WOMEN'S INTERAGENCY HIV STUDY
QUESTION BY QUESTION SPECIFICATIONS
FORM 7: PHYSICAL EXAM

General Instructions:

1. All dates should be recorded in the MM/DD/YY format.
2. Times should be recorded in HH:MM format. Remember to use leading zeros, e.g., 08:00.
3. Participants should remove all clothing, except underwear. Shoes should be removed; thin socks may be worn, if participant desires. Paper or lightweight cotton gowns should be worn during the entire exam.

Indicators for the beginning and end of all subforms (e.g., F07s1) have been added to the form. This has been done for data entry purposes only and will not affect how the form is completed.

PARTICIPANT INFORMATION

This section at the beginning of the form should be completed before beginning the physical exam. Remember to verify with the participant the date of her birth. Record the actual time you began the physical exam in the space provided for "Time Module Began" and the actual time you ended the exam in the space denoted "Time Module Ended."

SECTION A: GENERAL PHYSICAL CHARACTERISTICS AND BODY HABITUS

A1a. Weight: A balance scale should be used, and all weights should be recorded in pounds (LBS). The scale should be level and on a firm surface (not a carpet). Be sure the scale is balanced so that the indicator is at zero when no weight is on the scale. The participant should be instructed to stand in the middle of the platform of the balance scale with head erect and eyes looking straight ahead. Adjust the weight on the indicator until it is balanced. The weight should be recorded in pounds to the nearest 1.0 lb. Please do not make any conversions from kilograms. Have the participant step off the scale, reset the balance to zero and repeat. If measures differ by more than 1.0 lb., repeat a third time. Always record the first measure that most closely matches the third measure. For example, if only two measures were taken (i.e., the first and second measures were within 1.0 lb. of one another) record the first measure taken. If three measures were taken and the second and the third are within 1.0 lb. of each other, record the second measure. If three measures were taken and the first and the third measure were within 1.0 lb. of each other, record the first measure.

A1b. Indicate if the participant is attending an odd- or even-numbered visit. Beginning at visit 21, height will be measured once per year only, at even-numbered visits. If participant is attending an even-numbered visit, proceed to measure height as described in **Question A1c** below. If participant is attending an odd-numbered visit, skip to **Question A3b**.

A1c. Height: Direct the participant to the stadiometer platform. Ask her to remove any hair ornaments, jewelry, buns, or braids from the top of the head. Have the participant stand up straight against the backboard with the body weight evenly distributed and both feet flat on the platform. Instruct the participant to stand with the heels together and toes apart. The toes should point slightly outward at approximately a 60° angle. Check that the back of the head, shoulder blades, buttocks, and heels make contact with the backboard.

NOTE: Depending on the overall body conformation of the participant, all four contact points – head, shoulders, buttocks, and heels – may not touch the stadiometer backboard. For example, frequently, elderly participants may have kyphosis, a forward curvature of the spine that appears as a hump at the upper back. In particular, dowager's hump is a form of kyphosis that creates a hump at the back of the neck. Additionally, some overweight participants may

not be able to stand straight while touching all four contact points to the backboard. In such instances it is important to obtain the best measurement possible according to the protocol.

Second, align the head in the Frankfort horizontal plane. The head is in the Frankfort plane when 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. Many people will assume this position naturally, but for some participants the examiner may need to gently tilt the head up or down to achieve the proper alignment. Instruct the participant to look straight ahead.

Next, 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. The act of taking a deep breath helps straighten the spine to yield a more consistent and reproducible stature measurement. Notice that the inhalation will cause the head piece to rise slightly.

Some participant's have hair styles such as a barrette, bun, or braid that will interfere with the placement of the stadiometer head piece. Other participants may refuse to remove their shoes for the height measurement. In these cases, the examiner should enter "-9" (data missing) for the participant's height.

A3b. Indicate if the participant is pregnant. If she is, skip to **Section D**.

