,031     | 0.9†       | (0.3-2.8)   | 6            | 46,181     | 0.5†       | (0.2-1.2)   |
| 43   | ENDS PTU w/CIGS | All Other            | No Tobacco           | 3            | 9,166      | 3.0†       | (0.9-9.3)   | 8            | 30,937     | 1.1†       | (0.5-2.6)   | 6            | 42,160     | 0.5†       | (0.2-1.1)   |
| 44   | ENDS PTU w/CIGS | All Other            | Exclusive ENDS       | 0            | N/A        | N/A        | N/A         | 1            | 2,401      | 0.1†       | (0.0-0.7)   | 0            | N/A        | N/A        | N/A         |
| 45   | ENDS PTU w/CIGS | All Other            | Exclusive Cigarettes | 0            | N/A        | N/A        | N/A         | 0            | N/A        | N/A        | N/A         | 3            | 15,781     | 0.2†       | (0.0-0.6)   |
| 46   | ENDS PTU w/CIGS | All Other            | ENDS PTU w/CIGS      | 3            | 7,687      | 2.5        | (1.4-4.5)   | 3            | 11,347     | 0.4†       | (0.1-1.3)   | 1            | 6,361      | 0.1†       | (0.0-0.5)   |
| 47   | ENDS PTU w/CIGS | All Other            | ENDS PTU w/o CIGS    | 0            | N/A        | N/A        | N/A         | 5            | 16,925     | 0.6†       | (0.2-1.7)   | 3            | 10,607     | 0.1†       | (0.0-0.4)   |
| 48   | ENDS PTU w/CIGS | All Other            | CIG PTU w/o ENDS     | 2            | 4,352      | 1.4†       | (0.3-5.7)   | 4            | 9,987      | 0.4†       | (0.1-1.0)   | 5            | 25,554     | 0.3†       | (0.1-0.8)   |
| 49   | ENDS PTU w/CIGS | All Other            | All Other            | 1            | 1,377      | 0.5†       | (0.1-3.4)   | 8            | 31,781     | 1.2†       | (0.6-2.5)   | 5            | 25,257     | 0.3†       | (0.1-0.7)   |

## Notes:

Abbreviations: P30D = past 30-day; W2 = Wave 2; W3 = Wave 3; W1 = Wave 1; ENDS\* = electronic nicotine delivery system; 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 ENDS 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 ENDS: Defined as use of only ENDS within the past 30 days.
- 3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.
- 4) ENDS PTU w/CIGS: Defined as use of ENDS and cigarettes within the past 30 days and possibly one or more of the following: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco.
- 5) ENDS PTU w/o CIGS: Defined as use of ENDS and one or more of the following within the past 30 days: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco, but not cigarettes.
- 6) CIG PTU w/o ENDS: Defined as use of cigarettes and one or more of the following within the past 30 days: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco, but not ENDS.
- 7) All other: Defined as use of one or more of the following in the past 30 days: any cigars, hookah, pipe, or any smokeless tobacco, but without cigarettes or ENDS.

