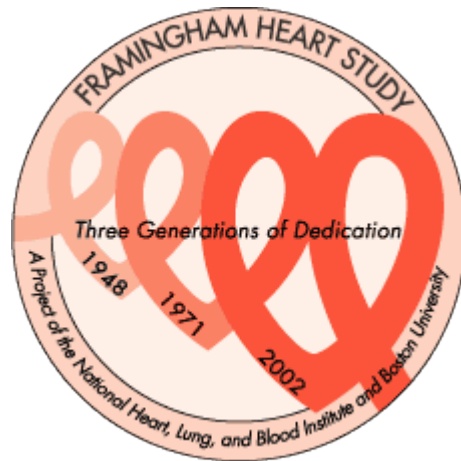


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## **CLINIC/OFFSITE PROTOCOL MANUAL**

### **COHORT CYCLE 30**

**5/2008 – 1/2010**

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## **Cohort Exam 30 Clinic Components**

### **Section I: Informational Form & Tracking Procedures**

- 1) Informational Form
- 2) HIPPA-Release of Health Information for Research Purpose
- 3) Tracking Information Form (Salmon Sheet)

### **Section II: Clinical Measurements & Procedures**

- 1) Anthropometrics
  - a) Height
  - b) Weight
- 2) Electrocardiogram (ECG)
- 3) Observed Physical Performance
  - a) Handgrip
  - b) Chair Stands (5)
  - c) Balance
  - d) Timed Walk

### **Section III: Tech-Administered Questionnaires**

- 1) Cognitive Function: The Mini-Mental State Examination (MMSE)
- 2) Sociodemographics and Subjective Health
- 3) Activities of Daily Living Self Reported Performance:
  - a) Rosow-Breslau
  - b) NAGI Scale
  - c) KATZ-Activities of Daily Living
- 4) Instrumental Activities of Daily Living (IADL's)
- 5) Center for Epidemiologic Studies Depression Scale (CES-D)
- 6) Berkman Social Network Questionnaire
- 7) Leisure Time Cognitive & Physical Activities
- 8) Other
  - a) Use of Nursing and Community Services
  - b) Falls and Fractures
  - c) Proxy Form
  - d) Procedure Sheet

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- 1) Medical History Exam Form (Form A)
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- 3) Resting Blood Pressure (2)
- 4) Referral Tracking
- 5) ECG Coding
- 6) MD Letter to Personal Physician

### **Section V: Exam Completeness**

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## **Cohort Exam 30 Offsite Components**

### **Section I: Informational Form & Tracking Procedures**

- 1) Informational Form
- 2) HIPPA-Release of Health Information for Research Purpose
- 3) Tracking Information Form (Salmon Sheet)

### **Section II: Clinical Measurements & Procedures**

- 1) Anthropometrics
  - a) Weight
- 2) Electrocardiogram (ECG)
- 3) Observed Physical Performance
  - a) Handgrip
  - b) Chair Stands
  - c) Balance
  - d) Timed Walk

### **Section III: Tech-Administered Questionnaires**

- 1) Cognitive Function: The Mini-Mental State Examination (MMSE)
- 2) Sociodemographics and Subjective Health
- 3) Activities of Daily Living Self Reported Performance:
  - a) Rosow-Breslau
  - b) NAGI Scale
  - c) KATZ-Activities of Daily Living
- 4) Instrumental Activities of Daily Living (IADL's)
- 5) Center for Epidemiologic Studies Depression Scale (CES-D)
- 6) Berkman Social Network Questionnaire
- 7) Leisure Time Cognitive & Physical Activities
- 8) Other
  - a) Use of Nursing and Community Services
  - b) Falls and Fractures
  - c) Proxy Form
  - d) Procedure Sheet

### **Section IV: Technician-Administered Medical History**

- 1) Medical History Exam Form (Form A)
- 2) Medical History Exam Form for Cognitively Impaired Participants (Form B)
- 3) Resting Blood Pressure (2)

### **Section V: Exam Completeness**

- 1) Exit Interview
- 2) MD Chart Review
- 3) Referral Tracking & Adverse Events
- 4) ECG Coding
- 5) Participant Letter
- 6) MD Letter to Personal Physician

**Equipment for Exam 30 Procedures**

1.    **A. Clinic:**    **Seca 700 Scale**  
                          Worcester Scale Co., Inc.  
                          [REDACTED]  
                          Worcester, MA  
                          [REDACTED]  
  
                          **Detecto Scale**  
                          Halliday Medical  
                          Walpole, MA 02081  
                          [REDACTED]
- 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  
                          [REDACTED]  
                          Jupiter, FL 33468-9100  
  
                          **Tech support:** [REDACTED]  
                          [REDACTED]  
                          **Sales Rep:** [REDACTED]  
                          [REDACTED]  
                          **Applications:** [REDACTED]
4.    **Acquisition Module for Mac5000**  
                          Cam-14 (see address above)
5.    **Marquette Mac5000 – Offsite Visits**
6.    **Portable standard mercury column sphygmomanometer:**  
                          **Baumanometer 300 model**  
                          W.A. Baum Co., Inc.  
                          [REDACTED]  
                          Copiague, NY 11726  
                          [REDACTED]

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

8. **Litman stethoscope tubing and earpieces with bell: Classic II**

9. **Bauman latex free blood pressure cuffs in four sizes: regular adult, large adult, pediatric, thigh.**

10. **JAMAR dynamometer**

Model #5030J1  
**Sales Address:**  
Sammons Preston  
Chicago, IL, 60607

**Calibration and Repair Address:**  
Sammons Preston/ JLW Instruments, INC  
Chicago, IL 60607

11. **Stopwatch -Water Resistant/Shock Resistant VCAT: 1045**

Fisher Scientific  
Atlanta, GA

**Calibration Only:**

Control Company  
Friendswood, TX, 77546

12. **Heart Square, by Heartware Inc.**  
purchased from: Nova Heart

- 13. **Adjusted stool, 18"**  
United Chair  
P.O. Box 96  
[REDACTED]  
Leeds, AL 35094
  
- 14. **Pocket Talker II**  
Williams Sound Corp.  
[REDACTED] [REDACTED] [REDACTED]  
Eden Prairie, MN 55344  
[REDACTED]
  
- 15. **SECA Stadiometer**  
Halliday Medical  
Seca 216  
Walpole, MA 02081  
[REDACTED]  
  
Quick Medical  
[REDACTED]  
Snoqualmie, WA 98065  
[REDACTED]



