

Appendix 3.2-4: Analyses of ALCS Tracking Study Data for Section 3.2 – Description of Conditions for Use and Actual Use of the Product

- **Statement of Purpose/ Objective:** To substantiate analyses of Adult Tobacco Consumer Tracking Study data in Section 3.2. (Note: The Adult Tobacco Consumer Tracking Study is referred to on an abbreviated basis as the “Tracking Study” in Section 3.2.)
- **Source:** Altria Client Services LLC Adult Tobacco Consumer Tracking Study (August 2015 to August 2017)

Altria Client Services’ LLC Adult Consumer Tracking Study is a nationally representative, mixed-mode tracking survey to measure tobacco use prevalence by category and segment among adult respondents among adults. The study is designed to yield quarterly and annual estimates. The survey was launched in July 2013. The Tracking Study recruits approximately 2,400 legal-age adults per month through a mix of cell phone and landline, which is regularly rebalanced to align with findings from the NHIS Wireless Substitution reports. In this section, we present analyses of data for the 24 months prior to August 2017. We report information for consumers of MST overall and for adult consumers who report “fine cut” as their regular form of MST. We also report data for adult consumers who report (1) “fine cut” as their regular form and (2) “Copenhagen®” as their regular brand. For simplicity, we refer to this group as Copenhagen® Fine Cut. All analyses were weighted to account for phone usage and the distribution of demographics characteristics (e.g., male/female, age, education, and race/ethnicity).

Additional Technical Background on the Adult Consumer Tracking Study

Summary

ATCT primarily measures prevalence of tobacco products and switching between tobacco products in the U.S. The study is designed to yield quarterly and annual estimates. Information is provided on Cigarettes; Cigars; Pipe Tobacco; e-Cigarettes; Smokeless Tobacco, including Moist Smokeless Tobacco or dip (MST), Chewing Tobacco, and Snus; as well as other smokeless tobacco (such as compressed tobacco or dissolvables); Tobacco-derived products; other smokeable tobacco products not already mentioned; and other tobacco products not already mentioned. Information is provided on adults in the U.S., with adults defined as “legal age to purchase tobacco products”, which is either 18+, 19+, or 21+, depending upon local laws where the respondent lives. Underage respondents are excluded from participation in this study. Questions on the brand used most often (for each tobacco product) are included in the survey. Background information includes gender, race/ethnicity, age, educational attainment, household income, employment status, marital status, and sexual preference.

Geographic coverage: U.S. (continental U.S. plus Alaska and Hawaii)

Time Period: July 2013 to present (data are updated monthly)

Unit of Observation: Individual

Source population: The civilian, noninstitutionalized population of the U.S., legal age and older, including residents of non-institutional group quarters such as college dormitories, group homes, shelters, rooming houses, and civilians dwelling on military installations. (Adults on active duty in any branch of the U.S. armed forces are excluded.)

Data type: Survey data

Methodology

Sample:

Interviews are conducted by telephone (computer assisted telephone interviewing, or CATI). Interviews are conducted among both landline and cell phone respondents, under a dual-frame sampling design. For the first four months of data collection (July-Oct. 2013), the composition of the sample was 36% cell phone and 64% landline. From Nov. 2013-Dec. 2014, the composition of the sample was 40% cell phone and 60% landline. From Jan. 2015 to current, the composition of the sample has been 45% cell phone and 55% landline.

Prior to commencing with the survey questions, all cell phone respondents are first asked “safety screening” questions, to assure that they are not driving an automobile and are in a place where they can speak freely and confidentially.

Both the landline and cell phone interviewing frames are probability samples, following an EPSEM (equal probability selection method) design. Each frame maintains quota controls to assure proper representation by geography, using the U.S. Census’ geographic distribution (Northeast, Midwest, South, and West), as well as by Gender (also aligned with U.S. Census). Quota “guardrails” are also in place for other demographic groups, including age, race/ethnicity, and educational attainment. These guardrails are in place to reduce the reliance on data weighting at the conclusion of data collection.

The monthly sample size was originally set to be 1,838 adults per month (5,514 per quarter, to meet an objective of reading quarterly prevalence rates with a +/- 1% margin of error). This monthly sample size was maintained from July 2013 through Aug. 2015, then was doubled to 3,676 adults per month from Aug. 2015 through Dec. 2016 (to provide a more robust sample for sub-group analyses). The current monthly sample size (beginning in Jan. 2017) is 2,400 adults per month.

Respondents are not provided with an incentive to participate in this research; participation is entirely voluntary.

