

# **Camel Snus Product Use Report**

**Demographic Characteristics, Use Behavior Patterns,  
Use Frequency and Use Rate**

**RAI Services Company  
401 North Main Street  
Winston Salem, NC 27101**

**January 13, 2017**

## Executive Summary

### Introduction

Descriptive analyses - based on survey data from RAI Services Company's (RAIS)<sup>1</sup> National Tobacco Behavior Monitor (NTBM) – examined demographic characteristics, use behavior patterns (product use across tobacco categories, including concurrent use of cigarettes), use frequencies (days used during the past week) and use rates (uses per day on days used during the past week) among adult current users of Camel Snus,<sup>2</sup> non-Camel snus and other categories (types) of smokeless tobacco, i.e., loose moist snuff, portioned moist snuff and loose leaf chew tobacco. Current users of the different types of smokeless tobacco were identified based on self-reported past-30-day (P30D) use, or having used the product category (and brand, where applicable) at least one day during the past 30 days.

The NTBM is a cross-sectional survey that provides nationally representative data<sup>3</sup> on use prevalence and behaviors among adult current tobacco users - by product category, brand and style - from May 2010 to present (*refer to [Appendix A, National Tobacco Behavior Monitor Methodological Report](#)*). This tracking tool collects data from more than 2,000 respondents (adults of legal age to purchase tobacco products)<sup>4</sup> online each month, with the current analyses (Jan-2013 to Mar-2016) based on data from 95,629 individuals (weighted sample, 94,678; *refer to [Appendix Table 1 for NTBM respondent demographics](#)*).

Confirmatory (descriptive) analyses were also conducted, examining demographic characteristics, use behavior patterns, use frequencies and use rates among adult current users of Camel Snus, non-Camel snus and other types of smokeless tobacco. These analyses were based on data from R.J. Reynolds Tobacco Company's (RJRT) Consumer Brand Tracker<sup>5</sup> (Brand Tracker; Jan-2013 to Mar-2016) and, in some instances, the National Institutes of Health (NIH) and Food and Drug Administration's (FDA) Population Assessment of Tobacco and Health Study (PATH)<sup>6</sup>; current users of the different product types were identified based on self-reported past-7-day (P7D) and P30D use, respectively.

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<sup>1</sup> RAI Services Company is a wholly owned subsidiary of Reynolds American Inc. (RAI) that bears primary responsibility for coordinating implementation of the Family Smoking Prevention and Tobacco Control Act for itself and RAI's FDA-regulated tobacco operating companies, including R.J. Reynolds Tobacco Company.

<sup>2</sup> Shipment-to-retail reporting data indicate market share for Camel Snus is relatively small for the combined cigarette and snus categories (0.3%); market share is somewhat larger for the combined moist snuff and snus categories (2.5%), with Camel Snus comprising the majority of the snus category (83.0%). Market share estimates are comparable when converted to volume, with Camel Snus comprising 0.2% of cigarette and snus volume, 3.0% of moist snuff and snus volume, and 79.4% of all snus volume.

<sup>3</sup> A calibrated weighting process was developed to support representative estimates when blending the opt-in and KnowledgePanel® samples for NTBM, for analytic purposes. For this methodology, an iterative proportional fitting (raking) procedure is employed to ensure that the resulting weights are aligned with respect to all study benchmark distributions simultaneously. The needed benchmarks for this step are obtained from the latest Current Population Survey, indexed by age, gender, education, race/ethnicity and region (*refer to [Appendix A](#)*).

<sup>4</sup> Pursuant to a long standing policy, research conducted by RAIS is limited to the U.S. adult population; NTBM defines adult tobacco users and non-users based on legal age to purchase tobacco products (by state and/or jurisdiction; *refer to [Appendix A](#)*).

<sup>5</sup> RJRT's Consumer Brand Tracker continuously monitors legal age adult tobacco consumers' behaviors to guide individual brand marketing plans, as well as overall strategic marketing direction (*refer to [Appendix B, Consumer Brand Tracker Methodological Report](#)*).

<sup>6</sup> NIH/FDA's PATH Study is a longitudinal survey that includes ~46,000 participants, ages 12 years and older who either do or do not use tobacco products; available at <https://pathstudyinfo.nih.gov/UI/HomeMobile.aspx>. For the current analyses of PATH data, snus use among U.S. adults (ages 18+ years) was based on P30D use.

## **Tobacco Users by Product Type (Category)<sup>7</sup> in NTBM<sup>8</sup>**

Camel Snus Users:<sup>9</sup> Respondents who report P30D use of snus, and identify the brand most often used as Camel Snus. Snus is defined as “a small pouch of tobacco that is spit free and is intended to be placed between your upper lip and gum. Snus pouches come in a tin (such as Camel Snus and Triumph).”

Non-Camel Snus Users: Respondents who report P30D use of snus (as defined above), and do not identify Camel Snus as the brand used most often.

Loose Moist Snuff Users: Respondents who report P30D use of moist snuff. Moist snuff is defined as “loose ground tobacco, that comes in a round can, that is typically placed between the lower lip and gum (such as Copenhagen, Grizzly and Skoal).”

Portioned Moist Snuff Users: Respondents who report P30D use of portion pack (portioned moist snuff). Portioned moist snuff is defined as “portion pack or pouches of tobacco that are moist, smokeless tobacco in individual pouches (such as Skoal Bandits, Copenhagen pouches and Renegades).”

Loose Leaf Chew Users: Respondents who report P30D use of loose leaf chewing tobacco. Loose leaf chew is defined as “loose leaf chewing tobacco that comes in foil pouches and is not sold in a can (such as Red Man, Levi Garrett and Beechnut).”

Cigarette Users: Respondents who report P30D cigarette use (not defined).

## **Statistical Methods**

Analyses of data from RAIS’s NTBM, RJRT’s Brand Tracker and NIH/FDA’s PATH primarily employed descriptive statistics; frequencies, percentages, means and confidence intervals were used to evaluate demographic characteristics and product use patterns among adult tobacco users across the surveys. Additionally, for data from NTBM, ordinary least-squares regressions of cigarette use (use frequency and rate) across time (survey quarters) are presented for exclusive cigarette users and users of both cigarettes and Camel Snus.

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<sup>7</sup> Each of the tobacco product types are identified by affirmative responses [1=“selected”, 2=“not selected”] to individual categories provided in Question 1A, “Which of the following products have you used in the **past 30 days**? (CHECK AS MANY AS APPLY.)” Analyses based on data from NTBM provide weighted estimates according to two separate weight variables. The calibration weight variable is identified with the data label “wgt\_cali”, and is applied to all data points from January 2014 to March 2016; this calibrated weight is used to balance the sample with introduction of the KnowledgePanel® sample. Prior to January 2014, all data are weighted according the demographic weight variable, identified as “wgt”. A derived weight variable (WGT\_D) was used for all statistical analyses.

<sup>8</sup> To the extent possible, similar definitions were applied for corresponding analyses based on data from RJRT’s Consumer Brand Tracker and NIH/FDA’s PATH Study. Tobacco product users within Brand Tracker were identified based on P7D use, while snus users within PATH were identified based on P30D use.

<sup>9</sup> Derived from the combination of Question 1A, “Which of the following products have you used in the **past 30 days**? (CHECK AS MANY AS APPLY.)” [snus, q1a\_14=1 (selected)] and Question US1, “Considering national brands as well as store brands, what one brand of snus do you use most often and consider to be your usual brand?” [Camel, US\_1=1]. [non-Camel snus, q1a\_14=1 and US\_1≠1; loose moist snuff, q1a\_7=1; portioned moist snuff, q1a\_8=1; loose leaf chew, q1a\_9=1; and, cigarettes, q1a\_1=1].

## Results

Descriptive analyses based on data from NTBM – as the primary data source for this report - demonstrate that demographic characteristics among adult current users of Camel Snus are generally consistent with current users of other smokeless tobacco product types, including the more conventional loose moist snuff and loose leaf chew tobacco. Specifically, P30D users of Camel Snus, as well as other types of smokeless tobacco, are predominantly between the ages of 25 and 49 years (69.2-75.2%), with a much smaller proportion of users being young adults, ages 18-24 years (13.4-17.5%); predominantly male (80.8-85.7%); primarily Caucasian (52.3-65.2%), with less than 10% being African American and less than 30% (18.8-28.4%) being Hispanic; and, primarily report greater versus lesser educational attainment (63.8-69.4% report at least some college). These findings were confirmed through a secondary data source, Brand Tracker, whereby adult current users of Camel Snus are similar to current users of other types of smokeless tobacco in terms of current age category, gender, race/ethnicity and educational attainment.

With regard to tobacco use behavior patterns among adult current users across a number of smokeless tobacco product types, descriptive analyses based on data from NTBM demonstrate that the vast majority of P30D users of Camel Snus (92.8%), non-Camel snus (96.3%), portioned moist snuff (93.3%), loose leaf chew (92.4%) and even loose moist snuff (77.4%) are dual/poly users of other combustible and/or non-combustible tobacco products. This finding was confirmed through secondary data sources, Brand Tracker and PATH, whereby the predominant use behavior pattern among adult current smokeless tobacco users – irrespective of product type - was identified as dual/poly use of other combustible and/or non-combustible tobacco products.

In terms of tobacco use frequency, or number of days used during the past week, descriptive analyses based on data from NTBM demonstrate that the vast majority of P30D adult users of Camel Snus (85.4%), non-Camel snus (88.4%), portioned moist snuff (84.6%) and loose leaf chew tobacco (88.2%) report less than 'near daily/daily' use (6-7 days/week); the proportion of loose moist snuff users who report less than 'near daily/daily' use is comparatively lower (65.9%). Estimated mean frequencies of use are consistent (~2.5 days/week) among P30D users of Camel Snus, non-Camel snus, portioned moist snuff and loose leaf chew tobacco, with mean frequency of use among loose moist snuff users being comparatively higher (3.7 days/week). These findings were confirmed through a secondary data source, Brand Tracker, whereby vast majorities of P7D adult users of snus (Camel Snus and non-Camel snus, combined) and loose leaf chew tobacco report less than 'near daily/daily' use (~80%); the proportion of moist snuff users (loose and portioned moist snuff, combined) who report less than 'near daily/daily' use is comparatively lower (48.6%). Brand Tracker also provided generally similar estimates (compared to NTBM) for mean use frequency among P7D users of snus (3.5 days/week), loose leaf chew tobacco (3.3 days/week) and moist snuff (5.0 days/week); the slightly higher estimates were likely due to sampling differences between Brand Tracker (P7D use requires 1 or more days use during the past week) and NTBM (P30D use does not require 1 or more days use during the past week). Efforts to confirm NTBM findings with a third data source, PATH, were limited somewhat by the relatively small sample of Camel Snus users. The available data nonetheless suggest a mean use frequency among P30D adult Camel Snus users that would – similar to findings from NTBM - be categorized as 'more than weekly' (2-5 days/week).

Tobacco use rate, or number of uses per day on days used during the past week, was likewise examined among adult current users of the different types of smokeless tobacco, using NTBM as the primary data source. Descriptive analyses demonstrate that a majority of P30D users of Camel Snus (57.3%), non-Camel snus (58.3%), portioned moist snuff (55.9%) and loose leaf chew tobacco (59.6%) report a rate of 1-2 uses per day; loose moist snuff users are comparatively less likely to report a low use rate (40.5%, 1-2 uses/day), and more likely to report 7 or more uses per day (20.6%). In addition, estimated mean rates of use are generally consistent (ranging from 2.9 to 3.4 uses/day) among P30D users of Camel Snus, non-Camel snus,

portioned moist snuff and loose leaf chew tobacco, with mean rate of use among loose moist snuff users being comparatively higher (4.5 uses/day). Data from a secondary data source, Brand Tracker, confirmed that the vast majority of P7D adult users of snus (Camel Snus and non-Camel snus, combined) report a low use rate (1-5 uses/day; 84.7%), with a lower proportion of moist snuff users (loose and portioned moist snuff, combined) reporting this lower rate (68.2%). Brand Tracker data provided similar estimates (compared to NTBM) for mean rate of use among P7D users of snus (3.4 uses/day) and moist snuff (5.1 uses/day). Efforts to confirm NTBM findings with a third data source, PATH, were limited somewhat by the relatively small sample of Camel Snus users. These data nonetheless suggest a mean use rate of 3.4 uses per day among P30D adult users of Camel Snus, nearly identical to estimates provided by NTBM.

Finally, cigarette use frequency and use rate were examined among P30D adult cigarette users who report exclusive cigarette use compared to those who report use of both cigarettes and Camel Snus. Analyses based on data from NTBM demonstrate that the vast majority of P30D exclusive cigarette users report a use frequency categorized as 'near daily/daily' (6-7 days/week; 76.5%), with less than 10% of users reporting 'near weekly/weekly' use (0-1 days/week); the mean use frequency among exclusive cigarette users was estimated to be 5.9 days per week. Comparatively, a lower proportion of P30D users of both cigarettes and Camel Snus report a use frequency categorized as 'near daily/daily' (55.1%), with nearly 20% of users reporting 'near weekly/weekly' use; the mean use frequency was lower (4.8 days/week) among those who report using both cigarettes and Camel Snus. Generally concordant findings were provided by a secondary data source, Brand Tracker, indicating that cigarette use frequency was lower among P7D adult users of cigarettes and Camel Snus compared to exclusive cigarette users.

For rate of use, NTBM data indicate that less than 10% of P30D adult exclusive cigarette users report use of 0-2 cigarettes per day, with nearly 70% reporting a rate of 7 or more cigarettes per day; the mean rate of use among exclusive cigarette users was estimated to be 12.9 cigarettes per day. Comparatively, a higher proportion of P30D adult users of both cigarettes and Camel Snus report a use rate of 0-2 cigarettes per day (24.0%), with slightly less than 60% reporting a rate of 7 or more cigarettes per day; the mean rate of use was estimated to be lower among those who report using both cigarettes and Camel Snus (11.8 cigarettes/day, versus 12.9 cigarettes/day among exclusive cigarette users). Generally concordant findings were provided by a secondary data source, Brand Tracker, indicating that cigarette use rate was lower among P7D adult users of cigarettes and Camel Snus compared to exclusive cigarette users.

## **Conclusions**

These descriptive analyses, based on data from RAIS's NTBM and confirmed by secondary data sources (RJRT's Brand Tracker and NIH/FDA's PATH), demonstrate that adult current users of Camel Snus are generally similar to users of non-Camel Snus and other types of smokeless tobacco (including the more conventional loose moist snuff and loose leaf chew tobacco) in terms of demographic characteristics, tobacco use patterns (product use across tobacco categories), use frequency (number of days used during the past week) and use rate (number of uses per day on days used during the past week). Moreover, adult current cigarette users who also use Camel Snus report a lower frequency and rate of cigarette use than do exclusive cigarette users. Trend data indicate that cigarette use frequency and rate among exclusive cigarette users have not changed across survey quarters (Q1 2013 to Q1 2016), whereas cigarette use frequency and rate among cigarette users who also use Camel Snus have decreased over time.