\*Respondents were asked about "e-cigarettes" at W1 and "e-products" (i.e., e-cigarettes, e-cigars, e-pipes, and e-hookah) at 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 Table 1c: Transitions in P30D Product Use at W2 (2014/15) and W3 (2015/16) Among W1 (2013/14) P30D ENDS 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    | ENDS PTU w/o CIGS | No Tobacco           | No Tobacco           | 7            | 17,419     | 13.8 <sup>†</sup> | (6.0-28.6) | 12           | 54,296     | 11.3             | (6.5-19.0) | 13           | 78,483     | 15.7             | (8.9-26.2)  |
| 2    | ENDS PTU w/o CIGS | No Tobacco           | Exclusive ENDS       | 1            | 2,062      | 1.6 <sup>†</sup>  | (0.2-10.4) | 0            | N/A        | N/A              | N/A        | 0            | N/A        | N/A              | N/A         |
| 3    | ENDS PTU w/o CIGS | No Tobacco           | Exclusive Cigarettes | 0            | N/A        | N/A               | N/A        | 1            | 4,199      | 0.9 <sup>†</sup> | (0.1-5.6)  | 0            | N/A        | N/A              | N/A         |
| 4    | ENDS PTU w/o CIGS | No Tobacco           | ENDS PTU w/CIGS      | 0            | N/A        | N/A               | N/A        | 1            | 3,235      | 0.7 <sup>†</sup> | (0.1-5.0)  | 0            | N/A        | N/A              | N/A         |
| 5    | ENDS PTU w/o CIGS | No Tobacco           | ENDS PTU w/o CIGS    | 2            | 5,545      | 4.4 <sup>†</sup>  | (1.0-17.0) | 0            | N/A        | N/A              | N/A        | 0            | N/A        | N/A              | N/A         |
| 6    | ENDS PTU w/o CIGS | No Tobacco           | CIG PTU w/o ENDS     | 0            | N/A        | N/A               | N/A        | 1            | 2,911      | 0.6 <sup>†</sup> | (0.1-3.7)  | 0            | N/A        | N/A              | N/A         |
| 7    | ENDS PTU w/o CIGS | No Tobacco           | All Other            | 2            | 4,023      | 3.2 <sup>†</sup>  | (0.7-12.6) | 2            | 6,921      | 1.4 <sup>†</sup> | (0.3-6.2)  | 1            | 3,830      | 0.8 <sup>†</sup> | (0.1-5.2)   |
| 8    | ENDS PTU w/o CIGS | Exclusive ENDS       | No Tobacco           | 3            | 5,982      | 4.7 <sup>†</sup>  | (1.4-14.5) | 2            | 9,088      | 1.9 <sup>†</sup> | (0.4-8.0)  | 3            | 14,772     | 3.0 <sup>†</sup> | (0.9-9.3)   |
| 9    | ENDS PTU w/o CIGS | Exclusive ENDS       | Exclusive ENDS       | 1            | 4,319      | 3.4 <sup>†</sup>  | (0.5-20.2) | 1            | 886        | 0.2 <sup>†</sup> | (0.0-1.4)  | 6            | 23,213     | 4.6 <sup>†</sup> | (2.1-9.8)   |
| 10   | ENDS PTU w/o CIGS | Exclusive ENDS       | Exclusive Cigarettes | 0            | N/A        | N/A               | N/A        | 0            | N/A        | N/A              | N/A        | 0            | N/A        | N/A              | N/A         |
| 11   | ENDS PTU w/o CIGS | Exclusive ENDS       | ENDS PTU w/CIGS      | 2            | 4,962      | 3.9 <sup>†</sup>  | (0.9-15.9) | 2            | 6,188      | 1.3 <sup>†</sup> | (0.3-5.5)  | 1            | 10,112     | 2.0 <sup>†</sup> | (0.3-13.7)  |
| 12   | ENDS PTU w/o CIGS | Exclusive ENDS       | ENDS PTU w/o CIGS    | 0            | N/A        | N/A               | N/A        | 0            | N/A        | N/A              | N/A        | 2            | 17,917     | 3.6 <sup>†</sup> | (0.8-14.1)  |
