

ALL OF US RESEARCH PROGRAM

Standard Operating Procedure

Height and Weight Measurement

SOP Number 014
Effective Date

Version 4
6/26/2017

1.0 SCOPE

1.1 INTRODUCTION AND PURPOSE

1.1.1 The purpose of this procedure is to obtain height and weight measurements for documentation during the physical exam.

1.2 SCOPE

1.2.1. This SOP applies to the activities involved in obtaining accurate height and weight measurements from consented participants enrolled in the Precision Medicine Initiative conducted across the various sites.

2.0 PROCEDURES

2.1 MATERIALS

The following equipment is required for taking height and weight measurements from *All of Us* participants:

Height

- Stadiometer or equivalent

Weight

- A well-maintained scale able to determine weight in kilograms rounded to a tenth of a kilogram. Precision of ± 1 pound (0.45 kg) per 150 pounds (~68 kg) is recommended. Either a digital or a non-digital scale can be used. (**Note:** It is preferred that your scale measures in kilograms, but if the only scale available measures in pounds, enter the number in the conversion tool in HealthPro)
- Scales should have a capacity of at least 440 pounds (~199.5 kg).

Note: The scale should be level and placed on a firm surface.

Equipment Calibration

Scales should be calibrated as recommended by the manufacturer, at least once a year. Calibration should be documented and will be periodically reviewed on site visits.

2.2 RESPONSIBILITY

This SOP applies to those members of the clinical research team involved in ensuring appropriate height and weight measurements at this research site. This includes the following:

- Principal investigator
- Co-investigator (s)
- Research manager
- Clinical research coordinator or trained Program staff
- Health interviewer

2.3 PROCESS

Participant Preparation

All measurements are to be obtained on the participant without shoes. Participants should remove bulky

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sweaters and coats/jackets that could impact the weight measurement. Pregnant women should be measured for both height and weight. The trained program staff should ascertain pregnancy status prior to measurements by asking, "Are you currently pregnant?" to all women regardless of age and then document the response in HealthPro. For pregnant women, trained Program staff should take extra care when asking them to step on/off equipment to ensure they don't lose balance.

Is participant pregnant?
No

Is participant a wheelchair user?
No

Exclusions for Height or Weight Measurements

Participants who are Wheelchair-users: No anthropometry measurements should be taken. If a participant is a wheelchair user, indicate this by checking "yes" for "Is participant a wheelchair user?".

Height

During height measurement, the participant should stand erect (without shoes) on the stadiometer platform/floor with his/her back against the vertical-mounted centimeter ruler, heels against the wall, and feet or knees together, whichever come together first. (**Note:** if it is not possible for some people to stand with both heels and back touching the wall, the trained Program staff should ask the participant to move back against the wall until either the back or buttocks touch the wall. It is important that the participant is in a vertical plane.)

The participant's head should be aligned such that the horizontal line from the ear canal to the lower border of the orbit of the eye is parallel to the floor and perpendicular to the vertical backboard (**Figure 1**).

Lower the stadiometer head piece so that it rests firmly on top of the participant's head, with sufficient pressure to compress the hair. Instruct the participant to stand as tall as possible, take a deep breath, and hold this position. (A deep breath helps straighten the spine to yield a more consistent and reproducible stature measurement.)

Note: If a wall-mounted stadiometer is not available, a standard balance beam scale with a height measurement device may be substituted.

Height Documentation

Height will be recorded in centimeters to the nearest millimeter. When entered in HealthPro, centimeters will be converted automatically to feet and inches for sharing of results with participant. (**Note:** It is preferred that your equipment measures in centimeters, but if your stadiometer only measures in inches, enter that value in the conversion tool in HealthPro.)

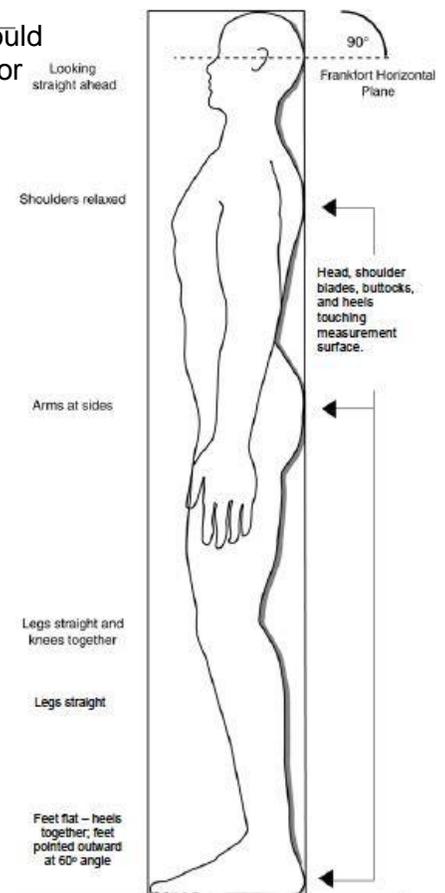


Figure 1

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If the participant is taller than the stadiometer, the trained Program staff should enter the maximum measurement on the device for height and answer “Modification to Height Protocol” as “Height is more than device measuring range.”

If the participant is a wheelchair user, the trained Program staff should ask the participant to self-report their height and enter into HealthPro. If the participant reports their height in feet and inches, use the conversion tool in HealthPro. Ensure “Wheelchair user” is selected for “Modification to Height Protocol.”

