2021 Ohio Medicaid Assessment Survey: Methodology Report

Prepared for

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1. Introduction

1.1. Project Overview

The Ohio Department of Medicaid (ODM), the Ohio Department of Health (ODH), the Ohio Department of Mental Health and Addiction Services, 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 2021 Ohio Medicaid Assessment Survey (OMAS), the ninth iteration of the OMAS series of surveys, dating back to 1998.[1] Similar to earlier iterations, the 2021 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 2021 OMAS:

- provides data comparable to earlier versions of the OMAS and Ohio Family Health Survey (OFHS) conducted in 2019, 2017, 2015, 2012, 2010, 2008, and 2004,[2] to assess changes in Ohio over time;
- informs policies and programs that serve Ohio's Medicaid and potentially Medicaid-eligible populations;
- helps policymakers 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; and
- helps policymakers evaluate the health risks of Ohioans.

The 2021 OMAS was fielded from July 21, 2021, through January 31, 2022, and used a combination of an address-based sampling (ABS) frame and a cell phone[3] random-digit-dialing (RDD) frame. With the ABS frame, a combination of web interviewing and paper surveys (paper-and-pencil interviewing, or PAPI) was used. This was the first OMAS iteration to use an ABS frame in the main study, and the ABS frame accounted for more than three-quarters of completions. With the RDD frame a combination of outbound calling using computer-assisted telephone interviewing (CATI) and text messaging, inviting respondents with cellular phones to complete the survey by web (through a computer-assisted web interviewing, or CAWI, module), was used. This 2021 iteration was the first OMAS iteration to occur during the COVID-19 pandemic and therefore the first iteration that needed to handle systematic changes in the way individuals communicate and their willingness to complete a survey. This new combination of modes was a direct response to these unique challenges.

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[1] For 1998, 2004, 2008, and 2010, iterations of these surveys were referred to as the Ohio Family Health Survey (OFHS). The name was changed with the 2012 survey to reflect the primary 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 2021 OMAS with the 1998 OFHS.

[3] This frame contained a limited amount of landline numbers, and there were 200 completes by landline. Additional information on the RDD frame is provided in Section 2.

For the 2021 OMAS ABS frame, respondents were invited to complete the survey by web through a series of four mailings. The first two mailings invited respondents to complete the survey by web, where they would access a web link, enter a PIN code, and then be taken to the CAWI module to complete the OMAS online. Then, to augment response rates further, the third mailing entailed sending nonrespondents a paper survey that they could complete and return to RTI. The fourth mailing was a reminder, asking respondents to complete the survey by web or by paper.

For the 2021 OMAS cell phone RDD frame, interviewers collected data via telephone surveys in randomly selected Ohio households using a CATI module. Interviewers administered the survey to a randomly selected adult in landline households with more than one adult resident or with the adult user of the sampled cell phone. If the selected adult was physically or mentally incapable of completing the interview, an adult proxy was allowed to complete the survey on their behalf. In households with children, the child component of the survey pertaining to a randomly selected child (aged 18 or younger) was completed by a proxy adult. After outbound calling attempts had been made, to augment response rates, a series of text messages were sent to these individuals with cell phones, inviting them to complete the survey by web.

The 2021 OMAS was originally planned to use CAWI and CATI modes for data collection (from the ABS and RDD sample frames, respectively) through a combination of mailed invitations and outbound calling. However, initial response rates suggested that using texting with the RDD sample and adding a paper survey as an additional mode of response would be necessary to reach the target number of completions—these actions were then taken to bolster responses.

Representatives from ODM, GRC, OSU, ODH, Ohio Department of Developmental Disabilities, Ohio Department of Aging, Ohio Department of Mental Health and Addiction Services, and RTI formed a working group called the OMAS Executive Committee (OMAS EC). The goal of the OMAS EC was to enable a highly transparent representative dynamic between state stakeholders, academic researchers, and RTI. The OMAS EC met in early 2021 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 a high standard for quality assurance in project 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 2021 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;
- COVID-19; 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 aged 18 or younger, if one was presently residing in the adult respondent's household and the respondent had sufficient knowledge of that child's health. 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 or younger. This keeps the child age classification in line with the Ohio Medicaid program eligibility rules.

The sample design for the 2021 OMAS was a complex design that used two sampling frames: ABS and RDD. The ABS frame consisted of randomly selected addresses while the RDD frame consisted almost entirely of cell phone numbers. This design is explained in Section 2, Sampling.

1.2.2. Important Changes From Prior Iterations

The 2021 OMAS incorporated several design enhancements to increase the accuracy and precision of the survey estimates or reduce item nonresponse. The enhancements included the following:

- incorporating an ABS frame and corresponding sample of addresses to account for at least 50% of survey responses;
- incorporating a listed cell phone frame using it to stratify the complete cell phone frame to target residents better at the county level;
- incorporating Ohio residents with out-of-state cell phone numbers into the sampling population (also included in 2019);
- incorporating the 2019 cell phone respondent sample in the Rate Center Plus Method (Berzofsky et al., 2019b) to better target counties on the cell phone frame;
- using Cellular Working Identification Number Service (Cell-WINS) to improve the efficiency of the cell phone sample (also included in 2019);
- reducing the portion of the sample that came from landline telephone numbers and restricted landline numbers to listed telephone numbers only, initially intending for this to be 5% of the sample;
- reducing the proportion of interviews conducted through the landline frame and, as such, eliminating the oversamples of African Americans in Metro counties and surname lists of Asian and Hispanic persons;

- including the number of dual enrollees in Medicaid and Medicare as a control total in the creation of the final survey weights (WT_A); and

- implementing a blended weighting strategy that combines the RDD and ABS frame respondents to produce a single weight representing the residents of Ohio.

These enhancements are described in the relevant sections of this report.

1.3. Institutional Review Board Determination

Because the 2021 OMAS collects 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 (PIs) at OSU and GRC and the project director at RTI to assess whether the 2021 OMAS fell under their respective responsibilities for protecting human subjects in sponsored research. Both IRBs determined that the 2021 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 agreed 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 or adverse events to the OSU and RTI IRBs.

1.4. Addition of Address-Based Sampling in 2019 and 2021

Although the OMAS has historically used phone samples, the response rate has steadily decreased over time. The response rate was 30.0% in 2012, 24.0% in 2015, 22.5% in 2017, and 22.2% in 2019. Much of this decline is because of the inability to contact potential respondents by phone given call screening, call blocking, and other technologies.

In 2019, to address this trend of decreasing response rates, RTI conducted a pilot experiment in a limited number of Ohio counties using an ABS frame to inform design considerations and provide options for administering the OMAS in the future, assuming response rates will continue to decrease.

An ABS frame can provide a more stable design and achieve a higher response rate than RDD through the use of web or paper modes, which are both cost-efficient. The ABS frame can also better target subpopulations (e.g., race/ethnicity, lower income) of interest based on known Census tract information for all addresses in Ohio—something that is not practical with RDD samples.

In all, the 2019 ABS pilot collected 1,561 surveys—985 via web and 576 via paper—across five counties: Athens (rural), Gallia (rural), Lake (suburban), Montgomery (metro), and Washington (rural). This number was sufficient to meet all analytical goals for the 2019 iteration and to determine that the use of ABS was strongly justifiable for future OMAS iterations. The success of the 2019 ABS pilot led to the use of an ABS sample in combination with the RDD sample for the 2021 study. The use of ABS and RDD frames enabled the study team to maximize response rates and provide optimal respondent composition.

2. Sampling

2.1. Objectives of the Sample Design

The 2021 OMAS employed a two-pronged design consisting of the following:

1. a stratified sample of addresses from an ABS frame by county, high-density African American areas, and high-density low-income areas; and
2. a stratified random sample of telephone numbers by telephone type (cell phone or landline), county, and, in the case of cell phone telephone numbers, whether the cell phone number can be linked to an address.

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 1 month;
- who did not speak or read 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.

2.2. Sampling Plan

2.2.1. Estimation Domains of Interest

The OMAS sampling plan was a probability-based design with known probabilities of selection at each stage of selection. The general sample design was a stratified simple random sample of persons residing in Ohio. The 2021 OMAS sample design needed to support estimation at the following geographic levels:

- State
- Medicaid region
- County type classification
- County

Additionally, the design needed to maximize the precision among key subpopulation groups. The design needed to maximize the number of respondents in the following subpopulations:

- African American persons; and
- low socioeconomic status (SES) persons.

2.2.2. Sample Target Goals

To support estimation at each of these geographic levels and subpopulations, the 2021 OMAS had two sample target goals:

1. Statewide interview goal: 30,000 interviews minimum, split approximately 50/50 between the ABS and RDD sample frames; and
2. county interview goal: 100 adult interviews minimum per county

2.2.3. Design Considerations

In determining an optimal allocation, several design allocations were considered. The design sought to achieve a minimum number of completed interviews in each analysis stratum while minimizing the design effects at each level of analysis. In addition, the design considered 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).

As described in this section, two separate samples were allocated to meet the 2021 OMAS goals. These samples used an ABS frame and an RDD telephone frame. The RDD frame consisted of two component frames: a cell phone frame and a landline frame.

New to the OMAS sample design was the use of an ABS frame for statewide estimates. In 2019, OMAS included an ABS pilot, which was implemented in five counties. The ABS pilot was conducted because RDD response rates were steadily declining, and an alternative frame was needed to maintain the stability of the study. The pilot demonstrated that:

- the address frame includes persons who do not have an active telephone;
- the address frame can more accurately target persons in key subpopulations within each county—such as African American or low-income persons—than the cell phone frame;
- respondents are able to take the OMAS instrument through a self-administered mode through either a CAWI or PAPI; and
- the combination of CAWI and PAPI can increase response rates in rural counties.

Similar to prior OMAS designs, an RDD telephone frame was used. However, for the 2021 OMAS, the RDD frame served as more of a bridge to the prior OMAS designs than the sole frame used to select respondents. Like prior OMAS cycles, the 2021 OMAS continued to shift more sample from the landline frame to the cell phone frame. With the continued increase in cell phone–only persons in Ohio (61.4% of adults and 74.6% of households with children in 2019 [National Center for Health Statistics (NCHS), 2020]) compared with a decrease in landline only households (3.2% of adults and 0.3% of children in

2019 [NCHS, 2020]) the optimal method to reach the key populations of interest through a telephone is from the cell phone frame. As such, 90% of the RDD frame is allocated to the cell phone frame compared to 85% in 2019. Furthermore, with more people porting numbers as they move to Ohio from other states, the potential for coverage error bias has increased. Although an exact number of persons with an out-of-state ported number is not known, information from Marketing Systems Group (MSG) indicates that it is at least 3% in Ohio and can be as high as 40% in some Ohio counties. The 2017 OMAS sample was used to determine whether differences existed between cell phone residents with in- and out-of-state cell phone numbers (Berzofsky et al., 2019c) and found persons with an out-of-state phone number were younger, in better health, and more likely to be insured. New to the 2021 cell phone frame is the ability to include listed cell phone addresses. Because the address is known to be in Ohio, numbers with out-of-state area codes are included.

For each of the two 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

Sample		Number of Completed Interviews	
Type	**Size from Vendor**	**Target**	**Actual**
ABS sample	300,000	15,000	27,478
RDD sample	731,105	15,000	7,065
RDD cell phone	661,590	13,500	6,820
RDD landline	69,515	1,500	245
Total	1,031,105	30,000	34,543

2.3. Address-Based Sampling Design

The 2021 OMAS used an ABS frame to sample Ohio residential addresses and achieve 50% of the overall sample goal.

2.3.1. ABS Frame Construction

The sampling frame consisted of computerized delivery sequence addresses from the U.S. Postal Service, including city-style, Rural Route Boxes, Highway Contract Boxes, and Only Way to Get Mail (OWGM) PO Boxes (both vendor and RTI identified). The frame excluded drop points with more than four units; non-OWGM PO Boxes; and addresses flagged business only, seasonal, or educational.

On the ABS frame, Census population information at the Census block group (CBG) level was appended to identify areas with high concentrations of key subpopulations. Specifically, areas with high concentrations of African American persons and areas with high concentrations of low-income persons were identified.

2.3.2. ABS Sample Selection Methods

The ABS design consisted of four components: (1) stratification, (2) allocation, (3) household selection and release, and (4) within-household selection.

Stratification

The ABS sample design used a stratified design to help achieve the goals of improving county-level estimate precision and increasing the number of African American and low-SES persons.

Defining high-concentration African American areas. High-concentration African American areas were identified at the county level (i.e., areas did not span across counties). Two criteria were used to identify the areas in each county: (1) the CBG had to have at least 40% of its residents identified as African American based on the latest 5-year American Community Survey (ACS) data, and (2) the areas needed to have at least 100 CBGs with that concentration level. The second criterion was used to balance the need to sample from the highest concentration CBGs and ensure a reasonable design effect. Five counties had CBGs that met these two criteria: Cuyahoga, Franklin, Hamilton, Lucas,[4] and Montgomery. ***Table 2-2*** identifies the cut point used to define a high-concentration African American area within each of the counties.

Table 2-2. Concentration Level Used to Define High-Concentration African American Areas Within Each County

County (FIPS)	Total CBGs	40+ % AA	50+ % AA	60+ % AA	70+ % AA	80+ % AA	90+ % AA
Cuyahoga (39035)	1,162	38%	33%	29%	25%	21%	15%
Franklin (39049)	887	25%	19%	13%	9%	5%	1%
Hamilton (39061)	697	28%	22%	18%	13%	8%	4%
Lucas (39095)	398	23%	18%	12%	10%	6%	3%
Montgomery (39113)	420	26%	24%	21%	18%	12%	7%

Note: AA = African American; CBG = Census block group.

Defining high-concentration low-SES areas. Although low SES is a construct based on several factors, the ABS frame can only append income level. Therefore, low-income areas were used as a proxy for low SES in the ABS sample. For the purposes of sampling, low income was defined as a household income of $20,000 or less. The income value was chosen because the 2021 federal poverty level (FPL) for a single-person household is $12,880 and increases $4,540 for each additional household member. According to the Census Bureau, in 2020 (latest data available) the average number of persons per household in Ohio was 2.53. Therefore, the FPL for an average sized household is $24,366. Because the ABS frame categorizes income, the $20,000 cut point was the closest to the average sized household FPL.

Given the definition of "low-income," a minimum number of CBGs meeting the definition needed to exist to ensure reasonable design effects at the county level. Based on review of the distribution, we determined that to target low-income CBGs in a county, there needed to be a minimum of five CBGs and those CBGs needed to be at least 15% of all CBGs in the county. ***Table 2-3*** shows the counties that met these criteria. In total, of the 88 counties plus 5 high-concentration African American groups, 41 areas (coming from 36 counties) met the threshold to target low-income households (see highlighted rows and cells).

[4] Lucas County had 91 CBGs with 40% or more of the population identified as African American. But, because it was close to the minimum 100, an exception was made to the criterion.

Table 2-3. Percentage of CBGs Meeting Definition of Low-Income by Concentration of Low-Income Persons

County	Total CBGs	30+ % Low Inc	40+ % Low Inc	50+ % Low Inc	60+ % Low Inc	70+ % Low Inc
Cuyahoga High AA	240	77%	55%	29%	13%	8%
Montgomery High AA	101	75%	36%	23%	11%	1%
Lucas High AA	91	75%	51%	29%	18%	4%
Hamilton High AA	123	62%	41%	24%	13%	8%
Franklin High AA	119	55%	27%	13%	5%	2%
Adams	22	41%	18%			
Scioto	73	37%	18%	11%	4%	
Athens	48	33%	21%	10%	4%	4%
Mahoning	216	31%	20%	9%	5%	2%
Meigs	23	30%	13%			
Guernsey	35	29%	6%	6%	3%	
Muskingum	75	28%	17%	7%	4%	
Ashtabula	94	26%	10%	2%	1%	
Belmont	68	25%	7%	3%	1%	
Monroe	16	25%	6%			
Noble	12	25%				
Perry	28	25%	14%			
Jefferson	67	24%	13%	4%	4%	3%
Clark	136	24%	9%	4%		
Highland	35	23%	9%			
Marion	57	23%	12%	5%		
Trumbull	193	23%	15%	9%	5%	2%
Pike	22	23%	5%			
Summit	452	22%	10%	6%	3%	1%
Hocking	23	22%	9%	4%		
Portage	101	21%	9%	6%	3%	1%
Allen	92	21%	10%	4%	2%	1%
Cuyahoga Low AA	922	20%	11%	6%	2%	1%
Gallia	25	20%	4%			
Jackson	30	20%	7%			
Lorain	202	20%	10%	5%	3%	0%
Lucas Low AA	307	20%	11%	6%	2%	1%
Lawrence	57	19%	9%	5%	2%	
Washington	47	19%	6%			
Coshocton	33	18%	12%	6%		
Butler	267	17%	11%	7%	4%	1%
Crawford	48	17%	6%	2%		
Franklin Low AA	768	17%	8%	4%	1%	1%
Montgomery Low AA	319	16%	8%	4%	2%	1%
Richland	95	16%	11%	3%	1%	1%
Brown	32	16%	6%	3%		

Note: AA = African American; CBG = Census block group; blue shaded rows are high AA strata; yellow highlighted cells indicate the concentration level used to define the low-income stratum.

Final strata construction. Using the identified high-concentration African American areas and the high-concentration low-income areas, 134 strata (88 counties, 5 high-concentration African American areas, and 41 high-concentration low-income areas) were constructed on the ABS frame.

Allocation

The target sample of 15,000 was allocated across the counties using the following algorithm:

1. A fixed oversample was allocated to each of the high-concentration African American strata. A fixed oversample of 300 responses was used to be consistent with how African American strata were oversampled on the landline frame in prior OMAS iterations. Across the five high-concentration African American strata, this accounts for 1,500 target responses.
2. Sample was allocated to each county. The remaining target sample of 13,500 was allocated to all 144 strata using a two-step process. First, the sample was proportionally allocated based on the number of addresses in each stratum. Second, a floor was applied to the allocated sample such that no stratum had an allocated sample below 75. In other words, if the proportional allocation to a county was less than 75, the allocation was raised to 75. To maintain the total target, the allocation to the strata with an allocation above 75 was lowered to adjust for the application of the sample floor. This was done using a ratio adjustment.
3. Sample was allocated within county to the high-concentration low-income strata. Within each county, the proportion of addresses in the high-concentration low-income strata were increased by an oversampling factor. The allocation to the non–low-income stratum in the county was adjusted to account for the sample. For the 2021 OMAS, the oversampling factor used was 2.0. For instance, if 15% of the county addresses were in the low-income stratum, then 30% (15%*2.0) was allocated to the low-income stratum and 70% was allocated to the non–low-income stratum. The oversampling factor of 2.0 was chosen because it best maximized the number of low-income respondents while keeping the county-level design effects below 2.

Household Selection and Release

Because this was the first year an ABS sample was being used statewide, and therefore there was no statewide experience using the ABS frame, the starting sample size was based on the yield rate (i.e., the ratio of the number of addresses sampled to the number of completed interviews) in the pilot study. However, to ensure that each stratum had enough sample to achieve its target allocation, two steps were taken. First, the yield rate was increased because it was not known whether the yield rate from the five pilot counties would apply to the entire state. Second, a three-wave design was implemented (see Section 4 for details). Under this design, sample was released three times during the data collection period. In the second and third releases, the sample release for a stratum was tailored to account for the actual field experience to date. In other words, better performing strata would use a smaller yield rate, and poorer performing strata would use a larger yield rate to determine the amount of sample to release. Starting sample not released in a stratum was discarded and did not contribute to the post–data collection procedures or response rates. The target and starting sample sizes for each stratum are detailed in ***Table 2-4***.

Table 2-4. Target and Starting Sample Size by Sampling Strata, ABS

Strata	Population	Sample Size	
		Target	Starting
Adams	6,959	13	95
Adams - Low Income	4,952	62	404
Allen	36,342	59	550
Allen - Low Income	8,556	36	319
Ashland	22,122	75	469
Ashtabula	32,146	45	532
Ashtabula - Low Income	10,902	46	487
Athens	19,365	36	347
Athens - Low Income	6,780	39	509
Auglaize	19,461	75	285
Belmont	24,574	42	367
Belmont - Low Income	6,962	33	284
Brown	16,076	56	269
Brown - Low Income	2,275	19	83
Butler	134,568	242	2,149
Butler - Low Income	19,724	83	1,216
Carroll	11,652	75	434
Champaign	16,281	75	301
Clark	47,684	72	620
Clark - Low Income	13,516	57	651
Clermont	84,559	178	1,586
Clinton	17,692	75	313
Columbiana	45,659	96	1,016
Coshocton	12,614	47	241
Coshocton - Low Income	2,838	28	155
Crawford	16,013	45	183
Crawford - Low Income	3,996	30	320
Cuyahoga - Low AA	420,221	684	6,213
Cuyahoga - Low AA, Low Income	95,596	403	4,903
Cuyahoga - High AA	68,524	197	2,471
Cuyahoga - High AA, Low Income	31,566	336	3,993
Darke	21,796	75	383
Defiance	16,333	75	233
Delaware	81,618	172	1,215
Erie	35,496	75	571
Fairfield	60,788	128	869
Fayette	12,295	75	415
Franklin - Low AA	447,182	809	6,643
Franklin - Low AA, Low Income	63,393	267	3,309
Franklin - High AA	48,040	287	2,152
Franklin - High AA, Low Income	14,569	250	2,487
Fulton	17,068	75	271
Gallia	10,731	49	245
Gallia - Low Income	2,216	26	113
Geauga	36,052	76	624
Greene	71,017	150	1,190
Guernsey	13,173	35	272
Guernsey - Low Income	4,863	40	169
Hamilton - Low AA	314,150	662	6,118
Hamilton - High AA	51,585	268	2,463
Hamilton - High AA, Low Income	16,703	257	2,146
Hancock	32,485	75	551
Hardin	12,641	75	329
Harrison	6,558	75	344
Henry	11,458	75	278
Highland	14,198	43	279
Highland - Low Income	3,795	32	113
Hocking	10,365	51	248
Hocking - Low Income	1,954	24	97
Holmes	14,141	75	481
Huron	25,137	75	542
Jackson	11,987	47	209
Jackson - Low Income	2,786	28	154
Jefferson	24,269	43	303

(continued)

Table 2-4. Target and Starting Sample Size by Sampling Strata, ABS (continued)

Strata	Population	Sample Size	
		Target	Starting
Jefferson - Low Income	6,499	32	432
Knox	23,999	75	418
Lake	104,709	221	1,802
Lawrence	21,446	47	301
Lawrence - Low Income	4,993	28	194
Licking	72,720	153	1,229
Logan	19,841	75	367
Lorain	113,511	196	1,567
Lorain - Low Income	20,612	87	1,169
Lucas - Low AA	137,382	233	2,469
Lucas - Low AA, Low Income	26,996	114	1,531
Lucas - High AA	31,124	318	2,964
Lucas - High AA, Low Income	8,457	237	1,556
Madison	16,108	75	413
Mahoning	92,197	159	2,010
Mahoning - Low Income	16,524	70	1,275
Marion	21,297	47	307
Marion - Low Income	4,936	28	251
Medina	74,966	158	1,171
Meigs	7,617	35	224
Meigs - Low Income	2,749	40	163
Mercer	16,615	75	311
Miami	46,374	98	757
Monroe	6,466	75	415
Montgomery - Low AA	176,537	315	3,406
Montgomery - Low AA, Low Income	27,230	115	1,597
Montgomery - High AA	40,886	280	2,649
Montgomery - High AA, Low Income	11,231	212	1,713
Morgan	6,060	75	415
Morrow	14,029	75	434
Muskingum	32,040	56	561
Muskingum - Low Income	5,438	23	173
Noble	5,428	75	362
Ottawa	22,033	75	342
Paulding	6,994	75	434
Perry	10,483	45	305
Perry - Low Income	2,597	30	134
Pickaway	21,795	75	448
Pike	9,511	46	208
Pike - Low Income	2,326	29	107
Portage	56,967	95	868
Portage - Low Income	11,846	50	524
Preble	17,400	75	397
Putnam	13,310	75	285
Richland	45,977	80	683
Richland - Low Income	8,101	34	406
Ross	30,933	75	895
Sandusky	25,877	75	457
Scioto	27,088	53	808
Scioto - Low Income	4,706	22	440
Seneca	23,243	75	401
Shelby	18,767	75	359
Stark	166,545	351	4,274
Summit	203,426	337	4,184
Summit - Low Income	43,569	184	2,656
Trumbull	83,487	153	1,296
Trumbull - Low Income	11,169	47	685
Tuscarawas	39,856	84	817
Union	23,825	75	391
VanWert	11,651	75	301
Vinton	5,343	75	397
Warren	92,389	195	1,507
Washington	21,939	49	267
Washington - Low Income	4,648	26	218
Wayne	45,761	96	909
Williams	14,892	75	253
Wood	54,214	114	776
Wyandot	9,201	75	381

Selection of Respondents Within a Household

Adult selection. Each selected household was mailed an invitation to participate in the survey. The invitation instructed each household to identify the household member who had the most recent birthday and was aged 19 or older. The person who met these criteria was asked to take the survey.

Child selection.[5] While an adult took the survey, the adult was asked to identify the number of children (aged 18 or younger) in the household and to identify which child had the most recent birthday. The adult taking the survey was asked to be a proxy respondent for the child.

2.4. RDD Sampling Design

The 2019 OMAS used a dual-frame approach for the RDD sample consisting of two distinct frames: (1) a list of all cell phone numbers with an Ohio area code or linked to an Ohio address, and (2) a list of listed landline numbers. The 2021 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.[6]

2.4.1. RDD Frame Construction

For sample selection, the two frames used were constructed separately. The process for constructing each frame was as follows:

Cell phone frame. For the cell phone frame, MSG's Advanced Cellular Frame (ACF) was used. The ACF contains 20.5 million cell phone numbers linked to Ohio. The ACF offers three key advantages over the frame sources used in the 2019 OMAS—a combination of 1,000-blocks of cell phone numbers and the Consumer Cellular Database (CCD), which had a limited set of listed cell phone numbers. First, the ACF is a singular frame that combines a listed cell phone frame and the unlisted 1,000-blocks. Second, because the listed frame is embedded in the ACF, the set of listed numbers can be used in stratification, which was not possible with the CCD used in prior OMAS studies. Third, the listed portion of the ACF incorporates out-of-state phone numbers linked to an Ohio address. As such, Ohio residents with an out-of-area cell phone number can be included in the main sample design without the use of a special frame.

Landline frame. For the landline frame, the set of landline numbers was restricted to listed landline telephone numbers only. The listed landline frame contained 2.5 million telephone numbers. This is a departure from past OMAS iterations, which included unlisted telephone numbers. This change in the landline frame was made for two reasons. First, based on the experience of the 2019 OMAS, the unlisted landline numbers were very inefficient (i.e., the yield rate to obtain one completed interview was very large). Second, because the allocation to the landline frame was only 5% of the total sample (10% of the

[5] Child selection only occurred for CAWI respondents. Based on the 2019 OMAS ABS pilot, 95% of PAPI respondents did not have children. Therefore, for cost and time efficiency, PAPI respondents were not asked to complete a child survey (if an eligible child resided in the household).

[6] 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.

RDD sample), any bias introduced by restricting the sample to listed landline numbers was determined to be minimal.

2.4.2. RDD Sample Selection Methods

Given the shift in the type of telephone used in Ohio—87.1% of adult only households and 98.2% of households with children identify as cell phone only, cell phone mostly, or dual telephone users (NCHS, 2020), with a greater proportion of African American households, low-income households, and households with children shifting to cell phones (Lu et al., 2014)—the 2021 OMAS shifted to a predominantly cell phone sample allocation. The 2021 OMAS targeted 90% of desired interviews to come from phone numbers on the cell phone frame and 10% from the landline frame. This translates to 13,500 respondents from the cell phone frame and 1,500 respondents from the landline frame. This cell phone allocation is an increase over that in the 2019 OMAS, which allocated 85% to the cell phone frame; the 2017 OMAS, which allocated 70% of desired respondents to the cell phone frame; the 2015 OMAS, which allocated 50% of desired 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 desired respondents to the cell phone frame.

The RDD frame sample design consisted of five steps applied separately to the cell phone and landline frames: (1) stratification, (2) allocation, (3) selection of starting sample, (4) pre-data collection processing and release, and (5) selection of adult and child respondent within a household.

Stratification

Cell phone. The cell phone frame was stratified by whether the telephone number was listed (i.e., linked to a specific address). The frame was then further stratified by county. For the ACF, county was defined by the county of the listed address. For the non-ACF strata, county was 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.[7] These areas can be grouped to form strata based on the county in 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 in which the cell phone owner resides. In total, the cell phone frame was divided into 172 strata: 88 strata within the ACF stratum and 84 strata within the non-ACF stratum.

Landline. The listed landline sample was stratified by the county of listed address. This created 88 strata.

[7] In Ohio, four counties—Auglaize, Carroll, Greene, and Vinton—do not have any rate center areas assigned to them.

Allocation

Cell phone. The cell phone sample was allocated in two steps:

1. *Allocated to counties*. To ensure a minimum sample size in each county, a target allocation floor of 25 was imposed. With this sample floor and the floor used for the ABS sample, a minimum of 100 respondents would be obtained in each county. The target sample was proportionally allocated to the 88 Ohio counties. If a county allocation fell below 25, then its allocation was raised to 25. A ratio adjustment was applied to the counties with a higher allocation to maintain the total sample allocation.
2. *Allocated to the listed portion of the sample*. With the ability to identify listed cell phone numbers on the frame, a more efficient design that oversampled numbers could be designed. As such, within each county, when allocating to the listed and non-listed portions of the frame, an oversampling factor of 1.1 was used to increase the allocation to the listed stratum. A factor of 1.1 was used for two reasons. First, the design effect for an oversampling factor of 1.2 almost doubled the design effect (1.12 design effect for oversampling factor of 1.2 vs. 1.07 design effect for oversampling factor of 1.1). Second, with almost half the numbers on the frame identified as listed (9.8 million listed vs. 10.7 million unlisted), oversampling factors greater than 1.2 led to negative allocations to the unlisted frame.

Landline. The landline target sample was allocated proportionally to the 88 counties based on the number of listed landline numbers in each county. A minimum allocation of 5 was assigned to ensure that each county had some listed landline sample allocated to it.

Sample Selection

Cell phone. The starting sample size was determined based on a two-step process. First, the 2019 OMAS statewide yield rate for the cell phone sample was determined to be 50. Second, for each county, the statewide yield rate was adjusted based on the 2019 county-level response rate. The statewide yield rate was decreased for counties with better response rates and increased for counties with poorer response rates. This county-level adjustment was done in such a way that the aggregate yield rate remained the statewide rate.

Using the starting sample size, MSG selected a random sample of cell phone numbers within each stratum.

Landline. The starting sample size was based on the 2019 OMAS yield rate for listed landline numbers. This yield rate was determined to be 40. Because the listed landline sample was so small, no further adjustment was made to the starting sample size. In other words, the statewide yield rate was applied to all counties without further adjustment.

Using the starting sample size, MSG selected a random sample of listed landline numbers within each stratum.

Pre–Data Collection Processing and Sample Release

Before uploading the sample to the CATI system, the sample phone numbers were preprocessed to remove clearly nonworking numbers. The preprocessing method was different for the cell phone and landline samples. For 2021, the entire sample was cleaned before being released.

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 was evaluated based on the 2015 OMAS and found to be accurate in identifying inactive numbers (Berzofsky et al., 2019a).

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 30% of cell phone numbers as inactive.

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

1. Phone numbers were entered into the Neustar system to identify those 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 25% 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.

Sample release. Once each sample was selected, the selected telephone numbers were grouped into replicates containing up to 100 telephone numbers on the landline frame and 25 numbers on the cell phone frame. Replicates were formed at the stratum level. Because the sample size of phone numbers selected in each stratum was not necessarily a multiple of 100 or 25, 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 2-5*** indicates the dates on which new replicates were released into the field and the number of telephone numbers associated with the released replicates.

Table 2-5. Sample Released by Date

Release Date	Total Sample
Cell Phone	
7/20/2021	28,131
8/20/2021	83,483
10/15/2021	79,707
Total	191,321
Landline	
7/20/2021	5,829

Selection of Respondents Within a Household

Cell phone. For the cell phone sample, the user of the cell phone called was selected to take the adult portion of the survey. If the cell phone user was aged 18 or younger, then the cell phone number was identified as ineligible for the study.

Landline. Among the respondents contacted through a landline, one adult (i.e., a person aged 19 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 aged 19 or older) was selected. People contacted on an unexpected phone type (i.e., a landline sample number that was a cell phone or vice versa) were considered ineligible for the study.

Selection of child respondent. 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.

2.5. Mid-Fielding Design Changes

2.5.1. Identified Issues

After the initial sample was released, two issues were identified:

1. the landline sample was not producing interviews at the anticipated rate, and more than 80% of the interviews conducted were from persons aged 65 or older; and
2. the cell phone sample was not producing interviews at the anticipated rate, although the interviews conducted appeared to reflect the population based on age and race distributions.

2.5.2. Implemented Solutions

Because of these identified issues, the following changes were made to the sample design to stay within budget:

1. The ABS sample allocation was increased to 80% of the total target. In other words, the revised target number of respondents from the ABS frame was 24,000. Because a conservative yield rate was used for the starting sample, the initial ABS sample had enough households selected to obtain 24,000 interviews.
2. The overall RDD allocation was reduced to 20%.
3. The landline sample was halted after the initial release. That is, the full protocol was applied to the initial release, but no additional listed landline replicates were released.
4. All remaining RDD releases consisted only of cell phone numbers.
5. Text survey invitations to released cell phone numbers were introduced as a nonresponse follow-up method (see Section 4 Data Collection procedures for further details).

2.6. Survey Respondents

The 2021 OMAS obtained 34,543 survey responses. This included 31,533 fully completed surveys and 3,010 partially completed surveys that were deemed completed enough to include in the analytic dataset. ***Table 2-6*** details the overall breakdown of the survey respondents by frame type.

Table 2-6. Number of Interviews Among Adults and Children

	Fully Complete		Partially Complete	
Frame	**Adult**	**Child**	**Adult**	**Child**
ABS	21,048	4,664	1,797	0
RDD	4,416	1,457	1,213	0
Cell phone	4,213	1,437	1,190	0
Landline	203	20	23	0

2.6.1. ABS Survey Respondents

Table 2-7 presents the final number of ABS respondents in each county by stratum and response mode. In total, there were 27,478 adult respondents—20,800 via web and 6,678 via paper—and 6,121 child respondents via web and phone. Each county nearly met or exceeded its targeted completed interviews. Miami County was short at 87% of target; Fairfield at 94%; Erie, Green, and Wood at 95%; and six other counties between 97% and 99% of target. However, Williams and Clinton were the only two counties that were below the 75 minimum target (73 and 74 completes, respectively).

Table 2-7. Number of ABS Completed Interviews by County and Response Mode

Ohio County	Web	Paper	Total
Adams County	59	26	85
Allen County	144	49	193
Ashland County	79	32	111
Ashtabula County	139	64	203
Athens County	133	37	170
Auglaize County	65	17	82
Belmont County	98	49	147
Brown County	62	19	81
Butler County	541	141	682
Carroll County	79	33	112
Champaign County	62	14	76
Clark County	195	78	273
Clermont County	272	72	344
Clinton County	62	12	74
Columbiana County	156	61	217
Coshocton County	58	24	82
Crawford County	109	37	146
Cuyahoga County	2,308	789	3,097
Darke County	64	39	103
Defiance County	67	14	81

Ohio County	Web	Paper	Total
Delaware County	275	56	331
Erie County	118	21	139
Fairfield County	178	58	236
Fayette County	57	30	87
Franklin County	2,238	541	2,779
Fulton County	62	16	78
Gallia County	63	17	80
Geauga County	125	38	163
Greene County	225	53	278
Guernsey County	73	41	114
Hamilton County	1,593	486	2,079
Hancock County	105	29	134
Hardin County	57	19	76
Harrison County	57	29	86
Henry County	67	16	83
Highland County	58	29	87
Hocking County	64	25	89

(continued)

Table 2-7. Number of ABS Completed Interviews by County and Response Mode (continued)

Ohio County	Web	Paper	Total
Holmes County	60	38	98
Huron County	85	29	114
Jackson County	60	23	83
Jefferson County	129	53	182
Knox County	82	22	104
Lake County	336	96	432
Lawrence County	90	25	115
Licking County	222	71	293
Logan County	64	19	83
Lorain County	449	156	605
Lucas County	1,309	409	1,718
Madison County	63	22	85
Mahoning County	493	188	681
Marion County	95	34	129
Medina County	256	68	324
Meigs County	69	24	93
Mercer County	64	17	81
Miami County	131	36	167
Monroe County	55	45	100
Montgomery County	1,457	402	1,859
Morgan County	61	38	99
Morrow County	64	29	93
Muskingum County	124	50	174
Noble County	53	32	85
Ottawa County	65	30	95
Paulding County	68	28	96
Perry County	63	34	97
Pickaway County	68	24	92
Pike County	51	28	79
Portage County	238	70	308
Preble County	69	21	90
Putnam County	67	19	86
Richland County	177	66	243
Ross County	151	63	214
Sandusky County	83	30	113
Scioto County	174	64	238
Seneca County	83	32	115
Shelby County	64	23	87
Stark County	709	251	960
Summit County	1,137	364	1,501
Trumbull County	315	114	429
Tuscarawas County	124	50	174
Union County	82	22	104
Van Wert County	62	22	84
Vinton County	61	26	87
Warren County	329	69	398
Washington County	98	39	137
Wayne County	146	59	205
Williams County	56	17	73
Wood County	162	50	212
Wyandot County	60	26	86
Total	20,800	6,678	27,478

2.6.2. RDD Survey Respondents

The RDD survey achieved 7,065 total telephone interviews, including 6,820 from the cell phone frame and 245 from the landline frame. Across strata, the sample achieved targeted respondent sample size goals of at least the target number of interviews in all but 14 cell phone strata (Allen, Ashtabula, Cuyahoga, Hamilton, Hancock, Holmes, Huron, Lake, Lorain, Mercer, Montgomery, Sandusky, Stark, and Williams). ***Table 2-8*** presents the number of completed RDD interviews in each county by phone type.

Table 2-8. Completed RDD Interviews by County and Telephone Type

Ohio County	Cell Phone	Landline	Total
Adams County	22	6	28
Allen County	54	5	59
Ashland County	41	3	44
Ashtabula County	59	3	62
Athens County	58	3	61
Auglaize County	25	2	27
Belmont County	38	4	42
Brown County	27	1	28
Butler County	191	2	193
Carroll County	31	2	33
Champaign County	32	3	35
Clark County	90	4	94
Clermont County	127	4	131
Clinton County	30	2	32
Columbiana County	62	2	64
Coshocton County	26	3	29
Crawford County	35	1	36
Cuyahoga County	572	9	581
Darke County	37	3	40
Defiance County	23	3	26
Delaware County	137	1	138
Erie County	51	1	52
Fairfield County	97	3	100
Fayette County	21	0	21
Franklin County	710	9	719
Fulton County	23	0	23
Gallia County	23	2	25
Geauga County	57	2	59
Greene County	78	5	83
Guernsey County	21	3	24
Hamilton County	429	8	437
Hancock County	44	2	46
Hardin County	25	0	25
Harrison County	17	3	20
Henry County	23	2	25
Highland County	31	1	32
Hocking County	21	1	22
Holmes County	14	1	15
Huron County	31	1	32
Jackson County	41	2	43
Jefferson County	44	0	44
Knox County	42	5	47
Lake County	109	1	110
Lawrence County	36	3	39
Licking County	112	2	114
Logan County	35	3	38
Lorain County	152	1	153
Lucas County	254	5	259
Madison County	43	0	43
Mahoning County	158	4	162
Marion County	41	1	42
Medina County	94	1	95
Meigs County	27	3	30
Mercer County	28	2	30
Miami County	66	6	72
Monroe County	18	3	21
Montgomery County	316	6	322
Morgan County	20	3	23
Morrow County	32	1	33
Muskingum County	46	2	48
Noble County	28	1	29
Ottawa County	22	1	23
Paulding County	21	2	23
Perry County	23	4	27
Pickaway County	42	3	45
Pike County	22	5	27
Portage County	93	2	95
Preble County	31	2	33
Putnam County	25	2	27
Richland County	77	1	78
Ross County	60	4	64
Sandusky County	33	4	37
Scioto County	49	2	51
Seneca County	19	1	20
Shelby County	38	0	38
Stark County	167	7	174
Summit County	304	7	311
Trumbull County	106	3	109
Tuscarawas County	56	2	58
Union County	57	0	57
Van Wert County	17	3	20
Vinton County	14	8	22
Warren County	140	2	142
Washington County	52	7	59
Wayne County	62	2	64
Williams County	23	2	25
Wood County	81	2	83
Wyandot County	11	2	13
Total	6,820	245	7,065

2.6.4. Overall Respondents

The 2021 OMAS had two sample target goals: (1) obtain at least 30,000 interviews statewide, and (2) obtain at least 100 adult interviews in each county. These target goals were met in all but two counties:

- Williams: 98 adult interviews
- Wyandot: 99 adult interviews

3. Questionnaire

3.1. Instrument Content

The 2021 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*** summarizes each questionnaire section. The final version of the instrument specification, in CAWI format, is presented in ***Appendix A: Final CAWI Questionnaire***.[8]

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 (CATI only); ▪ 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 aged 19 or older with the most recent birthday (landline only); ▪ determine respondents' ability to answer questions about their health insurance coverage; and ▪ also offered some initial background information about the study.
Current Insurance Status (Adult)	Respondents are asked ▪ whether they are currently covered by health insurance; and ▪ to verify their insurance status if they were unsure about their current insurance coverage status.
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; ▪ reason for the loss of insurance; and ▪ type and source of their previous health insurance.