| 13   | ENDS PTU w/o CIGS | Exclusive ENDS       | CIG PTU w/o ENDS     | 0            | N/A        | N/A               | N/A        | 1            | 2,804      | 0.6 <sup>†</sup> | (0.1-4.4)  | 0            | N/A        | N/A              | N/A         |
| 14   | ENDS PTU w/o CIGS | Exclusive ENDS       | All Other            | 0            | N/A        | N/A               | N/A        | 2            | 6,783      | 1.4 <sup>†</sup> | (0.3-5.9)  | 0            | N/A        | N/A              | N/A         |
| 15   | ENDS PTU w/o CIGS | Exclusive Cigarettes | No Tobacco           | 0            | N/A        | N/A               | N/A        | 2            | 9,773      | 2.0 <sup>†</sup> | (0.5-8.0)  | 1            | 5,473      | 1.1 <sup>†</sup> | (0.1-7.9)   |
| 16   | ENDS PTU w/o CIGS | Exclusive Cigarettes | Exclusive ENDS       | 0            | N/A        | N/A               | N/A        | 1            | 2,645      | 0.6 <sup>†</sup> | (0.1-4.0)  | 0            | N/A        | N/A              | N/A         |
| 17   | ENDS PTU w/o CIGS | Exclusive Cigarettes | Exclusive Cigarettes | 0            | N/A        | N/A               | N/A        | 1            | 2,700      | 0.6 <sup>†</sup> | (0.1-3.9)  | 1            | 6,971      | 1.4 <sup>†</sup> | (0.2-10.0)  |
| 18   | ENDS PTU w/o CIGS | Exclusive Cigarettes | ENDS PTU w/CIGS      | 0            | N/A        | N/A               | N/A        | 0            | N/A        | N/A              | N/A        | 2            | 11,968     | 2.4 <sup>†</sup> | (0.5-9.9)   |
| 19   | ENDS PTU w/o CIGS | Exclusive Cigarettes | ENDS 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   | ENDS PTU w/o CIGS | Exclusive Cigarettes | CIG PTU w/o ENDS     | 1            | 1,798      | 1.4 <sup>†</sup>  | (0.2-10.9) | 1            | 5,084      | 1.1 <sup>†</sup> | (0.1-7.3)  | 1            | 5,600      | 1.1 <sup>†</sup> | (0.2-7.4)   |
| 21   | ENDS PTU w/o CIGS | Exclusive Cigarettes | All Other            | 0            | N/A        | N/A               | N/A        | 2            | 12,797     | 2.7 <sup>†</sup> | (0.7-9.3)  | 0            | N/A        | N/A              | N/A         |
| 22   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | No Tobacco           | 0            | N/A        | N/A               | N/A        | 0            | N/A        | N/A              | N/A        | 1            | 5,738      | 1.1 <sup>†</sup> | (0.1-8.8)   |
| 23   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | Exclusive ENDS       | 0            | N/A        | N/A               | N/A        | 1            | 2,773      | 0.6 <sup>†</sup> | (0.1-4.3)  | 0            | N/A        | N/A              | N/A         |
| 24   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | Exclusive Cigarettes | 1            | 2,235      | 1.8 <sup>†</sup>  | (0.2-12.7) | 3            | 13,193     | 2.7 <sup>†</sup> | (0.8-8.7)  | 1            | 9,631      | 1.9 <sup>†</sup> | (0.3-12.9)  |
| 25   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | ENDS PTU w/CIGS      | 9            | 20,533     | 16.2 <sup>†</sup> | (8.0-30.3) | 11           | 36,157     | 7.5              | (4.3-12.8) | 3            | 13,126     | 2.6 <sup>†</sup> | (0.7-9.1)   |
| 26   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | ENDS PTU w/o CIGS    | 2            | 6,190      | 4.9 <sup>†</sup>  | (1.1-19.0) | 0            | N/A        | N/A              | N/A        | 2            | 10,799     | 2.2 <sup>†</sup> | (0.5-8.5)   |
