

**National Health and Nutrition Examination Survey**

**Supporting Statement B**

**OMB No. 0920-0237**

(Expires November 30, 2012)

**GenIC –NHANES National Youth Fitness Survey**

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## B. Statistical Methods

### 1. Respondent Universe and Sampling Methods

The sample design of NHANES is based on a continuous on-going annual survey of the non-institutionalized, civilian population of the U.S. Details of the overall universe and sampling methods are presented in Information Collection Request (ICR) Reference no. 201010-0920-007. The National Youth Fitness Survey is based on the overall NHANES design.

#### NYFS Dress Rehearsal

At the onset of NHANES survey two practice locations of data collection are planned so that staff can gain greater expertise in the tasks that they must perform day to day. These are an on-the-job training, in addition to the extensive classroom training for our field staff. We refer to these practice locations as Dress Rehearsals. Because 1999 was the last time we started data collection after a multiyear break we have not had one since that time. In 1999 for example two MECs were set up in a county accessible to NCHS and contract home office staff and participants were selected similarly and examined identically to the data collection for those sampled in the NHANES PSUs. That county was not an NHANES PSU that year. Because NHANES is currently ongoing the last two locations in 2011 prior to the start of the NYFS will be the location of the NYFS Dress Rehearsal. The first of the two counties is expected to have very few children to sample therefore we will supplement the examination schedule with paid subjects to insure the newly trained staff will get sufficient experience in conducting the examination of children with a wide variety of ages. A vendor will be paid to recruit and schedule these children with the understanding that the child will be paid an identical amount to what selected volunteer participants are remunerated. Additionally, at that location we will not screen in all of the segments because of the expected low density of children in some segments. All other participants will be selected using screening procedures identical to those that are to be employed in the NYFS for 2012. Data collected during dress rehearsals is not used for statistical analysis or health research. The data collected is used administratively to evaluate whether or not the component is working correctly or to assess whether the exam protocols need revising. Approximately 240 youth will take part in this activity.

Beginning in 2012, approximately 4,145 respondents from an independent sample of dwelling units (DUs) within the segments selected in the 2012 NHANES PSU sample will participate in some aspect of the NHANES NYFS. Of these, 2,270 (almost 55%) will be screened households where there are no children ages 3-15 to further participate in the survey. Approximately 1,875 children ages 3-15 will be selected to participate in the survey. Assuming an 80% examination rate this will result in 375 children completing the household interviews, but declining to be examined and 1500 children being both interviewed and examined in the NYFS. The distribution and sampling domains for those children is shown in Table 1. The targeted exams are based on the objective of approximately equal numbers of children at each single year of age. Departmental Affordable Care Act (ACA) funds will be used to conduct the NHANES National Youth Fitness Survey (NYFS), including the dress rehearsal.

Table 1. Projected number of sampled persons, and examined children for the NHANES NYFS

Sex	Age	Estimated NYFS response rate	Target number of NYFS exams	Target number of NYFS SPs
M	3-5	80%	173	216
	6-11	80%	346	433
	12-15	80%	231	288
F	3-5	80%	173	216
	6-11	80%	346	433
	12-15	80%	231	288
Total			1,500	1,875

## 2, Procedures for the Collection of Information

The NHANES National Youth Fitness Study (NYFS) will be conducted in the same PSUs as the regular NHANES, in a separate one-trailer examination center. Approximately 100 children aged 3-15 years will be examined in each PSU.

The NYFS will include the components tested in the NHANES Children’s Physical Activity Feasibility Study (CPAFS) (ICR Reference No. 201010-0920-007), as well as additional body measurements, expansion of the target ages for the physical activity monitor and treadmill, and addition of the hand grip test and dietary recall interview. The NYFS will also include screener, sample person, and family questionnaires administered in the household. Table 2 shows the examination components of the study. A description of these examination components is contained in the MEC data collection forms section of the NYFS Questionnaires and Data Collection Forms (Attachment B). A description of the data collection activities, letters and informed consent documents are found in the NHANES NYFS Protocol document (Attachment A).

Table 2. NYFS Examination Components

Examination Components Included in the National Youth Fitness Survey (NYFS)	Target Age	Source	Report of Findings
1. Body measurements -- Anthropometry	3-15 y	NHANES	Yes (Height, weight, BMI)
2. Physical activity monitor -- Accelerometry	3-15 y	NHANES/CPAFS	No
3. Treadmill	6-15 y	NHANES/CPAFS	Yes (12-15 y only)
4. Lower body muscle strength	6-15 y	CPAFS	No

5. Grip strength	6-15 y	NHANES	Yes
6. Modified pull-up	5-15 y	CPAFS	Yes
7. Plank	3-15 y	CPAFS	No
8. Gross motor skills	3-5 y	CPAFS	No
9. Dietary recall interview	3-15 y	NHANES	No
10. Computer-assisted self interview (CASI)	12-15 y	NHANES	No

### Estimation

The NHANES NYFS will have some content in common with the regular NHANES and some content ONLY on the NHANES NYFS. Therefore, to maximize utility of the data three sets of weights are planned for use with the data. Because the NYFS is only one year of the two year NHANES cycle any combined use of data with the regular NHANES would be restricted to a Research Data Center (RDC) setting. The three sets of planned weights are:

- 2 year combined NHANES and NHANES NYFS
  - 2011-2012 (for RDC use only)
- Single year NHANES NYFS
  - 2012
- Single year combined NHANES and NHANES NYFS
  - 2012 (for RDC use only)

### Report of Findings:

Height, weight, BMI and aerobic capacity will be reported to participants (see Table 2).

### 3. Methods to Maximize Response Rates and Deal with Nonresponse

Information is unchanged from that presented in Information Collection Request (ICR) Reference no. 201010-0920-007.

### 4. Tests of Procedures or Methods to be Undertaken

The components to be included in the NYFS are either administered in the current NHANES or were tested in the NHANES Children’s Physical Activity Feasibility Study (CPAFS). The NHANES Children’s Physical Activity Feasibility Study was conducted from June 27 through July 28 in a Community HANES trailer in Montgomery County, Maryland. One hundred sixty-nine children and adolescents ages 3-15 years participated in the study. Paid participants were solicited via community flyers and were not related in any way to NHANES field operations. Staff from the Division of Health and Nutrition Examination Surveys (DHANES) served as examiners. Data from the study were delivered to NCHS and analyzed by DHANES staff. The study was successful in identifying tests that worked well in the mobile examination center

environment and issues that needed to be resolved for inclusion of the tests in the NHANES National Youth Fitness Survey.

The study included one test to measure physical activity and five additional tests of muscle strength and endurance, as well as measurement of height, weight, and calculation of body mass index. The six tests in the study were selected by DHANES staff with the input of experts in the fields of physical activity and kinesiology:

Physical activity monitor (accelerometer)	3-5 y
Treadmill	6-11 y
Plank	3-15 y
Modified pull-up	5-15 y
Lower body muscle strength	6-15 y
Gross motor skills (TGMD-2)	3-5 y

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

Information is unchanged from that presented in Information Collection Request (ICR) Reference no. 201010-0920-007.

Attachments:

A NHANES National Youth Fitness Survey Protocol

B NHANES National Youth Fitness Survey Questionnaires and Data Collection Forms