## Equipment Calibration Time Table

| <u>Activity</u>                             | <u>Daily</u> | <u>Weekly</u> | <u>Monthly</u> | <u>Yearly</u> |
|---|--------------|---------------|----------------|---------------|
| <b>Scale (Onsite)</b>                       |              |               |                |               |
| Zero Reading                                | <b>X</b>     |               |                |               |
| 50# Weight                                  |              |               | <b>X</b>       |               |
| Professionally Calibrated                   |              |               |                | <b>X</b>      |
| <b>Digital Scale (Offsite)</b>              |              |               |                |               |
| 50# Weight                                  |              |               | <b>X</b>       |               |
| <b>Stadiometer (Onsite)</b>                 |              |               |                |               |
| Check w/ measuring tape                     |              |               | <b>X</b>       |               |
| <b>Tape Measure (Onsite &amp; Offsite)</b>  |              |               |                |               |
| Use purple tape measure                     |              |               | <b>X</b>       |               |
| <b>Mercury Manometer (Onsite)</b>           |              |               |                |               |
| Zero Reading                                | <b>X</b>     |               |                |               |
| Check Inflation System                      |              |               | <b>X</b>       |               |
| <b>Aneroid-Gauge Type (Offsite)</b>         |              |               |                |               |
| Check Inflation System                      |              |               | <b>X</b>       |               |
| <b>Hand Grip (Onsite)</b>                   |              |               |                |               |
| Zero Reading                                | <b>X</b>     |               |                |               |
| Professional Calibration                    |              |               |                | <b>X</b>      |
| <b>Hand Grip (Offsite)</b>                  |              |               |                |               |
| Zero Reading                                |              |               | <b>X</b>       |               |
| Professional Calibration                    |              |               |                | <b>X</b>      |
| <b>Digital Timer (Onsite &amp; Offsite)</b> |              |               |                |               |
| Professional Calibration                    |              |               |                | <b>X</b>      |

## **Annual/Monthly/Daily Equipment Calibration Protocol**

### **1. Scales: **Annually/Monthly/Daily (during clinic)****

Room 100- Detecto  
Room 101- Detecto  
Room 102- Seca 700

#### **Protocol:**

- a. Once a month scales are to be calibrated.
- b. Place a 50 lb weight onto the scale.
- c. Set the scale at zero.
- d. If scale is balanced then calibration is done.
- e. If scale is unbalanced then turn knob slightly on the side of the zero bar.
- f. Mark the date in the calibration log book located in the clinic office.
- g. Furthermore, scales must be certified on a yearly basis. This information can be found in the Clinic Equipment Book located in the clinic office.

### **2. Stadiometers: **Monthly****

Room 100- Seca Model # 216 1914009  
Room 101- Seca Model # 216 1914009  
Room 102- Seca Model # 216 1914009

#### **Protocol:**

- a. Using the purple measuring tape located in the clinic office.
- b. Line up against the meter to determine correct marker points.
- c. Make sure to move up and down at different spots along the meter.
- d. If lines do not match up then a new stadiometer must be ordered.
- e. Mark date in calibration log book once a month.

### **3. Manometers: **Monthly/ Daily (during clinic)****

Room 100- V88290  
Room 102- CE3201  
Room 101- T30928  
Room 107- T30927  
Room 109- T30906  
Spare- E95102 (located in clinic office rm.114)

**Protocol:**

- a. Use the blood pressure calibrator located in the clinic office in the calibration equipment box.
- b. Make sure to place manometer on a flat surface and at eye level.
- c. Connect pieces making sure there is no leak and inflate.
- d. Slowly release pressure stopping along the way at random places.
- e. Make sure both meters read the exact same.
- f. Repeat for all five then mark in the Calibration Log Book located in the clinic office.
- g. If meter is off, the spare will be used while repairs are being made.
- h. Calibrate once a month.

**4. Measuring Tape: Monthly**

Room 100  
Room 102  
(2) Offsite

**Protocol:**

- a. Use Purple Measuring tape located in the clinic office.
- b. Match up the two making sure they are exactly lined up.
- c. Move around the whole tape at random spots.
- d. If lines do not match then the tape has been stretched and a new one must be ordered.
- e. Once a month mark in Calibration Log Book.

**5. Hand Grips: Annually/ Daily (during clinic)**

Room 100- 10322924  
Room 102- 10100317  
Offsite- 10593388

**Protocol:**

- a. The hand grips must be certified on a yearly basis.
- b. Use the Clinic Equipment Book for contact info.
- c. Handgrip should be at zero and documented on the daily log sheet.
- d. Offsite will be checked on a monthly basis and logged in the calibration book.

**6. AED: Monthly**

The AED is located in the clinic hall on stand outside of Room 109.

**Protocol:**

- a. Once a month regular status (readiness) indicator checks are performed and recorded in Log Book.
- b. Also check and make sure that the spare battery and pads have not exceeded their expiration date.

**7. Digital Timers: When certificate expires (around every two years)**

Clinic #1- 72318431  
Clinic #2- 72318449  
Clinic #3- 22087033  
Offsite #1- 22086935  
Offsite #2- 61768767

**Protocol:**

- a. Digital timers are calibrated about every two years.
- b. All information can be found in the Clinic Equipment Book.

**8. Digital Offsite Scales: Monthly**

(2) Offsite Digital Scales

**Protocol:**

- a. Use a 50 lb weight.
- b. Place scale on solid flat surface then place weight onto scale.
- c. Weight must be 50 lbs exact.
- d. Mark the date in Log Book once a month.

**9. Blood Pressure Gauge: Monthly**

(2) Offsite  
(1) Used as a calibrator

**Protocol:**

- a. All three gauges are Lifetime Certified, but they are still compared on a monthly basis for consistency.
- b. Attach pressure gauges and inflate pressure.
- c. Slowly release pressure making sure to stop at random spots for exact comparison.

## Guidelines For Coding Accuracy

To ensure accuracy and legibility for persons performing data entry, 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. If measurements are not taken enter 9's (if the coding option is available) and document the reason. If the coding option of 9 is not available, leave blank and write any comments on why the questions were not asked. Comments are helpful at any point of the exam where data is not recorded in the standard manner.
4. If an error is made, cross the old value out with one line so original value is still visible, write the correct information in the margin, and initial and put the date the change was made. Do not superimpose numerals one on top of the other. It is always okay to write the reason for the change especially if it is not clear why.
5. Make sure both sides of the examination form are completed.
6. At the end of the exam a technician will review the entire exam and make sure all questions have been answered and that there are no blanks left on the form.
7. If a questionnaire was not administered check the following item at the top of the page and write in the reason why:

|   |                                    |                  |
|---|------------------------------------|------------------|
| _ | Check here if whole page is blank. | Reason why _____ |
|---|------------------------------------|------------------|

Dear \_\_\_\_\_:

Once again, we thank you for participating in the Framingham Heart Study. Your next clinic appointment is scheduled for \_\_\_\_\_ at \_\_\_\_\_

As you probably know, we are now located at \_\_\_\_\_, in the \_\_\_\_\_. Our clinic is located in the wing on the Franklin Street side of the building. The building is handicap accessible and we have reserved parking for you behind the Franklin Street wing.

We suggest you wear comfortable clothes that are easy for you to remove. You should bring slippers and, if you wish, your own robe although we provide hospital robes.

