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## Clinic Cohort 27 Exam Components

1. Obtain informed consent or consent by substituted judgment
2. Update of Sociodemographic Data and Family (Salmon Sheet)
3. Phlebotomy
  - A. Lipids (Total cholesterol, HDL, Triglycerides)
  - B. Creatinine
  - C. Glucose
  - D. Cell Line (if not already collected)
4. Electrocardiogram
5. Standing Height and Weight Measurement
6. Technician Obtained Resting Blood Pressure
7. Technician Administered Questionnaires
  - A. Cognitive Function/MMSE
  - B. Sociodemographics/Marital Status
  - C. Subjective Health
  - D. Activities of Daily Living
  - E. Use of Nursing and Community Services
  - F. Rosow-Breslau Questions
  - G. Nagi Questions
  - H. Falls/Fractures
  - I. CES-D Scale
  - J. Berkman Social Network Questionnaire
8. Technician Obtained Measures of Observed Physical Performance
  - A. Repeated Chair Stands
  - B. Measured Walks
  - C. Hand Grip Strength
  - D. Stands
9. Physician Obtained Medical History
  - A. Resting Blood Pressure (2)

## **Offsite Cohort 27 Exam Components**

1. Obtain informed consent or consent by substituted judgment
2. Update of Sociodemographic Data and Family History (Salmon Sheet)
3. No phlebotomy
4. Electrocardiogram
5. Weight Measurement (no Height Measurement)
6. Technician Obtained Resting Blood Pressure
7. Technician Administered Questionnaires
  - A. Cognitive Function/MMSE
  - B. Sociodemographics/Marital Status
  - C. Subjective Health
  - D. Activities of Daily Living
  - E. Use of Nursing and Community Services
  - F. Rosow-Breslau Questions
  - G. Nagi Questions
  - H. Falls/Fractures
  - I. CES-D Scale
  - J. Berkman Social Network Questionnaire
8. Technician Obtained Measures of Observed Physical Performance
  - A. Repeated Chair Stands
  - B. Measured Walks
  - C. Hand Grip Strength
  - D. Stands
9. Technician Administered Medical Questionnaire (same as physician-administered Medical Questionnaire for on-site exam)
  - A. Health Care
  - B. Medications
  - C. Female Hormone Replacement
  - D. Prostate Disease
  - E. Thyroid Disease
  - F. Alcohol Consumption
  - G. Smoking Status
  - H. Respiratory Symptoms
  - I. Chest Pain
  - J. Syncope History
  - K. Cerebrovascular Symptoms
  - L. Peripheral Arterial and Venous Disease
  - M. Cardiovascular Procedures
  - N. Cancer History

## Equipment For Exam Procedures

1. A. Clinic: Detecto Scale  
Worcester Scale Co., Inc.  
228 Brooks Street  
Worcester, MA  
(508) 853-2886  
Room 102

Detecto Scale  
Halliday Medical  
Walpole, MA 02081  
(508) 668-8670  
Room 101

- B. Offsite: SECA Portable Scale Model #841  
MSI: Measurement Specialties Inc.  
Fairfield, NJ 07007

2. Weight to calibrate scale: 50 lbs.  
Worcester Scale Co., Inc. (See address above)

3. Marquette Mac5000 (electrocardiogram cart)  
Marquette Electronics  
100 Marquette Drive  
Jupiter, FL 33468-9100

**Tech support:** George Ryan  
401-235-8289 (pager)  
800-527-5634 ext 5919 (voice mail)  
**Sales Rep:** Jack Moran  
508-400-6172  
**Applications:** 800-531-5613

4. Acquisition Module for Mac5000  
Cam-14 (see address above)
5. Mac PC (see information for Mac5000 above)  
backup portable ECG machine

6. Portable standard mercury column sphygmomanometer:  
Baumanometer 300 model  
W.A. Baum Co., Inc.  
620 Oak Street  
Copiague, NY 11726  
516-226-3940

ft 004

EKG

ft 488 - ft 523

ft 018, ft 019  
ft 319, ft 320  
ft 483, ft 484

7. Aneroid Sphygmomanometer – gauge type (offsite)  
P/N 5090 – 03 Tycos  
Samuel Perkins, Inc.  
Quincy, MA 02169

Repairs and Calibration  
Welch Allyn  
Arden, NC 28704  
1-800-535-6663

ft 018, ft 019  
ft 319, ft 320  
ft 483, ft 484

8. Litman stethoscope tubing and earpieces with bell: Classic II
9. Bauman blood pressure cuffs in four sizes: regular adult, large adult, pediatric, thigh (clinic only).

10. JAMAR dynamometer  
Model #5030J1  
**Sales Address:**  
Lafayette Instrument Co.  
P.O. Box 5729  
Lafayette, IN 47903  
1-800-428-7545

ft 193 - ft 200

**Calibration Address:**  
Sammons Preston  
452 N. Sangamon  
Chicago, IL 60622  
1-800-323-5547

11. Sports Stop Watch #63-5016  
Radio Shack  
314 Pond St.  
Ashland, MA 01721  
(508)231-0728

ft 201 - ft 212  
ft 214 - ft 234

12. Heart Square, by Heartware Inc.  
purchased from: Nova Heart ECG ft 489 - ft 523

13. Adjusted stool, 18"  
United Chair  
P.O. Box 96  
114 Churchill Ave. NW  
Leeds, AL 35094

ft 214 - ft 221 ✓

14. Pocket Talker II  
Williams Sound Corp.  
10399 W. 70<sup>th</sup> St.  
Eden Prairie, MN 55344  
1-800-843-3544

Used only with those  
participants who are  
hard of hearing

15. SECA Stadiometer  
Halliday Medical  
# 4-694-581  
Walpole, MA 02081  
(508) 668-8670

ft008

## Equipment Calibration Time Table

*Internal Use Only*

<u>Activity</u>	<u>Daily</u>	<u>Weekly</u>	<u>Monthly</u>	<u>Yearly</u>
<b>Scale</b>				
<b>Detecto Scale (Clinic)</b>				
Zero Reading	X			
50 lb. Weight		X		
Professionally Calibrated				X
<b>Seca Scale (Offsite)</b>				
Zero Reading		X		
50 lb. Weight			X	
<b>Sphygmomanometer</b>				
<b>Mercury Manometer</b>				
Zero Reading	X			
Check Inflation System			X	
<b>Aneroid-Gauge Type</b>				
Check Inflation System			X	
<b>Stadiometer (Check level)</b>			X	
<b>Dynamometer (Professional Calibrated)</b>				X
Drain portable ECG Battery			X	



## Guidelines For Coding Accuracy

To insure maximum accuracy and legibility for persons performing data entry, please adhere to the following guidelines:

1. Use a red or blue pen, or any other pen which will stand out from the page (pencil or black ball-point pens are unacceptable).
2. Make sure all numerals are unmistakably clear.
3. Do not leave any blanks on exam form. If measurements are not taken, please enter 9s in blanks, and document the reason. Your comments are helpful at any point of the exam where data is not recorded in the standard manner.
4. If you make an error, please cross it out entirely, write the correct information *in the margin*, and **initial the change**. **Do not superimpose numerals one on top of the other**.
5. Make sure both sides of the examination form are completed.

**Procedure To Determine Maximal Inflation Level**  
**For Blood Pressure Measurement**

Ht 018, Ht 019, Ht 319, Ht 320, Ht 483, Ht 484

For each participant, determine the maximal inflation level, or the pressure to which the cuff is to be inflated for blood pressure measurement. This assures that the cuff pressure at the start of the reading exceeds the systolic blood pressure and thus allows the first Kortokoff sound to be heard.

