Request for Approval of a Non-Substantive Change to the
National Health and Nutrition Examination Survey

OMB No. 0920-0950
(Expiration: 04/30/2023)

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Justification

1. Circumstances making the collection of information necessary

This request is for a non-substantive change to the National Health and Nutrition Examination Survey (NHANES) (OMB No. 0920-0950, Exp. Date 04/30/2023), conducted by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). NHANES is conducted annually. The NHANES consists of three primary methods of data collection: the personal interviews, the physical examinations (conducted in the Mobile Examination Center (MEC)) including laboratory assessments, and follow-up interviews that take place after the examinations. A major advantage of continuous NHANES data collection is the ability to address emerging public health issues and provide objective data on health conditions and issues by adding/changing/modifying survey content.

On April 12, 2021, OMB approved the NHANES 2021 – 2022 data collection cycle. The supporting statements requested approval to 1) collect data in years 2021-2022 with modifications to adapt the survey due to the coronavirus disease (COVID-19) pandemic and related concerns; 2) collect follow-up data and conduct activities related to data collection/processing (for survey year 2022) into 2023; 3) conduct developmental projects to support data collection for 2023 and beyond; and 4) conduct non-response projects, as needed.

In the 2019 – 2020 cycle, the NHANES cumulative interview response rate (RR) was 59%. Of those participants who completed the interview, approximately 90% completed the MEC visit. Using preliminary data from the first 4 completed locations of the 2021 – 2022 cycle, the interview RR is 56%, which is comparable to the interview RR observed during the 2019 – 2020 cycle. A $25 interview incentive provided during the current 2021 – 2022 cycle may be contributing to this observed rate. However, in the first 4 locations of 2021, only 75% of interviewed participants went on to complete a MEC examination (vs. 90% MEC RR in the 2019 – 2020 cycle). Due to a substantial decrease in the MEC RR and the ever-evolving landscape of the COVID-19 pandemic, NHANES is proposing the following modification to the approved 2021 – 2022 NHANES:

1. Restore the MEC exam incentive for adults (ages 16+) from the currently approved amount of $85 that was implemented for 2021 data collection to $125 in place from 2009-2020. The increase will be for 5 NHANES PSUs beginning with the PSU fielded after approval.

The above request is only for adults (ages 16+). No changes will be made to the current MEC incentive for participants aged 12 to 15 years ($60) or younger than 12 years of age ($40). The goal of this temporary change will be to assess whether the incentive of $125 compared to $85 for adults aged 16 and older will lead to an increased examination response rate among interviewed adults 16+. The $85 incentive will have been implemented for 7 NHANES PSUs in 2021 and 2022. The projected 5 PSUs to implement the $125 incentive is based on the following statistical calculations and assumptions:

For an increase of $85 to $125, it is reasonable to expect that NHANES will observe a 5% increase in the current response rate of 75% (i.e., first 4 locations in 2021) to 80%. In **Attachment 1**, a power calculation was performed to estimate the required sample size to detect a change in the MEC exam response rate (among participants who were interviewed). For the assumptions described in the power calculation, NHANES would need to visit 5 locations to detect a 5% increase in the MEC exam response rate with 81% power. If a greater number of people are interviewed (i.e., higher interview response rates), fewer number of locations will be needed to detect a 5% increase in response rates. Conversely, if interview response rates are lower and fewer adults per location are interviewed, a greater number of locations will be needed. If the impact of the incentive is greater (higher than a 5% increase), fewer locations will be needed to detect a change in exam response rates. NHANES will submit a non-substantive change request to increase the adult (ages 16+) incentive for additional locations in the 2021 – 2022 cycle if data suggests that the $125 incentive increases participation in the MEC.

In addition to increasing the adult incentive at 5 locations, NHANES will implement and optimize various additional strategies:
- Increase contact attempts
- Utilize study ambassadors
- Analyze paradata, and
- Conduct a follow-up survey for nonrespondents and respondents

This multi-faceted strategy will allow NHANES to determine the best approach at reducing nonresponse while maximizing participant incentive in an equitable way.

