

# Attachment 14a

## Sample Design Tables 2019-2020

The sample design selected for NHANES 2019-2020 is similar to the NHANES 2015-2018 with one exception. To increase operational efficiency, the new design will produce a nationally representative sample over the course of a two-year cycle instead of annually. Because of declining response rates, it has become difficult to reach the target number of examinations (5,000/year) with the current design. Changing to a two-year cycle will permit more days of field work and a great number of MEC appointments in each PSU which will result in more time to screen and recruit potential participants, and allow for more exam slots.

**Table 1** shows the summary distribution by race/Hispanic origin/income and age for 2015-2018 and the planned distribution in 2019-2020. For NHANES 2019-2020, there will still be 87 sampling domains defined by race and Hispanic origin, gender, age, and, for the white/other domains, low income status (i.e., households in which the household income is below 185% of the poverty level). These domains represent the analytic subpopulations of interest. **Table 2** shows the detailed sampling domains for NHANES with expected total sampled persons, estimated exam response rates and expected number of exams for the 87 sampling domains. **Attachment A** contains the current NHANES 2015-18 sample design as presented in the NHANES Protocol #2018-01.

**Table 1: Examination Target Distribution by Race/Hispanic: Origin/Income and Age Category**

Race/ethnicity/ income	Distribution	
	2015- 2018	2019- 2020
Black	25%	25%
Mexican/Hispanic	25%	25%
Other Low income	12%	12%
Other Non-low income	25%	25%
Asian	13%	13%

Age Category	Distribution	
	2015- 2018	2019- 2020
0-5	16%	16%
6-11	12%	12%
12-19	12%	12%
20-39	19%	19%
40-59	19%	19%

60+	21%	21%
0-19	40%	40%
20+	60%	60%

**Table 2: Projected population size for 2019-2022, number of sampled persons, and projected response rates for NHANES 2019-2020 in 30 PSUs by sex, age, race/Hispanic origin, and income**

Race Ethnicity Income	Sex	Age	Projected population average over years 2019-2022 <sup>1</sup>	Total Sample	Estimated exam response rate <sup>2</sup>	Target number of exams for 2019- 2020
Black	M&F	0-11 mos.	702,386	130	62%	79
		1-2 yrs.	1,386,924	252	56%	143
		3-5 yrs.	2,026,435	279	57%	160
	M	6-11 yrs.	2,006,398	287	56%	160
		12-19 yrs.	2,584,917	279	57%	160
		20-39 yrs.	5,992,528	502	49%	246
		40-49 yrs.	2,295,065	256	48%	123
		50-59 yrs.	2,349,826	244	51%	123
		60+ yrs.	3,283,261	507	49%	246
	F	6-11 yrs.	1,945,644	256	62%	160
		12-19 yrs.	2,582,021	264	61%	160
		20-39 yrs.	6,707,346	470	52%	246
		40-49 yrs.	2,804,662	221	56%	123
		50-59 yrs.	2,812,709	226	55%	123
		60+ yrs.	4,499,819	497	50%	246
<b>Total non-Hispanic Black</b>			<b>43,979,942</b>	<b>4,671</b>	<b>54%</b>	<b>2,500</b>
Hispanic	M&F	0-11 mos.	1,080,951	199	62%	123
		1-2 yrs.	2,145,096	242	62%	150
		3-5 yrs.	3,156,692	268	56%	150
	M	6-11 yrs.	3,235,852	261	58%	150
		12-19 yrs.	4,276,739	251	60%	150
		20-39 yrs.	10,325,422	531	46%	246
		40-49 yrs.	4,282,980	274	45%	123
		50-59 yrs.	3,287,883	256	48%	123
		60+ yrs.	3,400,667	529	46%	246
	F	6-11 yrs.	3,122,093	245	61%	150
		12-19 yrs.	4,124,568	253	59%	150
		20-39 yrs.	9,521,929	461	53%	246