1. Attach the cuff tubing to the sphygmomanometer.
2. Palpate the radial pulse.
3. Inflate the cuff rapidly until the radial pulse is no longer felt (palpated systolic pressure) by inflating rapidly to 70 mmHg, then inflating by 10 mmHg increments.
4. Deflate the cuff quickly and completely.
5. The maximal inflation level is 30 mmHg **above** the palpated systolic pressure.

## Technician's Seated Blood Pressure

ft018, ft019

### A. Equipment:

1. One standard Litman stethoscope tubing and earpieces with bell: Classic II 3M
2. One standard mercury column sphygmomanometer: Baumanometer (clinic)
3. Aneroid sphygmomanometer (off-site)
4. BP cuffs in four sizes

Thigh cuff  
Large adult cuff  
Regular adult cuff  
Pediatric cuff

### B. Blood Pressure Cuff Placement:

1. Bare participant's left arm to above the point of the shoulder.
2. Determine correct cuff size using guidelines inside the cuff.
3. Palpate the brachial artery.
4. With participant seated, place the appropriate cuff around the upper left arm. The midpoint of the length of the bladder should lie over the brachial artery. Each cuff has an artery marker. The mid-height of the cuff should be at heart level.
5. Place the lower edge of the cuff, with its tubing connections, about one inch (1") above the natural crease across the inner aspect of the elbow.
6. Wrap the cuff snugly about the arm, with the palm of the participant's hand turned upward.
7. If the subject has had a left-sided mastectomy, the right arm may be used for blood pressure measurement. If right arm is used, note it on the form.

ft018, ft019

C. Guidelines for Accurate Blood Pressure Readings:

1. The participant should be in a seated position for at least 5 minutes before the blood pressure is measured.
2. All readings are made to the nearest even digit.
3. Any reading which appears to fall exactly between marking on the mercury column should be read to the next higher marking (i.e. 2, 4, 6, 8, or 0).
4. All readings are made to the top of the meniscus, the rounded surface of the mercury column.
5. When the pressure is released quickly from a high level, a vacuum is formed above the mercury and the meniscus is distorted. Allow a few moments for it to reappear before reading the manometer.

For offsite Blood Pressures: Check that the needle is at the zero mark at the start and the end of the measurement. Place the manometer in direct line of sight with the eye on a line perpendicular to the center of the face of the gauge.

D. Blood Pressure Readings:

1. Following any previous inflation, wait at least 30 seconds after the cuff has completely deflated.
2. By closing the thumb valve and squeezing the bulb, inflate the cuff at a rapid but smooth continuous rate to the maximal inflation level (30 mmHg above palpated systolic pressure).
3. The examiner's eyes should be level with the mid-range of the manometer scale and focused at the level to which the pressure will be raised.
4. Open the thumb valve slightly. Allow the cuff to deflate, maintaining a constant rate of deflation at approximately 2 mmHg per second.
5. Using the bell of the stethoscope, listen throughout the entire range of deflation, from the maximum pressure past the systolic reading (the pressure where the FIRST regular sound is heard), until 10 mmHg BELOW the level of the diastolic reading (that is, 10 mmHg below the level at which the LAST regular sound is heard).
6. Deflate the cuff fully by opening the thumb valve.
7. Remove the stethoscope. Neatly enter systolic and diastolic readings in the spaces provided on the form.

## Weight Measurement

fb004

### Clinic

1. Ask participant to wear FHS gown for measurement if he/she brought a heavy gown from home. The participant should remove slippers or shoes.
2. Prior to asking participant to step onto the scale, lift the counter poise and position it at zero.
3. Ask the participant to step onto the scale, facing measurement beam.
4. Instruct the participant to stand in the middle of the scale platform with head erect and eyes looking straight ahead. Weight should be equally distributed on both feet, and participant should not touch or support him/herself.
5. With the participant standing still in the proper position, lift the counterweight (larger weight), and slide it to the right until the beam approaches balance.
6. Adjust the top poise until the beam is evenly balanced.
7. Have the participant step off the scale. The technician should stand directly in front of the scale and read the weight with eyes level to the point of measurement.
8. Record the weight to the nearest pound; **round up if  $\geq 0.5$ , round down if  $< 0.5$ .**

### Offsite

1. The participant should remove slippers or shoes.
2. Prior to asking participant to step on the scale, turn scale on, check to make sure it reads 0.0. The scale should be on a flat, hard surface.
3. Ask the participant to step onto the scale.
4. Instruct the participant to stand in the middle of the scale platform with head erect and eyes looking straight ahead. Weight should be equally distributed on both feet, and participant should not touch or support himself/herself.
5. Read the digital display while participant is on the scale.
6. Have the participant step off the scale.
7. Record the weight to the nearest pound; round up if  $\geq 0.5$ , round down if  $< 0.5$ .
9. If participant is unable to stand for weight measurement, record the last weight in nursing home chart and the date the weight was obtained. If the participant is unable to stand on a scale during a home visit, record the weight measurement as 999.

## Standing Height Measurement

ft 008

### Clinic

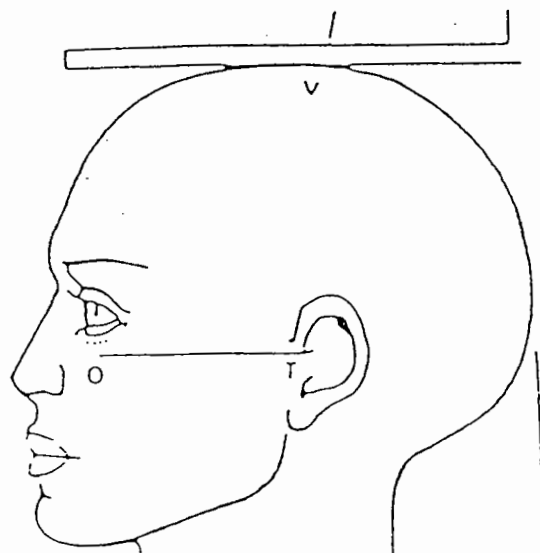
1. Participant should be barefoot or wearing thin socks so positioning of the body can be seen. Ask participant to stand erect with his/her back to vertical mounted stadiometer.
2. Heels should be together and against the vertical ruler, both feet flat on the floor, with weight distributed evenly across both feet. Check to make sure both feet are back against the wall.
3. Participant faces straight ahead with his/her head positioned in the Frankfort horizontal plane (see next page). The lower margin of the bony orbit (the socket containing the eye) should be on the same horizontal plane as the most forward point in the supratragal notch (the notch just above the anterior cartilaginous projections of the external ear).
4. Ask participant to let arms hang freely by the sides of the trunk, palms facing the thighs. Ask participant to inhale deeply and maintain a fully erect position.
5. Bring the level down snugly (but not tightly) on top of participant's head. Use an extension board for proper measurement of severely kyphotic subjects.
6. Record measurement to the **nearest 1/4 inch, rounding down.**

Note: Measurement is not taken during offsite visits.