## 1. Demographic Characteristics

RAIS's NTBM served as the primary source for survey data on demographic characteristics among adult current users of Camel Snus, non-Camel snus and other types of smokeless tobacco; specifically, P30D users of these product types (and brands, as applicable) were assessed in terms of current age category, gender, race/ethnicity and educational attainment (as a measure of socio-economic status). Subsequent to the examination of data from NTBM, confirmatory analyses were conducted based on data from RJRT's Brand Tracker; for this data source, current users of smokeless tobacco product types (and brands, as applicable) were identified based on P7D use.

### 1.1. National Tobacco Behavior Monitor (RAIS)

NTBM provides adult respondent data on demographic characteristics (current age, gender, race/ethnicity and educational attainment) among current users across a number of smokeless tobacco product types, which in turn can be further stratified by usual brand. The current analyses include P30D users of snus (Camel Snus as usual brand, "Camel Snus"; and, usual brand not Camel Snus, "non-Camel Snus"), loose moist snuff, portioned moist snuff and loose leaf chew tobacco.

Table 1 (and Figure 1, for select comparisons) present the current age category distribution among P30D users of Camel Snus, compared to users of non-Camel snus and other smokeless tobacco products (by type).<sup>10</sup> Current users of Camel Snus, as well as the comparator product types (including loose moist snuff and loose leaf chew), are predominantly between the ages of 25 and 49 years (69.2-75.2%), with a much smaller proportion of users being young adults, ages 18-24 years (13.4-17.5%). The current age category distribution among current users of Camel Snus is generally consistent with other types of smokeless tobacco, including the more conventional loose moist snuff and loose leaf chew tobacco.

**Table 1: Current Age Category Distribution among P30D Smokeless Tobacco Users (NTBM; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Camel Snus	Non Camel Snus	Loose Moist Snuff	Portioned Moist Snuff	Loose Leaf Chew
<i>weighted count</i>	555	968	2625	1322	1212
<b>Current Age Category (years)</b>					
<b>ages 18-24 (%)<sup>1</sup></b>	<b>14.1</b>	<b>16.0</b>	<b>13.4</b>	<b>17.0</b>	<b>17.5</b>
<i>weighted count<sup>2</sup></i>	78	155	351	225	212
<b>ages 25-34 (%)</b>	<b>37.0</b>	<b>41.4</b>	<b>32.1</b>	<b>43.1</b>	<b>41.6</b>
<i>weighted count</i>	205	400	844	570	504
<b>ages 35-49 (%)</b>	<b>33.0</b>	<b>32.1</b>	<b>37.1</b>	<b>32.1</b>	<b>29.3</b>
<i>weighted count</i>	183	311	974	424	355
<b>ages ≥ 50 (%)</b>	<b>15.9</b>	<b>10.5</b>	<b>17.4</b>	<b>7.8</b>	<b>11.6</b>
<i>weighted count</i>	88	102	456	103	141

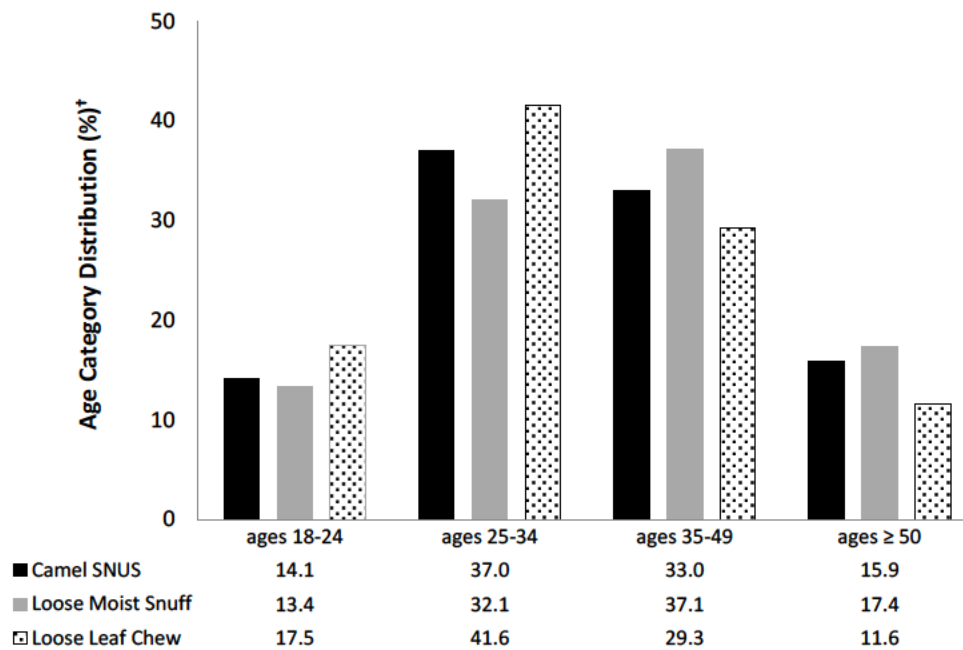
<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

<sup>1</sup> Bolded values in table represent percentages within categories; some columns may not add to 100% due to rounding/weighting.

<sup>2</sup> Italicized values represent weighted counts.

<sup>10</sup> Age categories are derived from Question S1, "We are interested in talking to people in different age groups. Please select your age from the list below (SINGLE AGE DROP DOWN)". Age responses are cross-tabulated with Question 1A (tobacco products used during past 30 days, as previously specified).

**Figure 1: Current Age Category Distribution among P30D Smokeless Tobacco Users (NTBM)**



<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

The gender distribution among P30D users of Camel Snus, compared to users of non-Camel snus and other smokeless tobacco products (by type), is presented in *Table 2* (and *Figure 2*, for select comparisons).<sup>11</sup> These data indicate current users of Camel Snus, as well as the comparator product types, are predominantly male (80.8-85.7%). The gender distribution among current users of Camel Snus is generally consistent with other types of smokeless tobacco, including the more conventional loose moist snuff and loose leaf chew tobacco.

**Table 2: Gender Distribution among P30D Smokeless Tobacco Users (NTBM; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Camel Snus	Non Camel Snus	Loose Moist Snuff	Portioned Moist Snuff	Loose Leaf Chew
<i>weighted count</i>	555	968	2625	1322	1212
<b>Gender</b>					
<b>male (%)<sup>1</sup></b>	<b>83.1</b>	<b>81.6</b>	<b>85.7</b>	<b>80.8</b>	<b>81.4</b>
<i>weighted count<sup>2</sup></i>	461	790	2249	1068	986
<b>female (%)</b>	<b>16.9</b>	<b>18.4</b>	<b>14.3</b>	<b>19.2</b>	<b>18.6</b>
<i>weighted count</i>	94	178	376	254	226

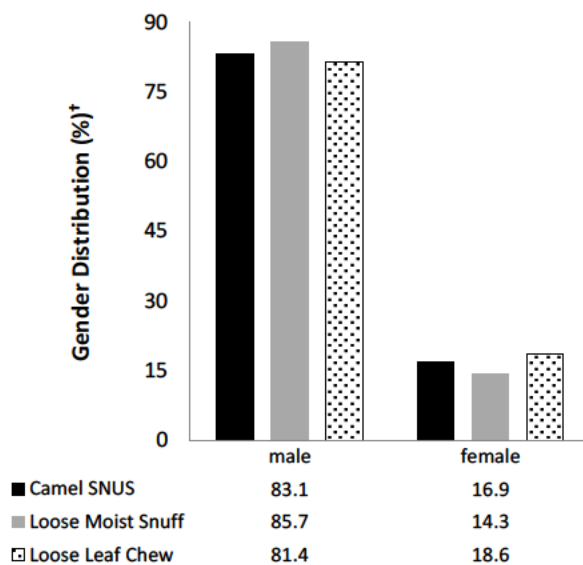
<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

<sup>1</sup> Bolded values in table represent percentages within categories; some columns may not add to 100% due to rounding/weighting.

<sup>2</sup> Italicized values represent weighted counts.

<sup>11</sup> Gender is collected from Question D1, "Are you..." [1=Male, 2=Female]. Gender responses are cross-tabulated with Question 1A (tobacco products used during past 30 days, as previously specified).

**Figure 2: Gender Distribution among P30D Smokeless Tobacco Users (NTBM)**



<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

Table 3 (and Figure 3, for select comparisons) present the race/ethnicity distribution among P30D users of Camel Snus, compared to users of non-Camel snus and other smokeless tobacco products (by type).<sup>12</sup> A majority of current users of Camel Snus, as well as the comparator product types, are Caucasian (52.3-65.2%), with less than 10% being African American and less than 30% (18.8-28.4%) being Hispanic. The race/ethnicity distribution among current users of Camel Snus is generally consistent with loose moist snuff, but may skew more towards Caucasians as compared to loose leaf chew tobacco.

**Table 3: Race/ethnicity Distribution among P30D Smokeless Tobacco Users (NTBM; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Camel Snus	Non Camel Snus	Loose Moist Snuff	Portioned Moist Snuff	Loose Leaf Chew
<i>weighted count</i>	<i>555</i>	<i>968</i>	<i>2625</i>	<i>1322</i>	<i>1212</i>
<b>Race/ethnicity</b>					
<b>Caucasian (%)<sup>1</sup></b>	<b>64.7</b>	<b>52.3</b>	<b>65.2</b>	<b>54.9</b>	<b>53.6</b>
<i>weighted count<sup>2</sup></i>	<i>359</i>	<i>506</i>	<i>1713</i>	<i>726</i>	<i>650</i>
<b>African American (%)</b>	<b>5.9</b>	<b>9.0</b>	<b>8.1</b>	<b>9.7</b>	<b>9.6</b>
<i>weighted count</i>	<i>33</i>	<i>88</i>	<i>214</i>	<i>128</i>	<i>117</i>
<b>Hispanic (%)</b>	<b>21.6</b>	<b>28.4</b>	<b>18.8</b>	<b>27.4</b>	<b>27.6</b>
<i>weighted count</i>	<i>120</i>	<i>275</i>	<i>494</i>	<i>362</i>	<i>335</i>
<b>other (%)</b>	<b>7.7</b>	<b>10.3</b>	<b>7.8</b>	<b>8.0</b>	<b>9.2</b>
<i>weighted count</i>	<i>43</i>	<i>100</i>	<i>205</i>	<i>105</i>	<i>112</i>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

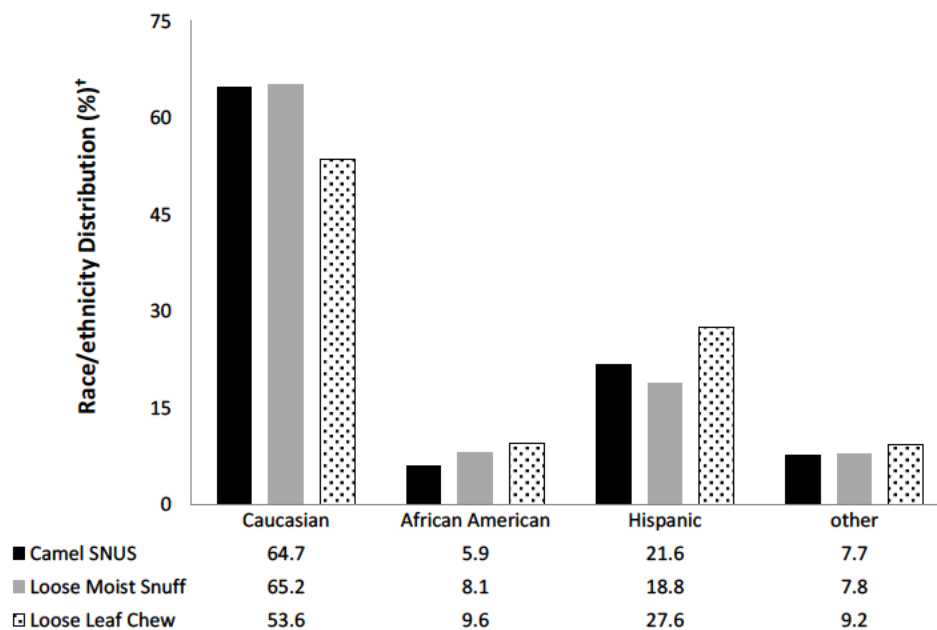
<sup>1</sup> Bolded values in table represent percentages within categories; some columns may not add to 100% due to rounding/weighting.

<sup>2</sup> Italicized values represent weighted counts.

<sup>12</sup> Race/ethnicity is derived from Question D4, "So that we can accurately represent people of all ethnic backgrounds, please indicate your ethnic background. (CHECK ONLY ONE RESPONSE)" [1=Caucasian, 2=African American, 3=Hispanic, 4=Asian, 5=Native American, 6=Or some other ethnic background]; and, Question D5, "[ASK ONLY IF DO NOT SAY "HISPANIC" IN D4 (D4=1, 2, 4, 5, 6)] Do you consider yourself to be a Hispanic, Latino, or Spanish-speaking American?" [1=Yes, 2=No]. Race/ethnicity responses are cross-tabulated with Question 1A (tobacco products used during past 30 days, as previously specified).



**Figure 3: Race/ethnicity Distribution among P30D Smokeless Tobacco Users (NTBM)**



<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

The educational attainment distribution among P30D users of Camel Snus, compared to users of non-Camel snus and other smokeless tobacco products (by type), is presented in *Table 4* (and *Figure 4*, for select comparisons).<sup>13</sup> Current users of Camel Snus, as well as the comparator product types, primarily report greater versus lesser educational attainment (63.8-69.4% report at least some college). Educational attainment among current users of Camel Snus is generally consistent with other types of smokeless tobacco, including the more conventional loose moist snuff and loose leaf chew tobacco.