| 27   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | CIG PTU w/o ENDS     | 0            | N/A        | N/A               | N/A        | 2            | 3,685      | 0.8 <sup>†</sup> | (0.2-3.2)  | 0            | N/A        | N/A              | N/A         |
| 28   | ENDS PTU w/o CIGS | ENDS PTU w/CIGS      | All Other            | 2            | 3,748      | 3.0 <sup>†</sup>  | (0.7-11.2) | 2            | 5,669      | 1.2 <sup>†</sup> | (0.3-4.7)  | 1            | 4,861      | 1.0 <sup>†</sup> | (0.1-7.5)   |
| 29   | ENDS PTU w/o CIGS | ENDS PTU w/o CIGS    | No Tobacco           | 0            | N/A        | N/A               | N/A        | 4            | 14,804     | 3.1 <sup>†</sup> | (1.1-8.6)  | 1            | 6,425      | 1.3 <sup>†</sup> | (0.2-8.3)   |
| 30   | ENDS PTU w/o CIGS | ENDS PTU w/o CIGS    | Exclusive ENDS       | 0            | N/A        | N/A               | N/A        | 3            | 9,146      | 1.9 <sup>†</sup> | (0.6-6.2)  | 0            | N/A        | N/A              | N/A         |
| 31   | ENDS PTU w/o CIGS | ENDS 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   | ENDS PTU w/o CIGS | ENDS PTU w/o CIGS    | ENDS PTU w/CIGS      | 1            | 5,816      | 4.6 <sup>†</sup>  | (0.6-27.6) | 4            | 18,734     | 3.9 <sup>†</sup> | (1.4-10.6) | 1            | 6,621      | 1.3 <sup>†</sup> | (0.2-9.4)   |
| 33   | ENDS PTU w/o CIGS | ENDS PTU w/o CIGS    | ENDS PTU w/o CIGS    | 0            | N/A        | N/A               | N/A        | 11           | 46,292     | 9.6 <sup>†</sup> | (4.7-18.7) | 6            | 29,677     | 5.9 <sup>†</sup> | (2.5-13.5)  |
| 34   | ENDS PTU w/o CIGS | ENDS PTU w/o CIGS    | CIG PTU w/o ENDS     | 0            | N/A        | N/A               | N/A        | 0            | N/A        | N/A              | N/A        | 0            | N/A        | N/A              | N/A         |
| 35   | ENDS PTU w/o CIGS | ENDS PTU w/o CIGS    | All Other            | 1            | 2,826      | 2.2 <sup>†</sup>  | (0.3-16.0) | 2            | 8,235      | 1.7 <sup>†</sup> | (0.4-7.5)  | 3            | 23,246     | 4.7 <sup>†</sup> | (1.4-14.5)  |
| 36   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | No Tobacco           | 1            | 1,517      | 1.2 <sup>†</sup>  | (0.2-8.8)  | 3            | 8,349      | 1.7 <sup>†</sup> | (0.5-5.5)  | 1            | 7,937      | 1.6 <sup>†</sup> | (0.2-10.6)  |
| 37   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | Exclusive ENDS       | 0            | N/A        | N/A               | N/A        | 0            | N/A        | N/A              | N/A        | 0            | N/A        | N/A              | N/A         |
| 38   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | Exclusive Cigarettes | 1            | 2,313      | 1.8 <sup>†</sup>  | (0.2-13.7) | 0            | N/A        | N/A              | N/A        | 1            | 6,534      | 1.3 <sup>†</sup> | (0.2-9.4)   |
| 39   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | ENDS PTU w/CIGS      | 1            | 2,008      | 1.6 <sup>†</sup>  | (0.2-11.5) | 7            | 35,072     | 7.3 <sup>†</sup> | (3.3-15.2) | 1            | 3,290      | 0.7 <sup>†</sup> | (0.1-4.7)   |
| 40   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | ENDS PTU w/o CIGS    | 1            | 3,003      | 2.4 <sup>†</sup>  | (0.4-13.1) | 1            | 3,659      | 0.8 <sup>†</sup> | (0.1-5.5)  | 1            | 5,203      | 1.0 <sup>†</sup> | (0.1-7.8)   |