## Standing Height Measurement

ft 008

### FRANFORT PLANE FOR MEASURING BODY HEIGHT



ORBITALE: Lower margin of eye socket

TRAGION: Notch above tragus of ear or at upper margin of zygomatic bone at that point

FRANFORT PLANE: Orbitale-tragion horizontal line

## ECG Lead Placement

At 488-16523

1. **V1:** The first intercostal space is palpated just below the clavicle. Count down and identify the 4th intercostal space just below the fourth rib. **Point V1** is just to the right of the sternum in the **fourth** intercostal space. Make a small line with a marking pencil here to show where the ECG lead should be placed.
2. **V2:** Should be at the same level as **Point V1** and immediately to the left of the sternum. Make a small line with a marking pencil to show where the ECG lead should be placed.
3. To locate the horizontal reference level for electrodes (**Point E**), starting from **V2**, locate the **fifth** intercostal space. Move your finger in the **5th** intercostal space laterally to where the midclavicular (center of the chest where you feel a bend in the clavicle) line intersects the **fifth** intercostal space. Make a horizontal line at this point.

Mark the exact transverse (horizontal) level at this spot with the midsternal line. It should be about one inch (1") below **V1** and **V2** placements.

4. **V6:** Move the participant's elbow laterally away from the body. Mark the midaxillary line in the exact vertical center plane of the thorax down to the intersection of the horizontal plane marked by the location of **E**. This is the exact location of **V6**. (**NOTE:** It is a common mistake to locate the midaxillary line too far anteriorly, toward the **V5** location).
5. **V4:** Place the # arm of the Heart Square firmly across the lower sternum at the level of **Point E** (as you face the participant, the writing on the Heart Square will appear upside down and backwards). Adjust the **E** and **V6** arms of the Heart Square so they are both perpendicular to the long axis of the thoracic spine at the level of the **E** position. The **E** arm should be exactly horizontal. If the participant is lying flat, the **V6** arm should be exactly vertical.

Slide the **V6** arm so the 0 point (the *arrow* labeled **V6**) is at the marked location for **V6**. Double check that the **E** arm is still in the correct spot.

**V4:** On the **V6** arm (the slide), find the number corresponding to the **E** measurement. Following the corresponding 45 degree line to the surface (e.g. 16) and mark the location. Place electrodes on **TOP** of the breast.

The participant may now lower the left arm in a more comfortable position.

6. **V3:** Exactly halfway between **V2** and **V4**.
7. **V5:** Exactly halfway between **V4** and **V6**.



Ht488 - Ht523

**NOTE:** Place the electrodes on the participant and hook up the leads before entering the data in the ECG machine. This will allow ample time for the participant to relax and the machine interference to smooth out.

8. Before electrodes are placed on the participant, ask if he/she is known to be allergic to alcohol wipes. If yes, prepare the areas of electrode placement by rubbing with water and drying with a washcloth. If allergies are denied, prepare the areas by wiping with an alcohol wipe and drying with a washcloth.
9. Attach limb leads in the following order: right leg (RL), left leg (LL), right arm (RA), left arm (LA). Precordial electrodes are attached in the following order: V1, V2, V3, V4, V5, V6. The body of the electrode is placed centrally at the pencil mark with the tab extending downward. This will avoid lead reversal. Recheck all leads for proper placement.
10. The ECG is printed and reviewed for errors. If ECG needs to be run at **5 mmHg** because of high voltage (if the standard **10 mmHg** is beyond the lines of the ECG paper), highlight (yellow or orange highlighter) the **5 mmHg** on the bottom of the printed ECG. On the top margin of the tracing write "**1/2 STANDARD**" using a bold magic marker.
11. Leads are disconnected and checked again for proper placement. Electrodes are carefully removed.
13. After each use, wash the Heart Square gently with soap and water (1 part detergent to at least 20 parts water, approximately 3 drops of detergent to one cup of water) and gently wipe dry with a soft cloth.

ft 488-ft 523

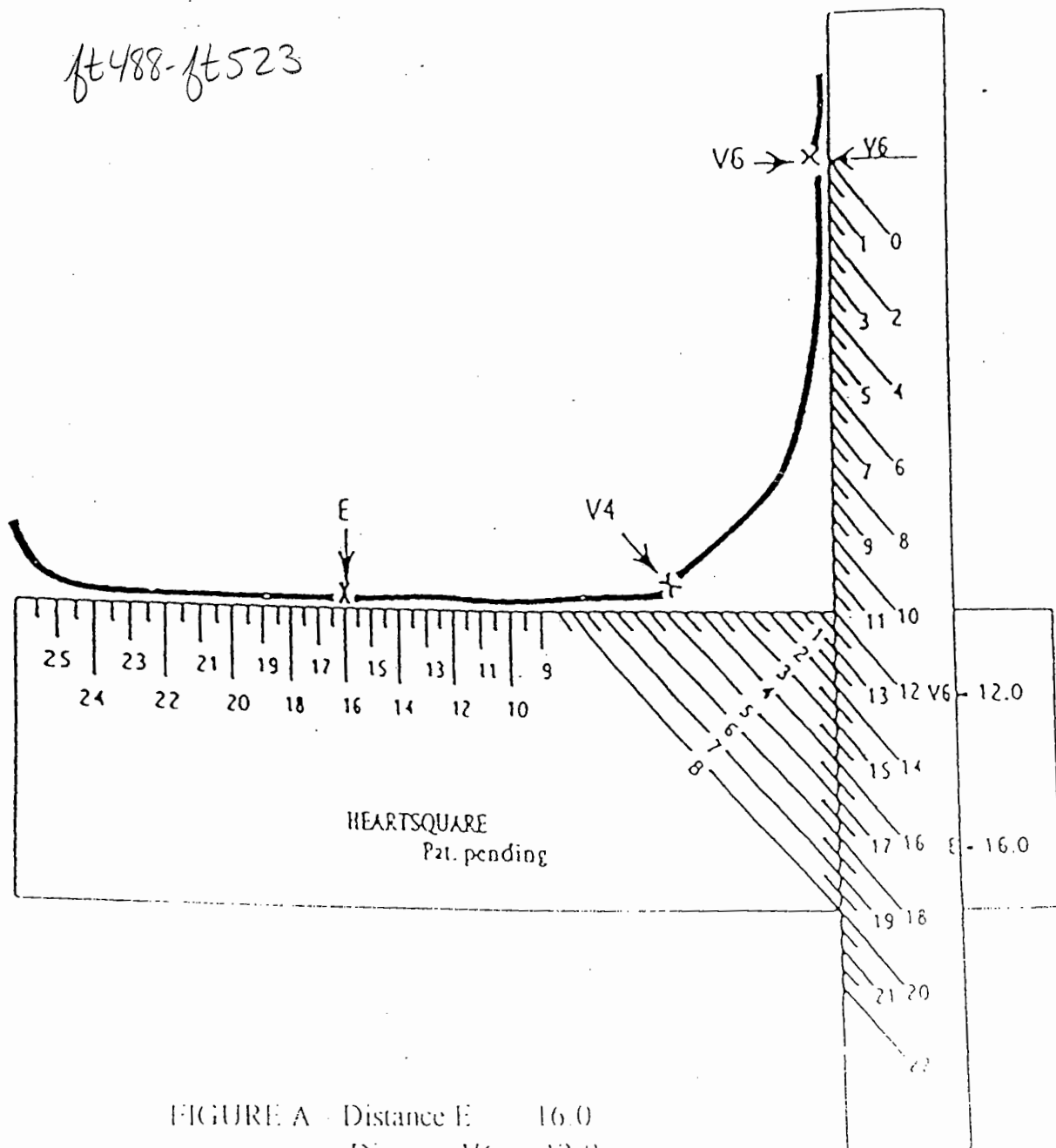


FIGURE A - Distance E 16.0  
Distance V6 12.0

Follow 45° line from 16.0 at V6 arm  
to locate V4.