2. Purpose and use of the information collection

NHANES collects questionnaire data as stand-alone components or to complement one or more examination or laboratory assessments. As a result of the COVID-19 pandemic, NHANES 2021 – 2022 screening, household and family interviews previously conducted via in-person interview in the home are administered either in-person, through multi-mode methods, or over the phone to reduce person-to-person contact. The average household interview time was shortened from 1.5 hours to approximately 1 hour to reduce burden and help maximize response rates. Trained interviewers may now ask questions of NHANES participants over the phone or using online tools or call center technology. NHANES makes use of self-administered approaches of data collection, such as online surveys or paper surveys that participants mail back. Both initial and follow-up activities may be administered in these ways.

In addition to the personal interviews, the MEC examination visits were shortened from 4 to 2.5 hours to also reduce burden and maximize response rates. A MEC visit consists of physical examinations (i.e., anthropometry, standing balance, dual energy x-ray absorptiometry, blood pressure management, liver elastography), laboratory assessments (e.g., renal and hepatic function, biochemical panel, etc.), and more sensitive interview components administered via ACASI (e.g., alcohol use, mental health, etc.). Previously, NHANES also conducted an in-person

dietary Day 1 interview at the MEC and a dietary Day 2 interview by phone. NHANES changed the mode of the in-person dietary Day 1 interview to also be via phone to limit face-to-face interaction with participants and mitigate COVID-19 risk.

A summary of the approved changes in interview modes between NHANES 2019 – 2020 and 2021 – 2022 are provided in **Table 1** below.

Table 1. NHANES 2021 – 2022: Modes of Data Collection by Component

Order	Component	2019 – 2020	2021 – 2022
1	Household Screener & Relationship Questionnaire	In-person	Multi-mode
2	Sample Participant & Family Questionnaires	In-person	Telephone & In-person
3	MEC Exam: Interview portion	In-person, some ACASI	Primarily ACASI
4	1st Dietary Recall	In-person (at MEC)	Telephone (post MEC)
5	2nd Dietary Recall	Telephone (post MEC)	Telephone (post MEC)
6	Food Consumer Behavior Survey	Telephone (post MEC)	Telephone (post MEC)

Despite efforts to mitigate COVID-19 risk and maximize response rates, NHANES observed a MEC exam response rate (among interviewed participants) of 75% using preliminary data from the first 4 locations in the current cycle. This rate is an approximate 15% decrease from previously observed rates of 90% during the 2019-2020 cycle. NHANES is implementing several strategies to address this decrease in participation. Specifically:

1. For those participants who initially scheduled but canceled their MEC appointment, or for those who are reluctant to schedule, the MEC clinician directly contacts the participant to address concerns or questions.
2. NHANES is in the process of more clearly defining study ambassadors. These individuals will consist of MEC exam participants who have completed their exams and voluntarily assist reluctant, yet interested, potential participants.
3. NHANES is extensively reviewing paradata to identify characteristics associated with MEC exam participation, and to closely assess those who missed or canceled appointments and develop targeted recontact strategies and messaging for these groups.

4. NHANES will implement a follow-up survey of MEC respondents and nonrespondents via telephone to better understand reasons for MEC participation as well as nonparticipation. Once the follow-up survey is created and cognitively tested, NHANES will implement the survey under the current cycle with OMB approval.

These strategies aimed at improving response combined with the proposed MEC visit incentive increase to $125 for adult participants (ages 16+) at 5 locations will ensure that NHANES maximizes survey participation while minimizing nonresponse bias. If empirical data suggests that the $125 incentive increases MEC participation rates, NHANES will submit a non-substantive change request to increase the adult (ages 16+) incentive for additional locations in the 2021 – 2022 cycle. A full revision is not required as the scope of the survey remains unchanged.

