Boston Behavioral Risk Factor Surveillance System (BRFSS)
2019 Methodology Report

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### Table of Contents

**I. INTRODUCTION**  
3

**II. SAMPLE DESIGN**  
3
1. LANDLINE SAMPLE  
1.1 SCREENING  
4
2. CELL PHONE SAMPLE  
2.1 SCREENING  
7

**III. QUESTIONNAIRE CONTENT**  
7

**IV. DATA COLLECTION PROTOCOL**  
8
1. INTERVIEWING PROTOCOL  
8
2. CONTACTING RESPONDENTS  
8
3. CELL PHONE CALLING PROTOCOLS  
9
4. IMPACT OF COVID-19 PANDEMIC ON DATA COLLECTION  
9

**V. INTERVIEWER TRAINING**  
10

**VI. QUALITY ASSURANCE PROTOCOL AND INTERVIEWER MONITORING**  
10
1. QUALITY CONTROL PROCEDURES DURING SURVEY SETUP  
10
2. INTERVIEWER MONITORING  
11
3. CLIENT REMOTE MONITORING  
11

**VII. DATA EDITING AND PROCESSING PROCEDURES**  
12

**VIII. WEIGHTING**  
12
1. OVERVIEW OF WEIGHTS  
12
1.1 CALCULATING CELL AND LANDLINE DESIGN WEIGHTS:  
12
1.1.1 SELECTION OF THE TELEPHONE NUMBER.  
12
1.1.2 SELECTION OF HOUSEHOLD MEMBER.  
14
1.1.3 MULTIPLE TELEPHONE LINES  
14
1.2 COMBINING THE CELL PHONE AND LANDLINE SAMPLES:  
14
1.3 POPULATION CALIBRATION  
15
1.4 WEIGHT TRIMMING  
15
1.5 IMPUTATION  
16

**IX. DATA QUALITY INDICATORS**  
16

**X. RESPONSE RATE FORMULAS**  
16

**XI. APPENDIX A: SURVEY RESEARCH QUALITY CONTROL FORM**  
21

**XII. APPENDIX B: QUESTIONNAIRE**  
22

**XIII. APPENDIX C: SAS OUTPUT FOR CALCULATING WEIGHTS**  
71
I. INTRODUCTION

This report describes survey implementation for the 2019 Boston Behavioral Risk Factor Surveillance System data collection (Boston BRFSS), conducted on behalf of the Boston Public Health Commission (BPHC). The Behavioral Risk Factor Surveillance System (BRFSS) is the largest health-risk behavior database in the world and provides the only nationwide health-risk data in the country. This annual survey, sponsored by the U.S. Centers for Disease Control and Prevention (CDC), is carried out independently by all 50 United States and four territories.

The BRFSS surveys measure the prevalence of specific risk behaviors as well as knowledge of both health risks and benefits. They provide valid national and state-level statistics about important health behaviors, such as tobacco use, the consumption of alcohol, immunization, and cancer screening. The BRFSS also measures public knowledge about the benefits of behaviors such as regular exercise and eating healthy foods. The results of these surveys are used to plan, implement, and evaluate health programs, as well as to better identify high-risk segments of the population for targeted education, outreach, and other types of health promotion and disease-prevention programs.

The Boston BRFSS data focuses on the health of residents in Boston, Massachusetts. The survey focuses on chronic disease prevention efforts within a specific geographical area and on issues such as diabetes, obesity and asthma. The survey also focuses on risk factors that cause these chronic diseases: physical inactivity, poor nutrition and tobacco use.

The BRFSS methodology was designed by the CDC to assure standardization among states that conduct the survey. The Boston BRFSS data collection included many of the BRFSS 2019 core questions, select optional modules, and questions particular to Boston. These data provide city-level information about the prevalence of specific risk behaviors as well as knowledge of both health risks and benefits.

The Boston BRFSS was implemented from March, 2019 through May 2020. Data collection was conducted via telephone surveys with randomly selected adults in randomly selected, telephone-equipped Boston, Massachusetts households. In addition, a sample of cell phone adults residing in Boston was surveyed. The BPHC provided a questionnaire in January of 2019, which was discussed and finalized in March. Once a final English questionnaire was determined, the questionnaire was assembled in Spanish which included using the translation from repeat questions and translating any new questions. The questionnaire was then programmed in English and Spanish. The data collection effort began on May 2, 2019.

II. SAMPLE DESIGN

The target population for the 2019 Boston BRFSS was adults living in households located in the City of Boston. To reach the target population, an overlapping dual frame landline and cellular random digit dial (RDD) sample design was implemented. The dual-frame covers households with at least one landline telephone or at least one cell phone. Adults living in phoneless households, estimated to be about two percent for Boston, are not covered by the dual-frame sample. In total, 751 interviews were completed in the landline sample and 2,250 interviews were completed in the cellular sample.
1. LANDLINE SAMPLE

The landline sample was a list-assisted disproportionally stratified sample. Boston block groups with 10% or more Asian population were further stratified as high Asian and block groups with less than 10% were stratified as low Asian. The list-assisted landline RDD frame was defined as the set of telephone exchanges associated with the high Asian strata or the low Asian strata.

After identifying the telephone exchanges for the two strata, all possible telephone numbers are then divided into blocks (or banks) of 100 numbers. As per the BRFSS protocol, zero-blocks, or 100 blocks without any residential assignments, are excluded from the sampling frame. The remaining 100-blocks, those with at least one residential assignment (or 1+ blocks), comprise the sampling frame. All possible telephone numbers, both listed and unlisted, in 1+ blocks are eligible for selection through RDD with equal probability. Telephone numbers in the high Asian strata were proportionately sampled at a 2:1 ratio relative to numbers in the low Asian stratum.

All possible telephone numbers in the frame were then stratified according to the BRFSS disproportionate stratified sample design (DSS):

- High density—listed telephone numbers in 1+ blocks; and,
- Medium density—unlisted telephone numbers in 1+ blocks.

The two strata are sampled to obtain a probability sample of all households with landline telephones. Numbers in the high density stratum are sampled at a proportionately higher rate than the numbers in the medium density stratum, a 1.5:1 ratio. The disproportionate sampling is accounted for in the weighting (see the description of weighting in section VIII. Weighting below). The landline sample for the Boston BRFSS was generated by ICF using Marketing Systems Group (MSG) Genesys software.

1.1 SCREENING

The Boston BRFSS landline phone survey had the following eligibility requirements:

- An adult aged 18 or older,
- Resident of Boston as defined by place of residence and zip code, and,
- Resided in a private residence.

2. CELL PHONE SAMPLE

The cell phone sample was based on telephone exchanges that have their rate centers (the midpoint of the rate area) in the vicinity of the Boston area. The location of the rate center is a rough indicator for the location of survey respondents. The rate centers for the 2019 survey were based on those used for the 2017 survey. We identified all telephone exchanges assigned to these rate centers based on the North American Numbering Plan Administration’s Central Office assignment files.

We then stratified the rate centers into high density and medium density based on whether the rate center was inside or outside the Boston city limits (the Brookline rate center was included as in Boston). Within the density strata, we further stratified based on the area code (617, 857, or 781/339.) Refer to Figure 1 for the stratification. All cell phone numbers in active cellular
dedicated 1000-blocks (according to Telcordia®) are eligible for selection. Cell phone numbers in the high density stratum are sampled at a proportionally higher rate than those in the medium density stratum. The disproportionate sampling is accounted for in the weighting.

A final cell phone stratum was the out-of-area numbers. These were the cell phone numbers that had billing zip code in Boston, but did not originate from a Boston area rate center. This sample was selected from Dynata’s SmartCell.¹

We selected an oversample of cell phone numbers with a billing address located in block groups that have at least 10% Asian population. The cell phone oversample was selected from Dynata’s SmartCell.

---

**FIGURE 1: 2019 BOSTON BRFSS CELL PHONE PHASE 1 STRATIFICATION**

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Frame Size¹</th>
<th>Phase 1 Sample</th>
<th>Zip Code Match rate²</th>
<th>% Matched to Boston Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1: High density:</strong> Boston, Brighton, Brookline, Charlestown, Dorchester, East Boston, Hyde Park, Jamaica Pl, Roxbury, So Boston</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>617</td>
<td>1,135,000</td>
<td>131,510</td>
<td>60%</td>
<td>28%</td>
</tr>
<tr>
<td>857</td>
<td>582,000</td>
<td>63,591</td>
<td>40%</td>
<td>49%</td>
</tr>
<tr>
<td><strong>2: Low Density:</strong> Cambridge, Chelsea, Dedham, Everett, Kingston, Malden, Melrose, Milton, Newton, Quincy, Revere, Saugus, Somerville, Watertown, Weymouth, Winthrop</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>617</td>
<td>596,000</td>
<td>51,592</td>
<td>51%</td>
<td>19%</td>
</tr>
<tr>
<td>857</td>
<td>136,000</td>
<td>8,582</td>
<td>33%</td>
<td>14%</td>
</tr>
<tr>
<td>781/339</td>
<td>270,000</td>
<td>19,431</td>
<td>46%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>3: Out-of-Area Boston number</strong></td>
<td>99,402</td>
<td>4,325</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>4: Asian oversample</strong></td>
<td>94,054</td>
<td>7,456</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Notes: ¹ The frame sizes are based on the available numbers at the time of sample design.

² Due to a sample processing error, the February and March samples were not matched for billing zip code. The entire sample was included in the “unmatched stratum”. These months were not included in calculating the match rates.

Within each strata, we implemented a double sampling for stratification methodology to improve the incidence of locating Boston residents. The stratification was based on matching the cell phone numbers to a database of billing zip codes. The results of the matching identified telephone numbers that matched to a Boston zip code ("match-in"), matched to a non Boston zip code ("match-out"), or did not have a matching record in database ("unmatched"). The two-phase sampling was as follows:

Phase 1. Select a stratified RDD sample of cell phone numbers for each density stratum. Match the sample to determine match status. Within the density strata, substratify the cell numbers as match-in, unmatched, or match-out.

Phase 2. Select a disproportionate sample based on match status by oversampling match-in cases and undersampling unmatched and match-out cases. The match-out cases in the low density stratum were excluded from the sample.

FIGURE 2: 2019 BOSTON BRFSS CELL PHONE PHASE 2 STRATIFICATION

<table>
<thead>
<tr>
<th></th>
<th>Phase 1 Sample</th>
<th>Phase 2 Sample</th>
<th>Geographic eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High density rate centers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>617</td>
<td>Matched Boston zip</td>
<td>18,292</td>
<td>18,292</td>
</tr>
<tr>
<td></td>
<td>Unmatched</td>
<td>66,597</td>
<td>44,493</td>
</tr>
<tr>
<td></td>
<td>Matched to non Boston zip</td>
<td>46,621</td>
<td>18,694</td>
</tr>
<tr>
<td>857</td>
<td>Matched Boston zip</td>
<td>9,849</td>
<td>9,849</td>
</tr>
<tr>
<td></td>
<td>Unmatched</td>
<td>43,325</td>
<td>34,778</td>
</tr>
<tr>
<td></td>
<td>Matched to non Boston zip</td>
<td>10,417</td>
<td>5,241</td>
</tr>
<tr>
<td><strong>Low density rate centers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>617</td>
<td>Matched Boston zip</td>
<td>4,272</td>
<td>4,272</td>
</tr>
<tr>
<td></td>
<td>Unmatched</td>
<td>29,400</td>
<td>14,797</td>
</tr>
<tr>
<td></td>
<td>Matched to non Boston zip</td>
<td>17,920</td>
<td>N/A</td>
</tr>
<tr>
<td>857</td>
<td>Matched Boston zip</td>
<td>332</td>
<td>332</td>
</tr>
<tr>
<td></td>
<td>Unmatched</td>
<td>6,159</td>
<td>3,227</td>
</tr>
<tr>
<td></td>
<td>Matched to non Boston zip</td>
<td>2,091</td>
<td>N/A</td>
</tr>
<tr>
<td>781/339</td>
<td>Matched Boston zip</td>
<td>328</td>
<td>328</td>
</tr>
<tr>
<td></td>
<td>Unmatched</td>
<td>11,614</td>
<td>4,807</td>
</tr>
<tr>
<td></td>
<td>Matched to non Boston zip</td>
<td>7,489</td>
<td>N/A</td>
</tr>
</tbody>
</table>
2.1 SCREENING

The Boston BRFSS cell phone survey had the same eligibility requirements as the landline survey:

- An adult aged 18 or older,
- Resident of Boston as defined by place of residence and zip code, and,
- Resided in a private residence.

III. QUESTIONNAIRE CONTENT

The Boston BRFSS questionnaire was composed of a mixture of BRFSS core and optional questions from the CDC BRFSS questionnaires and BPHC-added questions. The questionnaire was divided into 24 sections.

An introduction and screening section.

- Twenty-four sections including the topics on:
  - Health Status (4 questions)
  - Sleep (1 question)
  - Health Care Access (7 questions)
  - Oral Health (3 questions)
  - Hypertension & Heart Health (1 question)
  - Diabetes (1 question)
  - Sugar Sweetened Beverages (2 questions)
  - Caregiver (1 question)
  - Tobacco Use (4 questions)
  - Demographics (31 questions)
  - Depression/Anxiety (5 questions)
  - Physical Activity (8 questions)
  - Asthma (3 questions)
  - Falls (2 questions)
  - Alcohol & Drug Use (6 questions)
  - Women’s Health (4 questions)
  - Colorectal Cancer Screening (1 question)
  - Food Security (2 questions)
  - Discrimination (4 questions)
  - Social Determinants (5 questions)
  - Disability (3 questions)
  - Adverse Childhood Experiences (4 questions)
  - Physical and Sexual Violence (4 questions)
  - Follow-up (1 question)

- A closing statement.

The questionnaire that was administered to respondents can be found in Appendix B: Questionnaire.
IV. DATA COLLECTION PROTOCOL

A computer-assisted telephone interviewing (CATI) approach was implemented for data collection.

1. INTERVIEWING PROTOCOL

The telephone survey followed all CDC calling protocols, with the exception of the final month of data collection. Please see section IV.4 Impact of COVID-19 Pandemic on Data Collection below for more information. CDC calling protocol includes a maximum of 15 call attempts for some types of calls. For the cell phone calling, the protocol is less defined. ICF calls a maximum of eight times for the cell phone numbers. A final disposition was attained when:

- The respondent completed the interview;
- The telephone number was found to be invalid;
- The record reached the maximum number of required attempts per the CDC protocols distributed among three different day-parts as required (15 for landline and eight for cell phone); or,
- The respondent gave a final refusal.