MAC-PC Entries: E = 160 ("height")  
V6 = 120 ("weight")

## Mini-Mental State Exam

16047-16071

### A. Background and Rationale:

Cognitive function may decline as a result of certain risk factors (e.g. hypertension, elevated cholesterol, cardiac arrhythmias). This in turn could adversely impact the physical functioning and quality of life of older adults. Dementia is a major illness and cause of disability among the elderly. Cerebrovascular disease or multi infarct dementia is the second leading cause of dementing illness among Caucasians, preceded only by Alzheimer's Disease.

The Mini-Mental State Exam (MMSE) is a widely used test of cognitive function among the elderly; it includes tests of orientation, attention, memory, language and visuo-spatial skills.

### B. Definitions:

1. **Alert Level:** In general participant scoring below education-adjusted cut-off scores\* on the MMSE may be cognitively impaired and should be referred for further evaluation. Referral forms may be obtained from the clinic. They should be filled out and sent to the Dementia Study participant coordinator.

#### MMSE – EDUCATION ADJUSTED CUT-OFF SCORES

- a. Subjects whose education attainment levels are **7<sup>th</sup> grade or lower**, a score on the **MMSE of 22 or below**
- b. Subjects whose education attainment level is **8<sup>th</sup> grade or some high school** (but not a graduate of), a score on the **MMSE of 24 or below**
- c. Subjects whose education attainment level is **high school graduate**, a score on the **MMSE of 25 or below**
- d. Subjects whose education attainment level is **some college or higher**, a score on the **MMSE of 26 or below**

**\*Note: The Education Adjusted Cut-off Scores are calculated by data management.**

ft047-ft071

## 2. Mini-Mental State Exam Scoring:

The official total score for the MMSE (i.e. the scores used for statistical analyses) are computer generated. Examiners record individual test item scores on the MMSE test form. The one exception is "WORLD" where examiners record the response of subjects in the exact order that it is given by the subject.

For **referral purposes**, examiners are to calculate a total MMSE score. This includes examiners making their best guess for what score they will assign to the "WORLD" test item. Examiners should then refer any participants that meet the referral guidelines described above, unless a substituted judgment form has been signed.

For participants not known to be cognitively impaired but who appear to have a problem with confusion the MMSE will be performed early in the exam. If the MMSE score is <24 or if the MMSE score falls 3 or more points below the previous MMSE score, the participant may have a cognitive impairment. If there is not a consent by substituted judgment contact a family member, guardian, or power of attorney to obtain verbal consent to complete the exam. If possible **FAX** the consent by substituted judgment to the designated person at the time of the exam. Send the consent by substituted judgment by mail. If the appropriate person can not be located, complete the exam and hold the data until a consent by substituted judgment has been obtained. Be sure to notify the cohort coordinator and make a referral to the Dementia Study.

### C. Methods:

1. The MMSE asks questions to ascertain cognitive status. Responses are scored:  
0=incorrect  
1=correct  
6=item administered, participant does not answer  
9=test item not administered/unknown
2. If a response is ambiguous, the interviewer records the response in the margin so a decision can be made on its appropriateness. Please refer all questionable responses to the neuropsychologists (i.e. Rhoda Au, Sherral Devine or Mike Tocco)
3. When a participant is incapacitated by blindness, has a functional disability, is illiterate, or is otherwise unable to respond to a question, the interviewer should specify the problem and questions involved (see "Factors Potentially Affecting Mental Status Testing" later in the section).

8E047-8E071

D. Expanded Scoring Instructions for Mini-Mental Exam:

**Important note:** The single exception to scoring 6 for no response is if a participant is in a coma (this circumstance would be encountered in a nursing home visit) In this instance, administer the first item (to establish no response -- give a 0 to the first item if there is no response). (This exception is made to conform with the stroke protocol.)

9 = When test item was not administered (refused or inability because of physical limitations) or subject's response is uninterpretable (response could be correct, but tester is unable to discern the response).

**Important note:** Sometimes a participant might produce a response that is not a word (i.e. a neologism) but has been responding with intelligible responses on previous items (right or wrong). In this case the items should be scored 0. The key to differentiating a 0 or a 9 is consistency within test. If a person has a speech abnormality, such as aphasia or dysarthria, across all items, most (or many) responses will be unintelligible. If a person is, for example, demented, he/she may produce a flow of intelligible responses with occasional unintelligible responses. A "9" must represent situations in which the EXAMINER is not sure whether (1) the participant responded correctly (because of slurred speech, severe stuttering, etc.), or (2) if the participant has some other factor that prevents test item administration (such as an inability to administer *copy this figure* test item to a right-handed person who has right-handed paralysis, or to someone who has a visual impairment or inability to hear).

Scoring for Administered Individual Items: (applies only if a test item is administered)

Score 0 for the following reasons:

1. Incorrect response
2. *I don't know*
3. Unintelligible response in context of other intelligible responses (see scoring of 9 as well).
4. Participants attempted to respond but responds incorrectly (i.e. they are demonstrating that they heard the question and are making an attempt to respond to it).

E. Questions: Scripts and Procedures for Each Question:

*Introductory Script: I would like to ask you a few questions dealing with concentration and memory. Some questions may seem easy and others may be a bit more difficult.*

Read each question on the form.  
Record the response on the form.

ft047-ft071

1. *What is the date today?* (3 = correct score for month (1 pt), day (1 pt) and year (1 pt))
  - a. Ask for the date. Then ask specifically for parts omitted (e.g. *Can you also tell me what month, year it is?*)
  - b. If participant supplies part or all of the date (e.g. month and day, or month, day, and year), record as appropriate and do not ask those questions again.

2. *What is the season?*

Since distinctions between seasons can be difficult during certain months, one week leeway is allowed on either side of the actual date.

<u>Month</u>	<u>Correct Response</u>
January	Winter
February	Winter
March	Winter or Spring
April	Spring
May	Spring
June	Spring or Summer
July	Summer
August	Summer
September	Summer or Fall
October	Fall
November	Fall
December	Fall or Winter

3. *What day of the week is it?*

4. *What town, county, and state are we in?*

- a. Ask the participant what town, county, and state we are in.

5. *What is the name of this place?*

- a. Ask the participant where they are. Any appropriate answer is okay. On home visits, the examiner can ask, *What is the address of this place?*

6. *What floor of the building are we on?*

ft047-ft071

7. *I am going to name 3 objects. After I have said them I want you to repeat them back to me. Remember what they are because I will ask you to name them again in a few minutes: Apple, Table, Penny.*

- a. Make sure participant is attentive when beginning the question.
- b. Read the list of objects slowly. **DO NOT REPEAT ITEMS UNTIL AFTER THE FIRST TRIAL.**
- c. If participant asks you to repeat the 3 items, respond, *Can you tell me the items I just mentioned?* or *Just do the best you can.*
- d. Read *Apple, Table, Penny.*
- e. Script: *Could you repeat the three items for me?*
- f. Record the score for the first trial.
- g. If, after scoring the first attempt, the participant has not learned the 3 objects, repeat the list of objects up to 6 times until he/she has learned them.
- h. If, 3 items are repeated regardless of order, score 3 points. Occasionally hearing impairments prevent subjects from correctly hearing test questions (for example, when asked to repeat three items, *apple, table, penny*, they may repeat *April, tablet, pencil* -- these alternate responses should be accepted both under the repetition and recall conditions).

8. *Now I am going to spell a word forward and I want you to spell it backwards. The word is WORLD. W-O-R-L-D. Please spell it in reverse order. Write in letters \_\_\_\_\_* (letters are entered and computer scored later. For tabulating a total MMSE score for screening purposes, please determine a total score between 0-5 for this item).

