September 17, 2018

2017 Ohio Medicaid Assessment Survey

Methodology Report

Prepared for

Ohio Colleges of Medicine Government Resource Center
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RTI INTERNATIONAL

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Introduction

1.1 Project Overview

The Ohio Department of Medicaid (ODM), the Ohio Department of Health (ODH), the Ohio Colleges of Medicine Government Resource Center (GRC), The Ohio State University (OSU), and other State of Ohio health-associated agencies teamed with RTI International to conduct the 2017 Ohio Medicaid Assessment Survey (OMAS), the latest in a series of surveys dating back to 1998.[1] Similar to earlier iterations of the OMAS and its predecessor, the Ohio Family Health Survey (OFHS), the 2017 OMAS collected data on the health status, health insurance status, health care access and utilization, health risks, and demographics of Ohioans to help the Ohio Medicaid program and other state programs operate efficiently and effectively. Specifically, the 2017 OMAS

- Provides data comparable to earlier versions of the OMAS and OFHS conducted in 2015, 2012, 2010, 2008, and 2004,[2] to assess changes over time.
- Informs policies that serve Ohio's Medicaid and potentially Medicaid-eligible populations.
- Helps policy makers assess the impact of recent changes in Ohio's economic climate, the health care marketplace, and government programs related to health care reform on Ohioans' health status and access to care.
- Helps policy makers evaluate the health risks of Ohioans.

The 2017 OMAS was fielded from July through December 2017. Interviewers collected data via telephone surveys in randomly selected Ohio households with landline telephones and Ohio individuals with cell phones. Interviewers administered the survey to a randomly selected adult or adult proxy in case of interview difficulties and, if applicable, an adult proxy on behalf of a randomly selected child (18 years of age or younger).

Representatives from the ODM, GRC, OSU, ODH, the Ohio Department of Developmental Disabilities, the Ohio Department of Aging, the Ohio Department of Mental Health and Addiction Services, and RTI formed a working group called the OMAS Executive Committee (OMAS EC). The OMAS EC met in early 2017 to initiate the project and review methodological procedures for implementing the OMAS. This collaboration continued through weekly meetings, ongoing reporting of results, and co-development of the survey instruments and methodological procedures for data capture, cleaning, and reporting.

The OMAS EC was concerned with maintaining methodological continuity between the 2017 OMAS and earlier iterations of the survey and maintaining a high standard for quality assurance in project

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[1] From 1998 to 2010, these surveys were referred to as the Ohio Family Health Survey (OFHS). The name was changed with the 2012 survey to reflect the role of Ohio Medicaid in funding and leading the survey effort.

[2] Because of methodological differences between the two studies, we do not recommend comparing results from the 2017 OMAS with the 1998 OFHS.

procedures to preserve the validity of the data collected. This report describes the procedures involved in achieving these objectives.

1.2   Design Overview and Important Changes from Prior Iterations

1.2.1 Design Overview

The 2017 OMAS adult and child questionnaires covered several topics regarding the health and health insurance status of Ohio residents. Topics included the following:

- type of health insurance coverage, if any;
- general physical, mental, and dental health status;
- diagnosis of select health conditions;
- health care use and needs;
- perceptions of health care quality;
- access to health care; and
- health-associated demographics.

The survey consisted of two main sections—one for the randomly selected adult in the household and a second for an adult proxy responding for a randomly selected child under the age of 19, if one was presently residing in the adult respondent's household. Consistent with prior iterations of OMAS, the age at which one was considered a child for purposes of household enumeration and administration of the child survey instrument was 18 years of age and younger for the 2017 OMAS. This keeps the child age classification in line with the Ohio Medicaid program eligibility rules.

The sample design for the 2017 OMAS was a complex design consisting of landline and cell phone numbers. This design is explained in Section 2, Sampling.

1.2.2 Important Changes from Prior Iterations

The 2017 OMAS incorporated several design enhancements to increase the accuracy and precision of the survey estimates or reduce item nonresponse. The enhancements included

- increasing proportion of respondents from the cell phone frame to at least 70% (previously 50% in 2015 OMAS);
- incorporating Ohio residents with out-of-state cell phone numbers into the sampling population;
- eliminating the Asian and Hispanic surname list samples;
- incorporating the 2015 cell phone respondent sample in the Rate Center Plus Method (Berzofsky, Scruggs, et al. 2017) to better target counties on the cell phone frame;
- fully implementing the use of Cellular Working Identification Number Service (Cell-WINS) to the efficiency of the cell phone sample;
- including the number of dual enrollees in Medicaid and Medicare as a control total in the creation of the final survey weights (WT_A);

- ▪ altering the definition of type of insurance (I_TYPE_A_IMP) such that it no longer assigns Medicaid coverage based on the response to item B4H; and

- ▪ converting the household income section to be a categorical set of items rather than asking about a household's exact income amount.

Details of these enhancements are in the relevant sections of this report.

1.3   Institutional Review Board Determination

Because the 2017 OMAS involves collecting data about adult respondents and child respondents via an adult proxy, study documents, including the design, research protocol, and questionnaires, were delivered to the institutional review boards (IRBs) at OSU and RTI. The IRBs reviewed materials and spoke with the principal investigators (PI) at OSU and GRC and the project director at RTI to assess whether the 2017 OMAS fell under their respective responsibilities for protecting human subjects in sponsored research. The IRBs determined that the 2017 OMAS was research in support of governmental agency programs (research-for-hire), which under federal code does not necessarily require IRB oversight. Members of the OSU IRB did agree that GRC in collaboration with ODH would field and respond to respondents' calls about the survey, including complaints and requests for information and that GRC and ODH staff taking such calls would report any concerns to the OSU and RTI IRBs.

2

Sampling

2.1 Objectives of the Sample Design

The 2017 OMAS employed a five-pronged design consisting of the following:

1. A list-assisted random-digit-dialing (RDD) sample of landline numbers;
2. A high, medium, and low incidence African American RDD supplemental sample (landline African American oversample);
3. A stratified random sample of cell phone numbers by rate center county (cell phone sample);
4. A statewide sample of residents with an out-of-state area code cell phone number from Marketing System Group's (MSG's) Consumer Cellular Database; and
5. A random sample of telephone numbers from a rate center in West Virginia with a high propensity of Ohio residents (as a trial substudy).

2.2 Sampling Plan

The OMAS sampling plan was a probability-based design with known probabilities of selection at each stage of selection. This design allows for inference to be made for the entire State of Ohio and select metropolitan counties and various subpopulations and regions of interest.

As we describe in this section, five separate samples were allocated to meet the 2017 OMAS goals. New to the 2017 OMAS was the addition of samples consisting of out-of-state cell phone numbers. With the increase of allocating 70% of respondents to the cell phone frame (up from 50%), the potential for bias because of coverage error has increased. Although the exact percentage of Ohio residents with an out-of-state cell phone telephone number is not known, estimates based on the MSG Consumer Cellular Database place the average at 3%, with some counties having more than 40% of the cell phone population with an out-of-state cell phone number. Therefore, to minimize the potential for coverage bias, the population of Ohio residents with out-of-state cell phone numbers was incorporated into the design. The 2017 OMAS sample was used to determine whether differences existed between cell phone residents with in-state and out-of-state cell phone numbers (Berzofsky et al., forthcoming).

For each of the five designs discussed previously, *Table 2-1* summarizes the starting quantity of phone numbers that were selected and the number of completed interviews for each sample type.

Table 2-1.   Proposed Sample Sizes by Type of Sample

Type of Sample	Sample Size from Vendor	Target Number of Completed Interviews	Actual Number of Completed Interviews[a]
Base cell phone sample	1,475,851		29,450
Out-of-state cell phone sample (MSG Consumer Cellular Database)	109,000	25,200	1,370
Out-of-state cell phone sample (West Virginia rate center)	13,500		45
Base landline sample	468,477	7,552	6,719
Landline African American oversamplea	210,668	3,248	2,127
Total	2,277,496	36,000	39,711

[a] Number selected in the high-density African American strata in the five metropolitan counties (excluding Summit and Stark counties, which lacked high-density African American exchanges). The high-density African American strata are defined as the exchanges with the largest density of African Americans. Density was determined based on Census data for the geographic areas served by exchanges (see ***Section 2.4.4***). The exact density cut-point varied across the five major metropolitan counties: Cuyahoga, Franklin, Hamilton, Lucas, and Mahoning. As noted above, for the 2017 OMAS the Hispanic and Asian oversamples were eliminated because of (1) the predominance of these populations to use cell phones; (2) the difficulty of geographically targeting race/ethnicity to cell phone ownership; and (3) the increase of the cell phone sample for the OMAS – over 70% of collected sample.

2.3   Population of Interest

The target population for the OMAS was the total noninstitutionalized adult and child populations residing in residential households in Ohio. Excluded from this population were adults and children who met at least one of the following criteria:

- in penal, mental, or other institutions;

- living on military bases covered by dedicated central office codes;

- living in other group quarters such as dormitories, barracks, convents, or boarding houses (with 10 or more unrelated residents);

- contacted at their secondary residence during a stay of fewer than 30 days;

- living in Ohio for less than a month;

- without access to a residential phone (landline or cell phone);

- who did not speak English or Spanish well enough to be interviewed; and

- with physical or mental impairments that prevented a respondent from completing an interview (as defined by the interviewer or by another member of the household) if a knowledgeable proxy was not available.

2.4 Sampling Frames

The 2017 OMAS used a multiple-frame approach consisting of four distinct frames. The four frames consisted of (1) a list of all cell phone numbers with an Ohio area code; (2) a list of identified Ohio residents with an out-of-state cell phone number in the MSG Consumer Cellular Database; (3) a list

of cell phone numbers in the West Virginia rate center WVHNTNGTNZN1; and (4) a list of all landline numbers. The 2017 OMAS used an overlapping design, whereby dual users (i.e., people who can be reached on either a cell phone or a landline phone number) can enter the survey through either phone type.[3]

2.4.1 Cell Phone Frame

For the cell phone sample, the Telcordia Local Exchange Routing Guide was used to identify the cell phone 1,000-blocks in Ohio. As described in detail in *Section 2.5*, each 1,000-block was assigned to a rate center county for stratification purposes.

2.4.2 Marketing Systems Group Consumer Cellular Database Frame

For Ohio residents who have an out-of-state cell phone number (i.e., a telephone with an area code not assigned to Ohio), those with an out-of-state cell phone number in the MSG's Consumer Cellular Database were identified. The Consumer Cellular Database is not necessarily a representative set of Ohio residents. Therefore, those listed in the database with an out-of-state cell phone number may not be representative of all residents of Ohio with an out-of-state cell phone number.

2.4.3 West Virginia Cell Phone Rate Center

People with a phone number assigned to the West Virginia rate center WVHNTNGTNZN1 were sampled and screened for Ohio residence. Based on information from the Consumer Cellular Database, a large portion of people with phone numbers in this rate center resided in Ohio—especially in Lawrence County (southern Ohio).

2.4.4 Landline Frame

The landline samples for the OMAS consisted of a random sample of telephone numbers from all current operating telephone exchanges in Ohio. MSG's Genesys Sampling system was used to generate the full set of 100-blocks in Ohio—100-blocks refers to groupings of 100 phone numbers based on the area code, exchange, and next two numbers (e.g., *614-366-31XX* is a 100-block). Listed landline information is used to assign 100-blocks to counties and ZIP codes, allowing sampling statisticians to target a sample.

2.5 General Sample Design

The 2017 OMAS was a stratified simple random sample of telephone numbers in Ohio. The 2017 OMAS sample design needs to support estimation at the following geographic levels:

- State
- Medicaid region
- County type

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[3] If reached on both phones, the person was ineligible on the second phone type for which they were contacted. Because of the large number of phone numbers on each frame, the likelihood of being reached on both phone types is small.

- County

To support estimation at each of these levels, the 2017 OMAS targeted 36,000 completed interviews.

In determining an optimal allocation, several design allocations were considered. The design considerations took into account achieving a minimum number of completed interviews in each analysis stratum while minimizing the design effects at each level of analysis. In addition, the design considerations took into account the potential need to use small area estimation to produce estimates for some outcomes when the number of respondents endorsing an outcome of interest is smaller than desired. The design analysis followed the methods detailed in Berzofsky et al. (2015).

Given the shift in the type of telephone used in Ohio—81.3% identify as cell phone only, cell phone mostly, or dual telephone users (National Center for Health Statistics [NCHS], 2017), with a greater proportion of minorities, low income, and households with children shifting to cell phones (Lu et al., 2014)—the 2017 OMAS shifted to a predominantly cell phone sample allocation. The 2017 OMAS targeted 70% of desired interviews to come from phone numbers on the cell phone frame and 30% from the landline frame. This translates to 25,200 respondents from the cell phone frame and 10,800 respondents from the landline frame. This allocation is an increase over the 2015 OMAS, which allocated 50% of the desired number of respondents to the cell phone frame; the 2012 OMAS, which allocated 25% of desired respondents to the cell phone frame; and the 2008 OFHS, which allocated less than 5% of the desired number of respondents to the cell phone frame.

Within each phone type, the sample was distributed across five broad categories: three categories in the cell phone sample and two categories in the landline sample. For the cell phone sample, these categories include (1) the base cell phone sample, (2) the MSG Consumer Cellular Database, and (3) the West Virginia rate center. For the landline sample, the categories include (1) base landline sample and (2) African American oversample. The base cell phone and landline frames were stratified even further to help ensure estimation at each geographic level of interest. Across both frames, 189 unique strata were formed in the 2017 OMAS. Details on the stratification and allocation within the cell phone frame are in *Section 2.6*. Details on the stratification and allocation within the landline frame are in *Section 2.7*.

2.6   Cell Phone Sample

The 2017 OMAS targeted 25,200 completed interviews to come from the cell phone frame. This section describes how the sample was stratified and allocated.

2.6.1   Stratification

The cell phone frame was stratified into 93 unique geographic areas at the county and subcounty levels. Counties were defined using *rate center areas*. A rate center area is the area in which a cell phone was activated. Rate center areas are not bound by traditional geographic boundaries (e.g., county borders); rather they are areas surrounding an activation center. Denser areas with more activation centers will have more rate center areas. More rural areas will have fewer rate center areas. A rate center area is assigned to a county based on where the majority of the rate center population resides. Therefore, a county can

contain multiple rate centers or no rate centers.[4] These areas can be grouped to form strata based on the county for which the majority of the rate center population resides (i.e., rate centers can be assigned to a county). The collection of rate centers to form a county is called a *rate center county*. Although not a perfect match, rate center counties are correlated to the county for which the cell phone owner resides. Each rate center county was its own stratum (86 strata)—Ohio has 88 counties[5].

Five additional strata were created for the out-of-state cell phone number samples. The out-of-state cell phone number strata include (1) telephone numbers contained in the MSG Consumer Cellular Database stratified by county type (metro, suburban, rural non-Appalachian, rural Appalachian) and (2) telephone numbers assigned to a rate center in West Virginia, which was identified as having a high rate of Ohio residents. Including out-of-state cell phone numbers is new to the 2017 OMAS. These strata were added to minimize potential coverage bias in the cell phone frame.

2.6.2 Base Cell Phone Sample

The base cell phone sample was allocated across 86 cell phone strata. To achieve the estimation goals of the 2017 OMAS, a minimum number of interviews per stratum was set at 85 completed interviews in each county. Initially, the cell phone sample was allocated proportionally across the 88 strata based on the number of cellular-dedicated 1,000-blocks in each stratum. If the proportional allocation resulted in a targeted sample size less than 75, the sample size was set at 75. Using a raking procedure, the sample size in the other strata was reduced not to exceed the total number of desired interviews.

Furthermore, because of the classification error between a cell phone number's assigned rate center and the actual county a respondent resides in, the *Rate Center Plus* allocation method was used (see Berzofsky, Scruggs, Speizer, Peterson, et al., 2017). The Rate Center Plus method uses the prior OMAS to create a classification error matrix by which the conditional probabilities of a number being assigned to a rate center given the desired county the respondent is from was calculated. These probabilities were used to convert the desired number of interviews in each county to a rate center county for sample selection.

2.6.3 MSG Consumer Cellular Database Sample

The MSG Consumer Cellular Database sample was used to sample all telephone numbers with a non-Ohio area code stratified by county type. The sample was allocated proportionally based on the number of out-of-state cell phone numbers in each county type. A simple random sample of out-of-state cell phone numbers was selected from the Consumer Cellular Database within each stratum.

2.6.4 West Virginia Cell Phone Sample

The West Virginia cell phone sample was a simple random sample of telephone numbers assigned to the WVHNTNGTNZN1 rate center. Only people residing in Ohio were eligible for the study.

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[4] In Ohio, two counties—Carroll County and Vinton County—do not have any rate center areas assigned to them.
[5] Two Ohio counties—Carroll and Vinton do not have a rate center assigned to their county and, therefore, do not have a cellphone stratum.

If a respondent indicated he or she lived in West Virginia (or any other state other than Ohio), the interview was terminated.

2.6.5 Sample Selection

The sample selection method varied by the type of cell phone sample. For the base cell phone sample, a stratified random sample of phone numbers from cellular-dedicated 1,000-blocks was selected. Within each stratum, the allocated number of phone numbers was selected using a simple random sample. For the MSG Consumer Cellular Database sample, a simple random sample of eligible telephone numbers was selected. For the West Virginia sample, a simple random sample of telephone numbers in the rate center was selected.

2.7   Landline Sample

The 2017 OMAS targeted 10,800 completed interviews to come from the landline frame. This section describes how the sample was stratified and allocated.

2.7.1 Stratification

The landline frame was stratified into 96 unique strata at the county and subcounty levels. The nonmetropolitan counties plus Stark and Summit counties were each a stratum (83 strata). Each of the remaining five metropolitan counties[6] was further split into either two or three strata based on the density of African Americans living in the Census tract (13 strata).[7] Unlike prior OMAS studies, there was no explicit strata created for Asian or Hispanic people.[8]

2.7.2 Base Landline Sample

The base landline sample was allocated across the 96 landline strata. To achieve the estimation goals of the 2017 OMAS, a minimum number of interviews per stratum was set at 15 completed interviews in each county. The initial allocation was based on the number of landline numbers in each stratum. If, based on a proportional allocation, fewer than 15 interviews were allocated, the sample size was set to 15. A raking procedure was used to reduce the sample allocation in the other strata. Although other studies have found that listed households have a higher propensity of responding (i.e., if they are more willing to publish their phone number, they are more likely to answer and respond to a survey), they are very likely different from unlisted households on key health and demographic characteristics (Tarnai, Schultz, & Moore, 2009). Therefore, because the potential increase in bias was large, listed households were not oversampled.

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[6] The five metropolitan counties are Cuyahoga, Franklin, Hamilton, Lucas, and Montgomery.

[7] Cuyahoga, Franklin, and Montgomery counties were split into three strata. Hamilton and Lucas counties were split into two strata.

[8] Based on review of the 2015 sample, the increase in allocation to the cell phone frame was expected to make up for the exclusion of the Asian and Hispanic oversamples while improving precision by not oversampling a small number of counties.

2.7.3 African American Oversample

One key goal of the OMAS was to produce reliable probability-based estimates of the African American population. To achieve this, an oversample of telephone numbers in the five high-density African American counties[9] (Cuyahoga, Franklin, Hamilton, Lucas, and Montgomery) was conducted.[10] An oversample of African Americans in these counties was needed to achieve a reliable estimate because African Americans in Ohio are heavily concentrated in these five counties, requiring the large majority of African American respondents to come from these metropolitan counties.

Because of the desire to produce an African American estimate for each of the five largest urban counties, a balanced allocation of the African American oversample was used. In each county for which African Americans had a population density large enough to create substrata, a balance oversampling of 300 interviews was allocated to county by frame type.

On the landline frame, each county was then further stratified into either high-, medium-, and low-density or high- and low-density African American areas. *High, medium, and low density* refers to the concentration of telephone numbers associated with African American households in an exchange. Current data from Claritas were used to determine the percentage of African Americans in each telephone exchange. Phone exchanges were stratified into density-level categories (high, medium, and low density). *Table 2-2* presents the distribution of telephone numbers based on the associated percentage of African American households in the five metro counties for which on oversample was conducted. Because these distributions are not the same in each county, the definition of high, medium, and low density varied by county. The categories were created in such a way to maximize the likelihood of obtaining the desired number of African American respondents while maintaining a reasonable unequal weighting effect. Using these categories, for each county, an optimization routine was used to maximize the number of completed surveys in the high-density African American stratum while ensuring that the unequal weighting effect for the county did not exceed a specified threshold.

2.7.4 Sample Selection

In the base landline and African American oversampling strata, within each stratum, a random sample of 100-blocks was selected. This sample was selected through a list-assisted 1+block RDD method.

2.7.5 Selection of Respondents Within a Household

Among the respondents contacted through a landline, one adult (i.e., a person 19 years of age or older) was selected using the modified most recent birthday method (i.e., the adult with the most recently past birthday to the day of the interview was selected). Among those contacted through a cell phone, the owner of the phone (if 19 years of age or older) was selected. People contacted on an unexpected phone

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[9] Based on results of the 2012 OMAS, Stark and Summit counties did not have enough African American residents to make the oversampling in those counties efficient.

[10] On the landline frame, oversampling was conducted in all five counties; on the cell phone frame, oversampling was conducted only in Cuyahoga and Franklin counties.

type (i.e., a landline sample number that was a cell phone or vice versa) were considered ineligible for the study.

Table 2-2.   Number of Landline Telephone Numbers Assigned to an African American Household Within the Five Metro Counties, by Stratum Type

County	Total number of landline telephone numbers by density of African Americans in landline exchange			Maximum number of African Americans with landline telephone numbers by density of African Americans in landline exchangesf		
	Low	**Medium**	**High**	**Low**	**Medium**	**High**
Cuyahoga[a]	757,800	433,400	417,800	39,774	169,615	305,214
Franklin[b]	903,700	388,600	38,500	117,545	135,001	22,848
Hamilton[c]	809,400	N/A	47,300	216,247	N/A	29,616
Lucas[d]	429,000	N/A	67,700	69,529	N/A	41,315
Montgomery[e]	385,600	116,500	98,600	28,417	34,554	66,861

[a] Cuyahoga was split at 20% and 50%.
[b] Franklin was split at 25% and 50%.
[c] Hamilton was split at 53%.
[d] Lucas was split at 50%.
[e] Montgomery was split at 20% and 45%.
[f] The maximum number of African American households is based on assuming all estimated African Americans in each exchange having a landline telephone

Furthermore, in households with children, one child was selected using the most recent birthday method. However, rather than having the child complete a survey, a proxy adult respondent who was most knowledgeable about the child was identified to complete the survey for the child. Ideally, this adult was selected to complete the adult survey, but a different person completed the survey when the randomly selected adult indicated that he or she could not accurately respond for the child.

2.8   Starting Sample Size of Telephone Numbers

To achieve the desired number of completed interviews, a response ratio factor was applied to the desired number of completed interviews to obtain the starting number of telephone numbers that should be purchased from MSG. The ratios varied by stratum type (i.e., landline, cell phone). RTI used data from the 2015 OMAS to arrive at these average ratios. However, data from the 2015 OMAS also demonstrated that people across strata did not respond at the same rate. Therefore, RTI used the 2015 OMAS response rates to adjust the ratios used to determine the starting number of selected phone numbers for the 2017 OMAS. The adjustment applied to the average rate for 2017 was the ratio of the average 2015 response rate and the response rate within the stratum in 2015. For the landline RDD samples (i.e., base landline, African American oversample), an average response rate of 60:1 was used. For base cell phone samples (base cell phone), a ratio of 35:1 was used. For the MSG Consumer Cellular Database sample, a ratio of

25:1 was used[11]. For the West Virginia rate center sample, a ratio of 135:1 was used[12]. ***Table2-3*** shows the amount of sample purchased and released by stratum.[13]

Table 2-3.   Sample Released for Calling by Stratum

Stratum	Description	Phone Type	Sample Purchased	Sample Released[a]
1	Adams County	LL	1,114	473
2	Allen County	LL	5,369	1,138
3	Ashland County	LL	2,040	946
4	Ashtabula County	LL	4,491	1,314
5	Athens County	LL	2,275	1,584
6	Auglaize County	LL	2,335	765
7	Belmont County	LL	3,802	1,190
8	Brown County	LL	1,445	769
9	Butler County	LL	20,712	10,788
10	Carroll County	LL	1,211	423
11	Champaign County	LL	1,697	604
12	Clark County	LL	6,085	2,663
13	Clermont County	LL	10,046	5,574
14	Clinton County	LL	1,446	732
15	Columbiana County	LL	4,138	1,997
16	Coshocton County	LL	1,633	811
17	Crawford County	LL	1,791	814
18	Cuyahoga County—AA Low Density	LL	7,618	3,430
19	Cuyahoga County—AA Medium Density	LL	6,148	2,401
20	Cuyahoga County—AA High Density	LL	83,480	23,469
21	Darke County	LL	1,935	586
22	Defiance County	LL	1,783	682
23	Delaware County	LL	8,440	5,312
24	Erie County	LL	3,664	1,489
25	Fairfield County	LL	7,156	3,576
26	Fayette County	LL	1,594	562
27	Franklin County—AA Low Density	LL	7,772	3,493
28	Franklin County—AA Medium Density	LL	30,003	12,817
29	Franklin County—AA High Density	LL	34,385	8,778
30	Fulton County	LL	2,320	510
31	Gallia County	LL	1,044	382
32	Geauga County	LL	5,705	2,897
33	Greene County	LL	7,945	3,362
34	Guernsey County	LL	1,736	1,068
35	Hamilton County—AA Low Density	LL	7,525	4,791

(continued)

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[11]Lower ratio (compared to the base cell phone sample) was used because of the higher anticipated active number rate among telephone numbers in the MSG Consumer Cellular Database.

[12] A higher ratio was used because of the anticipated high level of ineligibility because of many numbers being linked to non-Ohio residents.

[13] The sample purchased includes 761,476 cases that were removed during cleaning because they were nonworking numbers and were not released.

Table 2-3.   Sample Released for Calling by Stratum (continued)

Stratum	Description	Phone Type	Sample Purchased	Sample Released[a]
36	Hamilton County—AA High Density	LL	36,157	25,200
37	Hancock County	LL	3,777	1,428
38	Hardin County	LL	1,330	418
39	Harrison County	LL	1,111	292
40	Henry County	LL	1,624	288
41	Highland County	LL	1,985	715
42	Hocking County	LL	1,290	675
43	Holmes County	LL	2,232	700
44	Huron County	LL	2,500	1,285
45	Jackson County	LL	1,079	673
46	Jefferson County	LL	2,969	1,194
47	Knox County	LL	2,836	877
48	Lake County	LL	14,259	5,679
49	Lawrence County	LL	2,914	1,277
50	Licking County	LL	8,043	3,128
51	Logan County	LL	1,248	221
52	Lorain County	LL	19,746	7,566
53	Lucas County—AA Low Density	LL	4,505	1,684
54	Lucas County—AA High Density	LL	26,219	14,446
55	Madison County	LL	2,008	981
56	Mahoning County	LL	13,104	5,861
57	Marion County	LL	2,541	1,066
58	Medina County	LL	10,484	6,333
59	Meigs County	LL	993	541
60	Mercer County	LL	1,889	706
61	Miami County	LL	4,957	2,617
62	Monroe County	LL	779	367
63	Montgomery County—AA Low Density	LL	3,206	1,255
64	Montgomery County—AA Medium Density	LL	1,219	552
65	Montgomery County—AA High Density	LL	30,427	11,262
66	Morgan County	LL	942	245
67	Morrow County	LL	2,379	445
68	Muskingum County	LL	4,068	1,156
69	Noble County	LL	1,063	649
70	Ottawa County	LL	1,889	1,005
71	Paulding County	LL	991	448
72	Perry County	LL	1,602	733
73	Pickaway County	LL	2,509	1,613
74	Pike County	LL	1,119	628
75	Portage County	LL	9,789	4,185
76	Preble County	LL	1,804	674
77	Putnam County	LL	1,642	486
78	Richland County	LL	6,838	2,300
79	Ross County	LL	3,493	924
80	Sandusky County	LL	3,190	1,417
81	Scioto County	LL	2,805	1,683

(continued)

Table 2-3.   Sample Released for Calling by Stratum (continued)

Stratum	Description	Phone Type	Sample Purchased	Sample Released[a]
82	Seneca County	LL	2,918	1,070
83	Shelby County	LL	2,160	760
84	Stark County	LL	32,477	12,537
85	Summit County	LL	43,187	17,986
86	Trumbull County	LL	12,174	3,697
87	Tuscarawas County	LL	4,071	2,130
88	Union County	LL	2,556	1,065
89	Van Wert County	LL	1,208	364
90	Vinton County	LL	1,197	654
91	Warren County	LL	13,657	6,864
92	Washington County	LL	2,229	778
93	Wayne County	LL	5,388	1,205
94	Williams County	LL	1,367	557
95	Wood County	LL	7,974	3,085
96	Wyandot County	LL	1,145	475
97	Adams County	Cell	1,419	425
98	Allen County	Cell	12,678	9,582
99	Ashland County	Cell	7,321	5,611
100	Ashtabula County	Cell	18,128	11,822
101	Athens County	Cell	17,047	8,171
102	Auglaize County	Cell	184	110
103	Belmont County	Cell	11,215	8,284
104	Brown County	Cell	4,741	3,709
105	Butler County	Cell	15,791	11,461
107	Champaign County	Cell	1,631	992
108	Clark County	Cell	10,474	7,629
109	Clermont County	Cell	4,389	3,105
110	Clinton County	Cell	4,922	3,228
111	Columbiana County	Cell	9,306	6,369
112	Coshocton County	Cell	4,483	3,273
113	Crawford County	Cell	2,232	1,432
114	Cuyahoga County	Cell	165,321	103,161
115	Darke County	Cell	7,366	5,867
116	Defiance County	Cell	7,479	5,252
117	Delaware County	Cell	7,880	5,978
118	Erie County	Cell	11,186	8,660
119	Fairfield County	Cell	9,941	7,240
120	Fayette County	Cell	2,832	2,150
121	Franklin County	Cell	134,132	80,522
122	Fulton County	Cell	792	584
123	Gallia County	Cell	4,947	3,185
124	Geauga County	Cell	3,374	2,567
125	Greene County	Cell	314	124
126	Guernsey County	Cell	9,472	6,233
127	Hamilton County	Cell	174,516	116,383
128	Hancock County	Cell	17,663	9,074

(continued)

Table 2-3.   Sample Released for Calling by Stratum (continued)

Stratum	Description	Phone Type	Sample Purchased	Sample Released[a]
129	Hardin County	Cell	3,278	1,821
130	Harrison County	Cell	3,612	2,081
131	Henry County	Cell	3,363	2,231
132	Highland County	Cell	5,754	4,347
133	Hocking County	Cell	5,362	3,675
134	Holmes County	Cell	6,231	5,026
135	Huron County	Cell	9,208	7,002
136	Jackson County	Cell	5,821	3,755
137	Jefferson County	Cell	12,015	9,008
138	Knox County	Cell	10,256	5,722
139	Lake County	Cell	59,249	48,043
140	Lawrence County	Cell	9,637	6,885
141	Licking County	Cell	10,804	7,340
142	Logan County	Cell	6,824	5,246
143	Lorain County	Cell	36,223	27,593
144	Lucas County	Cell	79,922	53,550
145	Madison County	Cell	2,415	1,760
146	Mahoning County	Cell	38,545	27,713
147	Marion County	Cell	11,877	8,624
148	Medina County	Cell	16,938	13,436
149	Meigs County	Cell	3,158	2,609
150	Mercer County	Cell	9,867	8,205
151	Miami County	Cell	4,344	3,050
152	Monroe County	Cell	3,884	2,982
153	Montgomery County	Cell	79,049	57,935
154	Morgan County	Cell	2,031	1,157
155	Morrow County	Cell	3,194	2,145
156	Muskingum County	Cell	13,379	9,628
157	Noble County	Cell	3,662	1,507
158	Ottawa County	Cell	1,783	986
159	Paulding County	Cell	2,539	1,839
160	Perry County	Cell	2,729	1,984
161	Pickaway County	Cell	5,454	3,913
162	Pike County	Cell	3,770	2,283
163	Portage County	Cell	9,241	5,409
164	Preble County	Cell	5,563	4,241
165	Putnam County	Cell	4,368	3,484
166	Richland County	Cell	13,563	10,018
167	Ross County	Cell	15,863	11,935
168	Sandusky County	Cell	7,888	5,163
169	Scioto County	Cell	18,923	13,897
170	Seneca County	Cell	5,820	3,005
171	Shelby County	Cell	8,196	6,516
172	Stark County	Cell	55,386	35,780
173	Summit County	Cell	90,124	57,835
174	Trumbull County	Cell	16,751	9,474

(continued)

Table 2-3.   **Sample Released for Calling by Stratum (continued)**

Stratum	Description	Phone Type	Sample Purchased	Sample Released[a]
175	Tuscarawas County	Cell	16,358	11,831
176	Union County	Cell	3,592	2,469
177	Van Wert County	Cell	5,228	3,882
179	Warren County	Cell	1,604	916
180	Washington County	Cell	10,653	7,519
181	Wayne County	Cell	16,476	13,905
182	Williams County	Cell	3,943	2,621
183	Wood County	Cell	4,797	3,293
184	Wyandot County	Cell	2,161	1,338
185	Out-of-state (West Virginia rate center)	Cell	13,500	6,472
186	Out-of-state—Rural Appalachian (MSG Consumer Cellular Database)	Cell	19,995	19,995
187	Out-of-state—Metro (MSG Consumer Cellular Database)	Cell	61,334	61,334
188	Out-of-state—Rural Non-Appalachian (MSG Consumer Cellular Database)	Cell	11,741	11,741
189	Out-of-state—Suburban (MSG Consumer Cellular Database)	Cell	15,930	15,930

[a]   The sample released is one of the following depending on phone type. Landline (LL): The phone numbers not identified as nonworking during the screening process. Cell phone: The phone numbers identified as having either an active or unknown activity Cell-WINS status.

2.9   Pre–Data-Collection Sample Processing

Prior to uploading the sample to the computer-assisted telephone interviewing (CATI) system, the sample phone numbers were preprocessed to remove clearly nonworking numbers. The preprocessing method was different for the landline and cell phone sample.

2.9.1   Cell Phone

The cell phone sample cannot be processed through a dialer. Therefore, to preprocess the cell phone sample and remove nonworking numbers, RTI relied on MSG Cell-WINS, which uses billing records and call usage data to flag the status of cell phone numbers. Cell-WINS classifies a number into one of three categories—active, inactive, or unknown. An active number has been used in the past month. An inactive number has not been used in the past 3 months. An unknown number has not been used in the past month or two.

Cell-WINS is relatively new. RTI evaluated the accuracy of the Cell-WINS flag in Ohio during the 2015 OMAS pilot and found that telephone numbers assigned a Cell-WINS inactive status created only a 2.4% undercoverage rate (i.e., the vast majority of telephone numbers identified as inactive truly were nonworking telephone numbers). The rate varied by county type but was always less than 5% in all county types. Berzofsky, Peterson, Speizer, Lu and Sahr (2017) presented the details and results of the experiment. Based on the findings from the 2015 survey, the 2017 OMAS used Cell-WINS throughout the data collection period.

Cell-WINS inactive telephone numbers were removed from the list of sampled telephone numbers before they were uploaded to the CATI system. To ensure the maximum accuracy of the Cell-WINS flag, replicates were not assigned a Cell-WINS status until 2 days before they were fielded. On average, Cell-WINS identified about 35% of cell phone numbers as inactive.

2.9.2 Landline

The preprocessing of the landline phone numbers had the following steps:

1. Phone numbers were entered into the Neustar system to identify phone numbers that had been ported to a cell phone. Ported numbers were removed from the landline sample and appended to the cell phone sample with their CATI call type changed.
2. The remaining phone numbers were fed into the dialer to identify nonworking numbers. Numbers that were nonworking, based on the Integrated Services Digital Network cause codes returned to the dialer, were flagged for removal. Approximately 55% of phone numbers were flagged as ineligible because they were nonworking.