**Table 4: Educational Attainment Distribution among P30D Smokeless Tobacco Users (NTBM; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Camel Snus	Non Camel Snus	Loose Moist Snuff	Portioned Moist Snuff	Loose Leaf Chew
<i>weighted count</i>	555	968	2625	1322	1212
<b>Educational Attainment</b>					
some high school or less (%) <sup>1</sup>	7.3	6.1	8.4	10.8	9.8
<i>weighted count</i> <sup>2</sup>	40	59	222	143	119
high school graduate (%)	25.6	24.5	27.4	25.5	23.7
<i>weighted count</i>	142	237	718	336	288
some college/technical school (%)	31.2	27.5	30.0	26.6	28.1
<i>weighted count</i>	173	266	786	351	341
college graduate or more (%)	35.9	41.9	34.2	37.2	38.3
<i>weighted count</i>	199	406	899	491	465

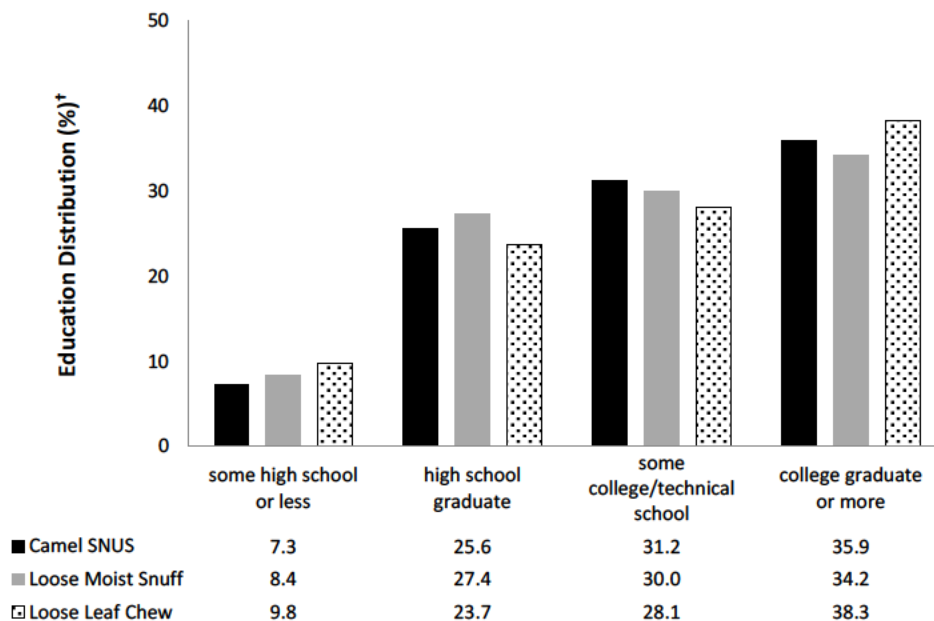
<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

<sup>1</sup> Bolded values in table represent percentages within categories; some columns may not add to 100% due to rounding/weighting.

<sup>2</sup> Italicized values represent weighted counts.

<sup>13</sup> Educational attainment is collected from Question D3, "Which of the following best describes your education?" [1=Some high school or less, 2=High school graduate, 3=Some college or technical school, 4=College graduate or more]. Education responses are cross-tabulated with Question 1A (tobacco products used during past 30 days, as previously specified).

**Figure 4: Educational Attainment Distribution among P30D Smokeless Tobacco Users (NTBM)**



<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

## 1.2. Brand Tracker (RJRT)

RJRT's Brand Tracker provides adult respondent data on demographic characteristics (current age category, gender, race/ethnicity and educational attainment) among current users – for these analyses, P7D users - across a number of smokeless tobacco product types.<sup>14</sup> The current analyses include P7D users of snus (*not* based on usual brand, but instead based *any* use of Camel Snus versus *no* use of Camel Snus), moist snuff (which combines loose and portioned products) and loose leaf chew tobacco – and are provided for comparison to estimates based on data from RAIS's NTBM.

[Table 5](#) presents the demographic characteristics distribution among P7D users of Camel Snus, compared to users of non-Camel Snus and other smokeless tobacco products (by type).<sup>15</sup> Similar to data provided by RAIS's NTBM, current users of Camel Snus as well as the comparator product types (including moist snuff and loose leaf chew) are (1) predominantly between the ages of 25 and 49 years (67.2-72.3%), with a much smaller proportion of users being young adults, ages 18-24 years (14.9-22.1%); (2) predominantly male (80.1-87.7%); (3) majority Caucasian (58.2-74.8%), with 10% or less being African American and less than 25% (13.2-23.0%) being Hispanic; and, (4) primarily report greater versus lesser educational attainment (58.4-65.4% report at least some college). Stratification of current Camel Snus users by

<sup>14</sup> Derived from the combination of Questions Q6A, "Do you use any of the following tobacco products?" [14=Moist snuff/snus, 9=Loose leaf chewing tobacco]; Q6A-1, "Which brands of moist snuff/snus do you use? Please mark all that apply." [1=Camel]; and, Q7A, "How many days out of the past 7 days have you used {moist snuff/chewing tobacco/snus}?" (0-7)".

<sup>15</sup> Demographic characteristics derived from Questions Q1A, "To be sure that we accurately represent people of all groups, what is your age please?" [specified, or Q1B/Q1C provide opportunity to respond by age range]; Q2, "Please indicate your gender" [1=Male, 2=Female]; Q3A, "So that we can accurately represent people of all ethnic backgrounds, please indicate your ethnic background." [1=Caucasian, 2=African-American, 3=Hispanic, 4=Asian, 5=Native American, 6=Some other ethnic background] and Q3B, "Do you consider yourself to be Hispanic, Latino, or Spanish-speaking American?" [1=Yes, 2=NO]; and, Q3C, "So that we can properly represent the adult population in our study, what was the last grade of school that you completed?" [1=Some high school or less, 2=Completed high school, 3=Technical school/associate degree/some other education beyond high school, 4=Some college, 5=Completed college/associate degree, 6=Graduate school].

demographic characteristics of current age category, gender, race/ethnicity and educational attainment provides proportional estimates that are generally consistent with other types of smokeless tobacco, including the more conventional moist snuff and loose leaf chew tobacco.

Estimates provided from this secondary data source confirm findings from RAIS's NTBM, that current users of Camel Snus are generally similar to current users of other types of smokeless tobacco, in terms of current age category, gender, race/ethnicity or educational attainment.

**Table 5: Demographics Distribution among P7D Smokeless Tobacco Users (Brand Tracker; 1Q 2013-1Q 2016)**

<b>Tobacco Product Type<sup>†</sup></b>	<b>Camel Snus<sup>††</sup></b>	<b>Non Camel Snus</b>	<b>Moist Snuff</b>	<b>Loose Leaf Chew</b>
<i>weighted count</i>	<i>1783</i>	<i>3069</i>	<i>8608</i>	<i>6178</i>
<b>Current Age Category (years)</b>				
<b>ages 18-24 (%)<sup>1</sup></b>	<b>19.0</b>	<b>18.2</b>	<b>14.9</b>	<b>22.1</b>
<i>weighted count<sup>2</sup></i>	<i>339</i>	<i>559</i>	<i>1282</i>	<i>1363</i>
<b>ages 25-34 (%)</b>	<b>38.4</b>	<b>39.1</b>	<b>28.8</b>	<b>37.7</b>
<i>weighted count</i>	<i>685</i>	<i>1199</i>	<i>2483</i>	<i>2329</i>
<b>ages 35-49 (%)</b>	<b>28.8</b>	<b>33.2</b>	<b>39.8</b>	<b>29.8</b>
<i>weighted count</i>	<i>514</i>	<i>1019</i>	<i>3426</i>	<i>1843</i>
<b>ages ≥ 50 (%)</b>	<b>13.7</b>	<b>9.5</b>	<b>16.5</b>	<b>10.4</b>
<i>weighted count</i>	<i>245</i>	<i>291</i>	<i>1417</i>	<i>642</i>
<b>Gender</b>				
<b>male (%)</b>	<b>82.7</b>	<b>80.1</b>	<b>87.7</b>	<b>80.7</b>
<i>weighted count</i>	<i>1474</i>	<i>2458</i>	<i>7546</i>	<i>4986</i>
<b>female (%)</b>	<b>17.3</b>	<b>19.9</b>	<b>12.3</b>	<b>19.3</b>
<i>weighted count</i>	<i>309</i>	<i>610</i>	<i>1063</i>	<i>1192</i>
<b>Race/ethnicity</b>				
<b>Caucasian (%)</b>	<b>69.7</b>	<b>58.6</b>	<b>74.8</b>	<b>58.2</b>
<i>weighted count</i>	<i>1243</i>	<i>1798</i>	<i>6438</i>	<i>3595</i>
<b>African American (%)</b>	<b>6.3</b>	<b>10.2</b>	<b>6.4</b>	<b>10.3</b>
<i>weighted count</i>	<i>113</i>	<i>313</i>	<i>547</i>	<i>637</i>
<b>Hispanic (%)</b>	<b>16.6</b>	<b>22.1</b>	<b>13.2</b>	<b>23.0</b>
<i>weighted count</i>	<i>296</i>	<i>677</i>	<i>1136</i>	<i>1424</i>
<b>other (%)</b>	<b>7.3</b>	<b>9.2</b>	<b>5.7</b>	<b>8.4</b>
<i>weighted count</i>	<i>131</i>	<i>281</i>	<i>487</i>	<i>522</i>
<b>Educational Attainment</b>				
<b>some high school or less (%)</b>	<b>8.6</b>	<b>9.2</b>	<b>10.2</b>	<b>13.2</b>
<i>weighted count</i>	<i>153</i>	<i>283</i>	<i>875</i>	<i>813</i>
<b>high school graduate (%)</b>	<b>27.3</b>	<b>25.3</b>	<b>31.4</b>	<b>28.1</b>
<i>weighted count</i>	<i>486</i>	<i>777</i>	<i>2703</i>	<i>1735</i>
<b>some college/technical school (%)</b>	<b>32.9</b>	<b>28.9</b>	<b>29.7</b>	<b>29.7</b>
<i>weighted count</i>	<i>586</i>	<i>888</i>	<i>2558</i>	<i>1834</i>
<b>college graduate or more (%)</b>	<b>31.3</b>	<b>36.5</b>	<b>28.7</b>	<b>29.1</b>
<i>weighted count</i>	<i>558</i>	<i>1121</i>	<i>2473</i>	<i>1796</i>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 7 days.

<sup>††</sup> For Brand Tracker, 'snus' use based on brand(s) currently used (or by exclusion, not used), and not based on usual brand; and, 'loose moist snuff' and 'portioned moist snuff' combined into single category, 'moist snuff', due to questionnaire structure.

<sup>1</sup> Bolded values in table represent percentages within categories; some columns may not add to 100% due to rounding/weighting.

<sup>2</sup> Italicized values represent weighted counts.

### 1.3. *PATH Study (NIH/FDA)*

Publicly available data from NIH/FDA's Population Assessment of Tobacco and Health (PATH) Study provide an insufficient number of P30D adult Camel Snus users (n=109, weighted sample) to support confirmatory analyses, based on stratification by demographic characteristics (current age category, gender, race/ethnicity and educational attainment).

## 2. *Tobacco use behavior patterns (product use across tobacco categories)*

RAIS's NTBM served as the primary source for survey data on use behavior patterns among adult current users of Camel Snus, non-Camel snus and other types of smokeless tobacco; specifically, P30D users of these smokeless tobacco types (and brands, as applicable) were assessed in terms of product use across tobacco categories, including concurrent use with cigarettes. Confirmatory analyses were conducted based on data from RJRT's Brand Tracker and NIH/FDA's PATH Study; for these data sources, current users of these product types (and brands, as applicable) were identified based on P7D use and P30D use, respectively.

### 2.1. *National Tobacco Behavior Monitor (RAIS)*

NTBM provides adult respondent data on tobacco use behavior patterns, or product use for different tobacco categories, among current users across a number of smokeless tobacco types, which can be further stratified by usual brand. The current analyses include P30D users of snus (Camel Snus as usual brand, "Camel Snus"; and, usual brand not Camel Snus, "non-Camel Snus"), loose moist snuff, portioned moist snuff and loose leaf chew tobacco. These data are intended to determine how Camel Snus, and other smokeless tobacco types, are currently used by consumers in terms of exclusive, dual and poly use.

[Table 6](#) presents tobacco use behavior patterns among P30D users of Camel Snus, compared to users of non-Camel snus and other smokeless tobacco products (by type).<sup>16</sup> A very small minority of current users of Camel Snus, as well as comparator product types, are exclusive (solo) users of their product type (<8%); the exception being loose moist snuff users, whereby slightly more than 20% are exclusive users. Approximately 10% of Camel Snus users, as well as comparator product users, report using 2 or more non-combustible tobacco products (no combustible product use), with the remaining users reporting some combustible product use. These data demonstrate that the vast majority of P30D users of Camel Snus (92.8%), non-Camel snus (96.3%), portioned moist snuff (93.3%), loose leaf chew (92.4%) and even loose moist snuff (77.4%) are dual/poly users of other combustible and/or non-combustible products.

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<sup>16</sup> Tobacco use behavior categories are derived from responses to categories provided in Question 1A, tobacco products used during past 30 days (defined previously); for example, "solo users" of Camel Snus are defined as past 30 day users of Camel Snus, who do not report use of any other products [Camel snus, (q1a\_14=1 and US\_1=1) AND NOT (q1a\_{1-13,15-16,18-19,21-22}=1)].

**Table 6: Tobacco Use Behavior Patterns among P30D Users (NTBM; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Camel Snus	Non Camel Snus	Loose Moist Snuff	Portioned Moist Snuff	Loose Leaf Chew
<i>weighted count</i>	555	968	2625	1322	1212
<b>Use Behavior Category</b>					
<b>solo user (%)<sup>1</sup></b>	<b>7.2</b>	<b>3.7</b>	<b>22.6</b>	<b>6.7</b>	<b>7.6</b>
<i>weighted count<sup>2</sup></i>	40	35	594	89	92
<b>dual use w/ cigarettes (%)</b>	<b>8.6</b>	<b>4.1</b>	<b>6.9</b>	<b>3.4</b>	<b>1.8</b>
<i>weighted count</i>	48	40	182	45	22
<b>dual use w/ combustibles* (%)</b>	<b>5.0</b>	<b>2.9</b>	<b>5.7</b>	<b>3.9</b>	<b>2.5</b>
<i>weighted count</i>	28	28	149	52	31
<b>dual/poly use w/ combustibles and non-combustibles (%)</b>	<b>68.1</b>	<b>80.5</b>	<b>54.7</b>	<b>76.3</b>	<b>77.6</b>
<i>weighted count</i>	378	779	1436	1008	940
<b>dual/poly use w/ non-combustibles (%)</b>	<b>11.0</b>	<b>8.8</b>	<b>10.0</b>	<b>9.7</b>	<b>10.5</b>
<i>weighted count</i>	61	86	263	128	128

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

\* This includes dual users with cigarettes and/or another combustible product that is typically smoked like cigarettes, such as roll-your-own cigarettes, little cigars, and cigarillos - but who are **not** included within the 'dual use w/ cigarettes' category (only use smokeless product and cigarettes).

<sup>1</sup> Bolded values in table represent percentages within categories; some columns may not add to 100% due to rounding/weighting.

<sup>2</sup> Italicized values represent weighted counts.

## 2.2. Brand Tracker (RJRT)

RJRT's Brand Tracker provides adult respondent data on tobacco use behavior patterns among current users – for these analyses, P7D users - across a number of smokeless tobacco product types. The current analyses include current users of snus (collectively, across brands), moist snuff (combines loose and portioned products) and loose leaf chew tobacco;<sup>17</sup> the resulting estimates are provided for comparison to findings based on data from RAIS's NTBM.

Data from Brand Tracker indicate that an estimated 3.5% (n=203) of snus users (n=5,870; all brands), 22.7% (n=2,114) of moist snuff users (n=9,297; loose and portioned product combined), and 6.1% (n=468) of loose leaf chew users (n=7,650) report as being exclusive (solo) product type users.<sup>18</sup> Alternatively stated, the vast majority of P7D users of snus, loose leaf chew and even moist snuff are dual/poly users of other combustible and/or non-combustible tobacco products. These data are generally consistent with estimates provided from NTBM, in terms of indicating that the predominant use behavior pattern among current smokeless tobacco users is dual/poly use of other tobacco product types.

