

# AFHS Response Rates

## Overview

The first national sample replicate of the AFHS obtained an overall response rate in the screening stage of 15.0% and a conditional AAPOR RR4 response rate of 66.0% in the main stage. The second national sample replicate obtained a screening-stage response rate of 17.8% and a conditional main-stage response rate of 62.4%. For individuals randomly assigned to the modular condition in replicate 1, completing at least two sections of the questionnaire in the first 20-minute module was counted as a partial response. These two rates resulted in net AAPOR RR4 response rates of 9.9% and 11.1% for replicates 1 and 2, respectively.

## Screening Response Rates

The screening response rate was calculated as

$$\frac{Elig + Inelig}{All - NS - (UH)(1 - e_2)}$$

where:

Elig=Screened eligible

Inelig=Screened ineligible

All=All released sample

NS=Screened non-sample, including mail returned as vacant or no such number or no such street.

UH=Unknown household

$e_2 = 88.94\%$ , the estimated occupancy rates of the UH cases. The estimation of  $e_2$  is explained below.

The counts of AFHS replicate 1 sample units in the AAPOR response rate categories are summarized in the **Table 1** below.

Table 1. AFHS replicate 1 sample unit counts in the AAPOR response rate categories.

ScreenOutcome	AAPORCategory	Known	Frequency
ScreenNS	NS	Non-HH	668
ScreenOther_Final	UH		15137
ScreenOther_Final	UO	HH	1020
ScreenedEligible	I	HH	801
ScreenedEligible	O	HH	435
ScreenedEligible	P	HH	197
ScreenedEligible	R	HH	80
ScreenedIneligible	Inelig	HH	1043
Total			19381

Among the cases which household status was *known*, the occupancy rate was

$$e_1 = \frac{1020 + 801 + 435 + 197 + 80 + 1043}{1020 + 801 + 435 + 197 + 80 + 1043 + 668} = 84.26\%$$

This observed occupancy rate is different from the 87.91% estimated occupancy rate based on ACS 2019 one-year data. We assume that this difference comes from the 15137 cases in which household status was unknown (UH). By matching the AFHS full sample occupancy rate to the ACS occupancy

$$\frac{1020 + 801 + 435 + 197 + 80 + 1043 + 15137 * e_2}{19381} = 87.91\%,$$

we solved that the estimated occupancy rate of the UH cases  $e_2$  is 88.94%.

### **Main Response Rates**

The main response rates were calculated as

$$\frac{I + P}{Elig}$$

where:

I=Interview

P=Partial

Elig=Screened Eligible

### **Overall Response Rates (AAPOR RR4)**

The overall response rates are obtained by the product of the screening response rate and main response rate.