Eat your regular meals and take medications as usual. PLEASE BRING ALL MEDICATIONS YOU TAKE, BOTH PRESCRIPTION AND NON-PRESCRIPTION, WITH YOU. **On the back of this form**, we would appreciate information regarding hospitalizations and/or major illnesses since your last visit or health history update. **PLEASE BRING THIS LETTER WITH YOU TO THE CLINIC.** If you need help completing it, our staff will be happy to assist you at the time of your appointment.

If you have any questions, please call \_\_\_\_\_, Participant Coordinator, at \_\_\_\_\_ or \_\_\_\_\_, or \_\_\_\_\_ at \_\_\_\_\_. Thank you again for your participation in the Heart Study and your ongoing help in our battle against heart disease.

Sincerely yours,

\_\_\_\_\_  
Director  
Framingham Heart Study

OMB No=0925-0216 Exp. 04/30/2011

Dear \_\_\_\_\_:

Once again, we thank you for participating in the Framingham Heart Study. Your next clinic appointment is scheduled for \_\_\_\_\_ at \_\_\_\_\_ P.M. A taxi will pick you up at \_\_\_\_\_ and will bring you home after your appointment

As you probably know, we are now located at \_\_\_\_\_, in the \_\_\_\_\_. Our clinic is in the wing on the Franklin Street side of the building. The building is handicap accessible and we have reserved parking behind the Franklin Street wing.

We suggest you wear comfortable clothes that are easy for you to remove. You should bring slippers and, if you wish, your own robe although we provide hospital robes.

Eat your regular meals and take medications as usual. PLEASE BRING ALL MEDICATIONS YOU TAKE, BOTH PRESCRIPTION AND NON-PRESCRIPTION, WITH YOU. **On the back of this form**, we would appreciate information regarding hospitalizations and/or major illnesses since your last visit or health history update. **PLEASE BRING THIS LETTER WITH YOU TO THE CLINIC.** If you need help completing it, our staff will be happy to assist you at the time of your appointment.

If you have any questions, please call \_\_\_\_\_, Participant Coordinator, at \_\_\_\_\_ or \_\_\_\_\_, or \_\_\_\_\_ at \_\_\_\_\_. Thank you again for your participation in the Heart Study and your ongoing help in our battle against heart disease.

Sincerely yours,

\_\_\_\_\_  
Director  
Framingham Heart Study

**Pt Name & FHS ID Primary Care Doctor's Name, Address & Phone Number:**

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**Power of Attorney/Health Care Proxy:** \_\_\_\_\_  
(If you have documentation please have a copy available to give to the FHS for their records)

**Same-Day Emergency Room Visits Since You Last Provided Health Information On:**

| <b>Date</b> | <b>Reason</b> | <b>Hospital &amp; Address</b> | <b>Doctor's Name</b> |
|-------------|---------------|-------------------------------|----------------------|
| _____       | _____         | _____                         | _____                |
| _____       | _____         | _____                         | _____                |
| _____       | _____         | _____                         | _____                |

**Overnight Hospitalizations Since You Last Provided Health Information On:**

| <b>Date</b> | <b>Reason</b> | <b>Hospital &amp; Address</b> | <b>Doctor's Name</b> |
|-------------|---------------|-------------------------------|----------------------|
| _____       | _____         | _____                         | _____                |
| _____       | _____         | _____                         | _____                |
| _____       | _____         | _____                         | _____                |

**Most Recent Doctors Visits Since You Last Provided Health Information On:**

| <b>Date</b> | <b>Doctor's Name</b> | <b>Findings (if applicable)</b> |
|-------------|----------------------|---------------------------------|
| _____       | _____                | _____                           |

Physical:

**Other Doctors Visits Since You Last Provided Health Information On:**

| <b>Appt Type</b> | <b>Date</b> | <b>Doctor's Name</b> | <b>Findings (if applicable)</b> |
|------------------|-------------|----------------------|---------------------------------|
| _____            | _____       | _____                | _____                           |
| _____            | _____       | _____                | _____                           |



*Date*

OMB No=0925-0216 Exp. 4/30/11

<<*Participant Name & Address*>>

Dear <<*Participant Name*>>:

This letter confirms your appointment for a home visit from the Framingham Heart Study on <<*Date & Time*>>, as part of the Heart Study Exam 30. I, <<*Technician Name*>> will visit you at that time to do the exam.

If you could help us by preparing the following items beforehand, it would be greatly appreciated:

- 1) Please wear a top that is easily removed for your ECG. Many people prefer to wear their bathrobes.
- 2) Using the attached form, please list major medical events that have occurred since your last encounter on <<*date*>>. We would like to know approximate dates, doctors, and where you were seen.
- 3) Please have all of your medication bottles out, include all of your prescription medications, non-prescription medications, creams, salves, and/or injections.
- 4) If you have legal healthcare proxy, or Power of Attorney please have a photocopy of this authorization for the Heart Study to put in their records.

This will help the exam run smoothly, but if you are unable to prepare beforehand, we will be happy to help during our visit. If you have any questions, please call the Cohort Participant Coordinator at [REDACTED] or [REDACTED].

Sincerely yours,

<<*Technician Name*>>

Framingham Heart Study Offsite Technician

*Date*

OMB No= 0925-0216 Exp. 4/30/11

*Nursing Home name*  
*Address*

Re: *Participant's name*

This letter confirms <<*participant name's*>> appointment for a visit from the Framingham Heart Study on <<*date & time*>>, as part of the Heart Study Exam 30. I, <<*Staff member's name*>> will visit at that time to do the exam.

It would be most helpful if a staff member who knows the patient well and can provide a good history be available to speak with <<*name*>> briefly at the time of her visit. Please let <<*participant's name*>> know we are coming and have <<*her/him*>> wear a top that is easily removed for the ECG. I will also need access to <<*his/her*>> nursing home chart to review medical events since <<*Date last seen*>>.

Thank you in advance for your help. If you have any questions, please call the Cohort Participant Coordinator at [REDACTED] or [REDACTED].

Sincerely yours,

<<*Technician name*>>

Framingham Heart Study Offsite Technician

# FRAMINGHAM HEART STUDY RESEARCH INFORMATION FORM

## ORIGINAL COHORT Exam 30 Clinic or Offsite

### BACKGROUND

This information sheet is for Exam 30 of the Framingham Heart Study Original Cohort. This exam is a continuation of the Framingham Heart Study (FHS). You have consented on numerous occasions to continue in the FHS. This information sheet will explain what will happen as part of FHS Exam 30.

If you have any questions about the FHS or Exam 30 please let the study staff know. The investigator and/or his/her designee will try to answer all of your questions. If you have questions or concerns at any time, you may contact [REDACTED], or [REDACTED], at [REDACTED]

Although you have consented in the past to be in the FHS, you have a right to refuse to participate at this time. Also, if you decide now to take part you may stop at any time if you wish.

This Exam 30 is limited to RESEARCH and does not take the place of a routine physical examination by your physician.