(continued)

[8] The final version of the CATI specs and the PAPI instrument are available on the Ohio Colleges of Medicine Government Resource Center website.

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

Questionnaire Section	Contents of Section
Adult Health Status & 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, alcohol, and other substances; and ▪ current pregnancy (female respondents aged 19 to 44 only).
Adult: Utilization of Adult Health Care Services	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.
Adult: Sources of Care & Determinants	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; ▪ their ability to access dental care; ▪ whether they experienced difficulty in getting needed prescriptions and other health care because of costs; ▪ reasons for delaying or avoiding care that they felt was needed in the past 12 months; and ▪ economic stressors related to health care, including ability to pay medical bills and rent or mortgage.
Adult: Employment	Respondents were asked about ▪ their job status and whether they were currently employed; ▪ health insurance offered by their employer; ▪ the number of hours they worked; and ▪ if unemployed, reasons for unemployment.
Adult: Demographics and Family Income	Demographic questions in this section included ▪ marital status; ▪ education; ▪ race and ethnicity; ▪ income; ▪ number of telephone numbers within the household; and ▪ household composition and income.
Adult: Household Questions	This section asked ▪ whether there was any lack of telephone service within the past 12 months.
Child: 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.

(continued)

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

Questionnaire Section	Contents of Section
Child: Insurance Coverage	If the selected child had insurance, the interviewer asked the adult proxy a variety of questions, such as ▪ type of health insurance; ▪ source of health insurance; ▪ period of time the child had been covered; ▪ previous coverage; and ▪ any possible lack of coverage in the past.
Child: Currently Uninsured	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).
Child: Health Status	Questions in this section focused on the child's ▪ general and physical health; ▪ screen time for things other than schoolwork; and ▪ need for special therapy, treatment, or counseling.
Child: Utilization and Quality of Child Health Care Services	For this section, questions asked respondents about ▪ the child's doctor, vision, and dental visits; and ▪ whether the child had any visits to an emergency room.
Child: Access to Care	Respondents were asked 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.
Child: Unmet Health Needs	This section of the survey asked about ▪ unmet dental care; ▪ unmet mental health care; and ▪ delays or avoiding getting care that was needed.
Child: Demographics	Demographic items included the child's ▪ race and ethnicity; and ▪ the employment status of his or her parents.
Weighting Questions (Adult)	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 EC oversees and governs the OMAS project content, methodological approach, and analyses. A major role 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 2004 through 2019 OMAS iterations with the sponsoring state agencies to assess which items would remain, which would be removed, and what new items would be necessary to meet the agencies' current needs. One fundamental difference between the 2021 iteration and all prior iterations was that the 2021 iteration was conducted during the COVID-19 pandemic, which is something the OMAS EC considered. These needs were incorporated into sections that examined current insurance status, health status and caregiving, utilization of health care services, sources of care and determinants of health, employment status, and demographic information for adults and children.

After the OMAS EC had developed a working draft of the adult and child instruments into initial CATI specifications, RTI project staff helped finalize the specifications. RTI staff examined the instruments for ease of administration and response, wording and response categories for new items, transitions, overall survey flow, skip patterns and item-specific logic, and actual survey length versus the budgeted length restrictions. After an advanced draft of the instrument was developed, GRC performed cognitive interviews, and the findings from the interviews were then integrated into a new instrument draft.

RTI received a draft version of the CATI questionnaire from the OMAS EC in early spring 2021, with the goal of programming, testing, and finalizing the survey for a pilot test in July. To prepare for fielding, 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;
- replaced the question regarding unmet sources of care with a new item set developed by RTI for other surveys to improve construct validity;
- compiled a comprehensive assessment of recommended revisions to the 2021 OMAS, identifying problems that the project team believed the instrument posed for data collection and presented strategies for resolving those problems;
- prepared each next version of the questionnaire based on full project team meetings, suggestions, and strategies;
- developed the initial CATI specifications into CAWI and PAPI specifications;
- programmed and tested the CATI, CAWI, and PAPI instruments;
- conducted a CATI pilot test to develop a comprehensive assessment of recommended revisions to review with the research team; and
- updated the specifications and instruments based on the pilot test results.

A detailed description of these activities follows.

3.3. CATI Instrument Programming and Testing

Upon completing the initial development steps outlined in Section 3.2 that culminated in final pre-pilot CATI specifications, RTI programmed and tested the CATI instrument.

3.3.1. CATI Instrument

RTI used Voxco CATI to program and process the CATI instrument. Voxco CATI is a fully integrated program that provides call management and replicate controls, multilingual interviewing capabilities, monitoring, and incidence tracking. The software automatically controls skip and fill logic and range checking for numeric data. The programming logic directs the questionnaire's flow and prevents an interviewer from entering data in the wrong field. On any given screen of the questionnaire, the program accepts only a predetermined range or type of response. Completed interview responses are securely fed into a main server, where the data can then be downloaded.

3.3.2. CATI Instrument Testing

After programming the CATI instrument, RTI performed internal instrument testing. CATI testing followed an iterative process. Testers checked for components such as text accuracy, logic functionality, and correct range validations. Different testers performed different scenarios; for example, one tester manually checked the instrument behavior of each value, while another tester completed the survey from the perspective of a hypothetical respondent with demographic/behavioral characteristics that are similar to those of actual study respondents to ensure that the questions made sense with respect to the hypothetical respondent's situation (for example, if the hypothetical respondent was a 75-year-old male with diabetes, we would verify that they were *not* asked question D43B, which asks if their diabetes was only during pregnancy, as D43B should only be asked of respondents with diabetes who are female and in a defined age range).

Issues testers found with the survey were documented in a Jira test log. After all testers had updated the log, a senior RTI staff member updated the instrument specifications, and the Voxco programmer updated the CATI program, after which the original testers verified that any previously identified issues were rectified. These iterations continued until all issues had been resolved.

After RTI completed testing, the updated specifications and the CATI instrument were delivered to GRC for testing. GRC logged any discrepancies in a test log. RTI then made the final updates based on GRC feedback, updating the instrument specifications and the CATI program, performing final pre-pilot testing, and then delivering the final CATI pilot specifications to GRC.

3.4. CAWI and PAPI Instrument Development, Programming, and Testing

The ABS component of the study entailed administering two versions of the questionnaire: CAWI as the primary mode and PAPI as the secondary mode. Both the CAWI and PAPI specifications were created using the CATI specifications described in Section 3.3. Special considerations were made for both of these additional modes.

With the web survey, there was considerable emphasis on mobile device compatibility, because smartphones are the device most frequently used to complete the OMAS web survey. In the paper survey, logic cannot be automated as it is for CATI and CAWI, so there was special emphasis on simplifying the PAPI logic so respondents could successfully follow the survey flow. One difference between the CATI and the CAWI/PAPI instruments is that the latter omitted all the CATI household

screening questions because the mailing materials sent to a respondent contained respondent selection criteria. In addition, the PAPI did not contain a child component.

3.4.1. CAWI and PAPI Specification Development and Design Considerations

The OMAS web questionnaire was designed for self-administration using best practices, and specifications included using a neutral background color, bolding questions to contrast against response options, underlining key words or terms, and providing additional supplemental question-specific instructions. Additionally, question-specific error messages were used for any web entry fields if a respondent entered a response that was outside of the validation range. For example, if a question asked about the number of days over the past month in which a respondent had one or more drinks (question D46A), and a respondent entered "32," a message in bright red text would read "Please enter a number between 0 and 30" so that the respondent better understood the range constraints.

The OMAS paper survey, unlike the CAWI and CATI versions, was a modified version of the adult-only form (no child version was administered). Effort was made to use many of the formatting cues from the web component, and arrows and "Go To" text were used to guide respondents through skip logic. RTI also endeavored to simplify the skip instructions to avoid the respondent needing to flip through pages of the survey to follow the correct path based on their answers. This required slightly reordering the questions from the CAWI/CATI versions. Despite all efforts to maximize the accessibility of the form, the large amount of skip logic was a challenge, and we recommend that future iterations of the paper survey attempt to reduce the amount of skip logic that a respondent must execute.

3.4.2. CAWI Instrument

RTI used Voxco CAWI to program and process the web instrument. This web-hosted software ensures an optimal survey experience on both desktop and mobile devices. If a respondent completes the survey on a mobile device, Voxco automatically uses a mobile version of the survey, with fonts, spacing, and sizes that are designed for optimal legibility on a mobile device with a touch-oriented interface. The Voxco instrument automatically controls skip and fill logic, and validation range checks on numeric data, so that respondents do not have to navigate skip logic manually as is the case with paper forms. If a respondent discontinues the survey mid-session and then returns to the survey later, the Voxco instrument would automatically pick up at the last question the respondent completed. Web responses are securely fed into a main server, where the data can then be downloaded.

3.4.3. CAWI Instrument Testing

After programming the CAWI instrument, RTI performed internal instrument testing. The steps used closely followed the methods used for CATI testing, with the addition of extensively testing on mobile devices to ensure that the survey displayed and functioned properly on smaller devices with touchscreens.

3.4.4. PAPI Instrument

RTI used OpenText TeleForm software to program and process the paper instrument. TeleForm is a suite of software programs that enable automated data capture, and it is capable of performing Optical Mark Recognition (OMR) and Intelligent Character Recognition (ICR). OMR is capable of reading marks such as checks, Xs, circles, or bubbles, and ICR is capable of reading handwritten numbers or printed text. When a completed paper survey is returned to RTI, it is scanned using a high-capacity, high-resolution scanner and then read by TeleForm, which performs the OMR and ICR processing. The data captured by the system are further augmented with human review of data and then exported into a secure internal database.

3.4.5. PAPI Instrument Testing

After programming the PAPI instrument in TeleForm, RTI performed internal instrument testing. In addition to verifying that question numbering, text, and responses matched the original specification, substantial time was spent verifying that the skip arrows and navigational text were accurate and conformed to best design practices. In addition, mock forms were filled out and scanned into the TeleForm system to verify the accuracy of the machine processing; and the final data processing protocol was defined, tested, verified, and approved.

3.5. Pilot Test

The primary purpose of the 2021 OMAS pilot test was to replicate the conditions for full-scale survey data collection, to accurately determine the survey length for both the adult and child versions of the instrument, and to check the programming, assess questionnaire flow, evaluate respondent understanding, identify potential fielding issues, and refine our understanding of interviewer training needs. The secondary purpose of the OMAS pilot test was to explore using the Medicaid administrative database to sample potential respondents. This ultimately necessitated the use of two pilot studies: a CATI RDD pilot and a CAWI Medicaid frame pilot. Each test was considered independently because of their different purposes and methods. No paper survey was piloted because this mode of data collection was not originally intended to be used.

3.5.1. CATI RDD Pilot

Interviewing for the CATI pilot test started on June 14, 2021, and continued through June 25, 2021. 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 interviews, stop and review the initial data, and make any necessary changes. At the conclusion of pilot interviewing, RTI obtained 26 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 7,161 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 dispose of nonworking numbers automatically and for the interviewing staff to code out businesses.

During the pilot test, the minimum interview time was 26.03 minutes, and the maximum interview time was 54.81 minutes. The mean interview time for cases administered for the adult questionnaire was 32.64 minutes, with a median time of 31.63 minutes. Approximately 75% of all adult section interviews were completed in less than 36.52 minutes.

Six responses to the pilot included the completion of a child interview. The mean interview time for cases administered both the adult and child questionnaires was 45.03 minutes, with a median time of 43.4 minutes. The minimum interview time for cases administered both the adult and child questionnaires was 37.54 minutes, and the maximum interview time was 54.81 minutes. Approximately 75% of all child questionnaire interviews were completed in less than 54.81 minutes.

3.5.2. CAWI Medicaid Frame Pilot

The Medicaid Frame CAWI Pilot started on June 17, 2021, and continued through August 17, 2021. The purpose of this pilot was to determine whether the Medicaid administrative database could be used as a sampling frame for OMAS. The OMAS EC is particularly interested in ensuring representation from underserved populations. Medicaid enrollees are one such population of interest. Because the Medicaid population has been traditionally more difficult to reach by RDD samples, the Medicaid pilot explored using a self-administered web survey to complement the ABS sample, which was to be used in the main study.

RTI identified two ways to contact Medicaid enrollees:

1. select individuals in the Medicaid enrollment file and send these individuals an invitation to participate in the survey; and
2. use the Medicaid enrollment file to select addresses on Medicaid enrollees and invite one randomly selected person within the selected address to participate in the survey.

The two approaches were used for two reasons: first, because the ABS sample was at the household level, there was interest in seeing whether the same approach could be used using the Medicaid file and, if it could, whether it would obtain as high a response rate as directly inviting the Medicaid enrollee. If the response rate under both approaches was similar, then the Medicaid addresses could be merged with the ABS frame and used as stratification rather than a separate frame. This would help reduce design effects. However, if the response rate is much higher when inviting a specific person, then any gains in the design effect may not be worth higher costs associated with a lower response rate. Second, when mailing an address rather than a person, it was of interest to see whether the respondent self-identified as having Medicaid.

The sample for the CAWI Medicaid frame was split evenly to examine whether response rates, among other factors, differed by method. The resulting data were then weighted and analyzed to estimate the impact of the design effect for each method.

For this test, the full mailing protocol was not implemented. Instead, samples were sent two mailings, both of which invited the respondent to complete the survey by web. The first mailing, an invitation letter, was sent on June 17, 2021. The second mailing, a postcard reminder, was sent on June 24, 2021. More details on the contents of the invitation letter and postcard are presented in Section 4.

Each sample comprised 3,000 members (6,000 total). In total, there were 798 completions across both subsample groups. There were 407 completions from sample members in the person-level subsample group, and 391 completions from sample members in the household-level subsample group. This equates to a ratio of 51% person level to 49% household-level. Analysis of the results is ongoing.

3.6. Instrument Updates Based on the Pilot Test Results

To bring the survey within a budgeted average of 22 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

important to the Ohio Medicaid program or important to examining economic impact, health risk change, and health system stress for Ohioans.

To reduce completion time, the study team ultimately deleted approximately 26 questions:

- Four heart disease questions
- One cholesterol question
- One asthma question
- Three cancer questions
- One chewing tobacco question
- Two pain reliever questions
- One telehealth question
- One primary care physician question
- Two birth control questions
- Two pregnancy testing questions
- Two sexually transmitted infection questions
- One debt question
- Two food security questions
- One race-ethnicity question that was asked of select Hispanic Americans
- Two child health coverage questions

The study team also modified the introduction of the CATI, which originally had the text, “This is not a scam or sales call,” because this text did not resonate with respondents.

Finally, minor logic and grammatical errors encountered during the pilot by interviewers or noted during monitoring were also corrected. Beyond deletions, other minor text changes were made for clarity and flow purposes.

Full pilot test findings are presented in ***Appendix B: Pilot Test Report***.

4. Data Collection

4.1. Procedures

The procedures used for the 2021 OMAS varied from prior iterations because of the use of two sampling frames and three data collection modes, and the use of text messaging. This section considers the CAWI/PAPI (ABS) and CATI (RDD) implementation protocols separately and discusses response rates and mid-fielding changes to the instruments.

4.1.1. CAWI/PAPI ABS Implementation Protocol

Mailing Materials

GRC and RTI used a sequential "push-to-web" multimode ABS methodology. This method has been demonstrated to be cost-efficient and to yield high response rates and representative results. Because there was a lower-than-expected yield from the initial CAWI-only mailings, the protocol was expanded to include a paper survey to meet the targeted number of completions. Subsequently, RTI developed the PAPI and modified the mailing schedule accordingly so that the survey used a sequential CAWI-PAPI design.

In the first two mailings, respondents were encouraged to complete the survey by web, and both the invitation letter and the postcard reminder contained CAWI login credentials (a link to the landing page, www.OSUsurvey.com, and a Survey Access [PIN] Code). The initial invitation letter also contained a $2 prepaid cash incentive. Respondents were further incentivized through a promised incentive of $10 if they completed the survey. The third mailing included the PAPI packet, which enabled respondents who could not or did not want to complete by web an alternative mode. The fourth and final mailing was an additional postcard reminder. See ***Appendix C: ABS Materials*** for a copy of these mailing materials.

The following describes the four mailings:

- Mailing 1: Invitation Letter: This letter was mailed in a 6"x9" OSU-branded envelope; inside was the invitation letter and a $2 bill. The letter explained the purpose of the study; invited the respondent to participate; and provided a URL (www.OSUsurvey.com) for the respondent to go to, a Survey Access Code (PIN) number, and a QR code that they could scan to be instantly taken to the website without having to type in the address manually. The sample member was also informed about the $10 incentive upon completion. In addition, contact information was provided should the sample member have any questions about the study.

- Mailing 2: Reminder Self-Mailer (Postcard): This fold-over postcard was sent several days after the invitation letter. It included the same URL, Survey Access Code, QR code, and contact information and reminded respondents to complete the survey if they had not done so already.

- Mailing 3: PAPI Packet[9]: This 8"x12" mailing packet contained an external OSU-branded envelope. Inside was an invitation letter, a paper survey with a cover, and a postage-paid and

[9] The PAPI packet was mailed slightly later to Release 1 sample members, being sent after the second reminder self-mailer had been sent.

self-addressed business return envelope that the respondent could use to send the survey back free of charge. The invitation letter text drew heavily from the social exchange theory and asked respondents to complete the survey either by web or by mail. The URL, Survey Access Code, and QR code were all provided in this letter as well, and the post-incentive amount was prominently displayed along with contact information.

- Mailing 4: Second Reminder Self-Mailer (Postcard): This final mailing was an additional fold-over postcard similar to the first self-mailer, reminding respondents one last time of the study, requesting their participation, and providing the information needed to complete the form.

Mailing Schedule

The data collection schedule for the ABS pilot is shown in ***Table 4-1***.

Table 4-1. OMAS ABS Schedule

Mailing	Release 1	Release 2	Release 3
Mailing 1: Invitation letter	8/6	10/8	12/1
Mailing 2: Reminder self-mailer 1	8/13	10/18	12/7
Mailing 3: PAPI packet	10/22	11/1	12/14
Mailing 4: Reminder self-mailer 2	9/17	11/15	12/30

The PAPI packet was sent to Release 1 sample members at a later date because the PAPI was a response to a lower than expected yield from the initial Release 1 mailings. Despite being sent to Release 1 sample members later, the PAPI still secured 1,263 responses from Release 1 sample members and 6,678 PAPI completions across all three releases.

Logging Undeliverable Mailings

For the OMAS, the return address on all mailing materials was an Ohio PO Box. When undeliverable mail arrived at this PO Box, it was forwarded on a biweekly basis to RTI's Research Operations Center (ROC) in Raleigh, North Carolina. Upon arriving at RTI's ROC, this undeliverable mail was scanned into RTI's internal system, logging the respondent's address as invalid and removing them from future mailings. Then, the undeliverable item was stored under lock and key until it was securely destroyed.

4.1.2. CAWI/PAPI ABS Household Selection

The 2021 OMAS definition for determining eligible households was based on prior OMAS surveys. However, for the CAWI and PAPI modes, this necessitated implementing a self-selection method that respondents could complete independent of an interviewer. Eligible households are defined 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, and businesses. If the selected respondent had not lived in Ohio for at least 1 month prior to the interview, the household was also considered ineligible.

To ensure that mailing materials were sent only to eligible households, the ABS sample systematically excluded dormitories, hospital rooms, nursing homes, group homes, sororities and fraternities, halfway houses, shelters, prisons or barracks, and businesses. In addition, these mailing materials were limited to valid Ohio residential addresses.

4.1.3. CAWI/PAPI ABS Respondent Selection

After a household was determined to be eligible, household members were asked to self-select the eligible respondent using text that was printed on the mailing materials. The CAWI instrument included a question that verified age and residency and would not allow the respondent to complete the survey if they did not meet age and residency requirements. The PAPI instrument contained the following message: "This survey should be completed by the adult, 19 years or older, who lives in this household, had the most recent birthday, and has lived in Ohio for one month or more."

4.1.4. CAWI/PAPI ABS Proxy Interviews

The 2021 OMAS CAWI and PAPI both allowed for the use of proxy interviews. Both the CAWI and PAPI instruments contained a question that asked respondents at the beginning of the survey if they were completing the survey for themselves or for someone else in their household.

If a CAWI respondent selected "for someone else on their behalf," they were asked the first name of the individual for whom they were completing the survey, then asked a question about their relationship to this individual, and were shown a conditional message that said, "As we continue the survey, please remember to answer all remaining questions on behalf of <Name of the Individual>." This message was then displayed as a banner at the top of the screen for every question throughout the full duration of the survey session.

If a PAPI respondent selected "for someone else on their behalf," arrows directed to a message that said, "please provide responses for the adult (age 19 or older) in your household with the most recent birthday, who has lived in Ohio for at least one month."

Proxy interviews were conducted for all child interviews in the 2021 OMAS (note that the child interview was only offered with CAWI and CATI modes). In these interviews, the screener randomly selected the child with the most recent birthday.

On the CAWI instrument, if the respondent was eligible to complete the child component, upon finishing the adult section, they were shown the following message: "Thank you for answering these questions about your own health. These next questions focus on the health insurance coverage and health status of one child in your home. You will receive an additional $5 for participating in this portion of the survey." They were then asked which child aged 18 or younger had the most recent birthday and the first name of that child. If the respondent could not or would not disclose this information, they were then asked to complete the survey on behalf of the youngest child in the home.

Upon establishing which specific individual the child component of the survey would apply to, respondents were then shown the following message: "All remaining questions will be about <Name of the Child>. The next questions should be answered by the adult in this household who knows about <Name of the Child>'s health insurance coverage and health status. This study is sponsored by Ohio State University and will take approximately 8 minutes. Your participation is voluntary, you do not have to answer any question you do not want to, and your responses to questions will be kept confidential." Respondents then had the option of selecting either "Continue," which would result in the child module continuing, or "I do not know enough about <Name of the Child>'s health to continue," in which case the survey would terminate.

4.1.5. CAWI/PAPI ABS Incentives

The CAWI and PAPI both relied on mailings to sample members, which enabled the use of a prepaid incentive. All respondents in the ABS sample were sent a $2 bill with the first mailing (the invitation letter) as a pre-incentive.

Respondents who completed the CAWI were offered a $10 (post) incentive if they completed the adult section of the survey and an additional $5 if they completed the child section. On all mailing materials, sample members were notified of the $10 incentive upon completion. If they were eligible to complete the child section, they were then notified of the additional $5 offered for completing this section.

CAWI incentives were delivered through either an electronic VISA card or by check. In addition, respondents could decline the incentive. To receive the electronic VISA, respondents had to enter their email address twice. These incentives were delivered almost instantaneously. To receive a check by mail, respondents had to enter their full name and address. The check was offered only to respondents who stated that they did not want or were unable to receive the electronic VISA. Checks were sent to respondents every Friday on a weekly basis.

Respondents who completed the PAPI were offered the choice of a $10 physical gift card or a $10 check by mail, sent to the mailing address from the sampling frame.

4.1.6. CATI RDD Implementation Protocol

The 2021 OMAS CATI closely followed the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System calling protocols as did prior iterations of the OMAS. The instrument maintained and fielded counters to manage protocol.

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 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 Sunday. RTI's 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 seven 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 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 whether 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 later, 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.

4.1.7. CATI RDD Household Selection

The 2021 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 before the interview, the household was also considered ineligible.

4.1.8. CATI RDD Respondent Selection

After a household was determined to be eligible, household members were verified as being eligible; eligibility included all related adults (aged 19 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 2021 OMAS used the "most recent birthday method" to select a respondent randomly for an interview. Interviewers asked the person answering the screening questions to identify the adult aged 19 or older currently living in the household who 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 selected for the interview. For the cell phone sample, the adult associated with the cell phone was by default the selected respondent.

4.1.9. CATI RDD Proxy Interviews

The 2021 OMAS CATI allowed for the use of proxy interviews in the same manner as the 2004 through 2019 administrations. Proxies were requested when the selected respondent had a cognitive or physical impairment. A knowledgeable adult for the proxy was defined as someone aged 19 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 2021 OMAS. In these interviews, the screener randomly selected the child with the most recent birthday or the youngest child if the respondent could not or would not disclose which child had 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 less than 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.

4.1.10. CATI RDD Incentives

Respondents who completed the CATI were offered a $10 incentive if they completed the adult section of the survey and an additional $5 if they completed the child section. At the beginning of the interview, respondents were notified of the $10 incentive upon completion. If they were eligible to complete the child section, they were then notified of the additional $5 offered for completing this section.

CATI incentives were delivered through either an electronic VISA card or by check. In addition, respondents could decline the incentive outright. To deliver the electronic VISA, the respondent needed to provide the interviewer with their email address. These incentives were delivered almost instantaneously. To deliver a check by mail, the respondent needed to provide the interviewer with their full name and address. The check was offered only to respondents who stated that they did not want or were unable to receive the electronic VISA.

4.1.11. CATI RDD Refusal Conversion

All interviewers calling on the 2021 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 asked 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.

4.1.12. CATI RDD 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 2021 OMAS: 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 reach individuals;
- conducting interviews in Spanish and English; and
- using an incentive for all respondents.

Each of these is described in detail below.

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 answering machine message was as follows:

> "Hello, I'm calling on behalf of The Ohio State University regarding an important study about health care issues affecting state residents. Please call us at 1-833-947-2577 at your convenience. Your participation will help the State of Ohio make better health care policy decisions for residents, such as yourself. My name is ___ (First name) and we look forward to speaking with you. Thank you."

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 and GRC available to respondents who wished to contact the survey sponsors directly. For 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 ODH, GRC, or RTI, pending the issue of concern, and logged for review by GRC and RTI.

Refusal Conversion Efforts

Refusal conversion for the 2021 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 4.1.11, CATI RDD Refusal Conversion, has more detailed information about the refusal conversion protocols for the OMAS.

Reattempting Numbers

As discussed 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.

4.1.13. CATI RDD Interviewer Training

RTI conducted numerous interviewer training sessions for the 2021 OMAS. The first session preceded the pilot test in June 2021, and multiple sessions were held before fielding the main study in July 2021 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 2021 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 before beginning "live" calling in production. Training consisted of 8 hours split between the two sessions. Topics covered during training focused heavily on the survey's background and structure, study-specific protocols and procedures, pronunciation, and answers to 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 and two paired-practice mocks, and they completed individual survey practice. Field certification for 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 2021 OMAS pilot training agenda included the items in ***Table 4-2***.

Table 4-2. 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 Contact 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			

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

RTI conducted follow-up refresher trainings and distributed project bulletins with FAQs 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 OMAS EC members, who participated in both live monitoring and the review of recorded interviewing sessions throughout the field period. In total, 104 interviewers were trained and certified to work on the 2021 OMAS.

4.1.14. Interviewer Debriefing and Feedback

During the OMAS data collection period, there were two types of primary interviewer retraining: (1) regular "check-in" and feedback sessions throughout the day for interviewers who had no completes over the past 2 hours (e.g., 0 completes as of 11 a.m., 1:00 p.m., 3:00 p.m.); and (2) ongoing, individual training based on observations from monitoring sessions (both live and recorded).

During individual training with monitors or supervisors, telephone interviewers were provided specific instances and examples of where they could improve. These sessions included onsite 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;
- any instance in which the survey was not read verbatim, no matter how minor the addition or omission;
- 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;
- over-probing 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.

Monitoring was conducted live and by recording, and was made available to OMAS EC members, the project PI, and co-investigators. When observations from monitoring were identified as a trend rather than an individual occurrence, this feedback was provided to all interviewing staff during quality circle meetings to make sure there was no widespread misunderstanding.

4.1.15. Data Collection Subcontractor

With the approval of the OMAS EC, RTI hired a data collection subcontractor to help complete the CATI component of the survey within the project period. Precision Opinion, Inc. (Precision) of Las Vegas, Nevada, completed approximately 23% of total interviewing hours on the 2021 OMAS. RTI has a longstanding relationship with Precision, and its 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 integrate Precision's call center staff fully into RTI project systems so that they operated as a virtual extension of RTI's own facilities. Precision employees were trained 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.

4.2. Text Messaging

RTI sent multiple text messages to RDD sample members to increase productivity of the RDD sample and to offer RDD respondents the opportunity to complete the survey by web. These text messages, sent by Twilio and Precision Opinion, were less than 160 characters and they invited respondents to complete the web survey, providing them with a hyperlink (web link) and the promise of the $10 incentive. Hyperlinks were individualized links with the PIN code embedded, so when a respondent tapped this link, they were automatically taken to the Voxco instrument and did not need to enter a PIN code manually.

Text messages were sent to RDD sample members only after at least one call attempt had been made. If that sample member replied "STOP," they were removed from the contact list and not texted further. If the number was invalid, blocked, or flagged as a landline, it was also removed. If the sample member replied anything other than "STOP," they were sent the following reply message: "The OMAS survey is conducted by The Ohio State University. If you would like to know more, please call 1-833-947-2577 or visit https://grc.osu.edu/OMAS."

About 1 week after the first text message was sent, reminder texts were sent to sample members who did not opt out and did not complete the survey. This text had similar content to the first. Finally, on December 9, a third and final text message was sent to all sample members across all three releases who had not opted out or completed the survey—this was the only text message sent to all three sample members simultaneously and on the same date. The full text messaging schedule is shown in ***Table 4-3***. In total, the texting component yielded an additional 2,188 completions from RDD sample members.

Table 4-3. OMAS RDD Text Messaging Schedule

Mailing	Release 1	Release 2	Release 3
Text Message 1	8/30	9/16	11/5
Text Message 2	9/2	9/24	11/15
Text Message 3	12/9	12/9	12/9

4.3. 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:

4.3.1. Eligible

- Completes and partial interviews (if applicable)
- Refusals and noncontacts (after confirming eligible household or nonresponse on ABS)

4.3.2. Ineligible

- Survey ineligible = No eligible respondents in household or cell phone did not belong to an eligible adult
- Nonresidential = Not a residential phone number
- Undeliverable = ABS frame addresses returned with a USPS message stating that the addresses were undeliverable

4.3.3. 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 4-4***.

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

AAPOR Group	Label	Count		
		ABS	RDD	All Records
1.1	Completes (full interviews only)	25,681	5,853	31,534
1.2	Partial Complete	1,797	1,212	3,009
2.0	Refusals and Break-offs	87,640	8,485	96,125
3.0	Unknown	0	117,074	117,074
4.0	No Eligible Respondent/Undeliverable	14,882	64,526	79,408

Full details on the response rates can be found in ***Appendix E: Response Rate and Disposition Tables***.

4.3.4. 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 4.4% for the RDD sample, 22.3% for the ABS sample, and 12.7% overall.

4.3.5. Response Rates Adjusted for Eligibility

Some response rates consider 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 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 15.3% for the RDD sample, 22.3% for the ABS sample, and 15.5% 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 18.5% for the RDD sample, 23.9% for the ABS sample, and 17.0% overall.

4.3.6. 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) or 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 37.6% for the RDD sample, 22.3% for the ABS sample, and 24.1% overall.

4.4. 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.

The 2021 OMAS final dataset includes variables indicating the status of the adult and child sections of each case. Included in the final dataset are 3,010 interviews (8.7% of cases) that completed the health insurance status module in the adult questionnaire but terminated before completing the full instrument—these were classified as partial complete interviews.[10] Adult interviews that completed all the adult modules are considered fully completed interviews. Because both partial and fully completed interviews provide critical analytic data, these records were included in the final dataset.

4.5. Spanish Language Option

RTI conducted the 2021 OMAS in English and Spanish, offering a Spanish option on both the CAWI and CATI instruments. Of the 35,453 completed records in the final data file, 441 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 CATI 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.

The procedure for completing the CAWI instrument in Spanish was also straightforward. The survey instrument included a toggle switch, where a respondent could alternate between English and Spanish text. The Voxco CAWI instrument automatically records the language in which the survey is completed.

4.6. Changes to the CAWI and CATI Instruments During the Fielding Period

Some changes to the 2021 OMAS CAWI and CATI programs were necessary after the start of the fielding period. GRC requested that a question be added to both the CAWI and CATI instruments. Question B23, the added question, asks a respondent “Just prior to your current health insurance coverage, were you covered by any other health care coverage not otherwise mentioned so far?” This

[10] For the partial completed interviews included in the analysis dataset, imputation was used to ensure a useable response existed for all key variables (see Section 5 for details).

question was added to the subsection that asks about prior health care, where the preceding questions ask whether the respondent was previously covered by Medicaid (B20), a health plan from an employer/labor union (B21), or a health plan paid for completely by oneself or their family (B22). Question B23 was added to account for situations where the respondent's previous health insurance did not fall into the categories covered in B20, B21, and B22.

Additionally, the display logic for Q153A_2, which asks if there are any active cell phones in the household, and Q153_2, which asks how many cell phones are in the household if the respondent indicates "yes" at Q153A_2, needed to be modified to account for text messaging. If a respondent was completing the survey using a text message invitation, this means they have a cell phone and asking them Q153A_2 would be unnecessary. Therefore, logic was added to skip Q153A_2 automatically if the respondent was completing the survey based on a text message invitation, and the respondent was just asked Q153A_2 instead.

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 F: Post-Field-Start Changes Log*.**

5. Data Processing and Analysis

5.1. Dataset

The Voxco survey management system stored 2021 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 Voxco program prevents most data inconsistences with built-in variable range and skip logic checks. However, with a PAPI, the following inconsistencies in the data are corrected after data collection:

- **Inconsistencies resulting from incorrect open-end recoding:** In a few cases, the open-ended response did not match the question. These inconsistencies were resolved and fixed in the open-end recoding process.

- **Inconsistencies because of respondents providing contradictory responses:** In some cases, the Voxco program could not force consistent data responses, or the respondent did not follow the skip rules on the PAPI. For example, if a respondent stated that there were more adults in the family than in the household, the Voxco 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. However, PAPI cases that did not follow skip logic were cleaned, where the gate response (initial question that the skip logic stems from) is treated as the truth.

- **Inconsistencies introduced during postprocessing:** Occasionally, respondents provided contradictory responses, and the steps to correct the inconsistency yielded further complications. For example, respondents who indicated that they were insured through a current job were automatically coded as being employed. The next question asked these respondents to indicate their 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 Voxco program developed for the 2021 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. However, in the PAPI, these rules could not be enforced, and in some cases variables were cleaned to remove out-of-range responses.

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 medium to 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 2021 OMAS used the coding manuals from the 2012, 2015, 2017, and 2019 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 not containing recoded verbatim text have the appendage *_RAW* on the variable name in the final dataset.

5.2.3. Recoded, Derived, and Auto-Coded Variables

In the 2021 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 *_RAW* are the original non-recoded variables. Also, variables that do not have a survey item in their name are derived variables.

Recoded Variable

Recoded variables 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 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 these items when categorizing an individual to have a particular characteristic.

In the 2021 OMAS, changes were made to how the derived variables were defined for adult and child race (RACE5_A_IMP/RACE5_C_IMP), Medicaid status of adults and children (MEDICD_A/MEDICD_C), and type of insurance held by adults and children (I_TYPE_A_IMP/I_TYPE_C_IMP).[11]

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, with the response categories being determined by the research team and RTI.

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 was 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 the 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; and
- verification that survey weight totals summed to expected control totals.

[11] Definitions for each derived variable are included in the data dictionary and codebook.

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.

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 identically, 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[12] 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[13] 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

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

[13]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.

nonrespondent in question, having ranges from 0.0 to 0.2 and 0.2 to 0.5, respectively). Although 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 of Insurance Type

Insurance type (I_TYPE_A and I_TYPE_C) was imputed based on the imputed values of the six underlying ways a person could obtain insurance. The six underlying means by which insurance can be obtained are:

1. Medicaid
2. Medicare
3. Employer-sponsored insurance
4. ACA Exchange
5. Other
6. Private insurance

To impute insurance type, each of the six underlying insurance types need to be imputed. Because a person's response to one insurance type is correlated with the other five, a block imputation approach was used. Block imputation is a type of hot deck imputation that imputes a set of variables simultaneously to ensure that they are internally consistent. For insurance type, the block imputation was conducted as follows:

1. *Partition sample based on insurance status*. Cases were split by those that were identified as having insurance (i.e., A1 = 1) and those that had a missing value for insurance status (i.e., A1 = .) For those identified as not having insurance (i.e., A1 = 2), any missing insurance types are imputed to "no."
2. *Impute cases with only one missing insurance type*. Cases with a single missing value (e.g., only missing whether the person had Medicaid) were imputed first. Cases were imputed in the order based on the type of insurance missing (e.g., Medicaid imputed first, Medicare second).
3. *Identify imputation donor*. Donors were identified as those with the same response pattern for the five types of insurance that were not missing. A random donor was selected to impute the missing insurance type.

4. *Impute cases with two missing insurance types*. Cases missing two insurance types were imputed after all cases with one missing value were imputed. Cases imputed with only one missing value were included as potential donors since they were not completed cases.
5. *Identify imputation donors*. Imputation donors were identified based on those with the same response patter for the three non-missing insurance types. The donor was used to impute all missing values from the imputee. This was done to maintain the internal consistency of the case.
6. *Impute cases with three or more missing*. The imputation processes continued by imputing those with three missing values, followed by those missing four values, and, finally, followed by those with five missing. The imputee was given the value from the donor from all missing insurance types.
7. *Finalize internal consistency*. After all imputation was completed, a final review was done to ensure the internal consistency with the insurance status response. If insurance status was "yes" and all insurance types were "no," insurance type "other" was assigned to "yes." If insurance status was missing and all insurance types were assigned to "no" then insurance status was assigned to "no" (i.e., uninsured).
8. *Create imputed insurance type*. Based on the imputed insurance type values, the imputed insurance type variable (I_TYPE_A_IMP) was created.

5.3.3. Imputation for Disability

The 2021 OMAS includes questions on the six disabilities asked in the ACS:

- Person is deaf
- Person is blind
- Person has difficulty walking or climbing stairs
- Person has difficulty dressing
- Person has serious difficulty concentrating, remembering, or making decisions due to a physical, mental or emotional condition
- Person has difficulty doing errands alone, such as seeing a doctor, because of a physical, mental or emotional condition

As with insurance type, the value of a particular disability is correlated with the value of the other five disabilities. Because of this similarity, the same method described for imputing insurance type was used to impute disability.

5.3.4. Imputation for Last Month's and Last Year's Household Income

Income is an extremely important variable that is also subject to relatively high rates of missingness. The income questions were also fairly complex in nature, because there was both a last month's and last year's version (asked separately) and because each version could be reported as either a specific dollar value or a category, with category options varying by the number of dependents. This all resulted in a

fairly intricate, multistep imputation process. The income imputation strategy employed is detailed in the following steps:

1. Classified missing income cases
    a. Reported continuous last year's income, missing last month's income entirely
    b. Reported continuous last year's income, reported categorical last month's income
    c. Reported continuous last year's income, reported continuous last month's income
    d. Reported categorical last year's income, missing last month's income entirely
    e. Reported categorical last year's income, reported categorical last month's income
    f. Reported categorical last year's income, reported continuous last month's income
    g. Missing last year's income entirely, missing last month's income entirely
    h. Missing last year's income entirely, reported categorical last month's income
    i. Missing last year's income entirely, reported continuous last month's income
2. Used percentile-constrained lognormal interpolation (Couzens et al., 2016) for cases reporting last year's income categories (*d-f*), where possible (i.e., when there were enough cases with same number of people in the household to estimate lognormal parameters).
3. Used WSHD for *d-f* cases where there were not enough cases with the same number of people in the household to estimate lognormal parameters, but where there was at least one additional case with the same cross-classification of number in household and income category number (1-10)[14]; formed imputation cells by number in household, income category number, and Adult Medicaid Status.
4. Used linear interpolation (uniformly select a value between category boundaries) for *d-f* cases not accounted for by 2 or 3, above.
5. Used cases in group *c* to determine which factors were most important in predicting the ratio of last year's to last month's income (random forest variable importance, for example).
6. For cases in *i*, used the median ratio between last year's and last month's income to impute last year's income within the cross-classification of variables identified in step 5 (again, using cases from group c to determine the median value).
7. Used WSHD for cases in group *h*, with imputation cells defined by the cross-classification of number of people in the household, last month's income category number (1-10), and Adult Medicaid Status.

[14] Cut points used to define category boundaries differ across groups defined by the number of people in the household (ranging from 1 to 15+ persons).