A5. The visual assessment section of the physical exam includes clinician rating of fat distribution and other changes according to a scale with the following gradations: normal, mild, moderate and severe. Surveys in previous studies used a subjective rating system that was based on the opinion of the observer. While there are no absolute criteria, the WIHS study is providing a series of photographs with some gradations and descriptions (see WIHS website and below) to assist in the examination of the participant. The photographs and descriptions should be viewed as a guide for the evaluation. Some of the findings are similar to those found in people without HIV infection. If the participant fits into the average of the people that are seen, then choose **Normal**.

For this portion of the exam, participants should wear a loose fitting hospital gown. The exam should be performed with the participant standing. The legs should be relaxed with both feet flat on the ground and the arms should be relaxed on either side. When examining the various body sites, please make sure the area can be well visualized. For instance, when examining the chest, please have the participant remove the top part of the gown, so that the chest can be well visualized.

The following are definitions for mild, moderate, and severe used in a separate study looking at fat redistribution (HIV Outpatient Study (HOPS)):

Mild:	Only seen if looked for
Moderate:	Easily seen
Severe:	Obvious immediately

Below are specific descriptions for each of the points (other than normal) on the seven-point scale associated with each area of the body listed.

Questions A5a, A5f, and **A5g** concern the chest, upper back, and neck, respectively. Please use the following guidelines for all three of these locations:

Severely fat:	Fat obviously bulging outward; may have prominent folds
Moderately fat:	Prominent amount of fat
Mildly fat:	More fat than average on exam
Mildly wasted:	Little fat; musculature and veins may be visible
Moderately wasted:	Very little fat; musculature and veins may be prominent
Severely wasted:	Virtually no fat present; muscle bellies, tendons and bones may stand out

Questions A5b (abdomen) and **A5c** (waist) focus on the lower torso. **Question A5b** focuses on the amount of subcutaneous fat present in the abdomen, both anteriorally and laterally. **Question A5c** refers to the general shape of the abdomen, or waist, and not the amount of fat in the abdomen.

Question A5d focuses on the shape of the face; please use the following guidelines:

Severely fat:	Moon facies
Moderately fat:	Rounded
Mildly fat:	Shifting to round when looked for
Mildly wasted:	Fat loss visible on side of face when looked for
Moderately wasted:	Deep indentations of fat loss on side of face
Severely wasted:	Obvious, very deep indentations on side of face with virtually no fat present; muscle and bones may stand out

Question A5e (cheeks) refers to the area just lateral to the nose and mouth. Please use the following guidelines when evaluating the participant:

Severely fat:	Cheeks bulging
Moderately fat:	Cheeks fuller
Mildly fat:	Cheeks look fuller when looked for
Mildly wasted:	Lines of loss visible in cheeks when looked for
Moderately wasted:	Deep indentation in cheeks
Severely wasted:	Obvious, very deep indentations in cheeks with no fat present; muscle and bones may stand out

Questions A5h and **A5i** concern the arms and legs, respectively. Please note that prominent indentations may be visible, especially above the elbows on the arms and above the knees on the thighs. The arms should be relaxed on either side and not flexed when examined and the legs should be relaxed with both feet flat on the ground when examined. Focus on the right extremities as anthropometric measurements are generally performed on the right. If this is not possible, examine the left extremities and make a note that the left extremities were examined. The following are guidelines for the scale points for these items:

Severely fat:	Fat obviously bulging outward; may have prominent folds
Moderately fat:	Prominent amount of fat
Mildly fat:	More fat than average on exam
Mildly wasted:	Little fat; musculature and veins may be visible
Moderately wasted:	Very little fat; musculature and veins may be prominent
Severely wasted:	Virtually no fat present; muscle bellies, tendons and bones may stand out

Question A5j focuses on the buttocks and the following guidelines should be used:

Severely fat:	Fat obviously bulging outward; may have prominent folds
Moderately fat:	Prominent amount of fat
Mildly fat:	More fat than average on exam
Mildly wasted:	Little fat; musculature and veins may be visible
Moderately wasted:	Very little fat; musculature and veins may be prominent
Severely wasted:	Virtually no fat present; muscle bellies, tendons and bones may stand out