### PURPOSE

The Framingham Heart Study (FHS) is an observational research study of risk factors for cardiovascular disease and other health conditions. The purpose of this research study is to 1) investigate factors related to the development of heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, cancer, and other diseases and health conditions; and 2) examine DNA and its relationship to the risks of developing these diseases and other health conditions.

### WHAT WILL HAPPEN DURING EXAM 30

Exam 30 will take place at the Framingham Heart Study at [REDACTED] in Framingham, MA, or may take place in your home or other residence for your convenience. The examination will take 2 to 2.5 hours. The exam will include the following:

1) History

An interview about your medical status including: heart and lung illnesses, hospitalizations, emergency room visits, surgeries, physician visits, and health habits (including prescription and non-prescription drug use, smoking and alcohol use).

2) Measurements and Procedures

The examination includes measurements of height, weight, blood pressure, and an electrocardiogram. You will be asked questions about activities of daily living, your memory, mood and social support. You will be asked to perform tasks of walking, balance, and hand grip strength. If you have had a stroke, you will be examined during your hospitalization at 3, 6, 12, and 24 months. With your permission, a summary letter of routine test results from this exam will be sent to you and your physician.

3) Medical Records

You will be asked to sign a medical release form (called a HIPAA Authorization form) allowing the Framingham Heart Study staff to obtain and review copies of your hospital, physician, cancer registry, and clinic records for the Framingham Heart Study investigators to review.

4) Future contact

You may be contacted by phone every 1-2 years to obtain additional health information. You may also be invited to participate in other Framingham Heart Study health-related studies. Another FHS exam may be offered every 1-2 years. At that time you will be given a new exam information sheet.

**RISKS & BENEFITS**

We do not expect any unusual risk or injury to occur as a result of participation.

If you think that you have been injured by being in this study, please contact [REDACTED] or [REDACTED] at [REDACTED] right away.

**SUBJECT COSTS & PAYMENTS**

You will not be charged or paid for the examination. In the event that your physician decides that follow up clinical tests or treatments are necessary, you or your third party payer will be charged for these, if applicable (for example, health insurance or Medicare). No special arrangements will be made by the Framingham Heart Study for compensation or for payment of treatment solely because of your participation in this study.

**CONFIDENTIALITY**

Information we obtain about you during this study will be treated in a confidential manner. Laboratory and DNA samples will be stored securely, separated from files which link your name to the code numbers. The risk in providing this sample is minimal. Your sample will be kept until it is no longer of scientific value.

You may choose to withdraw your blood samples. Your samples would be destroyed after your request is received. If you choose to withdraw your samples, you should call the Framingham Heart Study at [REDACTED] and ask for the lab manager.

When study results are published, your name and any other personally identifying information will not be revealed. You will be kept informed through periodic publications from the Framingham Heart Study of any new findings about genetics, cardiovascular disease or other health conditions generated from the DNA analyses.

The Framingham Heart Study investigates selected factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, memory loss and other diseases and health conditions. Your DNA and genetic data may be used to develop new lab tests or medications that could benefit many people. (You and/or your heirs will not benefit financially from this, nor will your DNA be sold to anyone.)

If a genetic condition happens to be identified with important health implications, the Framingham Heart Study may notify you, and then with your permission, may notify your physician.

## Working with Participants with Moderate to Severe Dementia

Dementia is defined as having deficits in two or more cognitive domains, functional decline and evidence of cognitive decline over a 6 month period. Moderate dementia is generally performance that is greater than two standard deviations below expected (also, using clinical judgment), and severe dementia is when a subject is not testable (or nearly so).

A participant is considered to have moderate to severe dementia by using the following criteria:

1. Dementia Review Outcome/Severity Score = 2 or 3 and/or
2. Clinical Dementia Rating Scale (CDR) = 2 or 3 and/or
3. Previous Consent Status = 3 or 4 and/or
4. Previous Waiver of Informed Consent

These criteria are determined through a prior assessment by the neurology team and can be found in the FHS Participant Tracking System. The participants will be pre-identified prior to their FHS examination and will have the Medical History Form B administered to their proxy.

The Medical History Form B is an abbreviated version of the Exam 30 Form A.

The technician working with the participant should obtain:

1. Electrocardiogram
2. Height (onsite only)
3. Weight
4. Self-assessment questions

If they are unable to answer the technician administered questionnaires their proxy may answer all questions except:

1. Mini-Mental State Exam (MMSE)
2. Self-assessment questions

The following questionnaires should not be administered to the participant or their proxy:

1. IADL's
2. Berkman Social Network
3. Leisure Time Cognitive
4. CES-D

Rather the technician should check the data box on the top of the form that reads:

|                          |   |  |
|--------------------------|---|--|
| <input type="checkbox"/> | Check here if whole page is blank due to cognitive impairment or other reason | If not cognitively impaired, specify _____ |
|--------------------------|---|--|

**HIPPA:**  
**Research Subject's Authorization for Release of Health Information**  
**for Research Purposes**

The HIPPA Privacy Rule, in effect April 14, 2003, protects the privacy of subject's health information which is used in human research. For researchers to gain access to health information that is stored at any HIPPA "covered entity" investigators must provide the covered entity with written assurances covering how the health information will be used and protected.

The Framingham Heart Study (FHS) is not a "covered entity". However hospitals, nursing homes and physician offices from which the FHS collect medical records are covered by HIPPA rules. Therefore, in order for the FHS to retrieve medical records, participants must sign the HIPPA medical release form. If the participant chooses not to sign the form they will be able to participate in the exam but the FHS will not be able to obtain any outside medical records.

The following explanation of the form is to be given during the intake process:

*We want to use your private health information in this research study. This will include both information we collect about you as part of this study as well as health information about you that is stored in your medical records. The law requires us to get your authorization (permission) before we can use your information or share it with others for research purposes. You can choose to sign or not sign this authorization. If you choose not to sign this authorization, you will still be able to take part in the research study.*

The participant must also be given adequate time to read the release form. If they agree to sign the form, they must be given a copy of it with their signature. For offsite exams, a photocopy will be mailed to the participant.

For cognitively impaired participants:

A Waiver of HIPPA Authorization for Original Cohort participants is implemented for participants without the capacity to consent and with a designated LAR. (Approved by the BUMC IRB 4/29/2008)

## **Admitting Procedures**

The Personal and Family History Data form (salmon colored sheets) documents personal and family information. It is updated during intake at each new core exam. A copy of this form is included in the chart to note any changes of address, physicians, or contacts which are later copied onto the original form and entered in the Roster by the Cohort Coordinator. This information may be obtained directly from participants, their proxy or from charts or personnel at facilities where they reside.

The inside pages of the form document and update family demographic information, including health and vital status information on the participant's spouse, children, parents and siblings.

## Weight Measurement

### 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 the 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  $< 0.5$ .**



## Weight Measurement

### Offsite Visits

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 at a nursing home, 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.
10. Calibrate the scale monthly with 50lb weight.