Experienced, supervised personnel conducted the Boston BRFSS interviews using the VOXCO software package. ICF concentrated calls between 9 a.m. and 9 p.m. Monday through Friday, and between 10 a.m. and 9 p.m. on Saturday and Sunday, E.S.T.

The average interview length was 26.5 minutes.

2. CONTACTING RESPONDENTS

The following protocols were followed when contacting households and potential respondents:

Treatment of No Answers. If a call to a sampled telephone number was not answered, the number was repeatedly called at different times, during daytime and evening hours (9 a.m. to 9 p.m. Monday through Friday; 10 a.m. to 9 p.m. Saturday; 1 p.m. to 9 p.m. Sunday), on different days of the week, in a pattern designed to maximize the likelihood of contact with a minimum number of calls. At least 15 contact attempts, over a minimum five-day period (typically 15 days), were made to reach a sampled number. Once any contact was made at a residence, as many calls as necessary were made to reach the selected adult (within the permitted time schedule). For cell phone, it was eight call attempts.

Rings per Attempt. The telephone rang a minimum of five times on each attempt made on a record.

Busy Lines. Busy lines were called back at least twice at 10-minute intervals. If the line was still busy after the third attempt, the number was assigned a “busy” disposition and called during the next shift.

Respondent Selection. Once a household was contacted, an adult was selected for participation in the study. No interview was conducted if:

- The adult was:
▪ Unavailable during the survey period;
▪ Unable or unwilling to participate; or,
▪ Did not speak English or Spanish well enough to be interviewed.

A randomly sampled number yielded:
▪ A business;
▪ An institution;
▪ Group quarters; or,
▪ Other strictly non-residential space.
▪ The number was an occupant’s second residence and his or her stay was less than 30 days.

Language of Interviewing. Interviewing for the Boston BRFSS was conducted in English and Spanish.

Converting Initial Refusals. Protocol for the Boston BRFSS followed the refusal protocol developed for the CDC BRFSS, which requires two refusals by a selected respondent to terminate the record from calling. Once a household or individual initially refused participation, specially trained conversion interviewers contacted them, at least three days later, to encourage participation in the survey.

3. CELL PHONE CALLING PROTOCOLS
ICF developed and institutes best practices when dialing cell phones. These include:
▪ Hand dialing the number. Due to federal regulations, auto-dialers are not permitted for the conduct of the cell phone sample.
▪ Using a cell phone screener which asks the respondent if they are in a safe place to conduct the interview (i.e. not driving while holding the phone, out to dinner, or socializing in bar, etc.).
▪ Offering to schedule a time to callback later, if they are not in a safe place to conduct the interview.
▪ Offering a toll-free number which the respondent can call to complete the interview with one of ICF’s interviewers.
▪ Asking for a landline number they can be reached at, if they would prefer not to use their cell phone to speak with our interviewers.

These cell phone procedures are necessary to ensure that the respondent is comfortable speaking with us on his/her cell phone and to follow the regulations regarding calling cell phones for research purposes.

4. IMPACT OF COVID-19 PANDEMIC ON DATA COLLECTION
On March 16, 2020, dialing was suspended due to the COVID-19 pandemic. When data collection resumed on May 21, 2020, Boston residents selected for the study were much more receptive to participating. If ICF had followed full CDC dialing protocol on the remaining telephone numbers released for March data collection, the annual targeted completes would have been surpassed. After careful consideration, ICF and BPHC jointly decided to stop data
collection when the annual targets were met. As a result, full dialing protocol was not completed for those records.

V. INTERVIEWER TRAINING

Prior to data collection, interviewers underwent extensive training specific to the Boston BRFSS project. The training, in conjunction with ICF’s quality assurance measures (discussed in the next chapter), assured consistent, high-quality interviewing during data collection.

ICF’s initial training session for the Boston BRFSS survey focused on the following topics:

- Background, Purpose, and Scope of the Boston BRFSS: use of data and importance of conducting high-quality interviews.
- Sample Overview: a review of quotas, how sample was drawn, random sample, representing the entire population, and dialing protocol.
- Response Rates: methods to increase response rates, such as: the use of answering machine messages, privacy manager options, scheduling call-backs, and the survey verification telephone line (IVR).
- Survey Methodology: interview mode, approximate survey length, proxy interviews (not permitted), language of interviewing, definition of a complete, and incentives.
- Survey Protocols: dates of fielding, day-part attempts, respondent selection and eligibility requirements, reselection, and refusal protocols.
- Overview of the Questionnaire: a review of sections, specific questions, questions with special vocabulary, different response categories and types of questions used, and a glossary of terms.
- Telephone Interviewing Techniques: a refresher of interview techniques, addressing refusals, dealing with problem situations, and probing and clarifying.

VI. QUALITY ASSURANCE PROTOCOL AND INTERVIEWER MONITORING

ICF International conducts many quality control activities each month to ensure that the data collected is of the highest quality. In addition to existing quality assurance activities, we have taken the following steps to further improve the quality of the data we collect.

1. QUALITY CONTROL PROCEDURES DURING SURVEY SETUP

ICF programmed the Boston BRFSS questionnaire using a software package that is designed specifically for programming and managing CATI studies.

Upon programming completion, ICF project managers rigorously tested the survey. Testing included:

- Developing scenarios to test all possible paths through the questionnaire;
- Checking frequencies of randomly generated data;
- Verifying frequencies of the data after the first few days of calling;
- Creating an automatic skip-check program (to check live data for errors), written by a staff member other than the CATI programmer, which ran nightly throughout the entire data collection period; and
- Repeating the above tests/quality assurance measures if, at any time, the survey was altered during the fielding process.

To track quality assurance indicators, ICF generated reports that read the survey data file, generating summary statistics on the following:

- Interviewer efficiencies ( completes per hour, on both individual interviewer and project levels);
- All call dispositions; and
- Sample status (number of attempts, percent complete, and refusal rates).

These reports were reviewed by the project manager on a daily basis. This enabled the management team to quickly detect and resolve any problems. Checks were performed on open-ended responses to determine the accuracy of data entry by interviewers.

2. INTERVIEWER MONITORING

Since 2000, each ICF call center has included a dedicated Quality Assurance (QA) department. The QA department consists of highly experienced callers trained to coach others in interviewing technique. The QA department monitors and/or validates at least 10 percent of interviews by unobtrusively tapping into an interviewer’s phone line, and using the CATI system’s monitoring function to observe the interview in progress. Neither the interviewer nor the respondent is aware that the QA staff is monitoring the call. Interviewers are scored on several measures of interview performance designed to reinforce proper interviewer protocol: introducing the survey, asking questions, repeating questions when necessary, probing, providing feedback, maintaining a proper pace, and the overall clarity of the interviewer’s voice and presentation. QA personnel also monitor calls made between completed interviews to verify that interviewers code dispositions properly, leave useful messages for the next interviewer, and make every attempt to complete an interview on every contact.

In Appendix A, there is an example of the Quality Control Form used during QA monitoring sessions. The form is used to specifically rate the interviewer’s quality in several different areas when applicable. The QA team will always provide feedback to the interviewer in regards to anything they hear/see during their monitoring time. This form, as well as any other notes made by the QA member, will then be reviewed with the interviewer to assure they are aware of the areas they need to improve as well as the areas they excel.

3. CLIENT REMOTE MONITORING

Boston BPHC staff monitored both cell phone and landline interviews. These monitoring sessions were invaluable in providing suggestions for necessary retraining and identifying problematic situations. The Coordinator and supervisors reviewed performance and instituted procedures to facilitate and clarify how interviewers should react in various situations.
VII. DATA EDITING AND PROCESSING PROCEDURES

Data from the Boston BRFSS is processed by ICF. Data are entered during interviewing using CATI software. ICF cleaned the data of out-of-range codes, recoded open-ended responses, and identified and clarified logically inconsistent responses.

To eliminate human subjectivity in the assignment of CDC dispositions, ICF International has automated data post-processing. This automation uses an algorithm based on CDC rules to reclassify CATI dispositions into BRFSS dispositions. This system also proves useful when tracking a particular respondent, because it provides information on each call attempt made to the selected number.

ICF produced a SAS file of the data structured as per the Boston questionnaire definition. These data were sent to the BPHC. No identifying information was included with these files when distributed but the original IDs for all completed interviews were part of the data set.

VIII. WEIGHTING

1. OVERVIEW OF WEIGHTS

Survey weights were computed to correct for disproportionate sampling probabilities introduced by the sampling design, including unequal probabilities due to the dual-frame sample; and to correct for differences in demographic characteristics of the sample versus the population, reducing the risk of nonresponse and coverage biases in substantive estimates that may be associated with those demographics. The weighted dataset includes a weight value (FINAL_WT) that weights the sample to the total population of Boston adults (18+).

We calculated the weights in three steps: 1) calculating cell and landline design weights, 2) combining the cell phone and landline samples, and 3) population calibration (i.e. poststratification and raking)

1.1 CALCULATING CELL AND LANDLINE DESIGN WEIGHTS:

The first stage in the weighting involved creating sampling weights that correct for disproportionate probabilities of selection, design weights. The design weight for a sampling unit is the inverse of the probability that the particular unit is drawn into the sample.

1.1.1 SELECTION OF THE TELEPHONE NUMBER.

The landline phone sample was selected in two phases (double sampling for stratification). The first phase sample was a selection of \( n_{ls} \) landline phone numbers from \( N_l \) numbers on the frame. The \( n_{ls} \) numbers were matched to telephone directories to determine whether the number was listed or unlisted. Twenty-six percent of numbers were listed in the high Asian stratum and 23% were listed in the low Asian stratum. In the second phase sample, the listed numbers were oversampled relative to the unlisted numbers. The two phase sample selection probability for density stratum s (1-listed, 2= unlisted) was calculated as \( Pr(L) = \)
\(n_L/N_L \times n_L/n_{LS}\) and the base weight as the inverse of the probability of selection, \(W1 = 1/Pr(L)\). The calculations are shown in Figure 3.

### FIGURE 3: BASE WEIGHTS FOR THE LANDLINE SAMPLE

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Frame size</th>
<th>Phase 1 sample</th>
<th>Phase 2 sample</th>
<th>Selection probability</th>
<th>Base weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>688,900</td>
<td>121,011</td>
<td>93,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High density Asian exchanges</strong></td>
<td>206,300</td>
<td>105,656</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High density</td>
<td>9,478</td>
<td>9,469</td>
<td>0.5117</td>
<td>1.95</td>
<td></td>
</tr>
<tr>
<td>Low density</td>
<td>96,178</td>
<td>64,151</td>
<td>0.3416</td>
<td>2.93</td>
<td></td>
</tr>
<tr>
<td><strong>Low density Asian exchanges</strong></td>
<td>467,800</td>
<td>113,456</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High density</td>
<td>19,985</td>
<td>19,941</td>
<td>0.2420</td>
<td>4.13</td>
<td></td>
</tr>
<tr>
<td>Low density</td>
<td>93,471</td>
<td>62,199</td>
<td>0.1614</td>
<td>6.20</td>
<td></td>
</tr>
</tbody>
</table>

Similarly, the cell phone sample was also selected in two phases. The first phase sample was a selection of \(n_c\) cell phone numbers from \(N_c\) numbers on the frame. The \(n_c\) numbers were matched to a database to obtain the zip code associated with the cell phone number. In the high density stratum 54% matched to a zip code; 48% in the low density. The matching numbers were then classified as in Boston (33% high density; 15% low density) and not in Boston. In the second phase sample, the numbers that matched to a zip code in Boston were oversampled relative to the unmatched numbers and the numbers that match outside of Boston. Numbers that matched to a non-Boston zip in the low density stratum were excluded. The two phase sample selection probability for matching stratum \(s\) was calculated as \(Pr(C) = (n_c/N_c) \times (n_{cs}/n_{cs'})\) and the base weight as the inverse of the probability of selection, \(W1 = 1/Pr(C)\).

Phone numbers selected for the Asian oversample were also potentially eligible for selection from the RDD cell frame. A composite weight was computed to adjust for this overlap. The composite weight is a ratio of the effective sample sizes, \(c = neff1/(neff1 + neff2)\), where \(neff = n/deff\) is the effective sample size; is a measure of variability of respondent level weights (\(wi\)) and \(n\) is the sample size for the survey.

