Attachment 10

NHANES History

Attachment #10: NHANES History

History of NHANES Content

Since 1999, each NHANES data collection cycle has incorporated personal interviews, body measurement, blood pressure and pulse assessments, biospecimen collections, and dietary assessments. Other rotating components have included physical and physiological measurements and tests such as vision and hearing tests, physical fitness and performance tests, lower extremity disease testing, spirometry, dual-energy x-ray absorptiometry (DXA) testing, dental examinations, and a substantial number of laboratory tests on blood, urine, and other biological specimens. Much of the content proposed for 2025–2026 NHANES field operations was part of previous NHANES data collection cycles. This includes operational features such as dwelling unit listing and screening, sections of the questionnaires, and components of the examination.

The questionnaire items in 2025–2026 NHANES came from many sources that ensured adequate testing of the wording of the questions and selection of appropriate response categories. Many questions were taken from the National Health Interview Survey core questionnaires (OMB No. 0920-0214, Exp. Date 12/31/2023). These questions have been tested in the NCHS Questionnaire Design Research Laboratory (OMB No. 0920-0222, Exp. Date 01/31/2026) and then used in the field with thousands of respondents. Additional NHANES questions were derived from standard instruments, tests, and surveys done by other agencies and organizations. Examples of these are the questions related to dietary and mental health. Still other NHANES questions were taken from previous NHANES surveys.

The examination components for 2025–2026 have been included in previous NHANES data collection cycles or other population-based studies. A criterion for inclusion of examination content for the early years of NHANES was the existence of a standardized procedure for use on NHANES. To incorporate new content in future years of the continuous NHANES, evaluation of objective data collection procedures used in other studies and testing of new procedures concurrent to NHANES data collection are required. This developmental work may be done as a component of the NHANES field operations or as a standalone study not using NHANES participants. All proposed laboratory methods need to have been tested and deemed reliable and valid prior to their inclusion in NHANES.

History of NHANES Response Rates

NHANES generally uses two types of response rates to measure performance: MEC exam conditional response rates and MEC stage response rates. The MEC exam **conditional response rate** is calculated as the number of MEC examined participants *out of all survey participants* (SPs), regardless of whether they completed the SP interview. The **MEC exam stage response rate** is calculated as the number of MEC examined participants *out of SPs who completed the SP interview.* By definition, for the same cycle, the MEC stage response rate will always be higher than the MEC conditional response rate.

The graph below presents MEC exam conditional response rates over time, highlighting a downward trend that has accelerated in recent years. NHANES (along with other surveys) is affected by continued challenges in the field, including the recent COVID-19 pandemic. Because of the COVID-19 pandemic, NHANES was paused in March 2020 for the first time since continuous data collection began in 1999. As a result, the cycle was not completed and no response rate information is available for 2020. However, there was a notable decrease in response rates when data collection resumed in the field in August 2021. The conditional MEC

response rate for participants examined in 2019 was 53%; the August 2021–August 2023 data collection cycle ended with a 39% conditional response rate.
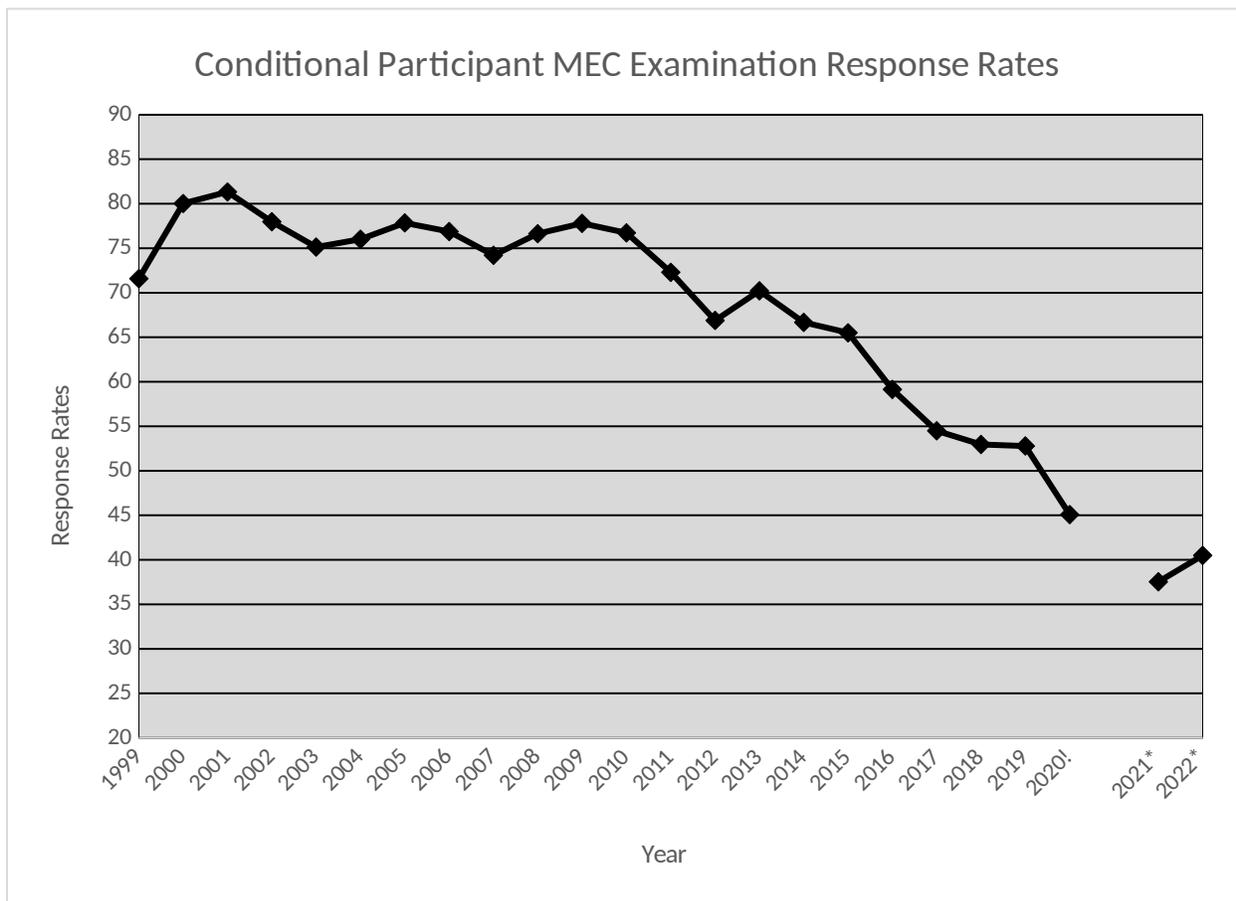