8. Use WSHD for cases in group *g* (imputing last year's and last month's income simultaneously from the same donor), with imputation cells defined by the cross-classification of Adult Medicaid Status, Adult Race, and Adult Gender.
9. For cases in *b*, *e*, and *h* with a reported categorical last month's income value, used a three-step interpolation/imputation approach equivalent to what was applied to last year's income in steps 2-4. This ensured that the imputed continuous income value was bound by the range of the reported income category.
10. For cases in *a* and *d* with no reported last month's income information, used WSHD with imputation cells defined by the cross-classification of number of people in the household, categorized last year's income, and Adult Medicaid Status.

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

Imputation Variables	Classification and Sorting Order																		
	Mode	County Type	Adult Gender	Adult Race	Adult Education	Adult Age	Adult Insurance	Adult Medicaid	No. of Children	No. of Children	No. of Adults in	Frame	Child Race	Child Age	Child Insurance	Child Medicaid	Poverty Status	Adult Health	Adult Job
County	C																		
Adult Gender	C	C																	
Adult Race	C	C	C																
Adult Education Attainment	C	S	S	S															
Adult Age	C	C	C	C		C[a]													
Adult Insurance Status	C	C	S	C	S	S													
Number of Children in Household	C	S		C	C	S													
Number of Children in Family	S	C		S	S	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 Adults in Household[b]	S	S		S	S	S			C[d]		C[c]								
Days Covered by Insurance	S	S		C	S	S	S	C				C							
Number of ER Visits		C		C		S													

(continued)

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

Imputation Variables	Classification and Sorting Order																		
	Mode	County Type	Adult Gender	Adult Race	Adult Education	Adult Age	Adult Insurance	Adult Medicaid	No. of Children in	No. of Children in	No. of Adults in	Frame	Child Race	Child Age	Child Insurance	Child Medicaid	Poverty Status	Adult Health Status	Adult Job Status
Child Gender	S	C																	
Child Race	S	C		C	S														
Child Age		C			S	S[e]													
Child Insurance Status		S		C	C	S	C												
Child Medicaid Status		S			C	S		C					C		C				
Child Experiences (ACES 3-10)		S			C	S							C		C	C			
Adult Health Status	S	S		C	S	S											C		
Adult Days Mental Health affected activities	S	S		C	S	S											C	C	
Adult Job Status	S	S	C	C	S	S	C										C		
Adult Retired	S	S	C	S	S	S											C		C
Adult Usual Source of Care	C	S	C	C	S	S	C										C		
Adult Developmental Disability	S	S		C	S	S	C										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] Categorical age, reported

[b] Only imputed for non-cell phone CATI cases.

[c] Number of adults in family was collapsed into three levels (1, 2, 3, or more).

[d] Number of children in household was collapsed into three levels (1, 2, 3, or more).

[e] Adult age was collapsed into six levels (19–24, 25–34, 35–44, 45–54, 55–64, 65+).

5.3.5. 5.3.5 Amount of Item Nonresponse

Across all the variables imputed, the level of missing data ranged from 0.1% (county of residence) to 21.9% (number of emergency room [ER] visits in last 12 months). In general, of the 46 items imputed, all but 5 items (last month's income, employer sponsored insurance coverage, last year's income, retired, and number of ER visits) had fewer than 11% 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	889	33,654	2.6
D30—Rate general health status	960	33,583	2.8
D30I—Past 30 days, mental health prevented work/activities	2,358	32,185	6.8
H77—Highest level of education completed	2,515	32,028	7.3
H84_A1—Number of family members supported by income	3,735	30,808	10.8
H84_A2—Last month gross income	5,386	29,157	15.6
H84_A3—Last year's gross income	6,852	27,691	19.8
I90A—Child age	0	6,121	0.0
INSRD_A—Adult Insurance Status	93	34,450	0.3
INSRD_C—Child Insurance Status	9	6,112	0.1
L125—Child Health Status	26	6,095	0.4
MEDICD_A—Adult covered by Medicaid	632	33,911	1.8
MEDICD_C—Child covered by Medicaid	42	6,079	0.7
P148—Child gender	31	6,090	0.5
RACE5_A—Race Ethnicity Adult, 5 categories	2,573	31,970	7.4
RACE5_C—Race Ethnicity Child, 5 categories	136	5,985	2.2
S9—Ohio FIPS County Code, Respondent Provided	42	34,501	0.1
S11—Adults in family	453	34,090	1.3
S12—Children in household	649	33,894	1.9
S14—Respondent age	406	34,137	1.2
S13B—Children in family	1,164	33,379	3.4
S15—Respondent gender	259	34,284	0.7
NUM_ADULTS—Number of Adults in household (excludes CATI Cell)	412	34,131	1.2
G71—Last week job status	1,881	32,662	5.4
G77RET—Retired	7,378	27,165	21.4
E62_CAT—ER Visits	7,569	26,974	21.9
INS_ESI_A—Adult covered by Employer Sponsored Insurance	5,388	29,155	15.6

(continued)

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

Variable	Nonrespondents	Respondents	% Missing
INS_EXCHANGE—Adult covered by Exchange Insurance	1,230	33,313	3.6
INS_PRIVATE_A—Adult covered by Private Insurance	1,329	33,214	3.8
INS_OTHER_A—Adult covered by Other Insurance	1,131	33,412	3.3
MEDICARE_A—Adult covered by Medicare	791	33,752	2.3
ACES3—Child treated unfairly based on race	73	6,048	1.2
ACES4—Child lived with a person with substance abuse	59	6,062	1.0
ACES5—Child lived with mentally ill person	65	6,056	1.1
ACES6—Child a victim of violence or witnessed violence	78	6,043	1.3
ACES7—Child saw/heard adults physical abuse	82	6,039	1.3
ACES8—Child has parent that served time in jail after child was born	74	6,047	1.2
ACES9—Child experienced parent death	72	6,049	1.2
ACES10—Child experienced parent divorced/separated	75	6,046	1.2
USUAL_A—Adult, Usual Source of Care	1,928	32,615	5.6
CDC_1—Difficulty hearing	1,149	33,394	3.3
CDC_2—Difficulty seeing	1,186	33,357	3.4
CDC_3—Difficulty walking	1,221	33,322	3.5
CDC_4—Difficulty dressing/bathing	1,209	33,334	3.5
CDC_5—Difficulty concentrating/remembering	1,293	33,250	3.7
CDC_6—Difficulty doing errands	1,321	33,222	3.8
ADULT_DD—Adult developmental disability	1,485	33,058	4.3

5.4. Weighting Strategy

The weighting strategy consisted of the following broad steps:

- Develop weights for the ABS respondents.
- Develop weights for the RDD respondents.
- Develop blended weights combining the ABS and RDD respondents.

These steps are detailed in the next three sections.

5.5. Weighting the ABS Sample

The ABS weighting plan consisted of five steps:

1. Base weight
2. Eligibility adjustment
3. Nonresponse adjustment
4. Person-level design weight
5. Poststratification

In this section, each step in the weighting process is described.

5.5.1. Design-Based Weight

The OMAS ABS sample used a stratified simple random sample to select housing units within each stratum (*h*). As such, the base (design) weight (WT_HH) is computed as follows:

$$WT\_HH = \frac{N_h}{n_h}$$

where N_h is the number of housing units within stratum h, and n_h is the number of housing units sampled within stratum h.

5.5.2. Eligibility Adjustment

The OMAS ABS sample included five mailings to each sampled household. After each mailing a subset of the cases were identified as "undeliverable address." ***Table 5-3*** presents the number and percentage of undeliverable addresses.

Table 5-3. Number and Percentage of Undeliverable Addresses

Number of Times Undeliverable	Number of Cases	Percentage of Cases
Never undeliverable	115,034	88.5
Undeliverable on one mailing[a]	4,274	3.3
Undeliverable on up to two mailings[b]	3,122	2.4
Undeliverable on up to three mailings[c]	4,445	3.4
Undeliverable on up to four mailings[d]	3,075	2.4
Undeliverable on all five mailings[e]	50	0.0[f]

[a] Of the five mailings made, one was returned as undeliverable and the other four, if mailed, had no response.
[b] Of the five mailings made, two were returned as undeliverable and the other three, if mailed, had no response.
[c] Of the five mailings made, three was returned as undeliverable and the other two, if mailed, had no response.
[d] Of the five mailings made, four were returned as undeliverable and the other one, if mailed, had no response.

[e] All five of the mailings were returned as undeliverable.
[f] Rounds to zero.

Cases with one or more undeliverable address mailings were coded as "out-of-scope" for the study. As such, these sampling units were ineligible for the study. However, any other housing unit where no residency was confirmed was considered eligible. Therefore, an eligibility adjusted weight (WT_HH_E) was defined as follows:

$$WT\_HH\_E = \begin{cases} 0 & if\ undeliverable \\ WT\_HH & otherwise \end{cases}$$

5.5.3. Nonresponse Adjustment

To correct for nonresponse, the eligibility adjusted weight for responding households was adjusted to account for the weight of eligible nonresponding households. The nonresponse adjustment was conducted within each stratum (*h*). As such, the nonresponse adjusted weight (WT_HH_NR) will be calculated for record *i* as follows

$$WT\_HH\_NR = WT\_HH\_E_i \times \frac{\sum_{ih} WT\_HH\_E_i}{\sum_{ih}(WT\_HH\_E_i \times I_h)} \times I_h$$

where $I_h$is an indicator of response for stratum h (i.e., $I_h = 1$indicates a responding household, and $I_h = 0$ indicates a nonresponding household).

5.5.4. Person-level Design Weight

Under the ABS sample protocol, one adult and one child (when present) were randomly selected to participate in OMAS. Responding adults indicate the number of adults in the household (n_{ia}) and, when present, the number of children (n_{ic}). Because the nonresponse adjusted weight is a household-level weight, the purpose of the person-level design weight is to adjust the weight so that it represents the number of persons within each stratum rather than households. As such, the person-level design weight consisted of two weights: (1) an adult weight (WT_A1) and (2) a child weight (WT_C1). These two weights are defined as follows:

$$WT\_A1 = WT\_HH\_NR_h \times n_{ia}$$

and

$$WT\_C1 = WT\_HH\_NR_h \times n_{ic}$$

5.5.5. Poststratification

The final weight adjustment is to correct the person-level design weight for any coverage deficiencies through a poststratification adjustment. In this step, calibration models were created to rake the person-level design weights to the desired population totals. These models will poststratify respondents based on population totals from the 2020 5-year ACS. To make this adjustment, a generalized exponential model (Folsom & Singh, 2002), which is a raking procedure that simultaneously controls the marginal totals, was used. Separate models were fit for the adult respondents and the child interviews. The 2021 OMAS controlled for the following characteristics for the adult respondents:

- Age (3 levels)

- Race (5 levels)
- Gender (2 levels)
- Medicaid (3 levels)
- County Type (4 levels)
- Metro County/Region (15 levels)
- Education (4 levels)
- Medicaid*Gender (6 levels)
- Gender*Age (6 levels)

The child weights were poststratified to the following characteristics:

- Age (4 levels)
- Race (5 levels)
- Gender (2 levels)
- Medicaid (2 levels)
- County Type (4 levels)
- Region/Metro County (15 levels)
- Gender*Age (8 levels)
- Race*Age (6 levels)
- Medicaid*Gender (4 levels)
- Gender*Race*Age (12 levels)

The resulting weights from the poststratification model are WT_A_ABS and WT_C_ABS for adults and children, respectively.

5.6. Weighting the RDD Sample

For the 2021 OMAS, four major weighting steps were used to create the RDD survey weights to ensure proper inference to the target population[15]:

- Design-based weights
- Eligibility adjustment
- Nonresponse adjustment
- Poststratification

[15] Unlike prior survey years, no dual-frame adjustment was conducted because of the small number of landline respondents (218). Instead, in the poststratification step, the landline cases were poststratified as if they were cell phone cases.

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

5.6.1. Create 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. The design-based weight was calculated as follows:

$$wt0 = \frac{N_h}{n_h}$$

Where *h* is the stratum used to sample the telephone number. For 2021, the design strata were counties.

5.6.2. Eligibility Adjustment

The first step in the weighting adjustment process was to adjust the design-based weights (wt0) for ineligible and unknown eligible telephone numbers. This step was implemented as follows:

- **Ineligible telephone numbers**. Telephone numbers identified as ineligible had their design-based weight set to zero.

- **Unknown eligible telephone numbers**. Telephone numbers where eligibility could not be determined with certainty were adjusted to account for the fact that some portion of them were eligible and the remaining portion were ineligible. To adjust these cases, an eligibility factor (e-factor) was calculated as follows: $e = \frac{\sum_h I_e}{\sum_h I_e + (1 - I_e)}$

  where I_e is an indicator where $I_e = 1$ if the case is eligible and $I_e = 0$ if the case is ineligible,.

Based on these adjustments the eligibility adjusted weight (wt1) was calculated as follows:

$$wt1 = \begin{cases} 0 & if\ ineligible \\ wt0 \times e & if\ unknown \\ wt0 & if\ eligilbe \end{cases}$$

5.6.3. Nonresponse Adjustment

The second step in the weighting adjustment process was to adjust the design-based weights (wt1) for nonresponse and other survey design factors (i.e., child oversample, number of people in the household, and 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 follows:

- **Nonresponse adjustment (wt2):** 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 eligible nonresponding telephone numbers. This was done through a ratio adjustment: $wt2 = wt1 \times {\sum_h wt1}/{n_{rh}}$ where $\sum_h wt1$ is the total number of eligible

telephone numbers in stratum h and n_{rh} is the number of responding telephone numbers in stratum h.

- **Multiple phone number adjustment (wt3):** 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., wt3 = wt2/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 (wt4):** To account for the sub-selection of a respondent within a household for landline respondents, the weight was multiplied by the reported number of people in the household (capped at four) (e.g., wt4 = 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.[16] No adjustment was made for cell phone respondents (i.e., wt4 = wt3).

5.6.4. Poststratification

After the nonresponse adjustment, the respondent weights were then poststratified to known control totals.[17] 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, a generalized exponential model (Folsom & Singh, 2002), which is a raking procedure that simultaneously controls the marginal totals, was used. Separate models were fit for the adult respondents and the child interviews. The 2021 OMAS controlled for the following characteristics for the adult respondents:

- Age (6 levels)
- Race (5 levels)
- Gender (2 levels)
- Medicaid (3 levels)
- County Type (4 levels)
- Region/Metro County (15 levels)
- Education (4 levels)

The control totals for age, race, gender, region, education, and county came from the 5-year 2020 ACS. The control totals for Medicaid enrollment came from the ODM. The Ohio Medicaid control totals are the average enrollment during the October–December data collection period.

The child weights were poststratified to the following characteristics:

- Age (4 levels)
- Race (5 levels)
- Region/Metro County (15 levels)
- Gender*Age (8 levels)

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

[17] Because of the small number of landline respondents (218), landline cases were placed in the cell phone county stratum where the associated landline number is located. No dual-frame adjustment was conducted. Any error because of multiple probabilities of selection is negligible and, therefore, was ignored.

- Gender (2 levels)
- Medicaid (2 levels)
- County Type (4 levels)
- Race*Age (6 levels)
- Medicaid*Gender (4 levels)
- Gender*Race*Age (12 levels)

5.7. Combining the RDD and ABS Weights

The final 2021 OMAS dataset consists of a combined set of ABS and RDD respondents. The blended OMAS weighting process consisted of two steps:

1. Blending of the final ABS sample and RDD sample weights
2. Poststratification adjustment to correct for any coverage error in the blending process

5.7.1. Blending of Final RDD and ABS Supplement Weights

The final ABS sample and RDD sample weights were blended to ensure that the combined sample did not overrepresent any population in the state. The ABS sample and RDD sample weights are representative of Ohio. Therefore, an adjustment is needed to ensure that the combined file does not double-represent people in the state.

The blending methodology used a dual-frame adjustment method (Hartley, 1962). Under Hartley's method a blending parameter (λ) is applied to cases that appear on the two frames. In this case, all persons in the RDD sample overlap with the ABS frame, and it was assumed that all persons on the ABS frame also overlap with the RDD frame.

The inputs for the blended weights were the weighted RDD cases and weighted ABS cases. The dual-frame adjusted weight was defined for adults as follows:

$$WT\_A\_BLEND = WT\_A\_ABS \times \lambda_A + WT\_A\_RDD \times (1 - \lambda_A)$$

and for children as follows:

$$WT\_C\_BLEND = WT\_C\_ABS \times \lambda_C + WT\_C\_RDD \times (1 - \lambda_C)$$

To determine the best blending parameter, seven options were considered:

1. respondent distribution based on nominal sample size (approximately 80/20) at the state level
2. respondent distribution based on the effective sample size (from unequal weighting effects [UWE]) at the state level
3. respondent distribution based on effective sample size (from design effect for uninsured) at the state level
4. respondent distribution under original sample design (i.e., 50/50 allocation) at the state level
5. respondent distribution based on the nominal sample size at the county level

6. respondent distribution based on the effective sample size (from UWE) at the county/region level (see ***Table 5-4***).
7. respondent distribution based on the effective sample size (from design effect for uninsured) at the county level

For each option, key estimates and corresponding standard errors were produced and compared. Comparisons were conducted for all adults, adults aged 19 to 64, Blacks only, Hispanics only, metro counties, suburban counties, rural Appalachian counties, and rural non-Appalachian counties. Based on the estimate review, two key findings were noted:

- the respondent distribution based on the overall UWE at the county level (option 6) provided the best standard errors, and
- the option that assumed the original 50/50 allocation design (option 4) provided estimates most similar to 2019 estimates.

Based on these findings, we decided to use Option 6 for the blending parameters. Although continuing the time series was important, greater emphasis was put on the 2021 cross-sectional estimates because so many factors could cause differences in estimates between 2019 and 2021 beyond the sample design changes (e.g., COVID-19). ***Table 5-4*** presents the blending parameters that are used under this option.

Table 5-4. Blending Parameters for Adult and Child Weights Under Proportional Option

Region	County	Sample Size (Adult)		Blending Parameter (Adult)	Sample Size (Child)		Blending Parameter (Child)
		RDD	ABS		RDD	ABS	
Metro 1	Cuyahoga	3,097	570	0.89	436	106	0.75
Metro 2	Franklin	2,767	652	0.87	505	161	0.70
Metro 3	Hamilton	2,095	503	0.86	370	102	0.73
Metro 4	Montgomery	1,877	365	0.89	297	77	0.74
Metro 5	Lucas	1,723	253	0.91	331	42	0.85
Metro 6	Summit	1,509	331	0.87	271	51	0.80
Metro 7	Stark	960	224	0.88	147	56	0.66
Metro 8	Butler	687	187	0.85	133	45	0.68
Metro 9	Mahoning	681	172	0.86	96	31	0.69
Metro 10	Lorain	605	158	0.85	99	28	0.72
Metro 11	Allen, Richland	438	140	0.83	75	30	0.65
Rural Appalachian 1 (lower river counties)	Adams, Athens, Brown, Gallia, Lawrence, Meigs, Monroe, Scioto, Washington	1,089	360	0.81	202	66	0.69

(continued)

Table 5-4. Blending Parameters for Adult and Child Weights Under Proportional Option (continued)

Region	County	Sample Size (Adult)		Blending Parameter (Adult)	Sample Size (Child)		Blending Parameter (Child)
		RDD	ABS		RDD	ABS	
Rural Appalachian 2 (lower non-river counties)	Clermont, Highland, Hocking, Jackson, Morgan, Noble, Perry, Pike, Ross, Vinton	1,267	406	0.83	201	83	0.64
Rural Appalachian 3 (upper non-river counites)	Carroll, Coshocton, Guernsey, Harrison, Holmes, Muskingum, Tuscarawas	831	241	0.84	120	49	0.64
Rural Appalachian 4 (upper river counties)	Ashtabula, Belmont, Columbiana, Jefferson, Trumbull	1,170	285	0.87	189	67	0.67
Rural Non-Appalachian 1	Ashland, Crawford, Knox, Marion, Morrow, Wayne, Wyandot	872	269	0.84	144	69	0.60
Rural Non-Appalachian 2	Champaign, Darke, Defiance, Hancock, Hardin, Henry, Logan, Mercer, Paulding, Preble, Putnam, Shelby, Van Wert, Williams	1,227	420	0.81	207	82	0.65
Rural Non-Appalachian 3	Clinton, Fayette, Warren	550	171	0.82	125	34	0.73
Rural Non-Appalachian 4	Erie, Huron, Ottawa, Sandusky, Seneca	581	173	0.83	92	28	0.71
Suburban 1	Delaware, Fairfield, Licking, Madison, Pickaway, Union	1,142	477	0.78	228	108	0.61
Suburban 2	Auglaize, Clark, Greene, Miami	795	240	0.84	132	52	0.65
Suburban 3	Geauga, Lake, Medina, Portage	1,228	376	0.83	211	64	0.71
Suburban 4	Fulton, Wood	287	92	0.84	53	26	0.60

5.7.2. Poststratification of Blended Weights

Because the poststratification models for the RDD and ABS weights are different, a final poststratification of the combined samples is needed to ensure that the blended estimates match population totals. A poststratification adjustment was made for each blended weight option.

For adults, the final blended poststratification model included the following population attributes:

- Age (6 levels)
- Race (5 levels)
- Gender (2 levels)
- Medicaid (3 levels)
- County Type (4 levels)
- Region/Metro County (15 levels)
- Education (4 levels)
- Medicaid*Collapsed Age (9 levels)
- Medicaid*Gender (6 levels)
- Gender*Collapsed Age (6 levels)

The final resulting weights will be identified by WT_A.

Table 5-5 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 child weights were poststratified to the following characteristics:

- Age (4 levels)
- Race (5 levels)
- Gender (2 levels)
- Medicaid (2 levels)
- County Type (4 levels)
- Region/Metro County (15 levels)
- Medicaid*Gender (4 levels)
- Gender*Age (8 levels)
- Collapsed Race*Collapsed Age (6 levels)
- Gender*Collapsed Race*Collapsed Age (12 levels)

The final resulting weights will be identified by WT_C.

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

Adult Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Intercept	1.001	0.425	1.573		
Frame					
RDD	0.984	0.425	1.499	1,287,775	14.4
ABS	1.004	0.438	1.573	7,635,278	85.6
Age, years					
19–24	1.414	0.746	1.573	907,591	10.2
25–34	1.051	0.578	1.169	1,536,737	17.2
35–44	0.806	0.425	0.889	1,397,754	15.7
45–54	1.176	1.029	1.305	1,485,265	16.6
55–64	0.880	0.778	0.985	1,606,549	18.0
65+	1.001	0.868	1.380	1,989,157	22.3
Race					
White	1.002	0.434	1.573	7,198,220	80.7
Black/African American	0.997	0.429	1.540	1,032,298	11.6
Hispanic	0.999	0.425	1.518	285,915	3.2
Asian	1.005	0.438	1.495	203,098	2.3
Other	0.996	0.444	1.554	203,522	2.3
Gender					
Male	1.002	0.425	1.515	4,314,446	48.4
Female	1.000	0.434	1.573	4,608,607	51.6
Medicaid Status					
No Medicaid	1.002	0.692	1.436	1,566,560	17.6
Medicaid only	1.002	0.425	1.380	413,951	4.6
Medicaid and Medicare	1.001	0.739	1.573	6,942,542	77.8
County Type					
Rural Appalachian	1.001	0.444	1.555	1,358,793	15.2
Metro	0.996	0.425	1.546	4,881,719	54.7
Rural Non-Appalachian	1.007	0.445	1.558	1,165,629	13.1
Suburban	1.012	0.450	1.573	1,516,912	17.0

(continued)

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

Adult Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Metro County / Region					
Allen County	0.998	0.483	1.501	77,520	0.9
Butler County	1.002	0.444	1.530	285,448	3.2
Cuyahoga County	0.994	0.439	1.527	968,679	10.9
Franklin County	0.994	0.429	1.507	982,029	11.0
Hamilton County	0.997	0.442	1.525	616,609	6.9
Lorain County	1.004	0.444	1.532	237,106	2.7
Lucas County	0.989	0.425	1.513	325,748	3.7
Mahoning County	1.001	0.473	1.537	179,862	2.0
Montgomery County	0.993	0.440	1.529	407,354	4.6
Richland County	1.002	0.445	1.546	93,476	1.0
Stark County	0.997	0.447	1.538	287,059	3.2
Summit County	0.999	0.464	1.538	420,830	4.7
Central/Southeast Region	1.007	0.444	1.564	1,416,354	15.9
Northeast Region	1.006	0.446	1.564	1,178,658	13.2
West Region	1.007	0.466	1.573	1,446,322	16.2
Education					
Less than high school	0.998	0.442	1.547	816,792	9.2
High school	1.001	0.429	1.546	2,959,403	33.2
Some college	1.001	0.425	1.564	2,722,833	30.5
College or more	1.002	0.444	1.573	2,424,025	27.2

Table 5-6 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 5-6. Child Sample Marginal Weighting Adjustments and Population Totals

Child Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Intercept	1.0003	0.6899	1.3994	2,752,222	100.0
Age, years					
<1	1.0049	0.715	1.2799	135,270	4.9
1–5	1.0016	0.717	1.3994	691,882	25.1
6–12	1.0038	0.7018	1.3235	1,013,658	36.8
13–18	0.9947	0.6899	1.3556	911,412	33.1
Race					
White	1.0012	0.8146	1.1418	1,942,294	70.6
Black/African American	0.9999	0.8142	1.1635	388,825	14.1
Hispanic	0.8639	0.6899	0.9886	174,508	6.3
Asian	0.8994	0.7253	1.0238	62,799	2.3
Other	1.2184	0.9978	1.3994	183,796	6.7
Gender					
Male	0.9995	0.7018	1.3264	1,407,619	51.1
Female	1.0011	0.6899	1.3994	1,344,603	48.9
Medicaid Status					
Medicaid	0.9995	0.6899	1.3264	1,293,771	47.0
Not Medicaid	1.001	0.7018	1.3994	1,458,451	53.0
County Type					
Rural Appalachian	1.0024	0.82	1.3264	1,498,449	54.4
Metro	0.9807	0.6899	1.2688	472,304	17.2
Rural Non-Appalachian	0.9958	0.8018	1.2835	376,056	13.7
Suburban	1.0699	0.8825	1.3994	405,413	14.7
Metro County / Region					
Allen County	1	0.8615	1.2431	25,290	0.9
Butler County	1.0066	0.8448	1.2284	96,694	3.5
Cuyahoga County	0.9942	0.8301	1.2483	272,757	9.9
Franklin County	0.9978	0.8366	1.2688	322,715	11.7
Hamilton County	0.9957	0.8225	1.2328	199,194	7.2
Lorain County	0.9996	0.8364	1.2495	72,026	2.6

(continued)

Table 5-6. Child Sample Marginal Weighting Adjustments and Population Totals (continued)

Child Variable	Marginal Weight Adjustment	Adjustment Factor		Population	
		Minimum	Maximum	Frequency	Percentage
Lucas County	0.9701	0.8225	1.2439	104,577	3.8
Mahoning County	1.0054	0.853	1.2607	48,580	1.8
Montgomery County	0.9932	0.8175	1.2281	124,632	4.5
Richland County	0.9971	0.8483	1.2198	27,566	1.0
Stark County	1.011	0.8413	1.2638	84,451	3.1
Summit County	0.8338	0.6899	1.0333	119,965	4.4
Central/Southeast Region	1.0086	0.8018	1.3235	440,529	16.0
Northeast Region	1.0096	0.806	1.3217	351,001	12.8
West Region	1.0527	0.8539	1.3994	462,243	16.8

5.7.3. Design Effects

To help evaluate the impact of the 2021 OMAS sample design and weighting adjustments on the variability of estimates, the design effects (Kish, 1965) for key outcomes were reviewed at the state and county levels. ***Table 5-7*** details the UWE from the final poststratification modes of the RDD weight, ABS weight, and final blended weight.

Table 5-7. Final Unequal Weighting Effects From Poststratification Models

Weight	RDD	ABS	Blended
Adult	2.98	2.04	4.37
Child	1.37	1.77	2.11

The design effect (DEFF) is defined as follows:

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

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

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

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.

The following factors in the 2021 OMAS design contributed to the design effect:

- **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 2021 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 can be applied to the final set of weights to reduce the design effect of an estimate; however, the design effects were small enough for the 2021 OMAS that no weight trimming was implemented.

In general, the combination of the above factors led to a design effect greater than one. To illustrate the design effects in the 2021 OMAS, ***Table 5-8*** presents the design effects at the county level for the percentage of adults insured, the percentage of adults on Medicaid, and the self-reported health status of adults (five-point Likert scale). As seen in the table, 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 5-8. Design Effects at the County Level for Adult Estimates of Key Outcomes

County	Insurance	Medicaid	Self-Reported Health Status
Adams	2.24	2.71	2.61
Allen	1.97	1.71	2.76
Ashland	2.33	1.77	2.15
Ashtabula	1.96	2.13	1.81
Athens	3.18	2.00	1.95
Auglaize		1.90	8.02
Belmont	2.17	1.94	2.05

(continued)

Table 5-8. Design Effects at the County Level for Adult Estimates of Key Outcomes (continued)

County	Insurance	Medicaid	Self-Reported Health Status
Brown	3.01	1.84	2.30
Butler	4.85	2.64	2.15
Carroll	1.29	2.82	1.53
Champaign	1.72	1.51	1.45
Clark	10.40	1.75	2.50
Clermont	3.09	1.72	1.77
Clinton	1.46	1.81	1.52
Columbiana	0.89	1.90	1.48
Coshocton	2.42	1.40	1.95
Crawford	1.41	2.36	2.27
Cuyahoga	2.21	2.83	2.25
Darke	3.33	3.17	1.61
Defiance	1.29	1.32	1.68
Delaware	3.25	1.96	1.80
Erie	1.66	2.31	3.69
Fairfield	1.98	2.35	2.12
Fayette	2.17	2.04	2.96
Franklin	4.19	2.58	2.18
Fulton	1.53	1.61	1.53
Gallia	3.25	1.66	1.43
Geauga	5.73	3.86	2.53
Greene	2.19	1.67	1.57
Guernsey	2.31	1.63	1.74
Hamilton	3.02	2.84	2.24
Hancock	2.80	1.80	1.36
Hardin	0.76	1.53	1.47
Harrison	1.63	1.73	1.53
Henry	0.79	1.07	1.13
Highland	3.72	2.35	1.82
Hocking	4.06	1.20	3.76
Holmes	2.33	1.48	1.74

(continued)

Table 5-8. Design Effects at the County Level for Adult Estimates of Key Outcomes (continued)

County	Insurance	Medicaid	Self-Reported Health Status
Huron	12.24	2.92	3.84
Jackson	3.80	1.60	2.10
Jefferson	7.69	3.39	3.76
Knox	3.40	2.27	1.38
Lake	1.86	1.74	1.65
Lawrence	2.02	2.44	1.92
Licking	1.85	2.59	1.87
Logan	1.04	1.69	1.15
Lorain	3.49	2.61	2.77
Lucas	4.34	2.42	2.45
Madison	1.47	1.45	1.41
Mahoning	5.38	1.79	2.85
Marion	5.18	2.28	1.76
Medina	4.40	2.16	2.33
Meigs	2.02	1.73	2.21
Mercer	2.03	1.39	1.68
Miami	2.67	1.68	1.74
Monroe	0.75	2.35	5.42
Montgomery	2.06	2.84	2.37
Morgan	2.56	3.11	2.06
Morrow	2.18	1.40	1.47
Muskingum	1.63	2.08	1.87
Noble	1.98	1.93	1.84
Ottawa	0.39	3.08	2.92
Paulding	2.46	1.89	1.40
Perry	0.92	2.10	1.50
Pickaway	1.27	1.36	1.73
Pike	1.14	2.06	2.21
Portage	2.31	2.29	1.68
Preble	1.61	0.99	1.73
Putnam	0.54	1.35	1.39

(continued)

Table 5-8. Design Effects at the County Level for Adult Estimates of Key Outcomes (continued)

County	Insurance	Medicaid	Self-Reported Health Status
Richland	3.03	1.93	1.82
Ross	2.36	2.27	2.78
Sandusky	1.25	1.69	1.34
Scioto	2.62	2.31	2.63
Seneca	3.62	1.41	1.44
Shelby	0.44	1.97	1.57
Stark	2.70	2.23	1.89
Summit	2.29	2.40	2.54
Trumbull	1.95	2.01	1.74
Tuscarawas	2.69	1.78	1.66
Union	1.21	2.10	4.00
Van Wert	2.12	1.50	2.09
Vinton	4.60	3.36	3.60
Warren	2.03	2.90	1.85
Washington	1.65	2.19	2.17
Wayne	2.52	2.00	2.15
Williams	1.42	1.45	3.15
Wood	3.58	1.86	1.97
Wyandot	0.40	1.15	1.78

5.8. Estimation

The 2021 OMAS used a complex survey design. As such, special procedures are required to calculate the standard error of estimates properly. 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***.

5.8.1. Estimation Approach

Estimates in the 2021 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 stratified designs, such as OMAS, standard errors 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); Wolter (1985); Lee, Forthofer, and Lorimor (1989); Särndal, Swensson, and Wretman (1992); Levy and Lemeshow (2008); and Lohr (2010).

5.8.2. Estimation Variables

To calculate the TSL standard errors, the analyst needs the stratum identifiers and analysis weights. The required variables for the 2021 OMAS are the following:

- **WT_A:** analysis weight for adults
- **WT_C:** analysis weight for children
- **STRATUM:** stratification indicator[18]

The 2021 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.

5.9. Public-Use and Restricted-Use Files and Other Documentation

The 2021 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 members of the public after they apply to and get permission from the GRC. The PUF has gone through disclosure review, and survey items that pose a disclosure risk have either been 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 or an internal review board determination from the researcher to obtain the RUF.

To further assist data users, ***Appendix H: PAPI-CAWI/CATI Crosswalk*** provides a comparison of the numbered questions on the paper survey to their source variable names used with CAWI and CATI.

In addition to the PUF and RUF, additional documentation related to the OMAS is available. The additional documentation includes substantive briefs and other related reports. All data files and documentation can be obtained on the OMAS website at http://grc.osu.edu/OMAS

[18] To allow for more stable variance estimates, some strata have been collapsed to account for the small sample sizes in some strata (e.g., the landline strata have been collapsed with the cellphone strata by county). The collapsed strata are listed in Appendix Table G-5.

References

Berzofsky, M. E., Lu, B., Weston, D., Couzens, G. L., & Sahr, T. (2015). Considerations for the use of small area analysis in survey analysis for health policy: Example from the 2015 Ohio Medicaid Assessment Survey. In *Proceedings for 70th Annual American Association for Public Opinion Research Conference,* pp. 3963–3976. Alexandria, VA: American Statistical Association.

Berzofsky, M. E., Peterson, K. C., Speizer, H., Lu, B., & Sahr, T. (2019a). Assessing the use of a pre-field screening service to identify nonworking cellphone numbers in Ohio. *Survey Practice*, *10*(1), 1–10. doi:10.29115/SP-2019-0004

Berzofsky, M. E., Scruggs, C. B., Speizer, H., Peterson, K., Lu, B., & Sahr, T. (2019b). A method for accounting for classification error in a stratified cellphone sample. *Journal of Survey Statistics and Methodology.* smx033. doi:10.1093/jssam/smx033

Berzofsky, M. E., Scruggs, C. B., Speizer, H., Lu, B., & Sahr, T. (2019c). *Coverage gap: Out-of-state telephone numbers for state surveys*. Presented at the Annual American Association for Public Opinion Research Conference.

Couzens, G. L., Berzofsky, M. E., & Peterson, K. C. (2016). Income interpolation from categories using a percentile-constrained inverse-CDF approach. In *Proceedings of the 70th Annual American Association of Public Opinion Research Conference*, Hollywood, FL.

Folsom, R. E., Jr., & Singh, A. C. (2002). The generalized exponential model for sampling weight calibration for extreme values, nonresponse, and poststratification. In *Proceedings of the American Statistical Association, Survey Research Methods Section* (pp. 598–603). Alexandria, VA: American Statistical Association.

Fuller, W. A. (1975). Regression analysis for sample survey. *Sankhyā*, Series C, 37, 117–132.

Hartley, H.O. (1962). Multiple frame surveys. In *American Statistical Association Proceedings of the Social Statistics Section, 1961* (pp. 203–206). Washington, DC: American Statistical Association.

Iannacchione, V. G. (1982). *Weighted sequential hot deck imputation macros*. Paper presented at the Seventh Annual SAS User's Group International Conference, San Francisco, CA.

Kish, L. (1965). *Survey sampling*. Hoboken, NJ: Wiley.

Lee, E. S., Forthofer, R. N., & Lorimor, R. J. (1989). *Analyzing complex survey data.* Beverly Hills, CA: Sage.

Levy, P.S., & Lemeshow, S. (2008). *Sampling of Populations: Methods and Applications,* 4th ed. Hoboken, NJ: Wiley.

Lohr, S. L. (2010). *Sampling: Design and analysis,* 2nd ed. Boston, MA: Brooks/Cole.

Lu, B., Berzofsky, M. E., Sahr, T., Ferketich, A., Blanton, C. W., & Tumin, R. (2014, May). *Capturing minority populations in telephone surveys: Experiences from the Ohio Medicaid Assessment Survey series*. Poster presented at the 69th Annual American Association for Public Opinion Research Conference, Anaheim, CA.

National Center for Health Statistics (NCHS). (2020). National Health Interview Survey Early Release Program, Table 1: Modeled estimates (with standard errors) of the percent distribution of household telephone status for adults aged 18 and over, by state: United States, 2019. Hyattsville, MD: Author. Retrieved from https://www.cdc.gov/nchs/data/nhis/earlyrelease/Wireless_state_201912-508.pdf

Särndal, C. E., Swensson, B., & Wretman, J. (1992). *Model assisted survey sampling (Springer series in statistics).* New York: Springer-Verlag.

Wolter, K. M. (1985). *Introduction to variance estimation.* New York: Springer-Verlag.

Woodruff, R. S. (1971). A simple method for approximating the variance of a complicated estimate. *Journal of the American Statistical Association*, *66,* 411–414.

Appendix A. Final CAWI Questionnaire

August 31, 2021

2021 Ohio Medicaid Assessment Survey

Adult and Child CAWI (Web) English Instrument Specifications

FINAL FOR FIELDING (rev.)

Prepared for

Ohio Colleges of Medicine Government Resource Center
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Prepared by

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Research Triangle Park, NC 27709

Table of Contents

INTRODUCTION AND SCREENER

INTRO

This study is sponsored by The Ohio State University and will take approximately 20 minutes. Your participation is voluntary. You do not have to answer any question you do not want to, and your responses to questions will be kept confidential.

([DISPLAY IF HH = 01] To ensure the representativeness of the survey, please have the adult age 19 or older in the household with the most recent birthday complete the survey.)

Click 'Next' to continue.

01 Next

AGE_Consent

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

Are you 19 years old or older?

01 Yes
02 No

INT09

(ASK IF AGE_Consent = 02, MISSING)

Thank you for your willingness to participate. However, we need to have an adult, 19 years old or older, complete the survey. Please have an adult in your household who is 19 years old or older complete the survey.

(ALLOW RESPONDENT TO BACKUP TO PREVIOUS QUESTION. IF RESPONDENT SELECTS 'NEXT' ON THIS SCREEN, END SURVEY AND CODE AS INELIGIBLE.)

NUM_ADULTS

(NOTE: RANGE IS DIFFERENT HERE THAN ON NUM_ADULTS ON CATI BECAUSE AGE_Consent HAS ALREADY ESTABLISHED THERE IS AT LEAST 1 HH MEMBER OVER THE AGE OF 18)

How many members of your household, <u>including yourself</u>, are 19 years of age or older?

ENTER NUMBER OF ADULTS RANGE 1-20 Adults

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")

NUM_ADULTSREF_1

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)
(ASK IF NUM_ADULTS = MISSING)
(THIS VARIABLE RECODES NUM_ADULTS AND USES SAME RANGE)

For the purposes of this survey, we will need to know the total number of adults, ages 19 years and older, who are members of your household. Please know that your responses will be kept strictly confidential. How many members of your household, including yourself, are 19 years of age or older?

ENTER NUMBER OF ADULTS RANGE 1-20 Adults

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")
(RECODE NUM_ADULTS TO THIS NEW NUMBER AND GO TO RES_NAME)
(IF MISSING, GO TO RES_NAME)

RES_NAME

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

What is <u>your</u> first name or initials?

RECORD NAME OR INITIALS (TEXT RANGE=25 CHARACTERS)

(**IF NUM_ADULTS = 1, GO TO S8)**
(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

PROXY1

Are you completing this survey for yourself or for someone else in your household?

01 For myself
02 For someone else on their behalf

SCR_NAME

(ASK IF PROXY1 = 2)

What is the first name or initials of the person you are completing this survey for?

RECORD NAME OR INITIALS (TEXT RANGE=25 CHARACTERS)

S2c

(ASK IF PROXY1 = 2)

What is your relationship to <SCR_NAME>?