- a. Read the question slowly. Where *world* has hyphens between the letters, spell out the word.
- b. Repeat the spelling if necessary.
- c. Record the participant's response. Write in the letter as the participant has spelled the word.

9. *What are the 3 objects I asked you to remember a few moments ago?*

- a. Items may be repeated in any order.

10. *What is this called? (Watch)*

Show the wristwatch to the participant  
Correct responses include: watch, wristwatch, timepiece  
Code 1 = correct answer

11047-11071

11. *What is this called?* (Pencil)

- a. Show the pencil to the participant. NOTE: the pencil should be a standard sharpened wooden pencil with eraser.
- b. Correct responses include: Pencil, number 2 pencil
- c. Code 1 = correct for correct answer.

12. *Please repeat the following: No ifs, ands or buts.*

- a. Enunciate clearly -- include the "S" at the end of *ifs*, *ands*, or *buts*, (if you think the participant heard you but repeated it incorrectly, make a note of what was missed and score 0).
- b. Allow only **one** attempt.
- c. Code 1 = correct when the participant correctly repeated the phrase.
- d. Code 0 = incorrect when the participant did not repeat the phrase exactly.

Occasionally hearing impairments prevent participants from correctly hearing test questions. In the case of repeating *no ifs, ands, or buts*, some judgment must be made on the part of the examiner as to whether the participant could hear the "s" or not.

13. *Please read the following and do what it says.*

- a. Hand participant the "Please Close Your Eyes" card.
- b. The participant may read the sentence out loud. The task to be coded is the participant's ability to follow instructions by closing his/her eyes. It is not necessary for the sentence to be read out loud if the participant performs the function properly.
- c. Code 1 = correct when the participant closes his/her eyes.
- d. Code 0 = incorrect when the participant did not close his/her eyes.

14. *Please write a sentence.*

- a. Script: *Write any complete sentence on this piece of paper for me.*
  - b. Repeat the instructions to participant if necessary.
  - c. Code 1 = correct if the participant wrote a complete sentence as directed.
  - d. Written commands, such as *sit down*, where the subject is implied, are considered correct responses.
  - e. Spelling and/or punctuation errors are not counted as errors.
  - f. Code 0 = incorrect when the participant did not write a complete sentence as directed.
  - g. Code 1 = if the participant is cognitively able to dictate a sentence but is physically unable to write it. In this case the examiner should write the dictated sentence and make a note that it was dictated.
- Code 6 = Low vision



ft047-ft071

15. Please copy this drawing.

- a. Script: *Here is a drawing. Please copy the drawing on the same piece of paper.*
- b. If the participant asks if the figures should be drawn separately or together the examiner should respond, *Draw the figures as you see them.*
- c. To be correct, each pentagon must have 5 sides, 5 sides that point outward. The two figures must be overlapping.
- d. The overlap figures must have 4 sides.
- e. Code "0" = incorrect when the participant's figure did not match.

16. *Take this piece of paper in your right hand, fold it in half with both hands, and put it in your lap.*

(If participant is unable to use right hand because of physical disability, you can alter instructions to read "Take this piece of paper in your left hand, fold it in half with your left hand, and put it in your lap". The goal is to see whether the subject is able to follow a 3-step command, so this variation to the directions to accommodate subject's physical limitations is allowable.)

- a. Read the full statement **BEFORE** handing the paper to the participant.
- b. **DO NOT** direct the paper to participant's right side. Hold the paper in front and have the participant reach out to take it. Observe which hand is used.
- c. **DO NOT** repeat instructions or coach participant. Only repeat if the examiner felt it was not heard or if instructions were not given clearly (just repeat the directions in full as they were the first time).
- d. Score: 1 for each correctly performed act (code 6 if low vision).

F. Factors Potentially Affecting Mental Status Testing

The examiner's impression for Cohort Cycle 27 will include the following:

<u>NO</u>	<u>YES</u>	<u>MAYBE</u>	<u>UNKNOWN</u>	
0	1	2	9	Illiteracy or low education
0	1	2	9	Not fluent in English
0	1	2	9	Poor eyesight
0	1	2	9	Poor hearing
0	1	2	9	Paralysis
0	1	2	9	Depression/Possible Depression
0	1	2	9	Aphasia
0	1	2	9	Coma
0	1	2	9	Parkinsonism or neurological impairment
0	1	2	9	Other

18047-18071

**PLEASE CLOSE YOUR EYES**

**Sociodemographics and Subjective Health:**  
**Self-Reported Performance Part 1**

H073 - H085

This is a self-reported form. If not self reported the Proxy Section of the exam must be completed.

A. Sociodemographics

1. *Where do you live?*

Coding

0 = Private residence

1 = Nursing home

2 = Other institution, such as an assisted living facility or retirement community

9 = Unknown

2. *Does anyone live with you?* (NOTE: Code nursing home resident as NO to these questions.)

Coding

0 = No

1 = Yes

9 = Unknown

NOTE: If the answer to the above question was 0 or 9 you may skip the following section. If the answer was yes, the examiner needs to determine who lives in the same household. It is important to ask whether others lives in the same household for < 3 months per year or > 3 months per year.

The list is:

Spouse

Significant other

Children

Friends

Relatives

Pets

Coding

0 = No

1 = Yes, less than 3 months per year

2 = Yes, more than 3 months per year

9 = Unknown

27

H073-H085

3. *Are you currently working at a paying job?*

Coding

0 = No

1 = Yes, full time ( $\geq 32$  hours)

2 = Yes, part time ( $< 32$  hours)

9 = Unknown

4. *Do you currently do unpaid volunteer or community work?*

Coding

0=No

1=Yes

9=Unknown

5. *During the past 6 months (180 days) how many days were you so sick that you were unable to carry out your usual activities?*

Coding

999 = Unknown

B. Subjective Health

**The following two questions MAY NOT be answered by a proxy.**

1. *In general, how is your health now?*

Coding

1 = Excellent

2 = Good

3 = Fair

4 = Poor

9 = Unknown

2. *Compare your health to most people your own age:*

Coding

1 = Better

2 = About the same

3 = Worse than most people your own age

9 = Unknown



## Activities of Daily Living: Self Reported Performance Part 2

H087 - H097

### A. Background and Rationale:

This section is designed to assess the following spectrum of physical functioning. This section assesses:

- a. General level of physical functioning and mobility
- b. Ability to carry out instrumental activities of daily living
- c. Ability to carry out activities of daily living
- d. Framingham Disability Index

### B. Activities:

#### Part 1:

Ask the participant, *During the course of a normal day, can you do the following activities independently or do you need human assistance or the use of a device?*

The answers will be coded by the examiner as:

- 0 = No help needed, independent
- 1 = Uses device, independent
- 2 = Human assistance needed, minimally dependent
- 3 = Dependent
- 4 = Does not do during a normal day
- 5 = Special Products used for continence
- 8 = Takes no medications regularly
- 9 = Unknown

NOTE: With a nursing home visit, the participant's chart may be used to verify or to obtain accurate information on ADL's. If information is obtained from the nursing home chart or staff then proxy information on screen must be completed.