## Standing Height Measurement (Clinic only)

### Clinic

1. The 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. 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 tight) on top of participant's head.
6. Record measurement to the **nearest 1/4 inch, rounding down.**

## ECG Lead Placement

1. **V2:** The first intercostal space is palpated just below the clavicle. Count down and identify the 4th intercostal space just below the fourth rib. **Point V2** is just to the left 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. **V1:** Should be at the same level as **Point V2** and immediately to the right 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 following the inside of the square. Place electrodes on **TOP** of the breast.

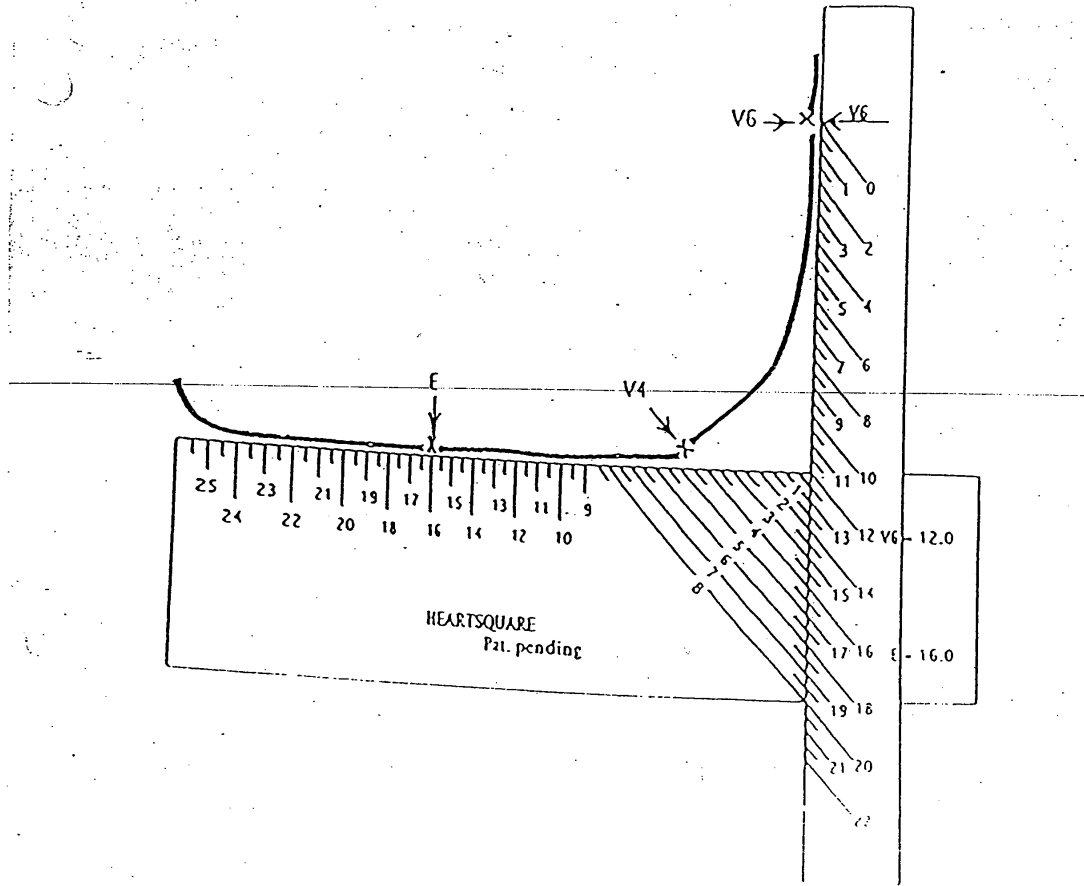
The participant may now lower the left arm in a more comfortable position.

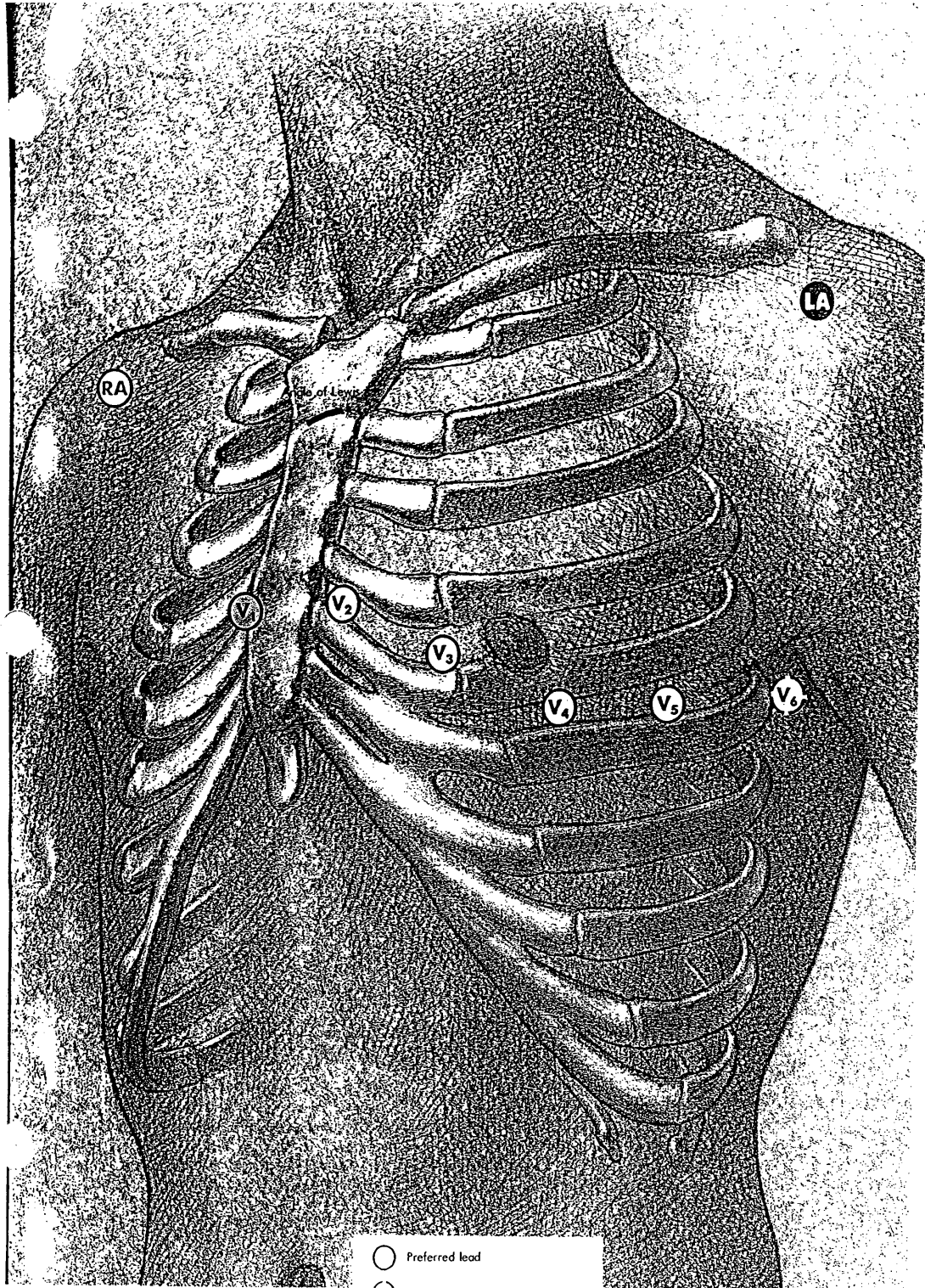
6. **V3:** Exactly halfway between **V2** and **V4**.