If there is any reason that the height measurement might not be accurate, the trained Program staff should select an option for “Modification to Height Protocol” that best documents the reason for an inaccurate measure, e.g. hairstyle (if hairstyle prevents putting the horizontal marker snugly against top of head). If “Other” response option is checked, the trained Program staff should enter the reason as concisely and accurately as possible in the space provided. If participant is wearing a religious headpiece which prevents putting the horizontal marker snugly against top of head, select “Hairstyle/Head Gear.”

The screenshot shows a web-based form for data entry. At the top, there are two dropdown menus: "Is participant pregnant?" (set to "No") and "Is participant a wheelchair user?" (set to "No"). Below these is a section titled "Height and Weight". It contains three main input areas: 1) "Height" with a text input field (placeholder: "Enter in feet & inches (value will be stored in cm)"), a unit selector set to "cm", and a dropdown menu for "Modification to Height Protocol" which is currently open, showing a list of options including "Hairstyle/headgear" (highlighted in blue). 2) "Weight" with a text input field (placeholder: "Enter in pounds (value will be stored in kg)"), a unit selector set to "kg", and a dropdown menu for "Modification to Weight Protocol" set to "None". 3) "BMI" with a large empty text area and a "--" placeholder.

Weight

During measurement of weight, the participant should wear light clothing and no shoes (no adjustment for recorded weight will be made for clothing). Shoes and heavy outer layers should be removed.

For body weight measurement, the scale should be placed on level and firm ground. The trained Program staff should balance the scale so that the indicator is at zero, when no weight is on the scale, instructing the participant to stand in the middle of the platform with head erect and eyes looking straight ahead.

For non-digital scales, it is permissible for the trained Program staff to ask the participant his/her approximate weight as a place to begin the weight measurement. The trained Program staff should adjust the weight on the indicator until it is balanced.

If the participant is too obese to stand securely on the scale's platform while looking straight ahead, it is

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permissible for the trained Program staff to have the participant stand sideways on the scale for the weight measurement. That is, the participant will face the side rather than the front; this will provide a wider base and more stability.

Weight Documentation

Weight will be recorded in kilograms to the nearest 0.1 kg. (When entered into HealthPro, kilograms will be converted to pounds for sharing with participant.) On a non-digital scale, when a measure falls between gradations, round down to the nearest 0.1 kg.

If the participant weighs more than the weight measuring range of the scale, the trained Program staff should enter the highest measurement of the scale in HealthPro and for the “Modification to Weight Protocol” select “Weight is more than weight measuring range.”

If the participant is pregnant, in addition to following the “Weight” procedure and documentation mentioned above, the participant should also be asked to self-report their approximate pre-pregnancy weight. Both weights will be documented in HealthPro. Ensure “Pregnancy” is selected for “Modification to Weight Protocol.”

If the participant is a wheelchair user, the trained Program staff should ask the participant to self-report their weight and enter into HealthPro. If the participant reports their weight in pounds, trained Program staff should enter the value in the conversion tool in HealthPro. Ensure “Wheelchair user” is selected for “Modification to Weight Protocol.”

If there is any reason that the weight measurement might not be accurate, the trained Program staff should select an option for “Modification to Weight Protocol” that best documents the reason for an inaccurate measurement, e.g. “Can’t balance on the scale.” If the “Other” response option is checked, the trained Program staff should enter the reason as concisely and accurately as possible in the “Additional Notes” section of HealthPro.

The screenshot displays the 'Height and Weight' form in HealthPro. The 'Height' field is set to 183 cm. The 'Weight' field is set to 75 kg. The 'BMI' field shows a value of 22.4. A dropdown menu for 'Modification to Weight Protocol' is open, showing the following options: None, Weight is more than weight measuring range, Can't balance on scale, Wheelchair user, Pregnancy, Refusal, Urgent/emergent event, and Other. Below the main form, there is a section for 'Waist and Hip Circumference' with a 'Waist' field.

Note: If the visit is terminated, and the participant is scheduled to complete their visit at a future date, the blood pressure and heart rate must be repeated. If the other physical measurements were completed during the initial visit, the provider does not need to repeat the physical measurements that were already taken and documented in HealthPro

3.0 LIST OF ATTACHED FORMS

None

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4.0 REFERENCES TO OTHER APPLICABLE SOPS

MESA Manual of Operations
 CARDIA Manual of Operations
 NICHD GDM Study – Anthropometric Measurements

5.0 REFERENCES

6.0 APPROVALS

MEDICAL DIRECTOR? Director of
 Operations? DATE

REVISION	
Original Date	Month XX, Year
Review Date	Month XX, Year
1. ----	

Effective Date	Version	Synopsis of Change
1/17/2017	1	Original Document
4/20/2017	2	<ul style="list-style-type: none"> – Section 2.1 added scales that measure in lbs. can be used, but the value should be entered in the HealthPro conversion tool. – Section 2.2 added Trained Program Staff – Section 2.3 added statement to ask all women if they are pregnant. – Removed 5% quality control measurements – If the participant weighs more than the weight measuring range of the scale, instead of a specific number since scales maximum weight will vary. – Added clarification around capturing pre-pregnancy weight of volunteers currently pregnant – Formatting changes
4/26/17	3	<ul style="list-style-type: none"> – Updated screenshot for modification to weight protocol.
6/26/17	4	<ul style="list-style-type: none"> – Added If the visit is terminated, and the participant is scheduled to complete their visit at a future date, the blood pressure and heart rate must be repeated. If the other physical measurements were completed during the initial visit, the provider does not need to repeat the physical

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