16087-16097

The activities include:

1. Dressing
  - Undressing and redressing
  - Picking out clothes, dress oneself including buttoning, fastening, etc.
  - Devices such as: velcro, elastic laces.
2. Bathing
  - Including getting in and out of tub or shower
  - Getting water, soap, towel and other necessary items and wash oneself
  - Devices such as: bath chair, long handled sponge, hand held shower, safety bars.
3. Eating
  - Able to eat from a dish and drink from a cup
  - Devices such as: rocking knife, spork, long straw, plate guard.
4. Transferring
  - Getting in and out of a chair
  - Arising from a sitting position to a standing position and back
  - Devices such as: sliding board, grab bars, special seat.
5. Toileting activities
  - Using the bathroom facilities and handling clothing
  - Devices such as: special toilet seat, commode.
6. Bladder continence
  - Ask if person has "accidents" (code =5 if use special product)
  - Devices such as: external catheter, drainage bags, ileal appliance, protective device.
7. Bowel continence
  - Ask if person has "accidents" (code=5 if use special products)
  - Devices such as: suppositories, bedpan, regular enemas.
8. Walking on a level surface about 50 yards
  - Devices such as: cane, crutches, or walker.
9. Walking up and down one flight of stairs
  - Devices such as: handrail, cane.
10. Using a telephone
  - Able to dial a phone number: ex. 935-3400. (The participant does not need to be observed doing this task).
  - Devices such as: large numbers, voice activation, amplification.
11. Preparing and taking own medications
  - Is able to measure out and take medications without being dependent on another person.
  - Medications include prescriptions and aspirin taken on a regular basis.
  - Specify Date \_\_\_\_\_

Part 2

bt 129 - bt 134

1. *Are you in bed or a chair for most or all of the day (on the average)?*

**Coding**

0 = No

1 = Yes

9 = Unknown

2. *Do you need a special aid (wheelchair, cane, or walker) to get around?*

**Coding**

0 = No

1 = Yes

9 = Unknown

*If yes, which of the following equipment do you use?*

Cane or Walking Stick

Wheelchair

Walker

Other (write in)

**Coding**

0 = No

1 = Yes, always

2 = Yes, sometimes

9 = Unknown

## Use of Nursing and Community Services

16t099 - 16t127

Coding for the following questions is:

- 0 = No
- 1 = Yes
- 9 = Unknown

1. Ask the participant, *Have you been admitted to a nursing home (or skilled facility) in the past two years?*
  
2. *In the past two years, have you been visited by a nursing service, or used home, community or outpatient programs?*

Ask which services were used and how often.

1. Home health aides
2. Homemaker visits
3. Visiting nurses
4. (PCA) Personal Care Attendant
5. Rehabilitation services (such as physical therapy, occupational therapy, speech therapy)
6. Cardiac rehabilitation
7. Meals on wheels
8. Community day programs
9. Other

### Coding

Currently	Since Last Exam	# Months Used Since Last Exam
0=No		0=None
At least once per ...		1=One month or less
1=Day		2-98= Put in actual number of months service used
2=Week		99=Unknown
3=Month		
4=Other (write in)		
9=Unknown		

NOTE: If a participant moved into a nursing home prior to the two year interim, then the first question is 0 = No. If the first question is No because the participant has been living in a nursing home for more than 2 years, the rest of Nursing and Community Services should be coded as 0. This section is to gather information on use of community services in the interim.



## Rosow-Breslau Questions

ft135-ft141

The method of assessing physical functioning is **self-report**. The questions assess the degree of difficulty that a person has performing a specific activity. This form has several important purposes:

1. These data will enable us to assess the level of independence and function in the study population.
2. It is hypothesized that impairments of physical function may be a risk factor for cardiovascular end points and progression of disease.
3. It will measure loss of physical functioning as a consequence of cardiovascular disease.

### Questions:

#### Coding

- 0 = No, unable to do
- 1 = Yes, independent
- 2 = Does not do
- 9 = Unknown

1. *Are you able to do heavy work around the house, like shovel snow or wash windows, walls, or floors without help?* (Scrub floors, wash windows, rake leaves, mow lawn). (Note: Code 2 if person **does not** do this activity).
2. *Are you able to walk half a mile without help?* (Walk one half mile or 4-6 blocks without stopping for more than 5 minutes). (Note: Code 2 if person does not do this activity).
3. *If you had to, could you do all the housekeeping yourself (like washing clothes and cleaning)?*
4. *If you had to, could you do all the cooking yourself?*
5. *If you had to, could you do all the grocery shopping yourself?*
6. *Do you drive?* *Reason for not driving now:*

#### Coding

- 0 = No
- 1 = Yes, currently
- 2 = Yes, not now
- 9 = Unknown

#### Coding for not driving:

- 1 = Health
- 2 = Other non-health reason
- 3 = Never licensed
- 8 = N/A, current driver
- 9 = Unknown

**Nagi Scale**

1E143-1E153

1. Show and explain the answer sheet *before* administering the test.
2. Ask each question individually. Start with, *For each item, tell me whether you have any difficulty with. . .*

Que card -

f143 - f153

No difficulty

A little difficulty

Some difficulty

A lot of difficulty

Unable to do

Do not do on doctor's orders

## Procedures For CES-D Interview

1t026-1t045

### A. Rationale and Background:

The Center for Epidemiologic Studies Depression Scale (CES-D) was developed for use in epidemiologic research of depressive symptomatology in the general population. It was designed as a screening instrument to elicit symptoms associated with depression. It is intended to document the presence and severity of depressive symptoms but is not intended to make clinical diagnosis. It assesses the current state of the subject by focusing on symptomatology in the past week.

The scale is given at each exam. The scale is not given if the patient is: sedated, aphasic, non-English speaking, or uncooperative.

### B. Procedure:

1. Each question is read to the participant who responds with one of four answers.
2. Response alternatives should be printed on paper which is placed in front of the participant for reference.
3. Each category of response should be explained to the participant prior to administering the scale.
4. If the participant is unable to read the response sheets, the interviewer should read each response as well as the question referring to their feelings in the past week.
5. Be sure the participant understands that the questions refer to his/her feelings only during the past week.

### C. CES-D Scoring:

Responses are circled on the form. The score is the sum of 20 weighted responses and the final score is calculated by the computer. Score ranges from 0 to 60 by totaling all responses. Code 9 = *refused or do not know* is not included in the score. Values for each question range from 0 to 3.

### D. Methods:

The CES-D Questionnaire consists of 20 questions. Since it is a scale for depression, it must be completed using responses by the participant, not a proxy.

ft026-ft045

SCRIPT: *The questions below ask about your feelings. For each of the following statements please say if you felt that way during the past week.*

1. Hand the response sheet to the participant and explain the categories. The following definitions should be given:

Code

0 = Rarely or none of the time (< one full day)

1 = Some or a little of the time (1 to 2 days in the past week)

2 = Occasionally or moderate amount of time (3 to 4 days in the past week, or about 1/2 the time)

3 = Most of the time (5 to 7 days in the past week)

9 = Unknown

If participant answers *YES* to a given statement, repeat the above responses to get a correct answer.

2. Read each item as it is written on the form, prefacing each question with the statement *During the past week*, then continuing with the response categories. For example:

SCRIPT: *During the past week I was bothered by things that usually don't bother me. Did you feel that way rarely or none of the time, some or a little of the time, occasionally or moderate amount of time, or most or all of the time?*

3. Discontinue reading the responses when the participant provides a response before you are finished. On the next item, however, again begin to read the entire set of responses.
4. Code 9 = *Refused* or *Do not know* is used when:
  - a. The question was asked, but the participant chooses not to answer. For example, response was *I would rather not say*, or *Go on to the next question*.
  - b. The question was asked, but the participant does not know, does not remember, or does not understand the statement.
5. Circle the response on the form.

ft026-ft045

6. When the participant asks about the meaning of any item or tries to qualify a statement, simply repeat the statement. For example:

Participant: *What do you mean by bothered?*

Interviewer: *I was bothered by things that usually don't bother me. Did you feel that way rarely or none of the time, some or a little of the time, occasionally or moderate amount of time, or most or all of the time during the past week?*

7. When the participant still asks about the meaning or says he/she does not understand, check 9 = refused or do not know. Do not try to interpret the statement for the participant.