## 2.3. PATH Study (NIH/FDA)

Publicly available data from NIH/FDA's PATH Study provide a relatively small sample of P30D adult Camel Snus users (n=109, weighted); nonetheless, this sample may be sufficient to assess the proportions of current users who report as being exclusive (solo) product types users, as compared to dual/poly users of other combustible and/or non-combustible tobacco products. Data from PATH indicate that among P30D users of Camel Snus (n=103, weighted), an estimated 15.5% (n=16) report as being exclusive product type

<sup>17</sup> For Brand Tracker, 'snus' examined as tobacco product type, based on incomplete data for usual brand among P7D users; and, 'loose moist snuff' and 'portioned moist snuff' combined into single category, 'moist snuff', due to questionnaire structure.

<sup>18</sup> Derived from the combination of Questions Q6A, "Do you use any of the following tobacco products?" [14=Moist snuff/snus, 9=Loose leaf chewing tobacco]; and, Q7A, "How many days out of the past 7 days have you used {moist snuff/chewing tobacco/snus}? (0-7)".

users, with the vast majority (84.5%) being dual/poly users of other combustible and/or non-combustible tobacco products.<sup>19</sup> These data are generally consistent with estimates provided from NTBM, in terms of indicating the predominant use behavior pattern is dual/poly use of other tobacco product types.

### **3. Tobacco use frequency (number of days used during past week)**

RAIS's NTBM served as the primary source for survey data on tobacco use frequency among adult current users of Camel Snus, non-Camel snus and other types of smokeless tobacco; specifically, P30D users of these smokeless tobacco product types (and brands, as applicable) were assessed in terms of use frequency, or number of days used during the past week. Confirmatory analyses were conducted based on data from RJRT's Brand Tracker and NIH/FDA's PATH Study; for these data sources, current users of these product types (and brands, as applicable) were identified based on P7D use and P30D use, respectively.

#### **3.1. National Tobacco Behavior Monitor (RAIS)**

NTBM provides adult respondent data on tobacco use frequency (number of days used during the past week) among current users across a number of smokeless tobacco product types, which can be further stratified by usual brand and style. The predominant use behavior pattern among smokeless tobacco users is dual/poly use of other combustible and/or non-combustible tobacco products; hence, these analyses included all P30D users of snus (Camel Snus as usual brand, "Camel Snus"; and, usual brand not Camel Snus, "non-Camel Snus"), loose moist snuff, portioned moist snuff and loose leaf chew tobacco. These data are intended to assess on how smokeless tobacco product types are currently used by consumers.

*Table 7* (and *Figure 5*, for select comparisons) present tobacco use frequencies among P30D users of Camel Snus, compared to users of non-Camel snus and other smokeless tobacco products (by type);<sup>20</sup> number of days used per week was categorized as 'near weekly/weekly' (0-1 days/week)<sup>21</sup>, 'more than weekly' (2-5 days/week) and 'near daily/daily' (6-7 days/week). For Camel Snus, non-Camel snus, portioned moist snuff and loose leaf chew, the vast majority of current users do not report a product use frequency categorized as 'near daily/daily' (84.6-88.4%); the exception being loose moist snuff users, whereby 34.1% report 'near daily/daily' use.

Estimated mean use frequencies are consistent (ranging from 2.4 to 2.5 days/week) among P30D users of Camel Snus, non-Camel snus, portioned moist snuff and loose leaf chew tobacco, with mean frequency of use among loose moist snuff users being comparatively higher (3.7 days/week) - but within the 'more than weekly' categorization (2-5 days/week). Thus, frequency of use among current Camel Snus users is generally consistent with that of other types of smokeless tobacco. Further stratification of P30D users of

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<sup>19</sup> Descriptive analyses were conducted using the *ADULT PATH Public Use Data Files*. Prevalence estimates among past-30-day snus users [(R01R\_A\_P30D\_SNU (DERIVED): Wave 1 Adult Past 30-day Snus User; "Has ever used snus and has used at least once in the past 30 days")] were generated according to PATH-derived variables in the adult file. To examine use behavior patterns among snus users (solo versus dual/poly use), a derived variable was defined (solo snus; coding included in [Appendix B](#)). Analytic results are provided for past-30-day snus users, stratified based on Camel as usual brand [(R01\_AS1048SU\_BRAND=1033; Brand of snus pouch usually / last used = CAMEL)]. Weighted estimates were calculated after applying the balanced repeated replication (BRR) method in SAS 9.3, as advised by the Westat investigators (August 3-5 2016, ICPSR at the University of Michigan, "Secondary Analysis of Data from the Population Assessment of Tobacco & Health (PATH)") using SAS 9.3.

<sup>20</sup> Tobacco use frequency is derived from responses to Question C1, "[DISPLAY EACH PRODUCT THAT = 1+ IN Q1B] How many days in the past week did you use the following? If you're not sure, your best estimate is fine. Enter "0" if none." Mean days used during the past week (Camel Snus users, by style) is derived by filtering on [US\_1=1], and classifying by Question US2, "And what flavor of snus do you use most often?" [1=Frost, 2=Mint, 8=Mellow, 9=Robust, 0=Winterchill, 23=Frost Large]. Tobacco use frequency responses are cross-tabulated with Question 1A (tobacco products used during past 30 days, as previously specified).

<sup>21</sup> NTBM respondent data include P30D users of smokeless tobacco products; hence, 'near weekly/weekly' category includes range of '0-1 days used during the past week', as not all P30D users reported use during past week.

Camel Snus by style (Frost, Mint, Mellow, Robust, Winterchill and Frost Large) provides comparable estimates of mean use frequencies, with a narrow range of 2.2 to 3.0 days used per week (*Table 7A*).

**Table 7: Tobacco Use Frequency (days used during past week) among P30D Users (NTBM; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Camel Snus	Non Camel Snus	Loose Moist Snuff	Portioned Moist Snuff	Loose Leaf Chew
<i>Weighted count</i>	555	968	2625	1322	1212
<b>Tobacco Use Frequency (days/week)</b>					
0-1 d/wk (%) <sup>1</sup>	46.2	43.9	28.3	45.4	46.9
<i>weighted count</i> <sup>2</sup>	257	425	743	601	569
2-5 d/wk (%)	39.2	44.5	37.6	39.2	41.3
<i>weighted count</i>	218	430	987	519	500
6-7 d/wk (%)	13.9	11.7	34.1	15.3	11.8
<i>weighted count</i>	77	113	894	203	143
Mean, days/week	2.4	2.4	3.7	2.5	2.4
95% CI	(2.3, 2.6)	(2.3, 2.6)	(3.7, 3.8)	(2.4, 2.7)	(2.2, 2.5)

**Table 7A: Tobacco Use Frequency (days used during past week, by style) (NTBM; 1Q 2013-1Q 2016)**

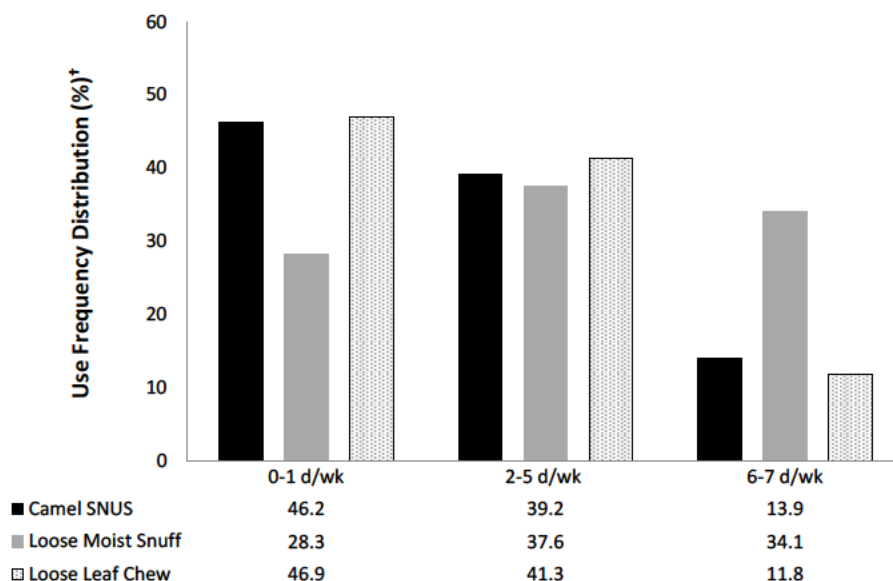
Camel Snus Style <sup>†</sup>	Frost	Mint	Mellow	Robust	Winterchill	Frost large
<i>Weighted Count</i>	291	129	86	35	57	35
Mean, days/week	2.4	2.2	2.6	2.5	3.0	2.5
95% CI	(2.1, 2.6)	(1.9, 2.5)	(2.2, 3.0)	(1.8, 3.2)	(2.3, 3.7)	(1.5, 3.4)

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days; and, Camel Snus, used most often and considered as usual brand (and style).

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting) and/or means with 95% confidence intervals (95% CI).

<sup>2</sup> Italicized values represent weighted counts.

**Figure 5: Tobacco Use Frequency among P30D Smokeless Tobacco Users (NTBM)**



<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days.

### 3.2. Brand Tracker (RJRT)

Brand Tracker provides adult respondent data on use frequencies among current smokeless tobacco users – for these analyses, P7D users - across a number of product types. The current analyses include current users of snus (collectively, across brands), moist snuff (combines loose and portioned products) and loose leaf chew tobacco.<sup>22</sup>

Data from Brand Tracker indicate that the vast majority of P7D users of snus and loose leaf chew do not report a product use frequency categorized as ‘near daily/daily’ (78.8% and 78.7%, respectively);<sup>23</sup> the exception being loose moist snuff users, whereby 51.4% report ‘near daily/daily’ use (*Table 8*).<sup>24</sup> Estimated mean frequencies of use are consistent among P7D users of snus and loose leaf chew tobacco (3.5 and 3.3 days/week, respectively), with mean frequency of use among loose moist snuff users being higher (5.0 days/week) - but within the ‘more than weekly’ categorization. Thus, frequency of use among current Camel Snus users is generally consistent with that of other types of smokeless tobacco.

**Table 8: Tobacco Use Frequency (days used during past week) (Brand Tracker; 1Q 2013-1Q 2016)**

<b>Tobacco Product Type<sup>†</sup></b>	<b>Snus<sup>††</sup></b>	<b>Moist Snuff</b>	<b>Loose Leaf Chew</b>
<i>Weighted count</i>	4866	8608	6178
<b>Tobacco Use Frequency (days/week)</b>			
<b>0-1 d/wk (%)<sup>1</sup></b>	<b>25.0</b>	<b>10.1</b>	<b>29.8</b>
<i>weighted count<sup>2</sup></i>	1218	873	1839
<b>2-5 d/wk (%)</b>	<b>53.8</b>	<b>38.5</b>	<b>48.9</b>
<i>weighted count</i>	2616	3314	3022
<b>6-7 d/wk (%)</b>	<b>21.2</b>	<b>51.4</b>	<b>21.3</b>
<i>weighted count</i>	1031	4422	1317
<b>Mean, days/week</b>	<b>3.5</b>	<b>5.0</b>	<b>3.3</b>
<b>95% CI</b>	<b>(3.4, 3.5)</b>	<b>(4.9, 5.0)</b>	<b>(3.2, 3.4)</b>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 7 days.

<sup>††</sup> For Brand Tracker, all snus users are combined, based on limitations associated with assigning usual brand; and, ‘loose moist snuff’ and ‘portioned’ moist snuff are similarly combined into single category, ‘moist snuff’, based on questionnaire structure.

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals (95% CI).

<sup>2</sup> Italicized values represent weighted counts.

Estimates provided from this secondary data source confirm findings from RAIS’s NTBM, in particular that current users of Camel Snus are generally similar to current users of other smokeless tobacco products in terms of product use frequency, or number of days used during the past week.

<sup>22</sup> For Brand Tracker, ‘snus’ examined as tobacco product type, based on incomplete data for usual brand among P7D users; and, ‘loose moist snuff’ and ‘portioned moist snuff’ combined into single category, ‘moist snuff’, due to questionnaire structure.

<sup>23</sup> Brand Tracker data includes P7D users of smokeless tobacco products; hence, ‘near weekly/weekly’ category limited to ‘1 day used during the past week’, as all P7D users must have reported use during past week; the remaining categories for use frequency are as described for NTBM, ‘more than weekly’ (2-5 days/week) and ‘near daily/daily’ (6-7 days/week).

<sup>24</sup> Derived from the combination of Questions Q6A, “Do you use any of the following tobacco products?” [14=Moist snuff/snus, 9=Loose leaf chewing tobacco]; and, Q7A, ‘How many days out of the past 7 days have you used {moist snuff/chewing tobacco/snus}? (0-7)’.



### 3.3. PATH Study (NIH/FDA)

Publicly available data from NIH/FDA's PATH Study provide a relatively small sample of P30D adult Camel Snus users (n=109, weighted); nonetheless, this sample may be sufficient to assess mean frequency of use among current Camel Snus users, or mean number of days used during the past month. Data from PATH indicate that P30D Camel Snus users report a mean use frequency of 17.0 days per month (95% CI: 14.7-19.3; n=101, weighted),<sup>25</sup> or slightly more than 4 days per week. Estimates based on data from NTBM indicate a lower mean use frequency (2.4 days/week) for current users of Camel Snus, with data from all three surveys providing a mean estimate that is categorized as 'more than weekly' use.

## 4. Tobacco use rate (number of uses per day on days used)

RAIS's NTBM served as the primary source for survey data on tobacco use rate among adult current users of Camel Snus, non-Camel snus and other types of smokeless tobacco; specifically, P30D users of these smokeless tobacco product types (and brands, as applicable) were assessed in terms of use rate, or number of uses per day on days used during the past week. Confirmatory analyses were conducted based on data from RJRT's Brand Tracker and NIH/FDA's PATH Study; for these sources, current users of these product types (and brands, as applicable) were identified based on P7D use and P30D use, respectively.

### 4.1. National Tobacco Behavior Monitor (RAIS)

NTBM provides adult respondent data on tobacco use rate (uses per day on days used during the past week) among current users across a number of smokeless tobacco types, which can be further stratified by usual brand and style. The predominant use behavior pattern among smokeless tobacco users is dual/poly use of other combustible and/or non-combustible tobacco products; hence, these analyses include all P30D users of snus (Camel Snus as usual brand, "Camel Snus"; and, usual brand not Camel Snus, "non-Camel Snus"), loose moist snuff, portioned moist snuff and loose leaf chew tobacco. These data are intended to assess how different smokeless tobacco product types are currently used by consumers.