Once ported and nonworking numbers were removed, the remaining phone numbers were uploaded to the CATI for data collection.

2.10 Creation of Sample Replicates

Once each sample was selected, the selected telephone numbers were grouped into replicates containing up to 100 telephone numbers on the landline frame and 50 numbers on the cell phone frame. Replicates were formed at the stratum level. Because the sample size of phone numbers selected in a given stratum was not necessarily a multiple of 100 or 50, some replicates contained fewer than the desired replicate amount. Sets of replicates were released in a manner proportional to the population distribution in the state. *Table 2-4* indicates the dates on which new replicates were released into the field and the number of telephone numbers associated with the released replicates.

2.11 Number of Respondents

The survey achieved 39,711 total interviews, including 8,397 from the landline frame and 31,314 from the cell phone frame. Across the strata, the sample achieved targeted respondent sample size goals of at least 45 interviews in each cell phone strata and only in half of the landline

Table 2-4.   Sample Released by Date

Release Date	Total Sample[a]
Landline	
5/30/2017[b]	2,450
6/12/2017	4,158
6/22/2017	6,697
7/12/2017	112,559
9/26/2017	64,529
10/12/2017	63,858
11/1/2017	29,044
Total	283,295
Cell Phone	
5/30/2017[b]	2,084
6/12/2017	4,283
6/22/2017	24,682
7/12/2017	291,769
9/26/2017	175,721
10/12/2017	284,436
11/1/2017	159,639
11/6/2017	70,513
11/29/2017	66,867
Total	1,079,994

[a] Excludes phone numbers removed before fielding (i.e., either screened nonworking phone numbers on the landline frame or Cell-WINS inactive phone numbers on the cell phone frame).

strata[14]; combined, all but four counties (Harrison, Morgan, Noble, and Vinton) achieved the targeted goal of 90 completed interviews. *Table 2-5* presents the number of completed interviews in each county by phone type.

Table 2-5. Completed Interviews by County and Telephone Type

Ohio County	Landline	Cell Phone	Total
Adams County	23	86	109
Allen County	53	337	390
Ashland County	20	203	223
Ashtabula County	72	319	391
Athens County	35	234	269
Auglaize County	24	152	176
Belmont County	73	285	358
Brown County	25	195	220
Butler County	247	767	1,014
Carroll County	25	86	111
Champaign County	33	109	142
Clark County	120	300	420
Clermont County	134	479	613
Clinton County	15	151	166
Columbiana County	77	309	386
Coshocton County	42	154	196
Crawford County	35	125	160
Cuyahoga County	787	2,598	3,385
Darke County	42	202	244
Defiance County	15	147	162
Delaware County	113	484	597
Erie County	45	231	276
Fairfield County	139	360	499
Fayette County	27	108	135
Franklin County	995	3,009	4,004
Fulton County	20	90	110
Gallia County	21	91	112
Geauga County	85	221	306
Greene County	141	439	580
Guernsey County	45	204	249
Hamilton County	474	1,999	2,473
Hancock County	46	329	375
Hardin County	17	107	124
Harrison County	20	67	87
Henry County	12	94	106
Highland County	27	160	187

(continued)

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[14] The landline strata that did not obtain their target sample size were Adams, Ashland, Athens, Auglaize, Brown, Carroll, Champaign, Clinton, Coshocton, Crawford, Darke, Defiance, Fayette, Fulton, Gallia, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Logan, Madison, Marion, Meigs, Mercer, Monroe, Morgan, Morrow, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Preble, Putnam, Seneca, Union, Van Wert, Vinton, Williams, and Wyandot.

Table 2-5.   Completed Interviews by County and Telephone Type

Ohio County	Landline	Cell Phone	Total
Hocking County	26	105	131
Holmes County	20	155	175
Huron County	34	196	230
Jackson County	23	147	170
Jefferson County	55	223	278
Knox County	46	240	286
Lake County	160	588	748
Lawrence County	63	284	347
Licking County	163	426	589
Logan County	20	173	193
Lorain County	204	697	901
Lucas County	191	1,179	1,370
Madison County	21	107	128
Mahoning County	171	572	743
Marion County	43	312	355
Medina County	93	416	509
Meigs County	27	114	141
Mercer County	22	183	205
Miami County	77	235	312
Monroe County	23	107	130
Montgomery County	509	1,403	1,912
Morgan County	22	66	88
Morrow County	26	144	170
Muskingum County	80	311	391
Noble County	20	66	86
Ottawa County	20	114	134
Paulding County	22	84	106
Perry County	33	129	162
Pickaway County	36	158	194
Pike County	21	102	123
Portage County	119	278	397
Preble County	32	135	167
Putnam County	31	130	161
Richland County	95	335	430
Ross County	88	337	425
Sandusky County	50	173	223
Scioto County	71	353	424
Seneca County	34	153	187
Shelby County	45	201	246
Stark County	364	794	1,158
Summit County	451	1,244	1,695
Trumbull County	119	395	514
Tuscarawas County	64	309	373
Union County	26	161	187
Van Wert County	6	139	145
Vinton County	20	55	75
Warren County	167	489	656

(continued)

Table 2-5.   Completed Interviews by County and Telephone Type

Ohio County	Landline	Cell Phone	Total
Washington County	64	342	406
Wayne County	60	506	566
Williams County	16	110	126
Wood County	66	318	384
Wyandot County	14	90	104
Total	8,397	31,314	39,711

Questionnaire

3.1 Instrument Content

The 2017 OMAS questionnaire consisted of two main sections: an adult section and a child section. Within each section were separate modules focusing on topics such as health insurance coverage, health status, health care utilization, and health care access. ***Table 3-1*** is a summary of each questionnaire section.

Table 3-1. Questionnaire Content by Section

Questionnaire Section	Contents of Section
Introduction and Screener Questions for Main Sample	Section asked respondents to • Identify themselves and describe the purpose for the call. • Give general information about the survey. • Determine the number of people in the household (landline only) and the family. • Select a member of the household age 19 or older with the most recent birthday (landline only). • Determine respondents' ability to answer questions about their health insurance coverage. • Offer some initial background information about the study.
Currently Insured (Adult)	Topics covered include • type of insurance coverage, • source of coverage, • length of coverage, • previous coverage, and • respondent's lack of coverage in the past.
Currently Uninsured (Adult)	Respondents who were currently uninsured were asked about • the last time they had insurance, and • type and source of their previous health insurance.
Health Status and Care-Giving (Adult)	Questions focused on respondents' • general physical and mental health; • current and past health care conditions; • need for assistance in day-to-day activities, special therapy, and treatment or counseling; • use of tobacco products and alcohol; and • current pregnancy (female respondents age 19–44 years only).
Utilization and Quality of Adult Health Care Services (Adult)	Section asked respondents • when they last visited a doctor, • when they last saw a dentist, • number of times spent in a hospital overnight, and • how many times they had to go to the emergency room.

(continued)

Table 3-1.   Questionnaire Content by Section (continued)

Questionnaire Section	Contents of Section
Access to Care and Unmet Needs (Adult)	Topics covered include ▪ where respondents usually went for health care, ▪ whether they had a personal doctor or nurse, ▪ characteristics of the care received at their usual place of care, ▪ whether they needed professional help coordinating health care and how often they received help, ▪ whether they needed to see a specialist within the past 12 months, ▪ their ability to access dental care, ▪ whether they experienced difficulty in getting needed prescriptions and other health care because of cost, ▪ use of prescription pain medications, ▪ ease of accessing care compared to 3 years ago, and ▪ economic stressors related to health care, including ability to pay medical bills.
Employment	Respondents were asked about ▪ their job status and whether they were currently employed; ▪ a description of their workplace setting, health insurance offered by their employer, the number of hours they worked; and ▪ the number of people employed at their current place of business.
Demographics and Family (Adult)	Demographic questions in this section included ▪ marital status, ▪ spouse/partner's employment status, ▪ education, ▪ race and ethnicity, ▪ income, ▪ number of telephone numbers within the household, and ▪ whether there was any lack of telephone service within the past 12 months.
Screening Questions for Eligible Child	The first section of the child questionnaire asked adults about ▪ the selected child's age and gender, ▪ their relationship to the child, ▪ their ability to answer questions about the child's health insurance coverage (landline only), and ▪ the selected child's current insurance status.
Insurance Coverage (Child)	If the selected child had insurance, the interviewer asked the adult proxy a variety of questions, such as ▪ type, ▪ source, ▪ period of time the child had been covered, ▪ previous coverage, and ▪ any possible lack of coverage in the past.
Currently Uninsured (Child)	If the selected child was uninsured at the time of the interview, the interviewer asked the adult proxy about the ▪ last time the child had insurance, ▪ type and source of the previous insurance, and ▪ whether anyone tried to get Medicaid coverage for the child or reasons the child no longer had Medicaid coverage (if previously covered).

(continued)

Table 3-1.   **Questionnaire Content by Section (continued)**

Questionnaire Section	Contents of Section
Health Status (Child)	Questions in this section focused on the child's ▪ general and physical health, ▪ consumption of 100% fruit juice and sugar-sweetened beverages (children 0–5 years only), ▪ use of prescription drugs and health services, ▪ ability to do age-appropriate activities, and ▪ need for special therapy, treatment, or counseling.
Utilization and Quality of Health Care Services (Child)	For this section, the interviewer asked respondents about ▪ the child's doctor , vision and dental visits and ▪ whether the child had any visits to an emergency room.
Access to Care (Child)	Interviewers asked respondents about ▪ where the child usually goes to receive health care, ▪ whether the child has a personal doctor or nurse, ▪ characteristics of the care the child received at their usual place of care, and ▪ whether the adult needed professional help coordinating the child's health care and how often the adult received help.
Unmet Health Needs (Child)	This section of the survey asked about ▪ unmet dental care.
Demographics (Child)	Demographic items included the child's ▪ race and ethnicity and ▪ the employment status of his or her parents.
Weighting Questions	The following questions from the adult interview were used in the weighting process: ▪ How many phone lines do you have? ▪ How many people live in the household? (landline only) ▪ Do you have a cell phone (for landline respondents) or landline phone (for cell phone respondents)? ▪ How many landline numbers/cell phones do you have?

3.2 Survey Instrument Development

The OMAS has an executive committee (EC) that oversees and governs the OMAS project content, methodological approach, and analyses. A major obligation of the OMAS EC is to collaborate on developing the survey questionnaire. The research team initiated the process by reviewing the survey instruments used in the 2015 and 2012 OMAS and the 2004–2010 OFHSs with the sponsoring state agencies to assess which items would remain and which would be removed and what new items would be necessary to meet the agencies' current needs. These needs were incorporated into sections consisting of current insurance status, health status and caregiving, utilization and quality of health care services, access to care and unmet needs, employment status, and demographic information for adults and children.

The OMAS EC elected to revise the questions that addressed monthly and yearly income to be categorical rather than continuous. The question was structured in a way that respondents would stop the surveyor at the point where they read their income category. The categories read to a respondent were based on the respondent's family size and corresponded the percentage of the federal poverty–level categories (e.g., less than 100% of poverty, 100% to 150% of poverty). If a respondent did not want to

place their income level within an income category, they were asked to indicate if their household income was above or below a certain amount.

After the OMAS EC had developed a working draft of the adult and child instruments, RTI project staff helped finalize the instrument and prepare it for pilot testing. RTI staff examined the instruments for ease of administration and response, wording and response categories for new items, transitions and overall survey flow, skip patterns and item-specific logic, and actual survey length versus the budgeted length restrictions.

RTI received a draft version of the questionnaire from the OMAS EC in late spring 2017, with the goal of programming, testing, and finalizing the survey for a pilot test in late June. RTI's project team

- reviewed the initial questionnaire item by item to assess question construction, order, and structure;

- discussed each section of the survey instrument and prepared preliminary training materials;

- contributed items developed by RTI from other surveys to replace employment-related items that were not deemed adequate based on prior iterations of the OMAS/OFHS;

- compiled a comprehensive assessment of recommended revisions to the 2015 OMAS and prior instruments, identifying problems that the project team believed the instrument posed for data collection and presented strategies for resolving those problems;

- prepared the next version of the questionnaire based on project team suggestions and strategies; and

- conducted a pilot test to develop a comprehensive assessment of recommended revisions to review with the Research Team. A detailed description of the pilot test follows.

3.3   Pilot Test

The primary objective and purpose of the 2017 OMAS pilot test was to replicate the conditions for full-scale survey data collection, to determine more accurately the survey length for both the adult and child versions of the instrument, and to further check the CATI programming, assess questionnaire flow, evaluate respondent understanding, identify potential fielding issues, and refine our understanding of interviewer training needs.

Interviewing for the pilot test started on Wednesday, June 7, 2017, and continued through Friday, June 23, 2017. All telephone interviewing occurred at the RTI CATI call center in Raleigh, North Carolina.

Pilot testing was completed using an English-only version of the instrument for both the cell phone and landline samples; the goal was to complete approximately 50 cell phone and landline interviews, stop and review the initial data, make any changes, and then compete an additional 50 cell phone and landline interviews. At the conclusion of pilot interviewing, RTI obtained 130 completed interviews. Pilot test examination included identifying and correcting overt problems such as flow patterns and respondent comprehension and examining response distributions, missing data, proportions

of "do not know" and "refused," extremely small cell sizes, survey section timings, and question series inconsistencies.

For the pilot test, RTI released 12,975 landline and cell phone sample records from across the state. RTI did not prescreen the sample with the vendor before calling, as is sometimes done, relying instead on a predictive dialer to automatically dispose of nonworking numbers and for the interviewing staff to code out businesses.

During the pilot test, the minimum interview length was 15.75 minutes and the maximum interview time was 57.58 minutes. Approximately 75% of all interviews, including households with children, were completed in less than 30.47 minutes. The total interview length was similar between landline and cell phone respondents. The mean interview time for cases administered for the adult questionnaire was 27.31 minutes, with a median time of 26.09 minutes. Approximately 75% of all adult section interviews were completed in less than 28.57 minutes. The adult questionnaire interview time was similar between landline and cell phone respondents.

The pilot included 15 cases with a child interview. The mean interview time for cases administered to both the adult and child questionnaires was 39.43 minutes, with a median time of 40.38 minutes. The minimum interview length for cases administered both the adult and child questionnaires was 28.23 minutes and the maximum interview time was 57.28 minutes. Approximately 75% of all child questionnaire interviews were completed in less than 42.43 minutes.

3.4   Cuts for Length

To bring the survey within a budgeted average of 20 minutes for adult respondents and 6 minutes per child proxy, questions were cut from both the adult and child instruments. The OMAS EC leadership developed guidelines for prioritizing questionnaire items to distinguish items that were critical to policy and program analyses from those that were less critical and therefore could be deleted. The guideline for deleted questions included time considerations (long banks of questions), whether an item would show much movement since the last wave of the OMAS, and the degree to which a question was of importance to the Ohio Medicaid program or important to examining economic impact, health risk change, and health system stress for Ohioans.

Beyond deletions, the introduction, transition, and closing statements were revised to shorten the survey and reduce break-offs. Other minor text changes were made for clarity and flow purposes. Finally, a number of small logic errors were found and corrected.

Final versions of the Adult and Child questionnaires with CATI specifications can be found in ***Appendix E: Final Questionnaires***.

4

Data Collection

4.1   Procedures

RTI used the Voxco CATI software system to program and field the 2017 OMAS. This fully integrated program provided call management and replicate controls, multilingual interviewing capabilities, monitoring, and incidence tracking. The software automatically controlled skip and fill logic as well as range checking for numeric data. The programming logic directed the questionnaire's flow and prevented an interviewer from entering data in the wrong field. On any given screen of the questionnaire, the program accepted only a predetermined range or type of response.

4.1.1   Implementation Protocol

The 2017 OMAS closely followed the Centers for Disease Control and Prevention's (CDC's) Behavioral Risk Factor Surveillance System (BRFSS) calling protocols as did prior iterations of the OMAS. The instrument maintained counters to manage protocol. The 2017 OMAS used up to a 15-attempt protocol for landline sample and up to a 10-attempt protocol for the cell phone sample.

Call Scheduling

In line with prior iterations of the survey, to encourage younger and more diverse population participation, RTI scheduled most interviewing session hours for weekday evenings, Saturdays during the day, and Sunday evenings. The target time interviewing period was between 5 p.m. and 9 p.m. respondent time on weekdays, between 10 a.m. and 9 p.m. on Saturday, and between 1 p.m. and 9 p.m. on Sundays. RTI's Research Operations Center (ROC) also scheduled shifts between 9 a.m. and 5 p.m. on weekdays for up to a maximum of 20% of total session hours, primarily to dispose of business numbers and to reach respondents who work or are otherwise unavailable in the evenings.

Number of Attempts

Interviewers made a minimum of 10 attempts to reach an eligible household and interviewed an eligible adult for each telephone number in the landline sample frame. Each call attempt was given a minimum of five rings. The attempts were rotated through weekday day, weekday evening, Saturday day, and Sunday evening shifts to maximize coverage of the residential population. Additional attempts were made when a household was reached and eligible for the study. Persistent "ring no-answers" were attempted a minimum of four times across varying days of the week. If a respondent was contacted on the last call and an interview could not be completed, another attempt was made.

Lines that were busy were called back a minimum of two times at 15-minute intervals. If the line was still busy after the third attempt, the number was attempted again on different calling occasions until the record was resolved.

Cell phone numbers were dialed a minimum of five times, which was the protocol for earlier iterations of the OMAS. To minimize the impact of call blockers and SPAM identification applications, RTI implemented an approach that used rotating telephone local numbers to contact sampled telephone numbers. The numbers pushed from the dialers were rotated daily from a core group of 30 numbers. In addition, phone numbers were screened regularly to determine if they had been identified as nuisance or SPAM numbers. Those identified were removed from the rotation.

Callbacks

The CATI system allowed two types of callbacks depending on whether the respondent could offer a specific time and date to be contacted again. A system-scheduled callback was assigned to a record that could not be given a specific date and time, and a scheduled callback was for respondents who provided a definite appointment for recontact.

Callbacks to specific respondents were entered into the computer by interviewers and handled automatically by the program. RTI's system accommodated both general and specific callbacks. For a specific appointment, the record waited until the designated time to be released. At this time, the system found the next available interviewer and delivered the record as the next call. The call history screen that accompanied each record informed the interviewer that the call was a definite appointment and described the circumstances of the original contact. General callbacks, where respondents requested that we try to reach them at a generally specified time of day ("I usually get home around 6 o'clock") were sorted and allotted automatically by the system. They were held out of the sample until the appointed hour, when they were sent to a station with an open slot for that call. They had a higher system priority than returning no-answer and busy records but a lower priority than specific callbacks.

RTI's system also accommodated restarting interrupted interviews by using a definite callback strategy. If a cooperative respondent had to terminate an interview but wanted to finish at a later time, it was possible to set a definite callback for that exact time and restart the interview where it left off. If the interviewer who began the survey was available at the prescribed time, the system sent the call back to that station.

The Voxco system automatically handled callbacks for "no answer," "busy," and "answering machine" outcomes. Repeated no answers were retried at different times of day and days of the week as follows:

- If a call between 5 p.m. and 6 p.m. resulted in no answer, the record was put in the queue to be retried between 8 p.m. and 9 p.m. of the same shift.

- If a call resulted in a busy signal, it was automatically recycled within the same shift according to a preset schedule.

- As with no answers, if a shift closed before an automatically rescheduled busy was attempted, the number was cycled to the next available calling time.

4.1.2 Household Selection

The 2017 OMAS definition for determining eligible households in the landline sample was based on prior OMAS surveys. This defines an eligible household as any residential housing unit such as an

apartment, a house, or a mobile home. Ineligible households included dormitories; hospital rooms; nursing homes; group homes; sororities and fraternities; halfway houses; shelters; prisons or barracks; businesses; or any number that reached a computer, fax line, or pay phone. If the selected respondent had not lived in Ohio for at least 1 month prior to the interview, the household was also considered ineligible.

4.1.3 Respondent Selection

After a household was determined to be eligible, household members were verified as being eligible; eligibility included all related adults (19 years of age or older), unrelated adults, roommates, and domestic workers who considered the household their home. Household members did not include adult family members who were living elsewhere at the time of the interview.

The 2017 OMAS used the "most recent birthday method" to randomly select a respondent for an interview. Interviewers asked the person answering the screening questions to identify the adult 19 year of age or older currently living in the household who had had the most recent birthday. Full identification was not required; a first name or relationship was accepted. The person identified as having had the most recent birthday was the selected respondent for the interview. For the cell phone sample, the adult associated with the cell phone was by default the selected respondent.

4.1.4 Proxy Interviews

The 2017 OMAS allowed for the use of proxy interviews in the same manner as the 2015, 2012, 2010, 2008, and 2004 administrations. Proxies were requested when the selected respondent had a cognitive or physical impairment. A knowledgeable adult for the proxy was defined as someone 19 years of age or older who was able to answer questions about the selected respondent's health insurance. For interviews that were suspended and resumed, the CATI program prompted interviewers to continue the survey only with the person who started the interview. Proxies were not allowed in the cell phone study.

Proxy interviews were conducted for all child interviews in the 2017 OMAS. In these interviews, the screener randomly selected the child with the most recent birthday. For the landline sample, the interviewer then asked to speak to the adult most knowledgeable about the selected child's health insurance; in 1% of interviews the child interview was completed by someone other than the adult respondent (an adult more knowledgeable). For the cell phone sample, the adult associated with the cell phone was asked to answer the child questions rather than handing the cell phone to another adult.

4.1.5 Refusal Conversion

All interviewers calling on the 2017 OMAS were trained to avoid refusals. When respondents refused to participate, the interviewer left a note explaining what had happened or had been said, if anything, and RTI's refusal conversion specialists made at least one more contact. Exceptions were made for cases in which the person answering the phone said something indicating a callback would not be appropriate, such as making threats. Whenever a respondent refused to be interviewed or terminated an interview in progress, the interviewer recorded information as to why the respondent refused or terminated the interview and entered this information into the CATI system. Staff reviewed this information just before calling the telephone number again. During nonresponse refresher training,

supervisory staff compiled these cases and reviewed effective strategies for nonresponse avoidance and conversion.

Although a high-response rate was important, the role of the interviewers was not to harass respondents into participating in either the selection process or the interview. Interviewers were trained to inform their supervisor if:

- The respondent was verbally abusive or threatened litigation;
- The respondent requested to be placed on a "do not call" list; or
- The household refused to transfer the call to the selected respondent and stated that they would never allow the call to be passed to the selected respondent.

These numbers were terminated and coded as final refusals not to be called back.

4.1.6 Spanish Interviewing

RTI conducted the 2017 OMAS in English and Spanish. Of the 39,711 completed records in the final data file, 173 were collected in a specialized CATI effort associating Spanish-speaking interviewers with records flagged during the primary collection effort as belonging to non–English-speaking households. The procedure for conducting interviews in Spanish was straightforward: When a bilingual interviewer reached a Spanish-speaking respondent, the interviewer explained the survey in Spanish and continued directly into the interview without interruption. When a non–Spanish-speaking interviewer contacted a Spanish-speaking household, the record was coded for Spanish interviewing, and the system automatically routed the record to a bilingual interviewer for subsequent attempts.

4.1.7 Methods Used to Increase Response Rates

As has been done for prior iterations of the OMAS, RTI implemented a variety of methods to maximize response rates for the 2017 OMAS:

- using a "short" version of the child questionnaire;
- leaving messages on answering machines and privacy managers;
- providing verification numbers for RTI and the survey sponsors;
- employing special refusal conversion efforts;
- reattempting phone numbers on different days and at different times of day to maximize efforts to each household;
- conducting interviews in Spanish and English; and
- using a $10 incentive for cell phone respondents.

Each of these is described in detail below.

"Short" Version of Child Questionnaire

Mid-survey terminations were more likely in the child section of the survey because of the length of the survey and the similarity of the child questions to the previously asked adult questions. This had been true in prior iterations of the OMAS and continued to be a problem with the 2017 OMAS. In an

effort to boost response rates and avoid mid-survey terminations, the OMAS EC agreed to implement a shortened child section during which the fundamental questions for the child were asked before the survey was suspended. The shortened child section was only implemented after the respondent threatened to terminate the interview; otherwise, the full child section was administered.

The OMAS EC defined the fundamental child questions (following the child's name, nickname, or initials) as the child's age and whether the child had health insurance. If the selected child did have health insurance, the respondent was asked whether the child was covered by Medicaid or another government assistance program. If the child did not have health insurance coverage, the respondent was asked if the child had had health insurance at any time in the past 12 months or inquired when the child had last had health care coverage.

Partially completed records were called to the maximum number of attempts set in the protocol in an attempt to complete the remainder of the child questions. If the remainder of child questions was not obtained and the record had reached 15 attempts, the record was considered a complete.

Leaving Messages on Answering Machines

RTI interviewing staff left messages on persistent "answering machine" and "privacy manager" dispositions, informing respondents of the study and scheduling another call attempt for the following day. The message stated that RTI interviewers were calling on behalf of the State of Ohio and that a callback at their convenience would be appreciated. The call center's toll-free telephone number was left on the answering machine. Messages were left on the first and fourth attempts to a household if an answering machine or privacy manager was reached on these attempts. For privacy managers, if a message could not be left, the interviewers were instructed to enter the call center's toll-free telephone number. RTI's call center supervisors were set up to handle incoming respondent calls to complete the interview in response to an answering machine message.

The text of the answering machine message appears below:

"Hello, my name is _____, and I am calling on behalf of the State of Ohio. We are conducting a survey on health and health care issues. Your participation would help the State of Ohio make better health care policy decisions for its residents. Please call us at (PROJECT TOLL-FREE NUMBER) at your convenience."

Survey Verification Lines

RTI's ROC dedicated a toll-free telephone number to receive respondent calls regarding the legitimacy and validity of the study. RTI staff also made contact information for ODH available to those respondents who wished to contact the survey sponsors directly. Of the sponsoring agencies, ODH took responsibility for responding to concerns about the survey effort and shared this information with GRC and RTI. All concerns were addressed by either ODH, GRC, or RTI, pending the issue of concern, and logged for review by GRC and RTI.

Refusal Conversion Efforts

Refusal conversion for the 2017 OMAS occurred at two points: the initial contact with the household and during any subsequent contacts with the household. Study protocols allowed for the reattempt of households that had initially refused. Section 4.1.5, Refusal Conversion, has more detailed information about the refusal conversion protocols for the OMAS.

Reattempting Numbers

As discussed earlier in Section 4.1.1, Implementation Protocol, telephone numbers that did not initially produce a completed interview were contacted on different days and at different times of the day to maximize efforts to reach each household. The study protocol allowed calling to be done over many weeks to ensure that respondents on vacation and those not at home during common calling hours could be reached.

Conducting Interviews in Spanish

The 2017 OMAS was conducted in English and Spanish to maximize response rates and increase the participation of Ohio's Hispanic population. As noted previously, fewer than one percent were conducted by Spanish-speaking interviewers with households or cell phones which were flagged as non-English speaking within the system.

The Use of a $10 Incentive for Cell Phone Respondents

As noted in Section 2 (Sampling), the 2017 OMAS design increased the desired number of interviews on the cell phone frame from 50% to 70% (the actual 2017 OMAS cell phone response was 78%). With this increase, there was concern about potential undercoverage because of respondents on prepaid plans not wanting to participate in the survey because of the impact on their cell phone minutes. People using a prepaid plan make up one in three cell phone users in the United States (Lifsher, 2013) (the actual 2017 OMAS prepaid plans as a part of the total cell phone collection was 40%). Prepaid phone users may be highly correlated with lower economic status or those living in rural areas (Berzofsky et. al., in press)—both key demographic groups for OMAS. To ensure representation from prepaid users, the 2017 OMAS offered a $10 incentive.

The process for notifying and implementing the cell phone incentive was as follows:

1. At the beginning of the interview, cell phone respondents were notified about the incentive. Only respondents who completed the interview were eligible for the incentive.
2. At the completion of the interview, the respondent was offered the incentive in one of two ways: by electronic Amazon code or by check. The respondent also had the option of declining the incentive. If the online gift card was selected, the respondent needed to provide a valid e-mail address. The check was offered only to participants who stated that they could not or did not want to receive an Amazon e-code.

4.1.8 Determining a Completed Interview

An interview was considered complete when a selected respondent or knowledgeable proxy answered:

- The adult section of the questionnaire through and including the question about adult health insurance status; or

- The adult section of the questionnaire, including the question about adult health insurance status and at least the key questions (as identified by the OMAS EC) in the child section of the questionnaire.

In the 2017 OMAS final dataset, there are variables indicating the status of the adult and child sections of each case. Included in the final dataset are 3,380 interviews (8.5% of cases in the final dataset) that completed the health insurance status module in the adult questionnaire but terminated before completing the full instrument were coded as partial complete interviews. Adult interviews that completed all the adult modules are considered fully completed interviews. Because both partial and full respondents provided the critical analytic data, their records were included in the final dataset.

4.1.9 Interviewer Training

RTI conducted numerous interviewer training sessions for the 2017 OMAS. The first session preceded the pilot test in June 2017, and multiple sessions were held prior to the fielding of the main study in July 2017 and throughout the field period. The training was conducted by RTI's project management team at RTI's Raleigh, North Carolina, ROC training facility. Members of the OMAS EC participated in the pilot test and initial field period training sessions. RTI's extensive training, combined with study quality control procedures, ensured consistent, high-quality interviewing throughout data collection.

The quality of data collection depends largely on the performance of the interviewing staff. Interviewers on this study were specifically recruited for health care research and call center experience. RTI developed an intensive 2-day training curriculum for the 2017 OMAS, integrating project-specific background discussion with hands-on practice interviewing, review of general and project-specific protocols, and quizzes to reinforce learning.

Interviewers had to complete training and certification prior to beginning "live" calling in production. Training consisted of 8 hours split between the 2 evenings. Topics covered during training focused heavily on the survey's background and structure, study-specific protocols and procedures, pronunciation, and answering frequently asked questions. Members of the OMAS EC attending the training sessions assisted with additional study details and answered interviewer questions.

During training, interviewers participated in two round-robin mock interviews, two paired-practice mocks, and completed individual survey practice. Field certification for the OMAS involved two oral quizzes and successfully attending and participating during training sessions and exercises. Interviewers needed to achieve 100% correct on both oral quizzes to become certified and begin calling. The 2017 OMAS pilot training agenda included the items in ***Table 4.1***.

In addition, any attendees who were new hires were required to complete RTI's standard new-hire training, which includes our *iLearning* and onsite introductory CATI training systems. Additional information about the training can be found in ***Appendix B, Interviewer Training Manual***.

Table 4-1.   Agenda

Time, Minutes	Topic	Time, Minutes	Topic
	Evening 1		**Evening 2**
15	Welcome and Introduction	10	Q&A/Review
25	Survey Background, Purpose, and Structure	30	Emotional Distress and Sensitivity
10	Roles and Responsibilities	30	Refusal Avoidance
10	General Contacting Procedures	55	Paired Practice
15	Respondent Rights and Importance of Confidentiality	15	**BREAK**
45	Review of Frequently Asked Questions (FAQ)	15	Review FAQ and Pronunciation
15	**BREAK**	40	Individual Read-Through of Questionnaire
20	Pronunciation Practice	35	Certification
75	Round-Robin	10	Q&A/Final Review
10	Question-and-Answer (Q&A) Sessions		

RTI conducted follow-up refresher trainings and distributed project bulletins with FAQ and issues encountered during fielding to all stations. These trainings reemphasized survey protocol, covered strategies for handling refusals, reviewed the procedures for suspended records, and reviewed particular survey items with which the interviewers had difficulty. The refresher trainings reinforced quality control during data collection to ensure reliable, valuable data. Much of the information discussed during refresher trainings was based on feedback from the OMAS EC, who participated in both live monitoring and the review of recorded interviewing sessions throughout the field period. In total, 485 interviewers were trained and certified to work on the 2017 OMAS.

4.2   Response Rates

To affirm the representation of the target population in a study, researchers look to response rates as indicators of performance. There is no one agreed-upon standard response rate formula because each project lends itself to different measures of performance. Several of these performance measures are discussed below.

All response rates will be affected by the procedure of assigning final status dispositions. The results of each call attempt were assigned a disposition according to guidelines published by the American Association for Public Opinion Research (AAPOR). These final dispositions can be summarized as follows:

Eligible

- Completes and partial interviews (if applicable)
- Refusals and noncontacts (after confirming eligible household)

Ineligible

- Survey Ineligible = No eligible respondents in household or cell phone did not belong to an eligible adult

- Nonresidential = Not a residential phone number

Unknown

- Unknown Eligible (known household) = Confirmed household but did not establish survey eligibility (landline); confirmed person owns phone but did not establish that phone is used for personal use (cell phone)

- Unknown Household = Cannot confirm whether the number is residential

Each telephone record's history of attempts is analyzed to determine the record's final status. Priority is given to outcomes that gather the most information. For more information, see **Table 4-2**.

Table 4-2.   Distribution of Disposition Codes by AAPOR Response Category and Phone Type

Rank	AAPOR Group	Label	Count		
			Landline	Cell Phone	All Records
1	1.1	Completes (full interviews only)	7,620	28,711	36,331
2	1.2	Partial Complete	777	2,603	3,380
3	2.1	Refusals and Break-offs	13,260	40,203	53,463
4	2.2	Noncontact (incl. Answering Machines)	289	1,472	1,761
5	4.4	Tech Circumstance (incl. Changed Number, Cellular Phones, Pagers)	1,358	1,918	3,276
6	4.5	Non-residence (incl. Businesses, Dorms)	39,709	19,552	59,261
7	4.7	No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)	967	81,092	82,059
8	4.2	Fax/Data Line	12,747	242	12,989
9	4.3	Nonworking, Disconnected Number [a]	81,416	350,215	431,631
10	3.1	Unknown, No Answer	723	0	723
11	3.2	Housing Unit, Unknown if Eligible Respondent (Screener Not Completed)	29,428	242,474	271,902
12	3.9	Unknown Eligibility, Other (incl. Language Barrier, Physical Impairment Preventing Interview)	69,738	252,904	322,642

[a] Excludes 677,904 cases that were removed from the system during cleaning; these cases are considered out of scope for purposes of calculating response rates.

4.2.1 Lower-Bound Response Rate

The lower-bound response rate provides the lowest possible response rate figure. Also known as AAPOR Response Rate #1, it is obtained by dividing the number of completed interviews by the maximum number of potentially qualified households:

$$RR1 = \frac{Completes}{Eligible + Unknown}$$

For this survey, the lower-bound response rate was 6.3% for the landline sample, 5.1% for the cell phone sample, and 5.3% overall.

4.2.2 Council of American Survey Research Organizations and AAPOR Response Rates

Some response rates take into account the ability of the interviewing staff to establish contact with potentially eligible households and to resolve all numbers that do not ring into potentially eligible households. In cases where resolution is not achieved (i.e., telephone numbers cannot be assigned dispositions that definitely reflect eligibility) these response rates generally use an estimate of the rate at which telephone numbers ring into eligible households to classify a fraction of these numbers of unknown disposition as eligible. Compared to the lower-bound rate, these response rates increase the response rate calculation by not assuming all unscreened numbers belong to qualifying households. In addition, some "adjusted" response rates assign cases to the denominator where the respondent is eligible but unable to complete the interview because of impairment or language difficulties. One adjusted response rate, defined by the Council of American Survey Research Organizations (CASRO) and equivalent to AAPOR's Response Rate #3, calculates the eligible households by taking a proportion of the unresolved numbers and classifying them as eligible.

$$RR3 = \frac{Completes}{Eligible + e_u \times Unknown}, \text{ where } e_u = \left(\frac{Eligible}{Eligible + Ineligible}\right)$$

For this study, this calculation produced an AAPOR Response Rate #3 response rate of 21.3% for the landline sample, 20.3% for the cell phone sample, and 20.5% overall.