### FIGURE 4: BASE WEIGHTS FOR THE CELL PHONE SAMPLE SELECTED FOR QUARTERS 2-4

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Frame size</th>
<th>Phase 1 sample</th>
<th>Phase 2 sample</th>
<th>Selection probability</th>
<th>Base weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High density rate centers</strong></td>
<td>1,135,000</td>
<td>131,510</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>617</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched Boston zip</td>
<td>18,292</td>
<td>18,292</td>
<td>0.1159</td>
<td>8.63</td>
<td></td>
</tr>
<tr>
<td>Unmatched</td>
<td>66,597</td>
<td>44,493</td>
<td>0.0774</td>
<td>12.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Matched to non Boston zip</td>
<td>Matched Boston zip</td>
<td>Unmatched</td>
<td>Matched to non Boston zip</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------</td>
<td>--------------------</td>
<td>-----------</td>
<td>---------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>857</strong></td>
<td>582,000</td>
<td>46,621</td>
<td>18,694</td>
<td>0.0465</td>
<td>21.52</td>
</tr>
<tr>
<td>Matched Boston zip</td>
<td></td>
<td>9,849</td>
<td>9,849</td>
<td>0.1092</td>
<td>9.15</td>
</tr>
<tr>
<td>Unmatched</td>
<td></td>
<td>43,325</td>
<td>34,778</td>
<td>0.0877</td>
<td>11.40</td>
</tr>
<tr>
<td>Matched to non Boston zip</td>
<td></td>
<td>10,417</td>
<td>5,241</td>
<td>0.0550</td>
<td>18.19</td>
</tr>
<tr>
<td><strong>Low density rate centers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>617</strong></td>
<td>596,000</td>
<td>51,592</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched Boston zip</td>
<td></td>
<td>4,272</td>
<td>4,272</td>
<td>0.0866</td>
<td>11.55</td>
</tr>
<tr>
<td>Unmatched</td>
<td></td>
<td>29,400</td>
<td>14,797</td>
<td>0.0436</td>
<td>22.95</td>
</tr>
<tr>
<td>Matched to non Boston zip</td>
<td></td>
<td>17,920</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>857</strong></td>
<td>136,000</td>
<td>8,582</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched Boston zip</td>
<td></td>
<td>332</td>
<td>332</td>
<td>0.0631</td>
<td>15.85</td>
</tr>
<tr>
<td>Unmatched</td>
<td></td>
<td>6,159</td>
<td>3,227</td>
<td>0.0331</td>
<td>30.24</td>
</tr>
<tr>
<td>Matched to non Boston zip</td>
<td></td>
<td>2,091</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>781/339</strong></td>
<td>270,000</td>
<td>19,431</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched Boston zip</td>
<td></td>
<td>328</td>
<td>328</td>
<td>0.0720</td>
<td>13.90</td>
</tr>
<tr>
<td>Unmatched</td>
<td></td>
<td>11,614</td>
<td>4,807</td>
<td>0.0298</td>
<td>33.57</td>
</tr>
<tr>
<td>Matched to non Boston zip</td>
<td></td>
<td>7,489</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Out-of-area Boston numbers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched Boston zip</td>
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<td>4,325</td>
<td>4,325</td>
<td>0.0435</td>
<td>22.98</td>
</tr>
<tr>
<td>Unmatched</td>
<td></td>
<td>7,456</td>
<td>7,456</td>
<td>0.0793</td>
<td>12.61</td>
</tr>
<tr>
<td><strong>Asian Surname</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched Boston zip</td>
<td></td>
<td>7,456</td>
<td>7,456</td>
<td>0.0793</td>
<td>12.61</td>
</tr>
</tbody>
</table>

### 1.1.2 SELECTION OF HOUSEHOLD MEMBER.

For the landline sample, one member (18+ adult) from each household was randomly selected to take the survey. To account for the within household selection probability, we multiplied the weight by the number of eligible adults in the household (A). The number of adults was capped at 3 to reduce weight variability. There is no within household selection for the cell phone.

### 1.1.3 MULTIPLE TELEPHONE LINES.

Households with more than one telephone line have a higher probability of selection than those with one line. To account for this, we divide by the number of telephone lines in the household. The number of telephone lines was capped at 3 to reduce weight variability. There is no adjustment for the cell phone.

### 1.2 COMBINING THE CELL PHONE AND LANDLINE SAMPLES:

The sample design was a fully overlapping landline and cell phone dual frame, meaning those who have a landline and cell phone are eligible to be selected via either sample. To account for the overlap of dual-users selected in the cell sample and the dual-users selected in the cell sample, we use a composite weight similar to the composite weight computed to adjust for the overlap of the high density Asian sample with the RDD cell frame.

First, the design weighted landline sample is calibrated to match the design weighted cell phone sample. Then the two samples are averaged based on a composite weight designed to optimize the variances of weighted estimates. The composite weight is a ratio of the effective sample sizes, \( c = \frac{\text{neff}_1}{\text{neff}_1 + \text{neff}_2} \), where \( \text{neff} = \frac{n}{\text{deff}} \) is the effective sample size; is a
measure of variability of respondent level weights (wi) and n is the sample size for the survey. The landline design weight is multiplied by \( c \), where \( 0 < c < 1 \) and the cell phone design weight by \( 1-c \). Before averaging the landline and cell samples, we adjust each individually to match the estimated number of cell-only and landline population based on the estimated cell-only percentage (51.7%) from Marketing Systems Group (MSG). The MSG cell-only estimate is calculated by subtracting the estimated landline households from the estimated telephone households. Since the MSG estimates only go down to the county level, the Suffolk County, MA cell-only estimate was used for the weighting.

### FIGURE 5: DISTRIBUTION OF LANDLINE AND CELL USERS

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>MSG Population Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landline</td>
</tr>
<tr>
<td>Cell-only</td>
<td>1,516</td>
</tr>
<tr>
<td>Landline</td>
<td>803</td>
</tr>
</tbody>
</table>

### 1.3 POPULATION CALIBRATION

As the final weighting step, we post-stratified the combined sample into demographic categories and ratio adjusted the weights so that the final weighted sample matches the population with respect to those demographic characteristics. We used a raking algorithm that iteratively calibrates the weighted sample to the population on these dimensions:

1. Age (18-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75+) by gender;
2. Race/ethnicity (Hispanic; non-Hisp white; non-Hisp black; non-Hisp other/multi);
3. Gender by race/ethnicity;
4. Education (Less than high school; HS grad; some college; Bachelor’s degree);
5. Marital Status (Married; widowed, divorced or separated; never married); and
6. Age (18-34; 35-54; 55+) by race/ethnicity (Hispanic; non-Hisp white; non-Hisp black; non-Hisp other/multi)

The population controls are the total adult household population living in Boston based on the 2014-2018 American Community Survey (ACS) Public Use Microdata (PUMs) files. The population totals are presented in Appendix C: SAS Output for Calculating Weights.

### 1.4 WEIGHT TRIMMING

After each iteration of the raking, the weights were evaluated for trimming. The purpose of trimming is to reduce the total mean square error of weighted survey estimates. One source of error is the variance of estimates associated with the variability of the weight values. Weight trimming was conducted after each iteration of the weighting based on the individual and global cap value (IGCV) algorithm as presented by Izrael. This method decreases high weight values by not allowing an individual’s weight value to exceed thresholds based on the individual’s weight and the average of the sample weights.
1.5 IMPUTATION

For item nonresponse on weighting variables, we imputed race/ethnicity based on the modal race/ethnicity category for the reported zip code. We imputed missing age based on the average age in a race/ethnicity category. Missing values for educational attainment and marital status were imputed using hot-deck imputation.

IX. DATA QUALITY INDICATORS

Response rates provide a measure of interviewing success, and there are a number of ways to calculate survey response rates. ICF applied the response rate formulas used by the CDC for the 2019 landline BRFSS studies. Response rates are presented in figure 6 below.

<table>
<thead>
<tr>
<th>Code</th>
<th>Disposition</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100</td>
<td>Complete</td>
<td>3322</td>
<td>Physical or mental impairment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(household level)</td>
</tr>
<tr>
<td>1200</td>
<td>Partial Complete</td>
<td>3330</td>
<td>Language barrier (household level)</td>
</tr>
<tr>
<td>2111</td>
<td>Household level refusal</td>
<td>3700</td>
<td>On never call list</td>
</tr>
<tr>
<td>2112</td>
<td>Known respondent refusal</td>
<td>4100</td>
<td>Out of sample</td>
</tr>
<tr>
<td>2120</td>
<td>Break off/termination within questionnaire</td>
<td>4200</td>
<td>Fax/data/modem</td>
</tr>
<tr>
<td>2210</td>
<td>Respondent never available</td>
<td>4300</td>
<td>Nonworking number/disconnected</td>
</tr>
<tr>
<td>2220</td>
<td>Household answering device</td>
<td>4400</td>
<td>Special technological circumstances</td>
</tr>
<tr>
<td>2320</td>
<td>Respondent physically or mentally unable to complete interview</td>
<td>4430</td>
<td>Call forwarding/pager</td>
</tr>
<tr>
<td>2330</td>
<td>Language barrier, selected respondent</td>
<td>4450</td>
<td>Cell phone</td>
</tr>
<tr>
<td>3100</td>
<td>Unknown if housing unit</td>
<td>4460</td>
<td>Landline</td>
</tr>
<tr>
<td>3130</td>
<td>No answer</td>
<td>4470</td>
<td>Cell phone respondent with landline</td>
</tr>
<tr>
<td>3140</td>
<td>Answering device, unknown if residence or respondent eligible</td>
<td>4500</td>
<td>Non residence</td>
</tr>
<tr>
<td>3150</td>
<td>Telecommunication barrier</td>
<td>4510</td>
<td>Group home</td>
</tr>
<tr>
<td>3200</td>
<td>Household, not known if respondent eligible</td>
<td>4700</td>
<td>Household, no eligible respondent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4900</td>
<td>Miscellaneous, non-eligible</td>
</tr>
</tbody>
</table>

X. RESPONSE RATE FORMULAS
<table>
<thead>
<tr>
<th>Disposition Code(s)</th>
<th>Symbol for equation</th>
<th>Category of Eligibility</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100, 1200</td>
<td>COIN</td>
<td>Complete</td>
<td>Completed or partial completed interview</td>
</tr>
<tr>
<td>1100, 1200, 2111, 2112, 2120, 2210, 2320, 2330</td>
<td>CONELIG</td>
<td>Contact/eligible</td>
<td>Contact is made with respondent/household with known eligibility</td>
</tr>
<tr>
<td>3100, 3200, 3322, 3330</td>
<td>CONUNK</td>
<td>Contact/unknown eligibility</td>
<td>Contact is made with respondent/household with unknown eligibility</td>
</tr>
<tr>
<td>1100, 1200, 2111, 2112, 2120, 2220, 2210, 2320, 2330</td>
<td>ELIG</td>
<td>Eligible</td>
<td>Contact is made and enough information obtained to ascertain eligibility of household and/or respondent</td>
</tr>
<tr>
<td>1100, 1200, 2111, 2112, 2120, 2220, 2210, 2320, 2330</td>
<td>HH</td>
<td>Households</td>
<td>Household or personal cell phone</td>
</tr>
<tr>
<td>2111, 2112, 2120, 2220, 2210, 2320, 2330</td>
<td>ELIGHH</td>
<td>Known household/personal cell phone, not interviewed</td>
<td>Contact is made and enough information is obtained to ascertain eligibility of household and/or respondent but interview is not completed.</td>
</tr>
<tr>
<td>3100, 3130, 3140, 3150, 3200, 3322, 3330, 3700</td>
<td>UNKELIG</td>
<td>Unknown eligibility</td>
<td>No contact is made or contact is made but not enough information is obtained to determine household and/or respondent eligibility</td>
</tr>
<tr>
<td>2111, 2112, 2120</td>
<td>TERE</td>
<td>Break offs, terminations and refusals</td>
<td>Contact is made and eligibility established, but the interview breaks off prior to completing half of the demographic section</td>
</tr>
<tr>
<td>4100, 4450, 4460, 4470, 4700</td>
<td>CONINELIG</td>
<td>Contact with ineligible household/respondents</td>
<td>Contact is made with a household and information obtained that determines ineligibility</td>
</tr>
<tr>
<td>4000-4999</td>
<td>INELIG</td>
<td>Ineligible</td>
<td>Information from individuals or from technological devices is available to ascertain that the phone number, household and/or respondent is not eligible</td>
</tr>
<tr>
<td>ELIG/(ELIG+INELIG)</td>
<td>e</td>
<td>Eligibility factor</td>
<td>Estimated proportion of cases of unknown eligibility that are likely eligible</td>
</tr>
</tbody>
</table>
Response Rate Calculations. This section of the report provides monthly data on response rates and frequency dispositions. The formulas used in the report follow the CASRO rates and are presented below.

1) Resolution rate: the proportion of all telephone numbers in the sample for which the status of the numbers as households with working numbers has been resolved.
   \[ = \frac{(\text{ELIG} + \text{INELIG})}{(\text{ELIG} + \text{INELIG} + (\text{UNKELIG}))} \]

2) Cooperation rate (AAPOR Cooperation rate #2): the proportion of all cases interviewed of all eligible units contacted.
   \[ = \frac{\text{COIN}}{\text{ELIG}} \]

3) Screening completion rate: the proportion of all known households in which the screening questions are completed to determine the presence or absence of an eligible respondent/household.
   \[ = \frac{(\text{CONELIG} + \text{CONINELIG})}{\text{HH}} \]

4) CASRO rate: CASRO response rate
   \[ = \frac{\text{COIN}}{\text{ELIG} + e^{(\text{UNKELIG})}} \]

5) Interview completion rate: the proportion of selected respondents who successfully complete an interview.
   \[ = \frac{\text{COIN}}{\text{COIN} + \text{TERE}} \]

6) Refusal rate (AAPOR Refusal rate #2): the proportion of all eligible respondents who refused to complete an interview or terminated an interview prior to the threshold required to be considered a partial interview.
   \[ = \frac{\text{TERE}}{\text{ELIG} + e^{(\text{UNKELIG})}} \]