[Table 9](#) (and [Figure 6](#), for select comparisons) present tobacco use rates among P30D users of Camel Snus compared to users of non-Camel snus and other smokeless tobacco products (by type).<sup>26</sup> For Camel Snus, non-Camel snus, portioned moist snuff and loose leaf chew, the majority of current users report a product use rate of 1-2 uses per day (55.9-59.6%); the exception being loose moist snuff users, who are less likely to report a low use rate (40.5%, 1-2 uses/day) and more likely to report 7 or more uses per day (20.6%).

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<sup>25</sup> Descriptive analyses were conducted using the *ADULT PATH Public Use Data Files*. Prevalence estimates among past-30-day snus users [(R01R\_A\_P30D\_SNU (DERIVED): *Wave 1 Adult Past 30-day Snus User; "Has ever used snus and has used at least once in the past 30 days"*)] were generated according to PATH-derived variables in the adult file. Estimates for use frequency and use rate were calculated from derived variables, based on [(R01\_AS1021SU: *Average number of snus pouches used now each day*; R01\_AS1022SU: *Number of days used snus pouches in past 30 days*; and, R01\_AS1023SU: *Average number of snus pouches used per day on days used in past 30 days*)]. From these original PATH variables, two derived variables were defined to capture use frequency (snus\_per\_day\_30dys) and use rate (days\_per\_month\_30dys\_SNU), in aggregate for everyday and someday 30 day users. The SAS coding employed for creating these derived variables is described in [Appendix B](#). Analytic results are provided for past-30-day snus users, stratified based on Camel as usual brand [(R01\_AS1048SU\_BRAND=1033; *Brand of snus pouch usually / last used = CAMEL*)]. Weighted estimates were calculated after applying the balanced repeated replication (BRR) method in SAS 9.3, as advised by the Westat investigators (August 3-5 2016, ICPSR at the University of Michigan, "*Secondary Analysis of Data from the Population Assessment of Tobacco & Health (PATH)*") using SAS 9.3.

<sup>26</sup> Tobacco use rate is derived from responses to Question C2, "[DISPLAY ITEMS USED IN PAST 7 DAYS IN QC1] On the days that you use the following product(s), about how much on average do you use per day?" Mean uses per day on days used during the past week (Camel Snus users, by style) is derived by filtering on [US\_1=1], and classifying by Question US2, "And what flavor of snus do you use most often?" [1=Frost, 2=Mint, 8=Mellow, 9=Robust, 0=Winterchill, 23=Frost Large]. Tobacco use rate responses are cross-tabulated with Question 1A (tobacco products used during past 30 days, as previously specified).

Estimated mean rates of use are consistent (2.9-3.4 uses/day) among P30D users of Camel Snus, non-Camel snus, portioned moist snuff and loose leaf chew tobacco, with mean rate of use among loose moist snuff users being comparatively higher (4.5 uses/day). Thus, rate of use among current Camel Snus users is generally consistent with non-Camel snus users, as well as other smokeless tobacco users (by type). Further stratification of P30D users of Camel Snus by style provides comparable estimates of mean use rates, with a somewhat narrow range of 2.6 to 3.9 uses per day on days used (*Table 9A*).

**Table 9: Tobacco Use Rate (uses per day on days used) (NTBM; 1Q 2013-1Q 2016)**

<b>Tobacco Product Type<sup>†</sup></b>	<b>Camel Snus</b>	<b>Non Camel Snus</b>	<b>Loose Moist Snuff</b>	<b>Portioned Moist Snuff</b>	<b>Loose Leaf Chew</b>
<i>Weighted count<sup>^</sup></i>	425	789	2284	1055	944
<b>Tobacco Use Rate (uses/day)</b>					
<b>1 use/d (%)<sup>1</sup></b>	<b>35.2</b>	<b>37.2</b>	<b>22.2</b>	<b>36.7</b>	<b>36.7</b>
<i>weighted count<sup>2</sup></i>	150	293	507	387	347
<b>2 uses/d (%)</b>	<b>22.1</b>	<b>21.1</b>	<b>18.3</b>	<b>19.2</b>	<b>22.9</b>
<i>weighted count</i>	94	166	417	202	216
<b>3-4 uses/d (%)</b>	<b>21.1</b>	<b>20.8</b>	<b>21.3</b>	<b>18.7</b>	<b>19.5</b>
<i>weighted count</i>	90	164	486	198	184
<b>5-6 uses/d (%)</b>	<b>11.3</b>	<b>13.9</b>	<b>17.7</b>	<b>12.7</b>	<b>11.0</b>
<i>weighted count</i>	48	110	404	134	104
<b>7+ uses/d (%)</b>	<b>10.3</b>	<b>7.0</b>	<b>20.6</b>	<b>12.7</b>	<b>9.9</b>
<i>weighted count</i>	44	55	470	134	94
<b>Mean, uses/day</b>	<b>3.2</b>	<b>2.9</b>	<b>4.5</b>	<b>3.4</b>	<b>3.1</b>
<b>95% CI</b>	<b>(2.9, 3.4)</b>	<b>(2.8, 3.1)</b>	<b>(4.4, 4.7)</b>	<b>(3.2, 3.6)</b>	<b>(2.9, 3.2)</b>

**Table 9A: Tobacco Use Rate (uses per day on days used, by style) (NTBM; 1Q 2013-1Q 2016)**

<b>Camel Snus Style<sup>†</sup></b>	<b>Frost</b>	<b>Mint</b>	<b>Mellow</b>	<b>Robust</b>	<b>Winterchill</b>	<b>Frost large</b>
<i>Weighted count<sup>^</sup></i>	185	92	65	26	36	20
<b>Mean, uses/day</b>	<b>3.2</b>	<b>2.6</b>	<b>3.5</b>	<b>3.1</b>	<b>3.9</b>	<b>3.2</b>
<b>95% CI</b>	<b>(2.8, 3.6)</b>	<b>(2.2, 3.1)</b>	<b>(2.8, 4.2)</b>	<b>(2.5, 3.6)</b>	<b>(2.9, 4.9)</b>	<b>(2.0, 4.4)</b>

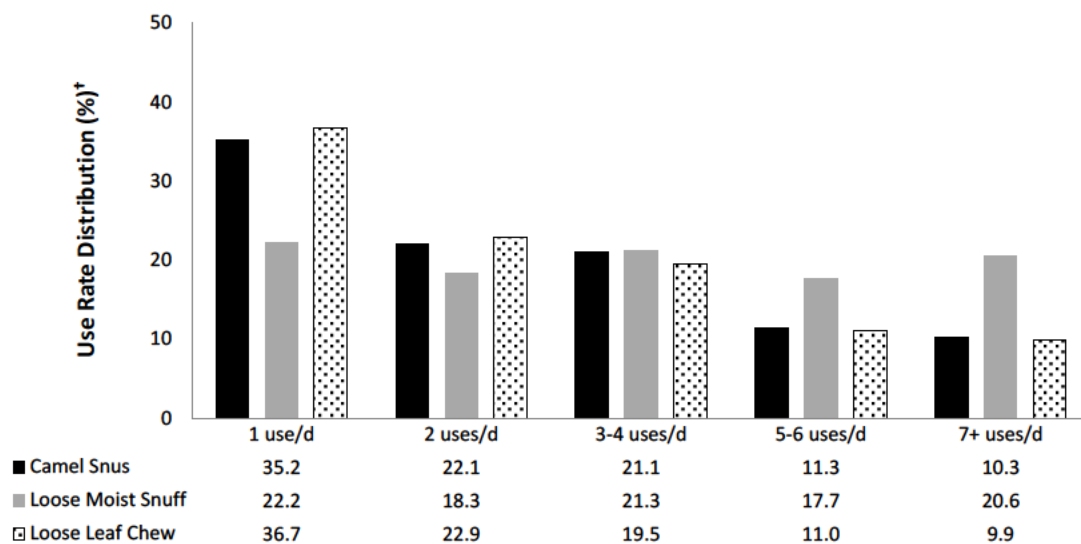
<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days; and, Camel Snus, used most often and considered as usual brand.

<sup>^</sup> Weighted counts reduced due to non-response on question for product use rate; estimates for percentages within categories and means based on available data (exclude non-responses).

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals (95% CI).

<sup>2</sup> Italicized values represent weighted counts.

**Figure 6: Tobacco Use Rate among Past-30-day Smokeless Tobacco Users (NTBM)**



† Respondents reporting use of tobacco product on one or more days during past 30 days.

#### 4.2. Brand Tracker (RJRT)

Brand Tracker provides adult respondent data on tobacco use rates among current users – for these analyses, P7D users - across a number of smokeless tobacco product types. The current analyses include P7D users of snus and moist snuff (combines loose and portioned products).<sup>27</sup>

Data from Brand Tracker indicate that, similar to estimates provided from NTBM, the vast majority of P7D users of snus report a product use rate of 1-5 uses per day (84.7%); 12.2% and 2.6% of users report rates of 6-10 and 11 or more uses per day, respectively ([Table 10](#)).<sup>28</sup> Product use rates were comparatively higher among P7D users of moist snuff, with 68.2%, 24.1% and 7.2% reporting use rates of 1-5, 6-10 and 11 or more uses per day, respectively. Higher rates of use among current moist snuff users were also reflected in higher mean estimates (5.1 uses/day, versus 3.4 uses/day for current snus users).

<sup>27</sup> For Brand Tracker, 'snus' examined as tobacco product type, based on incomplete data for usual brand among P7D users; 'loose moist snuff' and 'portioned moist snuff' combined into single category, 'moist snuff', due to questionnaire constraints; and, data for rate of use among 'loose leaf chew' users not collected.

<sup>28</sup> Derived from the combination of Questions Q6A, "Do you use any of the following tobacco products?" [14=Moist snuff/snus]; Q7A, "How many days out of the past 7 days have you used {moist snuff/snus}? (0-7)"; and, Q7B, "On the days you use {moist snuff/snus}, how many {pinches/pouches} on average do you use per day?"

**Table 10: Tobacco Use Rate (uses per day on days used) (Brand Tracker; 1Q 2013-1Q 2016)**

Tobacco Product Type <sup>†</sup>	Snus <sup>††</sup>	Moist Snuff
<i>Weighted count</i> <sup>^</sup>	4852	8608
<b>Tobacco Use Rate (uses/day)</b>		
<b>1-5 uses/d (%)</b> <sup>1</sup>	<b>84.7</b>	<b>68.2</b>
<i>weighted count</i> <sup>2</sup>	4112	5870
<b>6-10 uses/d (%)</b>	<b>12.2</b>	<b>24.1</b>
<i>weighted count</i>	594	2075
<b>11-15 uses/d (%)</b>	<b>1.8</b>	<b>4.3</b>
<i>weighted count</i>	87	373
<b>16+ uses/d (%)</b>	<b>0.8</b>	<b>2.9</b>
<i>weighted count</i>	38	250
<b>Mean, uses/day</b>	<b>3.4</b>	<b>5.1</b>
<b>95% CI</b>	<b>(3.3, 3.5)</b>	<b>(5.0, 5.2)</b>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 7 days.

<sup>††</sup> For Brand Tracker, all snus users are combined, based on limitations associated with assigning usual brand; and, 'loose moist snuff' and 'portioned' moist snuff are similarly combined into single category, 'moist snuff', based on questionnaire structure.

<sup>^</sup> Weighted counts reduced due to non-response on question for product use rate; estimates for percentages within categories and means based on available data (exclude non-responses).

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals (95% CI).

<sup>2</sup> Italicized values represent weighted counts.

#### 4.3. PATH Study (NIH/FDA)

Publicly available data from NIH/FDA's PATH Study provide a relatively small sample of P30D adult Camel Snus users (n=109, weighted); nonetheless, this sample may be sufficient to assess mean rate of use among current Camel Snus users, or mean number of uses per day on days used during the past month.<sup>29</sup> PATH data indicate that current Camel Snus users report a mean rate of 3.4 uses per day (95% CI: 2.4-4.4; n=101, weighted), consistent with the estimate provided by RAIS's NTBM (3.2 uses/day).

<sup>29</sup> Descriptive analyses were conducted using the *ADULT PATH Public Use Data Files*. Prevalence estimates among past-30-day snus users [(R01R\_A\_P30D\_SNUS (DERIVED): *Wave 1 Adult Past 30-day Snus User; "Has ever used snus and has used at least once in the past 30 days"*)] were generated according to PATH-derived variables in the adult file. Estimates for use frequency and use rate were calculated from derived variables, based on [(R01\_AS1021SU: *Average number of snus pouches used now each day*; R01\_AS1022SU: *Number of days used snus pouches in past 30 days*; and, R01\_AS1023SU: *Average number of snus pouches used per day on days used in past 30 days*)]. From these original PATH variables, two derived variables were defined to capture use frequency (snus\_per\_day\_30dys) and use rate (days\_per\_month\_30dys\_SNUS), in aggregate for everyday and someday 30 day users. The SAS coding employed for creating these derived variables is described in [Appendix B](#). Analytic results are provided for past-30-day snus users, stratified based on Camel as usual brand [(R01\_AS1048SU\_BRAND=1033; *Brand of snus pouch usually / last used = CAMEL*)]. Weighted estimates were calculated after applying the balanced repeated replication (BRR) method in SAS 9.3, as advised by the Westat investigators (August 3-5 2016, ICPSR at the University of Michigan, "Secondary Analysis of Data from the Population Assessment of Tobacco & Health (PATH)") using SAS 9.3.

## 5. Concurrent use of cigarettes and Camel Snus (cigarette use frequency)

RAIS's NTBM served as the primary source for survey data on use behavior patterns among adult current tobacco users; specifically, P30D cigarette users were assessed in terms of cigarette use frequency, or number of days used during the past week, based on P30D use of Camel Snus. Confirmatory analyses were conducted based on data from RJRT's Brand Tracker, with current users identified based on P7D use.

### 5.1. National Tobacco Behavior Monitor (RAIS)

NTBM provides adult respondent data on use behavior patterns, or product use across tobacco categories, among current cigarette users, which can be stratified based on concurrent use other tobacco products. The current analyses include P30D exclusive users of cigarettes and P30D users of both cigarettes and Camel Snus (as usual brand). These data are intended to determine how the concurrent use of Camel Snus impacts cigarette use frequency among current cigarette users.

Table 11 presents cigarette use frequencies among P30D cigarette users, comparing respondents who report exclusive use of cigarettes and those who use both cigarettes and Camel Snus.<sup>30</sup> Respondents categorized as exclusive cigarette users report a mean cigarette use frequency of 5.9 (95% CI: 5.87-5.94, days smoked during the past week), with 76.5% of users reporting 'near daily/daily' use (6-7 days/week). Comparatively, respondents categorized as using both cigarettes and Camel Snus report a lower mean cigarette use frequency of 4.8 (95% CI: 4.62-5.04, days smoked during the past week), with a substantially smaller proportion (55.1%) of users reporting 'near daily/daily' use. The proportion of cigarette and Camel Snus users who report 'near weekly/weekly' cigarette use (0-1 days)<sup>31</sup> is more than double the proportion of exclusive cigarette users who report the same use frequency (19.6% versus 8.4%, respectively).