At the end of data collection, this study treats partial completes in the same manner as total completed interviews and includes them in the final analysis file. For this reason, we produced AAPOR's Response Rate #4, which includes partial completes in the numerator of the response rate equation.

$$RR4 = \frac{Completes + Partials}{Eligible + e_u \times Unknown}, \text{ where } e_u = \left(\frac{Eligible}{Eligible + Ineligible}\right)$$

For this study, this calculation produced an AAPOR Response Rate #4 response rate of 23.5% for the landline sample, 22.1% for the cell phone sample, and 22.4% overall.

4.2.3 Upper-Bound Response Rate

The upper-bound response rate provides the most optimistic percentage of generally recognized response rates. The upper bound, also known as AAPOR's Response Rate #5, is a measure of interviewer performance and does not take into account sample quality (e.g., numbers that ring but are never

answered) nor household behavior that prevents contact (e.g., privacy manager technology, screening calls using an answering machine).

$$RR5 = \frac{Completes}{Eligible}$$

The upper-bound cooperation rate for this study was 38.3% for the landline sample, 42.9% for the cell phone sample, and 41.8% overall.

4.2.4 All Rates—Presented by State, Region, Stratum, and County

The sampling design was a dual-frame (cell phone and landline) design that included strata for each county within each frame. Response rates for each stratum can be found in *Appendix C: Response Rate & Disposition Tables*.

4.2.5 Coverage Estimates of Subpopulations

Table 4-3, Table 4-4, Table 4-5, and *Table 4-6* detail expected and observed (without weighting or imputation) percentages of the population classified by key demographic variables by region and age group.[15] The unweighted observed sample is compared to population distributions from the American Community Survey (ACS) 5-year averages. An arrow pointing up (↑) indicates that the observed sample percentage is greater than the population percentage. An arrow pointing down (↓) indicates that the observed sample percentage is less than the population percentage.

The sample tends to overrepresent populations with lower incomes, particularly those below the poverty level, and underrepresent populations with incomes over three times the poverty level. This is consistent with the 2004, 2008, 2010, 2012, and 2015 surveys. The African American oversampling in metro areas successfully increased the percentage of African American respondents. In prior iterations of the survey—2008, 2010, and 2012—the sample was skewed heavily toward females and older age groups, which is typical in contemporary telephone surveys. Under the new design (i.e., increased cell allocation to 80% of completed interviews) the distributions by gender and age have shifted to look more like the population at large. *Table 4-7* presents the respondent distributions by gender and age in 2015 and 2017. As the table shows, the percentage of male and younger adult (19–34 years of age) respondents increased.

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[15] Because 0 to 18 year olds are listed as a separate age category, the total number of respondents in these tables is equal to the total adult interviews and the total child interviews, which total 48,913.

Table 4-3.   Expected and Observed Ratio of Income to Poverty [a]

	Total Responses	Percentage							
		Under 1.0		1.0 to 2.0 [b]		2.0 to 4.0		Over 4.0	
		Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.
Age Group									
Total [c]	48,913	15.4	19.5↑	17.9	23.0↑	32.3	27.4↓	34.4	30.1↓
0–18	8,691	22.1	22.0↓	21.0	22.8↑	31.1	28.5↓	25.8	26.8↑
19–64 [d]	28,634	14.7	21.4↑	15.9	20.8↑	31.3	26.0↓	38.1	31.8↓
65+	11,588	8.1	13.0↑	21.4	28.5↑	38.1	30.1↓	32.4	28.4↓
Region									
Total	48,913	15.4	19.5↑	17.9	23.0↑	32.3	27.4↓	34.4	30.1↓
Appalachian	9,538	17.5	23.0↑	20.8	25.6↑	34.3	28.0↓	27.4	23.3↓
Metropolitan	23,814	17.1	21.3↑	17.9	22.0↑	30.6	25.6↓	34.5	31.1↓
Rural Non-App	7,910	12.1	15.8↑	18.4	24.5↑	36.7	31.2↓	32.8	28.5↓
Suburban	7,651	10.6	13.6↑	15.0	21.1↑	32.4	28.5↓	41.9	36.8↓

[a] The ratio of the reported household income to the federal poverty level for the reported household size.
[b] The 2017 OMAS had a poverty cutoff at 206%, while the ACS uses 200%.
[c] The total number of respondents is equal to the total number of adult and child interviews conducted because 0 to 18 year olds are included.
[d] The 2017 OMAS defined a child as a person 18 years of age or younger based on Medicaid eligibility criteria. However, ACS uses 0–17 years of age as an age category. Therefore, equal comparison age categories were recreated based on respondent data to match the ACS.

Table 4-4.   Expected and Observed Gender

	Total Responses	Percentage			
		Male		Female	
		Exp.	Obs.	Exp.	Obs.
Region					
Total	48,913	49.0	46.8↓	51.0	53.2↑
Appalachian	9,538	49.7	45.8↓	50.3	54.2↑
Metropolitan	23,814	48.4	46.3↓	51.6	53.7↑
Rural Non-App	7,910	49.8	48.7↓	50.2	51.3↑
Suburban	7,651	49.4	47.7↓	50.6	52.3↑

Table 4-5.   Expected and Observed Race/Ethnicity

	Total Responses	Percentage							
		Hispanic		White		African American		Other	
		Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.
Region									
Total	48,913	3.5	3.3↓	80.0	72.5↓	12.1	13.3↑	4.5	10.8↑
Appalachian	9,538	1.4	2.1↑	93.2	83.2↓	2.8	3.8↑	2.6	10.9↑
Metropolitan	23,814	4.4	4.1↓	70.4	61.1↓	19.7	23.4↑	5.6	11.4↑
Rural Non-App	7,910	3.2	3.0↓	91.7	83.8↓	2.1	3.2↑	3.0	10.0↑
Suburban	7,651	2.6	2.8↑	89.7	83.0↓	3.9	4.4↑	3.8	9.8↑

Table 4-6.   Expected and Observed Age

	Total Responses	Percentage							
		0–17[a]		18–34[a]		35–54		55+	
		Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.
Region									
Total	48,913	23.0	17.8↓	21.4	17.5↓	26.4	23.3↓	29.2	41.4↑
Appalachian	9,538	22.5	18.0↓	19.7	16.0↓	26.3	24.1↓	31.5	41.9↑
Metropolitan	23,814	22.8	17.2↓	22.8	19.1↓	26.1	23.1↓	28.2	40.6↑
Rural Non-App	7,910	24.0	18.4↓	19.2	16.1↓	26.6	22.9↓	30.2	42.5↑
Suburban	7,651	23.3	18.6↓	20.1	15.9↓	27.4	23.5↓	29.2	42.0↑

[a] The 2017 OMAS defined a child as a person 18 years of age or younger based on Medicaid eligibility criteria. However, ACS uses 0–17 years of age as an age category. Therefore, equal comparison age categories were recreated based on respondent data to match the ACS.

Table 4-7.   Distribution of Respondents by Gender and Age by Survey Year, 2012 and 2017 OMAS

	2015	2017
Gender		
Male	44.5	45.7
Female	55.5	54.3
Age Category, Years		
19–24	7.2	8.0
25–34	11.7	12.3
35–44	12.2	12.2
45–54	17.9	16.5
55–64	22.4	21.8
65+	28.5	29.2

4.3   Interviewer Debriefing and Retraining

During the OMAS data collection period there were two types of primary interviewer retraining: (1) general follow-up training approximately 1 week after an interviewer had completed general training and (2) ongoing, individual training based on observations from monitoring sessions (both live and recorded). There were also regular quality circle meetings to provide interviewers with updates on progress, provide information about any instrument changes, give and receive any feedback, and cover any administrative items.

The main points of focus during the general retraining were proper coding of case disposition, questionnaire administration, refusal aversion and conversion, and clarifying any issues that the telephone interviewers encountered in their first week of production (Q&A format) and needed additional clarification or guidance. During individual training with monitors or supervisors, telephone interviewers were provided specific instances and examples of where they could improve. These sessions were inclusive both of on-site monitoring and monitoring that the client team conducted. Overarching observations from both sets of monitoring were nearly the same, and improvement was observed over time. Comments included the following:

- Issues with pronouncing numbers like a "northerner" and the word *ask;*
- Lack of familiarity with the questionnaire—"stumbling and sounding choppy";
- Reading answer choices or interviewer notes when not necessary;
- Not consistently emphasizing highlighted words;
- Reading too slowly or too quickly;
- Overprobing or insufficient probing;
- Interviewers being chatty and overly casual;
- Good and appropriate handling of difficult respondents by addressing concerns, explaining the survey, and maintaining professionalism;
- Being accommodating with elderly respondents: adjusting tone of voice and pace and being patient;
- Enunciating and reading clearly;
- Good use of neutral probing and interviewer prompts;
- Engaging respondents to participate; and
- Enthusiastic and pleasant tone of voice.

In addition, the verbatim coding process, which was an ongoing process conducted by RTI and the OMAS EC during the field period, revealed the need to integrate verbatim questions into the retraining procedures.

When observations from monitoring, which were conducted live and by recording by EC members and the project PI and co-investigators, were felt to be a trend as much as isolated occurrences, this feedback was provided to interviewing staff during quality circle meetings to make sure there was no widespread misunderstanding. Feedback from interviewers during these meetings was mostly related to

handling specific questions and getting clarification of standard interviewing techniques. Most interviewers expressed enjoyment with the work and being part of a research team.

4.4 Changes to the CATI During the Field Period

Some changes to the 2017 OMAS CATI program were necessary after the start of the field period. These changes were made when the OMAS EC and RTI determined that the program was not adequately accounting for situations that presented the interviewer or the respondent with difficulty asking and answering questions or navigating the instrument. Most of these changes were minor or informational and did not affect the structure of the CATI dataset.

The details of all changes were kept in a log at RTI, along with notations of the different questionnaire versions and when they were put in the field. RTI has provided the OMAS EC with a condensed version of this log, which appears in *Appendix H Post-Field-Start Changes Log*.

4.5 Data Collection Subcontractor

With the approval of the OMAS EC, RTI hired a data collection subcontractor to help complete the survey within the project time period. Precision Opinion, Inc. (Precision) of Las Vegas, Nevada, completed approximately 40% of total interviewing hours on the 2017 OMAS. RTI has a longstanding relationship with Precision, and its staff of interviewers and supervisors have assisted RTI with telephone interviewing on other major projects. In addition to this existing relationship, the advantages of using Precision include its use of the Voxco system, which allowed RTI to fully integrate Precision's call center staff into our project systems so that they operated as a virtual extension of our own facilities. Precision employees were trained on site by RTI's training staff and were subject to the same protocols for calling on the project as RTI's staff. In addition, OMAS EC members were able to conduct live monitoring of Precision staff, just as they were able to do with RTI staff.

Data Processing and Analysis

5.1 Dataset

The Voxco survey management system stored 2017 OMAS telephone disposition data, sample data, survey response data, and data that the survey management system created into a centralized database. The final dataset was created in the SAS statistical program produced directly from the meta and survey data collected in Voxco. The final dataset contains sample information and survey responses but does not include the telephone number to preserve respondent confidentiality.

5.2 Data Processing

5.2.1 Cleaning the Data

Inconsistent Responses

The CATI program prevents most data inconsistences with built-in variable range and skip logic checks. Some inconsistencies in the data, however, the CATI instrument cannot prevent; instead, such inconsistencies are corrected after data collection. The following list describes these inconsistencies, with the corrective action steps taken for each:

- **Inconsistencies resulting from incorrect open-end recoding:** There were a few occurrences where the open-ended response did not match the question. These were resolved and fixed in the open-end recoding process.

- **Inconsistencies because of respondents providing contradictory responses:** In certain cases, the CATI program could not force consistent data responses. For example, if a respondent stated that there were more adults in the family than in the household, the CATI script was programmed to verify this information. If the respondent stated that his or her response was correct, the inconsistency remained. These inconsistencies remained in the final dataset.

- **Inconsistencies introduced during postprocessing:** Occasionally, respondents provided contradictory responses, and the steps to correct the inconsistency yielded further complications. For example, if a respondent mentioned that he or she was insured through a current job, he or she was automatically coded as being employed. The next question asked the same respondent to indicate place of employment. Some respondents answered that they did not work or that they had lost their job. This inconsistency remained.

Outliers—Out-of-Range Responses

The CATI program developed for the 2017 OMAS was designed to minimize inconsistent responses throughout the questionnaire, and range checks were set to appropriate limits on responses. For example, if a question asked, "How many days in the last 30 did you drink alcohol?" the answer should fall between 0 and 30. All range checks were "hard" in the sense that the computer would not allow entry of an out-of-range response. Consistency checks verified that responses matched one another across

questions. For instance, if a respondent said that there were more adults in his or her central family unit than lived in the household, a consistency check prompted the interviewer to reconcile the responses between the two questions.

Missing Values

After working with the OMAS EC to identify candidate variables for imputation at the household and individual levels, RTI conducted data imputation rather than accept high levels of nonresponse resulting from "don't know" or "refused" responses or from questions not asked. Section 5.3, Imputation, contains additional information about the OMAS imputation procedures.

Both "don't know" and "refused" were consistently coded throughout the questionnaire as 98 and 99 or 998 and 999.

5.2.2 Coding Open-Ended Responses

The 2017 OMAS used the coding manuals from the 2012 and 2015 OMAS iterations as a starting point for the development of a coding process. From these coding guides, codes were added as needed to allow for comparability with prior years while still giving added flexibility to the coders. All open-ended responses from the data were then output into files that were subsequently imported into a customized Microsoft Excel spreadsheet for verbatim coding. Several coders worked under a supervisor who checked their work for consistency. Coding results were shared with the OMAS EC regularly, with the delivery of interim datasets during fielding for review and approval or suggestions for changes in coding procedures.

Final coded verbatim data were merged back into the SAS dataset for delivery to the OMAS EC. Data variables containing recoded verbatim text have the appendage *_REC* on the variable name in the final dataset.

5.2.3 Recoded, Derived, and Auto-Coded Variables

In the 2017 OMAS, several variables were created to make data analysis easier. These variables come in one of three forms:

- Recoded variable
- Derived variable
- Auto-coded variable

These variables are identifiable in the dataset based on their names. For example, variables that end with *_REC* are recoded variables. Also, variables that do not have a survey item in their name are derived variables.

Recoded Variable

Recoded variables are variables that are exact replicates of a survey item, renamed to something that is more intuitive to the user. When applicable, recoded variables include open-ended responses that have been assigned to (1) an existing category, (2) a newly created category because of a large propensity of open-ended responses with a response not provided to respondents, or (3) an "other" category. These

variables were created for the items of analytic importance that can be directly linked to only one survey question.

Derived Variable

Derived variables are variables that are created from two or more survey items. These items often involve the skip logic in the survey to ensure that the levels of the derived variable are properly categorized. Furthermore, certain characteristics can be ascertained from several questions in the survey (e.g., does the person have insurance). Derived variables look at all these items when categorizing an individual to have a particular characteristic.

In the 2017 OMAS, a change was made to how the derived variable for type of insurance held by adults (I_TYPE_A_IMP) was defined. Prior iterations of OMAS included the item B4H when determining whether a respondent had coverage through Medicaid. In 2017, the endorsement of B4H was removed from determining whether Medicaid was a respondent's primary insurance type.

Auto-Coded Variables

Auto-coded variables are variables the CATI program creates during the interview based on respondent-answered questions. These variables are created during the interview process so that they can be used during the interview.

5.2.4 Quality Review

RTI conducted extensive tests of the integrity of the final data. RTI programmers developed SAS scripts that tested the integrity of all survey responses against the CATI logic and against the recoded, derived, and auto-coded variables. These scripts attempted to flag cases that violated any logic rules. Inconsistencies were logged in an output file and checked by data processing staff to see whether any of the data processing programs needed to be corrected.

After the final set of variables were recoded and created and analytic weights were produced, the data were reviewed for quality assurance. A set of checks was implemented to verify the key components of the data:

- Frequencies of derived variables with their source survey variables to ensure appropriate assignments
- Verification of universe totals (i.e., those eligible for an item) for each survey and derived variable
- Comparison of key estimates with prior year survey data to ensure that change in estimates was reasonable or expected
- Verification that all imputed variables had no item nonresponse after imputation
- Verification that the imputed variables had expected distributions
- Verification that all survey weights were positive and greater than one
- Verification that survey weight totals summed to expected control totals

In one case, the above scripts yielded a problem with the original CATI logic concerning variables that determined the creation of variable *prior_c* in the child data. This derived variable was meant to capture previous insurance coverage, but because of incorrect skip pattern instructions in the final specifications, it did not capture all relevant cases and was therefore dropped from the final dataset.

5.2.5 Data Formatting

The final SAS dataset has an associated SAS format library that contains variable labels to help users understand the source and content of the variable. A SAS program with the format values is provided. This SAS dataset was used to create additional formatted datasets in the Stata MP and R-System format for EC data users.

5.3 Imputation

Key survey variables for which a respondent did not provide an answer were imputed to allow for a complete analysis data file. These variables were identified for one of two reasons: (1) their necessity in the weighting process and (2) the need to be part of a complete data file to ensure that records with a missing value in one of these variables could still be included in analyses using these variables. Such variables are identified in the final dataset with the *_imp* suffix in the variable name. All variables were imputed with a weighted, sequential hot-deck (WSHD) approach that uses variable correlates for the formation of imputation cells and the sorting of donor and recipient cases within those cells. This approach also used the unit nonresponse-adjusted sampling weight to ensure that the sampling design is accounted for when matching donors with item nonrespondents.

A major change in the imputation process was the methodology used to impute last year's and last month's household income. The 2017 OMAS changed the manner in which household income was collected. Income was obtained in one of two ways: (1) respondents indicated their household's income range or (2) indicated whether their income was above or below a fixed amount corresponding to the 138% of the federal poverty level. The ranges provided in the interview were dependent on the number of people in the household and corresponded to multiples of the federal poverty level (2016 level for last year's income and 2017 level for last month's income). If a respondent could not provide a range, they were asked if the income level was above or below a fixed amount corresponding to the 138% of the federal poverty level. As a result of these changes, when not provided, household income was imputed using WSHD like other categorical items rather than using a multifaceted approach, which included a percentile-constrained inverse-CDF (cumulative density function) approach to determine a continuous household income value.

5.3.1 WSHD Imputation

WSHD imputed missing values by pairing item nonrespondents with donors who have similar values for auxiliary variables related to the variable being imputed (Iannacchione, 1982). This occurred in two ways:

- Sets of item respondents and nonrespondents were grouped based on the values of one or more variables that were important predictors of the variable in question; this cross-classification of predictors defined the "imputation cell."

▪ Within imputation cells, respondents and nonrespondents were sorted in an identical fashion, which makes it more likely (but not guaranteed) that nonrespondents will be paired with respondents who have similar values of the sorting variables.

The actual pairing of records within cells occurs randomly, with pairing probabilities determined by the amount of overlap between cases' scaled weight sums. Scaled weight sums are calculated by separately and cumulatively[16] summing respondents' and nonrespondents' nonresponse-adjusted weights and dividing each record's cumulative weight sum by the overall sum (among respondents or nonrespondents) for the cell. These scaled weight sums are greater than 0 and less than or equal to 1. These scaled weight sums can also be used to define scaled weight ranges, which are defined as the range between the previous case's scaled weight sum[17] and that of the case in question.

For example, consider the case where the first nonrespondent in an imputation cell has a scaled weight sum value of 0.3. This record therefore has a scaled weight range from 0.0 to 0.3. If the first two respondents in this cell have scaled weight sum values of 0.2 and 0.5, they are the only potential donors for the nonrespondent in question (they are the only ones with weight ranges overlapping that of the nonrespondent in question, having ranges from 0.0 to 0.2 and 0.2 to 0.5, respectively). Despite the fact that the second respondent has a wider weight range ($0.5–0.2 = 0.3$) relative to the first ($0.2–0.0 = 0.2$), it is less probable that it will be the donor record for the first nonrespondent because the entire range of the first respondent overlaps with that of the nonrespondent, covering two-thirds of the nonrespondent's range. The remaining one-third of the nonrespondent's range is covered by the second respondent. Therefore, in this example, the first respondent will be selected as the donor with twice the probability of the second, despite having a smaller weight.

Table 5-1 presents the imputation cells and sorting criteria varied across variables; the cell variables and sorting variables are denoted with a *C* for a variable included in formation of the imputation cell and *S* for a variable used for sorting. Imputation proceeded in the order in which the variables are presented in the table.

5.3.2 Imputation for Last Month's and Last Year's Household Income

In the case of missing household income, WSHD was implemented in four stages. In the first stage, last year's income was imputed using auxiliary information about the last year's income range (whether or not it is above a certain value), among other variables. In the second stage, remaining "missingness" for last year's income was imputed without this auxiliary information. The third and fourth stages follow this same patter but address last month's income. In these stages, imputed or reported last year's income was used in the intracell sorting criteria.

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[16]Because the weight sums are calculated cumulatively, the way in which the cells are sorted largely determines which records can be paired.

[17]The previous case refers to the ordering the sorting criteria imposed. The left endpoint on the scaled weight range for the first case in a cell is zero.

Table 5-1.   Classification and Sorting Order for Imputation Variables

Imputation Variables	Phone Type	Region	Adult Gender	Adult Race	Adult Education Attainment	Adult Age	Adult Insurance Status	Adult Medicaid Status	No. of Children in HH	No. of Children in Family	No. of Adults in Family	Child Race	Child Age	Child Insurance Status	Poverty Status
Region	C														
Adult Gender	C	C													
Adult Race	C	C	C												
Adult Education Attainment	C	S	S	S											
Adult Age	C	C	C	C											
Adult Insurance Status	C	C	S	C	S	S									
Adult Medicaid Status	S	C	S	C	S	S	C								
Number of Children in Household	C	C		C	C	S									
Number of Children in Family	S	C		S	C	S			C						
Number of Adults in Family	S	S		C	S	S				C					
Family Members Supported by Income	S	S		S	S	S				C	S				
Number of Landlines in Household	S	C		S	S	S									

(continued)

Table 5-1. Classification and Sorting Order for Imputation Variables (continued)

Imputation Variables	Phone Type	Region	Adult Gender	Adult Race	Adult Education Attainment	Adult Age	Adult Insurance Status	Adult Medicaid Status	# of Children in HH	# of Children in Family	# of Adults in Family	Child Race	Child Age	Child Insurance Status	Poverty Status	Income above or below x	# in Fam Supp. By Inc.	Annual Income
Number of Adults in Household[b]	S	S		S	S	S			C[c]		C[a]							
Days Covered by Insurance	S	S		S	S	S	S	C										
Without Phone for 24+ hrs (not cell)	C			S														
Without Phone for 24+ hrs (not landline)	C			S														
Child Gender	C	C																
Child Race	S	C		C	S													
Child Age		C			S	S[d]												
Child Insurance Status		S		C	C	S	C											
Child Medicaid Status		S			C	S		C				C	C					
Last Year's Income (cut point)				S	S	C[d]	S	C			C[a]					C	S	
Last Year's Income[e]				S	S	C[d]	S	C			C[a]						S	
Last Month's Income (cut point)				S	S	C[d]	S	C			S/C[a]					C	S	S

(continued)

Table 5-1.   Classification and Sorting Order for Imputation Variables (continued)

Imputation Variables	Classification and Sorting Order																	
	Phone Type	Region	Adult Gender	Adult Race	Adult Education Attainment	Adult Age	Adult Insurance Status	Adult Medicaid Status	# of Children in HH	# of Children in Family	# of Adults in Family	Child Race	Child Age	Child Insurance Status	Poverty Status	Income above or below *x*	# in Fam Supp. By Inc.	Annual Income
Last Month's Income[e]				S	S	C[d]	S	C			S/C[a]						S	S
Adult Health Status	S	S		C	S	S									C			
Child Health Status	S	S										S	S		C			

C – Variable used in formation of imputation cells.
S – Variable used for sorting within imputation cells.
[a] Number of adults in family was collapsed into three levels (1, 2, 3, or more).
[b] Only imputed for landline cases.
[c] Number of children in household was collapsed into three levels (1, 2, 3, or more).
[d] Adult age was collapsed into 6 levels (19–24, 25–34, 35–44, 45–54, 55–64, 65+).
[e] Donors limited to respondent cases.

5.3.3 Amount of Item Nonresponse

Across all the variables imputed, the level of missing data ranged from 0.20% (number of children in household) to 18.96% (last year's income). In general, of the 25 items imputed, all but last month's income, last year's income, and landline without phone service had fewer than 10% of responses missing. *Table 5-2* shows the number and percentage of missing data for each item imputed.

Table 5-2.   Number and Percentage of Missing Data for Imputed Variables

Variable	Nonrespondents	Respondents	% Missing
B4C2—Length of having current Medicaid plan	1,823	37,888	4.59
D30—Rate general health status	1,080	38,631	2.72
H77—Highest level of education completed	2,975	36,736	7.49
H84_A1—Number of family members supported by income	3,755	35,956	9.46
H84_A2—Last month gross income	6,958	32,753	17.52
H84_A3—Last year's gross income	7,531	32,180	18.96
I90A—Child age	620	39,091	1.56
INSRD_A—Adult Insurance Status	101	39,610	0.25
INSRD_C—Child Insurance Status	141	39,570	0.36
MEDICD_A—Adult covered by Medicaid	747	38,964	1.88
MEDICD_C—Child covered by Medicaid	376	39,335	0.95
P148—Child gender	599	39,112	1.51
RACE5_A—Race Ethnicity Adult, 5 categories	685	39,026	1.72
RACE5_C—Race Ethnicity Child, 5 categories	219	39,492	0.55
S9—Ohio FIPS County Code, Respondent Provided	94	39,617	0.24
S9-TYPE—Survey County Type	524	39,187	1.32
S11—Adults in family	135	39,576	0.34
S12—Children in household	78	39,633	0.20
S14—Respondent age	622	39,089	1.57
S13B—Children in family	183	39,528	4.61
S15—Respondent gender	88	39,623	0.22
Q153—Number of other landline phone lines in household	326	39,385	8.21
Q155—Without phone service 24 hours or more (not cell)	944	7,453	11.24
Q155C—Without phone service 24 hours or more (not landline)	2,923	28,391	9.33
NUM_ADULTS—Number of Adults in household (landline only)	157	8,240	1.87

5.4   Weighting

For the 2017 OMAS, RTI incorporated four major steps in the process to create the survey weights to ensure proper inference to the target population:

- Design-based weights
- Nonresponse adjustment
- Dual-frame adjustment
- Poststratification

- Weight trimming

This section describes these steps in detail. Further detail on using the survey weights can be found in *Appendix G, Data Usage*.

5.4.1 Design-Based Weight

The design-based weight (wt0) for each selected number is the inverse probability of selection. For OMAS, which used a stratified design, the design-based weight is equal to the number of telephone numbers available in a stratum divided by the number of telephone numbers selected.

5.4.2 Nonresponse Adjustments

The first step in the weighting adjustment process was to adjust the design-based weights (wt0) for nonresponse and other survey design factors (i.e., child oversample, number of people in the household, number of telephone lines). To account for each of these adjustments the nonresponse step was broken into three sequential parts. Each of these parts was conducted separately for adult respondents (including those with a child) and the child interviews. These parts were implemented as described:

- **Nonresponse and ineligibility adjustment (wt1):** Within the sampling stratum (county for landline numbers and rate center county for cell phone), the design-based weights of respondents were adjusted to account for the weight of ineligible telephone numbers, unknown eligibility telephone numbers, and the eligible nonresponding telephone numbers.

- **Multiple phone number adjustment (wt2):** Respondent weights were divided by the number of phone numbers (of the phone type—landline or cell phone—being responded on) reported by the respondent (e.g., wt2 = wt1/n_j where n_j = 1, 2, . . . ,k^* is the number of phone numbers person *j* has capped at three for landline respondents and two for cell phone respondents).

- **Number of people in household adjustment (wt3):** To account for the subselection of a respondent within a household for landline respondents, the weight was multiplied by the reported number of people in the household (capped at 4) (e.g., wt3 = wt3*n_h, where n_h = 1, 2, 3, or 4—the number of adults in the household). A similar adjustment was made for the child weight using the number of children in the household.[18] No adjustment was made for cell phone respondents (i.e., wt3 = wt2).

5.4.3 Dual-Frame Adjustment

To minimize potential respondent bias, the 2017 OMAS incorporated a dual-frame design that used both landline and cell phone numbers. To maximize the likelihood of reaching a potential respondent, the OMAS design allowed for respondents to be selected from either their landline or cell phone number (if they had both). However, the weight for these dual-frame respondents needed to be adjusted to account for the fact that they could have been selected from either frame (Lu et al., 2013). To identify the dual-frame respondents, the 2017 OMAS asked each respondent if he or she had a cell phone (if responding on a landline) or landline phone (if responding on a cell phone).

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[18] When multiple children were associated with a cellphone respondent, one child was randomly selected in a similar manner to the adult household respondent.

The 2017 OMAS used a composite adjustment to adjust the weights of these dual-frame users. The composite adjustment weights the dual users from each frame type such that when combined the dual users count as a single entity. The weight (known and λ) is the proportion of dual frame user's weight applied to the landline frame and the compliment of the weight (i.e., $1 - \lambda$) is proportion applied cell phone dual user's weight. Mathematically, the composite weight for all users can be written as

$$\begin{cases} wt_4 & if\ non-dual\ user \\ wt_4 \times \lambda & if\ dual\ landline\ user \\ wt_4 \times (1-\lambda) & if\ dual\ cell\ phone\ user \end{cases}$$

For the 2017 OMAS, a composite factor of $\lambda = 0.50$ was used.

Prior to deciding to use the composite method, several other dual-frame adjustment approaches were considered and compared. These approaches included a single-frame estimation approach; a composite approach with lambda set at 50%; a composite approach with lambda optimized to minimize the unequal weighting effect; and a composite approach with lambda optimized to minimize the design effect for past year's income. After comparing the standard errors for key estimates resulting from each of these approaches, it was determined that the composite approach produced the smallest standard errors. Based on this analysis, the 50/50 composite method approach was deemed most appropriate for the 2017 OMAS. The use of the composite approach differs from the 2012 and 2015 OMAS where the single frame estimation method provided the most optimal standard errors.

5.4.4 Poststratification

After the dual-frame adjustment, the respondent weights were poststratified to known control totals. This step ensures that weights of the respondents accurately reflect the distribution of the target population. In other words, this step corrects for the fact that the distribution of the respondent sample may not be the same as the distribution of the target population. To make this adjustment, RTI used the generalized exponential model (GEM; Folsom & Singh, 2002), which is a raking procedure that simultaneously controls the marginal totals. Separate models were fit for the adult respondents and the child interviews. The 2017 OMAS controlled for the following characteristics for the adult respondents:

- Age (6 levels)
- Race (5 levels)
- Gender (2 levels)
- Phone type (3 levels)
- Medicaid*Collapsed Age[19] (9 levels)
- Race*Age (30 levels)
- Education*Age (24 levels)
- Gender*Collapsed Race[20]*Collapsed Age (18 levels)

- Medicaid (3 levels)
- Education (4 levels)
- Region (19 levels)
- Medicaid*Gender (6 levels)
- Medicaid*Region (57 levels)
- Gender*Region (38 levels)
- Gender*Age (12 levels)
- Medicaid*Collapsed Age*Gender (18 levels)

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[19] Collapsed age has three levels: 19–44, 45–64, and 65 or older.
[20] Collapsed race has three levels: White, Black/African American, and Other.

Table 5-3 displays the marginal control totals used for the adult population totals (population frequency), the marginal adjustment made at each characteristic level, and the minimum and maximum weight adjustment. The control totals for age, race, gender, region, education, and county came from the 5-year ACS. The control totals for phone type came from the 2016 National Health Interview Survey (NCHS, 2017). The control totals for Medicaid enrollment came from the ODM. The Ohio Medicaid control totals are the average enrollment during the June–December data collection period.

The child weights were poststratified to the following characteristics:

- Age (4 levels)
- Race (5 levels)
- Gender (2 levels)
- Gender*Age (8 levels)
- Race*Age (20 levels)

- Phone type (3 levels)
- Medicaid (2 levels)
- Region (19 levels)
- Medicaid*Gender (4 levels)
- Gender*Collapsed Race*Collapsed Age[21] (18 levels)

Table 5-3.   Adult Sample Marginal Weighting Adjustments and Population Totals

Adult Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	**Maximum**	**Frequency**	**Percentage**
Intercept	1.0475	1.7553	1.7553	8,869,199	100.0
Age, years					
19–24	1.0489	0.8158	1.4900	939,268	10.6
25–34	1.0360	0.8189	1.4364	1,503,252	16.9
35–44	1.0409	0.8008	1.3890	1,375,956	15.5
45–54	1.0608	0.8345	1.4663	1,550,403	17.5
55–64	1.0502	0.8142	1.6688	1,614,629	18.2
65+	1.0478	0.7626	1.7553	1,885,691	21.3
Race					
White	1.0481	0.8204	1.7282	7,164,904	60.5
Black/African American	1.0459	0.7626	1.6889	1,030,755	15.1
Hispanic	1.0142	0.8044	1.5657	257,120	2.9
Asian	1.1459	0.8661	1.7553	182,892	2.1
Other	1.0052	0.7834	1.5636	233,528	2.6

(continued)

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[21] Collapsed child age has three levels: 0-5, 6-12, and 13-18.

Table 5-3.   Adult Sample Marginal Weighting Adjustments and Population Totals (continued)

Adult Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Gender					
Male	1.0453	0.7834	1.7282	4,288,528	48.4
Female	1.0496	0.7626	1.7553	4,580,671	51.6
Phone Type					
Cell	1.0069	0.7626	1.5482	4,687,349	52.8
Mixed	1.0983	0.8565	1.7553	3,639,588	41.0
Land	1.0891	0.8643	1.6955	542,262	6.1
Medicaid Status					
No Medicaid	1.0323	0.7626	1.6688	7,130,455	80.4
Medicaid only	1.1024	0.9020	1.7282	1,360,973	15.3
Medicaid and Medicare	1.1604	0.8008	1.7553	377,771	4.3
Region with Metro Counties					
Allen	1.0000	0.7892	1.6050	79,393	0.9
Butler	1.0023	0.7626	1.6415	279,021	3.1
Cuyahoga	1.1284	0.8745	1.6697	980,029	11.0
Franklin	1.0597	0.8402	1.7553	931,380	10.5
Hamilton	1.1365	0.9133	1.5680	612,592	6.9
Lorain	1.0255	0.7936	1.4306	232,700	2.6
Lucas	1.1829	0.8779	1.6688	330,850	3.7
Mahoning	1.0153	0.7840	1.5840	183,990	2.1
Montgomery	1.0932	0.8532	1.7060	409,994	4.6
Richland	1.0180	0.7655	1.4700	94,760	1.1
Stark	1.0008	0.7834	1.5672	290,045	3.3
Summit	1.0055	0.7898	1.5789	420,925	4.7
Remaining North Central	1.0060	0.7988	1.5715	221,133	2.5
Remaining Northeast	1.0168	0.7862	1.4936	918,244	10.4
Remaining Northeast Central	1.0040	0.7853	1.7282	265,887	3.0
Remaining Northwest	1.0145	0.8101	1.6118	371,212	4.2
Remaining South Central	1.0212	0.7847	1.4448	759,998	8.6
Remaining Southeast	1.0135	0.7760	1.6414	641,069	7.2
Remaining Southwest	1.0214	0.7751	1.6813	845,977	9.5

(continued)

Table 5-3.   Adult Sample Marginal Weighting Adjustments and Population Totals (continued)

Adult Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Education					
Less than high school	1.0439	0.7854	1.6697	919,472	10.4
High school	1.0526	0.7988	1.7282	2,987,148	33.7
Some college	1.0457	0.7655	1.6696	2,686,437	30.3
College or more	1.0443	0.7626	1.7553	2,276,142	25.7

Table 5-4 displays the marginal control totals used for the child population totals (population frequency), the marginal adjustment made at each characteristic level, and the minimum and maximum weight adjustment.