**FIGURE 8: CATEGORIES OF ELIGIBILITY AND STATUS BY FINAL DISPOSITION CODES**

<table>
<thead>
<tr>
<th>Disposition Code(s)</th>
<th>Symbol for equation</th>
<th>Category of Eligibility</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100, 1200</td>
<td>COIN</td>
<td>Complete</td>
<td>Completed or partial completed interview</td>
</tr>
<tr>
<td>1100, 1200, 2111, 2112, 2120, 2210, 2220, 2230</td>
<td>CONELIG</td>
<td>Contact/eligible</td>
<td>Contact is made with respondent/household with known eligibility</td>
</tr>
<tr>
<td>3100, 3200, 3322, 3330</td>
<td>CONUNK</td>
<td>Contact/unknown eligibility</td>
<td>Contact is made with respondent/household with unknown eligibility</td>
</tr>
<tr>
<td>1100, 1200, 2111, 2112, 2120, 2220, 2210, 2230</td>
<td>ELIG</td>
<td>Eligible</td>
<td>Contact is made and enough information obtained to ascertain eligibility of household and/or respondent</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Eligibility Factor</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>1100, 1200, 2111, 2112, 2120, 2220, 2210, 2320, 2330, 3200, 3322, 3330, 3700, 4100, 4450, 4460, 4470, 4700</td>
<td>HH</td>
<td>Households</td>
<td>Household or personal cell phone</td>
</tr>
<tr>
<td>2111, 2112, 2120, 2220, 2210, 2320, 2330</td>
<td>ELIGHH</td>
<td>Known household/personal cell phone, not interviewed</td>
<td>Contact is made and enough information is obtained to ascertain eligibility of household and/or respondent but interview is not completed.</td>
</tr>
<tr>
<td>3100, 3130, 3140, 3150, 3200, 3322, 3330, 3700</td>
<td>UNKELIG</td>
<td>Unknown eligibility</td>
<td>No contact is made or contact is made but not enough information is obtained to determine household and/or respondent eligibility</td>
</tr>
<tr>
<td>2111, 2112, 2120</td>
<td>TERE</td>
<td>Break offs, terminations and refusals</td>
<td>Contact is made and eligibility established, but the interview breaks off prior to completing half of the demographic section</td>
</tr>
<tr>
<td>4100, 4450, 4460, 4470, 4700</td>
<td>CONINELIG</td>
<td>Contact with ineligible household/respondents</td>
<td>Contact is made with a household and information obtained that determines ineligibility</td>
</tr>
<tr>
<td>4000-4999</td>
<td>INELIG</td>
<td>Ineligible</td>
<td>Information from individuals or from technological devices is available to ascertain that the phone number, household and/or respondent is not eligible</td>
</tr>
<tr>
<td>ELIG/ (ELIG+INELIG)</td>
<td>e</td>
<td>Eligibility factor</td>
<td>Estimated proportion of cases of unknown eligibility that are likely eligible</td>
</tr>
<tr>
<td>Disposition</td>
<td>Landline</td>
<td>Cell</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>1100</td>
<td>679</td>
<td>2121</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>56</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>2111</td>
<td>382</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2112</td>
<td>43</td>
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</tr>
<tr>
<td>2120</td>
<td>334</td>
<td>1059</td>
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</tr>
<tr>
<td>2210</td>
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<td></td>
</tr>
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<td></td>
</tr>
<tr>
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<td>23</td>
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</tr>
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<td>42113</td>
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<td>8641</td>
<td>1573</td>
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</tr>
<tr>
<td>3140</td>
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<td>34826</td>
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<tr>
<td>3150</td>
<td>112</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>3200</td>
<td>156</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>3322</td>
<td>70</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>3330</td>
<td>861</td>
<td>4696</td>
<td></td>
</tr>
<tr>
<td>3700</td>
<td>34</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>4100</td>
<td>536</td>
<td>11069</td>
<td></td>
</tr>
<tr>
<td>4200</td>
<td>3173</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>4300</td>
<td>111421</td>
<td>55680</td>
<td></td>
</tr>
<tr>
<td>4400</td>
<td>2157</td>
<td>14364</td>
<td></td>
</tr>
<tr>
<td>4430</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4460</td>
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<td>4510</td>
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<td>Total</td>
<td>154,636</td>
<td>172,238</td>
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</tbody>
</table>

**Screening**

- 44.9% (Landline)
- 74.9% (Cell)

**Cooperation**

- 25.5% (Landline)
- 62.6% (Cell)

**Resolution**

- 83.1% (Landline)
- 51.4% (Cell)

**CASRO**

- 44.9% (Landline)
- 31.0% (Cell)

**Refusal**

- 21.8% (Landline)
- 10.6% (Cell)
XI. APPENDIX A: SURVEY RESEARCH QUALITY CONTROL FORM

Survey Research Quality Control Form

- **Recording**: Check Live
- **Date of Call**: 2016-06-24

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbatim</td>
<td>Every word read as it appears on the screen</td>
</tr>
<tr>
<td>Scales/Lists</td>
<td>Every scale / list option read in full</td>
</tr>
<tr>
<td>Script</td>
<td>Every question read in full</td>
</tr>
<tr>
<td>Refusal Conversion</td>
<td>Attempted every refusal by the respondent</td>
</tr>
<tr>
<td>Appropriate</td>
<td>Answered appropriately with the appropriate rebuttal</td>
</tr>
<tr>
<td>Follow-Up</td>
<td>After rebuttal, move into the questionnaire without delay</td>
</tr>
<tr>
<td>Pace - Throughout</td>
<td>Reading each question in line with respondent needs</td>
</tr>
<tr>
<td>Data Mechanics - Throughout</td>
<td>Moving from question to question swiftly and accurately coding each answer</td>
</tr>
<tr>
<td>Accurate Disposition - Throughout</td>
<td>Correctly assign the disposition best suited for each call</td>
</tr>
<tr>
<td>Tone / Professionalism - Throughout</td>
<td>Clear, not monotone / Engaging and sounds interested / Respectful</td>
</tr>
</tbody>
</table>

**Perfect (Follows All Established Guidelines)**

**Acceptable (3 Point Deduction Per Offense)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Verbatim</td>
<td>Minimal and not survey affecting / Synonyms</td>
</tr>
<tr>
<td>Script</td>
<td>Minimal and not survey affecting / Synonyms</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Pace - Throughout</td>
<td>Had to speed up or slow down based on respondent feedback</td>
</tr>
<tr>
<td>Data Mechanics - Throughout</td>
<td>Moving from question to question slowly / corrected mistakes</td>
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</table>

**Unacceptable (11 Point Deduction Per Offense)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Verbatim</td>
<td>Didn't read the entire introduction verbatim, skipped words, sections</td>
</tr>
<tr>
<td>Scales/Lists</td>
<td>Didn't read the scale or list in full, regardless if they were cut off by respondent</td>
</tr>
<tr>
<td>Script</td>
<td>Didn't read every question in full as it appears on the screen</td>
</tr>
<tr>
<td>Refusal Conversion</td>
<td>Failed to attempt every refusal by the respondent</td>
</tr>
<tr>
<td>Appropriate</td>
<td>Failed to appropriately address the respondents concern in the rebuttal</td>
</tr>
<tr>
<td>Follow-Up</td>
<td>After rebuttal, delay in moving into the questionnaire, asked if respondent can continue, etc.</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Tone / Professionalism - Throughout</td>
<td>Unprofessional or rude to respondent</td>
</tr>
<tr>
<td>Pace - Throughout</td>
<td>Should have sped up or slowed down based on respondent feedback</td>
</tr>
<tr>
<td>Data Mechanics - Throughout</td>
<td>Moved from question too slowly or quickly which lead to inaccurately coding answers</td>
</tr>
<tr>
<td>Accurate Disposition - Throughout</td>
<td>Incorrectly assigned the call a disposition that was not survey affecting</td>
</tr>
<tr>
<td>Probing / Neutrality - Throughout</td>
<td>Probes were not neutral / personal opinions or statements given</td>
</tr>
<tr>
<td>Appointment Setting</td>
<td>Didn't properly probe for the best time and date and set the appointment accordingly</td>
</tr>
<tr>
<td>Falsification</td>
<td>Flagrant mis-coding of answers / dispositions - survey affecting / etc.</td>
</tr>
</tbody>
</table>
B XII. APPENDIX B: QUESTIONNAIRE

Boston Behavioral Risk Factor Surveillance System
Questionnaire

2019

Boston Public Health Commission
Research & Evaluation Office
1010 Massachusetts Avenue
Boston, MA 02118
## Behavioral Risk Factor Surveillance System
### 2019 Questionnaire – Boston

### Table of Contents

- Section 1: Health Status
- Section 2: Sleep
- Section 3: Health Care Access
- Section 4: Oral Health
- Section 5: Hypertension & Heart Health
- Section 6: Diabetes
- Section 7: Sugar Sweetened Beverages
- Section 9: Caregiver
- Section 10: Tobacco Use
- Section 11: Demographics
- Section 12: Depression/Anxiety
- Section 13: Physical Activity
- Section 14: Asthma
- Section 15: Falls
- Section 16: Alcohol & Drug Use
- Section 17: Women’s Health
- Section 18: Colorectal Cancer Screening
- Section 19: Food Security
- Section 20: Discrimination
- Section 21: Social Determinants
- Section 21A: Disability
- Section 22: Adverse Childhood Experiences
- Section 23: Physical and Sexual Violence
- Section 24: Follow-up

### SAMPLE READ-IN: FRAME SAMPTYPE

1. Landline
2. Cell Phone
Interviewer’s Script

**Answering Machine message text** [TO BE LEFT ON 1ST, 4TH, AND 9TH ATTEMPT RESULTING IN AN ANSWERING MACHINE]:
Hello, my name is _______. I am calling on behalf of the Boston Public Health Commission to conduct an important study on the health of Boston residents. We will call again in the next few days to conduct the interview. If you have any questions, please call us at 844-604-4394 at your convenience. Thanks.”

**Privacy Manager Message** [TO BE LEFT ON 1ST, 4TH, AND 9TH ATTEMPT RESULTING IN A PRIVACY MANAGER]: “(NAME) Calling on behalf of the Boston Public Health Commission”

**Interviewer’s Script from Field Test**

//ASK IF SELFLAG=WR OR CELLPH=1
INT01
HELLO, I’m calling for the Boston Public Health Commission. My name is ___(name)__. We’re gathering information on the health of Boston residents. Your phone number has been chosen randomly, and I’d like to ask some questions about health and health practices. This call may be monitored and recorded for quality control.

  01 Continue
  02 Terminate Screen

//IF FRAME=2 (CELL PHONE)\nSAFE
Is this a safe time to talk with you?

  01 Yes [Go to TOWN]
  02 No TERMINATE

  03 Respondent Says – They Do Not Live in Boston
  04 Termination Screen

//IF SAFE=03//
INTRO2
You may still be eligible to participate.

  01 Continue to next question
  07 Termination screen
  09 Not a safe time/driving

For Resumed Interviews and CELLPH=2 (LANDLINE):

//ASK IF SELFLAG=1 AND CELLPH=2//
INT02
HELLO, I’m calling for the Boston Public Health Commission. My name is ___(name)__. We’re gathering information on the health of Boston residents. Your phone number has been chosen randomly, and I’d like to ask some questions about health and health practices. This call may be monitored and recorded for quality control. When we called previously [IF ADULTS=1 INSERT:”, we spoke to the adult in this household”] [IF ADULTS>1 INSERT: “the computer randomly selected the [insert RSA] ]” to be interviewed. May I please speak to him/her?

  01 Transfer to respondent [go to newadult]
I have just a few questions to find out if you are eligible for the study and any information you give me will be confidential.

What city or town do you live in?

01 Boston
02 Allston
03 Brighton
04 Back Bay
05 Beacon Hill
06 Charlestown
07 Chinatown
08 Dorchester
09 Downtown
10 East Boston
11 Egleston Square
12 Fenway
13 Fields Corner
14 Hyde Park
15 Jamaica Plain
16 Mattapan
17 Mission Hill
18 North End
19 Readville
20 Roslindale
21 Roxbury
22 South Boston
23 South End
24 West End
25 West Roxbury
88 OTHER CITY/TOWN/STATE
77 DON'T KNOW
99 REFUSED //ASK IF TOWN=88, 77, 99 (NON-BOSTON RESIDENT) //

//ASK IF TOWN=88, 77, 99 (NON-BOSTON RESIDENT) //

TERM2 “Thank you very much, but we are only interviewing Boston residents.” 1 Continue //ASSIGN DISPO=S2 //

Qualified Level 1

//ASK if TOWN=01-25 ZIPCODE What is your zip code where you live? [If needed, say: I mean the zip code of your residence, that is, where you live?]

02 ___ Zip code
77777 Don't know/not sure S/O NON-BOSTON RESIDENT
99999 Refused S/O NON-BOSTON RESIDENT
[PLEASE NOTE: Boston zip codes are the following: 02108, 02109, 02110, 02111, 02113, 02114, 02115, 02116, 02118, 02119, 02120, 02121, 02122, 02124, 02125, 02126, 02127, 02128, 02129, 02130, 02131, 02132, 02134, 02135, 02136, 02163, 02199, 02210, 02215, 02467, 02101, 02112, 02117, 02123, 02133, 02137, 02196, 02201, 02205, 02211, 02212, 02222 and 02241]

//ASK IF ZIPCODE ≠ 02108, 02109, 02110, 02111, 02113, 02114, 02115, 02116, 02118, 02119, 02120, 02121, 02122, 02124, 02125, 02126, 02127, 02128, 02129, 02130, 02131, 02132, 02134, 02135, 02136, 02163, 02199, 02210, 02215, 02467, 02101, 02112, 02117, 02123, 02133, 02137, 02196, 02201, 02205, 02211, 02212, 02222 and 02241

ZIPCK I just want to confirm, you said your zip code is [ZIPCODE]. Is that correct?
01 Yes, correct zip code //TERM3//
02 No, incorrect zip code //REASK//

//ASK IF ZIPCK=01 OR ZIPCODE=77777,99999//
TERM3 "Thank you very much, but we are not interviewing in your zip code today. You may receive a call again at some point in the future." 1 Continue //ASSIGN DISP=S3//

Qualified Level 2

//ASK IF ZIPCODE≠02108, 02109, 02110, 02111, 02113, 02114, 02115, 02116, 02118, 02119, 02120, 02121, 02122, 02124, 02125, 02126, 02127, 02128, 02129, 02130, 02131, 02132, 02134, 02135, 02136, 02163, 02199, 02210, 02215, 02467, 02101, 02112, 02117, 02123, 02133, 02137, 02196, 02201, 02205, 02211, 02212, 02222, 02241, 77777, 99999//
PVTRESID IF FRAME=1, ASK: Is this a private residence?
IF FRAME=2, ASK: Do you live in a private residence?

[Read only if necessary: By private residence, we mean some place like a like a house or apartment.]
01. Yes GO TO CELLPH
02. No

//ASK IF PVTRESID=2//
SOPVTRES Thank you very much, but we are only interviewing private residences in Boston. 1 Continue //ASSIGN DISP=S4//

Qualified Level 3

//ASK IF PVTRESID=1//
CELLPH Is this a cell phone?

[Read only if necessary: By cell phone we mean a telephone that is mobile and usable outside of your neighborhood.]
1. Yes
2. No

CATI DUMMY QUESTION: AUTOPUNCH RESPONSE TO ‘CELLFON’. IF CELLPH=1 (YES), CELLFON=2 (YES). IF CELLPH=2 (NO), CELLFON=1 (NO).
CELLFON
1 No, not a cellular telephone.
2 Yes

RESPONDENT SELECTION
CATI NOTE:
- IF CELLPH=1 (is a cell phone) continue;
- Otherwise go to Adult Random Selection

//ASK IF CELLPH=1 (CELL PHONE)\\

CADULT Are you 18 years of age or older?

INTERVIEWER: PLEASE CONFIRM NEGATIVE RESPONSES TO ENSURE THAT RESPONDENT HAS HEARD AND UNDERSTOOD CORRECTLY.