9. Explanation of any payment or gift to respondents

The modifications described in this non-substantive change request will result in an increase in the MEC exam incentive for adults (ages 16+) from the current amount of $85 to $125 at 5 locations to assess the impact on the MEC participation rate. No changes will be made to the current MEC incentive for participants ages 12 to 15 years ($60) or those younger than 12 years of age ($40). Additionally, NHANES participants who complete the personal interviews will continue receiving currently approved incentives for completion of the interviews. No changes are requested for household interview incentives. The 2009 – 2020 incentives, the currently approved incentives for the 2021 – 2022 cycle, and the proposed 2021 – 2022 modification (i.e., adult incentive increase, marked in red) are shown in **Table 2**.

Table 2. Total NHANES Incentives

Age	2009 – 2020 Incentives	Current 2021 – 2022 Incentives	Proposed 2021 – 2022 Incentives *only 5 locations
16 years and older	$125 MEC + $30 dietary Day 2 interview) = **$155**	$25 interview + **$85** MEC + $25 dietary Day 1 interview + $25 dietary Day 2 interview = **$160**	$25 interview + **$125** MEC + $25 dietary Day 1 interview + $25 dietary Day 2 interview = **$200**
12 – 15 years	$75 MEC + $30 dietary Day 2 interview) = **$105**	$25 interview + $60 MEC + $25 dietary Day 1 interview + $25 dietary Day 2 interview = **$135**	$25 interview + $60 MEC + $25 dietary Day 1 interview + $25 dietary Day 2 interview = **$135**
Under 12 years	$40 MEC + $30 dietary Day 2 interview) = **$70**	$25 interview + $40 MEC + $25 dietary Day 1 interview + $25 dietary Day 2 interview = **$115**	$25 interview + $40 MEC + $25 dietary Day 1 interview + $25 dietary Day 2 interview = **$115**

12. Estimates of annualized burden hours and costs

The Household Interview and MEC Interview and Examination are budgeted for an average of one hour and two and a half hours, respectively. The maximum number of respondents for each is 5,600. The maximum burden for the Household Interview is 5,600 hours, and the maximum burden for the MEC Interview and Examination is 14,000 hours (**see Table 3**). These burden hours were budgeted and approved in the original OMB submission for the current cycle. The modification of the adult (ages 16+) MEC incentive to $125 at 5 locations will not affect the burden.

Table 3. Annualized Burden Hours for Household Interviews and MEC Visit

Type of Respondent	Form	Number of Respondents	Number of Responses per Respondent	Average Burden per Response (in hours)	Total Burden (in hours)
Individuals in households	Household Interview	5,600	1	1	5,600
Individuals in households	MEC Interview and Examination	5,600	1	2.5	14,000
Total					19,600

15.   Explanation for program changes and adjustments

The proposed modifications to the adult (ages 16+) MEC incentive in this submission do not change the estimated average burden hours from the previously approved clearance (**see Table 4**). The proposed incentive increase at 5 locations combined with various strategies to improve participation, including a follow-up survey on nonresponse, are vital to ensure NHANES maximizes participation and reduces nonresponse bias. If empirical data suggests that the $125 incentive contributes to increasing MEC participation rates, NHANES will submit a non-substantive change request to increase the adult (ages 16+) incentive for additional locations in the 2021 – 2022 cycle.

Type of Respondent	Form Name	Number of Respondents	Number of Responses per Respondent	Average Burden per Response (in hours)	Total Burden (in hours)
Individuals in households	Screener	8,300	1	10/60	1,383
Individuals in households	Household Interview	5,600	1	1	5,600
Individuals in households	MEC Interview & Examination	5,600	1	2.5	14,000
Individuals in households	Day 1 and Day 2 Telephone Dietary Recall & Dietary Supplements	5,600	1	1.3	7,280
Individuals in households	Flexible Consumer Behavior Survey Phone Follow-Up	5,600	1	20/60	1,867
Individuals in households	Developmental Projects & Special Studies	3,500	1	3	10,500
Individuals in households	24-hour wearable device projects	1,000	1	25	25,000
Total					65,630

Table 4. 2021 – 2022 Approved Annualized Burden Hours

List of Attachments

Attachment 1 Response rate incentive increase power calculation