A6. This question is to assess overall clinical impression of lipodystrophy and should be completed for all participants. Please indicate whether or not the participant exhibits any signs of lipoatrophy (peripheral fat loss) or lipohypertrophy (central fat accumulation). The term “lipodystrophy” has been used to describe patients who have any signs of either lipoatrophy or lipohypertrophy, or those who have both lipoatrophy and lipohypertrophy. These body fat changes occur in some patients on antiretroviral medications and it is unclear whether these changes are separate clinical entities or represent different manifestations of the same syndrome. The changes commonly reported include:

<u>Lipoatrophy (peripheral fat loss)</u>

- facial wasting (nasolabial or cheek area)
- loss of gluteal fat
- loss of subcutaneous fat in arms with prominence of arm veins and muscles in more severe cases
- loss of subcutaneous fat in legs with prominence of leg veins and muscles in more severe cases

<u>Lipohypertrophy (central fat gain)</u>

- dorsocervical fat pad enlargement (buffalo hump)
- supraclavicular and/or axillary fat pads
- abdominal girth enlargement
- breast hypertrophy

If the participant exhibits one or more signs of peripheral lipoatrophy, circle “YES” to **Question a**, otherwise circle “NO”. If the participant exhibits one or more signs of central fat accumulation, circle "YES" to **Question b**, otherwise circle “NO.”

A7 a-c. These questions allow the clinician to skip the BIA and body measurements for participants who meet the following criteria at time of visit:

- If the participant is NOT breastfeeding and is less than one year post-delivery, OR
- If the participant IS breastfeeding and is less than six months post-delivery.

Body Measurements:

Body measurements should always be taken on the right side of the body (unless for a specific reason, such as casts or amputations). Any marks that need to be made on the participant's skin should be made with a cosmetic pencil (waxed base), such as an eyeliner pencil. The measuring tape should be 180-cm long, and flexible but non-stretchable (i.e., Gulik type). Measurements should be recorded to the nearest 0.1 cm. For post-partum women who are not breastfeeding, do not take body measurements until one year post-partum. For women who are breastfeeding, do all of the measurements beginning six months post-partum, except for the chest/breast measurement.

NOTE: All measurements should be taken two times. If the difference between the measures exceeds 0.7 cm, repeat the measure a third (and final) time.

Each question in this section has a subquestion asking if the value exceeds 0.7 cm. If the first two values do not exceed this limit, record the measurements on lines #1 and #2 and circle "NO" for the subquestion. A third measurement does not need to be taken or recorded on line #3, and you should skip to the next body measure.

If the difference between the first two values exceeds 0.7 cm, a third measurement must be taken. Record measurements #1 and #2 in their respective boxes and answer, "YES" to the subquestion. Take the third measurement and record in box #3.

NOTE: If a body measure is above the measurable limits of the measuring tape (i.e., > 180), "999" should be entered into the field for that body measure.

A8. Upper Arm Girth: Have the participant stand erect with feet together and the right arm flexed 90E at the elbow with the palm facing up. The examiner is positioned behind the participant. Using a tape measure, mark a point halfway between the lateral projection of the acromian process of the scapula (bump on the backside of shoulder) and the interior part of the olecranon process (elbow). Next, the participant stands with the right elbow relaxed so that the right arm hangs freely to the side. The examiner stands facing the participant's right side. The measuring tape is placed around the upper arm at the marked point perpendicular to the long axis of the upper arm. The tape is held so that the zero end is held below the measurement value. The tape rests on the skin surface, but is not pulled tight enough to compress the skin. The arm circumference is recorded to the nearest 0.1 cm.

PROMPT: IF PARTICIPANT HAS GIVEN BIRTH WITHIN THE PAST YEAR AND IS BREASTFEEDING, SKIP THE CHEST MEASUREMENT (A9) AND ENTER -1, THEN PROCEED TO THE WAIST MEASUREMENT (A10).