**NOTE:**

Do not ask why the participant appears depressed. However, if that information is volunteered, briefly document the reason.

Do not score positive for *restless sleep* if the participant wakes to go to the bathroom and is able to get back to sleep easily.

This is a self-reported questionnaire and answers should be accepted as given.

ft026-ft045

0 = Rarely or none of the time  
(less than 1 day)

1 = Some or little of the time  
(1 – 2 days)

2 = Occasionally or moderate amount  
of time  
(3 – 4 days)

3 = Most or all of the time  
(5 – 7 days)

## Berkman Social Network Questionnaire

179-191

The intent of the Berkman Social Network Questionnaire (BSNQ) is to determine the participant's social support systems, both from friends and relatives. Question and response sheets, using large print should be given to the participant to help them better understand and answer the questions.

Before administering the BSNQ, read the following statement, *The following questions ask about your social support. Please read the following questions and circle the response that most closely describe your current situation. The first two questions refer to **close friends**, and the second two refer to **family**.*

The first four (4) questions should be answered with the following responses:

<i>None</i>	<i>6 to 9</i>
<i>1 or 2</i>	<i>10 or more</i>
<i>3 to 5</i>	<i>Unknown*</i>

\* **Unknown** only to be used if participant is unable to answer, refuses or question was not asked.

1. *How many **close friends** do you have; people that you feel at ease with, can talk to about private matters?*

The response should be based on whom the participant can **talk** to, in person and telephone contact.

2. *How many of these **close friends** do you see at least once a month?*

This question refers only to friends the participant has been in physical contact with, or spoken to in person. **Talking on the phone should not be included in the scoring.** This separates how often the participant talks to people versus physically meeting with them.

3. *How many **relatives** do you have; people that you feel at ease with, can talk to about private matters?*

The response should be based on relatives whom the participant can **talk** to, in person and telephone contact

4. *How many of these **relatives** do you see at least once a month?*

This question refers only to relatives the participant has been in physical contact with, or spoken to in person. **Talking on the phone should not be included in the scoring.** This separates how often the participant talks to people versus physically meeting with them.



ft 179 - ft 191

5. *Do you participate in any groups such as a senior center, social or work group, religious connected group, self-help group, or charity, public service or community group?*

This can include volunteer work or groups where the participant physically works or joins others. Again, it does not include telephone contact.

Coding

0 = No

1 = Yes

9 = Unknown

6. *About how often do you go to religious meetings or services?*

The answer should reflect how often the participant **goes** to meetings or services. Watching services on television should not be scored as having gone to meetings or services. The intent of this question is how often the person **joins** others in this particular activity.

Coding

1 - 9

See Exam Form

ft179- ft191

Questions 7 and 8 ask about insurance coverage.

7. *Do you have either Medicare or Medicaid?*

8. *Do you have health insurance?*

The intent of questions 9-13 is for friends and family, not mental health specialists. They should be answered with the following responses:

<i>None of the time</i>	<i>Most of the time</i>
<i>A little of the time</i>	<i>All of the time</i>
<i>Some of the time</i>	<i>Unknown*</i>

\* **Unknown** to be used only when participant is unable to answer, refuses, or question was not asked.

Hand participant que card.

9. *Is there someone available to you whom you can count on to listen to you when you need to talk?*

10. *Is there someone available to give you good advice about a problem?*

11. *Is there someone available to you who shows you love and affection?*

12. *Can you count on anyone to provide you with emotional support (talking over problems or helping you make a difficult decision)?*

13. *Do you have as much contact as you would like with someone you feel close to, someone in whom you can trust and confide?*

ft179-ft191

For each question please circle one answer

Coding Scheme	(Code=0)	(Code=1)	(Code=2)	(Code=3)	(Code=4)	(Code=9)
1. How many <i>close friends</i> do you have; people that you feel at ease with, can talk to about private matters?	None	1 or 2	3 to 5	6 to 9	10 or more	Unk.
2. How many of these <i>close friends</i> do you see at least once a month?	None	1 or 2	3 to 5	6 to 9	10 or more	Unk.
3. How many <i>relatives</i> do you have; people that you feel at ease with, can talk to about private matters?	None	1 or 2	3 to 5	6 to 9	10 or more	Unk.
4. How many of these <i>relatives</i> do you see at least once a month?	None	1 or 2	3 to 5	6 to 9	10 or more	Unk.

ft 179- ft 191

For each question please circle one answer

Coding Scheme	(Code=0)	(Code=1)	(Code=2)	(Code=3)	(Code=4)	(Code=9)
9. Is there someone available to you whom you can count on to listen to you when you need to talk?	None of the time	A little of the time	Some of the time	Most of the time	All of the time	Unknown
10. Is there someone available to give you good advice about a problem?	None of the time	A little of the time	Some of the time	Most of the time	All of the time	Unknown
11. Is there someone available to you who shows you love and affection?	None of the time	A little of the time	Some of the time	Most of the time	All of the time	Unknown
12. Can you count on anyone to provide you with emotional support (talking over problems or helping you make a difficult decision)?	None of the time	A little of the time	Some of the time	Most of the time	All of the time	Unknown
13. Do you have as much contact as you would like with someone you feel close to, someone in whom you can trust and confide?	None of the time	A little of the time	Some of the time	Most of the time	All of the time	Unknown

## Falls and Fractures

155 - 177

### 1. Falls

Ask the question, *In the past year have you accidentally fallen and hit the floor or ground?*

#### Coding

0 = No

1 = Yes

2 = Maybe

9 = Unknown

If yes, ask *How many times did you fall in the past year?*

NOTE: Falls during sports activities are not coded.

### 2. Fractures

Ask the participant, *Since your last clinic visit have you broken any bones?*

#### Coding

0 = No

1 = Yes

2 = Maybe

9 = Unknown

- List the year the participant broke a bone in the space corresponding to fracture site.
- All fractures not listed are to be handwritten next to *other*.
- If there were no broken bones, skip the rest of the section.
- If a broken bone was noted in one area, all the other boxes must be completed (0 = No).

Note: If a participant has had a hip fracture since the last clinic visit, photocopy the sheet and give the copy to the Bone Study.

## Observed Physical Performance Measures

ft 193 - ft 234

### A. Equipment:

- |                          |   |
|--------------------------|---|
| 1. Data sheets           | 5. 1 Armless straight back chair measuring approximately 18" high from floor to top of seat |
| 2. Pen                   | 6. JAMAR Dynamometer  |
| 3. Stopwatch             | 7. Straight back chair with arm rests   |
| 4. 4 Meter measured walk |   |

### B. A note on encouragement:

If a participant expresses doubt as to whether he or she can perform the task, ask the participant whether they would like to try. If they say yes, proceed with the task but if they say no, do not encourage them any further.