7. **V5:** Exactly halfway between **V4** and **V6**.
8. Arm leads should be placed midway between the elbow and the wrist.
9. Leg leads should be placed on the calf midway between the knee and ankle. If the participant has an amputation, the lead should be placed above this.
10. 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.

*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.

11. Attach limb leads in the following order: right arm (RA), right leg (RL), left arm (LA), left leg (LL). This will avoid lead reversal.
12. The body of the electrode is placed centrally at the pencil mark with the tab extending downward. Precordial electrodes are attached in the following order: V1, V2, V3, V4, V5, V6. Recheck all leads for proper placement.
13. Ask the participant to lie still and relax. In the computer, enter the participant's Name, ID, Age, Height (clinic only), Weight, and Gender. Enter the Exam Cycle, Location (1=clinic 2=offsite) and your Technician ID Number.
14. The ECG is reviewed and printed for errors
15. **Verify ECG Data Storage to Mac 5000**
  - a. Press File Manager
  - b. Highlight the Participant's Name
  - c. Press Display
  - d. View and Verify the Participant's Name and ECG Recording
  - e. Press Print and Save
  - f. 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.
16. Leads are checked again for proper placement and disconnected. Electrodes are carefully removed.





## Observed Physical Performance

### A. Overview:

An objective performance measure of physical functioning is an assessment instrument in which an individual is asked to perform a specific task and is evaluated in an objective, standardized manner using predetermined criteria, which may include counting of repetitions or timing of the activity as appropriate. Two theoretical models of the pathway from disease to disability have been developed. The first comes from the World Health Organization and goes from disease to impairment to disability, to handicapped. The second, which is being used more now by geriatricians and aging researchers, progresses from disease, to impairment, to functional limitations to disability.

### **Definitions**

**Impairment:** Dysfunctional and structural abnormalities in specific body systems, such as the musculoskeletal system or the cardiovascular system.

**Functional limitations:** Restrictions in basic physical and mental actions, including things such as ambulation reaching, and grasping.

**Disability:** Difficulty doing activities of daily life, including not only personal care, but household management, jobs, and hobbies.

### B. Methods:

During all tests, participant safety is paramount. Participants who do not feel safe or who are unable to perform a test should not be pressed. All procedures should be clearly demonstrated to the participant prior to performing any test and the participant should be queried to ensure that they understand the instructions. If it is obvious that the participant has not understood the directions, reread the standard instructions. You will be demonstrating each maneuver. Someone who may not completely understand the verbal instructions may still be able to perform the test following the demonstration.

### C. Equipment:

- |  |                                       |
|--|---------------------------------------|
| 1. Data sheets   | 5. JAMAR Dynamometer                  |
| 2. Pen   | 6. Straight back chair with arm rests |
| 3. Stopwatch   | 7. Measured 4 meter walking course    |
| 4. 1 Armless straight back chair measuring approximately 18” high from floor to top of seat. |                                       |

D. 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, honor the participant's choice to decline the testing.

E. 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.***

F. Performance Measures:

1. Hand Grip Strength Test
2. Stands (5)
3. Repeated Chair Stands
4. Measured Walks



## **JAMAR Hand Grip Strength Test**

1. *Script: 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 feet flat on the ground and forearms resting on chair arms, elbows are at about a 90 degree angle.
3. Participant should hold JAMAR in upright position and the wrist is in neutral position. The hand grip can be adjusted for those with larger hands.
4. The examiner should be close enough to the participant to be able to catch the JAMAR in case it is dropped.
5. Make sure that red peak-hold needle is set to zero.
6. 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.
7. Take back JAMAR, hold at eye level, 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.
9. If only one hand is completed then test is still coded as completed.

## Stands

The tests of balance provide an assessment of the participant's ability to hold three basic standing positions with the eyes open. These positions are side-by-side, semi-tandem, and full tandem stand (or heel-to-toe) and are performed in this order. Participants taking this test must be able to stand unassisted without using a cane or a walker. Don't assume that a participant who arrives for testing using a cane or walker can't stand unassisted. Ask them if they can stand without the device and are willing to try the test. If they say yes, you can assist them to assume the correct position for the testing.

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.

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:

1. Was this test completed?
2. Number of Seconds held if less than 10
3. If not attempted or completed, why not?  
1=Physical Limitation  
2=Refused  
3=Other \_\_\_\_\_ write in  
9=Unknown

## **Repeated Chair Stands (5)**

### **Description:**

The participant will first observe the examiner completing one chair stand. Arms will be folded across chest; feet flat on the floor and the chair should be placed up against the wall. The participant will then 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 the chair the first time without using their arms, ask them to try standing up using their arms. If arms are needed then the test is stopped and not continued.

*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.*

*Please watch while I demonstrate.*

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

**Procedure:**

1. Start timing on the word “Stand”.
2. Count out loud and only when the participant has straightened up so that you do not pace the test with your counting.
3. 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.
4. 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.
5. If, after one minute has elapsed, the participant has not completed all five stands, then stop.
6. Stop timer on the end on the fifth raise when they are standing up completely.
7. Do not coach the participant or encourage them during the test. You may do so after.

The following questions should be answered for each stand:

1. Time to complete five stands in seconds
2. If less than five stands, enter the number
3. If Offsite visit, chair height
4. Check if this test not completed or attempted
5. If not attempted or completed, why not?  
1=Physical Limitation  
2=Refused  
3=Other \_\_\_\_\_ write in  
9=Unknown

**Observed Performance Scoring:**

If a participant has an actual measured time of 9.99, make a note on the exam stating that the figure represents an actual time as opposed to unknown, and flag the variable so that when it gets cleaned, whoever is cleaning can make a point of changing the person's time back from missing.

Otherwise, round the time up to ten seconds and code that the participant was able to hold their position for 10 seconds.

## Measured Walks

### **Description:**

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 their normal walking pace. Next, he or she will repeat this normal pace while being timed two times. 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.

In Clinic only, the participant must be wearing socks or shoes they cannot be barefoot. If Offsite, a 3 meter course may be used if a 4 meter course is not available (this will be marked on the data sheet).

A cane or walker may be used during the walk, but if people with such devices can walk short distances without them, they should be encouraged to do so. Many people with assistive devices use them only when they walk outdoors or for long distances indoors. Doing the test without the device provides a much more accurate assessment of the functional limitation of the participant. Ask the participant if he/she ever walks at home without the device. Then ask the participant if s/he thinks he/she can walk a short distance for the test. Participants who normally use assistive devices should be watched particularly closely during the test to prevent falling.