**Table 11: Cigarette Use Frequency among P30D Users (NTBM; 1Q 2013-1Q 2016)**

<b>Tobacco Use Pattern<sup>†</sup></b>	<b>Cigarettes</b>	<b>Cigarettes with Camel SNUS</b>
<i>Weighted count</i>	13455	433
<b>Cigarette Use Frequency (d/wk)</b>		
<b>0-1 d/wk (%)<sup>1</sup></b>	<b>8.4</b>	<b>19.6</b>
<i>weighted count<sup>2</sup></i>	1134	85
<b>2-5 d/wk (%)</b>	<b>15.1</b>	<b>25.3</b>
<i>weighted count</i>	2030	109
<b>6-7 d/wk (%)</b>	<b>76.5</b>	<b>55.1</b>
<i>weighted count</i>	10292	239
<b>Mean, days/week</b>	<b>5.9</b>	<b>4.8</b>
<b>95% CI</b>	<b>(5.9, 5.9)</b>	<b>(4.6, 5.0)</b>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days; and, Camel Snus, used most often and considered as usual brand.

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals (95% CI).

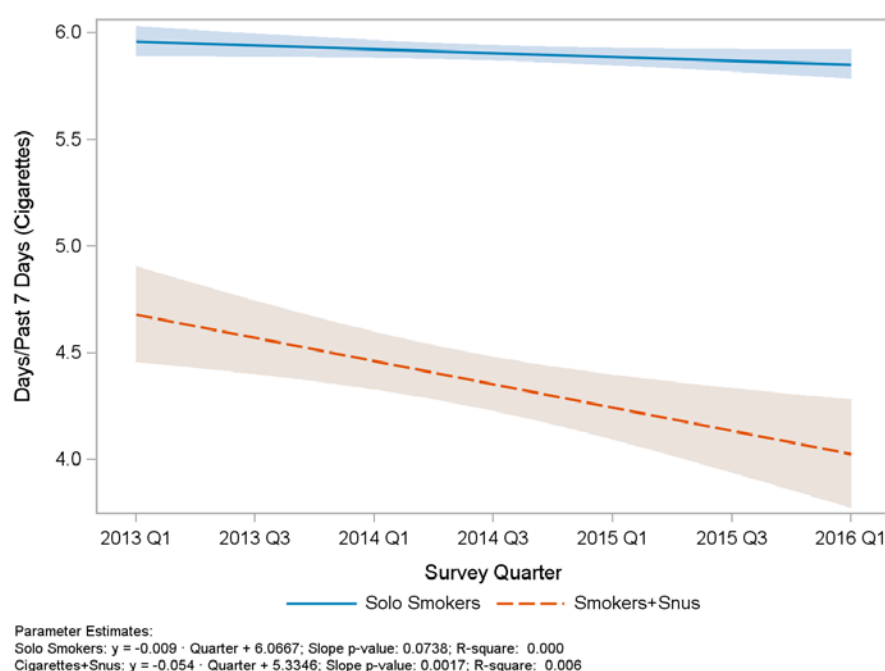
<sup>2</sup> Italicized values represent weighted counts.

<sup>30</sup> P30D exclusive cigarette users and P30D users of both cigarettes and Camel Snus identified as previously specified, based on Questions 1A and US1 [(q1a\_1=1) and (q1a\_14=1 AND US\_1=1), respectively]. Responses to tobacco product use are cross-tabulated with Question C1, "[DISPLAY EACH PRODUCT THAT = 1+ IN Q1B] How many days in the past week did you use the following? If you're not sure, your best estimate is fine. Enter "0" if none."

<sup>31</sup> NTBM respondent data includes past-30-day users of cigarettes; hence, the lowest use frequency category includes range of '0-1 days used during the past week', as not all P30D users reported use during the past week.

Figure 7 presents findings from a weighted linear regression analysis,<sup>32</sup> comparing cigarette use frequencies among respondents who report exclusive cigarette use and those who use both cigarettes and Camel Snus. Frequency of use among exclusive cigarette users has remained fairly constant during the period of January 2013 to March 2016, while use frequency among those who use both cigarettes and Camel Snus has decreased slightly, with a significant downward trend in number of days smoked during the past week.

**Figure 7: Trends for Cigarette Use Frequency among P30D Cigarette Users**



## 5.2. Brand Tracker (RJRT)

Brand Tracker also provides adult respondent data on use behavior patterns (product use across tobacco categories) among current cigarette users – for these analyses, P7D users – that can be stratified based on concurrent use of other tobacco products. The current analyses include P7D exclusive users of cigarettes and P7D users of both cigarettes and Camel Snus (as usual brand).<sup>33</sup> These data are intended to determine how the concurrent use of Camel Snus impacts cigarette use frequency among current cigarette users.

<sup>32</sup> Cigarette use frequency among exclusive cigarette users and among those using both cigarettes and Camel Snus, with the dependent variable being the response from Question C1, “[DISPLAY EACH PRODUCT THAT = 1+ IN Q1B] How many days in the past week did you use the following? If you’re not sure, your best estimate is fine. Enter “0” if none.”; and, the independent variable being the variable, QTR (not collected via survey instrument). As with previous analyses, regression is weighted with the derived weight. Shaded regions are the 95% confidence intervals about the regression line.

<sup>33</sup> For Brand Tracker, usual brand is only determined for dual/poly users of tobacco product categories; by design, this set of analyses, which only include Camel Snus users who use another product category (i.e., cigarettes) are not adversely impacted by the exclusion of Camel Snus solo users.

Table 12 presents cigarette use frequencies among P7D users of cigarettes, comparing respondents who report exclusive use of cigarettes and those using both cigarettes and Camel Snus.<sup>34</sup> Respondents categorized as exclusive cigarette users report a mean cigarette use frequency of 6.6 (95% CI: 6.59-6.61, days smoked during the past week), with 89.9% of users reporting ‘near daily/daily’ use (6-7 days/week). Comparatively, respondents categorized as using both cigarettes and Camel Snus report a lower mean cigarette use frequency of 6.0 (95% CI: 5.89-6.15, days smoked during the past week), with a smaller proportion of users reporting ‘near daily/daily’ use (73.8%). The proportion of cigarette and Camel Snus users who report ‘more than weekly’ cigarette use (2-5 days/week) is more than double the proportion of cigarette only users who report the same lower use frequency (22.8% versus 8.3%, respectively).

Estimates provided from this secondary data source confirm findings from RAIS’s NTBM, in particular that current users of both cigarettes and Camel Snus report a lower cigarette use frequency, or number of days smoked during the past week, than exclusive cigarette users.

**Table 12: Cigarette Use Frequency among P7D Users  
(Brand Tracker; 1Q 2013-1Q 2016)**

<b>Tobacco Use Pattern<sup>†</sup></b>	<b>Cigarettes</b>	<b>Cigarettes with Camel SNUS</b>
<i>Weighted count</i>	32743	705
<b>Cigarette Use Frequency (d/wk)</b>		
<b>0-1 d/wk (%)<sup>1</sup></b>	<b>1.7</b>	<b>3.4</b>
<i>weighted count<sup>2</sup></i>	562	24
<b>2-5 d/wk (%)</b>	<b>8.3</b>	<b>22.8</b>
<i>weighted count</i>	2731	161
<b>6-7 d/wk (%)</b>	<b>89.9</b>	<b>73.8</b>
<i>weighted count</i>	29450	520
<b>Mean, days/week</b>	<b>6.6</b>	<b>6.0</b>
<b>95% CI</b>	<b>(6.6, 6.6)</b>	<b>(5.9, 6.2)</b>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 7 days.

<sup>††</sup> For Brand Tracker, usual brand is only determined for dual/poly users of tobacco product categories; by design, this set of analyses, which only include Camel Snus users who use another product category (i.e., cigarettes) are not adversely impacted by the exclusion of exclusive Camel Snus users.

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals.

<sup>2</sup> Italicized values represent weighted counts.

## 6. Concurrent use of cigarettes and Camel Snus (cigarette use rate)

RAIS’s NTBM served as the primary source for survey data on use behavior patterns among adult current tobacco users; specifically, P30D cigarette users were assessed in terms of cigarette use rate, or number of uses per day on days used during the past week, based on P30D use of Camel Snus. Confirmatory analyses were conducted based on data from RJRT’s Brand Tracker, with current users identified based on P7D use.

<sup>34</sup> Derived from the combination of Questions Q6A, “Do you use any of the following tobacco products?” [1=Tobacco cigarettes, 14=Moist snuff/snus]; Q7A, “How many days out of the past 7 days have you smoked cigarettes? (0-7)” and “How many days out of the past 7 days have you used snus? (0-7)”; and, Q80, “You mentioned that you use snus. What one brand of snus do you use most often and consider to be your usual brand? Please select one answer.” [1=Camel].

### 6.1. National Tobacco Behavior Monitor (RAIS)

NTBM provides adult respondent data on use behavior patterns, or product use across tobacco categories, among current cigarette users, which can be stratified based on concurrent use other tobacco products. The current analyses include P30D exclusive users of cigarettes and P30D users of both cigarettes and Camel Snus (as usual brand). These data are intended to determine how the concurrent use of Camel Snus impacts cigarette use rate among current cigarette users.

Table 13 presents cigarette use rates among P30D cigarette users, comparing respondents who report exclusive use of cigarettes and those who use both cigarettes and Camel Snus.<sup>35</sup> Respondents categorized as exclusive cigarette users report a mean use rate of 12.9 (95% CI: 12.7-13.1, cigarettes/day), with 69.5% of users smoking 7 or more cigarettes per day. Comparatively, respondents categorized as using both cigarettes and Camel Snus report a lower mean use rate of 11.8 (95% CI: 10.9-12.8, cigarettes/day), with a smaller proportion of users smoking 7 or more cigarettes per day (59.7%). The proportion of cigarette and Camel Snus users who report smoking 0-2 cigarettes per day<sup>36</sup> is more than double the proportion of exclusive cigarette users who report the same low use rate (24.0% versus 9.0%, respectively).

**Table 13: Cigarette Use Rate among P30D Users**  
(NTBM; 1Q 2013-1Q 2016)

Tobacco Use Pattern <sup>†</sup>	Cigarettes	Cigarettes with Camel SNUS
<i>Weighted count</i>	12744	409
<b>Cigarette Use Rate (cig/d)</b>		
<b>0-2 cig/d (%)</b> <sup>1</sup>	<b>9.0</b>	<b>24.0</b>
<i>weighted count</i> <sup>2</sup>	1149	98
<b>3-4 cig/d (%)</b>	<b>8.6</b>	<b>5.8</b>
<i>weighted count</i>	1090	24
<b>5-6 cig/d (%)</b>	<b>12.9</b>	<b>10.6</b>
<i>weighted count</i>	1644	43
<b>7+ cig/d (%)</b>	<b>69.5</b>	<b>59.7</b>
<i>weighted count</i>	8862	244
<b>Mean, uses/day</b>	<b>12.9</b>	<b>11.8</b>
<b>95% CI</b>	<b>(12.7, 13.1)</b>	<b>(10.9, 12.8)</b>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 30 days; and, Camel Snus, used most often and considered as usual brand.

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals.

<sup>2</sup> Italicized values represent weighted counts.

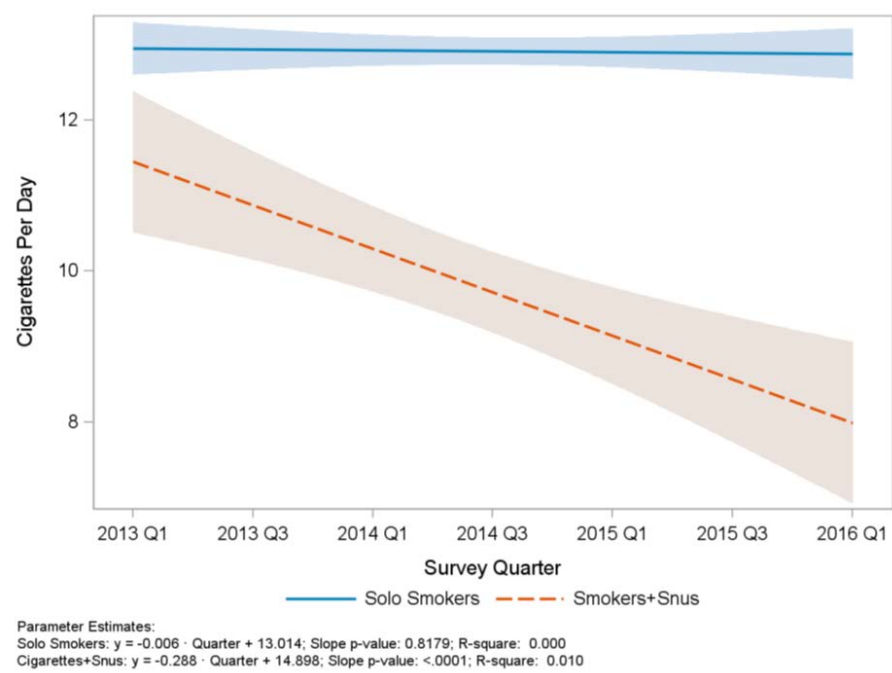
<sup>35</sup> P30D exclusive cigarette users and P30D users of both cigarettes and Camel Snus identified as previously specified, based on Questions 1A and US1 [(q1a\_1=1) and (q1a\_14=1 AND US\_1=1), respectively]. Responses to tobacco product use are cross-tabulated with Question C2, "[DISPLAY ITEMS USED IN PAST 7 DAYS IN QC1] On the days that you use the following product(s), about how much on average do you use per day."

<sup>36</sup> NTBM respondent data includes past-30-day users of cigarettes; hence, the lowest use rate category includes a range of '0-2 cigarettes per day', as not all P30D users reported use during the past week.



Figure 8 presents findings from a weighted linear regression analysis,<sup>37</sup> comparing cigarette use rates among respondents who report exclusive cigarette use and those who use both cigarettes and Camel Snus. Rate of use among exclusive cigarette users has remained fairly constant during the period of January 2013 to March 2016, while use rate among those who use both cigarettes and Camel Snus has decreased, with a significant downward trend in number of cigarettes smoked per day.

**Figure 8: Trends for Cigarette Use Rate among P30D Cigarette Users**



## 6.2. Brand Tracker (RJRT)

Brand Tracker also provides adult respondent data on use behavior patterns (product use across tobacco categories) among current cigarette users – for these analyses, P7D users – that can be stratified based on concurrent use of other tobacco products. The current analyses include P7D exclusive users of cigarettes and P7D users of both cigarettes and Camel Snus (as usual brand).<sup>38</sup> These data are intended to determine how concurrent use of Camel Snus impacts cigarette use rate among current cigarette users.

<sup>37</sup> Cigarette use rate among exclusive cigarette users and among those using both cigarettes and Camel Snus, with the dependent variable being the response from Question C2, “[DISPLAY ITEMS USED IN PAST 7 DAYS IN QC1] On the days that you use the following product(s), about how much on average do you use per day.”; and, the independent variable being the variable, QTR (not collected via survey instrument). As with previous analyses, regression is weighted with the derived weight. Shaded regions are the 95% confidence intervals about the regression line.