| 41   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | CIG PTU w/o ENDS     | 2            | 7,098      | 5.6 <sup>†</sup>  | (1.4-20.1) | 3            | 8,915      | 1.9 <sup>†</sup> | (0.5-6.7)  | 2            | 12,202     | 2.4 <sup>†</sup> | (0.6-9.9)   |
| 42   | ENDS PTU w/o CIGS | CIG PTU w/o ENDS     | All Other            | 0            | N/A        | N/A               | N/A        | 3            | 11,100     | 2.3 <sup>†</sup> | (0.6-8.6)  | 6            | 40,623     | 8.1 <sup>†</sup> | (3.0-20.4)  |
| 43   | ENDS PTU w/o CIGS | All Other            | No Tobacco           | 2            | 6,750      | 5.3 <sup>†</sup>  | (1.3-20.0) | 9            | 30,966     | 6.5 <sup>†</sup> | (3.2-12.6) | 3            | 13,136     | 2.6 <sup>†</sup> | (0.8-8.2)   |
| 44   | ENDS PTU w/o CIGS | All Other            | Exclusive ENDS       | 1            | 3,182      | 2.5 <sup>†</sup>  | (0.3-17.0) | 1            | 4,371      | 0.9 <sup>†</sup> | (0.1-6.2)  | 1            | 5,003      | 1.0 <sup>†</sup> | (0.1-7.2)   |
| 45   | ENDS PTU w/o CIGS | All Other            | Exclusive Cigarettes | 0            | N/A        | N/A               | N/A        | 1            | 4,346      | 0.9 <sup>†</sup> | (0.1-5.6)  | 0            | N/A        | N/A              | N/A         |
| 46   | ENDS PTU w/o CIGS | All Other            | ENDS PTU w/CIGS      | 2            | 6,220      | 4.9 <sup>†</sup>  | (1.3-17.1) | 5            | 17,752     | 3.7 <sup>†</sup> | (1.4-9.7)  | 2            | 6,270      | 1.3 <sup>†</sup> | (0.3-5.7)   |
| 47   | ENDS PTU w/o CIGS | All Other            | ENDS PTU w/o CIGS    | 1            | 2,892      | 2.3 <sup>†</sup>  | (0.3-13.7) | 4            | 16,129     | 3.4 <sup>†</sup> | (1.2-8.8)  | 2            | 13,648     | 2.7 <sup>†</sup> | (0.7-10.2)  |
| 48   | ENDS PTU w/o CIGS | All Other            | CIG PTU w/o ENDS     | 0            | N/A        | N/A               | N/A        | 1            | 2,483      | 0.5 <sup>†</sup> | (0.1-3.7)  | 1            | 2,977      | 0.6 <sup>†</sup> | (0.1-4.5)   |
| 49   | ENDS PTU w/o CIGS | All Other            | All Other            | 2            | 4,117      | 3.3 <sup>†</sup>  | (0.7-14.0) | 15           | 47,918     | 10.0             | (5.5-17.5) | 16           | 94,441     | 18.9             | (11.0-30.6) |

## Notes:

Abbreviations: P30D = past 30-day; W2 = Wave 2; W3 = Wave 3; W1 = Wave 1; ENDS\* = electronic nicotine delivery system; 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 ENDS 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 ENDS: Defined as use of only ENDS within the past 30 days.
- 3) Exclusive cigarettes: Defined as use of only cigarettes within the past 30 days.
- 4) ENDS PTU w/CIGS: Defined as use of ENDS and cigarettes within the past 30 days and possibly one or more of the following: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco.
- 5) ENDS PTU w/o CIGS: Defined as use of ENDS and one or more of the following within the past 30 days: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco, but not cigarettes.
- 6) CIG PTU w/o ENDS: Defined as use of cigarettes and one or more of the following within the past 30 days: traditional cigars, cigarillos, filtered cigars, hookah, pipe, or any smokeless tobacco, but not ENDS.
- 7) All other: Defined as use of one or more of the following in the past 30 days: any cigars, hookah, pipe, or any smokeless tobacco, but without cigarettes or ENDS.

\*Respondents were asked about "e-cigarettes" at W1 and "e-products" (i.e., e-cigarettes, e-cigars, e-pipes, and e-hookah) at 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>).