1 YES
2 NO
7 DON'T KNOW / NOT SURE
9 REFUSED

//ASK IF CADULT=1\\

ASKGNDR2 Are you male or female?

21 Male //GO TO YOURTHE1\\
22 Female //GO TO YOURTHE1\\
23 Other //GO TO YOURTHE1\\

//ASK IF CADULT=7,9\\

TERM5 Thank you very much for your time. 01 CONTINUE, //TERM DISP = S5\\

//ASK IF CADULT=2\\

CADULT2 Is there an adult that also uses this cell phone?

1 YES [GO TO CADULT3]
2 NO

//ASK IF CADULT2=2// (no adult uses cell phone)

TERM6 Thank you very much, but we are only interviewing persons aged 18 or older at this time. 01 CONTINUE // TERM DISP = S6\\

//ASK IF CADULT2=1\\

CADULT3 May I speak with him or her?

1 SWITCHING TO RESPONDENT
2 RESPONDENT NOT AVAILABLE/CALLBACK

//if CADULT3=1 GO TO INTRO1/
//if CADULT3=2 autocode 105, callback///
//ASK IF CELLFON=1// (landline)

Adult Random Selection

I need to randomly select one adult who lives in your household to be interviewed.

How many members of your household, including yourself, are 18 years of age or older?

[If needed say: For this study, households are first randomly selected in the area, and then one adult is selected in each household to be interviewed. It is important to the accuracy of the study that those selected for the study participate, because this is what ensures that the results will represent all Boston residents.]

ADULTS __ Number of adults [RANGE 0-18]

//if CELLFON=1 AND ADULTS = 0 //
XX3 I'm sorry we are only interviewing adult residents who are 18 years of age or older.
Thank you. “ //IF ADULTS=0 ASSIGN DISPO S7//
1. continue

//ask if CELLFON=1 AND ADULTS = 1//
ONEADULT Are you the adult?

01 YES
02 NO

If "yes."
Then you are the person I need to speak with.

//ASK IF ONEADULT=1//
ASKGNDR3 Are you male or female?

21 Male
22 Female
23 Other

//if CELLFON=1 AND ONEADULT=02//
GETADULT May I speak with him or her?

1 Yes, Adult coming to the phone.[GO TO NEWADULT]
2 No, not here (interview will terminate) [INTERVIEWER SET APPOINTMENT FOR BEST TIME TO REACH ADULT]

//if CELLFON=1 AND ADULTS>1//
RSA. System Generated Variable: Randomly Selected Adult

01 Oldest Adult
02 2nd Oldest Adult
03 3rd Oldest Adult
04 4th Oldest Adult
05 5th Oldest Adult
06 6th Oldest Adult
07 7th Oldest Adult
08 8th Oldest Adult
09 9th Oldest Adult
10 10th Oldest Adult
11 11th Oldest Adult
12 12th Oldest Adult
13 13th Oldest Adult
14 14th Oldest Adult
15 15th Oldest Adult
16 16th Oldest Adult
17 17th Oldest Adult
18 18th Oldest Adult
19 19th Oldest Adult
20 No respondent selected

//if CELLFON=1 AND ADULTS>1//
NBIRTH. The person in your household that I need to speak with is [RSA]. Are you the [RSA] in this household?

01 Yes,
02 No, adult coming to the phone
03 No, adult not available at this time. [SUSPEND AND SCHEDULE A CALL BACK]

//ask if nbirth = 01//

GENDER:
Are you male or female?
21 Male
22 Female
23 Other

(If nbirth=3, Interview will terminate) [INTERVIEWER SET APPOINTMENT FOR BEST TIME TO REACH ADULT]

To the correct respondent:
//IF NBIRTH=02 OR GETADULT = 1//
NEWADULT
HELLO, I’m calling for the Boston Public Health Commission. My name is ___________. We’re gathering information on the health of Boston residents. Your phone number has been chosen randomly, and I’d like to ask some questions about health and health practices.
1. Continue

//ASK ALL//
YOURTHE1
[Please read:] I will not ask for your last name, address, or other personal information that can identify you. You do not have to answer any question you don’t want to, and you can end the interview at any time. Any information you give me will be confidential. This call may be monitored and recorded for quality control. If you have any questions about the survey, I will provide a telephone number for you to call to get more information.
[If needed: If you have any questions about this study, you can call the study director, Johnna Murphy, at the Boston Public Health Commission. Her number is 617-534-2369. Your phone number will be erased from the data within two years from today.]

[IF NEEDED: The interview takes on average 27 minutes depending on your answers.]

001 Person Interested, continue.
002 Go back to Adults question. WARNING: A NEW RESPONDENT WILL BE SELECTED AND YOU NEED A SUPERVISOR’S PASSWORD TO CONTINUE
Section 1: Health Status

//ASK ALL//
1.1 (GENHLTH)
Would you say that in general your health is—

Please read:

1  Excellent
2  Very good
3  Good
4  Fair

Or
5  Poor

Do not read:
7  Don't know / Not sure
9  Refused

//ASK ALL//
1.2 (PHYSHLTH)
Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

___ ___ Number of days [RANGE 1-30]
8  8  None
7  7  Don't know / Not sure
9  9  Refused

//ASK ALL//
1.3 (MENTHLTH)
Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

___ ___ Number of days [RANGE 1-30]
8  8  None  [If PHYSHLTH and MENTHLTH = 88 (None), go to next section]
7  7  Don't know / Not sure
9  9  Refused

//ASK IF NOT (1.2 AND 1.3 = 88)//
1.4 (POORHLTH)
During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

___ ___ Number of days
8  8  None
7  7  Don't know / Not sure
9  9  Refused
Section 2: Sleep

//ASK ALL//
2.1

On average, how many hours of sleep do you get in a 24-hour period?

___ Number of hours [RANGE 1-24]
8 8 None
7 7 Don't know / Not sure
9 9 Refused

Section 3: Health Care Access

//ASK ALL//
3.1 (HLTHPLAN)

Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

1 Yes
2 No [Go to 3.3]
7 Don't know / Not sure [Go to 3.3]
9 Refused [Go to 3.3]

//ASK IF 3.1 (HLTHPLAN)=1//
3.2

What type of health care coverage do you use to pay for most of your medical care? Is it coverage through:

Please read:
01 Your employer
02 Someone else's employer
03 A plan that you or someone else buys on your own
04 Medicare
05 Medicaid, Masshealth, CommonHealth or Mass Health HMOs offered through Neighborhood Health Plan, Fallon Community Health Plan, BMC HealthNet, or Network Health
09 Commonwealth Care
06 The military, CHAMPUS, TriCare or the VA [or CHAMP-VA]
07 The Indian Health Service [or the Alaska Native Health Service]

or
08 Some other source

Do not read:
88 None
77 Don't know/Not Sure
99 Refused

PRE-3.3: ALL IN 3.2 SKIP to MEDCOST
There are some types of coverage that you may not have considered. Please tell me if you have any of the following:

Coverage through: Coverage Code

Please read:
01 Your employer
02 Someone else’s employer
03 A plan that you or someone else buys on your own
04 Medicare
05 Medicaid, MassHealth, CommonHealth or Mass Health HMOs offered through Neighborhood Health Plan, Fallon Community Health Plan, BMC HealthNet, or Network Health
06 The military, CHAMPUS, TriCare or the VA [or CHAMP-VA]
07 The Indian Health Service [or the Alaska Native Health Service]
or
08 Some other source

Do not read:
88 None
77 Don’t know/Not sure
99 Refused

Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?

1 Yes
2 No
7 Don’t know/Not sure
9 Refused

Was there a time in the past 12 months when you did not take your medication as prescribed because of cost? Do not include over-the-counter (OTC) medication.

1 Yes
2 No

Do not read:
3 No medication was prescribed.
7 Don’t know/Not sure
9 Refused
//ASK ALL//

3.6 (PERSDOC2)
Do you have one person you think of as your personal doctor or health care provider?

[If NO, ask: Is there MORE THAN ONE or is there NO person who you think of as your personal doctor or health care provider?]

1. Yes, only one
2. More than one
3. No
7. Don't know/Not sure
9. Refused

//ASK ALL//

3.7 (MEDHOME)
When you are sick or need advice about your health, to which one of the following places do you usually go? Would you say:

1. A public health clinic or community health center
2. A doctor’s office
3. A hospital outpatient department
4. A hospital emergency room
5. Urgent care center
6. Some other kind of place [PLEASE SPECIFY__________]. OR
8. No usual place

[Do not read]
7. Don’t know/Not sure
9. Refused

//ASK IF 3.7 (MEDHOME) = 6//
3.7_oth ENTER OTHER SPECIFY

Section 4: Oral Health

//ASK ALL//

4.1
Do you have any kind of insurance coverage that pays for some or all of your routine dental care, including dental insurance, prepaid plans such as HMO’s, or government plans such as Medicaid?

1. Yes
2. No
7. Don’t know/Not sure
9. Refused

//ASK ALL//

4.1a
Was there a time in the past 12 months when you needed to see a dentist but could not because of the cost?

1. Yes
2. No
7. Don’t know/Not sure
9. Refused
How many of your permanent teeth have been removed because of tooth decay or gum disease? Include teeth lost to infection, but do not include teeth lost for other reasons, such as injury or orthodontics.

NOTE: If wisdom teeth are removed because of tooth decay or gum disease, they should be included in the count for lost teeth.

_____ Record Number of Teeth Lost (RANGE 1 TO 36)

66 All
88 None
77 Don’t know / Not sure
99 Refused

Section 5: Hypertension & Heart Health

Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure?

Read only if necessary: By “other health professional” we mean a nurse practitioner, a physician’s assistant, or some other licensed health professional.

(If “Yes” and respondent is female, ask: “Was this only when you were pregnant?”)

1 Yes
2 Yes, but female told only during pregnancy
3 No
4 Told borderline high or pre-hypertensive
7 Don’t know / Not sure
9 Refused

Section 6: Diabetes

Have you ever been told by a doctor that you have diabetes?

If “Yes” and respondent is female, ask: “Was this only when you were pregnant?”
If respondent says pre-diabetes or borderline diabetes, use response code 4.

1 Yes
2 Yes, but female told only during pregnancy
3 No
4 No, pre-diabetes, or borderline diabetes
7 Don’t know / Not sure
9 Refused

Section 7: Sugar Sweetened Beverages
7.1 Now I would like to ask you some questions about sugary beverages.

01 CONTINUE

7.1 During the past 30 days, how often did you drink regular soda or pop that contains sugar? Do not include diet soda or diet pop. You can answer times per day, week or month; for example, twice a day, once a week and so forth.

[Interviewer note: Please remind respondents to include regular soda that they mixed with alcohol.]

1._ _ Times per day [RANGE = 101-199]
2._ _ Times per week [RANGE = 201-299]
3._ _ Times per month [RANGE = 301-399]
5 5 5 Never
7 7 7 Don’t know / Not sure
9 9 9 Refused

7.1A //ASK if [7.1#106-199,226-299,388-399]//

INTERVIEWER: YOU RECORDED //insert response from 7.1//
IS THAT CORRECT?

1 Yes, Correct as is
2 No, Re-ask question

7.2 During the past 30 days, how often did you drink sugar-sweetened fruit drinks (such as Kool-aid and lemonade), sweet tea, and sports or energy drinks (such as Gatorade and Red Bull)? Do not include 100% fruit juice, diet drinks, or artificially sweetened drinks. You can answer times per day, week, or month: for example, twice a day, once a week, and so forth.

1 _ _ Times per day [RANGE = 101-199]
2 _ _ Times per week [RANGE = 201-299]
3 _ _ Times per month [RANGE = 301-399]

Do Not Read
5 5 5 Never
7 7 7 Don’t know / Not sure
9 9 9 Refused

7.2A //ASK if [7.2#106-199,226-299,388-399]//

INTERVIEWER: YOU RECORDED //insert response from 7.2//
IS THAT CORRECT?

1 Yes, Correct as is
Section 9: Caregiver

//ASK ALL//
9.1cT
PLEASE READ: Now I’d like to ask you about providing care to others.

//ASK ALL//
9.1c (9.1c) People may provide regular care or assistance to a friend or family member who has a health problem or disability. In an average week, how many hours do you provide care or assistance to others? Would you say...

PLEASE READ
1 No hours
2 Up to 8 hours per week
3 9 – 19 hours per week
4 20 – 39 hours per week
5 40 or more hours per week

DO NOT READ
7 Don’t know/not sure
9 Refused

Section 10: Tobacco Use

Please read: Now I would like to ask you some questions about smoking.

//ASK ALL//
10.1 (SMOKE100) Have you smoked at least 100 cigarettes in your entire life?

NOTE: 5 packs = 100 cigarettes

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes [Go to Q10.3]</td>
</tr>
<tr>
<td>2</td>
<td>No [Go to Q10.3]</td>
</tr>
<tr>
<td>7</td>
<td>Don’t know / Not sure [Go to Q10.3]</td>
</tr>
<tr>
<td>9</td>
<td>Refused [Go to Q10.3]</td>
</tr>
</tbody>
</table>

INTERVIEWER NOTE: “FOR CIGARETTES, DO NOT INCLUDE: ELECTRONIC CIGARETTES (E-CIGARETTES, NJOY, BLUETIP), HERBAL CIGARETTES, CIGARS, CIGARILLOS, LITTLE CIGARS, PIPES, BIDIS, KRETEKS, WATER PIPES (HOOKAHS), OR MARIJUANA.”

//ASK IF 10.1 = 1//
10.2 (SMOKDAY2) Do you now smoke cigarettes every day, some days, or not at all?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Everyday</td>
</tr>
<tr>
<td>2</td>
<td>Some days</td>
</tr>
<tr>
<td>3</td>
<td>Not at all</td>
</tr>
</tbody>
</table>
7  Don't know / Not sure
9  Refused

//ASK ALL//
10.3  Do you currently use cigars, cigarillos or little cigars, for example, Black and Molds, Game, Dutchmaster, every day, some days, or not at all?

1  Everyday
2  Some days
3  Not at all
7  Don't know / Not sure
9  Refused

//ASK ALL//
10.4  Thinking about the past 7 days, about how many hours a week were you exposed to other people's tobacco smoke when you were at home?

___  Number of hours per week [76 = 76 or more]
01  An hour or less per week, but more than none
88  None
77  Don't know
99  Refused

Section 11: Demographics

//ASK ALL//
11.1 (AGE)  What is your age?