A9. Chest Girth: The chest girth is measured at the level of the fourth costo-sternal joints, which laterally corresponds to the level of the sixth ribs. The fourth costo-sternal joint can be located by a two-handed palpitation method whereby the examiner places both the index fingers on the superior surfaces of the clavicles, while the thumbs locate the first intercostal space. The index fingers then replace the thumbs, which are lowered to the second intercostal spaces. This procedure can then be repeated until the fourth cost-sternal joint is located. The ribs and their costal cartilages are followed medially to their articulations at the sternum, and this point is marked. The participant should be standing with the feet at the shoulder width. The arms are slightly away from the body to allow placing the tape around the chest. The measuring tape should be placed horizontally at the marked point. Once the tape is in place,

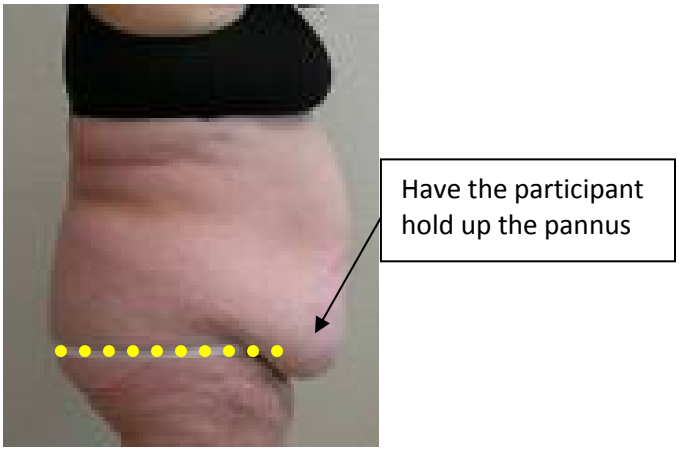
the arms can be lowered to their relaxed position. Take the measurement at the end of a normal expiration. The chest girth is recorded to the nearest 0.1 cm.

A10. Waist Girth: The study participant is in a standing position. The participant is asked to hold up her gown. The examiner stands behind the participant and palpates the hip area for the right iliac crest (see **Appendix A**). The examiner marks a horizontal line at the high point of the iliac crest and then crosses the line to indicate the midaxillary line of the body. The pants and underclothing of the participant must be lowered slightly for the examiner to palpate directly on the hip area for the iliac crest. The examiner then stands on the participant's right side and places the measuring tape around the trunk in a horizontal plane at this level marked on the right side of the trunk. Make sure that the tape is parallel to the floor and that the tape is snug, but does not compress the skin. The measurement is made at minimal respiration to the nearest 0.1 cm.

A11. Indicate whether the participant has folds of abdominal fat (pannus) that interfere with the clinician's ability to accurately perform the hip circumference measurement.

PROMPT:	IN A13, HAVE PARTICIPANT LIFT PANNUS UP TO MEASURE THE HIP CIRCUMFERENCE.

A13. Hip Girth: The study participant stands erect with feet together and weight evenly distributed on both feet. The participant is holding up the examination gown. (NOTE: If the participant has a pannus, have participant lift pannus up during measurement. Do not include pannus in measurement.) The examiner places the measuring tape around the buttocks. The tape is placed at the maximum extension of the buttocks (see **Appendix B**). The examiner then adjusts the sides of the tape and checks the front and sides so that the plane of the tape is horizontal. The zero end of the tape is held under the measurement value. The tape is held snugly but not tight. The examiner takes the measurement from the right side.



b. Indicate whether or not the waist girth is larger than the chest girth. This may occur in obese women. If one waist measurement is larger than the chest measurements and one waist measurement is smaller than the chest measurements, the clinician should enter "-9" for Question A11b.

c. Indicate whether or not the waist girth is larger than the hip girth without pannus (i.e., measurement in Question A13. This may occur in obese women. If one waist measurement is larger than the hip measurements and one waist measurement is smaller than the hip measurements, the clinician should enter "-9" for Question A13c.