<sup>38</sup> For Brand Tracker, usual brand is only determined for dual/poly users of tobacco product categories; by design, this set of analyses, which only include Camel Snus users who use another product category (i.e., cigarettes) are not adversely impacted by the exclusion of Camel Snus solo users.

Table 14 presents cigarette use rates among P7D users of cigarettes, comparing respondents who report exclusive use of cigarettes and those using both cigarettes and Camel Snus.<sup>39</sup> Respondents categorized as exclusive cigarette users report a mean use rate of 13.3 (95% CI: 13.2-13.4, cigarettes/day), with 50.4% of users smoking 1-10 cigarettes per day. Comparatively, respondents categorized as using both cigarettes and Camel Snus report a lower mean use rate of 12.4 (95% CI: 11.7-13.2, cigarettes/day), with a slightly higher proportion of users smoking at this lower rate (55.6%).

Estimates provided from this secondary data source confirm findings from RAIS's NTBM, in particular that current users of both cigarettes and Camel Snus report a lower rate of cigarette use, or number of cigarettes smoked per day on days smoked during the past week, than exclusive cigarette users.

**Table 14: Cigarette Use Rate among P7D Users  
(Brand Tracker; 1Q 2013-1Q 2016)**

<b>Tobacco Use Pattern<sup>†</sup></b>	<b>Cigarettes</b>	<b>Cigarettes with Camel SNUS</b>
<i>Weighted count</i>	32743	705
<b>Cigarette Use Rate (cig/d)</b>		
<b>1-10 cig/d (%)<sup>1</sup></b>	<b>50.4</b>	<b>55.6</b>
<i>weighted count<sup>2</sup></i>	16511	392
<b>11-20 cig/d (%)</b>	<b>39.1</b>	<b>33.5</b>
<i>weighted count</i>	12804	236
<b>21-30 cig/d (%)</b>	<b>7.8</b>	<b>7.9</b>
<i>weighted count</i>	2544	56
<b>31+ cig/d (%)</b>	<b>2.7</b>	<b>3.0</b>
<i>weighted count</i>	885	21
<b>Mean, uses/day</b>	<b>13.3</b>	<b>12.4</b>
<b>95% CI</b>	<b>(13.2, 13.4)</b>	<b>(11.7, 13.2)</b>

<sup>†</sup> Respondents reporting use of tobacco product on one or more days during past 7 days.

<sup>††</sup> For Brand Tracker, usual brand is only determined for dual/poly users of tobacco product categories; by design, this set of analyses, which only include Camel Snus users who use another product category (i.e., cigarettes) are not adversely impacted by the exclusion of exclusive Camel Snus users.

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting), and means with 95% confidence intervals.

<sup>2</sup> Italicized values represent weighted counts.

<sup>39</sup> Derived from the combination of Questions Q6A, "Do you use any of the following tobacco products?" [1=Tobacco cigarettes, 14=Moist snuff/snus]; Q7A, "How many days out of the past 7 days have you smoked cigarettes? (0-7)" and "How many days out of the past 7 days have you used snus? (0-7)"; Q7B, "On the days you smoke cigarettes, how many on average do you smoke per day?" and "On the days you use snus, how many pouches/pinches on average do you use per day?"; and, Q80, "You mentioned that you use snus. What one brand of snus do you use most often and consider to be your usual brand? Please select one answer." [1=Camel].

## **7. Conclusions**

These descriptive analyses, based RAIS's NTBM and the primary data source and confirmed by secondary data sources (RJRT's Brand Tracker and NIH/FDA's PATH), demonstrate that adult current users of Camel Snus are generally similar to users of non-Camel Snus and other types of smokeless tobacco (including the more conventional loose moist snuff and loose leaf chew tobacco) in terms of demographic characteristics, tobacco use patterns (product use across tobacco categories), use frequency (number of days used during the past week) and use rate (number of uses per day on days used during the past week). Moreover, adult current cigarette users who also use Camel Snus report a lower frequency and rate of cigarette use than do exclusive cigarette users. Trend data indicate that cigarette use frequency and rate among exclusive cigarette users have not changed across survey quarters (Q1 2013 to Q1 2016), whereas cigarette use frequency and rate among cigarette users who also use Camel Snus have decreased over time.

# Appendix Tables

Table A1: Demographic Characteristics among All Survey Respondents (NTBM; 1Q 2013-1Q 2016)

Survey Quarter <sup>†</sup>	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	Total
<i>weighted count</i>	5836	5794	5763	5683	7524	7519	7515	7521	8258	8300	8328	8339	8298	94678
<b>Current Age Category (years)</b>														
ages 18-24 (%) <sup>1</sup>	<b>11.9</b>	<b>12.1</b>	<b>12.0</b>	<b>11.7</b>	<b>12.7</b>	<b>13.0</b>	<b>12.9</b>	<b>12.4</b>	<b>12.6</b>	<b>12.6</b>	<b>12.3</b>	<b>12.2</b>	<b>12.1</b>	<b>12.4</b>
<i>weighted count</i> <sup>2</sup>	695	700	694	666	957	976	972	934	1043	1049	1026	1020	1007	11739
ages 25-34 (%)	<b>16.9</b>	<b>17.9</b>	<b>17.0</b>	<b>17.6</b>	<b>17.0</b>	<b>16.7</b>	<b>16.7</b>	<b>17.5</b>	<b>17.5</b>	<b>16.8</b>	<b>17.9</b>	<b>17.2</b>	<b>16.5</b>	<b>17.2</b>
<i>weighted count</i>	989	1034	982	997	1281	1258	1255	1313	1447	1397	1487	1432	1373	16245
ages 35-49 (%)	<b>26.6</b>	<b>26.6</b>	<b>26.5</b>	<b>26.5</b>	<b>25.6</b>	<b>25.9</b>	<b>25.9</b>	<b>25.3</b>	<b>24.9</b>	<b>25.6</b>	<b>24.6</b>	<b>24.5</b>	<b>24.9</b>	<b>25.5</b>
<i>weighted count</i>	1555	1542	1525	1504	1925	1946	1947	1900	2057	2124	2045	2043	2063	24175
ages ≥ 50 (%)	<b>44.5</b>	<b>43.5</b>	<b>44.4</b>	<b>44.3</b>	<b>44.7</b>	<b>44.4</b>	<b>44.5</b>	<b>44.9</b>	<b>44.9</b>	<b>45.0</b>	<b>45.3</b>	<b>46.1</b>	<b>46.5</b>	<b>44.9</b>
<i>weighted count</i>	2597	2518	2562	2516	3361	3338	3342	3374	3711	3731	3770	3844	3855	42519
<b>Gender</b>														
male (%)	<b>49.0</b>	<b>48.5</b>	<b>46.7</b>	<b>47.9</b>	<b>48.7</b>	<b>48.9</b>	<b>47.8</b>	<b>48.4</b>	<b>48.0</b>	<b>48.6</b>	<b>48.0</b>	<b>48.6</b>	<b>48.8</b>	<b>48.3</b>
<i>weighted count</i>	2861	2813	2690	2721	3667	3679	3591	3637	3968	4035	3996	4054	4046	45757
female (%)	<b>51.0</b>	<b>51.5</b>	<b>53.3</b>	<b>52.1</b>	<b>51.3</b>	<b>51.1</b>	<b>52.2</b>	<b>51.6</b>	<b>52.0</b>	<b>51.4</b>	<b>52.0</b>	<b>51.4</b>	<b>51.2</b>	<b>51.7</b>
<i>weighted count</i>	2974	2981	3073	2963	3857	3840	3924	3884	4290	4265	4332	4285	4251	48921
<b>Race/ethnicity</b>														
Caucasian (%)	<b>68.8</b>	<b>69.6</b>	<b>69.3</b>	<b>69.1</b>	<b>67.0</b>	<b>66.7</b>	<b>66.5</b>	<b>66.3</b>	<b>66.1</b>	<b>66.1</b>	<b>66.2</b>	<b>66.7</b>	<b>66.1</b>	<b>67.1</b>
<i>weighted count</i>	4013	4033	3994	3929	5040	5016	4994	4986	5455	5489	5513	5558	5483	63502
African American (%)	<b>11.4</b>	<b>10.8</b>	<b>10.8</b>	<b>11.1</b>	<b>11.1</b>	<b>11.1</b>	<b>10.9</b>	<b>11.4</b>	<b>11.2</b>	<b>11.0</b>	<b>11.0</b>	<b>11.1</b>	<b>11.3</b>	<b>11.1</b>
<i>weighted count</i>	663	624	620	631	835	838	819	854	922	916	918	927	939	10506
Hispanic (%)	<b>13.4</b>	<b>12.9</b>	<b>13.2</b>	<b>13.4</b>	<b>15.0</b>	<b>15.4</b>	<b>15.6</b>	<b>15.4</b>	<b>15.5</b>	<b>16.0</b>	<b>15.8</b>	<b>15.6</b>	<b>16.0</b>	<b>15.0</b>
<i>weighted count</i>	785	745	761	763	1131	1158	1172	1159	1276	1325	1316	1299	1330	14220
other (%)	<b>6.4</b>	<b>6.8</b>	<b>6.7</b>	<b>6.3</b>	<b>6.9</b>	<b>6.7</b>	<b>7.1</b>	<b>6.9</b>	<b>7.3</b>	<b>6.9</b>	<b>7.0</b>	<b>6.6</b>	<b>6.6</b>	<b>6.8</b>
<i>weighted count</i>	374	393	388	360	519	507	530	522	605	570	581	554	545	6450
<b>Educational Attainment</b>														
some high school or less (%)	<b>8.0</b>	<b>7.4</b>	<b>7.1</b>	<b>7.1</b>	<b>10.2</b>	<b>9.4</b>	<b>9.1</b>	<b>10.8</b>	<b>10.5</b>	<b>10.4</b>	<b>9.5</b>	<b>10.7</b>	<b>10.9</b>	<b>9.5</b>
<i>weighted count</i>	466	427	410	402	767	708	686	812	863	867	793	890	903	8995
high school graduate (%)	<b>31.4</b>	<b>31.1</b>	<b>31.3</b>	<b>31.2</b>	<b>29.6</b>	<b>29.7</b>	<b>29.9</b>	<b>29.9</b>	<b>29.7</b>	<b>29.9</b>	<b>29.9</b>	<b>29.9</b>	<b>30.2</b>	<b>30.2</b>
<i>weighted count</i>	1834	1799	1804	1772	2226	2235	2245	2246	2454	2484	2487	2495	2509	28590
some college or technical school (%)	<b>30.5</b>	<b>30.9</b>	<b>31.0</b>	<b>31.0</b>	<b>29.9</b>	<b>30.3</b>	<b>30.5</b>	<b>29.6</b>	<b>29.7</b>	<b>29.4</b>	<b>29.9</b>	<b>29.7</b>	<b>29.0</b>	<b>30.0</b>
<i>weighted count</i>	1778	1790	1785	1761	2249	2276	2294	2223	2450	2437	2487	2476	2407	28414
college graduate or more (%)	<b>30.1</b>	<b>30.7</b>	<b>30.6</b>	<b>30.8</b>	<b>30.3</b>	<b>30.6</b>	<b>30.5</b>	<b>29.8</b>	<b>30.2</b>	<b>30.3</b>	<b>30.7</b>	<b>29.7</b>	<b>29.9</b>	<b>30.3</b>
<i>weighted count</i>	1757	1777	1764	1748	2282	2301	2289	2240	2491	2511	2561	2478	2480	28679

<sup>1</sup> Bolded values in table represent percentages within categories (some columns may not add to 100% due to rounding/weighting).

<sup>2</sup> Italicized values represent weighted counts.

# Appendix A – National Tobacco Behavior Monitor Methodological Report



# **National Tobacco Behavior Monitor**

## **Methodological Report**

October 2016

Prepared for:  
**RAI Services Company**

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# National Tobacco Behavior Monitor Methodological Report

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## 1. INTRODUCTION

### 1.1. Overview

RAI Services Company (RAIS), working in conjunction with the research firm GfK Custom Research (GfK), has developed and implemented a post-market surveillance instrument, the National Tobacco Behavior Monitor (NTBM), to support regulatory submissions for in-market and new-to-market tobacco products. The NTBM is a repeated cross-sectional survey, designed to collect information on: (1) adult tobacco (and nicotine) product users and non-users, across various product categories; and, (2) adult product use behaviors by tobacco product category and brand/style, specific to initiation, quitting and recidivism. In conjunction with other research studies needed to support product submissions, data collected from the NTBM allow RAIS to empirically address the population health standards specific to the risks and benefits of tobacco product and brand/style use among the population as a whole. This report describes the methodological processes related to the development, implementation and execution of the NTBM.