Figure note: "2020!" indicates incomplete data collection in 2020; "2021*" and "2022*" indicate data collection from August 2021 through August 2022.

History of NHANES Incentives

To improve response rates for the examination component, NHANES participants have received incentives for their examination participation since the 1970s. Since the implementation of incentives on NHANES, experiments have been conducted to determine their effectiveness in increasing response rates and reducing nonresponse bias. The major incentive experiments and changes to incentive amounts are summarized in this section. The response rates described below are not necessarily the same conditional rates reported in the figure above. Calculations may vary across reports.

Incentives began after a study was conducted to test the effect of giving incentives to SPs who participated in NHANES I (1971–1974). The study demonstrated that SPs who were told they would receive an incentive had a MEC exam conditional response rate (82%) 12 percentage points higher than SPs who were not told they would receive an incentive (70%). Results of the study were published in the report "A Study of the Effect of Remuneration Upon Response in the Health and Nutrition Examination Survey, United States," *Vital and Health Statistics*, Series 2-No.67.

During NHANES II (1976–1980), a study was conducted to determine the effect of increasing incentives on survey response rates. It revealed that those who were told they would receive

$20 after their examination had a higher MEC exam conditional response rate (79%) than those told they would receive only $10 (74%).

In NHANES III (1988–1994), differential incentives were successfully utilized to persuade SPs to attend an examination session (morning, afternoon, or evening) to which they were randomly assigned. In prior years, participants were asked to fast for certain tests and to arrive at specific session times that corresponded to the test requirements with no variations in incentive remunerations. Shifting to the administration of differential incentives based on appointment scheduling helped achieve sufficient representation for both the fasting and nonfasting participants.

When continuous NHANES began in 1999, the MEC exam conditional response rate of 72% was lower than previous response rates experienced for NHANES I, II, or III. To help address this decline in survey response rate, an incentive study was implemented in 2000. The study treatment groups received either the current incentive level or one that was approximately 50% higher. Interviewers were not blinded to the incentive groups because their primary objective was to get the participants to the examination center. After 5,900 observations, the overall response rate did not differ across treatment groups. However, comments made during the debriefing suggested that interviewers spent more time convincing the lower-incentive group to be examined.

Between January and October 2019, NHANES conducted a pilot study that offered incentives for the screening and SP interview components. This was the first time that incentives at the screening and SP interviews were tested in NHANES. Historically, NHANES has only used incentives for participants completing the exam at the MEC. The purpose of this pilot was to assess what impact, if any, different incentive levels have on response, effort, and data quality. This pilot was conducted in 10 NHANES locations across seven states.

- For the screener, the incentive levels being compared were $0 (control), $2, and $5. During the pilot, some benefit was observed for the $2 prepaid incentive. However, this benefit was not large enough to support using any incentive at the screening stage of NHANES.
- For the SP interview, the incentive levels being compared were $0 (control), $20, and $40. Both the $20 and $40 SP interview incentives positively increased overall response rates and reduced the number of contacts per completed SP interview. Additionally, significant increases in the conditional SP interview response rate among women, children 11 years of age and younger, non-Hispanic Blacks, and Hispanics were achieved with both the $20 and $40 incentive.

As a result of this pilot study, starting in 2021 the program began implementing an incentive of $25 for the SP interview (conditional on SPs completing the SP interview) in the NHANES main study. The intention was for the incentive to boost interview responses and, in turn, participation in the MEC examination. Additionally, in 2021 the MEC examination incentive was lowered to $85 from the $125 used in 2009–2020.

Despite using an SP interview incentive in 2021, the project experienced decreasing response rates among interviewed SPs who went on to complete a MEC examination. In the 2019–2020 cycle, the MEC exam stage response rate among interviewed SPs was 89%. However, in the first four locations of 2021, only 72% of interviewed participants went on to complete a MEC examination. To address declining response rates, in 2022 NHANES received OMB approval to restore the MEC incentive for adults (16 years of age and older) from the initial amount of $85 implemented in 2021 back to the $125 that was used in 2009–2020. Utilizing the higher MEC incentive resulted in a 7 percentage point increase in the MEC exam stage response rate, a

narrower range in response rates across primary sampling units, and reduced variability in response rates across demographic groups for participants 16 years of age and older, the experiment age group.

For 2025–2026, the program plans to balance response rate and cost considerations with a MEC incentive of $100, an amount falling between the $85 used in 2021 and the $125 used in 2009–2020 and 2022–2023. Because evidence supports that increasing the incentive above $85 for the MEC exam is effective, the program has increased to $100. Should budget allow and response rates warrant, program may propose a higher amount in future data cycles.