___ ___  Code age in years [RANGE 18-99]  GO TO Q11.2
0  7  Don't know / Not sure  GO TO Q11.2
0  9  Refused

//ASK IF 11.1=9//
11.1a  In which of these age categories do you belong?  [READ LIST]

01  18-24
02  25-29
03  30-39
04  40-44
09  45-49
05  50-59
06  60-69
07  70-79
08  80 or older
Do not read:
77  Don't Know / Not Sure
99  Refused

//ASK ALL//
11.2
[IF S11Q19=1 OR ASKGNDR2=21 OR ASKGNDR3=21 OR GENDER=21 INSERT "Are you Hispanic or Latino?"]
[IF S11Q19=2 OR ASKGNDR2=22 OR ASKGNDR3=22 OR GENDER=22 INSERT "Are you Hispanic or Latina?"]
[OTHERWISE INSERT "Are you Hispanic, Latina or Latino?"]
11.3 (MRACE)
Which one or more of the following would you say is your race?
(Check all that apply)

Please read:
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian or Alaska Native
Or
6 Other [specify]________________

Do not read:
7 Don’t know / Not sure
9 Refused

//ASK IF 11.3 = 6
11.3oth ENTER OTHER SPECIFY

//ASK IF (11.2=2 AND 11.3=6 ONLY) OR (11.2=2 AND 11.3=7-9)
11.3pa How do you identify your ethnicity, ancestry or heritage?
1 Gave response
7 Don’t know / Not sure
9 Refused

//ASK IF (11.2=2 AND 11.3=6 ONLY AND 11.3preanc=1) OR (11.2=2 AND 11.3=7-9 AND 11.3preanc=1)//
11.3anc How do you identify your ethnicity, ancestry or heritage?

11.3a_1 //REQUIRED [SPECIFY]________________
11.3a_2 //NOT REQUIRED [SPECIFY]________________
11.3a_3 //NOT REQUIRED [SPECIFY]________________

CATI Note: If more than one response to 11.3 (MRACE), continue. Otherwise, go to pre-Q11.5

//ASK IF 11.3 = MUL//
11.4 (ORACE2)
Which one of these groups would you say best represents your race?

//PROGRAMMER: ONLY DISPLAY RESPONSES SELECTED IN 11.3//
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian or Alaska Native
6 Other [specify]________________

Do not read:
7 Don’t know / Not sure
9 Refused

//ASK IF 11.2=1 OR 11.3=1-3//
11.5 Now I will ask how you identify your ethnicity, ancestry or heritage. Are you…?

[CHECK ALL THAT APPLY]
//If 11.2=1 display 1-7 and 33
//If 11.3=1 display 26-32 and 33
//If 11.3=2 display 18-23 and 33
//If 11.3=3 display 10-16 and 33

(Hispanic/Latino ethnicity/heritage) /mul=7//
1 Columbian
2 Dominican
3 Guatemalan
4 Honduran
5 Mexican
6 Puerto Rican
7 Salvadorian

(Asian ethnicity/heritage) /mul=7//
10 Asian Indian
11 Cambodian
12 Chinese
13 Filipino
14 Japanese
15 Korean
16 Vietnamese

(Black ethnicity/heritage) /mul=6//
18 African American
19 Barbadian
20 Cape Verdean
21 Haitian
22 Jamaican
23 Nigerian

(White ethnicity/heritage) /mul=7//
26 Irish
27 Italian
28 English
29 German
30 Polish
31 Russian
32 French

(ASKED of all ancestry respondents)
33 Other [PLEASE SPECIFY]

[DO NOT READ]
77 Don't Know/Not Sure
99 Refused

//ASK IF 11.5=33//
11.5po INTERVIEWER NOTE: [DO NOT READ] Did respondent give a response for 33- Other ethnicity, ancestry or heritage?
1  Gave response
7  Don’t know / Not sure
9  Refused

//ASK IF 11.5po=1/
11.5o.1  ENTER OTHER SPECIFY  //REQUIRED [SPECIFY] ________________________
11.5o.2  //NOT REQUIRED [SPECIFY] ________________________
11.5o.3  //NOT REQUIRED [SPECIFY] ________________________

//ASK ALL//
11.6 Were you born in the mainland United States or somewhere else? (If somewhere else, probe for place of birth.)

<table>
<thead>
<tr>
<th>Country</th>
<th>Code</th>
<th>Country</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainland US [Go to 11.7]</td>
<td>01</td>
<td>Japan</td>
<td>40</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>02</td>
<td>Kenya</td>
<td>41</td>
</tr>
<tr>
<td>Algeria</td>
<td>03</td>
<td>Liechtenstein</td>
<td>42</td>
</tr>
<tr>
<td>Argentina</td>
<td>04</td>
<td>Malaysia</td>
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</tr>
<tr>
<td>Australia</td>
<td>05</td>
<td>Mexico</td>
<td>44</td>
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<tr>
<td>Austria</td>
<td>06</td>
<td>Morocco</td>
<td>45</td>
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<tr>
<td>Belgium</td>
<td>07</td>
<td>Netherlands</td>
<td>46</td>
</tr>
<tr>
<td>Belize</td>
<td>08</td>
<td>New Zealand</td>
<td>47</td>
</tr>
<tr>
<td>Bolivia</td>
<td>09</td>
<td>Nicaragua</td>
<td>48</td>
</tr>
<tr>
<td>Brazil</td>
<td>10</td>
<td>Nigeria</td>
<td>49</td>
</tr>
<tr>
<td>Cameroon</td>
<td>11</td>
<td>Norway</td>
<td>50</td>
</tr>
<tr>
<td>Cape Verde</td>
<td>79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>12</td>
<td>Panama</td>
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<tr>
<td>China</td>
<td>13</td>
<td>Paraguay</td>
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<td>Colombia</td>
<td>14</td>
<td>Peru</td>
<td>53</td>
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<td>Costa Rica</td>
<td>15</td>
<td>Philippines</td>
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<td>Poland</td>
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<td>Portugal</td>
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<td>Dominican Republic</td>
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<td>Saudi Arabia</td>
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<td>32</td>
<td>United Kingdom</td>
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</tr>
<tr>
<td>India</td>
<td>33</td>
<td>Uruguay</td>
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<td>Indonesia</td>
<td>34</td>
<td>Venezuela</td>
<td>73</td>
</tr>
<tr>
<td>Iran</td>
<td>35</td>
<td>Vietnam</td>
<td>74</td>
</tr>
<tr>
<td>Iraq</td>
<td>36</td>
<td>US: Alaska</td>
<td>75</td>
</tr>
<tr>
<td>Ireland</td>
<td>37</td>
<td>US: Hawaii</td>
<td>76</td>
</tr>
</tbody>
</table>

[Go to 11.7]
Italy  39  DK/not sure  77
Jamaica  78  Other(specify)  88
                          Refused  99

//ASK IF 11.6 = 88//
11.6_oth  ENTER OTHER SPECIFY
//ASK IF 11.6 = 02-74 or 11.6 = 78, 79, 88//
11.6a  How many years have you lived in this country?

___ ___ Years (round fractions up) [RANGE 0-76] [76 = 76 or more]
7  7  Don't know/not sure
9  9  Refused

//ASK IF (11.6a = 01-76 and 11.1 AGE = 18-99) AND (11.6a > 11.1 AGE)//
11.6_ck (UPDTAG)
I'm sorry, you indicated you were {CATI: fill-in response from 11.1 AGE} years old, and
you stated you have lived in this country for {CATI: fill-in response from 11.6a} years
which is greater than your age. Which is correct?

01  Years in country is correct (Update age)  GO TO 11.1 AGE
02  Age is correct (Update years in country)  GO TO 11.6a
03  Refused  CONTINUE

//ASK ALL//
11.7  What is the primary language spoken in your home?

1  English
2  Spanish
3  Portuguese or Portuguese Creole
4  Chinese
5  Vietnamese
6  Haitian Creole
8  Cambodian/Khmer
10  Italian
11  Russian
12  Other (specify)_____________________
77  Don't know/not sure
99  Refused

//ASK IF 11.7 = 12//
11.7_oth  ENTER OTHER SPECIFY
//ASK ALL//

11.8 (MARITAL)
Are you?

Please read:

1  Married
2  Divorced
3  Widowed
4  Separated
5 Never married
Or
6 A member of an unmarried couple living together

Do not read:
9 Refused

//ASK ALL//
ADULTS_CELL How many members of your household, including yourself, are 18 years of age or older?

ADULTS ___ Number of adults [RANGE 1-18]

//ASK ALL//
11.9 If you have children less than 18 years of age living in your household, going from OLDEST to YOUNGEST, what are their current ages? [READ AS NEEDED: The oldest child is the first child and the youngest child is the last. Please include children with the same birth date, including twins, in the order of their birth.]
[Record up to 9 people.]

Interviewer Note: 00= < 1 year

___ ___ Code ages [RANGE 1-17]
11.9_1 What is the age of the oldest child – Child #1
11.9_2 What is the age of the second oldest child – Child #2 [Etc.]
0 0 < 1 year
8 8 None/No more
9 8 Don’t know/not sure
9 9 Refused

//ASK IF Q11.9 iteration/child X<88 AND 11.9 iteration/child X-1 IS LESS THAN 11.9 iteration/child X//
11.9CHK I need to record the ages of the children younger than 18 living in your household going from the OLDEST child to the YOUNGEST child. I will re-ask these questions. To begin, I will ask for the age of the household’s OLDEST child.

1. Re-Ask 11.9 GO BACK TO 11.9

//ASK ALL//
11.10 What is the highest grade or year of school you completed?

Read only if necessary:

1 Never attended school or only attended kindergarten
2 Grades 1 through 8 (Elementary)
3 Grades 9 through 11 (Some high school)
4 Grade 12 or GED (High school graduate)
5 Some college or technical school (1 year to 3 years of college or Associate’s degree)
6 College graduate (4 to 5 years college ending in Bachelor’s degree)
8 Some graduate school or graduate degree (such as Masters, Doctorate, MD)

Do not read:
9 Refused
//ASK ALL//
11.11 (EMPLOY)
Are you currently?

Please read:
01 Employed full-time for wages
10 Employed part-time for wages
02 Self-employed
03 Out of work for 1 year or more
04 Out of work for less than 1 year
05 A Homemaker
06 A Student
07 Retired
08 Unable to work

Do not read:
09 Refused

//ASK ALL//
11.12 (RENTHOM1)
Do you own or rent your home?

INTERVIEWER NOTE: “Other arrangement” may include group home, staying with friends or family without paying rent.

NOTE: Home is defined as the place where you live most of the time/the majority of the year.

Read only if necessary:
1 Own
2 Rent
3 Other arrangement

Do not read:
7 Don’t know / Not sure
9 Refused

//ASK ALL//
11.13A [04] Is your annual household income from all sources...Less than $25,000 ($20,000 to less than $25,000)

[INTERVIEWER NOTE: If respondent asks why income information is needed or initially refuses PLEASE READ: This information is very useful in helping us understand the relationship between health and financial resources. Please remember that the information you provide is strictly confidential and not linked to your name.]

1 Yes
2 No
7 Don’t Know
9 Refused
<table>
<thead>
<tr>
<th>ASK IF 11.13A = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13B [03]</strong></td>
</tr>
<tr>
<td>Less than $20,000 ($15,000 to less than $20,000)</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASK IF 11.13B = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13C [02]</strong></td>
</tr>
<tr>
<td>Less than $15,000 ($10,000 to less than $15,000)</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASK IF 11.13C = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13D [01]</strong></td>
</tr>
<tr>
<td>Less than $10,000</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASK IF 11.13A = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13E [05]</strong></td>
</tr>
<tr>
<td>Less than $35,000 ($25,000 to less than $35,000)</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASK IF 11.13E = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13F [06]</strong></td>
</tr>
<tr>
<td>Less than $50,000 ($35,000 to less than $50,000)</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASK IF 11.13F = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13G [07]</strong></td>
</tr>
<tr>
<td>Less than $75,000 ($50,000 to less than $75,000)</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASK IF 11.13G = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.13H [08]</strong></td>
</tr>
<tr>
<td>Less than $100,000 ($75,000 to less than $100,000)</td>
</tr>
<tr>
<td>1 Yes</td>
</tr>
<tr>
<td>2 No</td>
</tr>
<tr>
<td>7 Don't Know</td>
</tr>
<tr>
<td>9 Refused</td>
</tr>
</tbody>
</table>
//ASK IF 11.13H = 2//

11.13I [09] Less than $150,000 ($100,000 to less than $150,000)

1 Yes
2 No
7 Don't know
9 Refused

//ASK IF 11.13I = 2//

11.13J [10] $150,000 or more

1 Yes
2 No
7 Don't know
9 Refused

//HIDDEN SELECTION QUESTION CREATED FOR 11.13 RESPONSE, DO NOT DISPLAY FOR INTERVIEWER//

//ASK ALL//

//IF 11.13B=2, SET INCOME=04
IF 11.13C=2, SET INCOME=03
IF 11.13D=2, SET INCOME=02
IF 11.13D=1, SET INCOME=01
IF 11.13E=1, SET INCOME=05
IF 11.13F=1, SET INCOME=06
IF 11.13G=1, SET INCOME=07
IF 11.13H=1, SET INCOME=08
IF 11.13I=1, SET INCOME=09
IF 11.13J=1, SET INCOME=10
IF ANY OF 11.13A-I=7, SET INCOME=77
IF ANY OF 11.13A-I=9, SET INCOME=99//

INCOME

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Less than $10,000</td>
</tr>
<tr>
<td>02</td>
<td>$10,000 to less than $15,000</td>
</tr>
<tr>
<td>03</td>
<td>$15,000 to less than $20,000</td>
</tr>
<tr>
<td>04</td>
<td>$20,000 to less than $25,000</td>
</tr>
<tr>
<td>05</td>
<td>$25,000 to less than $35,000</td>
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<tr>
<td>06</td>
<td>$35,000 to less than $50,000</td>
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<tr>
<td>07</td>
<td>$50,000 to less than $75,000</td>
</tr>
<tr>
<td>08</td>
<td>$75,000 to less than $100,000</td>
</tr>
<tr>
<td>09</td>
<td>$100,000 to less than $150,000</td>
</tr>
<tr>
<td>10</td>
<td>$150,000 or more</td>
</tr>
<tr>
<td>77</td>
<td>Don't know</td>
</tr>
<tr>
<td>99</td>
<td>Refused</td>
</tr>
</tbody>
</table>

//ASK IF INCOME=01-10//

S11Q13AA

Your annual household income is [INSERT ANSWER FROM INCOME]
Is this correct?