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

#### Coding

0 = No aid

2 = Walker

4 = Other

1 = Cane

9 = Unknown

*Training Note: we do not do timed walks for participant in a wheelchair.*

### **Methods:**

The walking course should be unobstructed and include at least an extra one-half meter on each end. You will need a measuring tape to measure the distance of the walking course and masking tape to mark the starting and finish lines. An X should be made at the end of the course approximately one foot after the finish line.

#### 1. Walk #1:

*Script: 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 not stop until you have reached the X.*

*Please watch while I demonstrate. After the demonstration ask, do you think this will be safe? If they say yes, proceed. If not, abort test.*

Have the participant line up his or her toes behind the line on the floor. Start timing with the stopwatch when you see the participant start to move and stop timing when the participant breaks the plane at the end of the course. The examiner should follow behind and to the side of the participant walking so they can see when the foot breaks the plane. Then, record the time on data sheet.

2. Walk #2:

*Script: 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. Do not stop until you have reached the X.*

*Ready? Begin.*

3. Walk #3:

*Script: 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. Do not stop until you have reached the X.*

*Please watch while I demonstrate.*

*Ready? Begin.*

**Coding:**

For each walk, the following questions will be answered:

1. Walk time
2. Course in Meters (3 or 4) for Offsite visits only
3. Walking Aid used (0=No aid, 1= Cane, 2= Walker, 3=Other, 9=Unknown)
4. Check if this test not completed or attempted
5. If not attempted or completed, why not?  
1=Physical Limitation  
2=Refused  
3=Other \_\_\_\_\_ write in  
9=Unknown

*Information on Observed Physical Performance found in this section was obtained through:  
Guralnik MD, PhD, Jack. Assessing Physical Performance in the Older Patient: An overview of the Short Physical Performance Battery (SPPB). CD-ROM. 2003*

## Mini-Mental State Exam (MMSE)

### 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 visual-spatial skills.

### B. Definitions:

1. **Alert Level:** In general participant scoring below education-adjusted cut-off scores on the MMSE may be cognitively impaired.

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

- a. Subjects whose education 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.**

### 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**, any participant with a drop of 3 points in score since their last exam should be referred to neurology group (if they are not already in the neurology study). A preliminary score can be calculated by the Offsite Research Coordinator to determine if the participant should be referred. A referral form should be completed and given to the Neurology Project Coordinator after the exam. Referral forms can be found in the appendices.

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 neurology study.
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).

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'm going to start by asking questions that require concentration and memory. Some questions are more difficult than others and some will be asked more than one time.*

Read each question on the form.

Record the response on the form.

1. *What is the date today?* (**3** = correct score for month (1 point), day (1 point) and year (1 point))
  - 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.
  - b. For offsite visits, refer to the section of the manual titled “New England Counties” for a complete list of counties.
  - c. If a participant has **Never** lived in Framingham, MA. They can give the name of the town, county, and state they live in. The examiner can look up their answer for correctness and score it appropriately.
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?*
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 say *“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, and timepiece

Code 1 = correct answer

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: *Please write a sentence.*
- 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

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 30 will include the following:

| <u>NO</u> | <u>YES</u> | <u>MAYBE</u> | <u>UNKNOWN</u> |                                |
|-----------|------------|--------------|----------------|--------------------------------|
| 0         | 1          | 2            | 9              | Illiterate or low education    |
| 0         | 1          | 2            | 9              | Poor eyesight                  |
| 0         | 1          | 2            | 9              | Poor hearing                   |
| 0         | 1          | 2            | 9              | Depression/Possible Depression |
| 0         | 1          | 2            | 9              | Other                          |

Note: If a participant scores a 30 on the MMSE but reports that he/she has depression this should be marked. It will help to have this flagged for future neurology testing.

**PLEASE CLOSE YOUR EYES**

## Sociodemographics and Subjective Health

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

### A. Socio-demographics

#### 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 live in the same household for < 3 months per year or > 3 months per year.** The list is:

Spouse

Children

Other Relative

##### Coding

**0** = No

**1** = Yes, less than 3 months per year

**2** = Yes, at least 3 months per year

**9** = Unknown



3. *Are you currently working at a paying job or doing unpaid volunteer or community work?*

Coding

0=No

1=Yes,

9=Unknown

4. *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

3. *As I get older, things are:*

Coding

1=Better than I thought they'd be

2=About the same that I thought they'd be

3=Worse

9=Unknown

## Rosow-Breslau Questionnaire

### A. Rationale & Background

Respondents' self-assessments of health may raise questions about the validity of such judgments. However, we are not interested in the literal details of people's medical condition as much as in the behavioral consequences, their physical capacity for role fulfillment and social participation. We are primarily concerned with the *functional* health which old people report, i.e., the degree to which they claim they can manage adequately or are restricted in their activities because of their physical condition or capacity. *Breslau, M, Rosow, I: A Guttman Health Scale for the Aged. 556-559*

### B. Methods

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. This 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.

### C. Procedures

#### Questions:

#### Coding

**0** = No, unable to do

**1** = Yes, able

**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, and mow lawn).
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).

If the participant answers no to question 2, ask: *Are you able to walk a quarter of a mile without help? (about 2-3 blocks)*

3. ***Are you able to walk up and down stairs to the second floor without any help?*** (Note: Code **2** if person does not do this activity).

If the participant answers no to question 3, ask: ***Are you able to climb up 10 steps without help?***

4. ***Do you drive now?***

If the participant answers no to question 4, ask: ***Reason for not driving?***  
(1=Health, 2=Other non-health reasons, 3=Never licensed, 9=Unknown).

**Nagi Questionnaire**  
Technician-Administered

A. Method

Show and explain the answer key *before* administering the questionnaire. The participant is to choose one of the following answers for each activity:

No Difficulty  
A Little Difficulty  
Some Difficulty  
A Lot of Difficulty  
Unable to Do

Don't Do on MD Orders

Unable to Assess Difficulty Because Not Done as Part of Daily Activities

B. Procedure

1. Script: ***I am going to read a list of activities, for each activity, tell me whether you have No Difficulty, A Little Difficulty, Some Difficulty, A Lot of Difficulty, if you are Unable to do it, if you Do not do it on MD Orders or Institutional Orders, or if you are Unable to Assess Difficulty Because the activity is not done as part of your daily activities.***
2. Read each activity separately, and go through the level of difficulty for each one until the participant understands the response choices.

Notes:

“Institutional Orders” is any facility that assists a person with their daily activities, (ex. Nursing homes, assisted living facilities, etc.)

**No Difficulty**

**A Little Difficulty**

**Some Difficulty**

**A Lot of Difficulty**

**Unable to Do**

**Don't Do on MD Orders or Institutional Orders**

**Unable to Assess Difficulty Because Not Done as Part of Daily  
Activities**

## **KATZ: Activities of Daily Living**

### 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. Procedures:

Part 1:

Script: *During the course of a normal day, can you do the following activities independently or do you need help from another person or use special equipment or use 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
- 9** = Unknown

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

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 washing 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.