		40-49 yrs.	4,100,088	213	58%	123
		50-59 yrs.	3,303,196	225	55%	123
		60+ yrs.	4,132,941	486	51%	246
<b>Total Hispanic</b>			<b>63,497,100</b>	<b>4,693</b>	<b>53%</b>	<b>2,500</b>
<b>Race Ethnicity Income</b>	<b>Sex</b>	<b>Age</b>	<b>Projected population average over years 2019-2022<sup>1</sup></b>	<b>Total Sample</b>	<b>Estimated exam response rate<sup>2</sup></b>	<b>Target number of exams for 2019- 2020</b>
Asian	M&F	0-11 mos.	298,790	55	51%	28
		1-2 yrs.	593,720	107	45%	48
		3-5 yrs.	880,552	160	41%	67
	M	6-11 yrs.	851,126	154	43%	67
		12-19 yrs.	1,108,621	203	42%	86
		20-39 yrs.	3,333,060	431	37%	159
		40-49 yrs.	1,466,201	221	36%	79
		50-59 yrs.	1,203,629	221	35%	78
		60+ yrs.	1,655,908	300	35%	105
	F	6-11 yrs.	814,305	148	38%	56
		12-19 yrs.	1,083,179	200	44%	87
		20-39 yrs.	3,531,786	451	35%	159
		40-49 yrs.	1,696,161	215	37%	79
		50-59 yrs.	1,401,563	242	33%	79
60+ yrs.		2,138,563	389	31%	122	
<b>Total non-Hispanic, non-Black Asian</b>			<b>22,057,165</b>	<b>3,498</b>	<b>37%</b>	<b>1,300</b>
White/Other Low Income	M&F	0-11 mos.	589,533	109	57%	61
		1-2 yrs.	1,212,175	133	54%	72
		3-5 yrs.	1,801,361	136	53%	72
	M	6-11 yrs.	1,799,593	124	58%	72
		12-19 yrs.	2,106,515	125	57%	72
		20-29 yrs.	2,728,011	100	50%	51
		30-39 yrs.	2,081,901	95	53%	51
		40-49 yrs.	1,704,688	95	53%	51
		50-59 yrs.	2,080,516	92	54%	51
		60-69 yrs.	2,415,067	101	49%	51
		70-79 yrs.	1,718,180	107	47%	51
	80+ yrs.	1,055,762	117	43%	51	
	F	6-11 yrs.	1,701,029	116	62%	72
		12-19 yrs.	2,226,543	125	57%	72
20-29 yrs.		3,602,179	87	58%	51	

		30-39 yrs.	2,865,649	83	60%	51
		40-49 yrs.	2,177,716	85	59%	51
		50-59 yrs.	2,344,394	86	58%	51
<b>Race Ethnicity Income</b>	<b>Sex</b>	<b>Age</b>	<b>Projected population average over years 2019-2022<sup>1</sup></b>	<b>Total Sample</b>	<b>Estimated exam response rate<sup>2</sup></b>	<b>Target number of exams for 2019- 2020</b>
White/Other Low Income	F	60-69 yrs.	3,011,326	89	56%	51
		70-79 yrs.	2,723,697	102	49%	51
		80+ yrs.	2,272,283	131	38%	51
<b>Total non-Hispanic White/Other Low Income</b>			<b>44,218,118</b>	<b>2,239</b>	<b>54%</b>	<b>1,200</b>
Total non-Hispanic White/Other Not Low Income	M&F	0-11 mos.	1,461,867	266	47%	127
		1-2 yrs.	2,922,530	326	46%	149
		3-5 yrs.	4,441,896	345	43%	149
	M	6-11 yrs.	4,568,617	361	42%	149
		12-19 yrs.	6,867,873	360	42%	149
		20-29 yrs.	9,326,976	304	35%	105
		30-39 yrs.	10,534,275	308	34%	105
		40-49 yrs.	9,996,836	297	36%	105
		50-59 yrs.	11,555,571	294	36%	105
		60-69 yrs.	11,385,049	281	38%	105
		70-79 yrs.	7,359,661	274	39%	105
		80+ yrs.	3,024,606	354	30%	105
		F	6-11 yrs.	4,357,716	342	44%
	12-19 yrs.		6,379,885	357	42%	149
	20-29 yrs.		8,386,306	234	45%	105
	30-39 yrs.		9,841,720	240	44%	105
	40-49 yrs.		9,665,823	255	42%	105
	50-59 yrs.		11,672,017	271	39%	105
	60-69 yrs.		11,801,476	244	43%	105
	70-79 yrs.		7,638,799	308	34%	105
80+ yrs.	3,499,707		370	29%	105	
<b>Total non-Hispanic White/Other Not Low Income</b>			<b>156,689,207</b>	<b>6,388</b>	<b>39%</b>	<b>2,500</b>
<b>Total non-Hispanic White/Other</b>			<b>200,907,325</b>	<b>8,627</b>	<b>43%</b>	<b>3,700</b>

<b>TOTAL</b>	<b>330,441,531</b>	<b>21,488</b>	<b>47%</b>	<b>10,000</b>
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<sup>1</sup> Civilian noninstitutionalized population in the 50 United States and the District of Columbia.

<sup>2</sup> Unconditional response rates are the domain-level response rates (number of examined persons divided by the number of sampled persons) from the 2015-2016 experience, each adjusted downward by the overall screener response rate experienced in those years to result in conservative estimates.

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