1 Yes, correct as is
2 No, re-ask question
About how much do you weigh without shoes?
ENTER “P” FOR WEIGHT GIVEN IN POUNDS
ENTER “K” FOR WEIGHT GIVEN IN KILOGRAMS

P pounds
K kilograms

7 Don’t Know
9 Refused

Round fractions up

Weight (pounds) [Range 50-776]

About how much do you weigh without shoes?
NOTE: If respondent answers in metrics, put “9” in column //

Round fractions up

Weight (kilograms) [Range 23-352]

Just to double-check, you indicated \:11.14: pounds as your weight.
IS THIS CORRECT?
1. Yes
2. No [go back to 11.14]

Just to double-check, you indicated \:11.14m: kilograms as your weight.
IS THIS CORRECT?
1. Yes
2. No, [go back to 11.14m]
//ASK ALL//

**P11.15**  
About how tall are you without shoes?

ENTER "F" FOR HEIGHT GIVEN IN FEET  
ENTER "M" FOR HEIGHT GIVEN IN CENTIMETERS

F  feet  
M  centimeters

7  Don't Know  
9  Refused

//ASK IF P11.15=F//

**11.15 (HEIGHT3)**  
About how tall are you without shoes?

NOTE: If respondent answers in metrics, put “9” in column 121.

Round fractions down  
[Enter height in Feet and Inches]  
[Ex: 5 feet 9 inches would be entered as 509]

_ _ / _ _  Height[Range 300-311, 400-411, 500-511, 600-611, 700-711]

//ASK IF 11.5= 300-407, 609-711//

**11.5a:**  Just to double check, you indicated you are //enter feet from 11.15// FEET //enter inches from 11.15// INCHES TALL.

IS THIS CORRECT?  
1. Yes  
2. No, go back to 11.15

//ASK IF 11.15 = M//

**11.15M**  
About how tall are you without shoes?

NOTE: If respondent answers in metrics, put “9” in column //.

Round fractions down  
[Enter height in centimeters]  
[Ex: 2 meters 5 centimeters would be entered as 205]

---  Height[Range 90-254]

//ASK IF 11.15M = 90-254 AND P11.15=M//

**11.15am:**  Just to double check, you indicated you are //11.15m// centimeters tall.

IS THIS CORRECT?  
1. Yes  
2. No [go back to 11.15m]
//ASK ALL//

11.16  Are you…

Please read:

1  a public housing resident living in a building owned by the Boston Housing Authority
2  part of a household that receives rental assistance, such as “Section 8” or any other rental assistance program
3  neither of the above

Do not read:

7  Don't know
9  Refused

11.16ck  [If 11.12 (RENTHOM1)=1 and 11.16=1 OR 2 please read:] I’m sorry earlier you told me that you own your home, and now you stated that you live in public housing or receive rental assistance. Which is correct?

01  Live in public housing is correct (Update home ownership)  GO TO 11.12
02  Own home is correct (Update public assistance status)  GO TO 11.16
03  Refused  CONTINUE

//ASK IF CELLFON=2// (cell phone)

LANDLINE  Do you also have a landline telephone in your home that is used to make and receive calls?

READ ONLY IF NECESSARY: “By landline telephone, we mean a “regular” telephone in your home that is connected to outside telephone lines through a cable or cord and is used for making or receiving calls. Please include landline phones used for both business and personal use.”

Interviewer Note: Telephone service over the internet counts as landline service (includes Vonage, Magic Jack and other home-based phone services.).

PLEASE CONFIRM NEGATIVE RESPONSES TO ENSURE THAT RESPONDENT HAS HEARD AND UNDERSTOOD CORRECTLY.

1  YES
2  NO
7  DON'T KNOW / NOT SURE
9  REFUSED

//ASK IF CELLPH=2 (not a cell phone) //

11.17  Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.

1  Yes    [Go to CPDEMO1]
2  No
7 Don’t know / Not sure  [Go to CPDEMO1]
9 Refused  [Go to CPDEMO1]

//ASK IF 11.17=1//
11.17a (NUMPHON2)
How many of these phone numbers are residential numbers?

__  Residential telephone numbers [6=6 or more]
7 Don’t know / Not sure
9 Refused

//ASK IF CELLPH=2 (not a cell phone)//
11.18 (CPDEMO1)
Do you have a cell phone for personal use? Please include cell phones used for both business and personal use.

1 Yes
2 No  [Go to SEX]
7 Don’t know / Not sure
9 Refused  [Go to SEX]

//ASK IF (11.18=1,7) OR (LANDLINE=1,7)//
11.18a (CPDEMO4)
Thinking about all the phone calls that you receive on your landline and cell phone, what percent, between 0 and 100, are received on your cell phone?

 Enter percent (1 to 100)
8 8 8 Zero
7 7 7 Don’t know / Not sure
9 9 9 Refused

//ASK IF ASKGNDR2=MISSING AND ASKGNDR3=MISSING AND GENDER=MISSING//
11.19 (SEX)
[This question should be asked of all respondents where sex is not verified in screening process.] Are you male or female?

1 Male
2 Female
3 Other

CATI Note: If respondent is a male, or if respondent is a female age 50 years old or older, go to 11.21T.

//ASK IF (11.19=2 OR ASKGNDR2=22 OR GENDER=22 OR ASKGNDR3=22) AND (11.1=07, 18-49 OR 11.1a=1-4, 9, 77,99)
11.20 (PREGNANT)
To your knowledge, are you now pregnant?

1 Yes
2 No
7 Don’t know / Not sure
9 Refused

//ASK ALL//
11.21T The next question is about sexual orientation.
1 Continue
Do you consider yourself to be:

Please read:

1 Straight or heterosexual
2 Gay, lesbian, or homosexual
3 Bisexual or
4 Something else [Other specify___________________]

Do not read:
7 Don't Know/Not Sure
9 Refused

[Additional information for interviewers: If respondent requires further definition of the terms heterosexual, homosexual/gay/lesbian, and/or bisexual, please read the appropriate definition(s) as below:

Heterosexual: A person who has sex with and/or is primarily attracted to people of the opposite sex.

Homosexual/Gay/Lesbian: A person who has sex with and/or is primarily attracted to people of the same sex.

Bisexual: A person who has sex with and/or is attracted to people of either sex.]

Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female and may live as a woman.

Do you consider yourself to be transgender?
IF YES, ASK “DO YOU CONSIDER YOURSELF TO BE A) MALE-TO-FEMALE, B) FEMALE-TO-MALE, OR C) GENDER NON-CONFORMING?

1 Yes, Transgender, male-to-female
2 Yes, Transgender, female-to-male
3 Yes, Transgender, gender nonconforming
4 No
7 Don’t know/not sure
9 Refused

[NOTE: Additional Information for interviewers if asked about definition of transgender:
Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female or lives as a woman would be transgendered. Some transgender people change their physical appearance so that it matches their internal gender identity. Some transgender people take hormones and some have surgery. A transgender person may be of any sexual orientation – straight, gay, lesbian, or bisexual.

//ASK ALL//
[Interviewer: DO NOT READ!]

Lang1. In what language was this interview completed?

1 English
2 Spanish

Section 12: Depression/Anxiety

//ASK ALL//
12.1T Now, I am going to ask you some questions about how you have been feeling lately.

1 Continue

//ASK ALL//
12.1 During the past 30 days, for about how many days have you felt worried, tense, or anxious?

___ ___ Number of days
8 8 None
7 7 Don't know/Not sure
9 9 Refused

//ASK ALL//
12.2 During the past 30 days, for about how many days have you felt sad, blue, or depressed?

___ ___ Number of days
8 8 None
7 7 Don't know/Not sure
9 9 Refused

//ASK ALL//
12.3 During the past 12 months, have you received professional counseling or any kind of treatment, including medication, for sadness or depression?

NOTES TO INTERVIEWERS:
If respondent says they are on medication for depression, code as "YES".
If respondent says they have had just one counseling session, code as "YES".
Talking with clergy, social worker, school counselor, physician = "YES".
Talking with family, friend, teacher, lawyer = "NO".

1 Yes
2 No
7 Don't know/Not sure
9 Refused
Section 13: Physical Activity

The next few questions are about exercise, recreation, or physical activities other than your regular job duties.

INTERVIEWER INSTRUCTION: If respondent does not have a “regular job duty” or is retired, they may count the physical activity or exercise they spend the most time doing in a regular month.

1 Continue

During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

1 Yes [Go to Q13.8]
2 No [Go to Q13.8]
7 Don't know / Not sure [Go to Q13.8]
9 Refused [Go to Q13.8]

What type of physical activity or exercise did you spend the most time doing during the past month?

INTERVIEWER INSTRUCTION: If the respondent's activity is not included in the Coding List A, choose the option listed as “Other “.
13.2CK
INTERVIEWER: YOU'VE CHOSEN _____________

IS THAT CORRECT?

1 YES
2 NO - GO BACK AND CHANGE RESPONSE

13.2o Enter Other Activity ______

13.3 How many times per week or per month did you take part in this activity during the past month?

1_ _ Times per week [range 101-150]
2_ _ Times per month [range 201-250]
7 7 7 Don't know / Not sure
9 9 9 Refused

13.4 And when you took part in this activity, for how many minutes or hours did you usually keep at it?

_:: _ Hours and minutes [RANGE = 1-59,100-159,200-259,300-359,400-459,500-559,600-659,700-759,800-859,900-959]
998 Don't know / Not sure
9 9 9 Refused

13.5 What other type of physical activity gave you the next most exercise during the past month?

INTERVIEWER INSTRUCTION: If the respondent's activity is not included in the Coding List A, choose the option listed as “Other”.

_ _ (Specify) [See Coding List A]
8 8 No other activity [Go to Q13.8]
9 7 Don’t know / Not Sure [Go to Q13.8]
9 9 Refused [Go to Q13.8]
1 YES
2 NO - GO BACK AND CHANGE RESPONSE

//ASK IF 13.5=98//
13.5o Enter Other Activity ______

//ASK IF 13.5 NE MISSING AND 13.5 NE 77, 88, 99//
13.6 How many times per week or per month did you take part in this activity during the past month?

1__ Times per week [range 101-199]
2__ Times per month [range 201-299]
7 7 7 Don't know / Not sure
9 9 9 Refused

//ASK IF 13.5 NE MISSING AND 13.5 NE 77, 88, 99//
13.7 And when you took part in this activity, for how many minutes or hours did you usually keep at it?

_:__: Hours and minutes [range=1-959]
9 9 8 Don't know / Not sure
9 9 9 Refused

//ASK ALL//
13.8 During the past month, how many times per week or per month did you do physical activities or exercises to STRENGTHEN your muscles? Do NOT count aerobic activities like walking, running, or bicycling. Count activities using your own body weight like yoga, sit-ups or push-ups and those using weight machines, free weights, or elastic bands.

1__ Times per week [range 101-199]
2__ Times per month [range 201-299]
8 8 8 Never
7 7 7 Don't know / Not sure
9 9 9 Refused

Section 14: Asthma

//ASK ALL//
14.1 (ASTHMA2)
Have you ever been told by a doctor, nurse, or other health professional that you had asthma?

1 Yes
2 No [Go to next section]
7 Don't know / Not sure [Go to next section]
9 Refused [Go to next section]

//ASK IF 14.1=1//
14.2 (ASTHNOW)
Do you still have asthma?
1 Yes
During the past 12 months, how many times did you visit an emergency room or urgent care center because of your asthma?

Number of visits [87 = 87 or more] [RANGE = 0-87]
88 None
98 Don't know / Not sure
99 Refused

Section 15: Falls

CATI NOTE: If respondent is 45 years or older continue, otherwise go to next section.

Next, I will ask about recent falls. By a fall, we mean when a person unintentionally comes to rest on the ground or another lower level. 1. Continue

In the past 12 months, how many times have you fallen?

Number of times [76 = 76 or more]
8 8 None [Go to next section]
7 7 Don't know / Not sure [Go to next section]
9 9 Refused [Go to next section]

Did this fall cause an injury? By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.

Yes
No
Don't know / Not sure
Refused

How many of these falls caused an injury? By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.

Number of falls [76 = 76 or more]
8 8 None
7 7 Don't know / Not sure
Section 16: Alcohol & Drug Use

16.1T Now on a different topic,

1 Continue

16.1 (ALCDAY4) During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage, such as beer, wine, a malt beverage or liquor?

1__ __ Days per week [range 101-107]
2__ __ Days in past 30 days [range 201-230]
8 8 8 No drinks in past 30 days [Go to PRE-NARC2]
7 7 7 Don't know / Not sure
9 9 9 Refused [Go to PRE-NARC2]

PROGRAMMER NOTE: S16Q1 not missing – assign flag16 = 1

16.2 (AVEDRNK2) One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

INTERVIEWER NOTE: A 40 ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks.

___ __ Number of drinks [range 01-76]
7 7 Don't know / Not sure
9 9 Refused

IF: ***([16.2#12-76])**

16.2CK Just to clarify, you said that you consume X drinks per day."

1 Correct as is
2 No, Re-ask question

16.3 (DRNK3GE5) Considering all types of alcoholic beverages, how many times during the past 30 days did you have [IF S11Q19=1 OR ASKGDNR2=21 OR ASKGDNR3=21 OR GENDER=21 INSERT “5” OR S11Q19=2 OR ASKGDNR2=22 OR ASKGDNR3=22 OR GENDER=22 INSERT “4”] or more drinks on an occasion?

INTERVIEWER NOTE: If asked, "occasion" means in a row or within a few hours.

___ ___ Number of times [range 01-76]
8 8 None
7 7 Don't know / Not sure
9 9 Refused
I am sorry, you said that in the past month there were \:s16q3: occasions when you had [IF S11Q19=1 OR ASKGNDR2=21 OR ASKGNDR3=21 OR GENDER=21 INSERT “5” OR S11Q19=2 OR ASKGNDR2=22 OR ASKGNDR3=22 OR GENDER=22 INSERT “4”] or more drinks.