01 You are (scr_name)'s wife / female partner
02 You are (scr_name)'s husband / male partner
03 You are (scr_name)'s mother
04 You are (scr_name)'s father
05 You are (scr_name)'s daughter
06 You are (scr_name)'s son
07 You are (scr_name)'s grandmother
08 You are (scr_name)'s grandfather
09 You are (scr_name)'s aunt
10 You are (scr_name)'s uncle
11 You are (scr_name)'s sister
12 You are (scr_name)'s brother
13 You are (scr_name)'s other female relative
14 You are (scr_name)'s other male relative
15 You are (scr_name)'s female legal guardian
16 You are (scr_name)'s male legal guardian
17 You are (scr_name)'s foster mother
18 You are (scr_name)'s foster father
19 You are (scr_name)'s other female non-relative
20 You are (scr_name)'s other male non-relative

PROXYREMIND

(ASK IF PROXY1 = 2)

As we continue the survey, please remember to answer all remaining questions on behalf of <SCR_NAME>.

01 I understand—Continue the survey

(DISPLAY PROXY BANNER THROUGHOUT THE REST OF THE SURVEY FOR ALL QUESTIONS)

S8

How long have you lived in Ohio?

01 Less than one month
02 One month or more

INT18

(ASK IF S8 = 01, MISSING)

Thank you for your willingness to participate. However, we can only interview individuals who have lived in Ohio for one month or more.

(ALLOW RESPONDENT TO BACKUP TO PREVIOUS QUESTION. IF RESPONDENT SELECTS 'NEXT' ON THIS SCREEN, END SURVEY AND CODE AS INELIGIBLE.)

S15

What is your gender?

01 Male
02 Female
97 Other

S15_1

(ASK IF S15 = 97)

TEXT SPECIFY
ENTER ALPHANUMERIC TEXT 100 CHARACTER MAX

S9

In what county in Ohio do you currently live?

001	ADAMS	061	HAMILTON	121	NOBLE
003	ALLEN	063	HANCOCK	123	OTTAWA
005	ASHLAND	065	HARDIN	125	PAULDING
007	ASHTABULA	067	HARRISON	127	PERRY
009	ATHENS	069	HENRY	129	PICKAWAY
011	AUGLAIZE	071	HIGHLAND	131	PIKE
013	BELMONT	073	HOCKING	133	PORTAGE
015	BROWN	075	HOLMES	135	PREBLE
017	BUTLER	077	HURON	137	PUTNAM
019	CARROLL	079	JACKSON	139	RICHLAND
021	CHAMPAIGN	081	JEFFERSON	141	ROSS
023	CLARK	083	KNOX	143	SANDUSKY
025	CLERMONT	085	LAKE	145	SCIOTO
027	CLINTON	087	LAWRENCE	147	SENECA
029	COLUMBIANA	089	LICKING	149	SHELBY
031	COSHOCTON	091	LOGAN	151	STARK
033	CRAWFORD	093	LORAIN	153	SUMMIT
035	CUYAHOGA	095	LUCAS	155	TRUMBULL
037	DARKE	097	MADISON	157	TUSCARAWAS
039	DEFIANCE	099	MAHONING	159	UNION
041	DELAWARE	101	MARION	161	VAN WERT
043	ERIE	103	MEDINA	163	VINTON
045	FAIRFIELD	105	MEIGS	165	WARREN
047	FAYETTE	107	MERCER	167	WASHINGTON
049	FRANKLIN	109	MIAMI	169	WAYNE
051	FULTON	111	MONROE	171	WILLIAMS

053	GALLIA	113	MONTGOMERY	173	WOOD
055	GEAUGA	115	MORGAN	175	WYANDOT
057	GREENE	117	MORROW		
059	GUERNSEY	119	MUSKINGUM		

997 I do not live in Ohio (GO TO XXXXX AND DISPLAY THE MESSAGE OF "Thank you for your interest but this survey is only open to Ohio residents"

S9a

(ASK IF: S9=MISSING, ELSE GO TO S9B)

In what city or town do you live?

RECORD RESPONSE (TEXT RANGE=70 CHARACTERS)

S9b

(ASK ALL)

What is your ZIP code?

RECORD 5 DIGIT ZIP CODE

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter your five-digit zip code.")

S11

(ASK IF NUM_ADULTS = 2-20; ELSE GO TO S12)

(IF NUM_ADULTS = 1, SET S11 = 1, DO NOT DISPLAY TO RESPONDENT, AND GO TO S12)

Including yourself, how many adult members of your family, age 19 and over, live in this household?

Family means two or more persons residing together who are related by birth, marriage, partnership, adoption or legal guardianship.

Answer layout – boxes for 1-digit number (valid responses: 1-20) Adults

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")

S11b_1

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

(ASK IF: S11> NUM_ADULTS AND NUM_ADULTS > 00, ELSE GO TO S12)

The number of adult family members living in your household is greater than the total number of adults living in your household. You said there were:

<NUM_ADULTS> adults living in your household, but
<S11> adult family members living in your household?

Which of these would you like to update?

01 Update the total number of adults in my household
//CREATE TEXT BOX ON SAME SCREEN//
//RECODE NUM_ADULTS//
02 Update the number of adult family members living in my household
///CREATE TEXT BOX ON SAME SCREEN//
//RECODE S11//
03 I do not want to make any updates (GO TO S12)

(IF MISSING GO TO S12)

S12

How many children 18 years of age or younger live in your household, whether they are family members or not?

Family means two or more persons residing together who are related by birth, marriage, partnership, adoption or legal guardianship.

ENTER NUMBER 0-20 Children

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")

S13b_1

(NOTE: NEW VARIABLE FOR 2021 THAT IS FOUND ON BOTH CAWI AND CATI)

(ASK IF S12 = 01)

Is the child living in your household a family member?

Please only count individuals 18 years of age or younger. Family means two or more persons residing together who are related by birth, marriage, partnership, adoption or legal guardianship.

01 Yes
02 No

S13b

(IF S12 = 00, RECODE S13b = 00 AND DO NOT SHOW QUESTION TO RESPONDENT)

(IF S13b_1 = 01, RECODE S13b = 01 AND DO NOT SHOW QUESTION TO RESPONDENT)

(IF S13b_1 = 02, RECODE S13b = 00 AND DO NOT SHOW QUESTION TO RESPONDENT)

(IF S13b_1 = MISSING, RECODE S13b = MISSING AND DO NOT SHOW QUESTION TO RESPONDENT)

(ASK IF S12 = 02 to 20)

How many of the <S12> children living in your household are family members?

Please only count individuals 18 years of age or younger. Family means two or more persons residing together who are related by birth, marriage, partnership, adoption or legal guardianship.

ENTER NUMBER 0-20 Children

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")

NOCHILD_CK_1:

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)
(ASK IF: S13B>S12, ELSE GO TO S13A)

The number of child family members living in your household is greater than the total number of children living in your household. You said there were:

<S12> total children in the household, but
<S13B> children in the household who are family members.

Which of these would you like to update?

01 Update the total number of children in my household
(CREATE TEXT BOX ON SAME SCREEN)
(RECODE S12)

02 Update the number of children in the household who are family members
9CREATE TEXT BOX ON SAME SCREEN)
(RECODE S13B)

03 I do not want to make any updates (GO TO S13a)

(IF MISSING GO TO S13a)

S13a

(ASK IF S13B=1 TO 20)

(ASK IF S13b=01)

Are you a parent of the one child living in your household, even if they are temporarily away? Parents include stepparents, foster parents, and legal guardians.

(ASK IF S13b=02 TO 20)

Are you a parent of any of the < S12> children living in your household, including children temporarily away from the home? Parents include stepparents, foster parents, and legal guardians.

01 Yes
02 No

S14

Please tell me how old you were on your last birthday?

RECORD AGE Years (RANGE 019-125)

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 19 and 125."

S14a

(ASK IF S14 = MISSING)

On your last birthday would you say that you were…

01 19-24 years old
02 25-34 years old
03 35-44 years old
04 45-54 years old
05 55-64 years old
06 65 - 74 years old
07 75 years old or older

SECTION A: ADULT CURRENT INSURANCE STATUS

A1

Now we would like to know what kind of health insurance coverage you had last week.

Are you covered by health insurance or some other type of health care plan?

01 Yes (GO TO END OF SECTION A)
02 No

A1A

(DISPLAY IF A1=02, MISSING)

Health insurance or some other type of health care plan may include health insurance obtained through employment or purchased directly as well as government and military programs such as Medicare, Medicaid, Healthy Families, TRICARE or Champ-VA.

Keeping this in mind, are you covered by health insurance or some other type of health care plan?

01 Yes, insured
02 No, not insured (GO TO C1_NEW)

(IF MISSING, GO TO D30)

SECTION B: ADULT CURRENTLY INSURED

Employer-based Coverage

B4A

Are you covered by a health insurance plan through a current or former employer or labor union?

01 Yes
02 No (GO TO B4B)

(IF MISSING GO TO B4B)

B4AA

Is your insurance through your work or are you receiving insurance as a dependent through someone else's work? This includes current or past work.

01 Through my own work (GO TO B4AB)
02 Through someone else's work (GO TO B4AB)
03 Both through your own work and someone else's work

(IF MISSING, GO TO B4B)

B4AA1

Just to confirm, you said that your insurance is through your own work and someone else's work?

01 Yes, I have insurance through my own work and someone else's work
02 No, insurance is only through my own work (RECODE B4Aa=01)
03 No, insurance is only through someone else's work (RECODE B4Aa=02)

(IF MISSING GO TO B4B)

B4AB

(IF B4AA =01 OR 03)

Is that through your current work or past work?

(IF B4AA = 02)

Are you covered through that person's current work or past work?

01 Current work
02 Past work

B4AC

(DISPLAY IF B4A=01)

Approximately how long have you been covered by your current health insurance plan from your or someone else's work?

01 Less than 3 months
02 3 months to less than 1 year
03 1 to 2 years
04 More than 2 years

Medicare Coverage

B4B

Are you _$recall (recall= "also", condition="B4A=01") covered by or enrolled in Medicare, the Federal government-funded health insurance plan for people 65 years and older or with certain disabilities?

01 Yes
02 No

B4B_1

(DISPLAY IF B4B = 01)

How long have you been covered by Medicare?

01 Less than 3 months
02 3 months to less than 1 year
03 1 to 2 years
04 More than 2 years

Medicaid Coverage

B4C

Ohio Medicaid is the state program that pays for medical insurance for people with low incomes. Medicaid may use managed care plans like CareSource, Buckeye, Molina, Paramount, and United Healthcare to provide services.

_$recall(recall="Are you also currently covered by or enrolled in Medicaid?", condition= "(B4A=01 OR B4B=01)")
_$recall(recall="Are you currently covered by or enrolled in Medicaid? ", condition="not(B4A=01 OR B4B=01)")

01 Yes

02 No

(IF MISSING GO TO B4B_R)

B4B_CON1

(ASK IF [(B4B = 01 AND (S14>=19 AND S14<65)] OR [(B4B = 01 AND S14A>=01 AND S14A <06)] OR [(B4B=02 AND (S14>=65 AND S14<=125)] OR [B4B=02 AND (S14A=06, 07) OR (B4B=MISSING), ELSE GO TO B4B_R)

Just to verify, are you covered by the state Medicaid program for people with low incomes, or are you covered through the federal Medicare program for people 65 years or older or with disabilities, or by both Medicaid and Medicare?

01 Only Medicaid the state program
02 Only Medicare the federal program
03 Both Medicaid and Medicare
04 I am not covered by either of these

B4B_R

(IF ((B4B_CON1= 02,03) THEN B4B_R=01), IF((B4B_CON1 = 01,04) THEN B4B_R=02), IF ((B4B_CON1= 98) THEN B4B_R=98), IF ((B4B_CON1=99) THEN B4B_R= 99), ELSE B4B_R= B4B)

01 YES
02 NO
98 DK
99 REFUSED

B4C_R

(IF ((B4B_CON1=01 OR 03) THEN B4C_R=01); ELSE IF ((B4B_CON1=02 OR 04) THEN B4C_R=02); ELSE IF B4B_CON1=98 THEN B4C_R=98; ELSE IF B4B_CON1=99 THEN B4C_R =99; ELSE IF B4C=1 THEN B4C_R=1; ELSE B4C_R = B4C)

01 YES
02 NO
98 DK
99 REFUSED

B4CA

(ASK: IF B4C_R=01), ELSE GO TO B4I

Which Medicaid program are you covered by?

01 Healthy Families or Healthy Start
02 Medicaid for the Aged, Blind and Disabled, or Waiver Programs
03 Medicare Premium Assistance Program, QMB, or SLMB

97 Some other Medicaid program
98 I'm not sure

B4C2

(ASK IF B4CA=01,02,03, MISSING)

How long have you been covered by Medicaid?

01 Less than 3 months
02 3 months to less than 1 year
03 1 to 2 years
04 More than 2 years

Health Insurance Exchange

B4I

Are you (recall= "also", condition="B4A=01, or B4B_R=01, or B4C_R=01") covered through the Ohio Health Care Exchange, also known as Obama Care, or a healthcare.gov insurance plan?

01 Yes
02 No (GO TO B4E)

(IF MISSING GO TO B4E)

B4I_2

A monthly premium is a fixed amount of money people pay each month to have health care coverage. It does not include copays or other expenses such as prescription costs. Is there a monthly premium for this Ohio Health Care Exchange or healthcare.gov insurance plan?

01 Yes
02 No

Private Coverage

B4E

Are you _$Recall (recall= "also", condition="B4A=01, or B4B_R=01, or B4C_R=01, or B4I=01") covered by health insurance purchased directly, that is, a plan not related to current or past employment or not purchased through healthcare.gov?

01 Yes
02 No

B4G

Do you (recall= "also", condition="B4A=01, or B4B_R=01, or B4C_R=01, or B4I=01, or B4E=01") have any other health care coverage not otherwise mentioned so far?

01 Yes
02 No

B4CHK

(ASK IF: (B4A=01 OR B4B_R=01 OR B4C_R=01 OR B4E=01 OR B4G=01 OR B4I=01)), ELSE GO B4_Dental)
To confirm, you said you are covered by:
(FILL:

- FILL: IF B4A=01 A health insurance plan through a current or former employer or labor union
- FILL: IF B4B_R=01 Medicare
- FILL: IF B4C_R=01 Medicaid
- FILL: IF B4I =01 Healthcare Exchange
- FILL: IF B4E=01 Direct Purchase Insurance Plan
- FILL: IF B4G=01 Some other health coverage)

Is that correct?

01 Yes (GO TO B4_DENTAL)
02 No

(IF MISSING GO TO B4_DENTAL)

B4U

(DISPLAY ALL OF THE B4U SUBVARIABLES ON THE SAME SCREEN)
(NOTE: NEW VARIABLE FOR 2021)

Let's update this information. Below is a list of different types of health insurance or health care plans you may have. Please select "yes" if you are covered by this type of insurance, or "no" if you are not.

B4U_1

A health insurance plan through a current or former employer or labor union?

01 Yes 02 No

(IF 01 (YES), SET B4A = 01 (YES))

B4U_2

Medicare, a program for people 65 years or older or with disabilities?

01 Yes 02 No

(IF 01 (YES), SET B4B_R = 01 (YES))

B4U_3

Medicaid, a program for people with low incomes?

01 Yes 02 No

(IF 01 (YES), SET B4C_R = 01 (YES))

B4U_4

A plan purchased on the Ohio Healthcare Exchange or healthcare.gov?

01 Yes 02 No

(IF 01 (YES), SET B4I = 01 (YES))

B4U_5

A plan you directly purchased from a health insurance company?

01 Yes 02 No

(IF 01 (YES), SET B4E = 01 (YES))

B4U_6

Some other type of health plan not previously mentioned?

01 Yes 02 No

(IF 01 (YES), SET B4G = 01 (YES))

Insurance Covered Health Services

B4_Dental

Do you have any insurance that covers dental bills?

01 Yes
02 No

B18

(ASK IF: If (B4E=01) OR (B4I = 01) OR (B4G = 01))

These next questions are about your primary health insurance.

How long have you been covered by your current primary health insurance?

01 Less than 3 months
02 3 months to 1 year
03 1 to 2 years (GO TO START OF SECTION D)
04 More than 2 years (GO TO START OF SECTION D)

(IF MISSING, GO TO START OF SECTION D)

Previous Coverage

B19

(ASK IF: (B18=01, 02) OR (B4C2=01, 02))

Before you became covered with your current health insurance plans, were you covered by another plan within the past 12 months?

01 Yes
02 No

B20

(ASK IF: (B19=01 AND B4C_R = 02,MISSING))

Just prior to your current health insurance coverage, were you covered by Medicaid, the State of Ohio government health care program?

01 Yes (GO TO B27)
02 No

B21

(ASK IF (B20=02, AND B19=01) OR (B4C_R=01 AND B19=01))

Just prior to your current health insurance coverage, were you covered by a health insurance plan obtained through an employer or labor union?

01 Yes (GO TO B27)
02 No

B22

(ASK IF (B19 = 01 AND B21=2,MISSING))

Just prior to your current health insurance coverage, were you covered by any other insurance that you or your family paid for completely?

01 Yes

02 No

B23

(ASK IF (B19 = 01 AND B22=2,MISSING))

Just prior to your current health insurance coverage, were you covered by any other health care coverage not otherwise mentioned so far?

01 Yes
02 No

Coverage Past 12 Months

B27

(ASK IF: (B18 = 01, 02) OR (B4C2 = 01, 02))

During the past 12 months, how long were you without health insurance coverage?

01 Less than 2 months
02 2 to 6 months
03 More than 6 months to 12 months
04 I have had health insurance for the past 12 months

B27A

(ASK IF: (B27 = 01, 02, 03)

There are a lot of reasons why people may have been without health insurance coverage during the past year. Was your gap in health insurance coverage due to the COVID-19 pandemic?

01 Yes
02 No

B27B

(ASK IF: (B27=01, 02, 03))

Was your gap in health insurance coverage due to a job loss or layoff that you or a family member experienced?

01 Yes
02 No

SECTION C: ADULT CURRENTLY UNINSURED

C1_NEW

(ASK IF: (A1A = 02)

When were you last covered by <u>any</u> type of health insurance plan?

01 Less than 3 months ago
02 3 months to less than 1 year ago
03 1 to less than 2 years ago
04 2 to 3 years ago (GO TO START OF SECTION D)
05 More than 3 years ago (GO TO START OF SECTION D)
06 *I never had health insurance coverage* (GO TO START OF SECTION D)

(IF MISSING GO TO START OF SECTION D)

C2A

Did you lose your insurance because of the COVID-19 pandemic?

01 Yes
02 No

C2B

Did you lose your insurance because of a job loss or layoff that you or a family member experienced?

01 Yes
02 No

C3

The last time you had health insurance, were you covered by <u>Medicaid</u>, the <u>State of Ohio</u> government health care program?

01 Yes (GO TO D30)
02 No

(IF MISSING, GO TO D30)

C4

The last time you had health insurance, were you covered by a plan obtained through a current or former employer or labor union?

01 Yes
02 No

SECTION D: ADULT HEALTH STATUS & CARE GIVING

General Health

D30

These next questions ask about your health.

In general, would you say your health is excellent, very good, good, fair, or poor?

01 Excellent
02 Very good
03 Good
04 Fair
05 Poor

D30I

Thinking about your mental health, which includes stress, depression, and problems with emotions or substance abuse, for how many days, during the past 30 days did a mental health condition or emotional problem keep you from doing your work or other usual activities?

ENTER NUMBER OF DAYS Days (RANGE 0-30)

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 30.")

D30_d

Thinking about your teeth and gums, would you say your dental health is excellent, very good, good, fair, or poor?

01 Excellent
02 Very good
03 Good
04 Fair
05 Poor

CDC_1

Next, we would like to know about any physical, mental, or emotional conditions that cause serious difficulties with daily activities.

Are you deaf, or do you have serious difficulty hearing?

01 Yes
02 No

CDC_2

Are you blind, or do you have serious difficulty seeing, even when wearing glasses?

01 Yes
02 No

CDC_3

Do you have serious difficulty walking or climbing stairs?

01 Yes
02 No

CDC_4

Do you have difficulty dressing or bathing?

01 Yes
02 No

CDC_5

Because of a physical, mental or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?

01 Yes
02 No

CDC_6

Because of a physical, mental or emotional condition, do you have difficulty doing errands alone, such as visiting a doctor's office or shopping?

01 Yes
02 No

ADULT_DD

Do you have a developmental disability?

01 Yes
02 No

Chronic Conditions

D41

These next questions are about medical conditions you may have.

Has a doctor, nurse or other health professional ever told you that you had high blood pressure or hypertension?

01 Yes
02 No

Diabetes

D43

Has a doctor, nurse or other health professional ever told you that you had diabetes or sugar diabetes?

01 Yes
02 No (GO TO E65)
03 Borderline

D43B

(ASK: IF D43 = 01,03 AND S15=02 AND (S14 < 45 OR (S14A = 01, 02, 03))), ELSE GO TO E65

Was your diabetes only during a time associated with a pregnancy?

01 Yes, only when pregnant
02 No

Pregnancy Status

E65

(ASK: IF S15=02 AND (S14 < 45 OR (S14A = 01, 02, 03))), ELSE GO TO D30A_VALUE

During the past 12 months were you pregnant at any time?

01 Yes
02 No

E65A

(ASK IF E65 = 01)

Are you currently pregnant?

01 Yes
02 No

Weight and Height

D30A_VALUE

(IF E65A=01: Just before your current pregnancy, about how much did you weigh without shoes?)

(IF E65A NE 01: About how much do you weigh without shoes?)

[Answer layout – boxes for 3-digit number] Pounds

(Use range of 1-700 pounds (per the 2021 OMAS CATI))

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 700.")

D30B_F / D30B_I

About how tall are you without shoes?

____Feet ____Inches

[Answer layout – 1-digit box Feet and 2-digit box Inches]

(Use range of 1-8 feet and 0-12 inches, per the 2021 OMAS CATI)

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 8." And "Please enter a number between 0 and 12.")

Loneliness/Isolation

IS_UCLA1

The next questions are about how you feel about different aspects of your life. You do not have to answer any questions that make you uncomfortable.

How often do you feel that you lack companionship?

01 Hardly ever
02 Some of the time
03 Often

IS_UCLA2

How often do you feel left out?

01 Hardly ever
02 Some of the time
03 Often

IS_UCLA3

How often do you feel isolated from others?

01 Hardly ever
02 Some of the time
03 Often

Substance use

D45

The next few questions are about your experiences with tobacco, alcohol, and other substances.

Have you smoked at least 100 cigarettes in your entire life?

01 Yes
02 No

D45a

(ASK IF D45 = 01)

Do you smoke cigarettes every day, some days, or not at all?

01 Every day
02 Some days
03 Not at all

D45e

Have you ever used an electronic cigarette or vaping product, even one time?

01 Yes
02 No

D45F

(ASK IF D45E=01)

Do you now use e-cigarettes or vaping products every day, some days, rarely, or not at all?

01 Every day
02 Some days
03 Rarely
04 Not at all

D46

During the past 30 days, on how many days did you have at least one drink of an alcoholic beverage such as beer, wine, a malt beverage or liquor?

Answer layout – boxes for 2-digit number (valid answers: 0-30) Days

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 30. If you did not have any drinks over the past 30 days, enter 0.")

D46A

(ASK IF D46 = 1 TO 30)

During the past 30 days, considering all types of alcoholic beverages, on how many days, if any, did you have [CAWI FILL: IF MALE: 5; ELSE 4] or more drinks on an occasion?

RECORD NUMBER OF DRINKING DAYS (RANGE 0 – 30) Days

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 30.")

D46B

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

Answer layout – boxes for 2-digit number (0-30) Days

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 30. If you did not use cannabis over the past 30 days, enter 0.")

SECTION E: ADULT UTILIZATION OF ADULT HEALTH CARE SERVICES

Visits to Medical Doctor and Health Professional

E59

This next section asks about your use of health care services.

Not including overnight hospital stays, visits to hospital emergency rooms, home visits, or telephone calls, about how long has it been since you last saw a doctor or other health care professional about your own health?

01 Within the last 12 months
02 More than 12 months ago
03 I have never seen a doctor about my health

E59A

(ASK IF E59=01, 02, MISSING)

About how long has it been since you last visited a doctor for a routine check-up? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition. If you are unsure, please make your best estimate.

01 Within the last 12 months
02 More than 12 months ago
03 I have never seen a doctor for a routine checkup

Emergency Room Visits

E62

During the past 12 months, how many times were you a patient in a hospital emergency room?

ENTER VALUE, RANGE 0-365 Times

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: “Please enter a number between 0 and 365. If you were not a patient in a hospital ER over the past 12 months, enter 0.”)

SECTION F: ADULT SOURCES OF CARE AND DETERMINANTS

F67

When you are sick or need advice about your health, do you usually receive care at one place, more than one place, or no place at all?

01 One place
02 More than one place
03 No place at all

F67_2

(ASK IF F67 = 01, 02)

Is the place where you usually receive care or advice about your health… (Choose one)

01 A doctor's office or health center, including by phone or video call
02 A hospital emergency room
03 An urgent care center, including by phone or video call
04 A clinic in a pharmacy or grocery store
05 Some other place

Unmet Needs of Adult

F68_1

These next questions ask about different types of care you may have needed and whether or not you were able to get this needed care.

During the past 12 months, was there a time when you needed dental care?

01 Yes, I needed dental care
02 No, I did not need dental care

F68_2

(ASK IF F68_1 = 01)

Were you able to get the dental care that you needed?

01 Yes, I got the dental care I needed
02 No, I did not get the dental care I needed

F68B_2_1

During the past 12 months, was there a time when you needed vision care or eyeglasses?

01 Yes, I needed vision care or eyeglasses
02 No, I did not need vision care or eyeglasses

F68B_2_2

(ASK IF F68B_2_1 = 01)

Were you able to get the vision care or eyeglasses that you needed?

01 Yes, I got the vision care or eyeglasses I needed
02 No, I did not get the vision care or eyeglasses I needed

F68B_3_1

During the past 12 months, was there a time when you needed mental or emotional health care or counseling services?

01 Yes, I needed mental health care or counseling
02 No, I did not need mental health care or counseling

F68B_3_2

(ASK IF F68B_3_1 = 01)

Were you able to get the mental or emotional health care or counseling services that you needed?

01 Yes, I got the mental health care or counseling I needed
02 No, I did not get the mental health care or counseling I needed

F68B_4_1

During the past 12 months, was there a time when you needed alcohol or other drug treatment, not counting cigarettes?

01 Yes, I needed alcohol or other drug treatment
02 No, I did not need alcohol or other drug treatment

F68B_4_2

(ASK IF F68B_4_1 = 01)

Were you able to get the alcohol or other drug treatment that you needed?

01 Yes, I got the alcohol or other drug treatment I needed
02 No, I did not get the alcohol or other drug treatment I needed

F68C_NEW_1

During the past 12 months, was there a time when you needed any other health care, such as a medical exam or medical supplies?

01 Yes, I needed other health care
02 No, I did not need other health care

F68C_NEW_2

(ASK IF F68C_NEW_1 = 01)

Were you able to get the other health care that you needed?

01 Yes, I got the other health care I needed
02 No, I did not get the other health care I needed

avoid_care

We just considered the types of health care you may have needed. These next questions examine reasons you may have delayed or avoided care.

During the past 12 months**,** did you delay or avoid getting care that you felt you needed?

01 Yes
02 No

why_avoid_a

(ASK IF AVOID_CARE=01; ELSE GO TO F70)

(RANDOMIZE WHY_AVOID_A THROUGH _E)

Did you delay or avoid getting care over the past 12 months because you thought it would cost too much?

01 Yes
02 No

why_avoid_b

Did you delay or avoid getting care over the past 12 months because you did not have transportation to or from appointments?

01 Yes
02 No

why_avoid_c

Did you delay or avoid getting care over the past 12 months because the provider was not available when you needed to go?

01 Yes
02 No

why_avoid_d

Did you delay or avoid getting care over the past 12 months because you could not find a provider?

01 Yes
02 No

why_avoid_e

Did you delay or avoid getting care over the past 12 months because you did not want to visit a provider's office because of COVID-19?

01 Yes
02 No

Financial Stress & Medical Bills

F70

These next questions are about your financial and food situations.

During the past 12 months, were there times when you had problems paying or you were unable to pay for medical bills for yourself or anyone else in the family or household?

01 Yes
02 No

Rent_12mo

In the past 12 months, has it gotten easier, harder, or stayed the same to pay rent or mortgage?

01 Easier
02 Harder
03 Stayed the same
04 I do not have rent or a mortgage

SECTION G: ADULT EMPLOYMENT STATUS

G70

These next questions are about your current employment status

Since March of 2020, have you lost a job?

01 Yes
02 No

G70a

Since March of 2020, has a family member you live with lost a job?

01 Yes
02 No
03 I do not live with a family member

G71

(SKIP IF (B4AA=01,03) AND (B4AB=01) AND AUTOCODE G71 = 01)

Last week did you have a job?

01 Yes
02 No (GO TO G76)

(IF MISSING GO TO G76)

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 168. If you did not work any hours last week, enter 0.")

G71A

Thinking about just last week, how many hours did you work?
If you are unsure, please make your best guess.

ENTER NUMBER 0-168 Hours

G71F

How long have you had your current job?
If you are unsure, please make your best guess.

01 Less than 3 months

02 3 months to 6 months
03 More than 6 months to 1 year
04 More than 1 year

G71A_NEW

Are you self-employed at all? This may be in addition to your main job.

01 Yes
02 No

G72

(ASK: if G71 = 01 AND NOT (B4AA=01,03) OR (NOT B4AB=01), ELSE GO TO G76)

These next few questions ask about employment and health insurance.

Next I'm going to ask you a few questions about employment and health insurance. Does your employer or labor union offer health insurance to <u>any</u> of its employees? If you are only self-employed, please answer "Does not apply."

01 Yes
02 No (GO TO H76)
03 Does not apply (GO TO H76)

(IF MISSING, GO TO H76)

ESI_CHLD

To the best of your knowledge, does your employer or labor union offer coverage to the children of employees?

01 Yes
02 No
04 Unsure

ESI_SPS

To the best of your knowledge, does your employer or labor union offer coverage to the spouses of employees?

01 Yes
02 No
03 Unsure

G72B

(ASK: IF (G72=01)

(IF B4Aa=01 OR 03 AND B4Ab=01 THEN AUTOCODE G72b=01 AND GO TO SK_ENDG.)

Are you currently eligible to participate in your employer or union health plan?

01 Yes
02 No

G72c

(ASK: IF (G72B=01 AND (NOT (B4AA=01,03 AND B4AB=01)

Please tell us whether each of the following was a reason you are not participating in your employer or labor union health insurance plan.

G72c_1

It costs too much.

01 Yes
02 No

G72c_2

I have other insurance.

01 Yes
02 No

G72c_3

I do not need it.

01 Yes
02 No

Not Working

G76

(ASK G76 IF G71=02, ELSE GO TO H76)

In the last month have you looked for work?

01 Yes
02 No

G77

People are not working for various reasons. This next section presents several reasons why you may be not working. For each, please select yes or no.

RANDOMIZE ITEMS EXCEPT G77RET, WHICH SHOULD ALWAYS BE ASKED FIRST, AND G77A, WHICH SHOULD ALWAYS BE ASKED LAST.

G77RET

(ASK G77RET IF S14=55-120 OR S14A = 05,06,07)

(PROGRAMMER NOTE, WHEN G77RET IS DISPLAYED, IT SHOULD ALWAYS COMES FIRST IN SET)

Are you not working because you are retired?
01 Yes
02 No

G77B

Are you not working because you are caring for a family member?
01 Yes
02 No

G77C

Are you not working because you have at least one physical or mental health limitation?
01 Yes
02 No

G77E

Are you not working because you are in a job training program or in school?
01 Yes
02 No

G77A

(NOTE G77A ALWAYS COMES LAST EVEN THOUGH ABOVE ITEMS ALWAYS RANDOMIZED)

Are you not working because you could not find work?
01 Yes
02 No

SECTION H: ADULT DEMOGRAPHICS AND FAMILY INCOME

H76

The next few questions are for general classification purposes.

Are you currently...

01 Married
02 Not married, but living together with a partner
03 Widowed
04 Divorced or annulled
05 Separated~~, or~~
06 Never been married~~?~~

H77

What is the highest level of school you have completed or the highest degree received?

02 Less than 8th grade
03 Some high school, but no diploma
04 High school graduate or equivalent (GED/vocational/trade school graduate)
05 Some college, but no degree
06 Associate degree (1-2 year occupational, technical or academic program)
07 Four year college graduate/bachelor's degree
08 Advanced degree (including master's, professional degree, or doctorate)

H78

Have you ever served in the United States Armed Forces?

01 Yes
02 No

S16

Are you of Hispanic, Latino, or Spanish origin?

01 Yes
02 No

S17

Which one or more of the following would you say is your race? *Please select all that apply.*

01 White
02 Black or African American

03 Asian
04 Native American, American Indian, or Alaskan Native
05 Native Hawaiian or Pacific Islander
06 Hispanic, Latino, Spanish
97 Other

(IF S17 SELECTED MORE THAN ONE, GO TO S17B. ELSE GO TO Q153A)

S17B

Which one of these groups would you say best represents your race?

(PROGRAMMER: PLEASE LIMIT RESPONSE CHOICES TO THOSE SELECTED IN S17)

01 White
02 Black or African American
03 Asian
04 Native American, American Indian, or Alaskan Native
05 Native Hawaiian or Pacific Islander
06 Hispanic, Latino, Spanish
97 Other

Q153A_1

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

Does your household have any landline telephone numbers primarily for non-business use?

Do not include cell phones or numbers that are only used by a computer or fax machine.

01 Yes
02 No

Q153_1

(ASK IF Q153A_1 = 1)

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

How many landline telephone numbers are there in your house that are primarily for non-business use?

ENTER NUMBER 0-10 Landline Numbers

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: “Please enter a number between 0 and 10. If you have more than 10 landline phones, enter 10.”)

Q153A_2

(ASK IF HH = 01)

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

Does your household have any active cell phone numbers primarily for non-business use?

01 Yes
02 No

Q153_2

(ASK IF Q153A_2 = 1 OR HH = 00)

(NOTE: NEW VARIABLE FOR 2021 THAT IS UNIQUE TO CAWI AND NOT FOUND IN CATI)

How many active cell phone numbers are there in your house that are primarily for non-business use?

ENTER NUMBER 0-10 Active Cell Phones

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 10. If you have more than 10 cell phones, enter 10.")

Family Income

H84_NEW

(ASK IF: SUMS11S113B=98,99), ELSE GO TO H84_A1_INTRO))

Family means two or more persons living together who are related by birth, marriage, partnership, adoption or legal guardianship.

How many family members, including yourself, live in your household?

ENTER NUMBER OF FAMILY MEMBERS, RANGE 1-20 Family Members

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")

(IF MISSING GO TO SK_ENDH)

H84_A1_INTRO

The next few questions ask about your income so that the survey sponsors can find out how income relates to health insurance coverage and problems receiving medical care.

01 Next

H84_A1

(AUTOCODE: IF SUMS11S113B=1, THEN AUTOCODE H84_A1=01 AND SKIP TO NEXT QUESTION)

Total income includes money from jobs, business, farm, pensions, investments, social security payments and other money income received before taxes or other deductions.
Earlier you said there were <sum of # of adults and children in family in household> family members, including yourself, living in your household. How many of these family members are supported by the family's total income?

ENTER NUMBER 1-20 Family Members

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Include yourself when counting. Enter 20 if the number is greater than 20.")

H84_A1_extra

Are there any other family members who do not live in your home who are also supported by the family's total income?

01 Yes
02 No

H84_A1_NUM

(ASK IF H84_A1_extra=01)

How many other family members are also supported by the family's total income?

(ENTER NUMBER) RANGE 0-20 Other Family Members

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 1 and 20. Enter 20 if the number is greater than 20.")

H84_A2

What is your best estimate of _$Recall (RECALL="your", CONDITION="H84_A1==01")_$Recall (RECALL="you and your family members'", CONDITION="H84_A1>1") income last month before taxes and other deductions?

RECORD INCOME Dollars (RANGE 0-15,000)

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 15,000. If you did not have any income last month, enter 0.")

H84_A2CATS

(ASK IF (H84_A2=MISSING)

(IF H84_A1=MISSING, USE CAT 15)

We want to reassure you that your best guess is fine and that responses will be kept strictly confidential. The survey asks about income to help researchers understand how income groups differ in health insurance coverage and in problems getting health care.

Was _$Recall (RECALL="your", CONDITION="H84_A1=01")_$Recall (RECALL="you and your family members'", CONDITION="H84_A1>1") gross income last month before taxes and other deductions more or less than <F_H84_A2CAT>?

01 Less than <<FILL AMOUNT>> (GO TO H84_A2L)
02 Exactly <<FILL AMOUNT>> (GO TO H84_A3)
03 More than <<FILL AMOUNT>> (GO TO H84_A2H)

(IF MISSING GO TO Q155)

Num in HH	138% Rounded
1	1,500
2	2,000
3	2,500
4	3,000
5	3,600
6	4,000
7	4,600
8	5,100
9	5,700
10	6,200
11	6,700
12	7,200
13	7,700
14	8,200
15+	8,800

H84_A2L

(ASK IF: H84_A2CATS=01)

Which category best represents _$Recall (RECALL="your", CONDITION="H84_A1==01")_$Recall (RECALL="you and your family members'", CONDITION="H84_A1>1") gross income before taxes and other deductions last month?

(IF SUM OF H84_A1 AND H84_A1_NUM=1 DISPLAY CATEGORIES 01-05)
(IF SUM OF H84_A1 AND H84_A1_NUM =2 DISPLAY CATEGORIES 06-10)
(IF SUM OF H84_A1 AND H84_A1_NUM =3 DISPLAY CATEGORIES 11-15)
(IF SUM OF H84_A1 AND H84_A1_NUM =4 DISPLAY CATEGORIES 16-20)
(IF SUM OF H84_A1 AND H84_A1_NUM =5 DISPLAY CATEGORIES 21-25)
(IF SUM OF H84_A1 AND H84_A1_NUM =6 DISPLAY CATEGORIES 26-30)
(IF SUM OF H84_A1 AND H84_A1_NUM =7 DISPLAY CATEGORIES 31-35)
(IF SUM OF H84_A1 AND H84_A1_NUM =8 DISPLAY CATEGORIES 36-40)
(IF SUM OF H84_A1 AND H84_A1_NUM =9 DISPLAY CATEGORIES 41-45)
(IF SUM OF H84_A1 AND H84_A1_NUM =10 DISPLAY CATEGORIES 46-50)
(IF SUM OF H84_A1 AND H84_A1_NUM =11 DISPLAY CATEGORIES 51-55)
(IF SUM OF H84_A1 AND H84_A1_NUM =12 DISPLAY CATEGORIES 56-60)
(IF SUM OF H84_A1 AND H84_A1_NUM =13 DISPLAY CATEGORIES 61-65)
(IF SUM OF H84_A1 AND H84_A1_NUM =14 DISPLAY CATEGORIES 66-70)
(IF SUM OF H84_A1 AND H84_A1_NUM >=15 DISPLAY CATEGORIES 71-75)

1		$300	or less	
2	Over	$300	to	$500
3	Over	$500	to	$750
4	Over	$750	to	$1,000
5		$1,000	to	$1,500
6		$400	or less	
7	Over	$400	to	$700
8	Over	$700	to	$1,000
9	Over	$1,000	to	$1,400
10		$1,400	to	$2,000
11		$500	or less	
12	Over	$500	to	$1,000
13	Over	$1,000	to	$1,500
14	Over	$1,500	to	$1,800
15		$1,800	to	$2,500
16		$700	or less	
17	Over	$700	to	$1,200
18	Over	$1,200	to	$1,700
19	Over	$1,700	to	$2,200
20		$2,200	to	$3,000
21		$900	or less	
22	Over	$900	to	$1,500
23	Over	$1,500	to	$2,100
24	Over	$2,100	to	$2,600
25		$2,600	to	$3,600
26		$1,000	or less	
27	Over	$1,000	to	$1,600

28	Over	$1,600	to	$2,200
29	Over	$2,200	to	$3,000
30		$3,000	to	$4,000
31		$1,200	or less	
32	Over	$1,200	to	$2,000
33	Over	$2,000	to	$2,700
34	Over	$2,700	to	$3,300
35		$3,300	to	$4,600
36		$1,400	or less	
37	Over	$1,400	to	$2,200
38	Over	$2,200	to	$3,000
39	Over	$3,000	to	$3,700
40		$3,700	to	$5,100
41		$1,500	or less	
42	Over	$1,500	to	$2,400
43	Over	$2,400	to	$3,300
44	Over	$3,300	to	$4,100
45		$4,100	to	$5,700
46		$1,700	or less	
47	Over	$1,700	to	$2,700
48	Over	$2,700	to	$3,600
49	Over	$3,600	to	$4,500
50		$4,500	to	$6,200
51		$1,900	or less	
52	Over	$1,900	to	$2,900
53	Over	$2,900	to	$3,900
54	Over	$3,900	to	$4,900
55		$4,900	to	$6,700
56		$2,000	or less	
57	Over	$2,000	to	$3,100
58	Over	$3,100	to	$4,200
59	Over	$4,200	to	$5,200
60		$5,200	to	$7,200
61		$2,200	or less	
62	Over	$2,200	to	$3,400
63	Over	$3,400	to	$4,400
64	Over	$4,400	to	$5,600
65		$5,600	to	$7,700
66		$2,500	or less	
67	Over	$2,500	to	$3,700
68	Over	$3,700	to	$5,000
69	Over	$5,000	to	$6,000
70		$6,000	to	$8,200

71		$3,000	or less	
72	Over	$3,000	to	$4,000
73	Over	$4,000	to	$5,200
74	Over	$5,200	to	$6,400
75		$6,400	to	$8,800

(ALL FROM H84_A2L GO TO H84_A3)

H84_A2H

(ASK IF: H84_A2CATS=03)

Which category best represents _$Recall (RECALL="your", CONDITION="H84_A1==01")_$Recall (RECALL="you and your family members'", CONDITION="H84_A1>1") gross income before taxes and other deductions last month?