Data weighting:

At the conclusion of each month of interviewing, landline and cell phone data are combined and weighted using a multi-step data-weighting process. Data are first pre-weighted to phone usage targets, as set forth by the National Health Interview Survey’s (NHIS) wireless substitution report. The NHIS report is updated every six months; therefore, targets for ATCT phone usage pre-weights are also

updated every six months. The NHIS report (and ATCT targets) include: Cell Only, Cell Mostly, Landline Mostly/Dual, and Landline Only. The NHIS report also includes very small proportions of Phoneless and Unknown Wireless, which are not applicable to ATCT, and therefore excluded from the ATCT weighting (targets re-based accordingly).

After pre-weighting for phone usage, the data are weighted for key demographics (gender, age, educational attainment, race/ethnicity nested within census region, and Nielsen county size nested within census region). Targets for all demos and Census region are derived from the Current Population Survey (CPS) of the U.S. Census Bureau. Targets for Nielsen county size are derived via ALCS' subscription service to Nielsen. Weighting of demos and geos is done using an Iterative Proportional Fitting (IPF) technique, also known as "rim-weighting" or "raking".

After the data are weighted, the data weights are trimmed to a range between 0.1 and 5.0, to alleviate the impact from extreme (either high or low) weights in the data set. As a result of the trimming, the weighted total sample size may differ slightly from the original unweighted sample size. A final adjustment is made to the weights so that the weighted total sample size matches the original (e.g., the current sample of 2,400 adult respondents per month).

An additional set of data weights are applied to project the sample to the total U.S. population ("Population weights"). The population weights are calculated using the following formula: $X/Y * Z$, whereby X=Total U.S. Adult Population (source: CPS), Y=ATCT monthly sample size, and Z=final respondent weight.

- **Summary of outcomes assessed**

We conducted analysis for five outcomes using data from Adult Tobacco Consumer Tracking Study for Section 3.2. These outcomes are listed in the table below along with the survey questions and the variables used to derive the outcome variables.

| Outcome Measure | Corresponding Variables & Questions | |
|--|--|---|
| | Variable | Question |
| 1 Average number of days Loose MST used during past 30 days (among PAST 30 DAYS Loose MST Users) | q703 | 703. During the past 30 days, that is, since [DATEFILL], on how many days did you use loose moist smokeless tobacco or dip? (DO NOT ACCEPT "DON'T KNOW", CLARIFY ALL INITIAL DON'T KNOWS WITH "What is your best estimate of the number of days you used (long cut/fine cut/long cut or fine cut) moist smokeless tobacco or dip during the past 30 days?") (RECORD EXACT) (RANGE: 1-30) |
| 2 Number of cans of Loose MST consumed on days used Loose MST* | q704 | 704. On the day[s] you used loose moist smokeless tobacco or dip during the past 30 days, how many cans of loose moist smokeless tobacco or dip did you use [per day, on average]? Less than one quarter of a can per day- 0.1** About one quarter of a can per day- 0.25** About half of a can per day- 0.5** About ¾ of a can per day- 0.75** About 1 can per day- 1** About 1 ½ cans per day- 1.5** More than 1 ½ cans per day- 2.0** |
| 3 Past 30-day use of other tobacco products | q1_cigt q1_cigr q1_pipeq1_ecigtq1_snus q1_chwt q1_tdn_nonvap | 1. Now we would like to ask you a few questions about some products you may or may not have used in the past 30 days – that is, from [DATEFILL] up to and including today. During the past 30 days, have you used [first product]? The same question was repeated for each product, including cigarettes, cigars, pipe tobacco, electronic cigarettes, chewing tobacco, moist smokeless tobacco, other smokeless tobacco products, tobacco-derived products, other smokeable tobacco products, and any other tobacco products. |
| 4 Past 30-day frequency of cigarette use on days used | q101 | 101. During the past 30 days, that is, since [DATEFILL], on how many days did you smoke part or all of a cigarette? (RECORD EXACT) (RANGE: 1-30) |
| 5 Past 30-day amount of cigarette use on days used | cigt_day | 102. On the day[s] you smoked cigarettes during the past 30 days, how many cigarettes did you smoke [per day, on average]? (RECORD EXACT) |

*"Don't know" responses are removed from the base when calculating the average number of cans used on days used.