Is this correct?

1  Correct as is
2  No, Re-ask question

//ASK ALL//

16.5  Have you ever used marijuana or hashish?

1  Yes
2  No [Go to next section]
7  Don't Know/Not Sure [Go to next section]
9  Refused [Go to next section]

//ASK IF 16.5=1//

16.6  During the past 30 days, on how many days did you use marijuana or hashish?

___ ___ Number of days [1-30]
88  None [Go to next section]
77  Don't know/Not sure
99  Refused

//ASK IF 16.6=1-30 OR 77 OR 99//

16.7  When you used marijuana or hashish during the past 30 days, was it for medical reasons to treat or decrease symptoms of a health condition, or was it for non-medical reasons to get pleasure or satisfaction (such as: excitement, to “fit in” with a group, increase awareness, to forget worries, for fun at a social gathering).

1  Only for medical reasons to treat or decrease symptoms of a health condition
2  Only for non-medical purposes to get pleasure or satisfaction
3  Both medical and non-medical reasons
7  Don’t know/Not sure
9  Refused

Section 17: Women’s Health

CATI note: If respondent is male, go to the next section.

//ASK IF 11.19=2 OR ASKGNDR2=22 OR ASKGNDR3=22 OR GENDER=22//
The next questions are about women’s health.

Continue

17.1 (HADPAP2)
A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

1 Yes [Go to pre-HADMAM instruction]
2 No [Go to pre-HADMAM instruction]
7 Don’t know / Not sure [Go to pre-HADMAM instruction]
9 Refused [Go to pre-HADMAM instruction]

17.2 (LASTPAP2)
How long has it been since you had your last Pap test?

Read only if necessary:
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

Do not read:
7 Don’t know / Not sure
9 Refused

Pre-HADMAM CATI Instruction: Go to next section if respondent age less than 40 years. Otherwise proceed.

17.3 (HADMAM)
A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?

1 Yes [Go to next section]
2 No [Go to next section]
7 Don’t know / Not sure [Go to next section]
9 Refused [Go to next section]

17.4 (HOWLONG)
How long has it been since you had your last mammogram?

Read only if necessary:
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago
Section 18: Colorectal Cancer Screening

CATI Note: If respondent is <45 years of age, go to next section.

18.1T The next questions are about colorectal cancer screening.

Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?

1  Yes
2  No
7  Don't know / Not sure
9  Refused

Section 19: Food Security

19.1T Next I'm going to read you two statements that people have made about their food situation. Please tell me whether these statements were OFTEN, SOMETIMES, or NEVER true for you or your household in the last 12 months.

1  Continue

19.1 “The food that we bought just didn’t last, and we didn’t have money to get more.” Was that often, sometimes, or never true for you or your household in the last 12 months?

[IF NECESSARY “Please tell me whether these statements were OFTEN, SOMETIMES, or NEVER true for you or your household in the last 12 months.”]

1  Often true
2  Sometimes true
3  Never true
7  Don’t know/Not sure
9  Refused

19.2 (19.4) “We were hungry but didn’t eat because we couldn’t afford enough food.” Was that often, sometimes, or never true for you or your household in the last 12 months?
Section 20: Discrimination

//ASK ALL//
20.1T Now I will ask about discrimination you may have experienced.
   1 Continue

//ASK ALL//
20.1 In your day-to-day life, how often do you receive poorer service than other people at restaurants or stores due to discrimination? Would you say…

[PLEASE READ]
1  Almost everyday
2  At least once a week
3  A few times a month
4  A few times a year
5  Less than once a year
6  Never

[DO NOT READ]
7  Don’t Know/Not sure
8  Refused

//ASK ALL//
20.2 In your day-to-day life, how often are you threatened or harassed due to discrimination? Would you say…

[PLEASE READ]
1  Almost everyday
2  At least once a week
3  A few times a month
4  A few times a year
5  Less than once a year
6  Never

[DO NOT READ]
7  Don’t Know/Not sure
8  Refused

[PRE-20.3 INSTRUCTION: If 20.1 OR 20.2=(1-4), then go to 20.3. Else if, go to 20.4.]
20.3 What do you think is the main reason for these experiences? Is it because of…

[PLEASE READ]

01 Your ancestry or national origins
02 Your gender
03 Your race
04 Your age
05 Your religion
06 Some aspect of your physical appearance
07 Your sexual orientation
08 A physical disability
09 Other [specify] _______________________

[DO NOT READ]

77 Don't know/ not sure
99 Refused

//ASK IF 20.3 = 09 //
20.3o ENTER OTHER SPECIFY

//ASK ALL//

20.4 Have you ever felt you were stopped by the police just because of your race or ethnic background?

1 Yes
2 No
7 Don’t know/Not sure
9 Refused

Section 21: Social Determinants

//ASK ALL//

21.1T Now I am going to ask you about other factors that can affect a person’s health. 1. Continue

//ASK ALL//

21.1 For how many years in a row have you lived in your current zip code? Please exclude time as a student living on a college or university campus.

___ Number of years [RANGE: 1-99]
666 Less than a year
777 Don’t know/not sure
999 Refused

//ASK ALL//

21.2 How safe from crime do you consider your neighborhood to be? Would you say…

[Please read:]

1 Extremely safe
2. Safe
3. Unsafe
4. Extremely unsafe

Do not read:
7. Don't know/Not sure
9. Refused

//ASK ALL//
21.4 In the past three years, did you move because you could no longer afford your home?
1. Yes
2. No
7. Don't know / Not sure
9. Refused

//ASK ALL//
21.5a In the past 12 months, have difficulties in transportation kept you from medical appointments, meetings, work or from getting things needed for daily living?
1. Yes
2. No
7. Don't know / Not sure
9. Refused

//ASK ALL//
21.6 Have you ever served time or been sentenced to serve time in a prison, jail, or other correctional facility?
1. Yes
2. No
7. Don't know / Not sure
9. Refused

Section 21A: Disability

//ASK ALL//
21.1AT Next I am going to ask you about issues with disability. 1. Continue

//ASK ALL//
21.1A Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?
1. Yes
2. No
7. Don't know/Not sure
9. Refused
21.2A Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone, such as visiting a doctor’s office or shopping?

1 Yes
2 No
7 Don't know/Not sure
9 Refused

//ASK ALL//

21.3A Do you have serious difficulty walking or climbing stairs?

1 Yes
2 No
7 Don't know/Not sure
9 Refused

Section 22: Adverse Childhood Experiences

//ASK ALL//

22.1T I’d like to ask you some questions about events that happened during your childhood. This information will allow us to better understand problems that may occur early in life, and may help others in the future. This is a sensitive topic and some people may feel uncomfortable with these questions. At the end of this section, I will offer you a phone number for an organization that can provide information and referral for these issues. Please keep in mind that you can ask me to skip any question you do not want to answer.

All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18 years of age—

//ASK ALL//

22.1 Did you ever live with a parent or caregiver who was depressed, mentally ill, or suicidal?

1 Yes
2 No
7 Don't know / Not sure
9 Refused

//ASK ALL//

22.2 Did you ever live with a parent or caregiver who was a problem drinker or alcoholic, or who used illegal street drugs or abused prescription medications?

1 Yes
2 No
7 Don't know / Not sure
9 Refused

//ASK ALL//

22.3 (ACEPUNCH)
How often did your parents or the adults in your home ever slap, hit, kick, punch or beat each other up? Would you say…

1. Never
2. Once
3. More than once

Do not read:

7. Don’t know / Not sure
9. Refused

//ASK ALL//

22.4 Did you live with anyone who had served time or was sentenced to serve time in a prison, jail, or other correctional facility?

1. Yes
2. No
7. Don’t know / Not sure
9. Refused

//If 22.1=1, or 22.2=1, or 22.3 (ACEPUNCH)=2, 22.3 (ACEPUNCH)=3, or 22.4=1//

22.3T As I mentioned when we started this section, I have a phone number for an organization that can provide information and referral for these issues. Would you like that number now? [If yes proceed:] You can dial 1-800-792-5200 to reach a referral service to locate an agency in your area.

Section 23: Physical and Sexual Violence

//ASK ALL//

23.1T The next questions deal with intimate partner abuse, physical violence, and sexual violence. I realize these are sensitive topics and some people may feel uncomfortable with these questions. Remember that your answers are strictly confidential and that you don’t have to answer a question if you don’t want to. If you believe it would not be safe for you to talk about this now, or at anytime during this part of the survey, please tell me to skip to the next topic. 1. Continue

//ASK ALL//

23.2 Physical or sexual violence includes incidents involving a stranger, acquaintance, friend, family member, or someone you are in a relationship with. By physical or sexual violence we mean being pushed, slapped or hit, made to take part in any sexual activity when you didn’t want to, or otherwise harmed by another person. During your lifetime as an adult, in other words since turning 18 years old, have you experienced any physical or sexual violence?

[Do not include situations that involve threats, but no physical violence]

1. Yes
2. No [Go to PRE-23.6]
3. Respondent requested to skip to next topic [Go to next section]
4. Respondent terminated interview at this point [Go to closing, record as a complete]
During the past 12 months, have you experienced any physical or sexual violence?

[Do not include situations that involve threats, but no physical violence]

1. Yes
2. No
7. Don’t know/Not sure
9. Refused

PRE-23.6 Now, I am going to ask you questions specifically about unwanted sex. Unwanted sex includes things like someone putting anything into your [S11Q19=2 OR ASKGNDR2=22 OR ASKGNDR3=22 OR GENDER=22] “vagina,” anus, or mouth or making you do these things to them after you said or showed that you didn’t want to.

It includes times when you were unable to give consent, for example, you were drunk or asleep, or you thought you would be hurt or punished if you refused.

23.6 Has anyone EVER had sex with you after you said or showed that you didn’t want them to or without your consent?

1. Yes
2. No
7. Don’t know/Not sure
8. Respondent asks to skip rest of section
9. Refused

23.7 Has this happened in the past 12 months?

1. Yes
2. No
7. Don’t know/not sure

Section 24: Follow-up

Finally, would you be willing to be contacted at some time in the future to participate in a follow-up survey?
1 Yes
2 No
7 Don't know/Not sure
9 Refuse

//ASK IF 23.2=1,2,3,4,7,9//

CLOSING That's my last question. Everyone's answers will be combined to give us information about the health practices of people in Boston. Thank you very much for your time and cooperation.
### Activity List for Common Leisure Activities (To be used for Section 13: Physical Activity)

#### Code Description (Physical Activity, Questions EXERACT3 and EXERACT4 above)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1</td>
<td>Active Gaming Devices (Wii Fit, Dance Dance revolution)</td>
</tr>
<tr>
<td>0 2</td>
<td>Aerobics video or class</td>
</tr>
<tr>
<td>0 3</td>
<td>Backpacking</td>
</tr>
<tr>
<td>0 4</td>
<td>Badminton</td>
</tr>
<tr>
<td>0 5</td>
<td>Basketball</td>
</tr>
<tr>
<td>0 6</td>
<td>Bicycling machine exercise</td>
</tr>
<tr>
<td>0 7</td>
<td>Bicycling</td>
</tr>
<tr>
<td>0 8</td>
<td>Boating (Canoeing, rowing, kayaking, sailing for pleasure or camping)</td>
</tr>
<tr>
<td>0 9</td>
<td>Bowling</td>
</tr>
<tr>
<td>1 0</td>
<td>Boxing</td>
</tr>
<tr>
<td>1 1</td>
<td>Calisthenics</td>
</tr>
<tr>
<td>1 2</td>
<td>Canoeing/rowing in competition</td>
</tr>
<tr>
<td>1 3</td>
<td>Carpentry</td>
</tr>
<tr>
<td>1 4</td>
<td>Dancing-ballet, ballroom, Latin, hip hop, zumba, etc</td>
</tr>
<tr>
<td>1 5</td>
<td>Elliptical/EFX machine exercise</td>
</tr>
<tr>
<td>1 6</td>
<td>Fishing from river bank or boat</td>
</tr>
<tr>
<td>1 7</td>
<td>Frisbee</td>
</tr>
<tr>
<td>1 8</td>
<td>Gardening (spading, weeding, digging, filling)</td>
</tr>
<tr>
<td>1 9</td>
<td>Golf (with motorized cart)</td>
</tr>
<tr>
<td>2 0</td>
<td>Golf (without motorized cart)</td>
</tr>
<tr>
<td>2 1</td>
<td>Handball</td>
</tr>
<tr>
<td>2 2</td>
<td>Hiking – cross-country</td>
</tr>
<tr>
<td>2 3</td>
<td>Hockey</td>
</tr>
<tr>
<td>2 4</td>
<td>Horseback riding</td>
</tr>
<tr>
<td>2 5</td>
<td>Hunting large game – deer, elk</td>
</tr>
<tr>
<td>2 6</td>
<td>Hunting small game – quail</td>
</tr>
<tr>
<td>2 7</td>
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XIII. APPENDIX C: SAS OUTPUT FOR CALCULATING WEIGHTS

RAKING WITH TRIMMING WEIGHT BY INDIVIDUAL AND GLOBAL CAP VALUE METHOD

Sample size of completed interviews: 3001
Raking input weight adjusted to population total: W3B_ATPT
Mean value of raking input weight adjusted to population total: 173.99
Minimum value of raking input weight: 9.99
Maximum value of raking input weight: 2719.96
Coefficient of variation of raking input weight: 0.87

Global low weight cap value (GLCV): 21.75
Global low weight cap value factor: Mean input weight times 0.125
Global high weight cap value (GHCV): 1043.91
Global high weight cap value factor: Mean input weight times 6
Individual low weight cap value (ILCV) factor: Respondent's weight times 0.2
Individual high weight cap value (IHCV) factor: Respondent's weight times 5

Number of respondents who have an individual high weight cap value less than the global low weight cap value (GLCV used in weight trimming): 0
Number of respondents who have an individual low weight cap value greater than the global high weight cap value (GHCV used in weight trimming): 0

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Weighted Distribution Prior To Raking. Iteration 0

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**** Program terminated at iteration 9 because all current percents differ from target percents by less than .001 ****

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Weighted Distribution After Raking

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Number of Respondents Who Had Their Weights Decreased by the Trimming: 79
Number of Respondents Who Had Their Weights Increased by the Trimming: 492

Raking output weight: w4b

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