(IF SUM OF H84_A1 AND H84_A1_NUM =1 DISPLAY CATEGORIES 01-05)
(IF SUM OF H84_A1 AND H84_A1_NUM =2 DISPLAY CATEGORIES 06-10)
(IF SUM OF H84_A1 AND H84_A1_NUM =3 DISPLAY CATEGORIES 11-15)
(IF SUM OF H84_A1 AND H84_A1_NUM =4 DISPLAY CATEGORIES 16-20)
(IF SUM OF H84_A1 AND H84_A1_NUM =5 DISPLAY CATEGORIES 21-25)
(IF SUM OF H84_A1 AND H84_A1_NUM =6 DISPLAY CATEGORIES 26-30)
(IF SUM OF H84_A1 AND H84_A1_NUM =7 DISPLAY CATEGORIES 31-35)
(IF SUM OF H84_A1 AND H84_A1_NUM =8 DISPLAY CATEGORIES 36-40)
(IF SUM OF H84_A1 AND H84_A1_NUM =9 DISPLAY CATEGORIES 41-45)
(IF SUM OF H84_A1 AND H84_A1_NUM =10 DISPLAY CATEGORIES 46-50)
(IF SUM OF H84_A1 AND H84_A1_NUM =11 DISPLAY CATEGORIES 51-55)
(IF SUM OF H84_A1 AND H84_A1_NUM =12 DISPLAY CATEGORIES 56-60)
(IF SUM OF H84_A1 AND H84_A1_NUM =13 DISPLAY CATEGORIES 61-65)
(IF SUM OF H84_A1 AND H84_A1_NUM =14 DISPLAY CATEGORIES 66-70)
(IF SUM OF H84_A1 AND H84_A1_NUM >=15 DISPLAY CATEGORIES 71-75)

1		$1,500	to	$2,200
2	Over	$2,200	to	$2,700
3	Over	$2,700	to	$4,300
4	Over	$4,300	to	$5,200
5		$5,200	or more	
6		$2,000	to	$3,000
7	Over	$3,000	to	$3,600
8	Over	$3,600	to	$5,800
9	Over	$5,800	to	$7,000
10		$7,000	or more	
11		$2,500	to	$3,800
12	Over	$3,800	to	$4,600
13	Over	$4,600	to	$7,300
14	Over	$7,300	to	$8,500

15		$8,500	or more	
16		$3,000	to	$4,500
17	Over	$4,500	to	$5,500
18	Over	$5,500	to	$8,800
19	Over	$8,800	to	$10,000
20		$10,000	or more	
21		$3,600	to	$5,300
22	Over	$5,300	to	$6,500
23	Over	$6,500	to	$10,300
24	Over	$10,300	to	$12,000
25		$12,000	or more	
26		$4,000	to	$6,100
27	Over	$6,100	to	$7,400
28	Over	$7,400	to	$11,900
29	Over	$11,900	to	$13,000
30		$13,000	or more	
31		$4,600	to	$6,900
32	Over	$6,900	to	$8,400
33	Over	$8,400	to	$13,400
34	Over	$13,400	to	$14,500
35		$14,500	or more	
36		$5,100	to	$7,700
37	Over	$7,700	to	$8,300
38	Over	$8,300	to	$14,900
39	Over	$14,900	to	$16,000
40		$16,000	or more	
41		$5,700	to	$8,500
42	Over	$8,500	to	$10,300
43	Over	$10,300	to	$16,400
44	Over	$16,400	to	$17,400
45		$17,400	or more	
46		$6,200	to	$9,200
47	Over	$9,200	to	$11,200
48	Over	$11,200	to	$18,000
49	Over	$18,000	to	$19,000
50		$19,000	or more	
51		$6,700	to	$10,000
52	Over	$10,000	to	$12,100
53	Over	$12,100	to	$19,400
54	Over	$19,400	to	$20,500
55		$20,500	or more	
56		$7,200	to	$10,800
57	Over	$10,800	to	$13,000

58	Over	$13,000	to	$21,000
59	Over	$21,000	to	$22,000
60		$22,000	or more	
61		$7,700	to	$11,500
62	Over	$11,500	to	$14,000
63	Over	$14,000	to	$22,400
64	Over	$22,400	to	$24,000
65		$24,000	or more	
66		$8,200	to	$12,300
67	Over	$12,300	to	$15,000
68	Over	$15,000	to	$24,000
69	Over	$24,000	to	$26,000
70		$26,000	or more	
71		$8,800	to	$13,000
72	Over	$13,000	to	$16,000
73	Over	$16,000	to	$25,500
74	Over	$25,500	to	$27,000
75		$27,000	or more	

H84_A3

What is your best estimate of $Recall (RECALL="your", CONDITION="H84_A1==01")_$Recall (RECALL="you and your family members'", CONDITION="H84_A1>1") total 2020 annual income before taxes and other deductions? This includes family members living inside and outside the household supported by you. All of the information you provide will be kept strictly confidential.

Please do not include any economic stimulus payments in your annual income.

RECORD INCOME Dollars (RANGE 0-999,996)

(IF OUTSIDE OF RANGE OR MISSING, DISPLAY THE MESSAGE OF: "Please enter a number between 0 and 999,996. If you did not have any income last year, enter 0.")

H84_A3CATS

(ASK IF H84_A3=MISSING; ELSE SKIP TO SK_ENDH)

(IF H84_A1=MISSING, USE CAT 15)

We want to reassure you that your best guess is fine and that your responses will be kept strictly confidential. The survey asks about income to help researchers understand how income groups differ in health insurance coverage and in problems getting health care.

Was _$Recall (RECALL="your", CONDITION="H84_A1=01")_$Recall (RECALL="you and your family members'", CONDITION="H84_A1>1") total 2020 annual income before taxes and other deductions more or less than <FILL AMOUNT>?

Please do not include any economic stimulus payments in your annual income.

01 Less than <<FILL AMOUNT>>
02 Exactly <<FILL AMOUNT>>
03 More than <<FILL AMOUNT>>

Num in HH	138% Rounded
1	18,000
2	24,000
3	30,000
4	36,000
5	42,000
6	49,000
7	55,000
8	61,000
9	67,000
10	73,000
11	80,000
12	85,000
13	92,000
14	98,000
15+	104,000

H84_A3L

(ASK IF: H84_A3CATS=01)
(IF H84_A1>=15 DISPLAY CATEGORIES 71-75)

Which category best represents your family members' total 2020 annual income before taxes and other deductions?

Please do not include any economic stimulus payments in your annual income.

1		$5	thousand or less		
2	Over	$5	thousand to	$8	thousand
3	Over	$8	thousand to	$11	thousand
4	Over	$11	thousand to	$13	thousand
5		$12	thousand to	$18	
6		$7	thousand or less		

7	Over	$7	thousand to	$10	thousand
8	Over	$10	thousand to	$14	thousand
9	Over	$14	thousand to	$17	thousand
10		$17	thousand to	$24	
11		$9	thousand or less		
12	Over	$9	thousand to	$13	thousand
13	Over	$13	thousand to	$18	thousand
14	Over	$18	thousand to	$22	thousand
15		$22	thousand to	$30	
16		$10	thousand or less		
17	Over	$10	thousand to	$16	thousand
18	Over	$16	thousand to	$21	thousand
19	Over	$21	thousand to	$26	thousand
20		$26	thousand to	$36	
21		$12	thousand or less		
22	Over	$12	thousand to	$18	thousand
23	Over	$18	thousand to	$25	thousand
24	Over	$25	thousand to	$31	thousand
25		$31	thousand to	$42	
26		$14	thousand or less		
27	Over	$14	thousand to	$21	thousand
28	Over	$21	thousand to	$28	thousand
29	Over	$28	thousand to	$35	thousand
30		$35	thousand to	$49	
31		$16	thousand or less		
32	Over	$16	thousand to	$24	thousand
33	Over	$24	thousand to	$32	thousand
34	Over	$32	thousand to	$40	thousand
35		$40	thousand to	$55	
36		$18	thousand or less		
37	Over	$18	thousand to	$27	thousand
38	Over	$27	thousand to	$36	thousand
39	Over	$36	thousand to	$44	thousand
40		$44	thousand to	$61	
41		$19	thousand or less		
42	Over	$19	thousand to	$29	thousand
43	Over	$29	thousand to	$39	thousand
44	Over	$39	thousand to	$49	thousand
45		$49	thousand to	$67	
46		$21	thousand or less		
47	Over	$21	thousand to	$32	thousand
48	Over	$32	thousand to	$43	thousand
49	Over	$43	thousand to	$53	thousand

50		$53	thousand to	$73		
51		$23	thousand or less			
52	Over	$23	thousand to	$36	thousand	
53	Over	$36	thousand to	$48	thousand	
54	Over	$48	thousand to	$58	thousand	
55		$58	thousand to	$80		
56		$25	thousand or less			
57	Over	$25	thousand to	$38	thousand	
58	Over	$38	thousand to	$50	thousand	
59	Over	$50	thousand to	$62	thousand	
60		$62	thousand to	$85		
61		$27	thousand or less			
62	Over	$27	thousand to	$40	thousand	
63	Over	$40	thousand to	$54	thousand	
64	Over	$54	thousand to	$67	thousand	
65		$67	thousand to	$92		
66		$28	thousand or less			
67	Over	$28	thousand to	$43	thousand	
68	Over	$43	thousand to	$58	thousand	
69	Over	$58	thousand to	$71	thousand	
70		$71	thousand to	$98		
71		$30	thousand or less			
72	Over	$30	thousand to	$45	thousand	
73	Over	$45	thousand to	$60	thousand	
74	Over	$60	thousand to	$75	thousand	
75		$75	thousand to	$104		

(ALL FROM H84_A3L GO TO Q155)

H84_A3H

(ASK IF: H84_A3CATS=03)

Which category best represents your family members' total 2020 annual income before taxes and other deductions?

Please do not include any economic stimulus payments in your annual income.

(IF H84_A1=1 DISPLAY CATEGORIES 01-05)

1		$18	thousand to	$26	thousand
2	Over	$26	thousand to	$32	thousand
3	Over	$32	thousand to	$51	thousand
4	Over	$51	thousand to	$60	thousand
5		$60	thousand or more		

6		$24	thousand to	$36	thousand
7	Over	$36	thousand to	$43	thousand
8	Over	$43	thousand to	$69	thousand
9	Over	$69	thousand to	$79	thousand
10		$79	thousand or more		
11		$30	thousand to	$45	thousand
12	Over	$45	thousand to	$54	thousand
13	Over	$54	thousand to	$87	thousand
14	Over	$87	thousand to	$98	thousand
15		$98	thousand or more		
16		$36	thousand to	$54	thousand
17	Over	$54	thousand to	$66	thousand
18	Over	$66	thousand to	$105	thousand
19	Over	$105	thousand to	$115	thousand
20		$115	thousand or more		
21		$42	thousand to	$63	thousand
22	Over	$63	thousand to	$77	thousand
23	Over	$77	thousand to	$123	thousand
24	Over	$123	thousand to	$130	thousand
25		$130	thousand or more		
26		$49	thousand to	$72	thousand
27	Over	$72	thousand to	$88	thousand
28	Over	$88	thousand to	$141	thousand
29	Over	$141	thousand to	$150	thousand
30		$150	thousand or more		
31		$55	thousand to	$82	thousand
32	Over	$82	thousand to	$99	thousand
33	Over	$99	thousand to	$159	thousand
34	Over	$159	thousand to	$170	thousand
35		$170	thousand or more		
36		$61	thousand to	$91	thousand
37	Over	$91	thousand to	$110	thousand
38	Over	$110	thousand to	$176	thousand
39	Over	$176	thousand to	$180	thousand
40		$180	thousand or more		
41		$67	thousand to	$100	thousand
42	Over	$100	thousand to	$122	thousand
43	Over	$122	thousand to	$194	thousand
44	Over	$194	thousand to	$205	thousand
45		$205	thousand or more		
46		$73	thousand to	$109	thousand
47	Over	$109	thousand to	$133	thousand
48	Over	$133	thousand to	$212	thousand

49	Over	$212	thousand to	$220	thousand
50		$220	thousand or more		
51		$80	thousand to	$119	thousand
52	Over	$119	thousand to	$144	thousand
53	Over	$144	thousand to	$230	thousand
54	Over	$230	thousand to	$240	thousand
55		$240	thousand or more		
56		$85	thousand to	$128	thousand
57	Over	$128	thousand to	$155	thousand
58	Over	$155	thousand to	$248	thousand
59	Over	$248	thousand to	$260	thousand
60		$260	thousand or more		
61		$92	thousand to	$137	thousand
62	Over	$137	thousand to	$166	thousand
63	Over	$166	thousand to	$266	thousand
64	Over	$266	thousand to	$280	thousand
65		$280	thousand or more		
66		$98	thousand to	$146	thousand
67	Over	$146	thousand to	$178	thousand
68	Over	$178	thousand to	$284	thousand
69	Over	$284	thousand to	$300	thousand
70		$300	thousand or more		
71		$104	thousand to	$155	thousand
72	Over	$155	thousand to	$189	thousand
73	Over	$189	thousand to	$302	thousand
74	Over	$302	thousand to	$315	thousand
75		$315	thousand or more		

SECTION Q: ADULT HOUSEHOLD QUESTIONS

Q155

(ASK: IF Q153A_1 = 1)

Excluding cell phones, at any time, during the past 12 months, had your household been without telephone service for 24 hours or more?

01 Yes
02 No

Q155C

(ASK: IF Q153A_2 = 1)

Excluding landline phones, at any time, during the past 12 months, have you been without telephone service for 24 hours or more?

01 Yes
02 No

Section I: CHILD SCREENING QUESTIONS

(IF S13B=00, MISSING OR S12=00, MISSING, GO TO CLOSING)

PREPI90

Thank you for answering these questions about your own health.

These next questions focus on the health insurance coverage and health status of one child in your home. You will receive an additional $5 for participating in this portion of the survey.

01 Continue the Survey

FL_PI90

((ASK IF S13b_1=01) OR (S13b=01)) Earlier you said there is one child in your family. What is that child's first name, nickname, or initials?

(ASK IF S13b=02-20) We would now like to identify the child in your family, age 18 or younger, who had the most recent birthday. What is that child's first name, nickname, or initials?

PI90

(FL_PI90> = 01 and COLLECT <CH_NAME)

FIRST NAME OR INITIALS OF CHILD, 30 CHARACTERS

(DISPLAY IF S13B=02-20)

77 I'm not sure which child was born last

(IF MISSING, CODE <CH_NAME> = "the child")

PI90S

(ASK IF (PI90 = 77) AND (S13B=02-20))

That's okay. The next questions will focus on the health insurance coverage and health status of the youngest child in your home.

FL_PI90B

What is the first name, nickname, or initials of the youngest child in your home?

PI90A

(FL_PI90A> = 01 and COLLECT <CH_NAME)

FIRST NAME OR INITIALS OF CHILD, 30 CHARACTERS
(IF MISSING, CODE <CH_NAME> = “the child”)

CH_NAME

(HIDDEN FROM RESPONDENT)
(CREATE FILL FOR CHILD’S NAME)

0 the child
1 <PI90:0>
2 <PI90A:0>

CH_INFORM_1

(NEW_SCREEN)

All remaining questions will be about <CH_NAME>**.**

The next questions should be answered by the adult in this household who knows about <CH_NAME>'s health insurance coverage and health status.

This study is sponsored by Ohio State University and will take approximately 8 minutes. Your participation is voluntary, you do not have to answer any question you do not want to, and your responses to questions will be kept confidential.

01 Continue the survey
02 I do not know enough about <CH_NAME>’s health to continue (END INTERVIEW)

P148

What is <CH_NAME>'s gender?

01 Male
02 Female
03 Other

I90A

(MAKE QUESTION MANDATORY)

How old was <CH_NAME> on <FL_HISHERTHEIR> last birthday? If your child is less than 1 year old, enter ‘0’.

ENTER AGE, RANGE 0-25 Years

(IF AGE IS MORE THAN 18, then display message of “I´m sorry but the child interview is targeted at children 18 years old or younger. We are not able to do the child interview with you.” And DO NOT PAY ADDITIONAL $5 INCENTIVE)

I90B

What is your relationship to <CH_NAME>?

01 <CH_NAME>'s parent
03 <CH_NAME>'s grandparent
04 <CH_NAME>'s aunt or uncle
05 <CH_NAME>'s brother or sister
06 <CH_NAME>'s other relative
07 <CH_NAME>'s legal guardian
08 <CH_NAME>'s foster parent
09 <CH_NAME>'s other non-relative
10 <CH_NAME>'s stepparent

I95

These next few questions ask about some general information related to <CH_NAME>'s health insurance coverage.

Last week was <CH_NAME> covered by health insurance or some other type of health care plan?

01 Yes (GO TO SK_ENDI)
02 No

I95A

Health insurance or some other type of health care plan may include health insurance obtained through employment or purchased directly as well as Government programs such as Medicare, Medicaid, Healthy Start, or Healthy Families.

Keeping this in mind, last week was <CH_NAME> covered by health insurance or some other type of health care plan?

01 Yes, <CH_NAME> was insured
02 No, <CH_NAME> was <u>NOT insured</u>

SECTION J: CHILD INSURANCE COVERAGE

Employer-based Coverage

(IF I95A = 01, ASK SECTION J; IF I95A = 02, GO TO START OF SECTION K; IF I95A = MISSING, GO TO START OF SECTION L)

J96

(IF S13B=00, MISSING OR S12=00,MISSING, SKIP CHILD SECTION AND GO TO CLOSING)

(ASK IF: ((A1 = 01 OR A1A=01) AND (I95=01 OR I95A=01), ELSE GO TO J100A)

(IF MISSING, GO TO J100A)

Last week, was <CH_NAME>'s health insurance coverage the same as your health insurance coverage?

01 Yes
02 No (GO TO J100A)

J96A

So, the health insurance coverage that <CH_NAME> has is _$Recall (RECALL="through a current or former employer or labor union,", CONDITION="B4A=01") _$Recall (RECALL="Medicare,", CONDITION="B4B_R=01") _$Recall (RECALL="Medicaid,", CONDITION="B4C_R=01") _$Recall (RECALL="purchased directly,", CONDITION="B4E=01") _$Recall (RECALL="other health care coverage,", CONDITION="B4G=01") and it has the same benefits and covers the same services as your insurance, and <CH_NAME> does not have any other health insurance coverage. Is this correct?

01 Yes
02 No

J100A

(ASK IF: (J96=02, MISSING) OR (J96A=02, MISSING) OR (I95=01) OR (I95A=01) AND (J96=WR), ELSE GO TO J113)

These next questions ask for additional details about <CH_NAME>'s health insurance coverage.

Is <CH_NAME> covered by a health insurance plan through someone's current or former employer or labor union?

01 Yes
02 No

Medicaid Coverage

J100C

Ohio Medicaid is the state program that pays for medical insurance for people with low incomes. Medicaid may use managed care plans like CareSource, Buckeye, Molina, Paramount, and United Healthcare to provide services.

Is <CH_NAME> _$recall(recall= "also", condition="J100A=01") covered by Medicaid, the State of Ohio government health care program?

01 Yes
02 No

J100CA

(ASK IF: (J100C=1) OR (J96A=01 AND B4CA=03), ELSE GO TO J100B)

Which Medicaid program is <CH_NAME> covered by?

01 Healthy Families or Healthy Start
02 Medicaid For the Aged, Blind and Disabled or Waiver Programs
03 Medicaid Premium Assistance Program/ QMB / SLMB
97 Some other Medicaid program
98 I'm not sure

Coverage

J100B

(ASK IF J96a NE 01, ELSE GO TO J113)

Is <CH_NAME> _$recall(recall="also", condition="(J100A=01 or J100C=01)") covered by Medicare, the Federal government-funded health insurance plan for people 65 years and older or persons with certain disabilities?

01 Yes
02 No

J100B_R

(HIDDEN FROM RESPONDENT)

(PROGRAMMER - THIS VARIABLE SHOULD BE CALCULATED FROM PRIOR RESPONSES)
(CALCULATE J100B_R=J100B)

01 YES
02 NO

J100C_R

(HIDDEN FROM RESPONDENT)
(PROGRAMMER – THIS VARIABLE SHOULD BE CALCULATED FROM PRIOR RESPONSES)
(CALCULATED FROM J100C: SET TO SAME VALUE AS J100C)

01 YES
02 NO

J1002J

Is <CH_NAME> _$recall(recall="also", condition="(J100A=01 or J100C_R=01 or J100B_R=01)") covered through the Ohio Health Care Exchange, also known as Obama Care, or a healthcare.gov insurance plan?

01 Yes
02 No

J100E

Is <CH_NAME> _$recall(recall="also", condition="(J100A=01 or J100C_R=01 or J100B_R=01 or J1002J=01)") covered by any other health insurance purchased directly, that is, a plan not related to someone's current or past employment and not purchased through healthcare.gov?

01 Yes
02 No

Other State-sponsored or Public Health Insurance

J100F

(THIS QUESTION INTENTIONALLY OMITS THE FULL LIST THAT IS DISPLAYED ON THE CATI)

Is <CH_NAME> _$recall(recall="also", condition="(J100A=01 or J100C_R=01 or J100B_R=01 or J1002J=01 or J100E=01)") covered by the Bureau for Children with Medical Handicaps (BCMH) or any other state-sponsored or public health insurance program that has not already been covered?

01 Yes
02 No (GO TO J100G)

(IF MISSING GO TO J100G)

NJ100F1

What is the name of that program?

01 Bureau for Children with Medical Handicaps (BCMH)

02 Medicaid (i.e., CareSource, Healthy Start, Healthy Family, Job & Family Services)
03 Another program

Other Health Insurance

J100G

(THIS QUESTION INTENTIONALLY OMITS THE FULL LIST THAT IS DISPLAYED ON THE CATI)

Does <CH_NAME> _$recall(recall="also", condition="(J100A=01 or J100C_R=01 or J100B_R=01 or J1002J=01 or J100E=01 or J100F=01)") have any other health care coverage that has not already been mentioned?

01 Yes
02 No

J100CHK

(ASK IF: J100A= 01, J100B_R=01, J100C_R= 01, J100E=01, J100F=01, J100G=01, J1002J=01; ELSE GO TO J113)

To confirm, you said <CH_NAME> is covered by:

(FILL: IF J100A= 01 A health insurance plan through an employer or labor union
IF J100B_R=01 Medicare
IF J100C_R= 01 A Medicaid program
IF J100E=01 A private health insurance plan purchased directly
IF J100F=01 A state-sponsored or other public health insurance program
IF J100G=01 Other health care coverage
IF J1002J=01 The Ohio Health Care Exchange)

Is that correct?

01 Yes (GO TO J113)
02 No

J100U

(NOTE: NEW VARIABLE FOR 2021 TO BE ASKED IF RESPONDENT SAYS AT J100CHK THAT INSURANCE INFORMATION IS INCORRECT, TO AVOID HAVING TO 'LOOP' THE ENTIRE SECTION A SECOND TIME)

(DISPLAY ALL J100U SUBVARIABLES ON THE SAME SCREEN)

Okay, let us update this information. Below is a list of health insurance or health care plans. Please select "yes" if <CH_NAME> is covered by this type of insurance, or "no" if they are not.

J100U_1

A health insurance plan through a current or former employer or labor union?

01 Yes 02 No

(IF 01 (YES), SET J100A = 01 (YES))

J100U_2

Medicare, a program for people 65 years or older or with disabilities?

01 Yes 02 No

(IF 01 (YES), SET J100B_R = 01 (YES))

J100U_3

Medicaid, a program for people with low incomes?

01 Yes 02 No

(IF 01 (YES), SET J100C_R = 01 (YES))

J100U_4

A private insurance plan directly purchased from a health insurance company?

01 Yes 02 No

(IF 01 (YES), SET J100E = 01 (YES))

J100U_5

A plan purchased on the Ohio Healthcare Exchange or healthcare.gov?

01 Yes 02 No

(IF 01 (YES), SET J1002J = 01 (YES))

J100U_6

A plan through the Bureau for Children with Medical Handicaps (BCMH) or any other state-sponsored or public health insurance program?

01 Yes 02 No

(IF 01 (YES), SET J100F = 01 (YES))

J100U_7

Some other type of health plan not previously mentioned?

01 Yes 02 No

(IF 01 (YES), SET J100G = 01 (YES))

J113

How long has <CH_NAME> been covered by <FL_HISHER> current primary health insurance plan?

01 Less than 3 months
02 3 months to less than 1 year

03 1-2 years
(DISPLAY IF I90A > 1)

04 More than 2 years
(DISPLAY IF I90A > 2)

Previous Coverage

J116b

(ASK IF: (J113=01, 02), ELSE GO TO END OF SECTION J)

Just prior to <CH_NAME>'s current health insurance coverage, <FL_WASWERE> <FL_HESHE> covered by any health insurance plan?

01 Yes
02 No (GO TO SK_ENDJ)

(IF MISSING (GO TO SK_ENDJ))

J117

(ASK IF: (J116b = 01) OR (J96A=01 AND B4C_R=02,98,99)), ELSE GO TO J117B)

Just prior to <CH_NAME>'s current health insurance coverage <FL_WASWERE> <FL_HESHE> covered by Medicaid, the State of Ohio government health care program?

01 Yes (GO TO SK_ENDJ)
02 No

J117B

(ASK IF: (J117 = 02, MISSING) OR (J100C=01) OR (J96A=01 AND B4C_R=01), ELSE GO TO SK_ENDJ

Just prior to <CH_NAME>´s current health insurance coverage, <FL_WASWERE> <FL_HESHE> covered by a health insurance plan obtained through someone's employment or labor union?

01 Yes
02 No

SECTION K: CHILD CURRENTLY UNINSURED

Previous Coverage

K96_new

(ASK IF: (I95a=02, MISSING), ELSE GO TO L125)

These questions ask for more specific details about <CH_NAME>'s prior insurance coverage.

When was <CH_NAME> last covered by any type of health insurance plan?

01 Never
02 Less than 3 months
03 3 months to less than 1 year

04 1-2 years
(DISPLAY IF I90A > 1)

05 More than 2 years
(DISPLAY IF I90A > 2)

K99

(ASK IF: K96_NEW=02,03)

The last time <CH_NAME> had insurance, <FL_WASWERE> <FL_HESHE> covered by Medicaid, the State of Ohio government health care program?

01 Yes
02 No

K100

(ASK IF: (K99=02), ELSE GO TO END OF SECTION K)

The last time <CH_NAME> had health insurance, <FL_WASWERE> <FL_HESHE> covered by a health insurance plan obtained through someone's employment or labor union?

01 Yes
02 No

SECTION L: CHILD HEALTH STATUS

General Health

L125

These next questions ask about <CH_NAME>'s health.

In general, how would you describe <CH_NAME>'s health?

01 Excellent
02 Very Good
03 Good
04 Fair
05 Poor

L125a

Thinking about <CH_NAME>'s teeth and gums, would you say <CH_NAME>'s dental health is excellent, very good, good, fair, or poor?

01 Excellent
02 Very Good
03 Good
04 Fair
05 Poor

DEVICE_USE

(SKIP IF I90A <1)

The next question asks about screen time for things other than schoolwork. Screen time is the time that <CH_NAME> spends with cell phones, tablets, television, computers, video games, and other electronic devices.

On an average weekday, about how much screen time does <CH_NAME> usually have?

01 None
02 Less than 1 hour
03 1 to 2 hours
04 3 to 4 hours
05 5 to 6 hours
06 7 or more hours

Height and Weight

PL125A1

(ASK: (IF i90A>=6), ELSE GO TO L126H_2)

How tall is <CH_NAME> now?

PL125AP_F
ENTER FEET (RANGE 1-8) Feet

PL125AP_I
ENTER INCHES (RANGE 0-12) Inches

PL125A2P

How much does <CH_NAME> weigh now?

ENTER WEIGHT (RANGE 25-500) Pounds

Developmental Disability

L126H_2

The next questions are about any kind of health problems, concerns, or conditions that may affect <CH_NAME>'s behavior, learning, growth, or physical development.

Does <CH_NAME> currently have a developmental disability?

01 Yes
02 No

Need/Use of Health Care Services

L126A_NEW

(ASK IF I90A > 1)

Because of a physical, mental, or emotional condition lasting 6 months or more, does <CH_NAME> currently need or use medicine prescribed by a doctor or other health care professional, other than vitamins?

01 Yes
02 No

L126J_NEW

(SKIP IF I90A < 1)

Because of a physical, mental, or emotional condition lasting 6 months or more, does <CH_NAME> need or get special therapy, such as physical, occupational or speech therapy?

01 Yes
02 No

L126M_NEW

(SKIP IF I90A < 1)

Because of a physical, mental, or emotional condition lasting 6 months or more, does <CH_NAME> have any kind of emotional, developmental or behavioral problem for which <FL_HESHE> <FL_L126M: needs or gets/need or get> treatment or counseling?

01 Yes
02 No

LAS12

(SKIP IF I90A < 1)

Compared to other <I90A>-year-old children, would you say <FL_HESHE> <FL_LAS12: experiences/experience> any difficulty speaking, communicating, or being understood?

01 Yes
02 No

LAS1a

Has a doctor or other health professional ever told you that <CH_NAME> has asthma?

01 Yes
02 No

ACES

The next questions are about events that may have happened during <CH_NAME>'s life. These things can happen in any family, but some people may feel uncomfortable with these questions. You may skip any questions you do not want to answer. Please remember this information will not be shared with anyone and you will not be identified.

ACE_3

To the best of your knowledge, has <CH_NAME> ever experienced parents or guardians going through a divorce or separation?

01 Yes
02 No

ACE_4

To the best of your knowledge, has <CH_NAME> ever experienced the death of a parent or guardian?

01 Yes
02 No

ACE_5

To the best of your knowledge, has <CH_NAME> ever experienced a parent or guardian serving time in jail after <CH_NAME> was born?

01 Yes
02 No

ACE_6

To the best of your knowledge, has <CH_NAME> ever seen or heard parents or adults slap, hit, kick, punch one another in the home?

01 Yes
02 No

ACE_7

To the best of your knowledge, has <CH_NAME> ever been the victim of violence or witnessed violence in their neighborhood?

01 Yes
02 No

ACE_8

To the best of your knowledge, has <CH_NAME> ever lived with anyone who was mentally ill, suicidal, or severely depressed?

01 Yes
02 No

ACE_9

To the best of your knowledge, has <CH_NAME> ever lived with anyone who had a problem with alcohol or drugs?

01 Yes
02 No

ACE_10

To the best of your knowledge, has <CH_NAME> ever been treated or judged unfairly because of their race or ethnic group?

01 Yes
02 No

Child Functional Impairment for Children and Adolescence

LAS12A

(ASK IF I90A>5 to I90A<12)

Now, thinking about <CH_NAME>'s mental health, which includes stress, depression, and problems with emotions, for how many days, during the past 30 days did a mental health condition or emotional problem keep <CH_NAME> from participating in school, social relationships with friends, or other usual activities?

ENTER NUMBER OF DAYS (RANGE 0-30)

LAS12B

(ASK IF I90A>11)

Now, thinking about <CH_NAME>'s mental health, which includes stress, depression, and problems with emotions or substance use, for how many days, during the past 30 days did a mental health condition or emotional problem keep <CH_NAME> from participating in school, social relationships with friends, or other usual activities?

ENTER NUMBER OF DAYS (RANGE 0-30)

SECTION M: CHILD UTILIZATION AND QUALITY OF CHILD HEALTH CARE SERVICES

M131

These next questions ask about <CH_NAME>'s use of health care services.

Not including overnight hospital stays, visits to hospital emergency rooms, home visits, or telephone calls, about how long has it been since <CH_NAME> last saw a doctor or other health care professional about <FL_HISHER> health?

01 Within the last 12 months
02 More than 12 months ago
03 <CH_NAME> has never been to a doctor

M131C_Tele

Telehealth is defined as having a health care or counseling visit without going to a healthcare office using a phone, smartphone, or computer.

Considering the past 12 months, how often has <CH_NAME> had a telehealth visit with a doctor, nurse, or other health care provider?

01 Never
02 1 or 2 times
03 3 or 4 times
04 More than 4 times

Well-baby Checkup

M130

(ASK IF M131=01,MISSING)

(USE THIS VERSION IF I90A=00) Since <FL_HISHER> birth did <CH_NAME> receive a well-baby checkup, that is a general checkup when <FL_HESHE> <FL_WASWERE> not sick or injured?

(USE THIS VERSION IF I90A>=01) During the past 12 months did <CH_NAME> receive a well-child checkup, that is a general checkup when <FL_HESHE> <FL_WASWERE> not sick or injured?

01 Yes
02 No

Dental Care

M135

(ASK IF I90A > 1)
About how long has it been since <CH_NAME> last visited a dentist?

01 Within the last 12 months
02 More than 12 months ago
03 <CH_NAME> has never been to a dentist

N067

Does <CH_NAME> have any insurance that covers dental bills?

01 Yes
02 No

SECTION N: CHILD ACCESS TO CARE

N136

The next questions are about access to health care for <CH_NAME>.

When <CH_NAME> is sick or needs advice about <FL_HISHER>health, <DO_DOES> <FL_HESHE> usually receive care at one place, more than one place, or no place at all?

01 One place
02 More than one place
03 No place at all

(IF MISSING, GO TO END OF SECTION N)

N136A

(ASK IF: (N136=01, 02), ELSE GO TO END OF SECTION N)

Is the place where <CH_NAME> usually receives care or advice about <FL_HISHER> health... (choose one)

01 A doctor's office or health center, including by phone or video call
02 A hospital emergency room
03 An urgent care center, including by phone or video call
04 A clinic in a pharmacy or grocery store
05 Some other place

N137B

(ASK IF: (N136=01, 02), ELSE GO TO END OF SECTION N)

A personal doctor or nurse is a health professional who knows <CH_NAME> well and is familiar with <CH_NAME>'s health history. This can be a general doctor, a pediatrician, a specialist doctor, a nurse practitioner, or a physician´s assistant.

Do you have one or more persons you think of as <CH_NAME>'s personal doctor or nurse?

01 Yes, one person or more than one person
02 No (GO TO THE END OF SECTION N)

(IF MISSING, GO TO END OF SECTION N)

Care Coordination

J108

(ASK IF: ((N137B=01) AND L126a_new=01 or L126j_new=01 or L126m_new=01 or LAS12=01), ELSE GO TO END OF SECTION N)

During the past 12 months, was there any time <CH_NAME> needed professional help coordinating care or coordinating referrals among different health care providers and services that <CH_NAME> uses?

01 Yes
02 No (GO TO END OF SECTION N)

(IF MISSING, GO TO END OF SECTION N)

J108B

(ASK IF: J108=01)

During the past 12 months, how often did you get as much help as you wanted with arranging or coordinating care for <CH_NAME>?

01 Always
02 Usually
03 Sometimes
04 Rarely
05 Never

SECTION O: CHILD UNMET HEALTH NEEDS

Dental Care

These next questions ask about healthcare needs <CH_NAME> may have had, and whether or not they were able to access these health care services.

O139_1

_$Recall (RECALL="Has there been", CONDITION="I90A=00")_$Recall (RECALL="During the past 12 months, was there", CONDITION="I90A>00") a time when <CH_NAME> needed dental care?

01 Yes, <CH_NAME> needed dental care
02 No, <CH_NAME> did not need dental care

O139_2

(ASK IF O139_1 = 01)

Was <CH_NAME> able to get the dental care that they needed?

01 Yes, <CH_NAME> got the dental care needed
02 No, <CH_NAME> did not get the dental care needed

O139_MH_1

(ASK ONLY IF I90A > 11)

During the past 12 months, was there a time when <CH_NAME> needed mental or emotional health care or counseling services?

01 Yes, <CH_NAME> needed mental health care or counseling
02 No, <CH_NAME> did not need mental health care or counseling

O139_MH_2

(ASK IF O139_MH_1 = 01)

Was <CH_NAME> able to get the mental or emotional health care or counseling services that they needed?

01 Yes, <CH_NAME> got the mental health care or counseling needed
02 No, <CH_NAME> did not get the mental health care or counseling needed

AVOID_CARE_C

During the past 12 months, did you delay or avoid getting care that you felt <CH_NAME> needed because of the cost?

01 Yes
02 No

SECTION P: CHILD DEMOGRAPHICS

P149

The next few questions are just for general classification purposes.

Is <CH_NAME> of Hispanic, Latino, or Spanish origin?

01 Yes
02 No

P150

Which one or more of the following would you say is <CH_NAME>'s race? *Please select all that apply.*

01 White
02 Black or African American
03 Asian
04 Native American, American Indian, or Alaskan Native
05 Native Hawaiian or Pacific Islander
06 Hispanic, Latino, Spanish
97 Some other race

P150A

(IF SELECTED MORE THAN ONE OPTION IN P150)

(PROGRAMMER: PLEASE LIMIT RESPONSE CHOICES TO THOSE SELECTED IN P150)

Which of these groups would you say best represents <CH_NAME>'s race?

01 White
02 Black or African American
03 Asian
04 Native American, American Indian, or Alaskan Native
05 Native Hawaiian or Pacific Islander
06 Hispanic, Latino, Spanish
97 Some other race

P151

Are either of <CH_NAME>'s parents employed?

01 Yes
02 No

CLOSING

INCENT

Thank you for completing the survey. To thank you for your participation, we would like to send you an electronic gift card for <VALUE>.

Would you provide your email address to receive your electronic gift card?

01 Will give email address
97 I would prefer to receive a check instead of an electronic gift card
99 I do NOT want to receive a gift card or a check

EMAIL1

(ASK IF INCENT = 01)

Please enter your email address:

01 ENTER EMAIL

EMAIL2

(ASK IF EMAIL = 01)

To be sure we are sending the electronic gift card to the right email address, please confirm your email address by entering it a second time:

01 ENTER EMAIL

(IF EMAIL AND EMAIL2 MATCH, GO TO EMAIL THANKS)
(IF EMAIL AND EMAIL2 DO NOT MATCH, GO TO EMAILCHECK)

EMAILCHECK

The emails you entered do not match. Please click "Next" to re-enter your email address.

01 Next (GO BACK TO EMAIL)

ADDRESS

(ASK IF INCENT = 02)

Please provide your contact information so we may send you your $10/15. This information will not be connected with your answers in the survey.

Full Name [50 CHARACTER TEXT BOX]

Address	[50 CHARACTER TEXT BOX]
Apartment	[50 CHARACTER TEXT BOX]
City	[50 CHARACTER TEXT BOX]
State	[AUTOFILL WITH OHIO]
ZIP	[5 DIGIT TEXT BOX]

EMAILTHANKS

(IF INCENT = 01)
(NOTE: TITLE OF EMAIL HAS CHANGED. ALERT JERRY C. FOR PROGRAMMING)

Thank you for providing us with your e-mail address. You will receive an e-mail shortly that will inform you of the approximate delivery time of your electronic gift card. We appreciate your willingness to participate in our survey. You may need to check your junk mail folder for an email titled "Thank you for participating in the Ohio Medicaid Assessment Survey."

ADDRESSTHANKS

(IF INCENT = 02)

Thank you for providing us with your information. It can take up to 4 weeks to receive the check. We appreciate your willingness to participate in our survey.

01 Next

THANKS

We would like to thank you again for your participation. Is it ok if we contact you with follow-up questions?

01 Yes
02 No

Appendix B. Pilot Test Report

July 21, 2021

2021 Ohio Medicaid Assessment Survey

CATI Pilot Test Report

Prepared for

Ohio Colleges of Medicine Government Resource Center
Attn: Timothy R. Sahr
157 Pressey Hall
Columbus, OH 43210
Telephone: (614) 366-3175
E-mail: timothy.sahr@osumc.edu

Prepared by

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3040 E. Cornwallis Road
Research Triangle Park, NC 27709

RTI Project Number 0217891.000.004

RTI INTERNATIONAL

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Appendixes

1. Objectives of the 2021 OMAS CATI Pilot Test

RTI International and the Government Resource Center (GRC) at the Ohio State University (OSU) conducted a Pilot Test of the computer-assisted telephone interviewing (CATI) component of the 2021 Ohio Medicaid Assessment Survey (2021 OMAS).[1] This report describes the methods and results of the Pilot Test. The 2021 OMAS Pilot Test was conducted under the supervision of the OMAS Executive Committee, which consists of leadership from the state agencies participating in OMAS (Ohio Medicaid, Ohio Department of Health, Ohio Department of Aging, Ohio Department of Mental Health), GRC, and RTI.