**Numerical values used to calculate mean can consumption.

- **User Groups**

This section describes the definition of the nine user groups and variables used to identify these groups, as presented in section 3.2.

| User Groups | Definitions | Variables / Syntax |
|--|---|---|
| Total Loose MST | Used Loose MST in past 30 days | q1_mstdip_lost=1 |
| Total MST – Regular form fine cut | Used MST in past 30 days and identified fine cut as regular form | q1_mstdip=1 & q715=2 |
| Total MST –Copenhagen Fine Cut | Used MST in past 30 days, identified fine cut as regular form, and identified Copenhagen as regular brand | q1_mstdip=1 & q714=1 & q715=2 |
| Exclusive MST* | Used MST in past 30 days, did not use cigarettes in past 30 days | q1_mstdip=1 & q1_cigt=2,999 |
| Exclusive MST* – Regular form fine cut | Used MST in past 30 days and identified fine cut as regular form, did not use cigarettes in past 30 days | q1_mstdip=1 & q1_cigt=2,999 & q715=2 |
| Exclusive MST* –Copenhagen Fine Cut | Used MST in past 30 days, identified fine cut as regular form, identified Copenhagen as regular brand, and did not use cigarettes in past 30 days | q1_mstdip=1 & q1_cigt=2,999 & q714=1 & q715=2 |
| MST & Cigarettes | Used MST and cigarettes in past 30 days | q1_mstdip=1 & q1_cigt=1 |
| MST & Cigarettes – Regular form fine cut | Used MST and cigarettes in past 30 days, identified fine cut as regular form | q1_mstdip=1 & q1_cigt=1 & q715=2 |
| MST & Cigarettes – Copenhagen Fine Cut | Used MST and cigarettes in past 30 days, identified fine cut as regular form, and identified Copenhagen as regular brand | q1_mstdip=1 & q1_cigt=1 & q714=1 & q715=2 |
| *MST exclusive of cigarette smoking. | | |

- **Syntax and Output**

Outputs were generated from an online system, and are presented below by outcomes.

Outcome 1: Average number of days loose MST used during past 30 days

Table 1. Number Of Days Used Loose MST/Dip In Past 30 Days

| Total MST | Total MST | Total Fine Cut | Copenhagen Fine Cut |
|--------------------------------|---------------------------|-----------------------|----------------------------|
| Base: P30D Loose MST/Dip Users | 1416 | 307 | 128 |
| 1 To 7 | 17.1% | 13.7% | 7.9% |
| 8 To 15 | 10.0% | 6.8% | 8.3% |
| 16 To 24 | 3.7% | 1.3% | 1.3% |
| 25 To 29 | 1.9% | 0.9% | - |
| 30 | 67.4% | 77.2% | 82.5% |
| Mean | 23.22 | 24.96 | 26.31 |
| Exclusive MST | MST/ No Cigarettes | Total Fine Cut | Copenhagen Fine Cut |
| Base: P30D Loose MST/Dip Users | 1018 | 244 | 104 |
| 1 To 7 | 10.0% | 6.2% | 3.1% |
| 8 To 15 | 6.2% | 5.5% | 8.8% |
| 16 To 24 | 3.5% | 1.2% | 0.7% |
| 25 To 29 | 2.3% | 1.1% | - |
| 30 | 78.0% | 86.0% | 87.5% |
| Mean | 25.82 | 27.25 | 27.58 |
| MST & Cigarettes | MST + Cigarettes | Total Fine Cut | Copenhagen Fine Cut |
| Base: P30D Loose MST/Dip Users | 398 | 64 | 24 |
| 1 To 7 | 35.2% | 42.6% | 28.8% |
| 8 To 15 | 19.7% | 11.5% | 6.4% |
| 16 To 24 | 4.0% | 2.0% | 3.8% |
| 25 To 29 | 1.0% | - | - |
| 30 | 40.1% | 43.8% | 61.0% |
| Mean | 16.55 | 16.18 | 20.84 |

Outcome 2: Number of cans of loose MST consumed on days using loose MST during past 30 days

Table 2. Number of cans of loose MST consumed on days using loose MST during past 30 days