Table 5-4.   Child Sample Marginal Weighting Adjustments and Population Totals

Child Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Intercept	1.0422	0.8104	1.4428	2,745,174	100.0
Age, years					
<1	1.0197	0.8104	1.3397	131,221	4.0
1–5	1.0438	0.8671	1.4428	690,961	25.2
6–12	1.0630	0.8332	1.3990	1,023,941	37.3
13–18	1.0215	0.8285	1.3175	899,051	32.8
Race					
White	1.0435	0.8983	1.3844	1,936,905	48.4
Black/African American	1.0561	0.8104	1.4428	391,577	19.2
Hispanic	1.0056	0.8332	1.2557	155,560	5.7
Asian	1.0437	0.8466	1.3891	52,394	1.9
Other	1.0324	0.8543	1.3339	208,738	7.6
Gender					
Male	1.0418	0.8104	1.3990	1,403,072	51.1
Female	1.0426	0.8285	1.4428	1,342,102	48.9
Phone Type					
Cell	1.0044	0.8104	1.2781	1,709,259	62.3
Mixed	1.1157	0.9157	1.4428	961,099	35.0
Land	1.0570	0.8876	1.2579	74,816	2.7

(continued)

Table 5-4.　Child Sample Marginal Weighting Adjustments and Population Totals (continued)

Child Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Medicaid Status					
Medicaid	1.0845	0.8738	1.4428	1,519,310	55.3
Not Medicaid	1.0104	0.8104	1.3327	1,225,864	44.7
Region with Metro Counties					
Allen	1.0000	0.8503	1.1955	25,499	0.9
Butler	1.0000	0.8317	1.1951	95,310	3.5
Cuyahoga	1.1180	0.9217	1.3951	282,116	10.3
Franklin	1.0673	0.8890	1.3389	303,332	11.0
Hamilton	1.1109	0.9223	1.3960	195,162	7.1
Lorain	1.0000	0.8434	1.2119	72,109	2.6
Lucas	1.0417	0.8573	1.2976	104,925	3.8
Mahoning	1.0096	0.8437	1.1997	49,731	1.8
Montgomery	1.1543	0.9532	1.4428	124,089	4.5
Richland	1.0000	0.8104	1.1720	27,457	1.0
Stark	1.0023	0.8389	1.2054	85,692	3.1
Summit	1.0000	0.8192	1.2337	121,908	4.4
Remaining North Central	1.0000	0.8365	1.1806	65,585	2.4
Remaining Northeast	1.0121	0.8444	1.2513	270,541	9.9
Remaining Northeast Central	1.0340	0.8585	1.2721	87,088	3.2
Remaining Northwest	1.0186	0.8571	1.2119	122,960	4.5
Remaining South Central	1.0118	0.8392	1.2436	247,910	9.0
Remaining Southeast	1.0094	0.8112	1.2278	189,660	6.9
Remaining Southwest	1.0311	0.8396	1.2707	274,100	10.0

5.4.5　Weight Trimming

The final step in the weighting process was to trim the extreme weights. This step is conducted to ensure that no one respondent has too much influence on the estimates. Weight trimming is useful to improve precision by reducing the variation in the weights. However, too much trimming may introduce bias in the estimates. Therefore, an analysis was conducted to determine the smallest level of weight trimming that sufficiently improved precision without introducing the potential for bias. As a part of this analysis, weight trimming levels of the largest 1%, 2.5%, 5%, and 7.5% of weights were compared. This comparison was conducted at the state and county levels.

For the 2017 OMAS, based on the analysis results, the largest 1% of weights were trimmed. This trimming involved identifying weights larger than the weight value at the 99th percentile. Weights larger

than this value were capped at the 99th percentile. The trimmed weight was redistributed to weights below the 99th percentile such that their weights were kept in the weighting class from which they came. In other words, the marginal control totals created in the poststratification step were maintained. The trimming step was conducted using the GEM.

5.4.6 Design Effects

To help evaluate the impact of the 2017 OMAS sample design and weighting adjustments on the variability of estimates, RTI and the OMAS EC reviewed the design effects (DEFF; Kish, 1965) for key outcomes at the state and county levels. The design effect is defined as:

$$DEFF = \frac{sampling\ variance\ of\ a\ complex\ design}{sampling\ variance\ of\ a\ simple\ random\ sample}$$

For a proportion, which most of OMAS estimates are, this formula translates to:

$$DEFF_{prop} = \frac{v(\hat{p})_{complex}}{v(\hat{p})_{SRS}}$$

Where $\hat{p}$ is the estimated proportion; $v(\hat{p})_{SRS}$ is the estimated variance of the estimated proportion, assuming a simple random sample; and $v(\hat{p})_{complex}$ is the estimated variance of the estimated proportion, considering the complex survey design.

Factors in the 2017 OMAS design that contributed to the design effect include the following:

- **Stratification:** For both the landline and cell phone samples, a stratified design was used at the county (or rate center county) or subcounty level. When the outcome of interest is homogeneous within a stratum, the design effect can be reduced.

- **Oversampling:** To meet the precision requirements for key subpopulations of the 2017 OMAS, the sample allocation to each stratum was altered from a proportional allocation to give more sample to strata where certain subpopulations of interest (e.g., African Americans, rural residents) were likely to reside. Any deviation from a proportional allocation is considered an oversample of one or more strata. Oversampling creates variation in the probabilities of selection, which increases the design effect.

- **Within-household selection:** One adult person for the landline sample and one child (if any were present) within each household were selected. Because the number of adults (or children) varied across households, the probability of selection for people in a household differed across households. This differing probability of selection increases the design effect.

- **Weight adjustments:** To reduce the potential for nonresponse and coverage bias, differential weight adjustments were applied to respondents. If response and coverage propensities varied greatly among subpopulations, the design effect may have increased as a result of these adjustments. In addition, weight trimming was conducted on the final set of weights to reduce the design effect of an estimate.

In general, the combination of the above factors led to a design effect greater than one. To illustrate the design effects in the 2017 OMAS, *Table 5-5* presents the design effects at the state and Medicaid region levels for the percentage of adults and children insured, respectively; the percentage of

adults and children on Medicaid, respectively; and the mean self-reported health status of adults and children (five-point Likert scale), respectively. *Table 5-6* presents the design effects at the county levels for the percentage of adults insured, the percentage of adults on Medicaid, and the self-reported health status of adults (five-point Likert scale). These design effects reflect estimates after the 1% weight trimming was conducted. As seen in the tables, some design effects were less than one. This occurred for estimates in counties where no oversampling occurred, the weight adjustments were not differential across respondents, and the outcome was homogeneous across respondents (e.g., most children insured).

Table 5-5.   Design Effects at the State and Medicaid Region Levels for Adult and Child Estimates of Key Outcomes

Medicaid Region	Insurance		Medicaid		Self-Reported Health Status	
	Adult	Child	Adult	Child	Adult	Child
State	2.06	1.30	1.88	1.55	1.93	1.52
North Central	2.13	1.00	2.02	1.41	1.95	1.59
Northeast	1.97	1.36	1.66	1.38	1.78	1.41
Northeast Central	2.16	1.24	1.71	1.60	1.75	1.50
Northwest	1.90	0.95	1.82	1.84	1.96	1.45
South Central	2.05	1.30	2.18	1.59	2.09	1.63
Southeast	2.42	1.26	2.00	1.89	2.11	1.67
Southwest	1.95	1.28	1.83	1.55	1.91	1.43

Table 5-6.   Design Effects at the County Level for Adult Estimates of Key Outcomes

County	Insurance	Medicaid	Self-Reported Health Status
Adams	1.72	2.00	2.24
Allen	1.23	1.76	1.51
Ashland	1.45	1.70	1.54
Ashtabula	1.55	2.03	1.90
Athens	0.99	2.07	2.10
Auglaize	4.23	1.69	2.04
Belmont	3.30	2.89	2.57
Brown	3.78	1.98	2.97
Butler	1.89	1.62	1.50
Carroll	1.15	1.38	2.28
Champaign	1.82	1.51	1.39
Clark	1.77	1.68	1.57
Clermont	1.95	1.69	1.68
Clinton	1.83	2.11	2.09
Columbiana	1.46	1.36	1.85
Coshocton	2.28	1.39	2.55
Crawford	1.45	1.42	1.66
Cuyahoga	2.11	1.61	1.84

(continued)

Table 5-6. **Design Effects at the County Level for Adult Estimates of Key Outcomes (continued)**

County	Insurance	Medicaid	Self-Reported Health Status
Darke	1.37	1.14	2.24
Defiance	1.12	0.98	3.38
Delaware	1.51	1.77	1.71
Erie	2.57	1.62	2.07
Fairfield	1.72	1.31	1.48
Fayette	1.59	1.47	1.55
Franklin	1.91	2.15	1.92
Fulton	2.34	1.42	2.07
Gallia	1.18	2.25	2.45
Geauga	2.50	1.81	1.53
Greene	1.46	1.48	1.81
Guernsey	4.59	1.45	1.64
Hamilton	1.88	1.98	2.05
Hancock	1.10	1.64	1.48
Hardin	1.71	2.13	1.59
Harrison	6.80	2.91	2.63
Henry	1.04	1.75	1.53
Highland	1.79	1.93	2.51
Hocking	1.18	2.48	1.86
Holmes	2.30	1.07	1.34
Huron	2.89	1.92	2.13
Jackson	1.61	1.92	2.26
Jefferson	1.15	2.59	1.84
Knox	1.40	2.52	1.78
Lake	2.21	1.49	2.03
Lawrence	3.01	2.29	2.98
Licking	1.72	1.47	1.48
Logan	3.54	2.86	3.44
Lorain	1.39	1.57	1.54
Lucas	1.98	2.24	1.95
Madison	1.69	1.07	1.65
Mahoning	1.40	1.92	1.87
Marion	1.54	2.11	2.02
Medina	2.38	1.46	1.67
Meigs	1.05	3.17	3.31
Mercer	0.95	2.90	2.58
Miami	1.66	1.73	1.52
Monroe	1.82	1.85	2.45
Montgomery	2.18	1.76	2.11
Morgan	0.77	1.91	3.67
Morrow	1.74	1.25	1.49
Muskingum	2.92	2.07	2.37
Noble	2.90	2.72	2.00
Ottawa	3.23	1.78	2.29
Paulding	0.79	2.48	2.44

(continued)

Table 5-6.   Design Effects at the County Level for Adult Estimates of Key Outcomes (continued)

County	Insurance	Medicaid	Self-Reported Health Status
Perry	1.19	1.56	2.27
Pickaway	1.01	1.58	1.66
Pike	1.86	2.78	2.69
Portage	1.79	1.66	1.50
Preble	1.09	1.23	2.48
Putnam	0.87	0.94	1.61
Richland	2.56	1.96	1.87
Ross	3.33	2.96	2.51
Sandusky	2.44	1.06	1.68
Scioto	3.39	3.16	3.92
Seneca	1.54	1.25	2.00
Shelby	1.55	1.44	1.97
Stark	1.77	1.54	1.52
Summit	1.85	1.61	1.54
Trumbull	1.61	1.61	1.70
Tuscarawas	2.29	1.84	1.90
Union	2.01	1.81	2.14
Van Wert	2.45	2.32	2.14
Vinton	1.37	1.24	1.38
Warren	1.45	1.77	1.58
Washington	2.00	1.49	2.31
Wayne	2.33	1.56	2.12
Williams	1.27	1.76	1.40
Wood	2.39	1.94	1.64
Wyandot	3.26	1.39	1.57

5.5   Estimation

The 2017 OMAS used a complex survey design. As such, special procedures are required to properly calculate the standard error of estimates. This section details the approach for proper estimation. Examples of how to use existing software (e.g., Stata, SUDAAN, SAS, and R) are presented in *Appendix G, Data Usage*.

5.5.1 Estimation Approach

Estimates in the 2017 OMAS can be produced through Taylor series linearization (TSL). TSL is a computational procedure that uses the sampling design, including strata and clusters, to estimate standard errors. For clustered designs, standard errors are estimated from the standard error among clusters; for stratified designs, such as OMAS, standard error are estimated within each stratum. Estimates of standard errors of means are available through formula; more complex estimates are then functions of means so that derivatives are used to linearize the variance. More information about Taylor series variance estimation for sample survey data is available in Woodruff (1971); Fuller (1975); Lohr (2010); Levy and

Lemeshow (2008); Särndal, Swensson, and Wretman (1992); Lee, Forthofer, and Lorimor (1989); and Wolter (1985).

5.5.2 Estimation Variables

To calculate the TSL standard errors, the analyst needs the stratum identifiers, cluster identifiers, and analysis weights. The required variables for the 2017 OMAS are the following:

- **WT_A:** analysis weight for adults
- **WT_C:** analysis weight for children
- **STRATUM:** stratification indicator

The 2017 OMAS had some strata for which there is only one child respondent in a stratum. In these cases, estimation requires the use of either the grand mean or collapsing strata.

5.6 Public-Use and Restricted-Use Files and Other Documentation

The 2017 OMAS is available to the public in two forms (1) a public-use file (PUF) and (2) a restricted-use file (RUF). The PUF is available for download without any restriction. The RUF is available to the public after applying to the GRC. The PUF has gone through disclosure review and survey items that pose a disclosure risk have been either suppressed (i.e., removed from the datafile) or coarsened (i.e., levels collapsed to have more respondents per level). The RUF has less suppression and coarsening, but, for this reason, requires additional information from the researcher to obtain the RUF.

In addition to the PUF and RUF, additional documentation related to the OMAS are available. The additional documentation includes substantive briefs and other related reports.

All datafiles and documentation can be obtained on the OMAS website at http://grc.osu.edu/OMAS

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Appendix A: Final Pilot Test Report

2017 OMAS Survey

Final Pilot Test Report

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Tables

Objectives of the 2017 Pilot Test

The primary objective and purpose of the Ohio Medicaid Assessment Survey (OMAS) 2017 Pilot Test was to replicate the conditions for full-scale survey data collection. The sample for the pilot was drawn in the same manner that will be used to draw the final sample. However, several methodological differences occurred between the implementation of the pilot and the ultimate fielding of the OMAS 2017. For example, call attempt protocols were relaxed during the pilot, specifically the number and timing of telephone attempts. Also, refusal conversion attempts were not conducted during the pilot. Finally, the final training protocol was modified based on observations from the pilot activities.

The secondary objective of the pilot was to determine more accurately the survey length for the instrument. Currently, it is estimated to be longer than the projected length used for budgeting: 20 minutes.

Tertiary objectives for the pilot included further checks on the computer-assisted telephone interviewing (CATI) programming, assessment of questionnaire flow, evaluation of respondent understanding, identification of potential fielding issues, and a greater and more refined understanding of interviewers' training needs.

2

Location and Dates of the Pilot

Interviewing for the pilot started on Monday, June 7, 2017, and continued through June 25, 2017. All telephone interviewing took place at RTI's Research Operations Center in Raleigh, NC.

The pilot was completed using English-language versions of the instrument; the goal was to complete approximately 100 interviews, break for an assessment of the first cases, then complete an additional 100 interviews. The questionnaire versions fielded for the pilot went through extensive review, editing, and testing by members of both the RTI International (RTI) and Ohio State University (OSU) project management teams. The full project fielding will use a CATI program allowing Spanish language display when needed.

The OMAS 2017 telephone interviewers made calls between the hours of 9:00 am–9:00 pm on weekdays. When interviewing concluded, RTI had obtained 206 completed interviews. Completed interviews were obtained with between one and three attempts per record; two attempts, on average, resulted in a completed survey. During actual fielding the sample received more attempts and refusal conversion efforts than was operationally feasible during the pilot.

3

Training for the Pilot

RTI conducted OMAS 2017 pilot training June 5–6, at RTI's Research Operation Center in Raleigh, NC. The OMAS 2017 data collection trainers, Marion Schultz and Kurt Johnson, led the training sessions with assistance from RTI and call center staff. Eight experienced interviewers and four supervisors participated in and successfully completed the pilot training.

Interviewers had to complete training and certification prior to beginning "live" calling in production. Experienced interviewers attended 4 hours of project training and 1 to 2 hours of mock interviewing. Topics covered during training focused heavily on the survey's background and structure, study-specific protocols and procedures, pronunciation, and answering frequently asked questions.

During training, interviewers participated in round-robin mock interviews, paired-practice mock interviews, and completed individual survey practice. Pilot certification involved completing two oral quizzes as well as successfully attending and participating during training sessions and exercises. Interviewers had to achieve 100% correct answers on both oral quizzes to become certified and begin calling. The training agenda is shown below.

Evening 1 Project Training Agenda

5 minutes	Welcome and introduction
25 minutes	Survey background, purpose and structure
10 minutes	Roles and responsibilities
10 minutes	General contacting procedures
15 minutes	Respondent rights and importance of confidentiality
45 minutes	Frequently asked questions
20 minutes	Emotional distress and sensitivity
30 minutes	Refusal avoidance
15 minutes	**BREAK**
75 minutes	Questionnaire training and round-robin mock #1 (adult, child)
10 minutes	Wrap-up

Day 2 Project Training Agenda

10 minutes	Q&A sessions
75 minutes	Round-robin mock #2 (adult, child)
15 minutes	**BREAK**
40 minutes	Individual survey practice
35 minutes	Certification quizzes
	▪ Oral FAQ quiz
	▪ Oral pronunciation quiz

3.1   Replicates

Replicates consisted of 2,754 numbers, both landline and cell phone.

3.2   Disposition of Pilot Sample

There were 206 completed interviews in the pilot. ***Table 3-1*** presents the final disposition for all 2,754 released sampled numbers.

Table 3-1.   Distribution of Disposition Codes for the OMAS 2017 Pilot

Disposition	Number	Percentage
Uncalled	7	0.25%
(4P) Privacy Manager	3	0.11%
(6O) Language Barrier—Other/Unknown	9	0.33%
(CC) Interview Complete	206	7.48%
(IA) All Residents under 18 (Age Ineligible)	28	1.02%
(IB) Business (not a dwelling unit or household)	891	32.35%
(IC) Changed Phone #	6	0.22%
(IE) Beeper/Pager	7	0.25%
(IF) Modem/FAX	308	11.18%
(IG) Group Quarters	1	0.04%
(IL) Blocked Line/Pay Phone	33	1.20%
(IS) Subject is Ineligible	66	2.40%
(IT) (Temporarily) Disconnected	92	3.34%
(IW) Nonworking # (wrong or bad phone #)	971	35.26%
(ND) Distressed	1	0.04%
(NE) Final Contact by not Interviewed	90	3.27%
(NM) Physically/Mentally Incapable	10	0.36%
(NU) Subject Unavailable During Data Collection Period	2	0.07%
(RH) Final Refusal—Hostile	6	0.22%
(RM) Mixed Refusal	1	0.04%
(RO) Refusal by Other—Multiple	1	0.04%
(RX) Final Refusal—Reviewed	1	0.04%
(UC) Unable to Contact Subject	14	0.51%
Total Calls	2,754	

3.3   Timing

During the pilot, the mean interview time for all cases during Phase 1 was 33.93 minutes, with a median time of 32.45. After the adjustments mid-pilot, the Phase 2 mean timing was 25.38, with a median time of 22.78.

Table 3-2 shows the mean and distributional interview times for the overall instrument as well as by module.

Table 3-2.   Phase 1 and Phase 2 Pilot Interview Time by Module

Module	Time of Complete (in minutes)					
	Phase 1			Phase 2		
	Mean	Median	Max	Mean	Median	Max
S – Screening Module	2.98	2.90	5.60	3.22	2.78	8.53
A – Current Insurance Status	0.36	0.33	0.67	0.41	0.33	0.93
B – Currently Insured Adult	3.52	3.12	10.92	3.32	3.15	9.12
C – Currently Uninsured Adult	0.27	0.27	0.28	0.68	0.68	0.68
D – Adult Health Status and Care Giving	5.81	5.32	11.95	4.32	3.90	8.18
E – Utilization and Quality of Adult Health Care Services	2.53	2.28	7.13	1.87	1.60	5.18
F – Access to Care and Unmet Needs of Adults	5.76	5.50	9.77	4.98	4.68	11.12
G – Employment	0.61	0.37	6.37	0.39	0.22	1.97
H – Adult Demographics and Family Income	4.82	4.48	9.10	4.69	4.34	7.83
Q – Household Questions	0.45	0.39	1.27	0.33	0.29	0.97
R – Guns and Violence	1.13	1.00	4.92	0.00	0.00	0.00
I – Screening Questions for Eligible Child	1.82	1.63	2.83	2.42	2.22	3.65
J – Child's Insurance Coverage	1.91	1.23	5.07	1.56	0.85	3.05
K – Child Currently Uninsured	0.43	0.43	0.43	0.38	0.38	0.38
L – Health Status of Child	2.65	2.40	5.20	2.84	2.13	5.35
M – Utilization and Quality of Child Health Care Services	2.41	2.37	4.02	3.15	2.48	5.85
N – Access to Care for Child	2.03	2.27	3.57	1.09	0.82	2.18
O – Unmet Health Needs	1.63	1.40	4.22	1.32	1.06	2.33
P – Child's Demographics	1.11	0.80	2.33	1.05	1.01	1.47
CL – Closing Module	2.02	1.82	12.68	0.72	0.36	8.62
Average Total Adult	**29.86**	**29.30**	**41.08**	**24.19**	**22.39**	**47.75**
Average Total Child	**13.46**	**13.21**	**19.37**	**13.13**	**11.67**	**20.03**
Average Total (Adult and Child Respondents)	**44.65**	**44.11**	**59.98**	**38.46**	**36.76**	**50.26**
Average Total	**33.93**	**32.45**	**59.98**	**25.38**	**22.78**	**50.26**

Appendix B: Interviewer Training Manual

Ohio Medicaid Assessment Study (2017 OMAS)

Telephone Interviewer Manual

RTI Project No.0214474

Prepared by:

RTI International
www.rti.org

2017

The contents of this manual are considered proprietary and should only be used for the purposes of this contract.

Ohio Medicaid Assessment Survey
(2017 OMAS)

Telephone Interviewer Manual

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1. Introduction

1.1 Background and Purpose

The State of Ohio is sponsoring the 2017 *Ohio Medicaid Assessment Survey* (2017 OMAS). The 2017 OMAS has been designed to provide accurate, reliable, and representative data on health insurance coverage, use of medical services, satisfaction with and access to health care. These data will inform healthcare policy decisions and ultimately, have the potential to make a significant impact on the lives of people living in Ohio.

The 2017 OMAS is a continuation of one of the largest ongoing state-level public health surveys. The survey includes sections that focus on insurance status for both adults and children, health status and care giving, usage and access to care, unmet healthcare needs, financial stress and medical bills, food situations, and demographic information.

RTI International, a not-for-profit survey research organization in Research Triangle Park, North Carolina, has been hired to manage the data collection effort.

1.2 Study Design

The design of the 2017 OMAS is similar to surveys conducted in 2004, 2008, 2010, and 2012. The survey was referred to as the Ohio Family Health Survey (OFHS) from 2004 through 2010 and was renamed as OMAS beginning in 2012. The 2017 OMAS study is designed as a random-digit-dial (RDD) and cell phone telephone survey using a computer-assisted telephone interview system, or CATI. Data will be collected from approximately 34,000 adults (19 years of age and older) living in Ohio. Approximately 8,000 of these interviews will include a child's proxy interview. The target population for the 2017 OMAS is non-institutionalized adult and child populations residing in the state of Ohio. The adult interview, including all screening questions, will take approximately 20 minutes to administer. The child interview will take approximately 9 minutes to complete.

1.3 Sample Design

The 2017 OMAS sampling plan consists of a list-assisted RDD landline sample, a RDD sample of cell phone numbers, and a supplemental African-American landline sample in the largest five primary metro counties. The landline sample frame will be stratified by Ohio's 88 counties with additional within county strata to account for the supplemental African-American sample. In total, there will be 96 landline sample strata. The sample will be allocated proportionally to each county. The largest 5 metro counties (Cuyahoga, Franklin, Hamilton, Lucas, and Montgomery) will have an additional 300 interviews allocated to them as a part of the supplemental African-American sample. If the expected number of respondents for a county based on the proportional allocation is less than 15 the allocation will be set to 15. The target for the remaining counties will be reduced in order to maintain the total desired interviews. The cellphone frame will be stratified based on the cell phone numbers rate center assigned county. A cell phone number's rate center is a geographic area around

the location for which the cellphone number was activated. One additional rate center located in West Virginia will be included because a high proportion of Ohio residents in Lawrence County purchased their cellphone from this rate center. In addition, a sample of Ohio residents with out-of-state cellphone numbers as identified by MSG's Consumer Cellular Database will be selected. These out-of-state cellphone numbers will be stratified by county type (urban, suburban, rural Appalachia, and rural non-Appalachia) based on the address of the cellphone owner. In total, there will be 93 cellphone sample strata. The sample will be proportionally allocated to each county. The largest 7 metro counties (the five largest plus Summit and Stark Counties) will have an additional 300 interviews allocated to them as a part of the supplemental African-American sample. If the expected number of respondents for a county based on the proportional allocation is less than 85 the allocation will be set to 85. The target for the remaining counties will be reduced in order to maintain the total desired interviews.

The sample file will be randomly divided into replicates for release to you, the telephone interviewers, to achieve approximately 36,000 completed interviews: 10,800 from landline telephone numbers and 25,200 from cellphone telephone numbers. Since the initial sampling unit is a telephone number, we will not know who to interview until we dial the telephone number and screen for eligibility. Interviewers will screen each telephone number in the sample and determine eligibility. The following types of telephone numbers will be ineligible for the 2017 OMAS:

- Business telephone numbers.
- Telephone numbers belonging to minors (18 years or younger).
- Telephone numbers associated with a household residing outside the state of Ohio.
- Mobile telephone numbers associated with a minor (18 years or younger).

1.4   Respondent Selection

1.4.1 Landline

The landline sample will use a simplified procedure for selecting a household member. We will first ask for the number of adults in the household aged 19 or older. If it is only one person, we will select that person. For households with more than one adult we will select the individual with the most recent birthday. Using the most recent birthday method guarantees we randomly select a person from the household as opposed to just interviewing the person answering the phone. The selected respondent will then be informed of their rights and read the informed consent.

1.4.2   Cell Phone

For the cell phone sample, we will attempt to conduct an interview with the person (aged 19 or older) who answers the phone. If the respondent cannot complete the interview at that time, attempt to set an appointment for a more convenient time. If at any point we are told the selected respondent is not the cell phone owner the case will be reset and rescreened. Only the owner of the cell phone can be the selected as the respondent.

1.4.3   Adult Proxy for Children

The 2017 OMAS includes a separate section that asks questions about a selected child in the household. We do not administer these questions with the selected child. Instead, a proxy adult will be identified to complete the survey. The proxy adult for Landline cases will be the most knowledgeable person in the household to answer questions about the child. It is possible that the selected proxy may not be the same person selected to answer the adult survey. Cell phone cases assume the owner of the phone is the most knowledgeable adult and will not ask this question. If a cell phone respondent for the child proxy answers "Don't know" 3 times in a row, the survey will skip to the end.

1.4.4 Adult Proxy for Impaired Adults

The 2017 OMAS does allow proxy interviews for adults **only** when the selected adult has a long-term or permanent mental or physical impairment. Interviewers do not ask if a selected adult has a mental or physical impairment rather we have this option if a household member offers this information. If this option is selected, the CATI, and not the interviewer, will make adjustments to the questions to be asked of the proxy for the selected respondent.

1.5   Data Collection Schedule

A small pilot study is scheduled in June of 2017. Full study data collection will take place for 5 months from July to December 2017.

1.6   Project Staff

The administrative Principal Investigator for the 2017 OMAS is Timothy Sahr from the Ohio Colleges of Medicine Government Resource Center. The academic Principal Investigator is Amy Ferketich from The Ohio State University. The RTI Project Director is Tom Duffy. He is responsible for the overall administration of all aspects of the project. Marcus Berzofsky is the Statistician who is responsible for sampling, weighting, and data analysis and reporting. Barbara Bibb and Dave Schultz are the project's Programmers who maintain the CATI instrument. Kurt Johnson is the Production Manager who is responsible for managing the overall data collection process. Marion Schultz is the Quality Assurance Manager who is responsible for overall training and quality assurance efforts. Dakisha Locklear is the Production Lead and Desiree Coll and Jerry Robinson are the project's Assistant Production Lead and both will oversee most production floor activities.

2. Telephone Interviewer Responsibilities and Expectations

2.1 Telephone Interviewer Responsibilities

As a member of the 2017 OMAS staff, you, the interviewer, play an extremely important role in the overall success of this study. You are the link to the thousands of respondents who will provide valuable information on their health insurance coverage, use of medical services, and access to health care. You are the person who develops rapport with the respondents, assures them that their participation is vital, makes them feel important, obtains their full cooperation, and provides information so they can make an informed decision about participating in the study (by administering informed consent).

It is extremely important that you help make each respondent feel at ease and comfortable with the interview. One key to accomplishing this goal is to be fully informed about the study and the data collection instruments and procedures. Helping you to become well informed about the Ohio Medicaid Assessment Survey (2017 OMAS) will be a major objective of our interviewer training for the project.

In fulfilling your role during each contact with a respondent you should:

- Communicate a positive attitude;

- Demonstrate familiarity with the questionnaire contents so that the interview proceeds in a professional manner;

- Maintain control of the interview; and

- Assume a nonjudgmental, neutral yet empathetic approach to the respondent, and the subject matter so that the sample member will feel comfortable answering the questions truthfully and completely.

As far as the respondents are concerned, they are sharing their information with a representative of the State of Ohio who cares and who will put that information to good use. Therefore, your understanding of the task and your commitment to it are crucial to the success of the survey. You are entrusted with treating all aspects of the project with the seriousness and attention deserved.

The chapters in this manual are designed to guide you through the interviewing process. Each section of the manual is devoted to a specific task. It is important for you to read it and keep it handy for reference. In addition to maintaining a pleasant, compassionate, and professional attitude toward all respondents, other interviewer responsibilities include:

- Successful completion of interviewer training for this study;

- Proper administration of the screening procedures to select individuals within households;

- Obtaining verbal informed consent to participate in the study;

- Securing cooperation from the eligible respondent to participate in the survey;

- Proper administration of the CATI interview to selected individuals in compliance with the directions in this manual;

- Observing all quality control procedures and meeting established performance standards;

- Maintaining the confidentiality of respondents and survey materials at all times;

- Filing daily time reports and other administrative records as required; and

- Committing your time and effort for the duration of the project and reporting for work as scheduled.

2.2 Telephone Interviewer Expectations

As an interviewer for the 2017 OMAS, you play a critical role in the success of the project. The following are our expectations for you regarding your performance and productivity while working on the 2017 OMAS.

Performance Expectations

All interviewers will be monitored for quality and quantity of their work. Project staff, Research Operations Center (ROC) Quality Experts (QE's), and OMAS Executive Committee members will be conducting monitoring sessions throughout the data collection period. Interviewers will be reviewed in terms of how consistently they read all survey questions *verbatim*, as well as to ensure that standardized interviewing techniques (probing, neutrality, etc.) are being followed at all times. You should expect to receive feedback after a monitoring session regarding your performance.

1.   Productivity Expectations

It is extremely important that we monitor interviewer productivity very closely to ensure that we meet all data collection goals. Your productivity will be measured through various means throughout the data collection period. You will receive feedback from a supervisor on a weekly basis about your productivity.

When working on the cell-phone sample, we expect that you will make an average of 30 outbound calls per hour. Since this is an RDD study, it is likely that you will reach a high number of answering machines, disconnected numbers, etc., so you will be dialing a lot of numbers in order to reach a person. If you are not completing interviews, you should be dialing more numbers, so higher than 30 calls per hour is better.

A dialer is used to make outbound calls when working on the landline sample. Therefore, if you are working on landline numbers, your productivity will be calculated by examining the number of completed interviews, refusals as well as efficiency in wrapping up cases in a timely manner.

In addition, we will require that you become "certified" before beginning to work on this project. Certification involves 4 steps:

1. Practice interviews

2. Paired mock interviews

3. Written and oral quizzes

4. Successfully completing training

No interviewer will be permitted to begin work on this study until he/she has been certified by a supervisor or project staff.

3. Respondent's Rights and Confidentiality

3.1 Respondent Rights

The rights of survey respondents must be recognized and protected by all RTI representatives. Verbal or written assurances to respondents have no meaning if they are violated or contradicted by the actions of any member of the research team. The 2017 OMAS is collecting sensitive information from respondents, therefore we must communicate to respondents that we are doing everything to keep their information safe and secure.

RTI survey procedures are designed to protect individual rights and to comply with all applicable laws. Among the rights that must be protected are:

- The right to accurate representation;
- The right of informed consent;
- The right to refuse; and
- The right of privacy.

The **right to accurate representation** is simply an extension of honesty in interpersonal relationships. Respondents have the right to receive completely accurate information about the study, its sponsor, their requested involvement and the reasons for the study.

- *You cannot tell* respondents that the interview will take "just a minute" when you know that it will take more.

- *You cannot tell* respondents that they **must** participate in the interview for any reason.

- *You can tell* respondents that the interview will take approximately 20 minutes to complete and that you can schedule an appointment at another time if they are unable to be interviewed just then.

- *You can also tell* respondents that their participation is voluntary, but their opinions and experiences are important because they represent the health experiences of a large number of people who will not be interviewed.

The **right of informed consent** requires that respondents be provided with adequate information to make an informed decision about participation. They must be expressly informed of the purposes of the study, the procedures that will be followed, any discomforts, risks, or benefits that might be associated with participation, and sources from which additional information about the study can be obtained. The individual must also be informed that consent may be withdrawn and participation discontinued at any time.

The **right to refuse** refers to a respondent's right to refuse to participate without fear of intimidation. While it is helpful to know why individuals do not want to participate in a study, those who refuse have no obligation to state a reason for their decision. You must distinguish between pressuring respondents to participate and providing them with sufficient information upon which to base a rational decision about participation.

The **right of privacy** is an issue that is currently receiving a great deal of attention from legislators, civil rights advocates, concerned citizens, and organizations that sponsor and conduct surveys. In addition to constitutional guarantees against invasion of privacy, specific federal legislation (The Privacy Act of 1974) assures that certain elements of an individual's personal privacy are protected against undue inquiry and subsequent use and dissemination of information collected.

At first it may seem as though recognizing respondents' rights will hinder your efforts to gain the cooperation of potential respondents. However, by adhering to the guidelines explained above, you will actually be more likely to obtain their participation. Being informative and truthful will demonstrate your integrity as an interviewer and assure the sample member of the legitimacy of the study.

3.2   Confidentiality

In addition to respondents' rights issues, we are concerned with *confidentiality*. We guarantee to all persons providing survey information that their responses will not be disclosed in a manner that will show identifying information. Interviewers and all other project staff members must uphold these promises of confidentiality of data collected from respondents.

The names or initials of respondents and the information obtained are not to be discussed with anyone other than authorized project personnel. All survey documents and records also must be safeguarded at all times. To be certain that the confidentiality requirements for this study are understood and that all who work on the study agree to uphold the requirements, a Confidentiality Agreement (*Exhibit 3-1*) must be read, understood and signed by each staff member before he/she begins work on the project. All project staff members are required to sign a confidentiality pledge stating that a breach of confidentiality will result in termination of their employment.

While working on the 2017 OMAS, if any notes are taken about an interview, these must remain secure in the call center and cannot be taken out of the building. Any project notes must also be destroyed properly by shredding. It is NEVER acceptable to take notes that contain any personally identifying information. Notes can, and should, reference a specific case ID. For the most part, you will not need to take notes and any questions about a case should be entered in a problem sheet. Again, no identifying information should be recorded in problem sheets.

Several measures will be implemented to ensure the security of the information gathered during each interview. These include the following:

- All project team members that might have contact with participants will sign a Pledge of Confidentiality.

- Personally identifying information is maintained separately from the actual questionnaire responses in RTI's CATI system.

- All data are maintained in project-specific, ID/password-protected shared network folders. Only those people that have been given authorization to access those folders by the project director can access that data. The ID/password that the user logs into the secured network determines what directories and data they can access.