The primary purpose of the 2021 OMAS Pilot Test was to replicate the conditions for full-scale survey data collection. The Pilot Test sample was a random subset of the cellphone sample selected for the main survey. The 2021 OMAS survey instrument was specified and programmed for computer-assisted telephone interviewing (CATI) for the Pilot Test. All other survey protocols designed for the main study, including interviewer training, data collection procedures, and data management routines, were developed in time to be implemented in the Pilot Test. The objectives of the Pilot Test were to test the accuracy of the CATI program, assess questionnaire flow and response burden, evaluate respondent understanding of questionnaire and survey terms, identify potential fielding issues, and develop an improved understanding of interviewer training needs.

The Pilot Test and main study had several methodological differences. The Pilot Test was conducted over 7 days, and therefore a more restricted call-attempt protocol was implemented. The Pilot Test was conducted only in English, only with the cellphone sample, and with no attempts to convert refusals. Given these methodological differences, the results of the 2021 OMAS Pilot Test cannot be projected to the general population of Ohio. This restriction does not limit the utility of the results in answering the objectives outlined above.

The remainder of this report is organized into the following sections:

- **Sample**: Section 2 outlines how the OMAS sample was framed and drawn for the pilot and how it was managed to fulfill the requirements.
- **Instrument Development:** Section 3 outlines the process undertaken to develop the 2021 OMAS data collection instrument.
- **Data Collection**: Section 4 details the location, date, and time of the training; the number of people trained; and the topics covered during the training.
- **Results**: Section 5 outlines issues with the CATI instrument (including wording/flow, respondent understanding, interviewer administration, open-ended responses, and nonresponses) and includes data on interview time by module, breakoffs, and item nonresponse.
- **Interviewer Comments and Recommendations**: Section 6 summarizes feedback received from Pilot Test interviewers and supervisors during debriefing sessions and presents recommendations to address identified issues.

[1] Please note that there is also a computer-assisted web interviewing (CAWI) component of the OMAS Pilot Test. However, the data in this report pertains specifically to the findings of CATI component of the OMAS Pilot Test. Data from the CAWI component will be submitted in a separate deliverable.

2. Sample

2.1. Sample Frame

The pilot sample frame consisted of the cellular random-digit-dial (RDD) frame of Ohio cellphone numbers. The sample was randomly selected from all cellphone numbers with an Ohio area code. For the pilot sample, 10,000 numbers were selected. To improve the efficiency of the sample, each number had an activity flag appended to it that designated the status for the past month as active, inactive, or unknown. Cellphone numbers flagged as inactive (28%) were screened out as ineligible for the study. Therefore, 7,161 cellphone numbers were loaded to Voxco for the pilot.

2.2. Disposition of Pilot Sample

There were 26 completed interviews in the pilot. Appendix A presents the final disposition for all 7,161 released, sampled cellphone numbers.

3. Instrument Development

Before pilot testing, the instrument went through multiple review and internal testing stages. The 2019 OMAS instrument was used as a starting point for the 2021 OMAS instrument. The instrument was initially reviewed by stakeholders from the state of Ohio during a series of meetings facilitated by GRC. During these meetings, the 2019 OMAS instrument was significantly modified: questions were deleted, added, revised, and reworded, and question logic was also modified. This resulted in the first version of the 2021 OMAS instrument specifications, which RTI then built into a CATI instrument using Voxco.

After the instrument was created in Voxco, RTI began internal testing, with special emphasis on testing for logic-related issues. During this period, when logic-related issues were found, RTI and GRC met to rectify the issues, update the specifications, and then update the instrument accordingly. Simultaneously, RTI worked closely with the OMAS Executive Committee to identify survey construct issues and ways that questions could be potentially improved. During this period of collaborative review and internal testing, as the instrument was modified, successive versions of the instrument specifications were created. Ultimately, version 29 of the instrument was piloted. After the Pilot Test completed, versions 30-32 were created that contained successive post-pilot updates that were reviewed with and approved by GRC. Version 34 is the final version that was fielded for the main study.

4. Data Collection for the 2021 OMAS Pilot Test

This section describes the data collection and training protocol of the 2021 OMAS Pilot Test, including the dates and times of all training activities.

4.1. Training

RTI conducted 2021 OMAS pilot training on June 14, 2021. The 2021 OMAS Data Collection Trainers led the training sessions with assistance from quality and supervisory leads assigned to the project. Eight interviewers and six supervisors participated in and successfully completed the pilot training.

Interviewers had to complete training and certification before beginning "live" calling. Experienced interviewers attended an 8-hour CATI training/project training. Topics covered during project training focused heavily on the survey's background and structure, study-specific protocols and procedures, pronunciation, and answers to frequently asked questions.

During training, interviewers participated in two round-robin mock interviews and a paired-practice mock interview. Pilot certification involved completing a background quiz and two oral quizzes and successfully attending and participating in training sessions and exercises. Interviewers had to score 80% on the background quiz and 100% on both oral quizzes to become certified and begin calling. ***Table 4-1*** shows the 2021 OMAS pilot training agenda.

Table 4-1. 2021 OMAS Pilot Training Agenda

Evening 1: Project/CATI Training Agenda	
15 minutes	Welcome
20 minutes	System security protocols for accessing CATI system
15 minutes	CATI training, disposition coding review
80 minutes	Project training, general interviewing review
15 minutes	BREAK
60 minutes	Round-robin (adult instrument only)
20 minutes	Paired practice
15 minutes	Logging off properly
Evening 2: Project/CATI Training Agenda	
5 minutes	Q&A sessions
15 minutes	Emotional distress and sensitivity
30 minutes	Round robin (adult w/ child)
55 minutes	Paired practice
15 minutes	BREAK
15 minutes	HIPAA training
10 minutes	Respondent rights, confidentiality agreements
40 minutes	Paired practice
35 minutes	Certification quizzes: Oral FAQ quiz Oral pronunciation quiz
10 minutes	Wrap-up

4.2 Location and Dates of the OMAS Pilot Test

Interviewing for the pilot started on June 14, 2021, and continued through June 25, 2021. All telephone interviewing took place at RTI's Research Operations Center in Raleigh, North Carolina.

Pilot Testing was completed using English-language versions of the instrument for the cellphone sample; the goal was to complete approximately 50 interviews.

The OMAS telephone interviewers made calls from 9:00 am to 9:00 pm on weekdays, 9:30 am to 6:00 pm on Saturday, and 1:00 pm to 9:00 pm on Sundays. At the conclusion of interviewing, RTI had obtained 26 completed interviews.

5. Results of the 2021 OMAS Pilot Test

This section describes the results of the 2021 OMAS Pilot Test, including instrument timing, breakoffs, and item nonresponse.

5.1. Instrument Timing

The mean interview time for all cases of the 2021 Pilot Test was 35.42 minutes, with a median time of 33.72 minutes. The minimum interview length was 26.03 minutes, and the maximum interview time was 54.81 minutes. The median completion time of 33.72 minutes on this 2021 Pilot compares to 28.16 minutes on the 2019 OMAS.

The mean interview time for cases administered for the adult questionnaire was 32.65 minutes, with a median time of 31.63 minutes. The minimum interview length for cases administered the adult questionnaire was 26.03 minutes and the maximum interview time was 40.70 minutes. The median completion time of 31.63 minutes on this 2021 Pilot compares to 25.62 minutes on the 2019 OMAS.

There were 6 cases on the pilot with a child interview. The mean interview time for cases administered both the adult and child questionnaires was 45.03 minutes, with a median time of 43.4 minutes. The minimum interview length for case administered both the adult and child questionnaires was 37.54 minutes and the maximum interview time was 54.81 minutes. The median completion time of 43.4 minutes on this 2021 Pilot compares to 36.07 minutes on the 2019 OMAS.

Table 5-1 below shows the mean and distributional interview times for the overall instrument as well as by module.

Table 5-1. Interview Time by Module

Module	Number of Interviews	Interview Time (in Minutes)							
			Percentiles						
		Mean	0	10	25	50	75	90	100
S - Screening Module	26	3.45	2.37	2.62	3.03	3.35	3.78	4.45	5.00
A - Current Insurance Status	26	0.38	0.25	0.28	0.32	0.34	0.37	0.68	0.77
B - Currently Insured Adult	25	3.72	1.33	2.13	3.03	3.62	4.52	5.13	6.35
C - Currently Uninsured Adult	1	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
D - Adult Health Status and Care Giving	26	8.09	6.28	6.53	6.93	7.77	8.77	10.57	11.27
E - Utilization and Quality of Adult Health Care Services	26	1.82	1.15	1.53	1.68	1.74	1.90	2.17	2.77
F - Sources of Care and Determinants	26	5.59	3.67	3.95	4.25	5.12	6.40	7.75	12.00
G - Employment	26	1.74	0.35	1.02	1.15	1.75	2.17	2.55	2.82

Module	Number of Interviews	Interview Time (in Minutes)							
		Mean	Percentiles						
			0	10	25	50	75	90	100
H - Adult Demographics and Family Income	26	4.82	3.05	3.33	3.75	4.71	5.45	6.45	8.93
Q - Household Questions	26	0.30	0.23	0.25	0.25	0.27	0.33	0.38	0.62
I - Screening Questions for Eligible Child	6	1.97	1.47	1.47	1.63	1.77	1.95	3.22	3.22
J - Child's Insurance Coverage	5	1.85	0.75	0.75	0.88	1.07	2.72	3.82	3.82
K - Child Currently Uninsured	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
L - Health Status of Child	5	5.12	2.72	2.72	4.35	5.30	6.47	6.78	6.78
M - Utilization and Quality of Child Health Care Services	5	1.88	1.37	1.37	1.73	1.78	1.98	2.52	2.52
N - Access to Care for Child	5	1.60	1.05	1.05	1.05	1.45	1.58	2.87	2.87
O - Unmet Health Needs	5	0.74	0.45	0.45	0.57	0.62	0.88	1.20	1.20
P - Child's Demographics	5	0.84	0.70	0.70	0.70	0.82	0.82	1.17	1.17
CL - Closing Module	26	2.88	0.72	1.77	2.30	2.66	3.23	4.38	5.68
Average Total Adult	**26**	**32.65**	**26.03**	**27.25**	**28.95**	**31.63**	**36.52**	**38.63**	**40.70**
Average Total Child	**6**	**11.99**	**1.78**	**1.78**	**10.87**	**14.03**	**14.33**	**16.92**	**16.92**
Average Total (Adult and Child respondents)	**6**	**45.03**	**37.54**	**37.54**	**37.60**	**43.40**	**53.44**	**54.81**	**54.81**
Average Total	**26**	**35.42**	**26.03**	**28.51**	**29.58**	**33.72**	**38.36**	**45.53**	**54.81**

5.2. Breakoffs

There was a total of four breakoffs in the pilot study that were left incomplete. Only one breakoff happened when the interviewer reached the child section of the interview. In other words, the adult instrument is considered complete for these interviews, but the child instrument is partially complete. Two of the breakoffs occurred during the insurance module. The remaining breakoff occurred during the employment module. (see ***Table 5-2***).

Table 5-2. Interview Breakoffs by Section, Question, Number of Breakoffs, and Interviewer Notes

Section	Question	Number of Breakoffs	Disposition Codes	
			TEMPRESULT	LAST CALL RESULT
B	B4C	1	Hung up	Hung up
	B4I	1	Refusal by Subject	Refusal by Subject
G	G77C	1	Appointment by subject (hard)	Appointment by subject (hard)
L	ACES_3	1	Refusal by Subject	Refusal by Subject

6. Interviewer Comments and Recommendations

Interviewers reported an overall positive experience with the pilot survey. No major issues were reported, and the staff expressed optimism about the main study. Interviewers had limited opportunities to experience a breadth of circumstances in the pilot study due to the small sample size and short timeline.

Interviewer and supervisor feedback and recommendations/actions are summarized below:

1. **Issue**: The median length of the 2021 OMAS Pilot Test was substantially longer (approximately 8 minutes more) than the 2019 OMAS Pilot Test. This longer completion time lends to concerns of satisficing and breakoff.
    - **Recommendation**: Reduce the length of the instrument to more closely mirror that of the 2019 instrument.

2. **Issue**: Reading “this is not a scam” in question LEAD_IN1 caused potential respondents to hang up upon hearing the word “scam”.
    - **Recommendation**: Remove “This is not a scam or sales call” from the question text.

3. **Issue**: One interviewer noted that multiple respondents who called in on a cell phone seemed hesitant to answer question CELL_RESP, which asks the respondent to confirm that they have called on either a landline or cell phone.
    - **Recommendation**: Consider adding additional, optional text to explain why this question is being asked if a respondent is hesitant to provide an answer that emphasizes that this number will not be shared with other parties and is used exclusively for purposes of the study.

4. **Issue**: Interviewers noted that respondents strongly disliked question S18, which asks respondents who select ‘Hispanic’ as their race whether they are ‘White Hispanic’, ‘Black Hispanic’, ‘Asian Hispanic’, etc.
    - **Recommendation**: Remove this question.

Appendix A: Sample Dispositions

Table A-1. Distribution of Disposition Codes for the 2021 OMAS Pilot

Disposition Code	Disposition Description	Count	Percent
1A	Ans Machine w/o Subject Name	188	2.63
1B	Busy / All circuits busy	25	0.35
1H	Hung up	401	5.60
1L	Line Trouble	58	0.81
1M	Answering Machine, Left Message	895	12.50
1N	Ring, no answer	452	6.31
1S	Ans Machine w/Subject Name	32	0.45
2O	Appointment by other (soft)	37	0.52
2S	Appointment by subject (hard)	13	0.18
3O	Refusal by Other (gatekeeper)	34	0.47
3S	Refusal by Subject	12	0.17
6S	Language barrier - Spanish	3	0.04
CC	Interview Complete	25	0.35
CR	Adult Interview Complete, Child Interview Refused	1	0.01
IA	All Residents Under 18 (Age Ineligible)	8	0.11
IB	Business (not a dwelling unit or household)	31	0.43
IL	Blocked Line/Pay phone	70	0.98
IM	Mobile/Cell phone (if it is a land line sample)	1	0.01
IS	Subject is Ineligible	8	0.11
IT	(Temporarily) Disconnected	185	2.58
IW	Nonworking # (wrong or bad phone #)	6	0.08
RH	Final refusal - hostile	3	0.04
UC	Unable to Contact Subject	11	0.15
	No Attempt	4,662	65.10

Appendix C. ABS Materials

OMAS
Ohio Medicaid Assessment Survey

<<*CaseID*>> <<StageID>>-<<Control#>>
<<COUNTYNAME2>> County Resident
<<ADDRESS_1>>
<<ADDRESS_2>>
<<CITY>>, <<STATE>> <<ZIPCODE>>

Dear <<COUNTYNAME2>> County Resident:

Congratulations, you've been selected to participate in The Ohio Medicaid Assessment Survey! By completing this survey, you will help local and state agencies improve health services across Ohio. **All your answers will be confidential**. For your participation, **you will receive a $10 Visa electronic prepaid card.** We have included $2 in this envelope as a thank you for your help. The survey should be completed by the adult, 19 years or older, who lives in this household and had the most recent birthday.

Visit our **survey website** to take the survey now:

Type **OSUSurvey.com** into your browser **OR** Scan this QR code:

Then Enter your Survey Access Code: **«Pin»**

We hope you will consider sharing your experiences with us. If you have any questions or concerns about the study or if you feel that you have been harmed as a result of this study, you may call The Ohio State University 1-833-947-2577 or visit OSUSurvey.com.

Sincerely,

Timothy Sahr, Principal
Director of Research and Analytics
Ohio Colleges of Medicine Government Resource Center at
The Ohio State University

OMAS
Ohio Medicaid Assessment Survey

Ohio Medicaid Assessment Survey
PO BOX 12728
Columbus, Ohio 43212

DO NOT FORWARD

Please help us help local and state agencies improve health services across Ohio. Open this postcard to learn how you can participate in our important survey and get **$10.**

OMAS
Ohio Medicaid Assessment Survey

A few days ago, we mailed you a letter containing **$2** in cash and an invitation to complete an important survey.

If you or someone else living with you already completed the survey – *thank you*.

If not, please complete your survey today.
It should be completed by the adult with the most recent birthday.

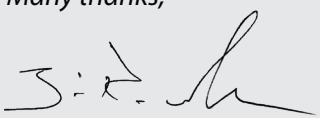
The survey is easy and may be completed online:

To access the survey:
Survey Website **OSUSurvey.com**
Survey Access Code: <<**PIN**>>

You will receive **$10** for completing the survey.

If you have any questions, please visit **www.OSUSurvey.com** or call **833-947-2577**. We look forward to hearing from you.

Many thanks,



Timothy Sahr, Principal
Director of Research and Analytics
Ohio Colleges of Medicine Government
Resource Center at The Ohio State University

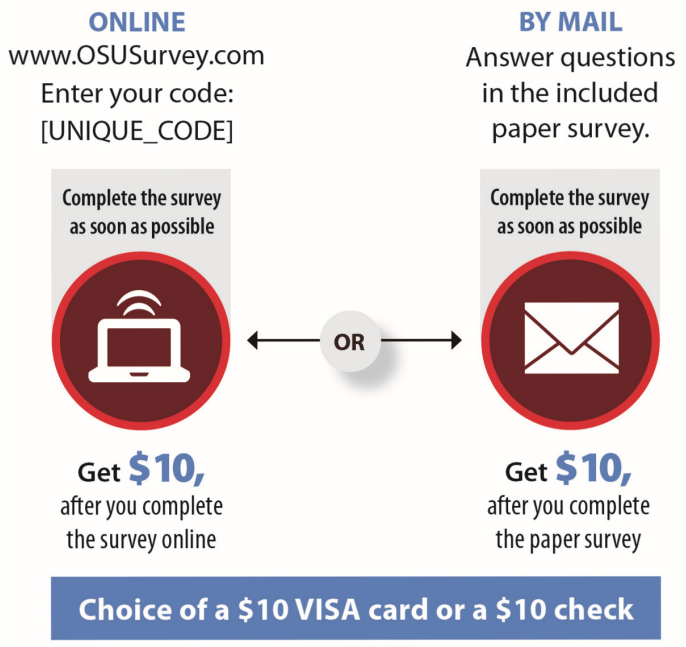
OMAS
Ohio Medicaid Assessment Survey

<<SYMPH_CaseID_Barcode>> <<StageID>>-<<Control#>>
<<COUNTY_NAME>> County Resident
<<ADDRESS_1>>
<<ADDRESS_2>>
<<CITY>>, <<ST>> <<ZIP>>

Dear COUNTY_NAME County Resident:

Ohio is a large state with many healthcare resources. Yet, we know that Ohio faces many health challenges. I have a favor to ask: could I have a few minutes of your time? A couple of weeks ago, we invited you to take part in an important survey. The responses from this survey help local and state agencies improve health services across Ohio and we would like to hear from you. Your participation is important so that your voice can be heard and represented.

The survey is easy and may be completed in one of two ways:



Participation is voluntary, and all of your answers will be kept private and confidential. This survey is sponsored by The State of Ohio and will take approximately 20 minutes. If you have questions or concerns about the study, you may call The Ohio State University/RTI International at 1-833-947-2577 or visit grc.osu.edu/OMAS.

Sincerely,

Timothy Sahr, Principal
Director of Research and Analytics
Ohio Colleges of Medicine Government Resource Center at
The Ohio State University

OMAS
Ohio Medicaid Assessment Survey

Ohio Medicaid Assessment Survey
PO BOX 12728
Columbus, Ohio 43212

DO NOT FORWARD

FOLD

FOLD

Please help us help local and state agencies improve health services across Ohio. Open this postcard to learn how you can participate in our important survey and get **$10.**

OMAS
Ohio Medicaid Assessment Survey

We have been trying to reach you with an invitation to complete an important survey.

If you or someone else living with you already completed the survey – ***thank you***.

If not, please complete your survey today.

It should be completed by the adult with the most recent birthday.

The survey is easy and may be completed one of two ways:

FOLD

FOLD

1. Access the survey online:
Survey Website **OSUSurvey.com**
Survey Access Code: <<**PIN**>>

OR

2. You may also respond by completing and mailing back the paper survey we sent to you earlier this month.

If you have any questions, please visit **www.OSUSurvey.com** or call **833-947-2577.** We look forward to hearing from you.

Many thanks,

Timothy Sahr, Principal
Director of Research and Analytics
Ohio Colleges of Medicine Government
Resource Center at The Ohio State University

OMAS
Ohio Medicaid Assessment Survey

Appendix D. Interviewer Training Manual

Ohio Medicaid Assessment Study (2021 OMAS)

Telephone Interviewer Manual

RTI Project No.0217102

Prepared by:

RTI International
www.rti.org

2021

Ohio Medicaid Assessment Survey
(2021 OMAS)

Telephone Interviewer Manual

RTI Project No. 0217102

Prepared by:

RTI International
www.rti.org

2021

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1. Introduction

1.1 Background and Purpose

The State of Ohio is sponsoring the 2021 *Ohio Medicaid Assessment Survey* (2021 OMAS). The 2021 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 2021 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 2021 OMAS is similar to surveys conducted in every two years since 2004. 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 2021 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 30,000 adults (19 years of age and older) living in Ohio. Approximately 7,500 of these interviews will include a child's proxy interview. The target population for the 2021 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 2021 OMAS sampling plan consists of a listed landline sample, a RDD sample of cell phone numbers, and an address-based frame. The sample allocates half the targeted interviews to the landline and cellphone sample and half to the address-base sample. Within the telephone samples, 90% of interviews will be conducted with a cellphone and 10% with a landline telephone number.

The landline sample frame will be stratified by Ohio's 88 counties. The sample will be allocated proportionally to each county. If the expected number of respondents for a county based on the proportional allocation is less than 5 the allocation will be set to 5. The target for the remaining counties will be reduced in order to maintain the total desired interviews. The cellphone frame will be stratified, within each county, based on whether an address is known for the cell phone number or not. This will yield 176 strata (two strata in each of the 88 counties) . Because listed cellphone sample will be used, phone numbers with area codes not assigned to Ohio will be included in the sample (when they are linked to an Ohio address). These out-of-state cellphone numbers will be included in the "listed" cellphone strata. The sample will be proportionally allocated to each county. If the expected number of respondents for a county based on the proportional allocation is less than 25 the allocation will be set to 25. The target for the remaining counties will be reduced in order to maintain the total desired interviews.

The address-based sample will be stratified by the 88 counties in Ohio. Within each county additional strata may be created in order to better target households containing African Americans or low-income persons. In total, there will be 144 strata. Sample will be allocated proportionally to each county. If the expected number of respondents for a county based on the proportional allocation is less than 75 the allocation will be set to 75. The target for the remaining counties will be reduced in order to maintain the total desired interviews.

The telephone sample file will be randomly divided into replicates for release to you, the telephone interviewers, to achieve approximately 15,000 completed interviews: 1,500 from landline telephone numbers and 13,500 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 2021 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).

The address-based sample will be randomly divided into 3 waves. Invitations will be sent by mail to each sampled address. The mailed invitation will invite a random adult in the household to either take the survey through the web or to call-in to take the survey by phone. If a person chooses to call-in to take the survey, the CAWI instrument will be used to conduct the survey. If a person will be identified as ineligible if they indicate:

- They live outside of Ohio
- Are 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 2021 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 to any of the questions, the survey will skip to the end.

1.4.4 Adult Proxy for Impaired Adults

The 2021 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 adjust the questions to be asked of the proxy for the selected respondent.

1.5 Data Collection Schedule

A small pilot study was fielded in June of 2021. Full study data collection will take place for 5 months from mid-July to mid-December 2021.

1.6 Project Staff

The administrative Principal Investigator for the 2021 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. Nicole Lee is the Project Assistant Director, she is responsible for the overall administration of the project. Marcus Berzofsky is the Statistician who is responsible for sampling, weighting, and data analysis and reporting. Dave Schultz is the project's Programmer 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. Timothy Nesius and Meagan Brackin are the Production Leads. Armando Molina Orellana, Jay Yelverton, Jerry Robinson and Carolina Valenzuela are the project's Production Shift Supervisors and will oversee most production floor activities. Amie Lynch is the Production Shift Supervisor who will oversee most monitoring activities.

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2. Telephone Interviewer Responsibilities and Expectations

2.1 Telephone Interviewer Responsibilities

As a member of the 2021 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 (2021 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 2021 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 2021 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.

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.

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.

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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 2021 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 2021 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

STAFF CONFIDENTIALITY AGREEMENT

(HR Directions employees working on the Ohio Medicaid Assessment Study)

I,_____ *(print employee's name),* an employee of HR Directions, an independent contractor utilized by RTI, agree to work on all RTI projects 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 RTI and that these terms are supplementary to those listed in my contract of employment with HR Directions.

a. I affirm I have watched the Health Insurance Portability and Accountability Act (HIPPA_

b. I agree to treat as confidential all case-specific information obtained any RTI project 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 RTI.
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 workstation, 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.

- **Listen carefully**. 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, yet professional, 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 FAQs' 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 2021 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 1-833-947-2577. This will ensure that their call gets routed to an interviewer working on the 2021 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 2021 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 2021 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 1-855-322-2826. You may also call a representative from the State of Ohio at 1-614-466-3543.

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

You may call my supervisor, T.J. Nesius, at RTI's Research Operations Center at 1-800-334-8571, extension 66559 to verify my employment.

Exhibit 4.1 2021 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 1-833-947-2577to 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 2021 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.

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5. Sensitivity Training

5.1 Sensitive Issues in 2021 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. If you encounter a distressed respondent, it is critical to immediately alert a supervisor so that she or he can assist you as well as escalate as appropriate.

For the 2021 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 are 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, 1-833-947-2577, 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

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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 and Informed Consent
	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 of Adult Health Care Services
SECTION F	Sources of Care and Determinants

Demographics

SECTION G	Employment
SECTION H	Adult Demographics & Family Income

Closing Section

SECTION Q	Household Questions
• CHILD	**IF APPLICABLE, Child Questionnaire**
CLOSING	Closing Statements and Incentive

7.1.1 Key Sections in the Questionnaire

The 2021 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 2021 OMAS.

- **Screening–**Please note, that for the purpose of the 2021 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–W**e 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). Do remind the respondent that their answers are confidential, and the information will be reported at a group level.

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 for a 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 include a pre-coded response. 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 breakoffs 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		**Huron**	Hy**oo**-ron
Ask	Ahsk		**Hypoglycemic**	Hi-po-gli-se-mik
Ashtabula	Ash-tuh-byoo-luh		**Infarction**	In-**fahrk**-shuh n
Auglaize	Ah-glaze		**Islander**	**Ahy**-luh n-der
Bronchitis	Brong-**kahy**-tis		**Latino**	Luh-**tee**-noh
Cardiologists	Car-dee-**all**-a-jists		**Latina**	Luh-**tee**-nuh
Champaign	Sham-**peyn**		**Mahoning**	Ma-hon-ing
Codeine	**Koh**-deen		**Meigs**	Meg-z
Congestive	Kun-**jes**-tiv		**Mexican**	**Mek**-si-kuhn
Coronary	**Kawr**-e-neree		**Morphine**	**Mawr**-feen
Coshocton	**Kuh**-shok-tun		**Muskingum**	Muh-sking-uh m
Cuyahoga	Ki-Ya-**Hoga**		**Myocardial**	Mahy-uh-**kahr**-dee-uh-l
Debt	Det		**Ohioan**	Oh-**hahy**-oh-en
Diabetes	Dahy-uh-**bee**-teez		**OxyContin**	Oxy-con-tin
Emphysema	Em-fuh-**see**-muh		**Pacific**	Puh-**sif**-ik
Erie	Eer-ee		**Percocet**	**Pur**-kuh-set
Excellent	**Ek**-suh-luh nt		**Scioto**	**Sigh**-oh-toe
Feeling	**Fee**-ling		**Specific**	Spi-**sif**-ik
Fentanyl	**Fen**-tuh-nil		**Tuscarawas**	**Tus**-ka-ro-wa-s
Fidgety	**Fij**-i-tee		**Wyandot**	**Wahy**-uhn-dot
Gallia	**Gahl**-lee-ah		**Vicodin**	**Vahy**-kuh-din
Geauga	Jee-**aw**-ga			
Guernsey	**Gurn**-zee			

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Appendix B

Reluctance VS. Refusal

1. I don't think I qualify for this study.
2. Can you pick someone else?
3. I am not really into surveys.
4. I am too old for this study.
5. I am hard to catch so maybe I should just skip this.
6. No one here has any insurance.
7. I do not have any health problems.
8. I do not think this is legit.
9. Twenty seems like a long time.
10. I'm on the other line now and this is not a good time.
11. Yeah, Yeah (hung up after 1 point)
12. I doubt {sample member's name} will help you.
13. I am in and out. You probably won't catch me.
14. I'm on my way out, sorry I can't help you right now.
15. Could you stop calling during the day?

1. Respondent uses profanity directed to the interviewer. This is not the same as casual profanity during the interview.
2. Respondent uses hate speech or racial, cultural slurs.
3. Respondent makes threatening statements to TI.
4. Call me again, and I am calling the police.
5. I am filing a complaint with the Better Business Bureau.
6. If you call again, I am contacting my lawyer.
7. (After 3 points stated) Respondent hangs up.
8. (After 3 points stated) Respondent says, "This is a waste of time, do not call me again."
9. Yeah, I know this is a survey for the State of Ohio about health insurance and I do not want to participate.
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!

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Appendix E. 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 2021, 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 E-1. Overall (%)

Sampling Phone	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Overall	12.7	15.5	17.0	24.1	23.8	23.8
ABS	22.3	22.3	23.9	22.3	93.5	93.5
Landline	5.9	15.2	16.8	32.0	17.1	17.1
Cell	4.4	15.3	18.5	37.9	5.4	5.4

Table E-2. Medicaid Region (%)

Medicaid Region No.	Sampling Medicaid Region	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	Central/Southeast	14.0	16.3	17.8	24.6	26.1	26.1
2	Northeast	11.5	14.6	16.0	23.3	21.9	21.9
3	West	13.2	15.9	17.5	24.7	24.3	24.3

Table E-3. County Type (%)

Region No.	Sampling Region	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	Rural Appalachian	12.6	15.3	16.7	22.8	25.0	25.0
2	Metro	12.2	15.1	16.6	26.7	20.3	20.3
3	Rural Non-Appalachian	13.0	16.0	17.5	27.0	22.1	22.1
4	Suburban	13.6	16.2	17.6	25.3	24.7	24.7

Table E-4. Sub-Stratum (%)

Sub-Stratum	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Low Income	19.7	19.7	21.3	19.7	92.6	92.6
African American—Low Density	22.8	22.8	24.7	22.8	92.1	92.1
African American—High Density	18.0	18.0	19.6	18.0	91.6	91.6

Table E-5. Stratum (%)

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Adams, Cell, Listed	RDD	5.3	12.1	16.2	33.3	7.4	7.4
Allen, Cell, Listed	RDD	6.0	14.1	16.9	42.5	6.4	6.4
Ashland, Cell, Listed	RDD	5.8	11.7	14.2	41.3	5.5	5.5
Ashtabula, Cell, Listed	RDD	5.9	14.7	17.4	45.9	6.2	6.2
Athens, Cell, Listed	RDD	5.9	12.8	16.4	35.9	7.4	7.4
Auglaize, Cell, Listed	RDD	5.1	9.3	10.5	33.3	6.4	6.4
Belmont, Cell, Listed	RDD	4.9	12.3	13.4	38.6	6.6	6.6
Brown, Cell, Listed	RDD	4.4	13.2	15.9	41.7	4.6	4.6
Butler, Cell, Listed	RDD	4.2	11.8	14.1	36.2	5.3	5.3
Carroll, Cell, Listed	RDD	4.4	9.0	11.8	30.8	5.5	5.5
Champaign, Cell, Listed	RDD	8.6	15.2	17.3	48.8	11.1	11.1
Clark, Cell, Listed	RDD	7.4	17.0	20.4	49.5	9.4	9.4
Clermont, Cell, Listed	RDD	4.9	11.9	14.3	37.8	5.3	5.3
Clinton, Cell, Listed	RDD	4.2	10.1	13.8	28.2	3.7	3.7
Columbiana, Cell, Listed	RDD	5.6	15.7	17.5	43.6	7.6	7.6
Coshocton, Cell, Listed	RDD	7.6	16.8	19.4	50.0	10.7	10.7
Crawford, Cell, Listed	RDD	9.0	16.8	20.2	43.5	7.4	7.4
Cuyahoga, Cell, Listed	RDD	4.6	12.5	14.7	39.4	5.5	5.5
Darke, Cell, Listed	RDD	5.3	13.7	13.7	44.1	7.2	7.2
Defiance, Cell, Listed	RDD	4.9	12.8	14.0	44.0	6.9	6.9
Delaware, Cell, Listed	RDD	7.6	14.3	16.2	45.2	9.7	9.7
Erie, Cell, Listed	RDD	6.6	13.4	16.8	38.7	8.5	8.5
Fairfield, Cell, Listed	RDD	6.0	12.8	14.8	39.4	5.9	5.9
Fayette, Cell, Listed	RDD	5.5	13.3	16.4	39.4	6.7	6.7
Franklin, Cell, Listed	RDD	6.9	14.5	17.2	41.2	7.4	7.4
Fulton, Cell, Listed	RDD	6.5	14.6	15.4	47.4	9.1	9.1

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Gallia, Cell, Listed	RDD	7.4	15.9	20.5	41.2	9.8	9.8
Geauga, Cell, Listed	RDD	3.3	8.4	11.6	29.8	4.4	4.4
Greene, Cell, Listed	RDD	5.4	13.5	16.6	41.2	7.3	7.3
Guernsey, Cell, Listed	RDD	5.8	12.9	15.5	37.0	7.8	7.8
Hamilton, Cell, Listed	RDD	4.6	12.6	15.4	38.9	5.4	5.4
Hancock, Cell, Listed	RDD	5.8	13.3	15.9	45.6	6.1	6.1
Hardin, Cell, Listed	RDD	8.7	16.4	17.5	39.5	6.5	6.5
Harrison, Cell, Listed	RDD	6.2	14.8	16.2	45.8	8.7	8.7
Henry, Cell, Listed	RDD	10.1	19.4	21.6	58.1	13.6	13.6
Highland, Cell, Listed	RDD	7.6	17.3	20.3	45.9	9.8	9.8
Hocking, Cell, Listed	RDD	5.6	12.2	15.6	30.6	4.5	4.5
Holmes, Cell, Listed	RDD	5.0	10.3	12.1	30.6	6.6	6.6
Huron, Cell, Listed	RDD	4.1	11.4	15.1	36.6	3.9	3.9
Jackson, Cell, Listed	RDD	8.0	18.1	24.2	50.0	10.4	10.4
Jefferson, Cell, Listed	RDD	6.3	14.2	15.9	40.7	8.7	8.7
Knox, Cell, Listed	RDD	6.0	11.3	12.9	33.0	7.9	7.9
Lake, Cell, Listed	RDD	4.2	11.4	12.1	39.0	5.2	5.2
Lawrence, Cell, Listed	RDD	5.1	12.6	14.9	34.8	6.5	6.5
Licking, Cell, Listed	RDD	5.8	12.2	15.0	34.7	6.9	6.9
Logan, Cell, Listed	RDD	6.7	13.2	16.7	39.6	8.4	8.4
Lorain, Cell, Listed	RDD	3.5	9.9	12.8	33.9	4.3	4.3
Lucas, Cell, Listed	RDD	5.8	14.1	15.9	43.8	7.4	7.4
Madison, Cell, Listed	RDD	5.1	10.5	13.7	36.1	6.6	6.6
Mahoning, Cell, Listed	RDD	4.9	13.6	16.1	40.6	5.5	5.5
Marion, Cell, Listed	RDD	6.1	13.3	16.9	38.6	8.4	8.4
Medina, Cell, Listed	RDD	3.1	8.9	10.9	34.9	3.7	3.7
Meigs, Cell, Listed	RDD	9.4	20.2	21.3	60.0	13.4	13.4
Mercer, Cell, Listed	RDD	4.3	8.8	9.5	38.2	4.1	4.1
Miami, Cell, Listed	RDD	5.2	14.5	16.3	50.5	4.5	4.5
Monroe, Cell, Listed	RDD	5.4	10.4	13.9	28.1	7.4	7.4
Montgomery, Cell, Listed	RDD	6.3	16.1	18.5	44.6	6.7	6.7
Morgan, Cell, Listed	RDD	6.6	15.5	16.7	48.0	9.0	9.0
Morrow, Cell, Listed	RDD	6.6	11.7	13.6	38.8	6.0	6.0
Muskingum, Cell, Listed	RDD	6.4	13.6	15.5	41.8	8.6	8.6

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Noble, Cell, Listed	RDD	8.8	17.9	20.3	46.9	11.5	11.5
Ottawa, Cell, Listed	RDD	4.1	8.6	10.8	31.4	5.3	5.3
Paulding, Cell, Listed	RDD	5.1	10.9	13.1	32.3	6.9	6.9
Perry, Cell, Listed	RDD	4.6	10.7	12.2	40.0	3.2	3.2
Pickaway, Cell, Listed	RDD	5.5	12.0	14.5	39.1	7.3	7.3
Pike, Cell, Listed	RDD	5.2	12.0	15.0	36.4	4.4	4.4
Portage, Cell, Listed	RDD	4.1	10.3	12.2	36.8	4.8	4.8
Preble, Cell, Listed	RDD	4.0	9.8	12.3	34.5	4.0	4.0
Putnam, Cell, Listed	RDD	5.9	10.3	11.0	36.6	7.7	7.7
Richland, Cell, Listed	RDD	4.6	10.6	11.8	34.3	6.0	6.0
Ross, Cell, Listed	RDD	4.7	10.7	15.6	30.8	5.0	5.0
Sandusky, Cell, Listed	RDD	4.0	9.7	11.2	40.4	5.2	5.2
Scioto, Cell, Listed	RDD	8.5	16.6	18.1	47.8	11.7	11.7
Seneca, Cell, Listed	RDD	3.8	10.3	11.4	33.3	5.1	5.1
Shelby, Cell, Listed	RDD	5.2	12.9	14.9	40.0	4.0	4.0
Stark, Cell, Listed	RDD	4.4	11.8	14.5	39.3	5.2	5.2
Summit, Cell, Listed	RDD	4.4	12.1	14.2	41.0	5.3	5.3
Trumbull, Cell, Listed	RDD	3.7	10.5	12.2	35.8	4.7	4.7
Tuscarawas, Cell, Listed	RDD	4.5	10.2	13.0	32.9	4.8	4.8
Union, Cell, Listed	RDD	9.5	17.0	21.2	48.7	12.4	12.4
VanWert, Cell, Listed	RDD	3.2	7.6	11.8	26.5	4.2	4.2
Vinton, Cell, Listed	RDD	5.2	11.5	13.5	32.4	7.1	7.1
Warren, Cell, Listed	RDD	5.1	12.5	14.4	39.4	6.6	6.6
Washington, Cell, Listed	RDD	6.5	14.7	18.2	48.1	4.9	4.9
Wayne, Cell, Listed	RDD	3.9	10.7	11.9	37.9	4.7	4.7
Williams, Cell, Listed	RDD	4.3	11.5	12.5	38.7	3.9	3.9
Wood, Cell, Listed	RDD	4.3	9.9	12.6	35.0	5.1	5.1
Wyandot, Cell, Listed	RDD	3.7	8.5	10.9	25.0	5.1	5.1
Adams, Cell, Unlisted	RDD	6.3	15.7	21.9	27.8	8.1	8.1
Allen, Cell, Unlisted	RDD	4.7	27.1	30.0	47.5	5.3	5.3
Ashland, Cell, Unlisted	RDD	2.5	12.4	22.1	29.0	3.5	3.5
Ashtabula, Cell, Unlisted	RDD	3.8	16.0	19.4	38.4	5.4	5.4
Athens, Cell, Unlisted	RDD	5.6	19.1	25.2	40.6	6.0	6.0
Auglaize, Cell, Unlisted	RDD						