| | Total MST | Total Fine Cut | Copenhagen Fine Cut |
|--|---------------------|----------------|------------------------|
| <u>Amount used on days used</u> | | | |
| Base: P30D Loose MST/Dip Users | 1416 | 307 | 128 |
| Less than 1/4 of a can per day | 24.7% | 24.7% | 25.9% |
| About 1/4 of a can per day | 16.5% | 13.5% | 14.6% |
| About half of a can per day | 25.2% | 23.9% | 22.8% |
| About 3/4 of a can per day | 7.9% | 7.9% | 7.5% |
| About 1 can per day | 18.6% | 21.0% | 20.9% |
| About 1 1/2 cans per day | 2.9% | 3.2% | 4.0% |
| More than 1 1/2 cans per day | 3.6% | 4.6% | 2.8% |
| Don't know | 0.6% | 1.30% | 1.4% |
| Average Cans Per Day (on days used) | 0.56 | 0.59 | 0.57 |
| Exclusive MST | Exclusive MST | Total Fine Cut | Copenhagen Fine Cut |
| <u>Amount used on days used</u> | | | |
| Base: P30D Loose MST/Dip Users | 1018 | 244 | 104 |
| Less than 1/4 of a can per day | 21.4% | 21.2% | 25.2% |
| About 1/4 of a can per day | 14.6% | 14.2% | 14.6% |
| About half of a can per day | 26.5% | 27.0% | 26.1% |
| About 3/4 of a can per day | 9.0% | 9.3% | 8.7% |
| About 1 can per day | 20.3% | 19.4% | 17.9% |
| About 1 1/2 cans per day | 3.3% | 4.0% | 5.0% |
| More than 1 1/2 cans per day | 4.3% | 4.3% | 2.5% |
| Don't know | 0.5% | 0.60% | - |
| Average Cans Per Day (on days used) | 0.60 | 0.61 | 0.56 |
| MST & Cigarettes | MST & Cigarettes | Total Fine Cut | Copenhagen Fine Cut |
| <u>Amount used on days used</u> | | | |
| Base: P30D Loose MST/Dip Users | 398 | 64 | 24 |
| Less than 1/4 of a can per day | 33.2% | 38.0% | 29.2% |
| About 1/4 of a can per day | 21.2% | 10.8% | 14.3% |
| About half of a can per day | 21.9% | 12.0% | 8.8% |
| About 3/4 of a can per day | 4.9% | 2.6% | 2.3% |
| About 1 can per day | 14.3% | 27.3% | 33.9% |
| About 1 1/2 cans per day | 1.8% | - | - |
| More than 1 1/2 cans per day | 1.7% | 5.5% | 4.1% |
| Don't know | 1.0% | 3.80% | 7.40% |
| Average Cans Per Day (on days used) | 0.44 | 0.55 | 0.59 |

Outcome 3: Past 30-day use of other tobacco products

Table 3. Past 30-day use of other tobacco products among MST & Cigarettes group
Other Products Used In Past 30 Days

| | Total MST | Total Fine Cut | Copenhagen Fine Cut |
|---------------------|-----------|----------------|------------------------|
| Base | 1675 | 307 | 128 |
| Cigarettes | 29.9% | 20.7% | 18.9% |
| Cigars | 13.2% | 11.0% | 10.8% |
| Pipe Tobacco | 5.1% | 2.3% | 3.5% |
| E-Cigarettes | 11.6% | 8.7% | 7.8% |
| Snus | 9.2% | 5.8% | 4.9% |
| Chewing Tobacco | 1.9% | 1.1% | 1.8% |
| Other Smokeless | - | - | - |
| Other Smokeable | 1.2% | 0.5% | 0.9% |
| Other Tobacco | 0.6% | 0.6% | 1.4% |
| Other TDN Non-Vapor | 0.9% | 0.1% | - |

Outcome 4: Past 30-day frequency of cigarette use on days used

Table 4. Number Of Days Smoked Cigarettes In Past 30 Days among MST & Cigarettes group

| Cigarettes & MST | Cigarettes & MST | Total Fine Cut | Copenhagen Fine Cut |
|-----------------------------|---------------------------------|-----------------------|--------------------------------|
| Base: P30D Cigarette Users | 495 | 64 | 24 |
| 1 To 7 | 11.5% | 7.9% | 12.6% |
| 8 To 15 | 8.7% | 6.5% | 2.3% |
| 16 To 24 | 3.3% | 6.7% | - |
| 25 To 29 | 2.1% | 1.7% | - |
| 30 | 74.4% | 77.2% | 85.1% |
| Mean | 25.07 | 26.02 | 26.41 |

Outcome 5: Past 30-day amount of cigarette use on days used

Table 5. Past 30-day amount of cigarette use on days used among MST & Cigarettes group

| Cigarettes & MST | Cigarettes + MST | Total Fine Cut | Copenhagen Fine Cut |
|--|-----------------------------|-----------------------|--------------------------------|
| <u>Amount used on days used</u> | | | |
| Base: P30D Cigarette Users | 495 | 64 | 24 |
| 1 to 10 | 53.1% | 61.1% | 59.3% |
| 11 to 20 | 34.1% | 29.5% | 20.1% |
| 21 to 30 | 6.0% | 3.8% | 9.9% |
| 31 to 40 | 4.4% | 0.0 | 0.0 |
| 41 to 50 | 1.6% | 3.4% | 7.4% |
| 51 to 60 | 0.5% | - | - |
| 61 to 70 | 0.0 | - | - |
| 71 to 80 | - | - | - |
| DK | 0.0 | - | - |
| Average Sticks Per Day (on days used) | 13.63 | 12.87 | 15.51 |