A14. Thigh Girth: First, have the participant sitting with her right knee bent at a 90° angle. Mark the nearest border of the patella (knee cap). A measuring tape is placed at the superior aspect of the inguinal crease which is easily located if the hips are in the sitting position. No

pressure is to be applied at the inguinal crease; however, folds of fat tissue may have to be lifted on some obese participants to measure at the crease. The exam gown should be lifted. The tape is extended along the midline of the thigh to the line just proximal to the patella (see **Appendix C**). The examiner should make a mark (+) at the mid point of the thigh with a cosmetic marker. Next, have the participant stand with her right leg just in front of her left leg and her weight shifted back from her left leg. The examiner should demonstrate this instruction. The edge of the examining table may be used for the participant to hold onto to maintain balance. The examiner stands on the participant's right side and the measuring tape is placed around the midthigh at the marked point. The tape is positioned perpendicular to the long axis of the thigh with the zero end of the tape held below the measurement value. The tape rests firmly on the skin without compressing the skin. The thigh circumference is measured to the nearest 0.1 cm.

A15. Dorsocervical fat pad:

a. The presence or absence of abnormal fat deposition in the dorsocervical region should be noted. Circle "1" if fat deposition is present; "2" if absent. Skip to **Question A16** if absent.

b. If present, record the clinician's impression of the severity of the fat deposition.

- **Mild**: Mild signs noted only after close inspection by the clinician.
- **Moderate**: Signs of fat maldistribution are noticed by the clinician without specifically looking for them.
- **Severe**: Signs of fat maldistribution are easily noted by casual observers or the clinician.

A16. The clinician performing the body measures should record his/her initials in **Question A16**.

Bioelectrical Impedance Analysis (BIA):

A19–A21: Ask these three questions before administering the BIA procedure.

A22–A23: *BIA General instructions:*

- ***BIA should not be done on pregnant women, on women who are overheated (as indicated by high body temperature), or on women who have a cardiac pacemaker or who have amputations other than fingers or toes.***
- There should be no portable electrical heater or other electronic device in use in the exam room and the exam table should be non-conductive.
- The battery should be kept current and the equipment should be calibrated weekly.
- If the participant refuses the BIA, enter "-7 " in each of the response boxes for **Questions A22** through **A23**. If the BIA cannot be performed for another reason, e.g., equipment malfunction, enter "-9" in each of the response boxes for **Questions A22** through **A23.**

Procedures:

1. The participant should remove her right shoe and sock. If, for some reason, the procedure must be done on the left side, then make note of it and on subsequent visits always use the left side.
2. The participant should lie on her back, without a pillow, on the exam table, with her arm 30 degrees from her body and thighs not touching.
3. Remove jewelry on the electrode sites.
4. The sites where you will place the electrodes should be gently cleaned with an alcohol wipe, particularly if the skin is moist or covered with lotion. Allow alcohol to evaporate before placing electrodes.

5. Attach the electrodes (use whole electrode pads only) and patient cables as described below and as shown in the photographs provided by RJL. Attach the lead wires to the electrodes with the red leads attached to the wrist and ankle and the black leads attached to the hand and foot. In each case, the red alligator clip should be proximal and the black clip distal.

    - *Right wrist:* Draw an imaginary line on the dorsal surface bisecting the styloid processes of the ulna and radius. Place the center of the electrode along the middle of the imaginary line, and with the tab of the electrode facing out (away from the body).
    - *Right hand:* Place the electrode below the knuckle and above the base of the middle finger, with the tab of the electrode facing out.
    - *Right ankle:* Draw an imaginary line on the dorsal surface of the foot bisecting the medial and lateral malleoli of the ankle. Place the center of the electrode along the middle of the imaginary line with the tab of the electrode facing out.
    - *Right foot:* Place the electrode at least four to five centimeters away from the electrode on the ankle, below the base of the second toe, with the tab of the electrode facing out.