- All identifying information, such as first name as gathered for callback purposes only and telephone number, will be removed from the CATI system to make certain that the information cannot be traced back to the respondent.

Exhibit 3-1 Ohio Medicaid Assessment Survey

CONFIDENTIALITY AGREEMENT

I,_____ *(print employee's name),* an employee of_____HR Directions, agree to work on the 2017 Ohio Medicaid Assessment Survey (2017 OMAS) in accordance with the guidelines and restrictions specified below. I understand that compliance with the terms of this agreement is a condition of my assignment with the 2017 Ohio Medicaid Assessment Survey (2017 OMAS) and that these terms are supplementary to those listed in my contract of employment with HR Directions.

a.   I agree to treat as confidential all case-specific information obtained in the 2017 Ohio Medicaid Assessment Survey (2017 OMAS) and related matters. I further agree that this covenant of confidentiality shall survive the termination of this agreement.

b.   I further understand that failure to follow the guidelines below may result in a potential violation of the provisions of the Privacy Act of 1974 (violation of the Privacy Act is a misdemeanor and may subject the violator to a fine of up to $5,000), and potential Institute disciplinary action, including termination. To fulfill confidentiality obligations, I will:

1. Discuss confidential project information only with authorized employees of the 2017 Ohio Medicaid Assessment Survey (2017 OMAS).

2. Store confidential project information as specified by project protocols.

3. Safeguard combinations, keys, and rooms that secure confidential project information.

4. Safeguard confidential project information when in actual use.

5. Immediately report any alleged potential violations of the security procedures to my immediate supervisor.

6. Not photocopy or record by any other means any confidential project information unless authorized by project leaders or my supervisor.

7. Not in any way compromise the confidentiality of project participants.

8. Not allow access to any confidential project information to any unauthorized person.

9. Report any lost or misplaced confidential project information to my supervisor immediately.

Employee's Signature _____ Date _____
        Employee's Organization: HR Directions (Greene Resources)

4. General Contacting Procedures

4.1 Obtaining Cooperation from Sample Members

It is important to the success of the survey that you become skilled at obtaining cooperation from sample members. Interviewers are expected to use their ingenuity as required during the introductory steps when requesting participation in the interview. You must be prepared, however, to deal with problem situations that may arise at any time during a contact with a respondent. Of particular importance is the fact that we are asking questions about health insurance coverage and experiences with health care, which some people may feel uncomfortable discussing. It is your job to address any concerns of the respondent and help put them at ease during the interview.

Guidelines for working with sample members to enlist their cooperation are presented below. Appropriate approaches that prove successful with various sample members should be shared during quality circle meetings and/or in discussions with your supervisor so that other interviewers can be informed and benefit from your experience.

4.2 Initial Contact

First, always read the call notes before you call a case. Interviewers who contacted the case before you will have made important entries in the call notes to help you handle the next call. This could provide you with some very important information such as if a call was broken off because the respondent had concerns regarding confidentiality or to let you know that a respondent refused to participate on the previous call. It is important to note that some cases where distress occurs are coded out and not ever called back, but for other cases, where the respondent wants to continue, callbacks are made. As such, it is important that you familiarize yourself with the case notes before you call the case. If you ever have a question about whether or not you should call a case where distress is noted in the interviewer notes, ask a supervisor.

Also, be sure to check the history of the case before you dial. You can determine what the last outcomes were for the case, and know if you are keeping an appointment, following up on a broken appointment, if the appointment was broken by the respondent, or if you are following up a "no contact" outcome like "ring no answer," "answering machine," or "regular busy."

Your initial contact with the respondent (or other adult) is critical in securing cooperation in the study. The first 10-20 seconds of the call are when most people make up their mind whether to hear you out, or to refuse to participate. Within the first moments of your call it is important that you convey four points:

1. You are a **professional, competent** interviewer;

2. Calling from a **legitimate and reputable** organization;

3. Engaged in **important and worthwhile** research; and

4. The respondent's **participation is vital** to the success of the research.

Your voice and words must convey credibility; it is not just *what you say* but *how you say it*! You should be serious, pleasant, and self-confident. What you say and how you sound to the person on the other end of the line impacts how well you are able to control your relationship with respondents. For example, if you sound uncertain or uncomfortable asking the questions, this feeling will be communicated to the respondent who may be reluctant to share such information experiences.

Approach all respondents as if they are friendly and interested. Assume that if they are not cordial, it is because they are not yet informed about why you are calling. An important component of this approach is to *talk with* the respondents, *not at* them. This requires that you respond interactively, and listen to what the respondents say. If they believe you are really interested in their responses, they are more likely to participate.

Keep in mind that not all respondents are the same; some will agree to a screening or interview with only a brief explanation of the purpose while others will need more detail. Begin with a brief explanation and give more detail as necessary.

4.3   Elements of an Interviewing Call

The key to successful interviewing is being prepared for every contact that you make. Have a complete set of the appropriate materials at your work station, organized in such a manner that you do not have to stop and search for the required documents. These materials include the Telephone Interviewer Manual and "cheat sheets" provided to you during training that gives quick answers to the top 5 most frequently asked questions and guidance on respondent distress.

The exact context of an interviewing call will vary depending on:

- What took place on previous calls to the household;

- What questions or objections the respondent has about participating; and

- The respondent's mood and current situation.

Because of these variables, every call is different and it is impossible to provide you with one picture of what happens during a call. Below are some general rules you should follow every time you place a call:

- Be prepared **before** you place a call. Be prepared to talk to the respondents. Do not rely on your memory to answer questions. Make sure you review and understand the Frequently Asked Questions (FAQs).

- Act professionally. Convey to respondents that you are a professional who specializes in asking questions and conducting interviews. As a professional interviewer, you have specific tasks to accomplish for this survey.

- Make the most of your contact. Even though you may not be able to obtain an interview on this call, it is important to make the most of the contact to aid in future attempts. For

example, if you are trying to contact the respondent and he/she is not available, gain as much information as you can to help us reach the respondent the next time we call. Important questions to ask include:

    ✓   When is the respondent usually home?

    ✓   What is the best time to reach the respondent?

4.4   Strategies for Gaining Cooperation to Conduct the Interview

With each call that you make, your goal is to identify an eligible respondent and complete the interview. You will need to obtain cooperation from potentially two different individuals as follows:

- From an adult household member (19 years of age or older) in order to screen the household for eligibility, and

- From the eligible respondent (19 years of age or older) him/herself to participate in the survey.

In each of these situations you are asking an adult to spend time with you on the telephone right now to complete the screener, obtain consent, and complete the interview. You must be prepared to explain why the study is important, why it is important for the individual to participate, and address any other concerns of any of these individuals. Although this section outlines important strategies for gaining cooperation and interviewing, your success in using these strategies starts with your ability to listen carefully at all times and bring your own creative style and thinking to these strategies.

4.4.1   The First Twenty Seconds

The first twenty seconds of your telephone call with a person will determine your success in gaining cooperation. Our experience shows that if you are able to get your foot in the door in the first twenty seconds of the call, you will be able to complete your task - whether it's administering the screener, obtaining consent, and/or securing cooperation to conduct the interview - on that call. If you are unsuccessful in the first twenty seconds of the call, you will be unlikely to complete your task on that call, and chances are the individual will not give you much more than twenty seconds to convey your message anyway.

If you are going to be successful in gaining cooperation, you need to develop skills and strategies to gain cooperation within the first twenty seconds of the call. Although the telephone call may sometimes last longer than twenty seconds, you will need to use the following five strategies to get your foot in the door in this portion of the call. While written in terms of the respondent, these strategies apply to other adult household members as well.

- **<u>Listen carefully</u>**. By listening carefully, you will know what you need to say to them next. This is a three pronged task: hear, acknowledge, approach. First, you must hear what the respondent is saying. When you hear a respondent offering

resistance, your next step is to acknowledge their concerns or feelings. You must acknowledge the objection immediately realizing that the respondent simply needs further information before they commit to the survey. Try to probe and understand the specifics of the objection so that it can be answered accurately and quickly. You must have a good working knowledge of the survey in order to realize the difference between a true objection and what may only be a concern. Then you must approach the objection with your professional and expert information. ***Using the same standard spiel for each respondent is a set up for failure.*** Always read the call notes, listen to the respondent and tailor your strategy for gaining cooperation accordingly.

- **Offer information**. When a respondent gives excuses as to why he/she is unable to participate in the study, many times the respondent simply does not fully understand why we are conducting the study and why it is important for them to be interviewed. Hence, a first step in gaining cooperation can be to offer the respondent more information. Of course, not just any information will do. ***You need to listen carefully to identify what in particular the respondent does not seem to understand and tailor the information you provide accordingly.***

- **Establish an emotional connection with the respondent**. We know from experience that respondents agree to participate in interviews when interviewers establish an emotional connection about why the study is important for this particular respondent, rather than just explaining why the study is important. ***When you offer the respondent more information about the study, you need to make it personal to them.***

- **Offer options**. You will often identify that what keeps the respondent from participating is not a lack of information, but that the respondent just does not have time to do the interview currently. Respondents who might otherwise participate might be busy or leaving for school or work. ***You can offer options for when and how the interview is completed.*** We can complete the interview in parts, any time of the day or night, on weekends, while the respondent is at work, and on any day of the week. Sometimes when you offer options, the respondents will balk at every option you provide. You might ascertain that the real issue regarding their resistance is that you have not made the purpose of the study personal to them, and you will need to provide additional information.

- **Know when you have established rapport**. You need to be able to identify the moment when you have convinced the respondent to participate and it is safe to jump into the interview. If you attempt to begin the interview before you have established rapport, you might lose the respondent completely on your current call. If you wait too long to start the interview after you have the respondent on your side, you might also lose the respondent as you provide extraneous information to the individual.

4.4.2   During and After the Call

The first twenty seconds of your contact with the respondent are crucial to gaining cooperation with the respondent. However, there are a number of additional approaches and strategies which you will need to employ during and after the call with the respondent.

Empathize. Let the respondent know that you understand where they are coming from. For example, if the respondent's major concern about participating is the amount of time

required, emphasize that you do understand and then explain that you will go through the interview as quickly as possible or call back at a time that is more convenient.

- **Do not argue**. Maintain a pleasant, friendly attitude and emphasize the positive: how important the study is, how important it is for this particular individual to participate, and how far we are willing to go to accommodate the respondents' needs no matter how abrasive or rude he/she is. It is helpful to get the respondent to respond positively to some statement, because this will usually lead to an interview.

- **Let the respondent know how important he/she is**. If the respondent appears to be "weakening," express a strong willingness to answer any questions and address any concerns. Do not hesitate to say outright how important it is to our study that he/she participates. Emphasize that this person is not replaceable. No one else but the respondent can supply the study with this crucial information.

- **Let the respondent know how important the study is to the sponsor and society.** Let the respondent know that their answers will directly affect policies the State of Ohio will create regarding health insurance and health care.

- **Leaving an opening for future conversion attempts**. If a respondent appears hesitant, attempt to keep a reluctant person talking by making brief, neutral statements in response to their comments. Make an effort to get a reluctant person started with the interview by asking the first question at the earliest possible moment. Once started, most respondents complete the interview.

  If a respondent refuses to participate when you call, you should ask how he/she reached this decision and attempt to address the respondent's concerns. If, despite your best efforts, the respondent still refuses to participate, tell the respondent that we regret not having his/her input, and that we understand his/her reasons. Thank the respondent for his/her time and suggest that if the respondent changes his/her mind that they may contact you again and that we will be happy to conduct an interview at that time.

- **Record what happened in the call notes**. You need to write concise information about the individuals to whom you spoke and what they said to you, as well as the outcome of the call in the call notes. Remember that interviewers form a team. You might not be the next interviewer to telephone the respondent, so include in the call notes all of the information which you think the next interviewer will need to be successful.

It is helpful to view gaining cooperation as an exercise in listening to and addressing the respondent's concerns. If you are able to do so quickly, confidently, and correctly, you will have good success in gaining cooperation

4.4.3   Answers to Common Questions

You must be prepared to deal with problem situations that may arise at any time during a contact with a respondent. While we do anticipate that some people may be uncomfortable answering the

questions in this survey, remember that you can always reassure respondents that they do not have to answer any questions they don't want to.

In addition, there are several questions that are frequently asked by both respondents and household members. We have identified a number of these questions, and responses to them are presented in *Exhibit 4-1*. It is important that you learn the responses to these questions and that you work to adapt them to the specific concerns of a respondent. Please keep your Telephone Interviewer Manual with the full list of FAQ's at your workstation. You should become familiar with the answers so that, when a question is asked, you can quickly find the appropriate answer from the list. Not every situation that you will encounter is covered; we will supplement the questions and answers as necessary throughout the data collection period.

4.5   2017 OMAS Toll Free Number

If you are in a situation where the person who answers the phone seems to be cooperative, but the sample member is simply impossible to catch at home, you can leave a phone number that the sample member can call. The number you should leave is 1-866-245-8078. This will ensure that their call gets routed to an interviewer working on the 2017 OMAS who can deal with them promptly and effectively. If a respondent calls after hours they will be forwarded to a project voicemail. There will be two separate voicemail boxes where respondents can leave a message. One box will be for Spanish-speaking respondents and one for English-speaking respondents.

Exhibit 4.1 2017 OMAS Frequently Asked Questions (FAQs)

What is this survey about? / What is the purpose of this survey?
>   The purpose of the study is to help the State of Ohio gather information on health insurance coverage, the use of medical services, and problems getting health care. These data will inform healthcare policy decisions and ultimately, have the potential to make a significant impact on the lives of people living in Ohio.

Why do you want to interview me?
>   We would like to gather information from residents about health insurance and health care in order to help inform the State of Ohio regarding healthcare policy decisions.

Who is sponsoring this study? / Who is conducting this study?
>   This study is sponsored by the State of Ohio.
>   [IF NEEDED: health agencies in Ohio including the Ohio Department of Health, Ohio Medicaid, Ohio Department of Mental Health and Addiction Services, Ohio Department of Aging, and Ohio Department of Developmental Disabilities.].

How long will this take?
>   This survey will take approximately 20 minutes to complete.

How do I know this remains confidential?
>   I can assure you that all information that we obtain from you will be kept confidential. Your answers will never be connected with your telephone number. The answers provided will be combined with those from other participants and only reported as a group, not individually. All project staff members have signed confidentiality agreements and are prohibited by law from using the information for anything other than this research study. Any other use is a violation of Federal Law and is subject to heavy fines and imprisonment.

I already have insurance. You don't want to interview me.
>   The study seeks information from residents of Ohio regardless of insurance coverage. These data will inform healthcare policy decisions and have the potential to make a significant impact on the lives of people living in Ohio.

I don't have insurance. You don't want to interview me.
>   The study seeks information from residents of Ohio regardless of insurance coverage. These data will inform healthcare policy decisions and have the potential to make a significant impact on the lives of people living in Ohio

What kinds of questions are you going to ask?
>   I will ask you some questions about yourself and your household, as well as about your health insurance coverage, the use of medical services, and problems getting health care.   The results of this study will help shape policies and programs regarding these issues.

Exhibit 4.1 2017 OMAS Frequently Asked Questions (FAQs) (Continued)

What is the difference between household and family?

For purposes of this survey, "household" is defined differently from "family". Household refers to all of the people who are living in the home where we reach the respondent. By family, I mean two or more persons residing together who are related by birth, marriage, adoption or legal guardian.

How can I complete the interview?

You can complete this interview with me over the phone right now or we could schedule a more convenient time for you to complete it. It only takes approximately 20 minutes to finish.

Who else is participating in this survey?

Adults age 19 or older residing in the state of Ohio.

I am not typical/representative, pick someone else/your questions don't apply to me?

In order for the State of Ohio to get an accurate view on issues related to health insurance and health care, they need information from all kinds of people. Everyone can share their experiences with these topics. You are not replaceable.

What will the data be used for?

The purpose of the study is to help the State of Ohio gather information on health insurance coverage, the use of medical services, and problems getting health care. The results of this study will help shape policies and programs regarding these issues.

What benefit do I get out of my participation?

Some people find that being in this survey is helpful. The results of this study will help shape future programs regarding these issues.

What is RTI International?

RTI International is a not-for-profit survey research organization in Research Triangle Park, North Carolina, who has been hired to manage the data collection effort.

How do I know this study is legitimate?

If you would like to verify the legitimacy of the study or to obtain additional information, please call Kurt Johnson at RTI International. His number is 1-800-334-8571, extension 66515. If you have any questions about your rights as a research participant, please contact RTI International's Office of Research Protection toll-free at 1-866-214-2043. You may also call a representative from the State of Ohio at 1-888-643-7787.

How do I know you are really an interviewer for this study?

You may call my supervisor, Timothy Nesius, at RTI's Research Operations Center at 1-800-334-8571, extension 66559 to verify my employment.

Exhibit 4.1 2017 OMAS Frequently Asked Questions (FAQs) (Continued)

How did you get my phone number?
> We randomly selected phone numbers of people residing in the state of Ohio. We do not know who you are and we have no other identifying information.

I'm too busy now!/ I just don't have time for your survey!
> This survey takes approximately 20 minutes to complete. We could get started now and I'll move through the questions as quickly as possible to save you time.

Call me back next week.
> [SUCH STATEMENTS ARE USUALLY PUT-OFF TACTICS AND USUALLY WILL BE CONTINUED WHEN YOU CALL BACK. TRY TO RETAIN CONTROL OF THE SITUATION BY ESTABLISHING AN APPOINTMENT.]

> O.K., I've made an appointment for you at _____[TIME] next _____ [DAY]. If that's all right, someone will call you then. If you decide you want to complete the interview before then, you can call 1-866-245-8078 to speak with an interviewer. You'll need to give them this number for reference: Case ID _____.

Do I have to do this/answer your questions?
> Your participation in this study is voluntary. We could begin the interview and if you do not want to answer a particular question we can skip them at any time. [IMMEDIATELY BEGIN INTERVIEW]

Can I refuse to answer that question?
> Yes, you can refuse to answer any questions, but please remember that your answers will be kept private and no identifying information will be given to the State of Ohio or anyone else.

I'm not going to give you all this personal information!
> The information we collect will be kept completely private. No information that could personally identify you will be given to the State of Ohio or anyone else. No one will know who participated in the study.

I'm not going to answer a lot of questions over the phone! / **I don't do anything by phone...send it to me in the mail.**
> I'm sorry. We are not able to send the survey by mail. Let me start and you can see what the questions are like.   [IMMEDIATELY ASK THE FIRST QUESTION.]

I don't want to buy anything!
> Let me assure you that we are not selling anything. We are conducting a very important research study for the State of Ohio regarding your experiences with health insurance coverage, the use of medical services, and problems getting health care.

Exhibit 4.1 2017 OMAS Frequently Asked Questions (FAQs) (Continued)

I think this whole business is stupid. The government has better things to do with dollars, etc., etc.
  This is a very important research study. The purpose is to help the State of Ohio gather
  information regarding health insurance coverage, the use of medical services, and problems
  getting health care. The results of this study will help shape future policies and programs
  regarding this issue.

Why do you need to know the number of telephones/cell phones in my household?
  We are collecting this information for statistical purposes only. We will not ask for any additional
  telephone numbers.

I don't want to confirm my telephone number.
  We are only asking to make sure that we dialed the number we intended to dial. [IF STILL
  WON'T CONFIRM NUMBER, MARK CASE AS A REFUSAL]

I am on the National Do Not Call list.
  The Do Not Call list covers telemarketing and soliciting. We are gathering data for a research
  study and are not trying to sell you anything. The do not call list does not apply.

5. Sensitivity Training

5.1 Sensitive Issues in 2017 OMAS

Due to the nature of the information we are seeking, there may be some items in the survey that some men or women feel uncomfortable answering. For example, some people may be hesitant to answer questions about their health experiences. During your training, you will learn skills to help reassure respondents that their answers are important and kept confidential, and their participation is appreciated. Some tactics that you will learn include:

- Reminding respondents that their answers are confidential and being familiar with the procedures we're using to protect respondent's information;

- Providing positive, neutral feedback, such as "Thank you; I understand; We appreciate your participation in this important study; It's important your opinion is included in the results, if you need to take a minute or if you would like us to call you back we can. ," etc.;

- Acknowledging a respondent's hesitancy in answering a question, such as, "It's important to find out what people think about this, so please take your time." And;

- (Only if necessary) Reminding respondents that it is okay to skip any question he/she does not feel comfortable answering.

5.2 Dealing with Distressed Respondents

If the respondent displays distress during the interview, you will administer the following distress protocol and then immediately contact a supervisor to report the situation. Keep in mind that respondent distress during the interview is different from respondent anger or frustration during the introduction and consent process. By "distress" we are referring to respondents who are most likely upset by the content of the survey as it relates to their own personal experiences, not an angry household member who is refusing to complete the screening process. The respondent distress protocol includes steps to follow for different levels of distress: mild, moderate, or severe distress.

For the 2017 OMAS, we have what we describe as a "Respondent Driven" protocol for dealing with possible distress and crisis situations. This means that we react to respondents' signs and needs by offering them choices.

Step 1: Recognize that a respondent is possibly distressed.

The following are signs that may indicate a respondent is possibly distressed:

- Hesitancy to answer a question or questions;

- Refusal to answer questions or to continue the interviewing process;

- Lowering of the volume or tone of voice;

- Responding in an agitated manner by raising his/her voice or using inappropriate language;

- Crying;

- Indications of tremors, a quivering in the respondent's voice;

- Hearing the respondent tap his/her fingers, or an instrument on the telephone or surface; or

- Disorganization, dissociation, or non-responsiveness to questions asked.

Step 2: Observe the level of distress that a respondent is apparently experiencing.

Below is a table that provides some guidance to an interviewer as to what indicators you might come across on the telephone indicating that a person may be in distress.

NOTE: _The indicators listed below are examples - not an exhaustive list._

LEVEL OF DISTRESS	SIGNS OR INDICATORS OF POSSIBLE DISTRESS
MILD	**Change in voice tone or volume.** **Hesitancy to answer questions.** **Use of inappropriate language/cursing.** **Provides non-relevant answers to questions asked.** **Displays an unwillingness or hesitancy to continue**
MODERATE	**MILD signs plus any of the following:** **Displays signs of distress that may include long pauses, or sighing** **Sobbing, weeping, and/or crying on the telephone.** **Displays flat voice tones.** **Being non-responsive** **Provides nonsensical/bizarre answers.**
SEVERE	**Talks about passive or active suicidal thoughts with or without a plan** **Talks about wishing another person was dead with or without a plan to kill the person** **Respondent asks for immediate help from emergency services or 911** **Respondent poses an immediate threat to themselves or someone else**

Step 3: Respond appropriately to the situation.

Based on your observation of the level of distress it is imperative that you react appropriately and with sensitivity. When a respondent displays emotional distress, either verbally or non-verbally (i.e., crying) you should acknowledge their distress and if appropriate offer to finish the interview at another time. Some acknowledgement phrases you may use include:

Acknowledgement Phrases

- "It sounds like these questions may be upsetting to you. Would you like to take a short break and get a drink of water?"

- "Would you like me to skip this question and go to the next section?"

- "Are you ok? Do you want to keep going with the interview? If not, I can call you back another time to finish."

- "Thank you for sharing that."

- "We appreciate you taking time to talk to us today, would it help to take a short break? "

- "These questions seem to be frustrating you, would you like me to call back at a better time to complete the interview?"

- "Sir/Ma'am, would you like to take a break and continue this at a later time?"

- "We really appreciate you telling us this."

If the respondent continues to exhibit distressed behavior you should provide the hotline number to the Ohio Department of Mental Health and Addiction Services (1-877-275-6364). In the event the respondent chooses to terminate the interview because of distress, you should record detailed comments about the case as well as complete a problem sheet describing the distress, and then put the case in the supervisor review queue so that it can be reviewed by project staff who will determine if the case should be returned to production. All such cases will be reviewed.

Similarly, in the unlikely event that a respondent exhibits severe distress by expressing thoughts/intentions of suicide, the interviewer will stop the interview and will encourage the respondent to call the National Suicide Hotline (1-800-273-8255 (TALK)). You may also offer to transfer the respondent to that hotline. Detailed comments about any case involving suicide should be recorded in a problem sheet and immediately reported to a supervisor. Break-off interviews with potentially suicidal respondents will not be placed back into production.

Step 4: Document the case by preparing a problem sheet

Once a distress situation is encountered it is necessary to document the case immediately. Notify a supervisor to assist you when completing a problem sheet. Please remember, more

detail and more information is better than less. The problem sheet needs to include details of the event so someone else can understand the type of distress and what actions the interviewer used when responding to the distress. The respondent's name should not be mentioned in this documentation.

5.3 Telephone Interviewer Distress

You may encounter a situation in which a respondent shares an experience or says something that is beyond the scope of this project which makes you feel uncomfortable. The following are procedures for you to follow in that situation.

- Encourage the respondent to stay on track by saying, "I don't want to take any more of your time than necessary, so why don't I ask the next question" and quickly move on with the interview.

- If a respondent continues to share information that is making you uncomfortable, thank the respondent for their time and disconnect the call. You should make careful case notes about the nature of the conversation so that project staff can review to determine whether or not the case should be called back. Please put these cases in the supervisor review queue, and if necessary, speak to your supervisor immediately.

6. Refusal Avoidance and Refusal Conversion

6.1   Dealing with Reluctant Respondents

Initial refusals from sample members often come before you have had a chance to explain what the study is about. Successful interviewers learn to vary their approach according to the attitude and comments of the respondents. While most respondents will be satisfied with the basic introduction, you must be prepared to answer more detailed questions if necessary. At times such questions may not be verbalized or may be hidden in another question or statement made by a potential respondent. You must become sensitive to such feelings and be prepared to deal with them. Even though not expressed, the person you wish to interview may hesitate because of various suspicions or a lack of understanding. Among the barriers you may encounter and have to overcome are:

- **Lack of understanding of this research.** The sample members may not understand what you, RTI, or the State of Ohio are doing and why. Quickly, prior to going into the more formal initial interview procedures, you need to be ready to briefly explain why this study is important and how it's being conducted. This explanation should be clear and concise.

- **Concern that personal or sensitive questions will be asked.** Explain to sample members who express or appear to have this concern that the personal or sensitive questions you will ask are necessary to make this study useful. Explain that names will never be associated with any reported information. The answers they give will be held in the strictest confidence. You may also tell them that while we hope they will answer all questions, they do not have to answer any question they do not want to answer. However, you should also emphasize that it is very critical that we get as many people as possible to answer all questions.

- **Fear that wrong answers will be given or the interview will make the respondent seem unintelligent.** If you sense that this fear is causing reluctance, explain that we are not testing anyone, there are no right or wrong answers, and that everyone's ideas and attitudes are important to the study. Most questions simply involve recalling facts and personal experiences.

- **Belief that you are really selling something.** Unfortunately, unethical use of survey research approaches by salespeople has made people, in some areas, suspicious of interviewers. Your introduction, in which you immediately explain who you are and why you are calling, will help deal with such suspicions.

In general, when answering questions or overcoming objections, respond positively to concerns voiced and do not argue with or alienate the sample member. Listen to any questions carefully and attempt to answer them briefly. Do not respond with more details than are required to meet a concern because additional details may suggest more questions or raise new concerns. Also, when you cannot answer a question, don't hesitate to tell a respondent that you will get an answer to his/her important question and then arrange a callback appointment to provide the information.

6.2   Refusal Avoidance Techniques

Maintaining a positive, professional attitude:

- remain in control of the interview;
- be accommodating;
- treat respondents the way you would like to be treated;
- always use good manners; and
- remember that you are a professional representative of the State of Ohio, as well as RTI International.

Knowing what to say and when to say it:

- explain the importance of the study;
- explain our procedures;
- offer the project toll free number, 1-866-245-8078, so the respondent can check the validity of the study; and
- apologize for bothering them, but explain that what we are doing is important and that their participation is necessary for the success of the study.

6.3   Refusals

Since the refusal rate is a large component of interview non-response, one of the most effective methods of maximizing the interview response rate is to minimize the refusal rate. The first (and most critical) step is the effort by the initial interviewer to deal effectively with reluctant sample members, therefore minimizing the incidence of initial refusals.

Interviewers need to be aware that participation by sample members is extremely important to the success of a study and that refusals cannot be accepted without reasonable efforts to convince the sample member to cooperate. Some general suggestions for dealing with potential non-respondent sample members are:

- Never take a comment or action of a sample member personally because he/she does not know you and, if your approach has been professional, he is reacting negatively for reasons beyond your control.

- Recognize that many factors may result in refusal at the time of your initial call that may not be a problem at another time (e.g., you called while the person was in the shower, napping, just leaving the house, not feeling well); a call at another time may find the person in different circumstances and more receptive.

- Attempt to keep a reluctant respondent talking by making **brief** and **neutral** statements in response to their comments.

- Never refer to a previous refusal directly. Review the event level comments and be ready to address specific concerns.

In spite of the best efforts of interviewers, refusals do occasionally occur. If you do encounter a refusal, analyze what happened to see if you could have handled the situation better. If necessary, discuss the situation with your supervisor or a team leader to see if he/she can suggest a way you could have handled the situation better. Generally, such cases will be followed up by someone else in an effort to obtain cooperation, so it's important that you provide adequate documentation of the refusal.

When you code a case as a refusal, be sure to provide thorough information about the nature of and reasons for the refusal. This is the only information that our refusal conversion interviewers will have at their disposal as they subsequently try to convert these cases. Their success in converting these cases into completed interviews depends, in large part, on how fully and accurately you document the reasons given for the refusal and other relevant details via your comments so they can prepare an appropriate approach. Always try to be the interviewer that other interviewers want to follow, not the interviewer that makes people wonder if all the information was recorded accurately.

And remember, a professional interviewer never harasses or unduly pressures a respondent. On the other hand, interviewers need to be aware that participation by respondents is extremely important to the success of a study and that refusals cannot be accepted without reasonable efforts to convince the respondent to cooperate

7. Administering the Survey

7.1 The Questionnaire

When administering the questionnaire, CATI will route you to the correct questions based on the responses of the sample member. The questionnaire is divided into five sections containing different modules described below. Depending on the respondent's answers, the interview is expected to take approximately 20 minutes to complete.

Opening Section

Intro	Introduction
	Screener and Cell Phone Usage

Health Insurance

SECTION A	Current Insurance Status
SECTION B	Currently Insured Adult
SECTION C	Currently Uninsured Adult

Access and Utilization of Healthcare

SECTION D	Adult Health Status & Care Giving
SECTION E	Utilization and Quality of Adult Health Care Services
SECTION F	Access to Care & Unmet Needs of Adult
F.1	Needs of Access to Care
F.2	Unmet Needs of Adult
F.3	Financial Stress & Medical Bills

Demographics

SECTION G	Employment
SECTION H	Adult Demographics & Family Income

Closing Section

SECTION Q	Household Questions
• CHILD	**IF APPLICABLE, Child Questionnaire**
CLOSING	Closing Statements
SECTION T	Interviewer Assessment of Interview Quality

7.1.1 Key Sections in the Questionnaire

The 2017 OMAS has some very specific definitions and detailed protocols. While the entire survey requires your keen attention to detail, some items may present more of a challenge than others. Below is a brief list of items unique to the 2017 OMAS.

- **Screening**–Please note, that for the purpose of the 2017 OMAS, an adult is considered someone 19 years of age and older. At CF1, when you ask, "May I speak with an adult?" it is important to remember that the person needs to be age 19 or older.
- **Adult**–Defined as a person **19** and older.
- **Child**–Defined as a person **18** and younger
- **Landline vs. Cell Phone**–If we anticipate calling a cell phone and instead reach someone on a landline, we will continue the interview after checking the respondent is not driving.
- **Proxy Adult Interviews**–If the selected respondent has a long term or permanent physical or mental impairment and is not capable of answering the questions over the phone, you may conduct the interview with a "proxy adult." The proxy adult is someone who is knowledge about the selected person's insurance status.
- **Proxy Child Interviews**–You will conduct the interview with the adult who is most knowledgeable regarding the child's insurance coverage and health status. It is possible that this adult is not the same one who completed the adult questionnaire.
- **Household definition**–Household refers to all of the people who are living in the house, apartment, or mobile home where we reached the respondent.
- **Family definition**–Defined as two or more persons residing together who are related by birth, marriage, adoption or legal guardian.
- **Insurance questions**–There may be times when a respondent is not clear on a definition or a type of insurance. There are interviewer notes throughout the survey that you may read if necessary. However, you may only provide the statements and definitions listed in the survey. You may not offer your own definition or explanation to a respondent.
- **Breastfeeding –** There are a few questions that ask pregnant women about how they plan to feed the new baby. Some women may find the questions sensitive. Do not apologize for the questions. Do remind a respondent that she can skip any question she would like. In the rare event that a respondent offers that she is not keeping or delivering the baby you will not ask this set of questions. If a respondent wants to refuse any of the questions you should not attempt refusal conversions.
- **Income questions**–If the respondent refuses to answer with an exact dollar amount then we will provide ranges as answer options for the respondent to select. The ranges are set based on the number of people reported in the respondent's family (S11 and S13).

7.2 General Interviewing Techniques

7.2.1 Asking Questions

The following are guidelines for asking questions:

- Ask the questions exactly as they are presented. Do not abbreviate or condense any question.
- Emphasize all words or phrases that are in **bold**.

- Ask every question specified, even when a respondent has seemingly provided the answer as part of the response to another question. The answer received in the context of one question may not be the same answer that will be received when the other question is asked. If it becomes cumbersome to the respondent, remind him/her gently that you must ask all questions of all respondents.
- If the answer to a question indicates that the respondent did not understand the intent of the question, repeat the question.
- Read the questions slowly, at a pace that allows them to be readily understood. It is important to remember that the respondent has not heard these questions before (at least not recently), and will not have had the exposure you have had to the questionnaire.
- Read transition statements just as they are presented. Transition statements are designed to inform the respondent of the nature of a question or a series of questions, to define a word, or to describe what is being asked for in the question. Don't create "transition statements" of your own; if you do, you risk introducing bias into the interview.
- Give the respondent plenty of time to recall past events.
- Do not suggest answers to the respondent. Your job as an interviewer is to read the questions, make sure the respondent understands what you have read, and then enter the responses. Do not assist the respondent in selecting responses.
- Ask the questions in the exact order in which they are presented.
- Words that are in ALL CAPITAL LETTERS are never to be read out loud. This includes both questions and response categories.
- Read all questions including those which may appear to be sensitive to the respondent in the same manner with no hesitation or change in inflection.

7.2.2 Probing

At times, it will be necessary for you to probe to obtain a more complete or more specific answer from a respondent. To elicit an acceptable response, you will often need to use an appropriate neutral or non-directive probe. The important thing to remember is **not** to suggest answers or lead the respondent. Some general rules for probing follow.

- Repeat the question if the respondent misunderstood or misinterpreted the question. After hearing the question the second time, the respondent will probably understand what information is expected.
- Use the silent probe, which is pausing or hesitating to indicate to the respondent that you need additional or better information. This is a good probe to use after you have determined the respondent's response pattern.
- Use neutral questions or statements to encourage a respondent to elaborate on an inadequate response. Examples of neutral probes are "What do you mean?", "How do you mean?", "Tell me what you have in mind.", "Tell me more about....
- Use clarification probes when the response is unclear, ambiguous, or contradictory. Be careful not to appear to challenge the respondent when

clarifying a statement and always use a neutral probe. Examples of clarification probes are "Can you give me an example?" or "Could you be more specific?"

- Encourage the respondent to give his or her best guess if a respondent gives a "don't know" response. Let the respondent know that this is not a test, where there are right and wrong answers; the respondent's answers are the right answers.

- If the respondent asks you to fill in the answer or guess for him or her, let the respondent know that you can't do that, and ask the respondent if she or he requires clarification on question content or meaning.

7.2.3 Entering Responses

The majority of the questions you will ask have pre-coded responses. To enter a response for these types of questions, you will simply select the appropriate response option and enter the number corresponding to that response. There are some questions, however, that are open-ended— that is, you must enter a verbatim response to the question.