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Belmont, Cell, Unlisted	RDD	3.8	14.0	16.5	33.3	5.2	5.2
Brown, Cell, Unlisted	RDD	2.6	12.9	17.2	27.3	4.3	4.3
Butler, Cell, Unlisted	RDD	3.3	13.2	18.1	29.7	2.8	2.8
Carroll, Cell, Unlisted	RDD						
Champaign, Cell, Unlisted	RDD	2.9	29.8	29.8	60.0	1.8	1.8
Clark, Cell, Unlisted	RDD	4.4	18.5	25.9	39.5	6.0	6.0
Clermont, Cell, Unlisted	RDD	3.0	12.3	15.3	26.7	4.8	4.8
Clinton, Cell, Unlisted	RDD	5.6	37.3	41.9	61.5	7.9	7.9
Columbiana, Cell, Unlisted	RDD	6.0	19.5	25.5	40.6	4.9	4.9
Coshocton, Cell, Unlisted	RDD	5.2	19.0	28.5	37.5	7.4	7.4
Crawford, Cell, Unlisted	RDD	3.8	15.6	26.0	25.0	4.7	4.7
Cuyahoga, Cell, Unlisted	RDD	2.3	16.2	20.7	32.0	3.8	3.8
Darke, Cell, Unlisted	RDD	3.4	13.8	16.1	26.1	4.7	4.7
Defiance, Cell, Unlisted	RDD	4.9	18.2	20.0	40.0	7.2	7.2
Delaware, Cell, Unlisted	RDD	3.1	17.0	29.7	30.8	4.8	4.8
Erie, Cell, Unlisted	RDD	5.4	21.6	27.3	45.2	7.4	7.4
Fairfield, Cell, Unlisted	RDD	3.4	13.2	18.7	29.3	4.5	4.5
Fayette, Cell, Unlisted	RDD	6.5	17.3	19.5	33.3	8.6	8.6
Franklin, Cell, Unlisted	RDD	4.6	19.9	24.2	41.0	5.6	5.6
Fulton, Cell, Unlisted	RDD	2.1	14.0	14.0	25.0	3.8	3.8
Gallia, Cell, Unlisted	RDD	5.5	20.1	25.2	44.4	7.7	7.7
Geauga, Cell, Unlisted	RDD	2.1	12.2	15.2	23.5	3.1	3.1
Greene, Cell, Unlisted	RDD						
Guernsey, Cell, Unlisted	RDD	4.3	14.6	16.4	32.0	5.3	5.3
Hamilton, Cell, Unlisted	RDD	2.8	15.4	19.7	33.0	3.9	3.9
Hancock, Cell, Unlisted	RDD	3.5	14.6	17.5	30.6	3.6	3.6
Hardin, Cell, Unlisted	RDD	2.9	14.1	18.8	30.0	4.3	4.3
Harrison, Cell, Unlisted	RDD	3.2	8.8	11.7	20.0	4.8	4.8
Henry, Cell, Unlisted	RDD	4.3	14.8	14.8	30.8	6.2	6.2
Highland, Cell, Unlisted	RDD	5.4	28.9	28.9	64.3	4.3	4.3
Hocking, Cell, Unlisted	RDD	7.7	24.7	30.9	44.4	4.6	4.6
Holmes, Cell, Unlisted	RDD	2.5	9.8	11.1	22.6	3.5	3.5
Huron, Cell, Unlisted	RDD	3.4	13.8	16.7	34.1	4.8	4.8
Jackson, Cell, Unlisted	RDD	7.4	18.6	21.5	46.4	10.1	10.1

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Jefferson, Cell, Unlisted	RDD	5.9	22.7	26.9	50.0	8.4	8.4
Knox, Cell, Unlisted	RDD	4.2	13.7	17.1	32.4	5.6	5.6
Lake, Cell, Unlisted	RDD	2.6	13.8	18.3	35.3	3.2	3.2
Lawrence, Cell, Unlisted	RDD	4.8	16.5	22.5	36.7	6.4	6.4
Licking, Cell, Unlisted	RDD	2.6	12.1	13.2	26.2	3.6	3.6
Logan, Cell, Unlisted	RDD	4.5	18.8	18.8	44.4	6.2	6.2
Lorain, Cell, Unlisted	RDD	2.7	13.6	18.5	28.1	3.5	3.5
Lucas, Cell, Unlisted	RDD	4.2	16.2	20.8	36.5	5.0	5.0
Madison, Cell, Unlisted	RDD	3.5	15.9	23.9	28.6	5.5	5.5
Mahoning, Cell, Unlisted	RDD	3.5	18.3	21.9	37.3	4.8	4.8
Marion, Cell, Unlisted	RDD	4.3	16.5	18.1	32.3	6.0	6.0
Medina, Cell, Unlisted	RDD	1.6	8.9	14.8	21.4	2.2	2.2
Meigs, Cell, Unlisted	RDD	4.4	15.0	20.0	33.3	6.2	6.2
Mercer, Cell, Unlisted	RDD	3.6	9.5	13.6	29.6	4.8	4.8
Miami, Cell, Unlisted	RDD	1.9	9.9	23.0	20.0	2.6	2.6
Monroe, Cell, Unlisted	RDD	6.7	22.9	26.1	38.9	8.5	8.5
Montgomery, Cell, Unlisted	RDD	3.9	17.2	21.9	35.9	4.9	4.9
Morgan, Cell, Unlisted	RDD	5.1	24.0	24.0	36.4	7.4	7.4
Morrow, Cell, Unlisted	RDD	4.3	22.5	27.0	41.7	6.0	6.0
Muskingum, Cell, Unlisted	RDD	5.0	18.1	21.5	37.2	6.7	6.7
Noble, Cell, Unlisted	RDD	3.7	13.9	18.6	35.3	5.2	5.2
Ottawa, Cell, Unlisted	RDD	4.2	61.7	61.7	100.0	9.1	9.1
Paulding, Cell, Unlisted	RDD	3.4	13.8	32.2	25.0	4.7	4.7
Perry, Cell, Unlisted	RDD	2.8	12.8	16.1	36.4	4.2	4.2
Pickaway, Cell, Unlisted	RDD	6.7	18.5	22.2	40.0	9.4	9.4
Pike, Cell, Unlisted	RDD	8.0	20.3	22.6	47.4	11.5	11.5
Portage, Cell, Unlisted	RDD	2.7	31.5	37.8	62.5	4.3	4.3
Preble, Cell, Unlisted	RDD	4.1	14.3	19.0	31.6	5.5	5.5
Putnam, Cell, Unlisted	RDD	6.1	23.4	26.3	50.0	4.3	4.3
Richland, Cell, Unlisted	RDD	2.8	16.9	22.8	28.7	4.3	4.3
Ross, Cell, Unlisted	RDD	5.4	18.2	21.5	40.0	7.3	7.3
Sandusky, Cell, Unlisted	RDD	5.5	20.0	21.4	42.4	7.5	7.5
Scioto, Cell, Unlisted	RDD	4.7	17.4	18.2	42.6	5.0	5.0
Seneca, Cell, Unlisted	RDD	5.7	31.6	31.6	50.0	10.9	10.9

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Shelby, Cell, Unlisted	RDD	5.1	19.2	22.4	40.0	7.0	7.0
Stark, Cell, Unlisted	RDD	3.7	16.6	19.5	34.4	5.6	5.6
Summit, Cell, Unlisted	RDD	3.1	16.9	20.7	37.5	4.1	4.1
Trumbull, Cell, Unlisted	RDD	4.3	27.2	32.0	42.5	5.2	5.2
Tuscarawas, Cell, Unlisted	RDD	3.5	13.2	16.9	30.2	4.2	4.2
Union, Cell, Unlisted	RDD	6.9	18.6	24.8	36.0	9.6	9.6
VanWert, Cell, Unlisted	RDD	4.1	22.2	22.2	40.0	5.6	5.6
Vinton, Cell, Unlisted	RDD						
Warren, Cell, Unlisted	RDD	4.8	25.3	25.3	42.9	9.7	9.7
Washington, Cell, Unlisted	RDD	7.0	22.9	29.7	48.8	8.7	8.7
Wayne, Cell, Unlisted	RDD	3.2	14.7	17.8	29.8	4.2	4.2
Williams, Cell, Unlisted	RDD	2.4	11.6	19.4	27.3	3.4	3.4
Wood, Cell, Unlisted	RDD	6.4	30.6	30.6	46.2	8.7	8.7
Wyandot, Cell, Unlisted	RDD	3.7	13.3	13.3	30.8	5.4	5.4
Adams, Landline	RDD	15.0	22.7	22.7	66.7	46.2	46.2
Allen, Landline	RDD	15.4	29.1	29.1	80.0	57.1	57.1
Ashland, Landline	RDD	9.1	13.5	13.5	42.9	33.3	33.3
Ashtabula, Landline	RDD	8.6	14.1	14.1	33.3	23.1	23.1
Athens, Landline	RDD	7.5	14.9	14.9	37.5	27.3	27.3
Auglaize, Landline	RDD	4.9	7.1	7.1	25.0	12.5	12.5
Belmont, Landline	RDD	5.4	9.8	14.7	20.0	14.3	14.3
Brown, Landline	RDD	8.3	31.3	31.3	100.0	50.0	50.0
Butler, Landline	RDD	6.3	12.9	12.9	33.3	23.5	23.5
Carroll, Landline	RDD	2.4	3.1	6.3	11.1	10.0	10.0
Champaign, Landline	RDD	10.7	11.6	11.6	37.5	20.0	20.0
Clark, Landline	RDD	12.5	18.5	18.5	57.1	33.3	33.3
Clermont, Landline	RDD	6.7	10.8	10.8	28.6	22.2	22.2
Clinton, Landline	RDD	4.7	6.2	6.2	28.6	16.7	16.7
Columbiana, Landline	RDD	2.7	4.1	4.1	12.5	8.3	8.3
Coshocton, Landline	RDD	5.0	6.9	10.4	16.7	11.8	11.8
Crawford, Landline	RDD	2.9	4.8	4.8	12.5	9.1	9.1
Cuyahoga, Landline	RDD	4.0	7.6	7.6	25.8	15.1	15.1
Darke, Landline	RDD	7.1	9.8	9.8	25.0	20.0	20.0
Defiance, Landline	RDD	10.3	26.5	26.5	60.0	42.9	42.9

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Delaware, Landline	RDD	3.1	8.8	8.8	16.7	8.3	8.3
Erie, Landline	RDD	3.0	13.8	13.8	25.0	14.3	14.3
Fairfield, Landline	RDD	6.1	21.3	21.3	40.0	1.8	1.8
Fayette, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Franklin, Landline	RDD	8.5	35.8	35.8	55.6	7.5	7.5
Fulton, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Gallia, Landline	RDD	4.3	7.2	7.2	12.5	11.1	11.1
Geauga, Landline	RDD	4.3	9.3	9.3	20.0	15.4	15.4
Greene, Landline	RDD	16.7	32.9	32.9	45.5	41.7	41.7
Guernsey, Landline	RDD	8.8	23.2	30.9	37.5	30.0	30.0
Hamilton, Landline	RDD	3.4	11.5	16.1	20.0	11.9	11.9
Hancock, Landline	RDD	5.4	51.4	51.4	100.0	66.7	66.7
Hardin, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Harrison, Landline	RDD	2.1	5.2	15.5	11.1	6.3	6.3
Henry, Landline	RDD	2.3	5.2	10.4	10.0	5.9	5.9
Highland, Landline	RDD	2.6	7.7	7.7	14.3	14.3	14.3
Hocking, Landline	RDD	2.4	5.6	11.1	10.0	7.1	7.1
Holmes, Landline	RDD	3.1	18.9	18.9	33.3	14.3	14.3
Huron, Landline	RDD	2.4	6.3	6.3	12.5	7.1	7.1
Jackson, Landline	RDD	5.7	18.7	18.7	33.3	25.0	25.0
Jefferson, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Knox, Landline	RDD	18.8	40.3	40.3	60.0	54.5	54.5
Lake, Landline	RDD	2.6	14.0	14.0	33.3	7.7	7.7
Lawrence, Landline	RDD	6.3	9.5	9.5	21.4	20.0	20.0
Licking, Landline	RDD	5.7	7.5	7.5	28.6	22.2	22.2
Logan, Landline	RDD	6.9	8.1	12.1	25.0	20.0	20.0
Lorain, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Lucas, Landline	RDD	6.3	18.4	18.4	33.3	22.2	22.2
Madison, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Mahoning, Landline	RDD	10.0	16.3	16.3	66.7	36.4	36.4
Marion, Landline	RDD	5.0	18.8	18.8	33.3	25.0	25.0
Medina, Landline	RDD	2.3	13.5	13.5	33.3	12.5	12.5
Meigs, Landline	RDD	0.0	0.0	30.9	0.0	0.0	0.0
Mercer, Landline	RDD	4.2	11.6	11.6	28.6	18.2	18.2

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Miami, Landline	RDD	15.0	36.9	36.9	85.7	46.2	46.2
Monroe, Landline	RDD	4.9	10.8	16.2	18.2	13.3	13.3
Montgomery, Landline	RDD	7.6	10.7	10.7	33.3	23.1	23.1
Morgan, Landline	RDD	7.1	10.9	10.9	50.0	30.0	30.0
Morrow, Landline	RDD	3.6	12.2	12.2	25.0	12.5	12.5
Muskingum, Landline	RDD	7.4	20.7	31.1	28.6	16.7	16.7
Noble, Landline	RDD	2.1	5.2	5.2	11.1	5.9	5.9
Ottawa, Landline	RDD	2.9	18.6	18.6	50.0	20.0	20.0
Paulding, Landline	RDD	9.8	24.6	24.6	80.0	40.0	40.0
Perry, Landline	RDD	8.3	13.3	17.8	33.3	21.4	21.4
Pickaway, Landline	RDD	3.1	21.2	21.2	50.0	16.7	16.7
Pike, Landline	RDD	8.0	10.7	13.4	44.4	30.8	30.8
Portage, Landline	RDD	5.9	10.3	10.3	40.0	20.0	20.0
Preble, Landline	RDD	6.7	9.2	9.2	28.6	25.0	25.0
Putnam, Landline	RDD	4.5	6.9	13.7	18.2	11.1	11.1
Richland, Landline	RDD	3.7	5.4	5.4	16.7	14.3	14.3
Ross, Landline	RDD	10.8	13.8	13.8	50.0	50.0	50.0
Sandusky, Landline	RDD	10.0	17.9	17.9	57.1	40.0	40.0
Scioto, Landline	RDD	7.1	18.7	18.7	42.9	30.0	30.0
Seneca, Landline	RDD	5.3	21.7	21.7	40.0	22.2	22.2
Shelby, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
Stark, Landline	RDD	9.0	27.5	27.5	53.8	36.8	36.8
Summit, Landline	RDD	4.3	15.1	18.1	27.8	14.3	14.3
Trumbull, Landline	RDD	7.7	18.6	18.6	33.3	18.8	18.8
Tuscarawas, Landline	RDD	4.5	13.5	13.5	33.3	20.0	20.0
Union, Landline	RDD	0.0	0.0	0.0	0.0	0.0	0.0
VanWert, Landline	RDD	8.7	36.4	36.4	50.0	33.3	33.3
Vinton, Landline	RDD	15.0	24.6	32.8	40.0	28.6	28.6
Warren, Landline	RDD	8.8	28.5	28.5	50.0	23.1	23.1
Washington, Landline	RDD	14.6	30.3	30.3	70.0	46.7	46.7
Wayne, Landline	RDD	7.1	20.7	20.7	33.3	25.0	25.0
Williams, Landline	RDD	5.3	7.3	7.3	20.0	18.2	18.2
Wood, Landline	RDD	5.9	8.8	8.8	25.0	14.3	14.3
Wyandot, Landline	RDD	8.0	22.2	22.2	40.0	28.6	28.6

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Adams	ABS	13.6	13.6	14.8	13.6	92.3	92.3
Adams, Low Income	ABS	18.6	18.6	20.3	18.6	91.5	91.5
Allen	ABS	23.6	23.6	25.9	23.6	91.5	91.5
Allen, Low Income	ABS	23.2	23.2	24.3	23.2	95.3	95.3
Ashland	ABS	24.2	24.2	24.9	24.2	97.3	97.3
Ashtabula	ABS	19.8	19.8	21.1	19.8	94.1	94.1
Ashtabula, Low Income	ABS	20.1	20.1	22.9	20.1	87.9	87.9
Athens	ABS	23.9	23.9	26.4	23.9	90.4	90.4
Athens, Low Income	ABS	17.0	17.0	18.9	17.0	89.7	89.7
Auglaize	ABS	29.5	29.5	30.3	29.5	97.5	97.5
Belmont	ABS	24.6	24.6	25.5	24.6	96.3	96.3
Belmont, Low Income	ABS	27.3	27.3	27.3	27.3	100.0	100.0
Brown	ABS	20.9	20.9	22.8	20.9	91.4	91.4
Brown, Low Income	ABS	29.3	29.3	30.7	29.3	95.7	95.7
Butler	ABS	22.4	22.4	24.4	22.4	91.8	91.8
Butler, Low Income	ABS	16.9	16.9	18.2	16.9	92.9	92.9
Carroll	ABS	26.0	26.0	27.5	26.0	94.6	94.6
Champaign	ABS	24.1	24.1	26.6	24.1	90.7	90.7
Clark	ABS	24.3	24.3	25.7	24.3	94.5	94.5
Clark, Low Income	ABS	20.4	20.4	22.2	20.4	92.0	92.0
Clermont	ABS	22.1	22.1	23.3	22.1	94.8	94.8
Clinton	ABS	24.3	24.3	26.1	24.3	93.2	93.2
Columbiana	ABS	23.1	23.1	24.1	23.1	95.9	95.9
Coshocton	ABS	20.6	20.6	20.6	20.6	100.0	100.0
Coshocton, Low Income	ABS	21.0	21.0	22.4	21.0	93.8	93.8
Crawford	ABS	29.4	29.4	31.9	29.4	92.2	92.2
Crawford, Low Income	ABS	29.6	29.6	31.0	29.6	95.6	95.6
Cuyahoga, Low AA	ABS	22.3	22.3	23.9	22.3	93.5	93.5
Cuyahoga, Low Income, Low AA	ABS	18.5	18.5	20.4	18.5	90.7	90.7
Cuyahoga, High AA	ABS	15.9	15.9	17.4	15.9	91.4	91.4
Cuyahoga, Low Income, High AA	ABS	16.1	16.1	17.9	16.1	89.9	89.9
Darke	ABS	27.8	27.8	28.4	27.8	98.1	98.1
Defiance	ABS	33.0	33.0	36.7	33.0	89.9	89.9
Delaware	ABS	26.8	26.8	28.7	26.8	93.5	93.5

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Erie	ABS	25.6	25.6	27.6	25.6	93.0	93.0
Fairfield	ABS	27.5	27.5	28.3	27.5	97.4	97.4
Fayette	ABS	20.8	20.8	21.5	20.8	96.4	96.4
Franklin, Low AA	ABS	23.6	23.6	25.3	23.6	93.2	93.2
Franklin, Low Income, Low AA	ABS	16.3	16.3	17.4	16.3	93.7	93.7
Franklin, High AA	ABS	17.0	17.0	18.5	17.0	91.8	91.8
Franklin, Low Income, High AA	ABS	15.5	15.5	17.1	15.5	90.6	90.6
Fulton	ABS	28.2	28.2	29.8	28.2	94.9	94.9
Gallia	ABS	21.1	21.1	23.2	21.1	90.6	90.6
Gallia, Low Income	ABS	27.3	27.3	28.3	27.3	96.4	96.4
Geauga	ABS	25.1	25.1	27.0	25.1	93.2	93.2
Greene	ABS	23.2	23.2	25.3	23.2	91.7	91.7
Guernsey	ABS	26.4	26.4	27.7	26.4	95.5	95.5
Guernsey, Low Income	ABS	30.6	30.6	32.6	30.6	93.6	93.6
Hamilton, Low AA	ABS	22.9	22.9	24.6	22.9	92.9	92.9
Hamilton, High AA	ABS	17.5	17.5	18.9	17.5	92.3	92.3
Hamilton, Low Income, High AA	ABS	20.4	20.4	21.9	20.4	93.1	93.1
Hancock	ABS	24.9	24.9	26.0	24.9	95.5	95.5
Hardin	ABS	24.8	24.8	25.5	24.8	97.4	97.4
Harrison	ABS	25.4	25.4	27.8	25.4	91.6	91.6
Henry	ABS	30.6	30.6	32.5	30.6	93.9	93.9
Highland	ABS	18.4	18.4	19.9	18.4	92.3	92.3
Highland, Low Income	ABS	31.4	31.4	31.4	31.4	100.0	100.0
Hocking	ABS	26.4	26.4	27.7	26.4	95.3	95.3
Hocking, Low Income	ABS	25.6	25.6	27.9	25.6	91.7	91.7
Holmes	ABS	20.8	20.8	21.9	20.8	94.9	94.9
Huron	ABS	21.4	21.4	23.0	21.4	93.0	93.0
Jackson	ABS	23.3	23.3	23.8	23.3	97.8	97.8
Jackson, Low Income	ABS	25.0	25.0	25.7	25.0	97.1	97.1
Jefferson	ABS	24.5	24.5	25.6	24.5	95.8	95.8
Jefferson, Low Income	ABS	29.6	29.6	31.1	29.6	95.3	95.3
Knox	ABS	25.3	25.3	26.3	25.3	96.2	96.2
Lake	ABS	23.2	23.2	25.2	23.2	91.9	91.9
Lawrence	ABS	25.0	25.0	26.5	25.0	94.3	94.3

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Lawrence, Low Income	ABS	22.7	22.7	24.4	22.7	92.9	92.9
Licking	ABS	24.0	24.0	25.3	24.0	94.9	94.9
Logan	ABS	23.3	23.3	24.2	23.3	96.3	96.3
Lorain	ABS	25.0	25.0	26.5	25.0	94.4	94.4
Lorain, Low Income	ABS	19.1	19.1	20.6	19.1	92.5	92.5
Lucas, Low AA	ABS	26.9	26.9	27.9	26.9	96.4	96.4
Lucas, Low Income, Low AA	ABS	21.1	21.1	23.0	21.1	91.9	91.9
Lucas, High AA	ABS	19.6	19.6	21.5	19.6	91.1	91.1
Lucas, Low Income, High AA	ABS	23.7	23.7	25.9	23.7	91.7	91.7
Madison	ABS	20.3	20.3	21.6	20.3	94.0	94.0
Mahoning	ABS	24.4	24.4	26.1	24.4	93.6	93.6
Mahoning, Low Income	ABS	19.4	19.4	20.4	19.4	94.9	94.9
Marion	ABS	22.5	22.5	25.6	22.5	87.7	87.7
Marion, Low Income	ABS	24.7	24.7	25.6	24.7	96.4	96.4
Medina	ABS	26.9	26.9	28.9	26.9	92.9	92.9
Meigs	ABS	25.4	25.4	26.4	25.4	96.1	96.1
Meigs, Low Income	ABS	28.1	28.1	28.9	28.1	97.4	97.4
Mercer	ABS	26.3	26.3	28.1	26.3	93.8	93.8
Miami	ABS	22.4	22.4	23.4	22.4	95.8	95.8
Monroe	ABS	27.4	27.4	28.5	27.4	96.0	96.0
Montgomery, Low AA	ABS	25.6	25.6	27.3	25.6	93.8	93.8
Montgomery, Low Income, Low AA	ABS	20.7	20.7	22.3	20.7	92.9	92.9
Montgomery, High AA	ABS	18.1	18.1	20.0	18.1	90.6	90.6
Montgomery, Low Income, High AA	ABS	23.0	23.0	24.5	23.0	94.2	94.2
Morgan	ABS	24.1	24.1	25.9	24.1	93.1	93.1
Morrow	ABS	21.9	21.9	23.6	21.9	92.6	92.6
Muskingum	ABS	22.5	22.5	23.7	22.5	95.0	95.0
Muskingum, Low Income	ABS	31.1	31.1	33.8	31.1	92.0	92.0
Noble	ABS	24.6	24.6	26.2	24.6	94.1	94.1
Ottawa	ABS	29.3	29.3	30.9	29.3	94.7	94.7
Paulding	ABS	22.3	22.3	24.6	22.3	90.9	90.9
Perry	ABS	22.6	22.6	22.9	22.6	98.5	98.5
Perry, Low Income	ABS	24.2	24.2	24.2	24.2	100.0	100.0
Pickaway	ABS	21.9	21.9	22.6	21.9	96.8	96.8

Sampling Stratum	Frame Type	RR1	RR3	RR4	RR5	Coop LB	Coop UB
Pike	ABS	26.2	26.2	26.7	26.2	98.0	98.0
Pike, Low Income	ABS	35.7	35.7	35.7	35.7	100.0	100.0
Portage	ABS	24.7	24.7	25.7	24.7	96.2	96.2
Portage Low Income	ABS	21.4	21.4	22.5	21.4	94.9	94.9
Preble	ABS	23.1	23.1	24.1	23.1	95.6	95.6
Putnam	ABS	27.3	27.3	30.9	27.3	88.2	88.2
Richland	ABS	26.1	26.1	27.8	26.1	93.8	93.8
Richland, Low Income	ABS	18.7	18.7	19.6	18.7	95.5	95.5
Ross	ABS	23.8	23.8	25.4	23.8	93.5	93.5
Sandusky	ABS	25.2	25.2	26.9	25.2	93.8	93.8
Scioto	ABS	20.1	20.1	20.6	20.1	97.4	97.4
Scioto, Low Income	ABS	20.7	20.7	22.6	20.7	91.7	91.7
Seneca	ABS	30.5	30.5	31.3	30.5	97.4	97.4
Shelby	ABS	22.6	22.6	24.9	22.6	90.6	90.6
Stark	ABS	22.8	22.8	24.2	22.8	94.3	94.3
Summit	ABS	24.0	24.0	25.4	24.0	94.5	94.5
Summit, Low Income	ABS	20.3	20.3	22.0	20.3	92.3	92.3
Trumbull	ABS	24.0	24.0	25.0	24.0	95.7	95.7
Trumbull, Low Income	ABS	22.7	22.7	24.4	22.7	93.1	93.1
Tuscarawas	ABS	22.0	22.0	23.2	22.0	94.8	94.8
Union	ABS	25.4	25.4	27.2	25.4	93.2	93.2
Van Wert	ABS	30.0	30.0	30.4	30.0	98.8	98.8
Vinton	ABS	22.5	22.5	25.4	22.5	88.6	88.6
Warren	ABS	25.3	25.3	27.1	25.3	93.4	93.4
Washington	ABS	30.9	30.9	32.1	30.9	96.3	96.3
Washington, Low Income	ABS	27.3	27.3	28.3	27.3	96.2	96.2
Wayne	ABS	22.2	22.2	23.7	22.2	93.7	93.7
Williams	ABS	30.3	30.3	32.0	30.3	94.6	94.6
Wood	ABS	26.9	26.9	28.6	26.9	94.3	94.3
Wyandot	ABS	21.7	21.7	24.2	21.7	89.4	89.4

Table E-6. County (%)

County Number	County Name	RR1	RR3	RR4	RR5	Coop LB	Coop UB
1	Adams County, Ohio	13.3	14.6	16.4	19.7	34.6	34.6
2	Allen County, Ohio	13.7	17.4	19.1	26.5	22.4	22.4
3	Ashland County, Ohio	12.0	14.9	16.4	26.2	19.1	19.1
4	Ashtabula County, Ohio	11.2	13.9	15.5	22.8	20.5	20.5
5	Athens County, Ohio	12.8	15.0	17.3	22.2	23.7	23.7
6	Auglaize County, Ohio	15.8	17.4	18.2	30.0	28.9	28.9
7	Belmont County, Ohio	13.2	16.5	17.2	27.2	25.1	25.1
8	Brown County, Ohio	10.8	14.0	15.6	25.6	17.0	17.0
9	Butler County, Ohio	11.6	13.7	15.2	22.5	20.4	20.4
10	Carroll County, Ohio	15.1	16.4	18.0	26.3	29.9	29.9
11	Champaign County, Ohio	14.4	17.1	18.9	28.1	21.1	21.1
12	Clark County, Ohio	13.4	16.3	18.3	25.6	25.6	25.6
13	Clermont County, Ohio	12.1	14.1	15.3	24.3	19.6	19.6
14	Clinton County, Ohio	12.3	16.4	18.2	26.2	18.5	18.5
15	Columbiana County, Ohio	14.5	16.8	17.9	25.1	27.1	27.1
16	Coshocton County, Ohio	14.1	15.8	17.1	23.1	32.9	32.9
17	Crawford County, Ohio	20.0	22.3	24.2	30.4	32.4	32.4
18	Cuyahoga County, Ohio	10.9	13.9	15.4	20.5	24.6	24.6
19	Darke County, Ohio	14.6	17.9	18.3	29.0	27.7	27.7
20	Defiance County, Ohio	14.2	19.2	21.2	35.2	24.8	24.8
21	Delaware County, Ohio	15.3	17.6	19.2	30.0	27.1	27.1
22	Erie County, Ohio	13.9	17.5	19.6	28.2	25.8	25.8
23	Fairfield County, Ohio	13.0	16.3	17.5	29.7	17.2	17.2
24	Fayette County, Ohio	12.9	15.0	16.0	22.7	27.1	27.1
25	Franklin County, Ohio	13.8	15.7	17.2	21.8	27.9	27.9
26	Fulton County, Ohio	15.0	18.3	19.3	30.4	30.1	30.1
27	Gallia County, Ohio	14.0	16.5	18.5	25.1	28.6	28.6
28	Geauga County, Ohio	10.0	13.1	14.9	25.8	17.3	17.3
29	Greene County, Ohio	16.6	17.8	19.7	24.6	38.2	38.2
30	Guernsey County, Ohio	16.6	19.6	21.1	28.9	32.0	32.0
31	Hamilton County, Ohio	11.3	14.6	16.1	22.8	21.3	21.3

County Number	County Name	RR1	RR3	RR4	RR5	Coop LB	Coop UB
32	Hancock County, Ohio	11.9	15.8	17.1	27.5	17.3	17.3
33	Hardin County, Ohio	15.1	17.8	18.6	26.4	24.1	24.1
34	Harrison County, Ohio	14.7	17.2	19.2	26.2	31.5	31.5
35	Henry County, Ohio	17.6	20.9	22.6	32.7	33.8	33.8
36	Highland County, Ohio	13.6	16.4	17.4	25.5	22.7	22.7
37	Hocking County, Ohio	15.7	18.5	20.5	27.0	19.7	19.7
38	Holmes County, Ohio	11.5	13.7	14.7	21.7	23.8	23.8
39	Huron County, Ohio	10.4	13.3	14.9	23.2	17.1	17.1
40	Jackson County, Ohio	15.0	17.7	19.1	27.7	30.1	30.1
41	Jefferson County, Ohio	16.8	19.6	20.9	29.0	34.5	34.5
42	Knox County, Ohio	12.3	15.5	16.7	27.7	21.1	21.1
43	Lake County, Ohio	8.9	13.0	14.5	25.6	13.7	13.7
44	Lawrence County, Ohio	13.1	16.0	17.7	25.7	24.7	24.7
45	Licking County, Ohio	13.0	15.5	16.8	25.6	22.8	22.8
46	Logan County, Ohio	13.0	15.6	16.9	26.2	23.9	23.9
47	Lorain County, Ohio	11.0	13.9	15.4	23.8	19.1	19.1
48	Lucas County, Ohio	16.3	18.1	19.6	24.2	36.2	36.2
49	Madison County, Ohio	10.1	12.8	14.6	23.2	18.1	18.1
50	Mahoning County, Ohio	12.5	15.9	17.3	24.6	22.8	22.8
51	Marion County, Ohio	13.5	16.4	18.3	25.4	26.9	26.9
52	Medina County, Ohio	10.3	13.3	14.8	27.9	15.7	15.7
53	Meigs County, Ohio	16.1	19.2	20.7	29.1	33.8	33.8
54	Mercer County, Ohio	9.8	12.9	14.5	27.9	14.3	14.3
55	Miami County, Ohio	11.8	14.5	15.6	26.1	15.9	15.9
56	Monroe County, Ohio	17.2	20.1	21.6	27.7	35.7	35.7
57	Montgomery County, Ohio	14.5	17.0	18.7	23.9	28.5	28.5
58	Morgan County, Ohio	16.3	18.5	19.8	26.2	37.9	37.9
59	Morrow County, Ohio	13.6	15.8	17.3	24.2	22.5	22.5
60	Muskingum County, Ohio	14.3	17.3	18.8	26.7	27.7	27.7
61	Noble County, Ohio	14.5	17.1	18.6	26.6	29.3	29.3
62	Ottawa County, Ohio	14.3	17.1	18.6	29.9	26.3	26.3
63	Paulding County, Ohio	14.7	16.5	18.8	23.7	33.8	33.8
64	Perry County, Ohio	13.0	14.8	15.4	24.8	18.0	18.0

County Number	County Name	RR1	RR3	RR4	RR5	Coop LB	Coop UB
65	Pickaway County, Ohio	12.1	14.5	15.7	25.0	23.1	23.1
66	Pike County, Ohio	15.6	18.7	19.8	31.3	23.3	23.3
67	Portage County, Ohio	13.1	15.3	16.3	25.1	24.0	24.0
68	Preble County, Ohio	10.8	13.4	14.7	24.9	16.2	16.2
69	Putnam County, Ohio	14.2	16.8	19.1	29.2	20.6	20.6
70	Richland County, Ohio	10.6	15.6	17.1	24.8	19.9	19.9
71	Ross County, Ohio	13.6	15.9	17.9	25.5	23.4	23.4
72	Sandusky County, Ohio	11.9	15.2	16.4	28.2	21.2	21.2
73	Scioto County, Ohio	14.0	15.8	16.6	22.9	29.0	29.0
74	Seneca County, Ohio	17.5	21.1	21.8	31.3	36.8	36.8
75	Shelby County, Ohio	10.9	14.4	16.1	25.6	14.2	14.2
76	Stark County, Ohio	12.9	15.6	16.9	24.4	25.2	25.2
77	Summit County, Ohio	12.2	15.2	16.5	24.3	22.9	22.9
78	Trumbull County, Ohio	13.7	16.6	17.8	24.9	26.8	26.8
79	Tuscarawas County, Ohio	10.2	13.5	15.0	23.8	15.9	15.9
80	Union County, Ohio	15.4	18.2	20.7	29.5	28.4	28.4
81	Van Wert County, Ohio	14.5	18.5	19.6	30.2	26.3	26.3
82	Vinton County, Ohio	15.6	17.2	19.7	24.1	34.7	34.7
83	Warren County, Ohio	13.6	15.9	17.2	27.5	24.4	24.4
84	Washington County, Ohio	15.6	19.6	21.4	33.4	20.3	20.3
85	Wayne County, Ohio	10.9	13.8	14.9	24.1	18.6	18.6
86	Williams County, Ohio	11.3	15.9	17.5	30.6	16.0	16.0
87	Wood County, Ohio	12.6	15.5	17.1	28.5	20.2	20.2
88	Wyandot County, Ohio	13.2	15.0	16.9	22.4	29.3	29.3

Appendix F. Post–Field-Start Changes Log

Date	Mode	Quex #	Change Made
8/3/2021	CATI	PREIP90	Updated spec to remove the conditional use of CALLTYPE = 02 to account for providing all respondents with the same incentive. The next questions focus on the health insurance coverage and health status of one child in your home. You will receive ~~[IF CALL TYPE = 02, DISPLAY "~~an additional~~"]~~ $5 for participating in this portion of the survey.
8/3/2021	CATI	CF1A	Updated spec to remove the following phrase, ~~(FILL: IF CALLTYPE=02: The person selected to participate will receive a $10 electronic gift card for completing the survey.)~~ as it no longer applied, and this text was redundant with text in LEAD_IN1. Stem then read: Your telephone number was chosen randomly, and all information will be kept strictly confidential.
8/3/2021	CAWI	B18	Modified question text to remove the phrase, ~~Would you say…~~ at the end of the stem, as this was not necessary for self-administration. Question stem then read: These next questions are about your primary health insurance. How long have you been covered by your current primary health insurance? Spanish translation updated accordingly.
8/24/2021	CAWI	B23	Added question (and corresponding response values/logic): (ASK IF (B19 = 01 AND B22=2,MISSING)) Just prior to your current health insurance coverage, were you covered by any <u>other</u> health care coverage not otherwise mentioned so far? 01 Yes 02 No Corresponding Spanish translation also added.

Date	Mode	Quex #	Change Made
8/24/2021	CATI	B23	Added question (and corresponding response values/logic): (ASK IF: (B19 = 01 AND B22=2,98,99)) Just prior to your current health insurance coverage, were you covered by any **other** health care coverage that I have not mentioned? 01 YES 02 NO 98 DK 99 REFUSED Corresponding Spanish translation also added.
8/31/2021	CAWI	HH	Modified an unseen variable (within Voxco) that would enable RDD respondents to complete the CAWI instrument when they were sent text message invitations and to differentiate between an ABS CAWI completion and a RDD CAWI completion.
8/31/2021	CAWI	INTRO	Added logic of DISPLAY IF HH = 01 to the portion of the statement in the INTRO variable that read, To ensure the representativeness of the survey, please have the adult age 19 or older in the household with the most recent birthday complete the survey. This was done to hide this statement from cell phone RDD respondents completing the CAWI through a text message invitation, as a cellular device was considered to already be at the person-level.
8/31/2021	CAWI	153A_2	Added logic of ASK IF HH = 01 to account for cell phone RDD respondents who were completing the CAWI instrument from a text message invitation (as they would need to have an active cell phone in order to complete the survey in this fashion, making the question redundant.)
8/31/2021	CAWI	153_2	Changed logic to ASK IF Q153A_2 = 1 OR HH = 00, adding in the OR HH = 00 portion to account for the logic change made to 153A_2, so that RDD respondents who were completing the CAWI instrument from a text message invitation were asked this question even though they were not asked 153A_2.