### C. Introductory script:

***We are going to try to do different physical activities together. I will ask you to stand in different positions for me. I will ask you to walk for me and then I will ask you to stand up from a chair.***

***I will first explain what I would like you to do, then I will demonstrate it for you, and then I will ask you to try it for me.***

### D. Performance Measures:

1. Hand Grip Strength Test
2. Stands
3. Repeated Chair Stands
4. Measured Walks

**JAMAR Hand Grip Strength Test:**

ft193 - ft200

1. Technician tells the participant: ***This instrument will measure your grip strength. The instrument is a little heavy, so be careful. When I tell you, I want you to squeeze the instrument as hard as you can. Do not expect the handle to move very much.***
2. Participant is seated in chair with arms, forearm resting on chairarm, elbow at about a 90 degree angle.
3. Participant should hold JAMAR in upright position, wrist in neutral position, JAMAR facing the technician.
4. Make sure that red peak-hold needle is set to zero.
5. Tell participant to squeeze as hard as s/he can, and squeeze until you tell s/he to stop. Hold squeeze for a 3 to 5-1000 second count.
6. Take back JAMAR, hold at eye level at about a foot from your eyes and record reading on the kilogram scale. If directly in the middle of the scale then the reading is the odd number between the two even hash marks; otherwise record as the closest hash mark.
7. Repeat steps until three measurements are recorded with the right hand.
8. Repeat steps for three trials with the left hand.

ft 201 - ft 212 Stands:

The participant will hold each standing position for ten seconds.

Side by Side: Feet together

Semi-Tandem: Heel of one foot lines up with the big toe of the other foot

Tandem: Heel of one foot touching the toes of the other foot

While performing stands, the participant should be wearing comfortable shoes, with low heels. No bare feet or slippers. The participant must be able to stand unaided. You may assist participant with getting up from a chair.

1. Side by Side stand:

*First, I would like you to stand with your feet together, side by side, for ten seconds. Please watch first while I demonstrate. You may use your arms, bend your knees, or move your body to maintain your balance, but try not to move your feet. Try to hold this position until I say "stop".*

*Are you ready? Begin.*

You may help the participant into the position. Allow them to hold onto your arms to obtain their balance. If they are holding on, say, *When you are ready, let go of my arms.* Begin timing the ten seconds when he or she lets go.

When the subject steps out of position, grasps your arm, or when the ten seconds have elapsed, stop timing and say, *stop*. If the participant steps out of position, the stopwatch is stopped when their foot is replanted on the floor. Record results on data sheet.

If the participant is unable to hold the side by side position for ten seconds, skip the next two stands.

2. Semi-tandem stand:

*Next, I would like you to stand with the heel of one foot touching the big toe of the other foot for ten seconds. You may put either foot in front, whichever is more comfortable for you. Please watch while I demonstrate. You may use your arms, bend your knees or move your body to maintain your balance, but try not to move your feet. Try to hold this position until I say "stop".*

*Are you ready? Begin.*

If the participant is unable to hold the semi-tandem stand for ten seconds, skip the tandem stand.



ft201 - ft212

3. Tandem:

*Next, I want you to try to stand with the heel of one foot in front of and touching the toes of the other foot for ten seconds. You may put either foot in front, whichever is more comfortable for you. Please watch while I demonstrate. You may use your arms, bend your knees or move your body to maintain your balance but try not to move your feet. Try to hold this position until I say "stop".*

*Are you ready? Begin.*

The following questions should be answered for each stand:

*Was this test completed? (Held for 10 seconds)*

**Coding**

0 = No

1 = Yes

8 = N/A

9 = Unknown

*If test was not attempted or completed, why not?*

**Coding**

1 = Physical limitation

2 = Refused

3 = Other (write in)

9 = Unknown

*Number of seconds held if less than 10 seconds.*

**Repeated Chair Stands:**

*bt 214 - bt 221*

The participant will attempt to stand up once from his chair without using his or her arms. This is not timed. If he or she is able to do this, then proceed to the timed five consecutive chair stands.

**If participant feels it is unsafe, skip the chair stands**

*Do you think it is safe to try to stand up from a chair without using your arms?*

*The next tests measure the strength in your legs. First, I will ask you to fold your arms across your chest and sit so that your feet are flat on the floor. Then I will ask you to stand up without using your arms.*

*Please watch while I demonstrate.*

*Please fold your arms across your chest and begin when I say, "Ready, stand."*

Stand in front of the participant before he or she begins. Be prepared to supply physical support if the participant's safety requires it, but do not stand so close as to impede the task.

If he or she cannot get up from his chair the first time without using their arms, ask him to try standing up using his arms. Score this and skip the repeated stands.

*Do you think it is safe to try and stand up from a chair five times without using your arms?*

If participant does not feel that it would be safe, abort the five chair stands and record on data sheet.

*I will ask you to stand up straight, as quickly as you can, five times without stopping in between. After you stand up each time, sit down and then stand up again. Keep your arms folded across your chest. I will be timing you.*

*When you have finished the last stand, please sit down and hold out your left arm, with the palm facing up, so that I can take your pulse.*

*Please watch while I demonstrate.*

*Please fold your arms across your chest and begin when I say, "Ready, stand".*

Start timing on the word "Stand".

Count aloud after the participant reaches the top of each stand.

If the participant appears to be fatigued before completing all five stands, ask if they can continue. Only if they say "no" should the examiner stop timing and stop the procedure.

JE214-JE221

If the participant did not use his or her hands during the initial chair stand, but begins to use them during the repeated stands, then stop.

If, after one minute has elapsed, the participant has not completed all five stands, then stop.

Stop timing when the participant has straightened up completely for the fifth time.

Have the subject sit down immediately after the fifth stand so that you can take the thirty second pulse on the left wrist.

Answer the following questions:

*Was this test completed?*

**Coding**

0 = No

1 = Yes

*If not attempted or completed, why not?*

**Coding**

1 = Physical limitations

2 = Test not completed

3 = Refused

4 = Other \_\_\_\_\_

5 = Test stopped in 60 seconds

9 = Unknown

If it is an offsite visit, the height of the chair used is measured and recorded.

The time to complete five stands in seconds is recorded.

If less than five stands are completed, enter the number of stands completed.

Measured Walks:

ft 222 - ft 234

The participant will first observe while the examiner demonstrates how to walk the measured course at a normal pace. The participant will then be asked to walk the measured 4 meter course at a normal walking pace while being observed and timed. Next, he or she will repeat this usual pace while being timed. The examiner will then demonstrate the rapid pace walk and the participant will be asked to walk the course at a rapid pace while being timed.

1. Walk #1:

*Now I am going to observe how you normally walk, if you use a cane or other walking aid and would be more comfortable with it, you may use it.*

*This is our walking course. I want you to walk to the other end of the course at your usual speed, just as if you were walking down the street. Walk all the way past the other end of the tape before you stop. Do you think this would be safe?*

If participant says that it would not be safe indicate this on the data sheet and abort walks.

*Please watch while I demonstrate. When I want you to start, I will say "Ready, begin."*

Have the participant line up his or her toes behind the line on the floor. Start timing when you say, "begin" and stop timing when the participant breaks the plane of the line at the end of the course. Record the time on data sheet.

2. Walk #2:

*Now I want you to repeat the walk. Remember to walk at your usual pace, and all the way past the other end of the course.*

*Ready? Begin.*

3. Walk #3:

*Now I want you to repeat the walk again, but this time, I would like you to walk at a rapid pace, as fast as you can. Make sure you go all the way past the other end of the course.*

*Please watch while I demonstrate.*

*Ready? Begin.*

If a walking aid is used, this will be recorded.

Coding

0 = No aid

2 = Walker

4 = Other

1 = Cane

3 = Wheelchair

9 = Unknown

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ft 222- ft 234

For each walk, the following questions will be answered:

*Was this test completed?*

**Coding**

0 = No

1 = Yes

8 = Not attempted

9 = Unknown

*If the test was not attempted or completed, why not?*

**Coding**

1 = Physical limitation

2 = Refused

3 = Other (write in)

9 = Unknown

Walk time for each walk is recorded.