The conventions presented below must be followed at all times to ensure that the responses you enter accurately reflect the respondents' answers and to guarantee that questionnaire data are all collected in the same systematic manner.

- You must listen to what the respondent says and enter the appropriate answer if the response satisfies the objective of the question. If it does not appear to satisfy the objective, repeat the question.
- In entering answers to open-ended questions or "Other (SPECIFY)" categories, enter the response verbatim, exactly as it was given by the respondent.
- Enter the response immediately after it is given.
- If a respondent gives a range in response to a question, probe as appropriate for a more specific answer.

7.3   Screening the Household

Because we are getting our numbers from an RDD sample, we will not know who to interview until we dial the telephone number and screen for eligibility. The CATI system will provide the screening questions for you. In order to start a screening, you must verify if the individual you are speaking with is an adult, age 19 or older. The phone number must be a private residence or a non-business cell phone. Businesses will be coded out as ineligible.

Once an eligible household is confirmed, the screening process for picking the sample member may begin. If there is only one person in the household we would select that person. For households with more than one adult we will select the individual with the most recent birthday. For the cell phone sample, we will attempt to conduct an interview with the person (aged 19 or older) who answers the phone.

In order to ensure that the selection process is completely random, each household must be screened in the same way. Once an individual is selected as the respondent, they become the person that must be

interviewed. Even if this person is hard to reach or another household member is willing to complete the interview, only the selected respondent may continue. Likewise, if a proxy adult is selected to answer questions for another adult or regarding a child, you must continue with the person selected as the proxy.

You will ask the respondent for the first name of the selected individual. If the respondent does not want to give their first name, you may ask for their initials. The purpose of asking for the first name or initials is to ensure that if a break-off occurs during the interview, the correct person can be identified when the call back is made. For the cell phone sample, we will attempt to conduct an interview with the person (aged 19 or older) who answers the phone, asking for the first name of the selected individual**.**

7.4   Monitoring and Feedback

To ensure that performance standards set for this project are met, supervisors, project staff, and the client will monitor interviewer performance. They will be listening for application of proper interviewing techniques, and will pay attention to production rates, and the number of refusals and break-offs experienced. The CATI system will provide summary performance data for each interviewer for review by his or her supervisor and for discussion between the supervisor and interviewer.

Quality circle meetings will be held throughout the project. The project team will meet with interviewing staff to discuss operating issues, such as progress with production, the wording and structure of interview questions, special screens, quality control monitoring, gaining cooperation during the interview, refusal conversion, and the overall interviewing environment. These meetings have been well-received by all interviewers in past studies as an opportunity for interviewer teams to provide feedback on daily operations.

Appendix A

Pronunciation Guide

Alcoholic	al-kuh-**haw**-lik	**Islander**	**ahy**-luh n-der
Angina	an-**jy**-na	**Latino**	luh-**tee**-noh
Artery	**art**uree	**Latina**	luh-**tee**-nuh
Ask	ahsk	**Mexican**	**mek**-si-kuh-n
Breast	brest	**Molina**	moh-**lee**-nuh
Buckeye	**buhk**-ahy	**Myocardial**	mahy-uh-**kahr**-dee-uh-l
Cardiologists	car-dee-**all**-a-jists	**Ohioan**	oh-**hahy**-oh-en
Champ-VA	ch-amp-vee-Ay	**Obstetrician**	ob-sta-**trish**-ens
Congestive	kun-**jes**- tiv	**Orthodontists**	awr thuh **don** tist
Coronary	**kawr**-e-neree -	**Orthopedists**	ortho-**peed**-ists
Dermatologists	derm-a-**tol**-a-jists	**Pacific**	puh-**sif**-ik
Diabetes	dahy-uh-**bee**-teez	**Pediatrician**	pee-dee-uh-**trish**-uh n
Excellent	**ek**-suh-luh nt	**Respite**	res-pit
Feeling	**fee**-ling	**Specific**	spi-**sif**-ik
Fidgety	**fij**-i-tee	**Syndrome**	**sin**-drohm
Gynecologists	guy-na-**col**-a-jists	**Unison**	yoo-nuh-suh n
Hygienists	hy-**jen**-ist hahy-**jee-**nist	**Voluntary**	**vol**-uh n-ter-ee
Infarction	in-**fahrk**-shuh n		

Appendix B

Reluctance   VS.   Refusal

Reluctance	Refusal
1. I don't think I qualify for this study.	1. Respondent uses profanity directed to the interviewer. This is not the same as casual profanity during the interview.
2. Can you pick someone else?	
3. I am not really into surveys.	2. Respondent uses hate speech or racial, cultural slurs.
4. I am too old for this study.	
5. I am hard to catch so maybe I should just skip this.	3. Respondent makes threatening statements to TI.
6. No one here has any insurance.	4. Call me again, and I am calling the police.
7. I do not have any health problems.	5. I am filing a complaint with the Better Business Bureau.
8. I do not think this is legit.	
9. Twenty seems like a long time.	6. If you call again, I am contacting my lawyer.
10. I'm on the other line now and this is not a good time.	7. (After 3 points stated) Respondent hangs up.
11. Yeah, Yeah (hung up after 1 point)	8. (After 3 points stated) Respondent says, "This is a waste of time, do not call me again."
12. I doubt {sample member's name} will help you.	
13. I am in and out. You probably won't catch me.	9. Yeah, I know this is a survey for the State of Ohio about health insurance and I do not want to participate.
14. I'm on my way out, sorry I can't help you right now.	
15. Could you stop calling during the day?	10. I have told you 20 times to stop calling!! Do not call this evening, do not call this weekend, there is no time you can call!

Appendix C: Response Rate and Disposition Tables

Note: No telephone numbers were identified as AAPOR code 2.3 (Other Non-Refusal), so the upper and lower bounds of the cooperation rates are the same throughout the following tables.

The cooperation rates are defined as follows:

$$COOP_{LB} = \frac{completes}{completes + partials + refusals + other}$$

$$COOP_{UP} = \frac{completes}{completes + partials + refusals}$$

Note: In 2017, no telephone numbers were assigned to an "other" disposition code. The "other" disposition code consists of telephone numbers assigned to AAPOR code 2.3 (Other Non-Interview). Therefore, the upper and lower bounds of the cooperation rate are the same in this case.

Table C-1. Overall (%)

Sampling Phone	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Landline	6.3	21.3	23.5	38.3	28.8	28.8
Cell	5.1	20.3	22.1	42.9	26.2	26.2
Overall	5.3	20.5	22.4	41.8	26.7	26.7

Table C-2. Medicaid Region (%)

Medicaid Region No.	Sampling Medicaid Region	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	North Central	5.0	23.0	25.2	39.4	28.7	28.7
2	Northeast	4.5	19.0	20.8	36.1	24.3	24.3
3	Northeast Central	4.9	18.6	20.1	35.4	26.6	26.6
4	Northwest	6.0	19.0	20.6	38.4	28.6	28.6
5	South Central	6.4	21.8	23.9	39.9	27.9	27.9
6	Southeast[a]	6.3	21.3	23.2	41.7	27.9	27.9
7	Southwest	5.2	21.1	23.1	38.9	27.2	27.2

[a]This includes 6,427 nonrespondents from the out-of-state cell phone sample in West Virginia.

Table C-3. County Type (%)

Region No.	Sampling Region	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	Rural Appalachian	6.1	21.7	23.8	41.0	26.8	26.8
2	Metro	4.5	18.9	20.8	34.9	24.9	24.9
3	Rural Non-Appalachian[a]	6.4	21.1	22.9	41.0	28.4	28.4
4	Suburban	6.7	23.7	25.7	45.0	31.4	31.4

[a]This includes 6,427 nonrespondents from the out-of-state cell phone sample in West Virginia.

Table C-4. Sub-Stratum (%)

Sub-Stratum	RR1	RR3	RR4	RR5	Coop LB	Coop UB
African American Oversample	6.1	22.6	25.3	34.6	28.6	28.6

Table C-5. Stratum (%)

Stratum	Stratum Description	Phone Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	Adams County	Landline	10.8	28.3	29.6	40.4	13.9	13.9
2	Allen County	Landline	7.2	20.7	22.2	38.9	38.9	38.9
3	Ashland County	Landline	6.3	24.9	27.1	36.5	36.5	36.5
4	Ashtabula County	Landline	8.4	18.2	20.1	39.6	39.6	39.6
5	Athens County	Landline	8.5	30.4	33.9	37.8	18.0	18.0
6	Auglaize County	Landline	6.1	15.4	17.3	28.1	28.1	28.1
7	Belmont County	Landline	9.5	21.7	23.4	37.1	17.1	17.1
8	Brown County	Landline	8.0	28.9	31.7	39.6	39.6	39.6
9	Butler County	Landline	5.4	20.4	23.1	31.6	31.6	31.6
10	Carroll County	Landline	9.1	26.6	28.2	40.5	40.5	40.5
11	Champaign County	Landline	7.6	16.8	19.5	33.8	33.8	33.8
12	Clark County	Landline	8.0	21.1	23.6	35.6	35.6	35.6
13	Clermont County	Landline	5.9	22.2	23.1	34.5	34.5	34.5
14	Clinton County	Landline	5.3	23.9	23.9	35.7	35.7	35.7
15	Columbiana County	Landline	6.6	19.6	22.1	32.8	32.8	32.8
16	Coshocton County	Landline	8.5	21.3	22.5	35.9	35.9	35.9
17	Crawford County	Landline	8.0	20.7	23.8	35.5	35.5	35.5
18	Cuyahoga County—AA Low Density	Landline	4.4	16.6	18.2	30.6	30.6	30.6
19	Cuyahoga County—AA Medium Density	Landline	3.6	15.0	19.9	28.4	28.4	28.4
20	Cuyahoga County—AA High Density	Landline	5.3	17.0	18.9	32.0	24.6	24.6
21	Darke County	Landline	9.5	20.4	23.2	33.7	33.7	33.7
22	Defiance County	Landline	4.7	13.4	14.3	22.1	22.1	22.1
23	Delaware County	Landline	5.4	24.9	27.4	37.2	37.2	37.2
24	Erie County	Landline	4.5	17.1	19.9	31.9	31.9	31.9

(continued)

Table C-5. Stratum (%) (continued)

Stratum	Stratum Description	Phone Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
25	Fairfield County	Landline	8.4	23.9	25.1	35.0	27.4	27.4
26	Fayette County	Landline	10.4	26.2	26.2	48.4	48.4	48.4
27	Franklin County—AA Low Density	Landline	6.5	23.2	24.9	41.5	41.5	41.5
28	Franklin County—AA Medium Density	Landline	7.8	24.1	26.6	39.3	31.3	31.3
29	Franklin County—AA High Density	Landline	9.6	23.6	26.2	37.8	34.6	34.6
30	Fulton County	Landline	6.3	14.1	17.8	26.8	26.8	26.8
31	Gallia County	Landline	11.3	21.7	23.6	39.0	39.0	39.0
32	Geauga County	Landline	5.0	15.5	17.2	30.1	30.1	30.1
33	Greene County	Landline	7.4	20.7	22.8	38.6	38.6	38.6
34	Guernsey County	Landline	11.2	31.9	33.9	46.2	23.9	23.9
35	Hamilton County—AA Low Density	Landline	4.5	20.5	24.8	28.6	20.5	20.5
36	Hamilton County—AA High Density	Landline	5.3	24.5	27.1	31.6	26.9	26.9
37	Hancock County	Landline	6.2	22.5	24.6	37.7	37.7	37.7
38	Hardin County	Landline	6.9	20.4	21.7	34.9	34.9	34.9
39	Harrison County	Landline	12.6	27.1	28.9	40.5	40.5	40.5
40	Henry County	Landline	5.2	11.5	12.7	25.7	25.7	25.7
41	Highland County	Landline	7.5	21.2	21.2	38.5	16.9	16.9
42	Hocking County	Landline	9.4	21.6	21.6	28.2	28.2	28.2
43	Holmes County	Landline	7.3	26.5	31.4	41.5	41.5	41.5
44	Huron County	Landline	7.5	28.2	29.8	39.5	18.4	18.4
45	Jackson County	Landline	8.9	26.0	28.8	33.9	33.9	33.9
46	Jefferson County	Landline	8.4	20.5	23.5	35.5	35.5	35.5
47	Knox County	Landline	8.3	19.9	21.7	41.0	21.1	21.1
48	Lake County	Landline	5.1	15.0	16.4	31.0	22.2	22.2
49	Lawrence County	Landline	8.8	20.7	23.1	35.1	35.1	35.1
50	Licking County	Landline	8.8	19.2	20.5	38.7	30.8	30.8
51	Logan County	Landline	10.9	22.6	27.1	44.1	44.1	44.1
52	Lorain County	Landline	4.8	14.9	16.7	31.4	26.9	26.9
53	Lucas County—AA Low Density	Landline	6.8	20.5	21.2	36.2	36.2	36.2
54	Lucas County—AA High Density	Landline	4.8	25.6	29.1	30.1	24.2	24.2
55	Madison County	Landline	4.6	15.4	17.8	25.0	10.9	10.9
56	Mahoning County	Landline	5.0	16.8	19.0	31.4	31.4	31.4
57	Marion County	Landline	8.7	28.7	30.7	45.2	45.2	45.2
58	Medina County	Landline	4.0	20.9	21.5	34.7	34.7	34.7
59	Meigs County	Landline	7.6	18.4	21.3	27.5	27.5	27.5
60	Mercer County	Landline	6.7	18.3	19.3	27.8	27.8	27.8
61	Miami County	Landline	5.8	21.1	22.5	36.9	24.8	24.8
62	Monroe County	Landline	11.1	25.4	26.7	39.2	39.2	39.2
63	Montgomery County—AA Low Density	Landline	6.8	21.9	26.9	38.6	38.6	38.6

(continued)

Table C-5. Stratum (%) (continued)

Stratum	Stratum Description	Phone Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
64	Montgomery County—AA Medium Density	Landline	7.4	31.1	32.6	56.8	56.8	56.8
65	Montgomery County—AA High Density	Landline	6.1	17.5	20.0	36.1	28.3	28.3
66	Morgan County	Landline	17.1	28.2	29.6	52.6	52.6	52.6
67	Morrow County	Landline	8.9	22.7	22.7	45.1	45.1	45.1
68	Muskingum County	Landline	11.7	24.7	25.9	43.2	20.9	20.9
69	Noble County	Landline	9.2	35.0	37.2	44.4	44.4	44.4
70	Ottawa County	Landline	4.8	22.9	26.2	30.4	30.4	30.4
71	Paulding County	Landline	8.5	18.8	21.0	29.3	29.3	29.3
72	Perry County	Landline	11.9	27.5	27.5	41.4	13.8	13.8
73	Pickaway County	Landline	6.0	21.1	23.4	30.6	30.6	30.6
74	Pike County	Landline	9.4	27.3	32.1	34.7	34.7	34.7
75	Portage County	Landline	5.6	17.8	19.2	35.4	35.4	35.4
76	Preble County	Landline	9.0	23.1	24.6	39.7	39.7	39.7
77	Putnam County	Landline	11.5	21.1	23.2	39.7	39.7	39.7
78	Richland County	Landline	6.6	16.3	18.0	33.1	33.1	33.1
79	Ross County	Landline	14.3	22.8	25.5	39.7	39.7	39.7
80	Sandusky County	Landline	7.7	22.5	23.7	39.9	23.2	23.2
81	Scioto County	Landline	11.6	29.0	32.4	39.9	26.1	26.1
82	Seneca County	Landline	7.4	24.7	24.7	43.8	43.8	43.8
83	Shelby County	Landline	8.3	17.6	21.1	35.0	17.6	17.6
84	Stark County	Landline	6.0	16.9	18.4	33.5	30.9	30.9
85	Summit County	Landline	4.8	17.2	18.9	35.3	30.6	30.6
86	Trumbull County	Landline	6.1	15.2	16.5	32.4	32.4	32.4
87	Tuscarawas County	Landline	6.0	18.4	20.9	29.1	19.5	19.5
88	Union County	Landline	5.6	21.3	23.6	40.0	16.6	16.6
89	Van Wert County	Landline	4.6	15.3	15.3	30.0	30.0	30.0
90	Vinton County	Landline	15.0	44.3	45.9	56.0	56.0	56.0
91	Warren County	Landline	5.1	18.1	20.1	32.6	27.3	27.3
92	Washington County	Landline	14.5	30.1	32.0	52.0	29.2	29.2
93	Wayne County	Landline	9.1	23.4	24.9	44.5	25.8	25.8
94	Williams County	Landline	6.6	19.7	22.1	29.6	29.6	29.6
95	Wood County	Landline	5.8	24.2	26.5	37.3	24.7	24.7
96	Wyandot County	Landline	4.8	15.0	16.8	23.5	23.5	23.5
97	Adams County	Cell	7.6	24.7	28.1	61.1	61.1	61.1
98	Allen County	Cell	6.7	18.8	20.4	40.5	33.8	33.8
99	Ashland County	Cell	5.9	19.6	21.2	40.2	33.2	33.2
100	Ashtabula County	Cell	5.5	20.7	22.5	42.8	25.2	25.2
101	Athens County	Cell	6.8	22.8	24.6	48.9	36.6	36.6
102	Auglaize County	Cell	8.2	31.4	39.2	50.0	50.0	50.0
103	Belmont County	Cell	4.9	17.8	19.2	36.5	22.4	22.4
104	Brown County	Cell	6.3	20.1	21.6	43.9	23.0	23.0
105	Butler County	Cell	5.4	22.2	23.7	41.7	24.4	24.4
107	Champaign County	Cell	7.0	24.8	26.0	51.9	23.3	23.3
108	Clark County	Cell	5.6	19.1	20.5	42.4	27.9	27.9
109	Clermont County	Cell	4.5	19.6	21.6	35.6	23.3	23.3
110	Clinton County	Cell	6.3	20.9	22.4	40.5	29.9	29.9

(continued)

Table C-5. Stratum (%) (continued)

Stratum	Stratum Description	Phone Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
111	Columbiana County	Cell	5.2	19.5	22.0	37.5	20.4	20.4
112	Coshocton County	Cell	6.3	20.0	21.5	43.8	32.2	32.2
113	Crawford County	Cell	5.8	18.6	20.9	38.7	38.7	38.7
114	Cuyahoga County	Cell	4.4	19.6	21.8	35.6	21.0	21.0
115	Darke County	Cell	5.3	18.8	20.4	38.5	26.1	26.1
116	Defiance County	Cell	5.3	19.8	21.2	38.3	25.5	25.5
117	Delaware County	Cell	6.3	19.9	21.1	39.2	28.2	28.2
118	Erie County	Cell	4.9	21.0	23.6	42.6	31.3	31.3
119	Fairfield County	Cell	5.7	19.4	21.6	40.7	21.4	21.4
120	Fayette County	Cell	6.0	17.5	19.2	36.3	18.4	18.4
121	Franklin County	Cell	6.2	20.7	22.8	38.7	27.0	27.0
122	Fulton County	Cell	4.0	15.0	15.0	29.3	29.3	29.3
123	Gallia County	Cell	6.4	24.4	26.5	48.2	23.7	23.7
124	Geauga County	Cell	4.9	22.5	22.9	42.2	42.2	42.2
125	Greene County	Cell	3.6	17.2	17.2	28.6	28.6	28.6
126	Guernsey County	Cell	5.8	20.7	23.1	39.1	23.9	23.9
127	Hamilton County	Cell	4.8	20.5	22.6	39.7	25.6	25.6
128	Hancock County	Cell	6.6	20.8	21.7	46.2	33.7	33.7
129	Hardin County	Cell	6.6	18.9	21.1	38.1	17.9	17.9
130	Harrison County	Cell	3.8	15.8	18.3	36.5	21.2	21.2
131	Henry County	Cell	5.4	19.5	21.2	40.0	25.0	25.0
132	Highland County	Cell	7.3	21.9	23.7	46.1	25.2	25.2
133	Hocking County	Cell	6.2	21.8	23.4	45.2	32.7	32.7
134	Holmes County	Cell	6.2	19.8	20.7	39.2	20.7	20.7
135	Huron County	Cell	5.7	19.5	21.1	39.9	22.9	22.9
136	Jackson County	Cell	6.4	19.5	22.0	41.9	24.9	24.9
137	Jefferson County	Cell	4.4	19.4	21.7	39.1	27.5	27.5
138	Knox County	Cell	7.2	21.1	22.3	44.8	38.1	38.1
139	Lake County	Cell	4.2	19.3	20.7	41.4	28.1	28.1
140	Lawrence County	Cell	5.0	21.4	24.3	39.6	23.6	23.6
141	Licking County	Cell	5.9	19.0	20.8	40.6	27.5	27.5
142	Logan County	Cell	6.2	18.7	20.3	40.0	27.7	27.7
143	Lorain County	Cell	4.4	19.2	21.0	40.0	24.1	24.1
144	Lucas County	Cell	4.9	20.8	22.6	41.3	31.5	31.5
145	Madison County	Cell	6.1	22.0	23.2	40.9	23.4	23.4
146	Mahoning County	Cell	4.6	18.8	20.9	39.4	23.8	23.8
147	Marion County	Cell	7.0	21.9	23.4	42.7	26.2	26.2
148	Medina County	Cell	3.9	18.8	20.3	39.7	30.1	30.1
149	Meigs County	Cell	5.6	20.5	22.2	43.7	28.7	28.7
150	Mercer County	Cell	5.4	16.3	17.9	37.4	32.7	32.7
151	Miami County	Cell	5.8	17.6	18.6	39.7	22.6	22.6
152	Monroe County	Cell	5.6	19.5	22.5	39.3	27.9	27.9
153	Montgomery County	Cell	5.6	18.8	20.2	41.8	28.1	28.1
154	Morgan County	Cell	7.1	21.1	21.7	38.9	38.9	38.9
155	Morrow County	Cell	6.5	20.3	21.7	43.6	43.6	43.6
156	Muskingum County	Cell	5.6	17.7	19.6	37.8	27.0	27.0
157	Noble County	Cell	5.9	19.5	21.7	40.5	40.5	40.5
158	Ottawa County	Cell	3.8	18.6	19.7	29.6	29.6	29.6

(continued)

Table C-5.   Stratum (%) (continued)

Stratum	Stratum Description	Phone Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
159	Paulding County	Cell	5.5	21.4	24.4	39.1	22.0	22.0
160	Perry County	Cell	6.9	19.8	21.5	40.9	40.9	40.9
161	Pickaway County	Cell	5.9	17.4	19.0	36.8	28.9	28.9
162	Pike County	Cell	5.2	18.6	21.9	36.5	23.0	23.0
163	Portage County	Cell	4.7	24.7	26.3	44.1	44.1	44.1
164	Preble County	Cell	4.9	16.3	18.7	35.0	21.3	21.3
165	Putnam County	Cell	5.3	16.3	17.6	33.8	33.8	33.8
166	Richland County	Cell	6.0	17.8	19.2	37.6	34.0	34.0
167	Ross County	Cell	5.6	20.2	22.6	40.1	27.4	27.4
168	Sandusky County	Cell	5.6	19.5	22.0	40.6	18.2	18.2
169	Scioto County	Cell	5.7	19.6	22.0	41.0	25.1	25.1
170	Seneca County	Cell	6.3	22.0	24.1	38.4	27.5	27.5
171	Shelby County	Cell	5.6	16.6	18.0	36.8	36.8	36.8
172	Stark County	Cell	4.9	20.7	22.5	38.6	26.4	26.4
173	Summit County	Cell	4.8	20.7	22.4	38.4	25.4	25.4
174	Trumbull County	Cell	3.9	17.8	20.1	30.6	19.4	19.4
175	Tuscarawas County	Cell	5.1	19.4	20.9	36.5	23.0	23.0
176	Union County	Cell	6.5	20.4	22.3	44.0	29.4	29.4
177	Van Wert County	Cell	7.3	21.8	23.0	45.5	35.8	35.8
179	Warren County	Cell	4.9	24.3	25.5	40.0	40.0	40.0
180	Washington County	Cell	6.5	22.7	24.7	43.5	29.5	29.5
181	Wayne County	Cell	6.1	19.2	20.7	39.4	26.2	26.2
182	Williams County	Cell	5.9	17.6	19.1	36.7	20.0	20.0
183	Wood County	Cell	6.4	24.3	25.7	45.0	45.0	45.0
184	Wyandot County	Cell	8.0	22.7	24.5	43.4	25.6	25.6
185	Out-of-State, West Virginia	Cell	1.2	10.2	11.2	19.7	19.7	19.7
186	Out-of-State, Consumer Cellular Database, Rural Appalachian	Cell	2.6	19.0	20.6	34.0	24.1	24.1
187	Out-of-State, Consumer Cellular Database, Metro	Cell	2.6	20.0	21.6	33.4	22.6	22.6
188	Out-of-State, Consumer Cellular Database, Rural Non-Appalachian	Cell	2.7	19.9	20.8	32.2	25.9	25.9
189	Out-of-State, Consumer Cellular Database, Suburban	Cell	3.1	22.2	23.7	36.4	17.8	17.8

Table C-6.   County (%)

County Number	County Name	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	Adams County	8.9	27.4	29.9	48.9	23.0	23.0
2	Allen County	6.7	19.0	20.6	40.4	34.2	34.2
3	Ashland County	6.0	20.6	22.2	39.7	33.5	33.5
4	Ashtabula County	5.8	20.3	22.2	42.3	26.7	26.7
5	Athens County	6.9	25.1	27.2	47.4	33.0	33.0
6	Auglaize County	6.3	16.7	19.0	29.9	29.9	29.9
7	Belmont County	5.5	18.4	19.7	36.6	21.0	21.0
8	Brown County	6.5	21.9	23.6	43.3	24.3	24.3
9	Butler County	5.4	21.5	23.6	36.4	27.3	27.3
10	Carroll County	9.1	26.6	28.2	40.5	40.5	40.5
11	Champaign County	7.2	21.0	22.9	43.2	26.4	26.4
12	Clark County	6.2	19.6	21.3	40.0	29.9	29.9
13	Clermont County	5.4	21.3	22.6	34.8	29.9	29.9
14	Clinton County	6.2	21.7	23.1	39.9	30.5	30.5
15	Columbiana County	5.5	19.5	22.0	36.1	22.7	22.7
16	Coshocton County	6.7	20.2	21.7	41.6	33.0	33.0
17	Crawford County	6.6	19.4	22.0	37.2	37.2	37.2
18	Cuyahoga County	4.6	18.9	21.0	34.5	21.9	21.9
19	Darke County	5.7	18.8	20.6	37.6	27.0	27.0
20	Defiance County	5.2	18.9	20.3	35.9	25.2	25.2
21	Delaware County	6.0	22.6	24.3	38.5	30.9	30.9
22	Erie County	4.9	20.3	23.0	40.8	31.4	31.4
23	Fairfield County	6.5	21.1	23.0	38.5	23.2	23.2
24	Fayette County	6.9	19.3	20.6	39.1	22.4	22.4
25	Franklin County	6.6	21.5	23.6	38.7	28.6	28.6
26	Fulton County	5.0	14.4	16.6	27.8	27.8	27.8
27	Gallia County	7.0	23.6	25.6	46.0	25.7	25.7
28	Geauga County	4.9	17.8	19.1	34.1	34.1	34.1
29	Greene County	7.3	20.7	22.8	38.4	38.4	38.4
30	Guernsey County	6.5	22.4	24.7	40.4	23.9	23.9
31	Hamilton County	4.9	21.9	24.2	38.3	25.6	25.6
32	Hancock County	6.5	21.2	22.3	45.2	34.0	34.0
33	Hardin County	6.6	19.2	21.3	37.4	19.7	19.7
34	Harrison County	4.5	17.1	19.4	37.4	23.8	23.8
35	Henry County	5.3	18.1	19.8	37.5	25.1	25.1
36	Highland County	7.3	21.8	23.4	44.7	23.4	23.4
37	Hocking County	6.6	22.0	23.4	41.2	31.9	31.9
38	Holmes County	6.3	20.6	21.9	39.4	21.9	21.9
39	Huron County	5.9	20.9	22.6	39.8	22.2	22.2
40	Jackson County	6.7	21.1	23.8	40.6	25.9	25.9
41	Jefferson County	4.9	19.4	21.8	38.2	29.0	29.0
42	Knox County	7.4	20.9	22.2	44.2	34.1	34.1
43	Lake County	4.3	18.5	19.9	39.4	27.1	27.1
44	Lawrence County	5.6	21.0	23.7	38.3	25.8	25.8
45	Licking County	6.7	18.9	20.6	39.9	28.6	28.6
46	Logan County	6.4	18.9	20.7	40.3	28.5	28.5

(continued)

Table C-6.   County (%) (continued)

County Number	County Name	RR1	RR3	RR4	RR5	Coop LB	Coop UB
47	Lorain County	4.5	18.0	19.7	37.6	24.7	24.7
48	Lucas County	5.0	23.3	25.4	39.9	30.9	30.9
49	Madison County	5.6	19.8	21.5	35.1	18.0	18.0
50	Mahoning County	4.7	18.3	20.4	37.6	24.9	24.9
51	Marion County	7.1	22.6	24.2	42.9	27.5	27.5
52	Medina County	3.9	19.8	21.0	38.0	31.4	31.4
53	Meigs County	5.9	19.9	21.9	39.4	28.5	28.5
54	Mercer County	5.5	16.6	18.2	36.5	32.3	32.3
55	Miami County	5.8	19.4	20.6	38.5	23.5	23.5
56	Monroe County	6.1	20.1	22.9	39.2	29.3	29.3
57	Montgomery County	5.7	18.7	20.3	40.8	28.4	28.4
58	Morgan County	9.0	23.3	24.1	43.0	43.0	43.0
59	Morrow County	7.0	20.8	21.8	43.9	43.9	43.9
60	Muskingum County	6.3	18.7	20.5	38.9	25.4	25.4
61	Noble County	6.5	23.8	26.2	41.3	41.3	41.3
62	Ottawa County	4.2	20.7	22.8	30.0	30.0	30.0
63	Paulding County	6.0	20.4	23.1	36.0	23.5	23.5
64	Perry County	8.1	22.2	23.4	41.1	23.7	23.7
65	Pickaway County	5.9	19.0	20.8	35.3	29.3	29.3
66	Pike County	5.7	20.7	24.3	36.1	24.8	24.8
67	Portage County	5.2	20.9	22.4	39.0	39.0	39.0
68	Preble County	5.5	17.4	19.6	35.9	23.8	23.8
69	Putnam County	6.1	17.1	18.5	35.0	35.0	35.0
70	Richland County	6.1	17.5	18.9	36.6	33.8	33.8
71	Ross County	6.4	20.4	22.8	40.0	29.2	29.2
72	Sandusky County	6.0	20.2	22.4	40.4	19.3	19.3
73	Scioto County	6.2	20.9	23.4	40.8	25.3	25.3
74	Seneca County	6.6	22.7	24.2	39.8	30.8	30.8
75	Shelby County	5.8	16.6	18.3	36.5	31.8	31.8
76	Stark County	5.2	19.5	21.1	36.8	27.7	27.7
77	Summit County	4.8	19.8	21.5	37.5	26.6	26.6
78	Trumbull County	4.6	17.3	19.2	31.4	23.6	23.6
79	Tuscarawas County	5.2	19.2	20.9	35.1	22.4	22.4
80	Union County	6.3	20.9	22.8	43.0	24.8	24.8
81	Van Wert County	7.1	21.4	22.5	44.3	35.4	35.4
82	Vinton County	15.0	44.3	45.9	56.0	56.0	56.0
83	Warren County	5.0	18.7	20.6	33.2	28.2	28.2
84	Washington County	7.3	23.7	25.6	45.0	29.5	29.5
85	Wayne County	6.3	19.6	21.1	40.0	26.2	26.2
86	Williams County	6.0	18.2	19.8	35.4	21.1	21.1
87	Wood County	6.1	24.6	26.5	41.5	33.6	33.6
88	Wyandot County	7.4	21.7	23.5	39.5	25.4	25.4
—	Out-of-State, West Virginia	1.2	10.2	11.2	19.7	19.7	19.7
—	Out-of-State, Consumer Cellular Database	2.7	20.2	21.7	33.8	22.2	22.2

Appendix D: Data Dictionary

OMAS 2017 - Adult Variables
Main Study - 100% File

Contents Listing
Date Created: *12APR18*

Data Set Name	DATA.ADULT
Observations	39711
Variables	277
Engine	V9
Created	04/12/2018 15:04:26

NAME	TYPE	LENGTH	VARNUM	LABEL
CASEID	char	9	1	CASEID--Case ID
RTIID	char	15	2	RTIID--RTI ID
CALLTYPE	num	8	3	CALLTYPE--Phone line type as reported in sample
REPLICATE	num	8	4	REPLICATE--Sample Replicate
PILOT	num	8	5	PILOT--Was record in the pilot? 1=Yes, 0=No
SVY_PAUSE	num	8	6	Svy_Pause--Case was completed before or after the pause in survey fielding
WEEKNUM	num	8	7	WEEKNUM--Week data collection call was made
REGION	num	8	8	REGION--Sample Frame County type region
COUNTYTYPE	num	8	9	COUNTYTYPE--Sample Frame County Type
COUNTY_FRAME	num	8	10	COUNTY_FRAME--Sample Frame FIPS county code
CALL_FLAG	num	8	11	CALL_FLAG--Who called this case and what phone type
WHO_CALLED	num	8	12	WHO_CALLED--RTI (1) or Precision (2) Call
LASTCALL_DATE	num	8	13	LASTCALL_DATE-- Date of Last Call
LASTCALL_TIME	char	8	14	LASTCALL_TIME-- Time of Last Call
CALL_COUNT	num	8	15	CALL_COUNT-- Count of times called
S_VIM	char	3	16	S_VIM--Importation wave
S_DIM	char	8	17	S_DIM--Sample importation date
LANG	char	7	18	LANG--Language
LASTCALL_RESLT	char	62	19	LASTCALL_RESLT-- Final Dispositon Code
CELL_RESP	num	8	20	CELL_RESP--Is this a landline or cell phone?
NUM_ADULTS	num	8	21	NUM_ADULTS--Number of adults in HH
S10C	num	8	22	S10C--Adults in HH 19 or older
S1	num	8	23	S1--Adult in HH with most recent birthday
S1A	num	8	24	S1A--Person most knowledgeable about HH birthdays
SS2B	num	8	25	SS2B--Person most knowledgeable about health insurance
S4A	num	8	26	S4A--Speak to Proxy
S5	num	8	27	S5--Intro to see if R is available for interview
PROXY_FLAG	num	8	28	PROXY_FLAG--Proxy Interview
MONTH	num	8	29	MONTH--Month survey was completed
LASTMON	num	8	30	LASTMON--Month before survey was completed
DAYMINUS30	char	8	31	DAYMINUS30--Date 30 days ago
S2C	num	8	32	S2C--Relationship to sample member
S15	num	8	33	S15--Respondent gender
S8	num	8	34	S8--Time lived in Ohio
S9	num	8	35	S9--Ohio FIPS County Code, Respondent Provided
S9_REGION	num	8	36	S9_REGION--Medicaid Region value
S9A	num	8	37	S9A--City/town of residence
S9A_REC	num	8	38	S9A_REC--City/town of residence, Recoded
S9B	num	8	39	S9B--Zip code
S9_REC	num	8	40	S9_REC--Ohio FIPS County Code, Recoded
S9_TYPE	num	8	41	S9-TYPE--Survey County Type
S11	num	8	42	S11--Adults in family
ZS11	num	8	43	ZS11--Original value of S11
S11B	num	8	44	S11B--Verify adults in HH
NUMADULT_REC	num	8	45	NUMADULT_REC--Change Number of Adults in HH
S12	num	8	46	S12--Children in HH
S13B	num	8	47	S13B--Children in family
NOCHILD_CK	num	8	48	NOCHILD_CK--Verify children in HH
S13A	num	8	49	S13A--Respondent is parent of child in HH
S14	num	8	50	S14--Respondent age
S14A	num	8	51	S14A--Respondent age range
S14A_RECODE	char	1	52	S14A_RECODE--Move updated age category to age cat var
SECSCOMP	num	8	53	SECSCOMP--Section S Complete
PREA1	num	8	54	PREA1--Health insurance last week
A1	num	8	55	A1--Have health insurance/plan
A1A	num	8	56	A1A--Verify health insurance/plan
SECACOMP	num	8	57	SECACOMP--Section A Complete
B4A	num	8	58	B4A--Employer health insurance/plan
B4AA	num	8	59	B4AA--Your/someone else's work insurance
B4AA1	num	8	60	B4AA1--Verify employer insurance/plan
B4AA1_ACODE	num	8	61	B4AA1_ACODE--Recode B4AA instruction
B4AA_RECODE	char	1	62	B4AA_RECODE--Moves recoded answers to B4AA
B4AB	num	8	63	B4AB--Current or past work insurance/plan
B4B	num	8	64	B4B--Medicare insurance/plan
B4C	num	8	65	B4C--Medicaid insurance/plan
B4C_CK	num	8	66	B4C_CK--Medicaid coverage confirmed
B4C_CK_PAYER	num	8	67	B4C_CK_PAYER--Who provided this health insurance plan