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
- STRATUM: 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 / missunit;
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 STRATAt;
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(centered)

xi, noomit: svy: total i.INSRD_A_IMP, level(95)
xi, noomit: svy: mean i.INSRD_A_IMP, level(95
```

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

```
library(survey)
options(survey.lonely.psu="adjust")
omas2019_design = svydesign(ids = ~1, strata=~strata, data=omas_2019, weights = omas_2019$WT_A)

svytotal(~as.factor(INSRD_A_IMP), design = omas2019_design)
svymean(~as.factor(INSRD_A_IMP), design = omas2019_design)
```

G.2 Limitations and Cautions When Using the Data

The 2021 OMAS carries with it the following limitations and cautions regarding use of the data:

- A majority of these data were collected via the ABS frame (80% of responses). The ABS frame allowed for web and paper responses. An RDD dual frame of cell phone and landline was used for the remainder of the sample (20%). Cell phone respondents could respond via telephone or web. This led to most responses (75%) coming through web administration. The predominance of web administration merits limits relating to do the following:
  - Web administration may lead to different response distributions than telephone. Because prior OMAS iterations predominantly relied on telephone interviewing a mode effect may exist with prior years for some outcome.
  - Paper administration was utilized more heavily in rural counties. This could lead to mode effects as well in rural counties compared to non-rural counties.

- 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 et al., 1990; Ellis et al., 2003; Epstein et al., 1989; Kovar & Wright, 1974; 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 et al., 1999).

These limitations, as they relate to the ability to use the 2021 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 how the survey was designed and conducted—not necessarily because of actual differences in the population of interest.
- To maximize coverage, a multi-frame design consisting of ABS, cell phone and frames was used. The 2021 OMAS used an overlapping design, which included respondents who could have been captured from any of the frames. This poses several methodological challenges since the entire ABS and RDD frames overlap. As discussed in Section 5, the 2021 OMAS independently weighted the ABS and RDD samples to represent the Ohio population and then blended the two to create a single representative weight.
- 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

Frame 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
ABS	25,681	1,797				884	101,584					54
Landline	222	23	449	58		345	2,651	47	1,714	96	212	12
Cell	5,630	1,190	8,036	8,018		75,391	30,611	120	40,897	5,307	5,347	10,774
Overall	31,533	3,010	8,485	8,076		76,620	134,846	167	42,611	5,403	5,559	10,840

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 Non-residence (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	Central/Southeast	8,396	782	2,361	2,136		16,434	32,964	42	8,663	1,114	1,221	2,301
2	Northeast	11,442	1,115	3,133	3,125		33,359	52,861	63	19,492	2,697	2,293	5,239
3	West	11,695	1,113	2,991	2,815		26,827	49,021	62	14,456	1,592	2,045	3,300

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 Non-residence (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	Metro	18,214	1,780	4,253	4,299		42,198	85,407	91	27,106	3,471	3,106	7,183
2	Suburban	4,223	414	1,375	1,312		12,952	15,215	17	5,066	615	924	1031
3	Rural Non-Appalachian	3,905	358	1,319	1,126		10,109	14,015	26	4,944	569	730	1024
4	Rural Appalachian	5,191	458	1,538	1,339		11,361	20,209	33	5,495	748	799	1602

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 Non-residence (incl. Businesses, Dorms)
4.7 No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-4. Final Disposition by Sampling Stratum

Sampling Stratum	Frame 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
Adams, Cell, Listed	RDD	9	3	15	17		86	40		35	3	7	10
Allen, Cell, Listed	RDD	31	6	36	47		288	106		96	11	18	22
Ashland, Cell, Listed	RDD	19	4	23	25		194	61		43	4	10	8
Ashtabula, Cell, Listed	RDD	28	5	28	21		298	93	1	78	8	24	23
Athens, Cell, Listed	RDD	14	4	21	20		143	34		34	2	11	23
Auglaize, Cell, Listed	RDD	15	2	28	21		180	50		33	8	5	6
Belmont, Cell, Listed	RDD	22	2	33	33		270	92		62	12	16	38
Brown, Cell, Listed	RDD	20	4	24	27		278	100		81	11	23	25
Butler, Cell, Listed	RDD	132	25	208	186		1851	714	5	598	72	144	155
Carroll, Cell, Listed	RDD	16	5	31	27		226	59	1	47	4	13	12
Champaign, Cell, Listed	RDD	21	3	19	24		135	43		33	3	6	6
Clark, Cell, Listed	RDD	50	10	41	68		387	121		120	15	30	35
Clermont, Cell, Listed	RDD	93	19	134	100		1107	447	2	310	26	90	87
Clinton, Cell, Listed	RDD	11	4	24	19		157	50		60	7	12	9
Columbiana, Cell, Listed	RDD	34	4	40	49		359	125		122	18	25	56
Coshocton, Cell, Listed	RDD	13	2	11	11		93	40	1	26	4	7	9
Crawford, Cell, Listed	RDD	20	4	22	13		124	39	1	38	6	5	15
Cuyahoga, Cell, Listed	RDD	226	39	308	326		3005	1038	5	915	131	194	220
Darke, Cell, Listed	RDD	14	1	19	27		154	68		43	4	15	16
Defiance, Cell, Listed	RDD	11	1	13	10		133	56		24	5	11	17
Delaware, Cell, Listed	RDD	112	15	121	105		794	330	1	173	21	64	62
Erie, Cell, Listed	RDD	24	6	32	19		209	76		57	8	10	24
Fairfield, Cell, Listed	RDD	71	11	98	81		695	229		190	20	50	42

Sampling Stratum	Frame 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
Fayette, Cell, Listed	RDD	13	3	17	15		149	41		47	7	6	12
Franklin, Cell, Listed	RDD	307	58	380	369		2342	980	5	737	88	165	254
Fulton, Cell, Listed	RDD	18	1	19	12		172	54		38	6	14	10
Gallia, Cell, Listed	RDD	14	4	16	15		100	40		38	8	6	12
Geauga, Cell, Listed	RDD	36	14	71	59		678	225		133	23	58	42
Greene, Cell, Listed	RDD	35	8	42	36		378	149	1	106	17	30	36
Guernsey, Cell, Listed	RDD	10	2	15	8		103	33	1	23	3	6	17
Hamilton, Cell, Listed	RDD	187	41	253	286		2389	938	4	804	81	156	208
Hancock, Cell, Listed	RDD	26	5	26	28		258	106		63	10	14	18
Hardin, Cell, Listed	RDD	15	1	22	6		95	34		42	5	6	5
Harrison, Cell, Listed	RDD	11	1	12	10		104	39		23	4	6	16
Henry, Cell, Listed	RDD	18	2	11	7		99	41		26	4	9	4
Highland, Cell, Listed	RDD	17	3	17	16		129	41		43	8	9	15
Hocking, Cell, Listed	RDD	11	3	22	12		110	37		37	8	8	17
Holmes, Cell, Listed	RDD	11	2	23	29		112	41		40	2	9	5
Huron, Cell, Listed	RDD	15	5	21	27		233	62		58	6	17	23
Jackson, Cell, Listed	RDD	15	5	10	17		103	38		37	2	3	18
Jefferson, Cell, Listed	RDD	24	3	32	16		215	91		54	12	15	32
Knox, Cell, Listed	RDD	29	4	55	44		259	91		76	8	15	19
Lake, Cell, Listed	RDD	62	4	93	77		941	294	1	207	43	64	66
Lawrence, Cell, Listed	RDD	16	3	27	29		186	55		59	11	5	32
Licking, Cell, Listed	RDD	66	15	109	73		650	222		211	20	41	50
Logan, Cell, Listed	RDD	19	5	24	16		168	51		42	6	7	15
Lorain, Cell, Listed	RDD	84	25	139	155		1560	437	1	400	36	101	103

Sampling Stratum	Frame 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
Lucas, Cell, Listed	RDD	141	18	163	140		1427	533	1	424	43	82	127
Madison, Cell, Listed	RDD	30	9	44	57		351	95		78	10	17	18
Mahoning, Cell, Listed	RDD	69	13	88	86		863	288		267	29	59	96
Marion, Cell, Listed	RDD	22	6	29	26		195	84	1	62	10	10	20
Medina, Cell, Listed	RDD	66	15	108	125		1383	417		262	41	98	66
Meigs, Cell, Listed	RDD	18	1	11	11		99	52		26	8	3	15
Mercer, Cell, Listed	RDD	13	1	20	21		193	53		29	2	8	7
Miami, Cell, Listed	RDD	48	6	41	73		556	202	1	135	21	39	44
Monroe, Cell, Listed	RDD	9	3	20	11		89	34		21	6	4	16
Montgomery, Cell, Listed	RDD	144	21	158	134		1308	524	2	498	66	87	138
Morgan, Cell, Listed	RDD	12	1	12	14		106	38		23	6	7	14
Morrow, Cell, Listed	RDD	19	3	27	16		160	61	2	26	5	9	12
Muskingum, Cell, Listed	RDD	28	4	35	24		249	98		73	17	8	14
Noble, Cell, Listed	RDD	15	2	15	15		99	25		22	6	4	22
Ottawa, Cell, Listed	RDD	16	4	31	20		246	71		31	8	16	22
Paulding, Cell, Listed	RDD	10	2	19	10		109	46		33	5	2	13
Perry, Cell, Listed	RDD	14	2	19	26		192	49		41	4	4	13
Pickaway, Cell, Listed	RDD	25	5	34	31		273	84		68	7	16	18
Pike, Cell, Listed	RDD	12	3	18	24		125	50		38	4	8	15
Portage, Cell, Listed	RDD	49	9	75	68		775	222	1	160	24	51	43
Preble, Cell, Listed	RDD	20	5	33	28		334	84		67	14	19	20
Putnam, Cell, Listed	RDD	15	1	25	21		144	48		30	4	7	2
Richland, Cell, Listed	RDD	34	4	61	46		462	135		119	18	19	32
Ross, Cell, Listed	RDD	28	13	50	51		351	98		113	10	15	37

Sampling Stratum	Frame 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
Sandusky, Cell, Listed	RDD	19	3	25	26		317	91		50	9	14	17
Scioto, Cell, Listed	RDD	33	3	33	26		207	85	2	56	12	8	22
Seneca, Cell, Listed	RDD	9	1	17	22		142	47		41	6	9	11
Shelby, Cell, Listed	RDD	20	3	27	26		240	67		64	14	16	15
Stark, Cell, Listed	RDD	95	22	125	137		1345	420	3	372	33	82	82
Summit, Cell, Listed	RDD	139	25	175	197		2011	638		519	65	137	125
Trumbull, Cell, Listed	RDD	48	8	78	69		855	252		197	25	43	86
Tuscarawas, Cell, Listed	RDD	25	7	44	30		332	116	1	78	6	17	36
Union, Cell, Listed	RDD	37	9	30	26		208	80		55	10	14	14
VanWert, Cell, Listed	RDD	9	5	20	16		176	58		34	10	9	13
Vinton, Cell, Listed	RDD	12	2	23	19		128	45		37	7	4	21
Warren, Cell, Listed	RDD	99	15	137	125		1107	442	3	284	39	100	97
Washington, Cell, Listed	RDD	25	6	21	39		233	63		44	9	11	31
Wayne, Cell, Listed	RDD	36	4	55	62		562	197		145	13	43	26
Williams, Cell, Listed	RDD	12	1	18	22		160	63		39	6	7	21
Wood, Cell, Listed	RDD	50	14	79	66		720	231		146	14	49	47
Wyandot, Cell, Listed	RDD	7	2	19	11		108	42		34	7	4	10
Adams, Cell, Unlisted	RDD	5	2	11	8		38	15	1	29	8	19	4
Allen, Cell, Unlisted	RDD	19	2	19	20		215	126	1	284	65	19	71
Ashland, Cell, Unlisted	RDD	9	7	15	17		223	83		154	18	9	29
Ashtabula, Cell, Unlisted	RDD	28	6	39	42		450	176		280	39	28	56
Athens, Cell, Unlisted	RDD	28	9	32	37		282	113		227	20	18	49
Auglaize, Cell, Unlisted	RDD												
Belmont, Cell, Unlisted	RDD	11	2	20	14		184	62	1	100	9	6	39

Sampling Stratum	Frame 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
Brown, Cell, Unlisted	RDD	3	1	7	17		45	43		50	10	11	12
Butler, Cell, Unlisted	RDD	19	7	38	36		317	152		239	23	23	57
Carroll, Cell, Unlisted	RDD												
Champaign, Cell, Unlisted	RDD	3		2	13		56	30		73	10	2	8
Clark, Cell, Unlisted	RDD	30	12	34	39		418	145		334	30	24	68
Clermont, Cell, Unlisted	RDD	4	1	10	6		69	45		51	6	12	18
Clinton, Cell, Unlisted	RDD	8	1	4	11		82	36	1	144	10	6	24
Columbiana, Cell, Unlisted	RDD	13	4	15	11		131	44		91	19	6	24
Coshocton, Cell, Unlisted	RDD	6	3	7	4		65	30		35	6	33	12
Crawford, Cell, Unlisted	RDD	3	2	7	7		44	17		77	7	3	14
Cuyahoga, Cell, Unlisted	RDD	233	64	432	421		5383	3773	8	5823	911	408	1981
Darke, Cell, Unlisted	RDD	6	1	16	10		105	39		126	7	8	10
Defiance, Cell, Unlisted	RDD	10	1	14	12		110	56		82	12	5	24
Delaware, Cell, Unlisted	RDD	4	3	6	4		75	35	1	89	12	10	15
Erie, Cell, Unlisted	RDD	19	5	18	35		201	73		182	13	22	23
Fairfield, Cell, Unlisted	RDD	12	5	24	24		211	80		167	13	13	25
Fayette, Cell, Unlisted	RDD	8	1	15	12		58	30	1	69	1	2	11
Franklin, Cell, Unlisted	RDD	228	49	279	347		2661	1396	5	2323	328	288	671
Fulton, Cell, Unlisted	RDD	1		3	1		22	21		38	6	2	6
Gallia, Cell, Unlisted	RDD	8	2	8	9		81	38		46	14	4	24
Geauga, Cell, Unlisted	RDD	4	1	12	7		113	58		124	13	16	21
Greene, Cell, Unlisted	RDD												
Guernsey, Cell, Unlisted	RDD	8	1	16	17		116	30		76	8	9	18
Hamilton, Cell, Unlisted	RDD	210	58	369	399		4359	2044	8	3959	330	371	693

Sampling Stratum	Frame 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
Hancock, Cell, Unlisted	RDD	15	3	31	20		269	93		210	24	21	43
Hardin, Cell, Unlisted	RDD	3	1	6	10		54	30		59	3	6	5
Harrison, Cell, Unlisted	RDD	3	1	11	7		43	29		26	7	4	10
Henry, Cell, Unlisted	RDD	4		9	7		52	22		35	9	6	12
Highland, Cell, Unlisted	RDD	9		5	10		98	46		83	10	2	17
Hocking, Cell, Unlisted	RDD	8	2	8	9		51	26		52	9	9	20
Holmes, Cell, Unlisted	RDD	7	1	23	22		166	62		113	9	22	15
Huron, Cell, Unlisted	RDD	14	3	24	32		239	96	1	148	25	3	30
Jackson, Cell, Unlisted	RDD	13	2	13	19		88	41		42	9	3	17
Jefferson, Cell, Unlisted	RDD	11	2	9	10		104	49		71	11	6	26
Knox, Cell, Unlisted	RDD	12	3	22	17		174	60	2	94	11	17	23
Lake, Cell, Unlisted	RDD	71	23	107	153		1819	549	3	1051	118	106	142
Lawrence, Cell, Unlisted	RDD	11	4	15	8		141	48	1	98	14	2	16
Licking, Cell, Unlisted	RDD	11	1	30	24		261	104		229	13	23	27
Logan, Cell, Unlisted	RDD	8		10	11		112	38		71	7	11	11
Lorain, Cell, Unlisted	RDD	36	13	79	73		808	312	2	752	77	49	108
Lucas, Cell, Unlisted	RDD	70	20	102	100		979	392	2	648	91	75	168
Madison, Cell, Unlisted	RDD	4	2	8	3		59	38		84	13	5	10
Mahoning, Cell, Unlisted	RDD	72	14	107	114		1295	433	1	1097	137	88	264
Marion, Cell, Unlisted	RDD	10	1	20	19		131	50		140	12	11	15
Medina, Cell, Unlisted	RDD	6	4	18	23		242	86	1	152	22	13	31
Meigs, Cell, Unlisted	RDD	6	2	10	8		74	35		48	9	3	18
Mercer, Cell, Unlisted	RDD	16	7	31	27		267	99		80	11	15	25
Miami, Cell, Unlisted	RDD	3	4	8	10		99	30		97	8	2	13

Sampling Stratum	Frame 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
Monroe, Cell, Unlisted	RDD	7	1	10	8		59	20		87	5	3	11
Montgomery, Cell, Unlisted	RDD	152	42	229	254		2249	983	8	1865	226	164	510
Morgan, Cell, Unlisted	RDD	4		7	7		40	21		106	5	3	7
Morrow, Cell, Unlisted	RDD	5	1	6	10		69	24		83	13	4	9
Muskingum, Cell, Unlisted	RDD	16	3	24	19		184	75	1	158	22	13	27
Noble, Cell, Unlisted	RDD	6	2	9	11		97	36		47	6	6	18
Ottawa, Cell, Unlisted	RDD	1					10	13		19	2		15
Paulding, Cell, Unlisted	RDD	3	4	5	5		51	21		61	8	4	10
Perry, Cell, Unlisted	RDD	4	1	6	12		84	34		38	11	1	10
Pickaway, Cell, Unlisted	RDD	10	2	13	11		76	38		53	17	2	11
Pike, Cell, Unlisted	RDD	9	1	9	12		53	28	1	31	6	6	7
Portage, Cell, Unlisted	RDD	5	1	2	15		110	49		97	24	11	37
Preble, Cell, Unlisted	RDD	6	2	11	14		76	36		59	7	6	13
Putnam, Cell, Unlisted	RDD	8	1	7	8		68	40		56	13	6	11
Richland, Cell, Unlisted	RDD	29	10	62	49		563	327	4	801	173	46	227
Ross, Cell, Unlisted	RDD	22	4	29	28		229	92		157	21	14	43
Sandusky, Cell, Unlisted	RDD	14	1	18	9		160	54	2	111	15	18	20
Scioto, Cell, Unlisted	RDD	23	1	30	48		283	107	1	164	32	13	39
Seneca, Cell, Unlisted	RDD	5		5	2		42	34	1	48	9	4	62
Shelby, Cell, Unlisted	RDD	12	2	16	8		146	52		128	9	11	12
Stark, Cell, Unlisted	RDD	85	15	147	139		1246	667	5	1057	185	79	333
Summit, Cell, Unlisted	RDD	132	29	191	225		2596	1154	7	2008	230	188	493
Trumbull, Cell, Unlisted	RDD	17	3	20	14		188	149		347	67	7	164
Tuscarawas, Cell, Unlisted	RDD	29	8	59	59		474	190		340	35	41	52

Sampling Stratum	Frame 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
Union, Cell, Unlisted	RDD	9	3	13	9		63	34		64	6	8	10
VanWert, Cell, Unlisted	RDD	4		6	15		48	24		69	11	9	9
Vinton, Cell, Unlisted	RDD												
Warren, Cell, Unlisted	RDD	3		4	4		22	30		66	2	2	4
Washington, Cell, Unlisted	RDD	20	6	15	23		173	49	1	107	16	22	29
Wayne, Cell, Unlisted	RDD	14	3	30	26		282	84	2	268	23	22	18
Williams, Cell, Unlisted	RDD	6	4	12	13		157	58		103	11	18	16
Wood, Cell, Unlisted	RDD	6		7	4		54	23		111	7	14	14
Wyandot, Cell, Unlisted	RDD	4		9	6		61	28		33	9	4	13
Adams, Landline	RDD	6		3			4	27	1	2		3	1
Allen, Landline	RDD	4		1	1		1	19		5	1	1	
Ashland, Landline	RDD	3		4			2	24	1	2	1	1	
Ashtabula, Landline	RDD	3		6	1		3	22	1	6		2	1
Athens, Landline	RDD	3		5			3	29		9	1	3	
Auglaize, Landline	RDD	2		6	2		6	25	1	2		2	
Belmont, Landline	RDD	2	1	7	1		2	24		8	7	1	
Brown, Landline	RDD	2					2	20	1	4	2	1	
Butler, Landline	RDD	4		8			5	46		8	3	9	
Carroll, Landline	RDD	1	1	7			1	32		2	1	1	
Champaign, Landline	RDD	3		5	2		5	13	1				
Clark, Landline	RDD	4		3	1		4	20			2	3	
Clermont, Landline	RDD	2		5			2	21	2	2	1	2	
Clinton, Landline	RDD	2		5			5	31		1	1	1	
Columbiana, Landline	RDD	1		7			4	25		3	1	2	

Sampling Stratum	Frame 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
Coshocton, Landline	RDD	2	1	9	1		3	24		3	2	3	
Crawford, Landline	RDD	1		7	1		2	24	1	2		5	1
Cuyahoga, Landline	RDD	8		23	1		21	145	2	22	4	10	1
Darke, Landline	RDD	2		6			2	18		3		2	
Defiance, Landline	RDD	3		2			2	22	1	10		3	
Delaware, Landline	RDD	1		5	1		6	19		20	2	1	
Erie, Landline	RDD	1		3			3	26	1	27		4	
Fairfield, Landline	RDD	2		3			5	23		24		3	
Fayette, Landline	RDD			2			5	31		32	1	1	
Franklin, Landline	RDD	10		8	2		15	83	6	144	4	7	2
Fulton, Landline	RDD			2			5	25	1	33		4	
Gallia, Landline	RDD	2		14	1		1	29		23	1	2	
Geauga, Landline	RDD	2		8			3	33		18	1	2	
Greene, Landline	RDD	5		6			1	18		36		2	1
Guernsey, Landline	RDD	3	1	4	1		1	24		31	1	2	
Hamilton, Landline	RDD	5	2	18	2		15	105	2	127	3	9	
Hancock, Landline	RDD	2					1	34		31	1	3	
Hardin, Landline	RDD			3			2	30		30		3	
Harrison, Landline	RDD	1	2	6	1		7	30		19	3	2	
Henry, Landline	RDD	1	1	8	2		5	26		25		1	
Highland, Landline	RDD	1		6				32	2	27		1	
Hocking, Landline	RDD	1	1	8	1		3	27		26		3	
Holmes, Landline	RDD	1		2	1		3	25	1	30	1	3	
Huron, Landline	RDD	1		7	2		4	28		24	1	2	

Sampling Stratum	Frame 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
Jackson, Landline	RDD	2		4			2	27	1	28		2	
Jefferson, Landline	RDD			5	1		1	24	1	20	4		
Knox, Landline	RDD	6		4	1			21		31		4	
Lake, Landline	RDD	1		2	2		8	26	1	20	1	1	
Lawrence, Landline	RDD	3		11	1			33		9	3		1
Licking, Landline	RDD	2		5			2	26		1		2	
Logan, Landline	RDD	2	1	5			2	19		2			
Lorain, Landline	RDD			2			3	29		8	1	2	
Lucas, Landline	RDD	4		8	1		6	45	1	46		5	
Madison, Landline	RDD			2			5	16		13		4	
Mahoning, Landline	RDD	4		2	1		4	29	1	2	1	1	
Marion, Landline	RDD	1		2			1	16		13	5	1	
Medina, Landline	RDD	1		2			5	36		23	2		
Meigs, Landline	RDD		3	2			3	28	1	23	2	2	
Mercer, Landline	RDD	2		5	1		3	37		19	1	1	
Miami, Landline	RDD	6		1			6	27	2	13		3	
Monroe, Landline	RDD	2	1	8	1		3	26		29	1	3	
Montgomery, Landline	RDD	6		12	2		6	53		4		7	
Morgan, Landline	RDD	3		3	2		2	32		3	1		
Morrow, Landline	RDD	1		3			4	20		17		2	
Muskingum, Landline	RDD	2	1	4	1		3	16	1	44		1	
Noble, Landline	RDD	1		8	4		4	30		22		3	
Ottawa, Landline	RDD	1		1	1		2	29		11	1	4	1
Paulding, Landline	RDD	4		1			5	31		7	3	1	

Sampling Stratum	Frame 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
Perry, Landline	RDD	3	1	5	1		3	23		6	1	2	
Pickaway, Landline	RDD	1		1			4	26	1	16	2	1	
Pike, Landline	RDD	4	1	4			4	37		2	2		
Portage, Landline	RDD	2		3	1		4	24				5	
Preble, Landline	RDD	2		5			1	22		2	1	1	
Putnam, Landline	RDD	2	2	7			5	28	1	4	1	3	
Richland, Landline	RDD	1		5			1	20		3		1	
Ross, Landline	RDD	4		4				29		1		2	
Sandusky, Landline	RDD	4		3	1		2	30		4	1	3	
Scioto, Landline	RDD	3		4			4	31		18		2	
Seneca, Landline	RDD	2		3			4	29		32	2		
Shelby, Landline	RDD			5	1		11	24	1	28		1	
Stark, Landline	RDD	7		6	1		6	58	1	48	2	3	1
Summit, Landline	RDD	5	1	12	2		15	81	1	84	3	9	1
Trumbull, Landline	RDD	3		6	1		6	23	4	23	2		
Tuscarawas, Landline	RDD	2		4	1		3	34		18		2	
Union, Landline	RDD			2			3	21		39	3		
VanWert, Landline	RDD	2		2	1		1	17	1	45		1	
Vinton, Landline	RDD	6	2	7	1		4	20		21	1	2	1
Warren, Landline	RDD	3		3	1		6	21		25	1	5	
Washington, Landline	RDD	7		3	2		3	33	1	15	1	2	
Wayne, Landline	RDD	2		4			2	20	1	25		4	
Williams, Landline	RDD	2		8			1	27		4		2	
Wood, Landline	RDD	2		6			6	20	1	3		2	

Sampling Stratum	Frame 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
Wyandot, Landline	RDD	2		3			2	18		19	1		
Adams	ABS	12	1				6	76					
Adams, Low Income	ABS	65	6				2	330					1
Allen	ABS	118	11				7	414					
Allen, Low Income	ABS	61	3				2	253					
Ashland	ABS	108	3				3	355					
Ashtabula	ABS	96	6				3	427					
Ashtabula, Low Income	ABS	87	12				3	384					1
Athens	ABS	75	8					263					1
Athens, Low Income	ABS	78	9				4	417					1
Auglaize	ABS	78	2				4	201					
Belmont	ABS	79	3					285					
Belmont, Low Income	ABS	62					3	219					
Brown	ABS	53	5				1	210					
Brown, Low Income	ABS	22	1					60					
Butler	ABS	462	41				16	1630					
Butler, Low Income	ABS	171	13				10	1019					3
Carroll	ABS	106	6					322					
Champaign	ABS	68	7				5	221					
Clark	ABS	138	8				6	468					
Clark, Low Income	ABS	115	10				2	524					
Clermont	ABS	331	18				13	1224					
Clinton	ABS	69	5				3	236					
Columbiana	ABS	208	9				2	796					1

Sampling Stratum	Frame 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
Coshocton	ABS	47					2	192					
Coshocton, Low Income	ABS	30	2					123					
Crawford	ABS	47	4				2	129					1
Crawford, Low Income	ABS	87	4				2	227					
Cuyahoga, Low AA	ABS	1301	91				55	4763					3
Cuyahoga, Low Income, Low AA	ABS	768	79				29	4024					3
Cuyahoga, High AA	ABS	297	28				13	2133					
Cuyahoga, Low Income, High AA	ABS	479	54				25	3435					
Darke	ABS	101	2				3	277					
Defiance	ABS	71	8				2	152					
Delaware	ABS	314	22				14	865					
Erie	ABS	133	10				3	425					
Fairfield	ABS	226	6				4	632					1
Fayette	ABS	81	3					331					
Franklin, Low AA	ABS	1472	108				64	4994					5
Franklin, Low Income, Low AA	ABS	462	31				21	2792					3
Franklin, High AA	ABS	326	29				16	1781					
Franklin, Low Income, High AA	ABS	307	32				18	2126					4
Fulton	ABS	74	4				1	192					
Gallia	ABS	48	5				1	191					
Gallia, Low Income	ABS	27	1				1	84					
Geauga	ABS	151	11				11	451					
Greene	ABS	254	23				8	905					
Guernsey	ABS	64	3				1	204					

Sampling Stratum	Frame 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
Guernsey, Low Income	ABS	44	3				1	121					
Hamilton, Low AA	ABS	1253	95				43	4727					
Hamilton, High AA	ABS	358	29				15	2059					2
Hamilton, Low Income, High AA	ABS	335	25				12	1772					2
Hancock	ABS	127	6				2	416					
Hardin	ABS	74	2				1	252					
Harrison	ABS	76	7				1	260					
Henry	ABS	77	5				1	195					
Highland	ABS	48	4				2	225					
Highland, Low Income	ABS	33					1	79					
Hocking	ABS	61	3				4	180					
Hocking, Low Income	ABS	22	2					73					
Holmes	ABS	93	5				3	380					
Huron	ABS	107	8				5	422					
Jackson	ABS	45	1				1	162					
Jackson, Low Income	ABS	34	1					119					
Jefferson	ABS	68	3				4	228					
Jefferson, Low Income	ABS	101	5				2	323					1
Knox	ABS	100	4				3	311					
Lake	ABS	398	35				15	1354					
Lawrence	ABS	66	4				1	230					
Lawrence, Low Income	ABS	39	3				2	150					
Licking	ABS	279	15				10	925					
Logan	ABS	78	3				2	284					

Sampling Stratum	Frame 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
Lorain	ABS	371	22				18	1155					1
Lorain, Low Income	ABS	196	16				5	952					
Lucas, Low AA	ABS	620	23				28	1798					
Lucas, Low Income, Low AA	ABS	262	23				14	1230					2
Lucas, High AA	ABS	448	44				18	2453					1
Lucas, Low Income, High AA	ABS	278	25				7	1245					1
Madison	ABS	78	5				3	327					
Mahoning	ABS	452	31				12	1515					
Mahoning, Low Income	ABS	188	10				5	1071					1
Marion	ABS	64	9				4	230					
Marion, Low Income	ABS	54	2				2	193					
Medina	ABS	303	23				6	839					
Meigs	ABS	49	2				2	171					
Meigs, Low Income	ABS	38	1					124					
Mercer	ABS	75	5				2	229					
Miami	ABS	160	7				8	582					
Monroe	ABS	96	4				2	313					
Montgomery, Low AA	ABS	818	54				26	2506					2
Montgomery, Low Income, Low AA	ABS	275	21				4	1295					2
Montgomery, High AA	ABS	377	39				11	2222					
Montgomery, Low Income, High AA	ABS	276	17				2	1415					3
Morgan	ABS	94	7				1	313					
Morrow	ABS	88	7				2	336					1
Muskingum	ABS	115	6				3	437					

Sampling Stratum	Frame 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
Muskingum, Low Income	ABS	46	4				1	122					
Noble	ABS	80	5					277					
Ottawa	ABS	90	5					247					
Paulding	ABS	90	9				4	331					
Perry	ABS	65	1				2	237					
Perry, Low Income	ABS	30						104					
Pickaway	ABS	91	3				2	352					
Pike	ABS	49	1				2	156					
Pike, Low Income	ABS	30					1	76					
Portage	ABS	200	8				9	651					
Portage Low Income	ABS	94	5				4	421					
Preble	ABS	86	4				4	303					
Putnam	ABS	75	10				1	199					
Richland	ABS	167	11				3	502					
Richland, Low Income	ABS	64	3				1	338					
Ross	ABS	200	14				3	678					
Sandusky	ABS	106	7				1	342					1
Scioto	ABS	150	4				2	652					
Scioto, Low Income	ABS	77	7				1	355					
Seneca	ABS	112	3				3	283					
Shelby	ABS	77	8				4	270					
Stark	ABS	905	55				32	3282					
Summit	ABS	948	55				32	3149					
Summit, Low Income	ABS	467	39				14	2134					2

Sampling Stratum	Frame 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
Trumbull	ABS	287	13				5	991					
Trumbull, Low Income	ABS	122	9				2	552					
Tuscarawas	ABS	165	9				4	639					
Union	ABS	96	7				4	284					
Van Wert	ABS	84	1				1	215					
Vinton	ABS	78	10				1	307					1
Warren	ABS	366	26				14	1100					1
Washington	ABS	77	3				1	186					
Washington, Low Income	ABS	51	2				3	162					
Wayne	ABS	193	13				4	698					1
Williams	ABS	70	4				2	176					1
Wood	ABS	197	12				5	562					
Wyandot	ABS	76	9				5	291					

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 Non-residence (incl. Businesses, Dorms)
4.7 No Eligible Respondent (incl. No Adults, Not Qualified for Oversample)

Table G-5. Final Respondents by Consolidated Sampling Stratum

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
1	RDD, Adams	21	4
2	RDD, Allen	54	8
3	RDD, Ashland	40	2
4	RDD, Ashtabula	57	13
5	RDD, Athens	47	11
6	RDD, Auglaize	13	6
7	RDD, Belmont	34	6
8	RDD, Brown	24	6
9	RDD, Butler	142	45
10	RDD, Carroll	22	1
11	RDD, Champaign	25	5
12	RDD, Clark	82	24
13	RDD, Clermont	95	24
14	RDD, Clinton	23	3
15	RDD, Columbiana	39	17
16	RDD, Coshocton	20	7
17	RDD, Crawford	23	7
18	RDD, Cuyahoga	464	106
19	RDD, Darke	21	3
20	RDD, Defiance	21	5
21	RDD, Delaware	102	33
22	RDD, Erie	44	11
23	RDD, Fairfield	80	21
24	RDD, Fayette	20	5
25	RDD, Franklin	491	161
26	RDD, Fulton	12	8
27	RDD, Gallia	26	4
28	RDD, Geauga	46	11
29	RDD, Greene	40	8
30	RDD, Guernsey	19	6
31	RDD, Hamilton	401	102
32	RDD, Hancock	42	9
33	RDD, Hardin	15	5
34	RDD, Harrison	14	5
35	RDD, Henry	21	5

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
36	RDD, Highland	22	8
37	RDD, Hocking	22	4
38	RDD, Holmes	17	5
39	RDD, Huron	33	5
40	RDD, Jackson	30	7
41	RDD, Jefferson	29	11
42	RDD, Knox	41	13
43	RDD, Lake	137	24
44	RDD, Lawrence	30	7
45	RDD, Licking	69	26
46	RDD, Logan	28	7
47	RDD, Lorain	130	28
48	RDD, Lucas	211	42
49	RDD, Madison	38	7
50	RDD, Mahoning	141	31
51	RDD, Marion	21	19
52	RDD, Medina	75	17
53	RDD, Meigs	24	6
54	RDD, Mercer	32	7
55	RDD, Miami	53	14
56	RDD, Monroe	17	6
57	RDD, Montgomery	288	77
58	RDD, Morgan	14	6
59	RDD, Morrow	19	10
60	RDD, Muskingum	40	14
61	RDD, Noble	20	6
62	RDD, Ottawa	19	3
63	RDD, Paulding	18	5
64	RDD, Perry	20	5
65	RDD, Pickaway	38	5
66	RDD, Pike	25	5
67	RDD, Portage	54	12
68	RDD, Preble	25	10
69	RDD, Putnam	21	8
70	RDD, Richland	56	22
71	RDD, Ross	57	14

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
72	RDD, Sandusky	34	7
73	RDD, Scioto	48	15
74	RDD, Seneca	15	2
75	RDD, Shelby	30	7
76	RDD, Stark	168	56
77	RDD, Summit	280	51
78	RDD, Trumbull	59	20
79	RDD, Tuscarawas	60	11
80	RDD, Union	42	16
81	RDD, Van Wert	17	3
82	RDD, Vinton	18	4
83	RDD, Warren	94	26
84	RDD, Washington	57	7
85	RDD, Wayne	44	15
86	RDD, Williams	22	3
87	RDD, Wood	54	18
88	RDD, Wyandot	12	3
89	ABS, Adams	9	4
90	ABS, Adams , Low Income	59	12
91	ABS, Allen	106	23
92	ABS, Allen , Low Income	58	6
93	ABS, Ashland	94	17
94	ABS, Ashtabula	91	11
95	ABS, Ashtabula , Low Income	80	19
96	ABS, Athens	69	14
97	ABS, Athens , Low Income	80	7
98	ABS, Auglaize	63	17
99	ABS, Belmont	73	9
100	ABS, Belmont , Low Income	46	16
101	ABS, Brown	50	8
102	ABS, Brown , Low Income	18	5
103	ABS, Butler	398	105
104	ABS, Butler , Low Income	156	28
105	ABS, Carroll	99	13
106	ABS, Champaign	61	14
107	ABS, Clark	130	16

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
108	ABS, Clark , Low Income	108	17
109	ABS, Clermont	285	64
110	ABS, Clinton	57	17
111	ABS, Columbiana	176	41
112	ABS, Coshocton	37	10
113	ABS, Coshocton , Low Income	28	4
114	ABS, Crawford	39	12
115	ABS, Crawford , Low Income	75	16
116	ABS, Cuyahoga , Low AA	1190	202
117	ABS, Cuyahoga , Low Income, Low AA	743	104
118	ABS, Cuyahoga , High AA	281	44
119	ABS, Cuyahoga , Low Income, High AA	447	86
120	ABS, Darke	90	13
121	ABS, Defiance	63	16
122	ABS, Delaware	262	74
123	ABS, Erie	119	24
124	ABS, Fairfield	188	44
125	ABS, Fayette	68	16
126	ABS, Franklin , Low AA	1286	294
127	ABS, Franklin , Low Income, Low AA	423	70
128	ABS, Franklin , High AA	286	69
129	ABS, Franklin , Low Income, High AA	267	72
130	ABS, Fulton	65	13
131	ABS, Gallia	42	11
132	ABS, Gallia , Low Income	20	8
133	ABS, Geauga	137	25
134	ABS, Greene	223	54
135	ABS, Guernsey	61	6
136	ABS, Guernsey , Low Income	44	3
137	ABS, Hamilton , Low AA	1121	227
138	ABS, Hamilton , High AA	321	66
139	ABS, Hamilton , Low Income, High AA	283	77
140	ABS, Hancock	113	20
141	ABS, Hardin	66	10
142	ABS, Harrison	74	9
143	ABS, Henry	71	11

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
144	ABS, Highland	45	7
145	ABS, Highland , Low Income	25	8
146	ABS, Hocking	60	4
147	ABS, Hocking , Low Income	19	5
148	ABS, Holmes	84	14
149	ABS, Huron	94	21
150	ABS, Jackson	36	10
151	ABS, Jackson , Low Income	28	7
152	ABS, Jefferson	61	10
153	ABS, Jefferson , Low Income	85	21
154	ABS, Knox	90	14
155	ABS, Lake	369	64
156	ABS, Lawrence	57	13
157	ABS, Lawrence , Low Income	31	11
158	ABS, Licking	243	51
159	ABS, Logan	67	14
160	ABS, Lorain	329	64
161	ABS, Lorain , Low Income	177	35
162	ABS, Lucas , Low AA	520	123
163	ABS, Lucas , Low Income, Low AA	239	46
164	ABS, Lucas , High AA	394	98
165	ABS, Lucas , Low Income, High AA	239	64
166	ABS, Madison	66	17
167	ABS, Mahoning	416	67
168	ABS, Mahoning , Low Income	169	29
169	ABS, Marion	58	15
170	ABS, Marion , Low Income	46	10
171	ABS, Medina	262	64
172	ABS, Meigs	40	11
173	ABS, Meigs , Low Income	32	7
174	ABS, Mercer	56	24
175	ABS, Miami	139	28
176	ABS, Monroe	85	15
177	ABS, Montgomery , Low AA	725	147
178	ABS, Montgomery , Low Income, Low AA	261	35
179	ABS, Montgomery , High AA	353	63

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
180	ABS, Montgomery , Low Income, High AA	241	52
181	ABS, Morgan	85	16
182	ABS, Morrow	81	14
183	ABS, Muskingum	103	18
184	ABS, Muskingum , Low Income	41	9
185	ABS, Noble	72	13
186	ABS, Ottawa	84	11
187	ABS, Paulding	83	16
188	ABS, Perry	61	5
189	ABS, Perry , Low Income	23	7
190	ABS, Pickaway	76	18
191	ABS, Pike	47	3
192	ABS, Pike , Low Income	27	3
193	ABS, Portage	169	39
194	ABS, Portage Low Income	80	19
195	ABS, Preble	77	13
196	ABS, Putnam	68	17
197	ABS, Richland	144	34
198	ABS, Richland , Low Income	55	12
199	ABS, Ross	182	32
200	ABS, Sandusky	95	18
201	ABS, Scioto	120	34
202	ABS, Scioto , Low Income	64	20
203	ABS, Seneca	97	18
204	ABS, Shelby	73	12
205	ABS, Stark	813	147
206	ABS, Summit	833	170
207	ABS, Summit , Low Income	405	101
208	ABS, Trumbull	259	41
209	ABS, Trumbull , Low Income	110	21
210	ABS, Tuscarawas	140	34
211	ABS, Union	79	24
212	ABS, Van Wert	65	20
213	ABS, Vinton	71	17
214	ABS, Warren	300	92
215	ABS, Washington	68	12

Stratum	Consolidated Sampling Stratum Description	Adult Respondents	Child Respondents
216	ABS, Washington , Low Income	43	10
217	ABS, Wayne	173	33
218	ABS, Williams	67	7
219	ABS, Wood	169	40
220	ABS, Wyandot	72	13

Appendix H. PAPI - CAWI CATI Crosswalk

As noted in Section 3.3, the 2021 OMAS PAPI (paper survey) was created after the CAWI and CATI versions had begun fielding. During the design process, the PROJECT TEAM decided that the PAPI would only contain the adult module. In addition, to optimize the survey flow for a self-assessed paper format, the order of some question sets were revised. Afterwards, all questions on the PAPI were numbered sequentially, which is necessary for self-addressed paper administration because, unlike CAWI and CATI, a respondent must manually navigate skip logic. As a result, the question numbers on the PAPI instrument are different from the variable names of the identical questions in the CAWI and CATI instruments (and these CAWI and CATI variable names are the ones referenced and utilized for data analysis). This 2021 OMAS Variable Crosswalk is the reference guide for data users to illustrate which CAWI/CATI questions were asked on the PAPI and which numbered PAPI questions correspond to what variable names.

Question # (PAPI)	Variable Name (CAWI/CATI)
1	PROXY1
2	A1
3	A1A
4	C1_NEW
5	C2A
6	C2B
7	C3
8	C4
9	B4A
10	B4AA
11	B4AB
12	B4AC
13	B4B
14	B4B_1
15	B4C
16	B4CA
17	B4C2
18	B4I
19	B4I_2
20	B4E
21	B4G
22	B4_Dental
23	B18
24	B27
25	B27A
26	B27B
27	B19
28	B21
29	B22

Question # (PAPI)	Variable Name (CAWI/CATI)
30	B23
31	D30
32	D30I
33	D30_d
34	CDC_1
35	CDC_2
36	CDC_3
37	CDC_4
38	CDC_5
39	CDC_6
40	ADULT_DD
41	E65
42	E65A
43	D41
44	D43
45	D43B
46	D30A_VALUE
47	D30B_F / D30B_I
48	IS_UCLA1
49	IS_UCLA2
50	IS_UCLA3
51	D45
52	D45a
53	D45e
54	D45F
55	D46
56	D46A
57	D46A
58	D46B

Question # (PAPI)	Variable Name (CAWI/CATI)
59	E59
60	E59A
61	E62
62	F67
63	F67_2
64	F68_1
65	F68_2
66	F68B_2_1
67	F68B_2_2
68	F68B_3_1
69	F68B_3_2
70	F68B_4_1
71	F68B_4_2
72	F68C_NEW_1
73	F68C_NEW_2
74	avoid_care
75	why_avoid_a
76	why_avoid_b
77	why_avoid_c
78	why_avoid_d
79	why_avoid_e
80	F70
81	Rent_12mo
82	G70
83	G70a
84	G71
85	G71A
86	G71F
87	G71A_NEW
88	G72
89	ESI_CHLD
90	ESI_SPS
91	G72B
92	B4A
93a	G72c_1
93b	G72c_2
93c	G72c_3
94	G76
95a	G77RET
95b	G77B

Question # (PAPI)	Variable Name (CAWI/CATI)
95c	G77C
95d	G77E
95e	G77A
96	H76
97	S15
98	H78
99	S14
100	S16
101	S17
102	H77
103	Q153A_1
104	Q153_1
105	Q155
106	Q153A_2
107	Q153_2
108	Q155C
109	H84_NEW
110	H84_A1
111	H84_A1_extra
112	H84_A1_NUM
113	H84_A2
114	H84_A3
115	NUM_ADULTS
116	S11
117	S12
118	S13b_1
119	RES_NAME
119	S13b
120	S13a