### 1.2. Approach

In its present form, the NTBM represents an in-depth post-market surveillance instrument that collects empirical data from tobacco (and nicotine) product users and non-users, as well as product use behaviors specific to initiation, quitting and recidivism (by tobacco product category and brand/style). (b) (4)

(b) (4)

### 1.3. Constructs of Interest

The NTBM is designed to collect information according to the following primary constructs of interest:

- Prevalence of tobacco product use
- Tobacco use behaviors of initiation, quitting and recidivism
- Tobacco product use and corresponding behaviors according to category and brand/style

The NTBM also collects information on respondent/household demographics, used to inform sample weighting; individual demographic variables include:

- Gender
- Education
- Race/ethnicity
- Current age

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Appendix A(

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## 2. OVERVIEW OF SAMPLE DESIGN

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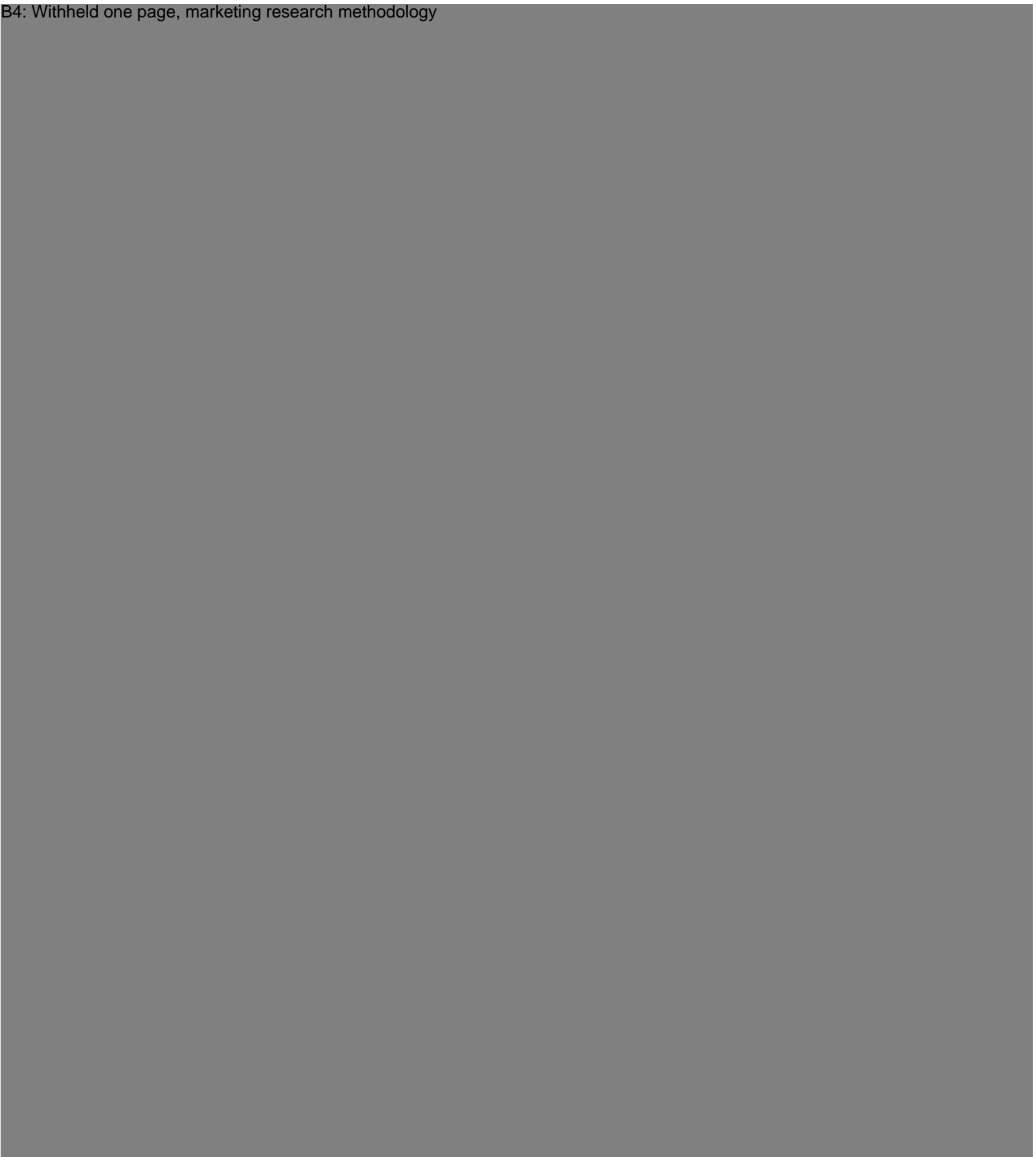
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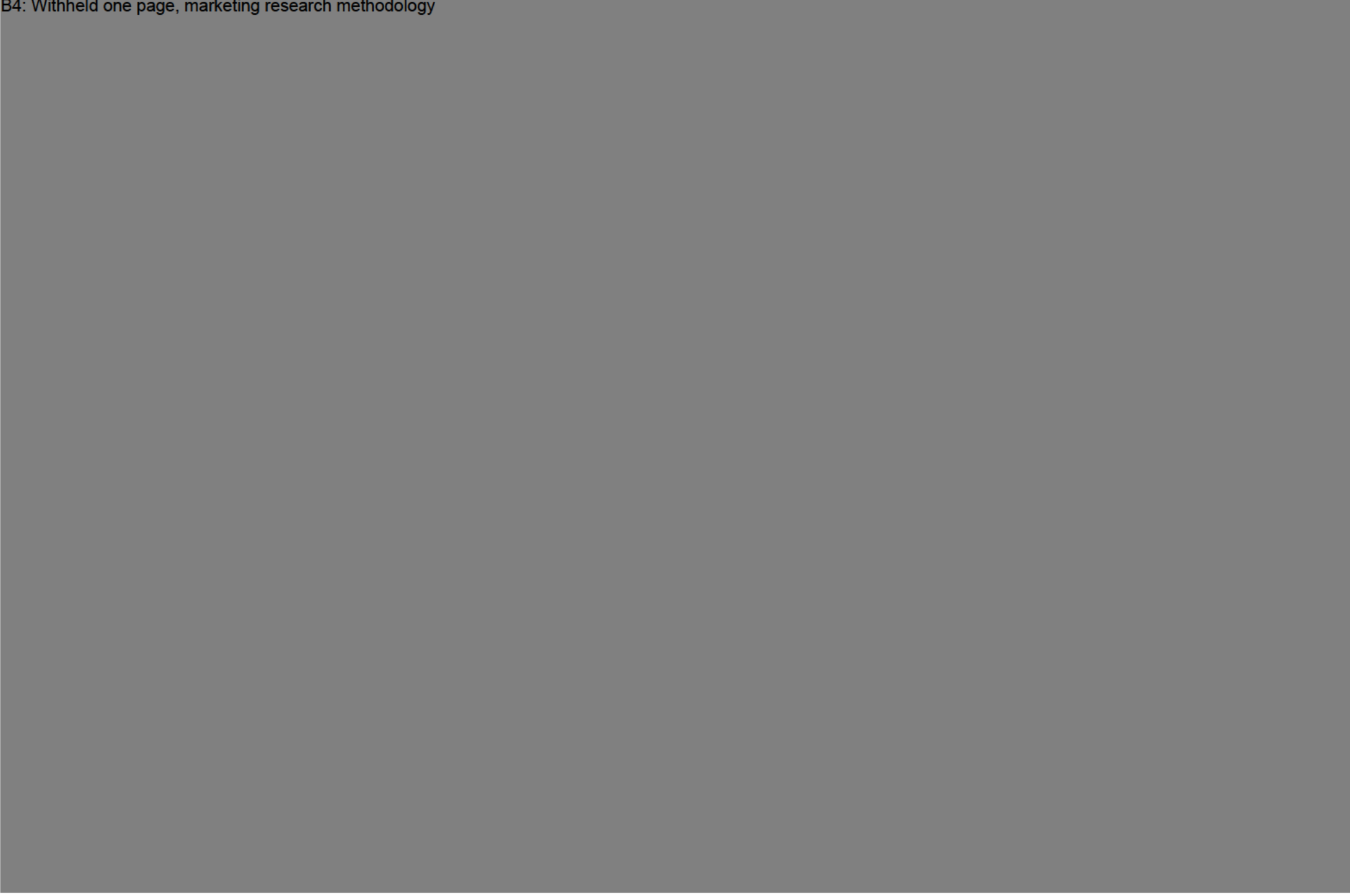
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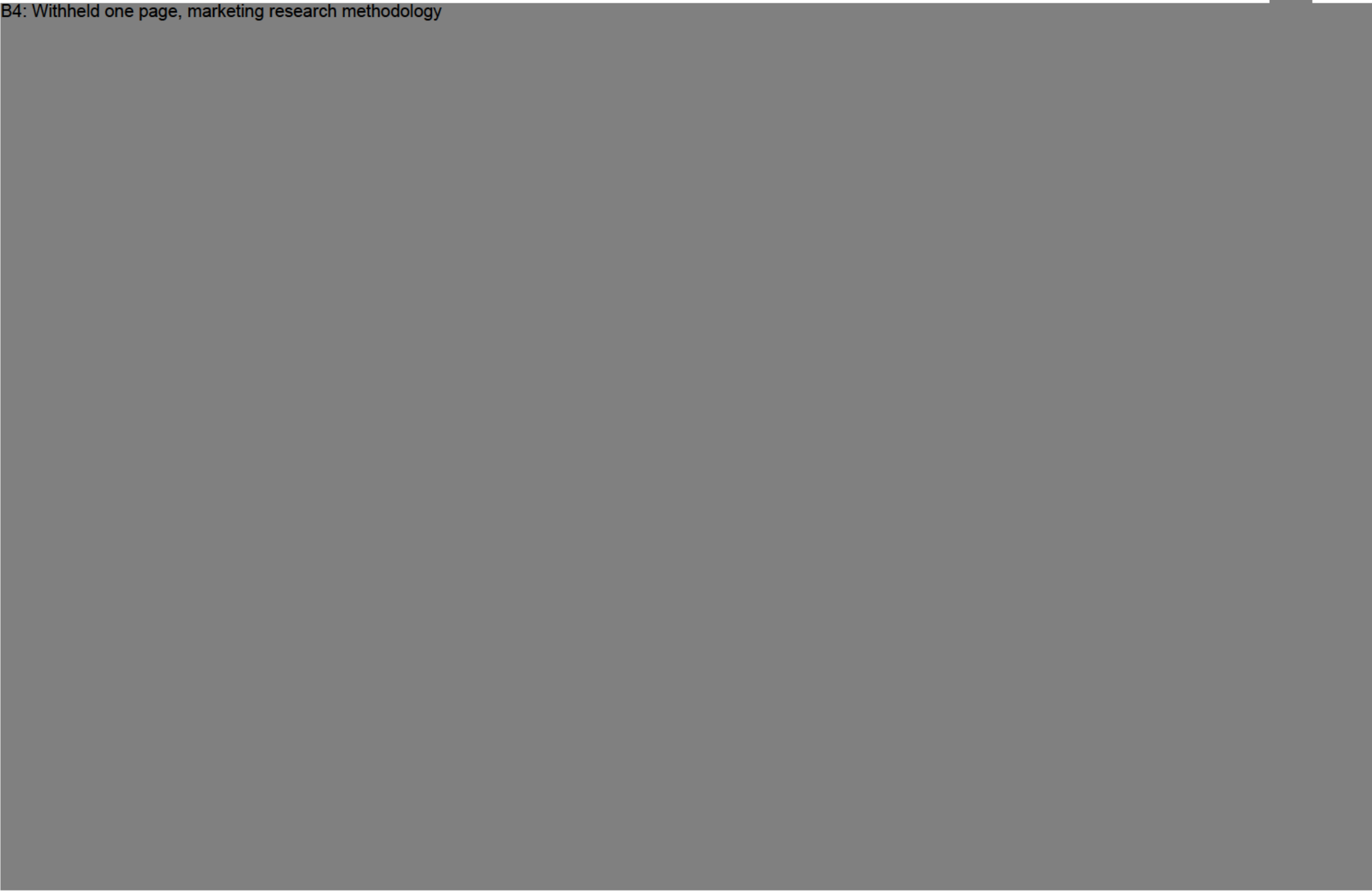
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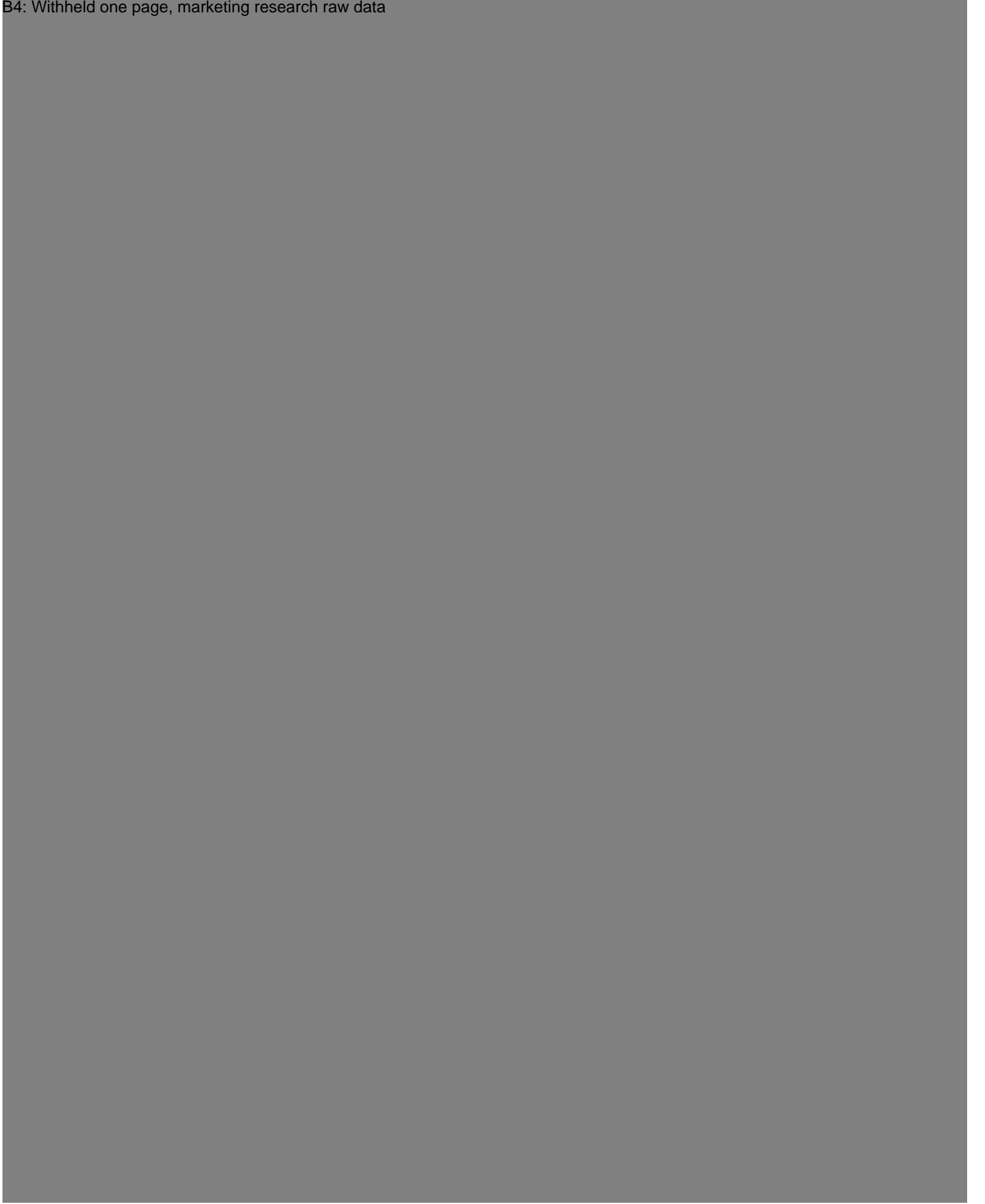
















## REFERENCES

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# Appendix B – Consumer Brand Tracker Methodological Report

# Consumer Brand Tracker Methodological Report

## 1. OVERVIEW

RJRT began tracking population tobacco use in 1979 to measure the market impact and guide marketing efforts of RJRT products among the U.S. population of legal age tobacco product consumers.

The (b) (4) Tracker Program is an (b) (4) survey effort that collects information (b) (4) with the following objectives:

(b) (4)

Guided by these objectives, the Tracker system measures:

(b) (4)

This report describes the methodological processes related to the development of this survey effort and the ongoing tracking of tobacco purchasing and behavior with corresponding specific product use as it is captured in this survey.

### **1.1. PURPOSE AND DOMAINS OF INTEREST**

The purpose of the Tobacco Brand Tracker is to continuously monitor adult tobacco consumer behavior to guide recommendations to RAIS for individual brand marketing plans as well as the overall RAIS strategic marketing direction. Quantitative data provided by the Tracker are defined according to the following survey domains:

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