NAME	TYPE	LENGTH	VARNUM	LABEL
B4B_CON1	num	8	68	B4B_CON1--Verify Medicaid/Medicare
B4B_CON2	num	8	69	B4B_CON2--Verify respondent age
B4BCAGE	num	8	70	B4BCAGE--Verify respondent age range
B4B_R	num	8	71	B4B_R--Medicare recoded
B4C_R	num	8	72	B4C_R--Medicaid recoded
B4CAM1	num	8	73	B4CAM1--Medicaid plan, 1st response
B4CAM1_REC	num	8	74	B4CAM1_REC--Medicaid plan 1st response, Recoded
B4CAM2	num	8	75	B4CAM2--Medicaid plan 2nd response
B4CAM2_REC	num	8	76	B4CAM2_REC--Medicaid plan 2nd response, Recoded
B4CAM3	num	8	77	B4CAM3--Medicaid plan 3rd response
B4CAM3_REC	num	8	78	B4CAM2_REC--Medicaid plan 3rd response, Recoded
B4C2	num	8	79	B4C2--Length of having current Medicaid plan
B4E	num	8	80	B4E--Private insurance/plan
B4I	num	8	81	B4I--Exchange insurance/plan
B4I_2	num	8	82	B4I_2--Exchange insurance/plan monthly premium
B4G	num	8	83	B4G--Any other insurance
B4H	num	8	84	B4H--Who pays for other insurance
B10	num	8	85	B10--Transition statement current insurance plan coverage
B10B	num	8	86	B10B--Insurance plan covers dental care
B10C	num	8	87	B10C--Insurance plan covers vision care
B10D	num	8	88	B10D--Insurance plan covers prescription medications
B18	num	8	89	B18--Primary insurance coverage - number days
B19	num	8	90	B19--Other insurance plan - last 12 mons
B20	num	8	91	B20--Had Medicaid prior to current plan
B21	num	8	92	B21--Prior to current coverage; covered by employer/union
B22	num	8	93	B22--Prior to current coverage; covered by family paid plan
B24	num	8	94	B24--Prior to current coverage; covered by any insurance
B25	num	8	95	B25--Last 12 mons, any time did not have insurance
B27	num	8	96	B27--Last 12 mons, how long without insurance
SECBCOMP	num	8	97	SECBCOMP--Section B Complete
C1_NEW	num	8	98	C1_NEW--When last covered by any type of health insurance plan
C3	num	8	99	C3--Last coverage, Medicaid
C4	num	8	100	C4--Last coverage, employer/union
SECCCOMP	num	8	101	SECCCOMP--Section C Complete
D30	num	8	102	D30--Rate general health status
D30I	num	8	103	D30I--Past 30 days, mental health prevented work/activities
ADULT_DD	num	8	104	ADULT_DD--Adult reports having developmental disability
D31F	num	8	105	D31F--Difficulty/Need assistance with day-to-day
D31I	num	8	106	D31I--Need/Get special therapy
D31L	num	8	107	D31L--Need/Get treatment or counseling
D32A	num	8	108	D32A--Need assistance with personal care
D32B	num	8	109	D32B--Need assistance with domestic tasks
D32D	num	8	110	D32D--Need assistance with social/emotional support
D32E	num	8	111	D32E--Need assistance with coordinating health care
D41	num	8	112	D41--Diagnosed high BP or hypertension
D41A	num	8	113	D41A--Ever diagnosed heart attack
D41B	num	8	114	D41B--Ever diagnosed coronary heart disease
D41D	num	8	115	D41D--Ever diagnosed congestive heart failure
D43	num	8	116	D43--Ever diagnosed diabetes
D43B	num	8	117	D43B--Ever diagnosed diabetes only with pregnancy
E65	num	8	118	E65--Last 12 mons, any pregnancy
E65A	num	8	119	E65A--Currently pregnant
BF_INTRO	num	8	120	BF_INTRO--Intro to questions asking about baby feeding
BF_28	num	8	121	BF_28--Method of feeding
BF_31	num	8	122	BF_31--Expected age (in months) when breast feeding will stop
BF_32	num	8	123	BF_32--Breast feeding confidence scale
D30A_VALUE	num	8	124	D30A_VALUE--Weight without shoes
D30A_UNIT	num	8	125	D30A_UNIT--Weight without shoes - units
D30B	num	8	126	D30B--Height without shoes - units
D30B_F	num	8	127	D30B_F--Height without shoes - Feet
D30BINC	num	8	128	D30BINC--CALCULATE NUMBER OF INCHES
D30B_I	num	8	129	D30B_I--Height without shoes - Inches
D30B_C	num	8	130	D30B_C--Height Centimeters
D30BFI	char	3	131	D30BFI--Height without shoes - Feet/Inches (Feet-Inches format)
D45	num	8	132	D45--During lifetime, smoked 100 cigarettes
D45A	num	8	133	D45A--Frequency of smoking now
D46	num	8	134	D46--Past 30 days, number days had alcohol

NAME	TYPE	LENGTH	VARNUM	LABEL
D46FILL	num	8	135	D46FILL--Computed number of drinks
D46A	num	8	136	D46A--Past 30 days, number of days with 4 or 5 drinks
SECDCOMP	num	8	137	SECDCOMP--Section D Complete
E59	num	8	138	E59--How long since last doctor visit
E59_1	num	8	139	E59_1--Confirm never been to a doctor
E59A	num	8	140	E59A--How long since last doctor visit for routine check up
E62	num	8	141	E62--Last 12 mons, number of ER visits
E63	num	8	142	E63--How long since last dentist visit
VISION_CARE	num	8	143	VISION_CARE--How long since having eyes examined
SECECOMP	num	8	144	SECECOMP--Section E Complete
F67	num	8	145	F67--Regular source of medical care
F67_1	num	8	146	F67_1--No regular source of care
F67_2	num	8	147	F67_2--Usual source of care
F67A1	num	8	148	F67A1--More than one doctor or nurse
FH11	num	8	149	FH11--Last 12 mons, seen health care provider
FH12	num	8	150	FH12--Last 12 mons, provider spent enough time
FH03	num	8	151	FH03--Last 12 mons, get care during off hours
FH04	num	8	152	FH04--Last 12 mons, get care during off hours
FH05	num	8	153	FH05--Last 12 mons, contacted provider for urgent care
FH06	num	8	154	FH06--Last 12 mons, number of days waiting for urgent care
FH13	num	8	155	FH13--Last 12 mons, how often provider explained well
F68	num	8	156	F68--Last 12 mons, could not get needed dental
F68B_2	num	8	157	F68B_2--Last 12 mons, could not get needed vision care
F68B_3	num	8	158	F68B_3--Last 12 mons, could not get needed mental health
F68C	num	8	159	F68C--Last 12 mons, could not get other needed care/supplies
AVOID_CARE	num	8	160	AVOID_CARE--Delayed or avoided getting care needed
WHY_AVOID	num	8	161	WHY_AVOID--Why did you avoid or delay getting care
WHY_AVOIDA	num	8	162	WHY_AVOIDA--Avoided or delayed getting care because they thought it would cost too much
WHY_AVOIDB	num	8	163	WHY_AVOIDB--Avoided or delayed getting care because they did not have transportation
WHY_AVOIDC	num	8	164	WHY_AVOIDC--Avoided or delayed getting care because the provider was not available when needed to go
WHY_AVOIDD	num	8	165	WHY_AVOIDD--Avoided or delayed getting care because they could not find a provider
F70	num	8	166	F70--Last 12 mons, problem paying medical bills
FOOD_12MO	num	8	167	FOOD_12MO--Ability to buy food for family compared to 12 mons ago
RENT_12MO	num	8	168	RENT_12MO--Ability to pay rent/mortgage compared to 12 mons ago
DEBT_12MO	num	8	169	DEBT_12MO--Ability to pay off any debt compared to 12 mons ago
SECFCOMP	num	8	170	SECFCOMP--Section F Complete
G71	num	8	171	G71--Last week job status
G71A_NEW	num	8	172	G71A_NEW--Self-employed
G72	num	8	173	G72--Employer/union offer health plan
G72A	num	8	174	G72A--Employer/union type of coverage
G72A_REC	num	8	175	G72A_REC--Employer/union type of coverage, Recoded
G72B	num	8	176	G72B--Eligible for employer/union health plan
G72C	num	8	177	G72C--Reason not participating in employer health plan
G72C_1	num	8	178	G72C_1--Not participating in employer health plan because it costs too much
G72C_2	num	8	179	G72C_2--Not participating in employer health plan because of having other insurance
G73A	num	8	180	G73A--Work more or less than 30 hours per week
SECGCOMP	num	8	181	SECGCOMP--Section G Complete
H76	num	8	182	H76--Marital status
H76A	num	8	183	H76A--Spouse employed
H77	num	8	184	H77--Highest level of education completed
H78	num	8	185	H78--Military service ever
S16	num	8	186	S16--Adult Hispanic ethnicity
S17M1	num	8	187	S17M1--Adult Race- 1st response
S17M1_REC	num	8	188	S17M1_REC--Adult Race- 1st response, Recoded
S17M2	num	8	189	S17M2--Adult Race- 2nd response
S17M2_REC	num	8	190	S17M2_REC--Adult Race- 2nd response, Recoded
S17M3	num	8	191	S17M3--Adult Race- 3rd response
S17M3_REC	num	8	192	S17M3_REC--Adult Race- 3rd response, Recoded
S17M4	num	8	193	S17M4--Adult Race- 4th response
S17M4_REC	num	8	194	S17M4_REC--Adult Race- 4th response, Recoded
S17M5	num	8	195	S17M5--Adult Race- 5th response
S17M5_REC	num	8	196	S17M5_REC--Adult Race- 5th response, Recoded
S17M6	num	8	197	S17M6--Adult Race- 6th response
S17M7	num	8	198	S17M7--Adult Race- 7th response
S17B	num	8	199	S17B--Adult Primary Race
S18	num	8	200	S18--Adult Hispanic Race

NAME	TYPE	LENGTH	VARNUM	LABEL
Q153A	num	8	201	Q153A--Primary landline use
Q153	num	8	202	Q153--Number of other landline phonelines in household (excludes survey phoneline)
U3	num	8	203	U3--IF LL - Use cell phone; IF Cell phone - Use LL
H84_NEW	num	8	204	H84_NEW--How many family members, including yourself, live in your household?
H84_A1	num	8	205	H84_A1--Number of family members supported by income
H84_A1_EXTRA	num	8	206	H84_A1_EXTRA--Are there additional family members not in household but supported by family income
H84_A1_NUM	num	8	207	H84_A1_NUM--How many additional family members not in household but supported by family income
HHCOUNT	num	8	208	HHCOUNT--Household count
H84_A2_OP1	num	8	209	H84_A2_OP1--Monthly Income Categories based off FPL less than 75%
H84_A2_OP2	num	8	210	H84_A2_OP2--Monthly Income Categories based off 76-100% FPL
H84_A2_OP3	num	8	211	H84_A2_OP3--Monthly Income Categories based off 101-138% FPL
H84_A2_OP4	num	8	212	H84_A2_OP4--Monthly Income Categories based off 139-206 FPL
H84_A2_OP5	num	8	213	H84_A2_OP5--Monthly Income Categories based off 207-250% FPL
H84_A2_OP6	num	8	214	H84_A2_OP6--Monthly Income Categories based off 251-400% FPL
H84_A2_OP7	num	8	215	H84_A2_OP7--Monthly Income Categories based off More than 400% FPL
H84_A3_OP1	num	8	216	H84_A3_OP1--Annual Income Categories based off FPL less than 75%
H84_A3_OP2	num	8	217	H84_A3_OP2--Annual Income Categories based off 76-100 % FPL
H84_A3_OP3	num	8	218	H84_A3_OP3--Annual Income Categories based off 101-138% FPL
H84_A3_OP4	num	8	219	H84_A3_OP4--Annual Income Categories based off 139-206% FPL
H84_A3_OP5	num	8	220	H84_A3_OP5--Annual Income Categories based off 207-250% FPL
H84_A3_OP6	num	8	221	H84_A3_OP6--Annual Income Categories based off 251-400% FPL
H84_A3_OP7	num	8	222	H84_A3_OP7--Annual Income Categories based off More than 400% FPL
H84_A2	num	8	223	H84_A2--Last month gross income
F_H84_A2CAT	num	8	224	F_H84_A2CAT--Borderline monthly income
H84_A2CATS	num	8	225	H84_A2CATS--Gross income estimate
H84_A3	num	8	226	H84_A3--Gross income estimate exactly equal to value
F_H84_A3CAT	num	8	227	F_H84_A3CAT--Borderline annual income fill
H84_A3CATS	num	8	228	H84_A3CATS--Gross income estimate
SECHCOMP	num	8	229	SECHCOMP--Section H Complete
Q155	num	8	230	Q155--Without phone service 24 hours or more (not cell)
Q155C	num	8	231	Q155C--Without phone service 24 hours or more (not LL)
TRACFONE1	num	8	232	TRACFONE1--Prepaid/Pay as you go cell
SECQCOMP	num	8	233	SECQCOMP--Section Q Complete
Q160	num	8	234	Q160--Incentive contact information
INCENT	num	8	235	INCENT--Provide email address for incentive
ADDRESS	num	8	236	ADDRESS--Provide address for incentive
PROGRAMID	char	5	237	PROGRAMID--Incentive Program ID
DENOMINATION	num	8	238	DENOMINATION--Dollar amount of the incentive
SECCLCOMP	num	8	239	SECCLCOMP--Section Closing Complete
CALLNOTE	num	8	240	CALLNOTE--Notes regarding call outcome
STARTTIME_S	char	5	241	STARTTIME_S--Duration of call to this point and start time for Section S.
ENDTIME_S	char	5	242	ENDTIME_S--Section S End Time
TOTALTIME_S	char	5	243	TOTALTIME_S--Section S Total Time
STARTTIME_A	char	5	244	STARTTIME_A--Duration of call and Section A start time
ENDTIME_A	char	5	245	ENDTIME_A--Section A End Time
TOTALTIME_A	char	5	246	TOTALTIME_A--Section A Total Time
STARTTIME_B	char	5	247	STARTTIME_B--Duration of call and Section B start time
ENDTIME_B	char	5	248	ENDTIME_B-- Section B End Time
TOTALTIME_B	char	5	249	TOTALTIME_B-- Section B Total Time
STARTTIME_C	char	5	250	STARTTIME_C--Duration of call and Section C start time
ENDTIME_C	char	5	251	ENDTIME_C-- Section C End Time
TOTALTIME_C	char	5	252	TOTALTIME_C-- Section C Total Time
STARTTIME_D	char	5	253	STARTTIME_D--Duration of call and Section D start time
ENDTIME_D	char	5	254	ENDTIME_D--Section D End Time
TOTALTIME_D	char	5	255	TOTALTIME_D--Section D Total Time
STARTTIME_E	char	5	256	STARTTIME_E--Duration of call and Section E start time
ENDTIME_E	char	5	257	ENDTIME_E--Section E End Time
TOTALTIME_E	char	5	258	TOTALTIME_E--Section E Total Time
STARTTIME_F	char	5	259	STARTTIME_F--Duration of call and Section F start time
ENDTIME_F	char	5	260	ENDTIME_F--Section F End Time
TOTALTIME_F	char	5	261	TOTALTIME_F--Section F Total Time
STARTTIME_G	char	5	262	STARTTIME_G--Duration of call and Section G start time
ENDTIME_G	char	5	263	ENDTIME_G--Section G End Time
TOTALTIME_G	char	5	264	TOTALTIME_G--Section G Total Time
STARTTIME_H	char	5	265	STARTTIME_H--Duration of call and Section H start time

NAME	TYPE	LENGTH	VARNUM	LABEL
ENDTIME_H	char	5	266	ENDTIME_H--Section H End Time
TOTALTIME_H	char	5	267	TOTALTIME_H--Section H Total Time
STARTTIME_Q	char	5	268	STARTTIME_Q--Duration of call and Section Q start time
ENDTIME_Q	char	5	269	ENDTIME_Q--Section Q End Time
TOTALTIME_Q	char	5	270	TOTALTIME_Q--Section Q Total Time
STARTTIME_CL	char	5	271	STARTTIME_CL--Duration of call and Section Closing start time
ENDTIME_CL	char	5	272	ENDTIME_CL--Section CL End Time
TOTALTIME_CL	char	5	273	TOTALTIME_CL--Section CL Total Time
CALLTIME_SEC	num	8	274	CALLTIME_SEC-- Time of Call, Seconds
CALLTIME_MIN	num	8	275	CALLTIME_MIN-- Time of Call, Minutes
AAPOR	char	5	276	AAPOR--AAPOR Disposition Code
STATUS	char	17	277	STATUS--AAPOR Code Description

OMAS 2017 - Child Variables
Main Study - 100% File

Contents Listing
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Data Set Name	DATA.CHILD
Observations	39711
Variables	133
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NAME	TYPE	LENGTH	VARNUM	LABEL
PREPI90	num	8	1	PREPI90--One child health coverage and status questions
PI90	num	8	2	PI90--Child name
P148	num	8	3	P148--Child gender
I90A	num	8	4	I90A--Child age
I90B	num	8	5	I90B--Relationahip to child
I91A	num	8	6	I91A--Person responsible for child's insurance (LL only)
I91B	num	8	7	I91B--Name of person responsible for child's insurance
I91C	num	8	8	I91C--Person available
I91D	num	8	9	I91D--Request to speak to person responsible for child's insurance
I92	num	8	10	I92--Continue child interview
PAR3	num	8	11	PAR3-Would you be able to answer just 1 to 3 of the most important questions about the child's health insurance coverage
I95	num	8	12	I95--Last week, child covered by health care plan
I95A	num	8	13	I95A--Confirm child has health insurance
SECICOMP	num	8	14	SECICOMP--Section I Complete
J96	num	8	15	J96--Last week, child health insurance same as R
J96A	num	8	16	J96A--Confirm child health insurance same as R
PREJ100A	num	8	17	PREJ100A--Spec questions about child coverage
J100A	num	8	18	J100A--Child covered by employer or union plan
J100C	num	8	19	J100C--Child covered by Medicaid
J100CHELP	num	8	20	J100CHELP--Medicaid defined
J100C_CK	num	8	21	J100C_CK--Check if child covered by Medicaid
J100C_CK_PAY	num	8	22	J100C_CK_PAY--Who provides health insurance plan
J100CA	num	8	23	J100CA--Specify which Medicaid plan
J100B	num	8	24	J100B--Child covered by Medicare
J100BCON	num	8	25	J100BCON--Confirm child covered by Medicare
J100B_R	num	8	26	J100B_R--Medicare recoded
J100E	num	8	27	J100E--Child covered by private health plan
J100F	num	8	28	J100F--Child covered by BCMH or other public program
NJ100F1	num	8	29	NJ100F1--Specify which other public program
J100I1	num	8	30	J100I1--Child covered by Exchange insurance/plan
J100I3	num	8	31	J100I3--Is there a monthly premium for this Ohio Health Care Exchange or healthcare.gov insurance plan
J100G	num	8	32	J100G--Does child have any other health coverage
J100H	num	8	33	J100H--Who pays for health insurance plan
J100CHK	num	8	34	J100CHK--Confirm child health plan coverage
J113	num	8	35	J113--Length of time child has been covered by current primary health insurance
J116B	num	8	36	J116B--Child covered by any insurance prior to current plan
J117	num	8	37	J117--Child covered by Medicaid prior to current plan
J117HELP	num	8	38	J117HELP--Help text
J117B	num	8	39	J117B--Prior to current coverage had employer/union plan
PREJ120	char	1	40	PREJ120--Skip instructions
J120	num	8	41	J120--Any time since birth child had no insurance
J122	num	8	42	J122--Length of time child was without health insurance
SECJCOMP	num	8	43	SECJCOMP--Section J Complete
PREK96	num	8	44	PREK96--Child current insurance status
K96_NEW	num	8	45	K96_NEW--When was the child last covered by any type of health insurance plan
K99	num	8	46	K99--Last time child had coverage was Medicaid
K100	num	8	47	K100--Child last insurance was employer/union plan
SECKCOMP	num	8	48	SECKCOMP--Section K Complete
L125	num	8	49	L125--Rate child's health
SUGAR_1	num	8	50	SUGAR_1--Glasses of juice yesterday
SUGAR_2	num	8	51	SUGAR_2--Glasses of non-diet soda yesterday
PL125A1	num	8	52	PL125A1--Child height
PL125A2	num	8	53	PL125A2--Child weight - units
L125AP_F	num	8	54	L125AP_F--How tall is the child now? (0-8 FEET)
L125AP_I	num	8	55	L125AP_I--How tall is the child now? (00-12 INCHES)
L125AP	char	3	56	L125AP--Child Height Feet/Inches (FII format)
L125AC	num	8	57	L125AC--Child Height Centimeters
L125A2P	num	8	58	L125A2P--Child Weight Pounds (025-500)
L125A2K	num	8	59	L125A2K--Child Weight Kilograms (018-227)
L125LBS	num	8	60	L125LBS--Child Weight, Calculate number of pounds
PL125INC	num	8	61	PL125INC--Child height - calculate number of inches
PRE_L126A	num	8	62	PRE_L126A--Child health problems questions
L126H_2	num	8	63	L126H_2--Child developmental disability
L126A_NEW	num	8	64	L126A_NEW--Does the child currently need or use medicine prescribed by a doctor or other health care professional, other than vitamins
L126J_NEW	num	8	65	L126J_NEW--Does the child need or get special therapy

NAME	TYPE	LENGTH	VARNUM	LABEL
L126M_NEW	num	8	66	L126M_NEW--Does the child have any kind of emotional, developmental or behavioral problem for which they need or gets treatment or counseling
LAS10	num	8	67	LAS10--Does the child have any trouble taking care of themselves
LAS11	num	8	68	LAS11--Does the child experience any difficulty learning, understanding, or paying attention
LAS12	num	8	69	LAS12--Does the child experience any difficulty speaking, communicating, or being understood
SECLCOMP	num	8	70	SECLCOMP--Section L Complete
M131	num	8	71	M131--How long since the child has last seen a doctor
M131A	num	8	72	M131A--Confirm child never had doc visit
FL_M130	num	8	73	FL_M130--Question Fill for M130
M130	num	8	74	M130--Child received well checkup
M130_NUMBER	num	8	75	M130_NUMBER--How many well checks has the child had in the past 12 months
M134	num	8	76	M134--Times child was in ER
M135	num	8	77	M135--How long since the child has last seen a dentist
LAS14	num	8	78	LAS14--How long since the child had eyes examined by any doctor or eye care provider
SECMCOMP	num	8	79	SECMCOMP--Section M Complete
N136	num	8	80	N136--Place child goes when sick
N136CHECK	num	8	81	N136CHECK--verify place child goes for health care
N136A	num	8	82	N136A--Kind of place child goes for care
N137B	num	8	83	N137B--Child has personal doctor or nurse
PCMH_6	num	8	84	PCMH_6--Child has seen health provider
PCMH_7	num	8	85	PCMH_7--Health provider spent enough time with child
PCMH_X	num	8	86	PCMH_X--Days waited for appt for child needing urgent care
PCMH_3	num	8	87	PCMH_3--Able to get off hours care for child
PCMH_8	num	8	88	PCMH_8--Health provider explained things in a way that was easy to understnad
J108	num	8	89	J108--Needed help coordinating child's care
J108B	num	8	90	J108B--Received needed help coordinating child's care
SECNCOMP	num	8	91	SECNCOMP--Section N Complete
O139	num	8	92	O139--Child unable to get needed dental care
SECOCOMP	num	8	93	SECOCOMP--Section O Complete
P149	num	8	94	P149--Child Hispanic
P150M1	num	8	95	P150M1--Child race - 1st response
P150M1_REC	num	8	96	P150M1_REC--Child race - 1st response, Recoded
P150M2	num	8	97	P150M2--Child race - 2nd response
P150M2_REC	num	8	98	P150M2_REC--Child race - 2nd response, Recoded
P150M3	num	8	99	P150M3--Child race - 3rd response
P150M3_REC	num	8	100	P150M3_REC--Child race - 3rd response, Recoded
P150M4	num	8	101	P150M4--Child race - 4th response
P150M4_REC	num	8	102	P150M4_REC--Child race - 4th response, Recoded
P150M5	num	8	103	P150M5--Child race - 5th response
P150M6	num	8	104	P150M6--Child race - 6th response
P150M7	num	8	105	P150M7--Child race - 7th response
P150A	num	8	106	P150A--Best represents child's race
P150B	num	8	107	P150B--Confirm child's primary race
P151	num	8	108	P151--Child's parents employed
SECPCOMP	num	8	109	SECPCOMP--Section P Complete
STARTTIME_I	char	5	110	STARTTIME_I--Duration of call and Section I start time
ENDTIME_I	char	5	111	ENDTIME_I--Section I End Time
TOTALTIME_I	char	5	112	TOTALTIME_I--Section I Total Time
STARTTIME_J	char	5	113	STARTTIME_J--Duration of call and Section J start time
ENDTIME_J	char	5	114	ENDTIME_J--Section J End Time
TOTALTIME_J	char	5	115	TOTALTIME_J--Section J Total Time
STARTTIME_K	char	5	116	STARTTIME_K--Duration of call and Section K start time
ENDTIME_K	char	5	117	ENDTIME_K--Section K End Time
TOTALTIME_K	char	5	118	TOTALTIME_K--Section K Total Time
STARTTIME_L	char	5	119	STARTTIME_L--Duration of call and Section L start time
ENDTIME_L	char	5	120	ENDTIME_L--Section L End Time
TOTALTIME_L	char	5	121	TOTALTIME_L--Section L Total Time
STARTTIME_M	char	5	122	STARTTIME_M--Duration of call and Section M start time
ENDTIME_M	char	5	123	ENDTIME_M--Section M End Time
TOTALTIME_M	char	5	124	TOTALTIME_M--Section M Total Time
STARTTIME_N	char	5	125	STARTTIME_N--Duration of call to this point and start time for Section N.
ENDTIME_N	char	5	126	ENDTIME_N--Section N End Time
TOTALTIME_N	char	5	127	TOTALTIME_N--Section N Total Time
STARTTIME_O	char	5	128	STARTTIME_O--Duration of call and Section O start time
ENDTIME_O	char	5	129	ENDTIME_O-- Section O End Time
TOTALTIME_O	char	5	130	TOTALTIME_O--Section O Total Time

NAME	TYPE	LENGTH	VARNUM	LABEL
STARTTIME_P	char	5	131	STARTTIME_P--Duration of call and Section P start time
ENDTIME_P	char	5	132	ENDTIME_P--Section P End Time
TOTALTIME_P	char	5	133	TOTALTIME_P--Section P Total Time

OMAS 2017 - Derived and Imputed Variables
Main Study - 100% File

Contents Listing
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Data Set Name	DATA.DERIVED
Observations	39711
Variables	125
Engine	V9
Created	04/12/2018 15:04:45

NAME	TYPE	LENGTH	VARNUM	LABEL
LASTDELIVERY	num	8	1	LastDelivery--Case was in the previous file delivered
inttype	num	8	2	INTTYPE - Type of Interview
race_a	num	8	3	RACE_A--Adult's Race
race_c	num	8	4	RACE_C--Child's Race
hisp_a	num	8	5	HISP_A--Adult Hispanic ethnicity
hisp_c	num	8	6	HISP_C--Child Hispanic ethnicity
educ	num	8	7	EDUC--Level of education
insrd_a	num	8	8	INSRD_A--Adult Insurance Status
insrd_c	num	8	9	INSRD_C--Child Insurance Status
medicd_a	num	8	10	MEDICD_A--Adult covered by Medicaid
medicd_c	num	8	11	MEDICD_C--Child covered by Medicaid
marital	num	8	12	MARITAL--Marital status
ins_emp	num	8	13	INS_EMP--Enrolled in employer plan-whose employer
relate_a	num	8	14	RELATE_A -- Relationship of proxy to respondent
age_a	num	8	15	AGE_A--Adult's Age, categorical
age_c	num	8	16	AGE_C--Child's Age, categorical
bmi_a	num	8	17	BMI_A--Body mass index - adult
bmi_a_cat	num	8	18	BMI_A_CAT--BMI category - adult
ervt_a	num	8	19	ERVT_A--Adult - number of ER visits
usual_a	num	8	20	USUAL_A--Usual source of care - adult
hlthnd_a_10	num	8	21	HLTHND_A_10--Problem getting needed health care - adult
ins_emp2	num	8	22	INS_EMP2--Insured by Own Current Employer
ervt_c	num	8	23	EVRT_C--Child - number of ER visits
relate_c	num	8	24	RELATE_C -- Relationship of child to proxy
assist2	num	8	25	ASSIST2--Current Need for Personal Care, Domestic, or Social/Emotional Assistance for adults with SHCN in fair or poor health
race5_a	num	8	26	RACE5_A-- Race Ethnicity Adult, 5 categories
race5_c	num	8	27	RACE5_C-- Race Ethnicity Child, 5 categories
race4_a	num	8	28	RACE4_A--Four Level adult race
race4_c	num	8	29	RACE4_C--Four Level child race
mc_region	num	8	30	MC_REGION--Medicaid Region
COUNTY	num	8	31	COUNTY--FIPS county code
COUNTY_REC	num	8	32	COUNTY_REC--FIPS county code, Recoded
ZIPCODE	num	8	33	ZIPCODE--Zip Code
exch_a	num	8	34	EXCH_A--Adult Calculated exchange coverage
exch_c	num	8	35	EXCH_C--Child Calculated exchange coverage
shcn_a	num	8	36	SHCN_A--Adults w/ or w/o special health care needs
smoke_stat	num	8	37	SMOKE_STAT--Smoking Status
complete_c	num	8	38	COMPLETE_C--Completed child interview
i_type_a	num	8	39	I_TYPE_A--Adult insurance type (for trend comparisons with previous surveys)
i_type_c	num	8	40	I_TYPE_C--Child insurance type (for trend comparisons with previous surveys)
RX_Need_C	num	8	41	RX_Need_C--Child need for prescription drugs
limit_c_new	num	8	42	LIMIT_NEW--Activity Limitations, child
therap_c_new	num	8	43	THERAP_C_NEW--Need for Special Therapies Long Term, child
mhcond_c_new	num	8	44	MHCOND_C_NEW-- Potential Disabling Mental Health or developmental Condition, child
Care_ABD_c	num	8	45	CARE_ABD_C--Medicaid ABD/Waiver or Medicare, child
disab_proxy_c_new	num	8	46	DISAB_PROXY_C_NEW--Proxy for disability - child
assist	num	8	47	ASSIST--Adult Need for Day to Day Assistance Long Term
therap	num	8	48	THERAP-- Need for Special Therapies Long Term
mhcond	num	8	49	MHCOND-- Potential Disabling Mental Health Condition
Care_ABD	num	8	50	CARE_ABD--Medicaid Waiver or < age 65 and Medicare or Medicaid ABD
INCOME_MON	num	8	51	INCOME_MON--2017 Monthly Income, Catagorical
INCOME_ANN	num	8	52	INCOME_ANN--2016 Annual Income, Catagorical
d30_imp	num	8	53	D30_IMP--Adult health status, Imputed
H84_A3_IMP	num	8	54	H84_A3_IMP--Last year gross income, Imputed
H84_A2_IMP	num	8	55	H84_A2_IMP--Last month gross income, Imputed
MEDICD_C_IMP	num	8	56	MEDICD_C_IMP--Child covered by Medicaid, Imputed
INSRD_C_IMP	num	8	57	INSRD_C_IMP--Child Insurance Status, Imputed
I90A_IMP	num	8	58	I90A_IMP--Child age, Imputed
RACE5_C_IMP	num	8	59	RACE5_C_IMP--Race Ethnicity Child, 5 categories, Imputed
P148_IMP	num	8	60	P148_IMP--Child gender, Imputed
Q155C_IMP	num	8	61	Q155C_IMP--Without phone service 24 hours or more (not LL)
Q155_IMP	num	8	62	Q155_IMP--Without phone service 24 hours or more (not cell)
B4C2_IMP	num	8	63	B4C2_IMP--Length of having current Medicaid plan, Imputed
NUM_ADULTS_IMP	num	8	64	NUM_ADULTS_IMP--Number of Adults in household, Imputed (LL only)
Q153_IMP	num	8	65	Q153_IMP--Number of other landline phonelines in household (excludes survey phoneline), Imputed

NAME	TYPE	LENGTH	VARNUM	LABEL
H84_A1_IMP	num	8	66	H84_A1_IMP--Number of persons in family supported by income, Imputed
S11_IMP	num	8	67	S11_IMP--Number of Adult family members in household, Imputed
S13B_IMP	num	8	68	S13B_IMP--Number of children family members in household, Imputed
S12_IMP	num	8	69	S12_IMP--Number of children in household, Imputed
MEDICD_A_IMP	num	8	70	MEDICD_A_IMP--Adult covered by Medicaid, Imputed
INSRD_A_IMP	num	8	71	INSRD_A_IMP--Adult Insurance Status, Imputed
S14_IMP	num	8	72	S14_IMP--Adult Age, Imputed
H77_IMP	num	8	73	H77_IMP--Highest level of education, Imputed
RACE5_A_IMP	num	8	74	RACE5_A_IMP--Race Ethnicity Adult, 5 categories, Imputed
S15_IMP	num	8	75	S15_IMP--Adult Gender, Imputed
s9_imp	num	8	76	S9_IMP--FIPS county code, Imputed
STRATA	num	8	77	STRATA--Sample Stratum
L125_IMP	num	8	78	L125_IMP--Child health status, Imputed
s9_type_imp	num	8	79	S9_TYPE_IMP-- County type, Imputed
WT_A	num	8	80	WT_A--Final Weight, Adult
WT_C	num	8	81	WT_C--Final Weight, Child
educ_imp	num	8	82	EDUC_IMP--Level of education, Imputed
fam_type_imp	num	8	83	FAM_TYPE_IMP--Household composition, imputed
gender	num	8	84	GENDER--Adult gender imputed
i_type_a_imp	num	8	85	I_TYPE_A_IMP--Adult insurance type, imputed
i_type_c_imp	num	8	86	I_TYPE_C_IMP--Child insurance type, imputed
age_c_imp	num	8	87	AGE_C_imp--Child's Age, categorical, Imputed
age_a_imp	num	8	88	AGE_A_IMP--Adult's Age, categorical, Imputed
usual_c	num	8	89	USUAL_C--Usual source of care - child
disab_proxy_a	num	8	90	DISAB_PROXY_A--Proxy for disability - adult
COUNTY_imp	num	8	91	County_IMP--FIPS county code, Imputed
race4_a_imp	num	8	92	RACE4_A_IMP--Four Level adult race, imputed
race4_c_imp	num	8	93	RACE4_C_IMP--Four Level child race, imputed
FPL_CAT_18	num	8	94	FPL_CAT_18--Categorical Annual FPL Level
FPL_MON_CAT_18	num	8	95	FPL_MON_CAT_18--Categorical Monthly FPL Level
FPL100_18	num	8	96	FPL100_18--Annual Poverty Threshold by Persons in Household
FPL100_MON_18	num	8	97	FPL100_MON_18--Monthly Poverty Threshold by Persons in Household
fpl100_flag_18	num	8	98	FPL100_FLAG_18--Last year's 0/1 Flag of records that are 100% of FPL or less
fpl100_M_flag_18	num	8	99	FPL100_M_FLAG_18--Last month's 0/1 Flag of records that are 100% of FPL or less
fpl138_flag_18	num	8	100	FPL138_FLAG_18--Last year's 0/1 Flag of records that are 138% of FPL or less
fpl138_M_flag_18	num	8	101	FPL138_M_FLAG_18--Last month's 0/1 Flag of records that are 138% of FPL or less
poverty_18	num	8	102	POVERTY_18--Annual Categorical Poverty Level
poverty_m_18	num	8	103	POVERTY_M_18--Monthly Categorical Poverty Level
mcd_elig_a	num	8	104	MCD_ELIG_A--All potential Medicaid income eligible adults
mcd_expansion_a	num	8	105	MCD_EXPANSION_A--Medicaid expansion eligible adults
mcd_expansion_noABD_a	num	8	106	MCD_EXPANSION_NOABD_A--Medicaid expansion eligible adults; excluding ABD
exch_a_imp	num	8	107	EXCH_A_IMP--Adult Calculated exchange coverage, imputed
exch_c_imp	num	8	108	EXCH_C_IMP--Child Calculated exchange coverage, imputed
caidelig_m	num	8	109	CAIDELIG_M--Medicaid Eligibility, 14 Levels
caidelig_grp	num	8	110	CAIDELIG_GRP--Medicaid Eligibility, 4 levels
partial_flag_a	num	8	111	PARTIAL_FLAG_A--Adult Partial 0/1
partial_flag_c	num	8	112	PARTIAL_FLAG_C--Child Partial 0/1
INCOME_MON_IMP	num	8	113	INCOME_MON_IMP--2017 Monthly Income, Categorical
INCOME_ANN_IMP	num	8	114	INCOME_ANN_IMP--2016 Annual Income, Categorical
bmi_c_z	num	8	115	BMI_C_Z--child BMI z score, 6 years and older
bmi_c_pct	num	8	116	BMI_C_PCT--child BMI percentage, 6 years and older
bmi_c	num	8	117	BMI_C--child body mass index, 6 years and older
bmi_c_cat2	num	8	118	BMI_C_CAT2--BMI category, children 6 - 18 years old
bmi_c_cat	num	8	119	BMI_C_CAT--BMI category, children 11 years and older
s9_type_rec	num	8	120	S9_TYPE_REC--County type, Recoded
bmi_a_rec	num	8	121	BMI_A_REC--Body mass index - adult, Cleaned - Capped at 80
bmi_c_rec	num	8	122	BMI_C_REC--Body mass index - child, Cleaned - Capped at 80
bmi_a_cat_rec	num	8	123	BMI_A_CAT_REC--BMI category - adult, Cleaned
bmi_c_cat_rec	num	8	124	BMI_C_CAT_REC--BMI category, children 11 years and older, Cleaned
bmi_c_cat2_rec	num	8	125	BMI_C_CAT2_REC--BMI category, children 6 - 18 years old, Cleaned

Appendix E: Final Questionnaires

(Separate Document on Project Website)

Appendix F: Verbatim Coding Guide

(Separate Document on Project Website)

Appendix G: Data Usage

G.1 Instructions for Using Weights

For the purposes of design-based (variance) estimation, the data file includes the following design variables:

- WT_A, WT_C: adjusted survey weights for adult-level and child-level estimates and analyses
- STRATA: a stratum indicator for generating design-based variance estimators

Sampling variances for the weighted estimates that account for the complex sample design can be computed with statistical software such as SUDAAN, STATA, SAS, or R.

