Body Measurements Component (June 2002)

MEC Exam

Description

Body measurements were recorded for all examinees by a trained examiner in the mobile examination center (MEC). The measures taken were age dependent, and include the following:

Weight:	all ages
Recumbent length:	0 through 47 mo.
Standing height:	24+ mo.
Upper leg length:	24+ mo.
Upper arm length:	2+ mo.
Head circumference:	0 through 5 mo.
Mid-upper arm circumference:	2+ mo.
Waist circumference:	24+ mo.
Mid-thigh circumference:	24+ mo.
Maximal calf circumference:	24+ mo.
Triceps skinfold:	2+ mo.
Subscapular skinfold:	2+mo.

In situations when examinees had to leave the MEC early and were unable to complete the Body Measurement Component, at a minimum, weight and standing height or recumbent length were measured.

Eligible Sample and Exclusion Criteria

The protocol for this component did not detail any medical, safety, or other exclusions. For examinees who used a wheelchair, the health technicians used their discretion to obtain as many measures as practical. Generally, height and weight were not obtained for examinees who used a wheelchair in the MEC.

This data set includes body measurements for women who were pregnant at the time of the exam. Analysts should determine if it is appropriate to exclude data for pregnant women in a particular analysis. Pregnancy status information is denoted by the MEC Demographic Data File variable, RIAPPREG.

Data Collection Methods

The data collection methods, examination protocol, and data collection forms are fully documented in the Anthropometry Procedures Manual.

Examination Protocol

See Item 3 above. In addition, for general guidelines on standard procedures that were followed for the anthropometric measures, refer to the Anthropometric Standardization Reference manual (Lohman, 1988). For specific guidelines, the Anthropometric Procedures Video that demonstrates the NHANES III anthropometric procedures in detail is available for all measures except the calf circumference. This video may be obtained from the U.S. Government Printing Office (http://www.cdc.gov/nchs/about/major/nhanes/avideo.htm).

Staff

All body measures were obtained by trained health technicians in the body measures room for each of the Mobile Examination Centers.

Quality Control Procedures

The first line of quality control was provided by the automated data collection system. For weight, height, and recumbent length, the data were captured electronically from the measuring instruments to minimize potential data entry errors. Range edits, based on the 1_{st} and 99_{th} percentiles of the NHANES III distribution were also programmed into the automated data collection system, giving an out of range message, prompting the examiner to verify or re-check the measure.

Experienced trainers and observers monitored technician performance in the field. Periodic retraining sessions were conducted with the survey staff. Replicate examinations were performed by body measurement consultant s during visits to the field. Routine calibration of the body measures equipment was a part of the quality control plan for this component. The Anthropometry Procedures Manual details the equipment calibration procedures.

Data Editing

The data were edited for values that exceeded the capacity of the measuring equipment.

Biologically implausible values were checked by examining age and sex-specific measurements that exceeded the 1_{st} and 99_{th} percentile values of the NHANES III distribution for each measure. Measured body weights were compared with self- or proxy reported body weights. For ages 24-28 months, length and height measures were compared for reasonable agreement. Length and height measures were also checked against proxy reported values. A limited number of observations that could not be reconciled were set to missing.

Analytic Notes

During the data editing process, outlier values were examined. When there was insufficient information to conclude that values were invalid, they were left in the data set.

Analysts should examine the data spread and consider whether or not it is appropriate to include or exclude extreme values in a given analysis.