6. The participant should remain motionless and relaxed with her arms and legs slightly apart, never touching any other part of the body. The arms should be bent slightly at the elbow with palms down. In cases where the participant's arms and legs cannot be properly spread (because the participant's body is large), the procedure should still be completed and a note made in the comments section. As long as there is no skin contact (the paper gown can be used to separate the arms from the trunk or the legs from each other), no interference with the proper flow of the current should take place.
7. Turn on the analyzer and when the measurements have stabilized, read and record the displayed Resistance (Rx) and Reactance (Xc) in the spaces provided in **Question A22**.
8. Turn off the analyzer. Double-check the leads and electrodes. Stabilize the participant, turn the leads back on, read and record the displayed Resistance and Reactance in the spaces provided in **Question A23**.
9. Unhook the leads and remove and dispose of the electrodes. Do not reuse the electrodes.

A24. The clinician performing BIA measures should record his/her initials in **Question A24**.

Comments: Please note if the participant reports recently having had diarrhea, having thrown up, being diaphoretic or incontinent, or any other factors that may affect the BIA measurement.

NOTE: As you proceed with the Physical Exam, shaded responses circled "YES" require prompt referral for evaluation and/or treatment. Please refer to your manual for referral guidelines.

SECTION D: PHYSICAL FINDINGS IN THE BREASTS

D1a. Indicate if the participant is attending an odd- or even-numbered visit. Beginning at visit 21, the breast exam will be performed once per year only, at even-numbered visits, unless a semi-annual exam is clinically indicated. If participant is attending an even-numbered visit, perform the breast exam as described in **Question D1b** below. If participant is attending an odd-numbered visit, skip to **Section E**.

NOTE: If a semi-annual exam is clinically indicated and an exam is performed at an odd-numbered visit, the results will not be recorded on the F07 form. However, if abnormalities are found, the participant should be referred as appropriate to her medical provider.

D1b. Examine and record your overall assessment of the participant's breasts.

D9–D18: Be careful to record information from the LEFT and the RIGHT breasts separately and in the proper location on the form. If a breast mass is not found in a region, code "NO," and skip to the next region (do not complete sub questions "**a**" and "**b**"). If a mass is found, record the

size of the mass in centimeters and indicate whether or not this is an old mass. Old mass is defined as:

Old Mass: A persistent, discrete lump or localized thickening in either breast that has been evaluated by a physician, mammogram, needle aspiration or biopsy and that was found to be a benign condition.

SECTION E: BLOOD PRESSURE MEASUREMENT

E1. BLOOD PRESSURE (MEASURE AND RECORD THREE TIMES USING DINAMAP MONITOR):

All blood pressure measurements in the WIHS will be collected using the same automated Dinamap monitor (Dinamap Procare Series, GE Medical Systems) for standardization purposes. Each site should purchase a sufficient number of Dinamap monitors so that all WIHS participants seen at all subsites will have their blood pressure measured using the Dinamap monitor.

The WIHS requires the collection of three seated blood pressure measurements from the participant's right arm, using an automated Dinamap blood pressure monitor. The pulse rate will be recorded with each blood pressure measurement from the Dinamap monitor. The Dinamap monitor should be set to automatically measure blood pressure at one-minute intervals.

The clinician should communicate appropriately with the participant regarding the purpose, time requirement and process of blood pressure measurement. Throughout the BP measurement, the clinician should keep the participant warm, relaxed and comfortable. The participant should be discouraged from reading, watching TV or talking, except to voice discomfort or confusion about instructions. The participant should be seated with both feet flat on the floor and with the back supported. Her right arm should be placed on the table in the proper position (i.e., at heart level with the arm slightly flexed and the palms facing upward). The participant's arm should be bare to above the point of the shoulder.

1. ARM MEASUREMENT

   The proper size cuff must be used to obtain accurate blood pressure (BP) readings.