An example SUDAAN statement would necessitate a Nest statement where STRATA is specified, and a Design statement with a "WR" specification for a with-replacement sampling design (approximation).

An example follows for a health insurance variable (INSRD_A) that is tabulated by region.

```
Proc Descript Data="OMAS.ssd" Filetype=sas Design=WR;
Weight  WT_A;
Nest    STRATA;
Var     INSRD_A_IMP;
Tables  REGION;
Class   REGION;
Title   "OMAS, Percent of adults insured by region";
Print Percent SEPercent;
```

This example SAS code shows how to compute the weighted percentage of adults insured statewide:

```
Proc Surveymeans Data= OMAS mean;
Stratum STRATA;
Weight WT_A;
Var INSRD_A_IMP:
Class INSRD_A_IMP;
Domain REGION;
run;
```

The following example STATA code shows how to compute the weighted percentage of adults uninsured statewide.

```
svyset _n [pweight=wt_a], strata(strata) vce(linearized) singleunit(certainty)
xi, noomit: svy: tabulate INSRD_A_IMP, level(95) ci deff
```

The following example R code shows how to compute the weighted percentage of adults uninsured statewide.

```
# If you don't have one of these packages installed,
# uncomment and install the package.
# install.packages("tidyverse")
# install.packages("srvyr")
# install.packages("naniar")

#Load necessary packages
library(tidyverse) #tidyverse allows for easy to read code
library(srvyr) #srvyr is needed for survey analysis
library(naniar) #naniar works with missing data

OMAS_TSL <- OMAS %>%
   as_survey(weights=WT_A, strata=strata)

OMAS_TSL %>%
   group_by(INSRD_A_IMP) %>%
   summarize(Proportion=survey_mean())
```

G.2   Limitations and Cautions When Using the Data

The 2017 OMAS carries with it the following limitations and cautions regarding use of the data:

- The data were collected via telephone only. A telephone-only approach precluded the ability to do the following:
  - Collect information from consumers of the sampled population without valid telephone numbers.
  - Maximize the number of attempts to reach nonrespondents; a mail-and-telephone survey method would increase the number of attempts.
  - Reach respondents in a manner that is most suitable for themselves; for example, respondents with limited speaking abilities may be more likely to conduct the survey via mail because they would not be required to talk to an interviewer.
  - Minimize bias that may result from only one mode of data collection. A study conducted in 1998 with the 36-Item Short Form Health Survey found that younger adults were more likely to refuse to participate when the study was administered via mail, whereas older adults were more likely to refuse telephone interviews (Perkins & Sanson-Fisher, 1998).

- Interviews were only conducted with households that could speak English or Spanish well enough to be interviewed. Thus, non–English- and non–Spanish-speaking households were excluded from the survey. As identified by the final dispositions, less than one tenth of 1% of households contacted were unable to complete the survey because of a language barrier.

- The literature indicates that using proxies can introduce bias to the survey results. Several studies have shown consistent differences between self- and proxy reporting (Bassett, Magaziner, & Hebel, 1990; Ellis et al., 2003; Epstein, Hall, Tognetti, Son, & Conant, 1989; Kovar & Wright, 1973; Mathiowetz & Groves, 1985; Todorov, 2003). The research has shown that proxies have difficulty measuring another person's behaviors or disabilities because they have a different perception of the behavior or disability when it is not their own. Availability of information also can be an issue when using proxies because they may not

have the direct knowledge to respond accurately about another person's behavior or opinions. Proxies were limited to cases where the selected household member had a long-term or permanent physical or mental impairment. Of the 37,700 cases in the final data file, fewer than 1% were completed by proxy. Unrelated to the adult section, the child section was always by proxy.

- The inability to verify the information collected, and the reliance on self-reported insurance status and health behaviors, are further limitations of the study. Although both live monitoring of interviewers and review of their recordings verified the information as recorded, this survey's protocols did not allow for the verification of respondent insurance status by obtaining a copy of their insurance card. Research has shown that differences occur when comparing claims data and medical records to self-reported information provided in a telephone survey (Fowles, Rosheim, Fowler, Craft, & Arrichiello, 1999).

These limitations, as they relate to the ability to use the 2017 OMAS data, are common to all RDD telephone surveys in the following ways:

- The data can only be generalized to the population surveyed (i.e., the information cannot be generalized to households without telephones).

- Comparisons made to other data sources for Ohio must be done with the understanding that differences in the data could result from differences in the how the survey was designed and conducted—not necessarily because of actual differences in the population of interest.

- To maximize coverage when conducting a telephone study, a dual frame of landline and cell phone numbers must be used. The 2017 OMAS used an overlapping dual-frame design, which included respondents who could have been captured from either frame. This poses several methodological challenges related to a person with both a landline and cell phone having multiple chances of being selected. As discussed in the section on weighting (5.3), the 2017 OMAS used a 50/50 composite technique to account for this overlap and to ensure proper weights for inference to the target population.

- When considering subpopulation sizes with OMAS data analysis, the OMAS EC recommends using the NCHS guidelines for health-surveillance suppression of cell sizes of 10 or fewer to protect against possible identification breaches (NCHS, 2004).

G.3   Survey Dispositions

This section presents the final dispositions for the entire study and by region stratum and county. For details, see *Tables G-1 through G-4*.

1.1	Interview
1.2	Partial Interview
2.1	Refusals
2.2	Noncontact
3.1	Unknown, No Answer
3.2	Unknown Household
3.9	Unknown Other
4.2	Fax/Data Line
4.3	Nonworking, Disconnected Number
4.4	Tech Circumstance (incl. Changed Number, Cellular Phones, Pagers)
4.5	Nonresidence (incl. Businesses, Dorms)
4.7	No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-1.   Final Dispositions Overall

Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
Landline	7,620	777	723	29,428	69,738	13,260	289	12,747	81,416	1,358	39,709	967
Cell	28,711	2,603	0	242,474	252,904	40,203	1,472	242	350,215	1,918	19,552	81,092
Overall	36,331	3,380	723	271,902	322,642	53,463	1,761	12,989	431,631	3,276	59,261	82,059

Note:
1.1   Interview
1.2   Partial Interview
2.1   Refusals
2.2   Noncontact
3.1   Unknown, No Answer
3.2   Unknown Household
3.9   Unknown Other
4.2   Fax/Data Line
4.3   Nonworking, Disconnected Number
4.4   Tech Circumstance (incl. Changed Number, Cellular Phones, Pagers)
4.5   Nonresidence (incl. Businesses, Dorms)
4.7   No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-2.   Final Dispositions by Medicaid Region

Medicaid Region No.	Sampling Medicaid Region	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
1	North Central	2,098	200	2,916	109	37	18,414	18,009	900	35,646	154	3,880	5,319
2	Northeast	9,606	935	15,594	467	222	82,356	106,441	4,534	128,972	920	20,292	27,790
3	Northeast Central	2,763	213	4,664	159	51	23,196	25,503	1,043	33,758	237	5,036	6,171
4	Northwest	2,343	193	3,454	113	29	15,027	18,143	462	19,510	147	2,343	4,107
5	South Central	7,508	732	10,222	370	115	46,673	51,984	2,224	74,984	558	9,850	12,876
6	Southeast	3,597	308	4,563	149	52	22,105	26,773	707	31,702	189	3,535	6,400
7	Southwest	8,416	799	12,050	394	217	64,131	75,789	3,119	107,059	1,071	14,325	19,396

Notes:
1.1   Interview
1.2   Partial Interview
2.1   Refusals
2.2   Noncontact
3.1   Unknown, No Answer
3.2   Unknown Household
3.9   Unknown Other
4.2   Fax/Data Line
4.3   Nonworking, Disconnected Number
4.4   Tech Circumstance (incl. Changed Number, Cellular Phones, Pagers)
4.5   Nonresidence (incl. Businesses, Dorms)
4.7   No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-3. Final Dispositions by County Type

Region No.	Sampling County Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
1	Rural Appalachian	7,059	668	9,154	344	138	49,150	49,527	1,496	73,410	493	7,105	11,572
2	Metro	17,736	1,739	30,353	971	371	153,823	191,875	8,020	258,963	2,056	37,063	52,730
3	Rural Non-Appalachian	5,865	508	7,690	254	76	37,371	40,387	1,333	50,502	365	6,274	9,513
4	Suburban	5,671	465	6,266	192	138	31,558	40,853	2,140	48,756	362	8,819	8,244

Notes:
1.1   Interview
1.2   Partial Interview
2.1   Refusals
2.2   Noncontact
3.1   Unknown, No Answer
3.2   Unknown Household
3.9   Unknown Other
4.2   Fax/Data Line
4.3   Nonworking, Disconnected Number
4.4   Tech Circumstance (incl. Changed Number, Cellular Phones, Pagers)
4.5   Nonresidence (incl. Businesses, Dorms)
4.7   No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-4. Final Disposition by Sampling Stratum

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
1	Adams County	LL	21	1	29	1	2	32	108	12	221	2	43	1
2	Allen County	LL	44	3	66	0	2	112	383	71	146	2	226	9
3	Ashland County	LL	23	2	37	1	1	93	207	33	425	3	119	2
4	Ashtabula County	LL	67	7	95	0	5	111	508	60	122	1	171	6
5	Athens County	LL	34	4	50	2	0	92	219	30	1,004	2	136	11
6	Auglaize County	LL	25	3	59	2	4	106	213	41	150	2	102	9
7	Belmont County	LL	63	5	101	1	7	121	365	74	215	1	225	12
8	Brown County	LL	21	2	29	1	3	75	130	23	411	2	72	0
9	Butler County	LL	246	33	492	7	34	1,259	2,503	465	4,048	79	1,440	48
10	Carroll County	LL	17	1	24	0	2	64	79	13	182	1	37	3
11	Champaign County	LL	25	4	45	0	2	64	187	22	82	0	71	2
12	Clark County	LL	109	13	177	7	16	316	720	117	713	8	359	19
13	Clermont County	LL	141	6	255	7	24	606	1,339	250	2,231	45	601	24
14	Clinton County	LL	15	0	26	1	0	78	165	29	316	14	84	4
15	Columbiana County	LL	64	8	123	0	9	247	524	74	583	6	281	24
16	Coshocton County	LL	37	2	63	1	6	106	218	34	226	1	112	5
17	Crawford County	LL	33	5	55	0	5	92	224	27	229	1	93	6
18	Cuyahoga County—AA Low Density	LL	71	7	150	4	11	427	957	170	736	11	491	14
19	Cuyahoga County—AA Medium Density	LL	40	13	83	5	3	232	730	134	345	15	441	10
20	Cuyahoga County—AA High Density	LL	631	71	1,238	33	59	2,534	7,254	1,284	3,535	144	4,130	117
21	Darke County	LL	29	4	53	0	1	58	159	22	131	3	88	2
22	Defiance County	LL	15	1	50	2	0	87	165	42	168	3	106	3
23	Delaware County	LL	111	11	174	2	11	604	1,143	188	2,410	29	610	19
24	Erie County	LL	36	6	69	2	7	197	488	70	345	9	251	9
25	Fairfield County	LL	124	6	218	6	12	440	666	139	1,394	10	484	21
26	Fayette County	LL	30	0	32	0	2	75	149	32	64	3	103	2
27	Franklin County—AA Low Density	LL	108	8	142	2	2	390	1,003	157	719	20	594	14

(continued)

Table G-4. Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
28	Franklin County—AA Medium Density	LL	455	46	648	10	24	1,412	3,261	595	3,745	45	1,885	77
29	Franklin County—AA High Density	LL	400	44	604	10	18	911	2,173	635	1,713	47	1,642	75
30	Fulton County	LL	15	4	36	1	1	49	134	26	50	1	65	5
31	Gallia County	LL	23	2	33	1	1	41	103	21	25	1	71	5
32	Geauga County	LL	78	9	169	3	11	367	938	137	563	4	407	18
33	Greene County	LL	135	14	197	4	15	440	1,014	169	615	15	529	21
34	Guernsey County	LL	49	3	49	5	5	138	187	51	437	2	135	7
35	Hamilton County—AA Low Density	LL	72	15	161	4	12	461	879	174	2,363	44	593	13
36	Hamilton County—AA High Density	LL	357	38	717	19	62	2,185	3,421	825	14,401	276	2,795	88
37	Hancock County	LL	43	4	67	0	2	194	381	84	357	8	280	8
38	Hardin County	LL	15	1	26	1	1	61	112	18	128	1	50	4
39	Harrison County	LL	15	1	20	1	0	24	58	10	91	0	24	3
40	Henry County	LL	9	1	24	1	1	46	90	10	16	2	45	2
41	Highland County	LL	30	0	48	0	4	96	220	32	156	7	113	9
42	Hocking County	LL	22	0	53	3	2	55	100	24	344	2	64	6
43	Holmes County	LL	22	4	26	1	0	76	172	57	160	6	156	8
44	Huron County	LL	34	2	48	2	6	130	234	34	648	5	136	6
45	Jackson County	LL	19	2	34	1	0	73	84	18	377	1	61	3
46	Jefferson County	LL	54	8	89	1	7	167	315	82	220	7	196	8
47	Knox County	LL	43	4	56	2	1	94	316	47	77	3	150	5
48	Lake County	LL	154	14	320	8	14	652	1,861	305	480	25	1,029	30
49	Lawrence County	LL	61	7	101	5	13	169	338	55	392	10	112	8
50	Licking County	LL	150	10	224	4	1	288	1,027	155	290	10	441	13
51	Logan County	LL	15	3	16	0	0	21	83	15	23	0	36	1
52	Lorain County	LL	187	23	376	10	19	767	2,553	341	907	31	1,102	25
53	Lucas County—AA Low Density	LL	59	2	101	1	5	234	469	100	308	2	337	17
54	Lucas County—AA High Density	LL	123	17	262	7	15	1,024	1,106	413	10,023	25	1,420	11
55	Madison County	LL	19	3	54	0	3	105	229	38	292	5	127	3

(continued)

Table G-4. Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
56	Mahoning County	LL	155	21	308	10	12	797	1,768	299	1,206	23	916	16
57	Marion County	LL	42	3	48	0	0	108	281	53	370	4	153	4
58	Medina County	LL	110	3	199	5	14	951	1,502	274	2,289	15	833	13
59	Meigs County	LL	19	3	46	1	2	81	97	17	239	2	33	1
60	Mercer County	LL	20	1	50	1	2	83	141	21	251	1	90	4
61	Miami County	LL	75	5	122	1	5	351	726	89	785	7	352	7
62	Monroe County	LL	20	1	30	0	2	41	86	11	135	2	38	1
63	Montgomery County—AA Low Density	LL	39	9	51	2	1	115	357	61	256	7	186	7
64	Montgomery County—AA Medium Density	LL	21	1	14	1	1	84	161	36	118	6	96	6
65	Montgomery County—AA High Density	LL	391	55	631	7	20	1,471	3,790	407	2,311	47	1,116	38
66	Morgan County	LL	20	1	16	1	2	13	64	6	18	1	28	0
67	Morrow County	LL	23	0	27	1	0	65	141	19	73	1	61	4
68	Muskingum County	LL	80	4	98	3	4	136	357	58	168	3	241	4
69	Noble County	LL	16	1	18	1	7	73	58	15	415	1	43	1
70	Ottawa County	LL	14	2	30	0	2	122	124	35	577	0	92	7
71	Paulding County	LL	17	2	39	0	5	73	65	14	153	1	29	0
72	Perry County	LL	41	0	58	0	3	88	155	24	299	1	59	5
73	Pickaway County	LL	37	4	76	4	6	182	312	48	754	1	181	5
74	Pike County	LL	17	3	28	1	3	66	63	11	379	1	47	2
75	Portage County	LL	116	9	198	5	13	474	1,250	198	565	16	641	10
76	Preble County	LL	31	2	44	1	1	80	186	27	177	2	85	2
77	Putnam County	LL	31	3	43	1	1	57	133	27	25	2	78	7
78	Richland County	LL	87	9	165	2	6	268	773	110	224	14	395	16
79	Ross County	LL	85	10	115	4	3	105	274	46	94	1	152	9
80	Sandusky County	LL	55	3	76	4	4	164	409	85	308	5	210	3
81	Scioto County	LL	75	9	101	3	7	167	286	50	820	8	151	3
82	Seneca County	LL	39	0	48	2	2	155	279	58	263	5	143	3
83	Shelby County	LL	35	7	56	2	2	73	245	42	63	3	112	3
84	Stark County	LL	391	36	726	15	26	1,391	3,906	624	1,334	47	2,196	53

(continued)

Table G-4. Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
85	Summit County	LL	453	43	776	10	39	2,226	5,862	967	2,336	72	3,001	80
86	Trumbull County	LL	124	11	242	6	7	387	1,253	162	364	10	508	27
87	Tuscarawas County	LL	58	8	126	7	3	292	472	85	738	4	282	7
88	Union County	LL	28	3	38	1	3	114	312	43	204	1	164	9
89	Van Wert County	LL	9	0	19	2	1	39	125	15	59	1	66	0
90	Vinton County	LL	28	1	21	0	3	82	52	14	401	0	48	4
91	Warren County	LL	167	18	321	7	14	857	1,915	319	1,615	28	991	31
92	Washington County	LL	66	4	56	1	2	76	249	47	151	0	123	3
93	Wayne County	LL	61	4	71	1	6	153	374	60	173	5	212	4
94	Williams County	LL	16	2	36	0	6	72	109	29	195	0	91	1
95	Wood County	LL	72	7	113	1	9	415	630	152	1,146	5	431	8
96	Wyandot County	LL	8	1	24	1	1	39	92	18	122	8	48	1
97	Adams County	CELL	22	3	11	0	0	60	193	1	108	3	6	18
98	Allen County	CELL	402	36	550	4	0	1,777	3,237	2	2,479	9	179	661
99	Ashland County	CELL	190	15	264	4	0	1,208	1,521	0	1,735	2	80	322
100	Ashtabula County	CELL	365	32	440	15	0	2,433	3,327	2	3,734	12	194	580
101	Athens County	CELL	288	23	270	8	0	1,154	2,509	1	2,059	12	108	437

Notes:
1.1   Interview
1.2   Partial Interview
2.1   Refusals
2.2   Noncontact
3.1   Unknown, No Answer
3.2   Unknown Household
3.9   Unknown Other
4.2   Fax/Data Line
4.3   Nonworking, Disconnected Number
4.4   Tech Circumstance (incl. Changed Number, Cellular Phones, Pagers)
4.5   Nonresidence (incl. Businesses, Dorms)
4.7   No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-4.   Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
102	Auglaize County	CELL	4	1	3	0	0	17	24	0	39	0	1	21
103	Belmont County	CELL	228	17	373	6	0	1,877	2,140	3	2,734	9	143	318
104	Brown County	CELL	144	11	167	6	0	893	1,057	0	1,074	3	57	184
105	Butler County	CELL	292	20	376	13	0	2,436	2,252	3	3,722	23	188	707
107	Champaign County	CELL	42	2	36	1	0	263	254	0	328	2	14	50
108	Clark County	CELL	244	19	306	7	0	1,433	2,317	1	1,865	5	137	482
109	Clermont County	CELL	67	7	105	9	0	693	594	1	1,007	3	69	301
110	Clinton County	CELL	113	8	152	6	0	738	768	0	1,033	8	50	234
111	Columbiana County	CELL	178	23	266	8	0	1,697	1,245	1	2,370	16	95	237
112	Coshocton County	CELL	120	9	142	3	0	802	840	0	886	4	37	184
113	Crawford County	CELL	41	5	56	4	0	330	275	0	370	0	17	69
114	Cuyahoga County	CELL	2,273	247	3,789	73	0	18,534	26,713	32	36,563	209	2,109	10,261
115	Darke County	CELL	160	14	231	11	0	1,435	1,184	1	1,645	14	74	342
116	Defiance County	CELL	151	11	221	11	0	1,470	1,001	0	1,882	23	73	262
117	Delaware County	CELL	199	12	287	10	0	1,192	1,453	1	1,751	10	76	382
118	Erie County	CELL	233	29	279	6	0	2,268	1,908	6	2,861	28	149	454
119	Fairfield County	CELL	224	25	292	10	0	1,498	1,867	1	2,010	22	140	345
120	Fayette County	CELL	74	7	118	5	0	565	461	0	618	9	20	106
121	Franklin County	CELL	2,485	251	3,567	121	0	14,791	19,179	15	24,884	103	1,588	6,216

Table G-4. Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
122	Fulton County	CELL	12	0	26	3	0	140	116	0	179	1	10	39
123	Gallia County	CELL	92	8	85	6	0	664	576	0	913	27	34	106
124	Geauga County	CELL	54	1	71	2	0	492	481	0	780	8	48	146
125	Greene County	CELL	2	0	5	0	0	8	40	0	36	4	2	24
126	Guernsey County	CELL	183	21	257	7	0	1,465	1,210	1	2,148	27	114	249
127	Hamilton County	CELL	2,792	283	3,799	152	0	25,485	25,357	13	35,791	262	2,373	8,943
128	Hancock County	CELL	369	16	399	14	0	1,829	2,992	1	2,275	23	190	652
129	Hardin County	CELL	67	8	98	3	0	405	438	1	535	2	26	88
130	Harrison County	CELL	50	8	78	1	0	524	658	1	637	7	21	96
131	Henry County	CELL	66	6	88	5	0	523	542	0	712	3	28	102
132	Highland County	CELL	165	14	175	4	0	925	975	2	1,093	15	71	175
133	Hocking County	CELL	117	9	127	6	0	854	770	0	1,095	7	48	102
134	Holmes County	CELL	174	8	254	8	0	1,446	913	1	1,508	3	128	330
135	Huron County	CELL	214	18	294	11	0	1,849	1,394	1	2,090	5	109	352
136	Jackson County	CELL	122	16	146	7	0	858	753	1	949	8	39	111
137	Jefferson County	CELL	182	22	249	12	0	2,074	1,617	2	2,803	15	90	244
138	Knox County	CELL	254	15	286	12	0	1,070	1,875	2	1,511	12	113	408
139	Lake County	CELL	872	65	1,139	32	0	8,696	9,925	7	11,399	58	690	2,036
140	Lawrence County	CELL	173	23	226	15	0	1,740	1,284	1	2,822	27	58	219
141	Licking County	CELL	252	25	334	9	0	1,497	2,141	1	2,015	11	139	396
142	Logan County	CELL	177	15	248	2	0	1,216	1,185	0	1,300	11	80	276

Table G-4. Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
143	Lorain County	CELL	600	54	801	44	0	5,573	6,463	3	7,842	38	392	1,351
144	Lucas County	CELL	1,306	110	1,673	70	0	11,652	11,612	46	15,904	90	941	3,466
145	Madison County	CELL	54	3	67	8	0	400	349	0	618	13	31	77
146	Mahoning County	CELL	652	73	899	30	0	5,827	6,748	3	7,973	88	490	1,212
147	Marion County	CELL	335	23	408	19	0	2,079	1,944	1	2,810	16	136	474
148	Medina County	CELL	246	19	340	14	0	2,655	3,033	1	3,477	28	211	771
149	Meigs County	CELL	83	7	93	7	0	709	577	0	831	6	20	91
150	Mercer County	CELL	258	25	394	13	0	1,813	2,232	0	1,918	7	116	412
151	Miami County	CELL	104	6	148	4	0	436	1,086	0	702	8	55	188
152	Monroe County	CELL	95	15	127	5	0	842	626	0	1,050	10	41	100
153	Montgomery County	CELL	1,862	137	2,384	67	0	11,459	17,596	3	14,179	105	1,111	3,961
154	Morgan County	CELL	35	1	52	2	0	223	181	0	362	1	9	19
155	Morrow County	CELL	75	5	88	4	0	333	643	1	483	3	36	156
156	Muskingum County	CELL	281	29	417	16	0	2,197	2,101	0	2,494	8	160	394
157	Noble County	CELL	53	6	71	1	0	380	381	1	453	4	28	93
158	Ottawa County	CELL	16	1	35	2	0	208	160	0	462	1	21	80
159	Paulding County	CELL	50	7	69	2	0	449	334	0	707	9	28	78
160	Perry County	CELL	70	6	92	3	0	467	379	1	542	7	19	54
161	Pickaway County	CELL	133	12	213	3	0	856	1,038	0	1,083	7	54	193
162	Pike County	CELL	62	11	92	5	0	513	512	0	774	25	32	65
163	Portage County	CELL	105	7	118	8	0	912	1,068	3	1,788	21	73	393
164	Preble County	CELL	108	16	179	6	0	1,071	818	1	1,103	5	66	166

Table G-4. Final Disposition by Sampling Stratum (continued)

Stratum	Stratum Description	Phone Type	1.1	1.2	2.1	2.2	3.1	3.2	3.9	4.2	4.3	4.4	4.5	4.7
165	Putnam County	CELL	103	8	189	5	0	838	801	0	977	21	29	205
166	Richland County	CELL	351	28	545	10	0	1,886	2,994	2	2,618	42	184	602
167	Ross County	CELL	343	41	454	18	0	2,720	2,561	2	3,878	15	171	449
168	Sandusky County	CELL	164	21	210	9	0	1,322	1,182	4	1,471	5	71	370
169	Scioto County	CELL	387	47	499	12	0	3,145	2,745	2	3,785	38	146	515
170	Seneca County	CELL	96	9	141	4	0	664	618	2	1,218	13	45	195
171	Shelby County	CELL	211	18	331	14	0	1,497	1,725	0	1,616	7	93	358
172	Stark County	CELL	826	70	1,190	53	0	7,256	7,568	4	11,961	57	539	2,469
173	Summit County	CELL	1,261	102	1,861	60	0	11,154	12,001	7	17,776	27	953	5,096
174	Trumbull County	CELL	158	20	325	13	0	2,059	1,522	1	3,753	4	102	620
175	Tuscarawas County	CELL	310	24	492	24	0	2,966	2,229	1	4,049	4	163	818
176	Union County	CELL	88	8	102	2	0	409	744	0	537	1	63	200
177	Van Wert County	CELL	166	9	187	3	0	974	920	0	1,012	2	53	314
179	Warren County	CELL	20	1	27	2	0	177	182	0	403	0	11	93
180	Washington County	CELL	273	24	311	19	0	2,042	1,507	0	2,580	6	148	490
181	Wayne County	CELL	465	36	662	16	0	3,162	3,287	1	3,631	4	240	1,061
182	Williams County	CELL	87	7	138	5	0	599	637	0	691	2	31	182
183	Wood County	CELL	103	6	116	4	0	646	729	2	978	1	61	347
184	Wyandot County	CELL	62	5	72	4	0	352	281	0	428	0	23	102
185	Out-of-State, West Virginia	CELL	41	4	161	2	0	498	2,623	1	1,322	10	90	1,720
186	Out-of-State, Consumer Cellular Database, Rural Appalachian	CELL	246	21	420	37	0	6,330	2,389	3	7,979	26	301	2,043
187	Out-of-State, Consumer Cellular Database, Metro	CELL	691	54	1,208	115	0	17,693	6,846	19	26,497	46	1,014	7,051

| 188 | Out-of-State, Consumer Cellular Database, Rural Non-Appalachian | CELL | 131 | 6 | 254 | 16 | 0 | 3,234 | 1,246 | 4 | 5,244 | 7 | 179 | 1,420 |
| 189 | Out-of-State, Consumer Cellular Database, Suburban | CELL | 207 | 14 | 325 | 22 | 0 | 4,417 | 1,765 | 4 | 6,799 | 10 | 273 | 1,994 |

Appendix H: Post–Field-Start Changes Log

Date	Quex #	Change Made
7/5/2017	LEAD_IN1	Is the "(First and Last name)" language necessary? It looks like the CATI is already programmed to auto populate with the interviewer's name. I believe there was also a request from the RTI team that the interviewers only provide their first name, which was fine with the GRC team.
	S5	Should this introduction language be changed to more closely match the revised version of LEAD_IN1? For example, "Hello, my name is *** and I am calling on behalf of the State of Ohio regarding an important study about the health and health care issues affecting state residents. This call may be monitored or recorded for quality assurance."
	D30B_F	Can we make the valid answers 1-8, rather than 0-8? The interviewers will have grown accustomed to entering two-digit response options (e.g. 01 or 02), and I'm concerned they'll accidentally try to enter a two-digit response option here as well, which will generate a lot of "0" responses.
	H84_A2	The second "IF NECESSARY" prompt doesn't seem to make sense for this question, "This includes family members living inside and outside the household support by you." Is there any reason we need to keep it?
	H84_A3	Same as with H84_A2 - The second "IF NECESSARY" prompt doesn't seem to make sense for this question. Is there any reason we need to keep it?
	B27	Replace the dashes with the word "to": 0 to 2 months 3 to 6 months, or 7 to 12 months
	H84_A2	Add the "IF NECESSARY" prompt from H84_A1 that defines what we mean by income to this question (IF NECESSARY: Total income includes money from jobs, net income from business, farm or rent, pensions, dividends, interest, social security payments and other money income received before taxes or other deductions.)
7/5/2017	H84_A3	Add the "IF NECESSARY" prompt from H84_A1 that defines what we mean by income to this question (IF NECESSARY: Total income includes money from jobs, net income from business, farm or rent, pensions, dividends, interest, social security payments and other money income received before taxes or other deductions.)

Date	Quex #	Change Made
	U3	There is a parenthesis missing at the end of the IF NECESSARY prompt.
	H84_A1_extra	"When SUMS11S113B=1 we skip H84_A1, which is fine (and what we want the CATI to do). However, that means we go from U3 to H84_A1_extra without providing the transition sentence to the income section. Please add the transition sentence to H84_A1_extra (""The next question asks about <your>/<Person in S1's> income so that the survey sponsors can find out how income relates to health insurance coverage and problems with medical care."") when SUMS11S113B=1. There is no change to the universe of who should be asked H84_A1_extra.
		We need to update the skip on J122 so that cases where J116b=02, 98, 99 are also asked J122. We had this direction in the response options to J116b but forgot to include them in the skip for J122. The new J122 skip should be (ASK IF J120=01 OR J166b=02, 98, 99)
	B19	Amy reviewed the pilot data and found a case that didn't seem to follow the skip: B19 (ASK IF: (B18=01, 02) OR (B4C2=01, 02)) Not Correct – One person was B18=03 and B4C2 = 02 and was not asked. RTI - please check skip.
	G72c	We revised the structure of this question to ensure each statement was read and evaluated separately, rather than as a check-all-that-apply format. Please see accompanying Word spec for tracked change. We have also removed the "other" option.
	H84_A1	Change the word "people" to "family members" in the second sentence. Please see accompanying Word spec for exact change, tracked in the document.
	L126a_new	Delete the parentheses around "other than vitamins" so the question reads, "…by a doctor or other health care professional, other than vitamins?"
	sugar_1 and sugar_2	The CATI is correct but the Word spec needs to be updated: this question is only asked if the child is older than 1 but younger than 6 (but the Word spec still says i90a<6)
7/5/2017	J122	To account for instances where the selected child is less than 1 year old and has had the same insurance coverage since they were born, please add a new option to J122 when i90a=00: 04 R SAYS CHILD HAS BEEN COVERED BY SAME INSURANCE SINCE BIRTH
7/13/2017	FH11	Change HAVE to Has
7/17/2017	L125Ap_F	Change to match numbering process for Adult Height and weight

Date	Quex #	Change Made
	H84_a2, h84_A3	change for one person: _ (RECALL=" <YOUR NAME> total gross income", CONDITION="H84_A1==01") _$Recall (RECALL=" <YOUR NAME> total gross family income", CONDITION="H84_A1>1") income last month before taxes and other deductions, please stop me.
8/1/2017	B10B, B10C, B10D	Need to add the question stem "Do any of <YOUR NAME> current insurance plans cover…" as a parenthetical if the interviewers need to be reminded.
8/1/2017	B4A	Add an interviewer note that indicates Military would count as Employer Coverage. So, add a bullet to IF NECESSARY that states "Military status is considered employment."
8/14/2017	TRACFONE1	Add "if necessary" prompt for clarification: "By prepaid or pay as you go we mean you have to buy minutes or credits to use your phone."
9/14/2017	LEAD_IN1	"Change to: Hello, I'm calling on behalf of The Ohio State University regarding an important study about the health and health care issues affecting Ohio residents. My name is INTERVIEWER NAME and I am part of the research team. This is not a scam or a sales call.