   - Ask participant to either remove her upper garment or to completely expose the right upper arm in order to perform the arm circumference measurement.
   - In the standing position with the **right** forearm held horizontal, measure the arm length from the shoulder to the elbow. Mark the midpoint. (Arm circumference measurement is already being done in WIHS.)
   - With the arm relaxed at the side of the body, place the tape measure horizontally, and draw snugly around the arm at the midpoint. Record the circumference.
   - Consult the chart of arm circumference measurements and corresponding cuff sizes to choose the appropriate cuff. **Do not rely** on the markings on most BP cuffs – they may be incorrect!
   - The left arm may be used if the BP is known to be higher in that arm, or in the presence of an anomaly or other circumstance prohibiting use of the right arm. Otherwise all BP measurements should be done on the right arm.

2. APPLYING THE BP CUFF

   The cuff sizes used are:

   Small adult: 17.1 – 25 cm

   Regular adult: 25.1 – 33 cm

   Large adult: 33.1 – 40 cm

   Thigh: 40.1 – 50 cm

   - Place the cuff directly on the skin, not over clothes.
   - Palpate the brachial artery and place the midpoint of the length of the bladder over the brachial artery and the mid-height of the cuff at heart level.
   - The lower edge of the cuff should be about one inch above the natural crease of the inner aspect of the elbow.
   - Wrap the cuff snugly and secure firmly.
   - The participant should be seated with both feet flat on the floor and with her back supported, and rest with her palm turned upward. Ask if the participant is relaxed, and, if necessary, help her to relax.

3. OBTAINING THE BP READINGS

   The participant should be allowed to sit quietly for five minutes without talking. She should be seated comfortably, feet flat on the floor with her back supported. Ideally she should not have smoked or have had any caffeine within the 30 minutes prior to the BP determinations. After the five-minute waiting period, the clinician is to take three blood pressure measurements, with a one-minute wait between each measurement. The participant's arm should be passively raised overhead by the examiner for the first five seconds between each measurement. All measurements should come from the Dinamap.

   1. Turn the Dinamap monitor on by pressing the blue "*on/off*" button on the lower right hand corner of the monitor. Then, press the light gray "*cycle*" button, which is below the green "*inflate/stop*" button on the upper right hand corner of the monitor. Make sure that the number "1" appears in the screen immediately to the left of the "*cycle*" button. This automatically sets the monitor to inflate, and then to re-inflate every one minute thereafter.
   2. After the first blood pressure and pulse measurements appear on the screen, enter the systolic blood pressure, diastolic blood pressure and pulse onto the WIHS ***Physical Exam*** (F07) ***Form***. Please note that the pulse on the Dinamap monitor appears below the diastolic blood pressure.
   3. After the cuff deflates, passively raise the participant's arm overhead for five seconds. Lower the arm gently.
   4. Record the second blood pressure measurement and pulse, and again passively raise the participant's arm overhead for five seconds. Lower the arm gently.
   5. Record the third blood pressure measurement and pulse, and then remove the cuff.

Always remember to turn off the monitor by pressing the blue button at the lower right hand corner of the monitor after all three blood pressure measurements are taken, otherwise the cuff will continue to inflate at one-minute intervals.

If, for some reason, you did not record the prior reading before the next blood pressure measurement was taken, you can press the gray "*history*" button after the blood pressure

measurement is taken. The Dinamap monitor can store up to 25 blood pressure readings. If you would like to store just the three blood pressure measurements for the participant, clear all previous stored blood pressure measurements before taking the first blood pressure measurement. This can be done by pressing and holding the gray "*history*" button for two seconds. If you would like to print the blood pressure measurements, press the gray "*history*" button, followed by the gray "*print*" button, which is directly below the gray "*history*" button.

When the blood pressure is reported to the participant, the clinician should say, "Your average blood pressure today is …"

NOTE: If blood pressure is less than 90/60 or greater than 140/90, refer participant to medical provider.