Note: The answer is only Yes, uses device if the pt is using it for themselves.
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.

## Lawton IADL'S-Instrumental Activities of Daily Living

Technician-Administered

**The IADL questions are NOT administered to nursing home residents.**

A. Background and Rationale:

The IADL's is used to assess the ability to carry out instrumental activities of daily living.

B. Procedures:

1. Prior to administering the form the examiner should hand the answer key to the participant and explain each of the answer options:

01 = Completely Unable

02 = With Some Help

03 = Without Help

2. The participant will choose one answer from the prompt card that best describes their ability to carry out the activities.
3. If the participant answers "with some help" the examiner should write in the definition of "some help"
4. The questions should be asked exactly as they are written on the exam form and **the examiner should only use the examples of help printed on the exam form.**

### Questions:

- 1) Can you use the phone?
- 2) Can you get to places out of walking distance?
- 3) Can you go shopping for groceries?
- 4) Can you prepare your own meals?
- 5) Can you do your own housework?
- 6) Can you do your own handyman work?
- 7) Can you do your own laundry?
- 8) Do you take medicines or use any medications?
  - a) Do you take your own medicines?
  - b) If you had to take medicine, could you do it?
- 9) Can you manage your own money?



**Completely Unable**

**With Some Help**

**Without Help**

## CES-D Scale

### 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.

Note: The depression questions used in the NHANES 1 survey were the 20-item set of the CES-D developed and validated by the Center for Epidemiologic Studies, National Institute of Mental Health (NIMH).

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:

Each item has a range of four response options which indicated how often the survey examinee had felt that way during the past week:

| <i>Code</i> | <i>Response Option</i>                                   |
|-------------|--|
| 0           | Rarely or none of the time (less than 1 day)             |
| 1           | Some or a little of the time (1-2 days)                  |
| 2           | Occasionally or a moderate amount of the time (3-4 days) |
| 3           | Most or all of the time (5-7 days)                       |

Questionnaire items 4, 8, 12, and 16 were worded in a positive (i.e., nondepressed) direction. The other 16 scale items were worded in a negative direction to elicit depressive symptomatology directly. To score the CES-D, the sense of the four positive questionnaire items was reversed by subtracting their coded value (indicating the response option selected) from 3. Then the coded values for all 20 items were summed into a total score. The range of possible scores was 0-60. The final score is calculated by the computer.

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.**

***SCRIPT: The next questions 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 response options. The following definitions should be given:

Code

Rarely or none of the time (less than day)

Some or a little of the time (1 to 2 days)

Occasionally or moderate amount of time (3 to 4 days)

Most of the time (5 to 7 days)

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 the first three questions 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?*

If the participant appears to be confused after dropping "During the past week..." loop it back in and continue saying it until the participant appears to understand.

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.

\*\* If "unknown" is used more than 4 times on the questionnaire it is no longer considered valid for research. Do your best to have the participant give you an answer listed on the response key. \*\*

5. Circle the response on the form.
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, leave blank and write in participant's response. Do not try to interpret the statement for the participant.

Rarely or none of the time (Less than 1 day)

Some or a little of the time (1-2 days)

Occasionally or moderate amount of time (3-4 days)

Most or all of the time (5-7 days)

## Berkman Social Network Questionnaire

### A. Background & Rationale

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

### B. Procedures

Script: *The next questions ask about your social support. Please tell me the response that most closely describes your current situation.*

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** can be used only when participant is unable to answer, refuses, or if the question was not asked. The participant is not told this is an option for an answer.

1. *How many **close friends** do you have, people that you feel at ease with and 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 and 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.

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

0=Never or almost never

1=Once or twice a year

2=Every few months

3=Once or twice a month

4=Once a week

5=More than once a week

9=Unknown

7. *Do you have health insurance other than Medicare or Medicaid?*

The intent of questions 8-12 is for friends and family, not mental health specialists. They should be answered with the following responses:

*None of the time*      *Most of the time*

*A little of the time*      *All of the time*

*Some of the time*

\* **Unknown** can be used only when participant is unable to answer, refuses, or if the question was not asked. The participant is not told this is an option for an answer.

The remaining questions should be asked exactly as they are printed on the page. The technician should not try to explain them. **Note: Questions 1-4 & 8-12 should not be asked of participants with moderate to severe dementia and the questions should not be asked of the participant's proxy.**



None

1 or 2

3 to 5

6 to 9

10 or more

None of the time

A little of the time

Some of the time

Most of the time

All of the time

## Leisure Time Cognitive and Physical Activities

### A. Background and Rationale

The intent of the Leisure Time Cognitive and Physical Activities questionnaire is to determine whether increased participation in leisure activities lowers the risk of dementia or participation in leisure activities declines during the preclinical phase of dementia. Response sheets, using large print should be given to the participant to help them better understand and answer the questions.

### B. Procedures

1. Show and explain the answer key *before* administering the questionnaire. The participant is to choose one of the following answers for each activity:

Never  
Daily (7 days/week)  
Several Days Per Week (2-6 days/week)  
Once Weekly (1 day/week)  
Monthly (once a month)  
Occasionally (less than once a month)

2. Ask each question individually. Script, *During the past year, how often have you participated in the following leisure time activities?*
3. These questions can be answered by the participants' proxy. For nursing home visits this information can also be taken from the up-to-date Minimum Data Sheets in the nursing home chart.
4. This questionnaire can be asked of all participants regardless of their cognitive status.

Note:

“Group exercises” is considered done as a group, not exercise done alone.

“Crossword Puzzles” Include word searches

“Reading books/Newspapers” If the participant is legally blind but listens to books on tape, this is considered as a book on tape reader. It involves the same process once it migrates to the brain: attention, memory, and sequence.

Never

Daily (7 days per week)

Several Days Per Week (2-6 days)

Once Weekly (1 day per week)

Monthly (Once a month)

Occasionally (less than once a month)

## Use of Nursing and Community Services

These questions are meant to gather information on use of nursing and community services since the participant's last contact.

***Question 1: Have you been admitted to a nursing home (or skilled facility) since your last exam or medical history update?***

If a participant moved into a nursing home prior to the two year interim, then the first question 1 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 = No.

***Question 2: Since your last exam, have you been visited by a nursing service, or used home, community, or outpatient programs?***

If the participant answers yes, ask what services they used:

***Home Health Aides***

***Homemaker Visits***

***Visiting Nurses***

***Other (write in) \_\_\_\_\_***

Check the box next to the services the participant used since their last contact.

***Question 3: Are you in bed or a chair for most or all of the day (on the average)?***

*Note: this is a lifestyle question, not related to poor health.*

***Question 4: Do you need a special aid (wheelchair, cane, walker) to get around?***

If the participant answers yes, ask which equipment they use:

***Cane or walking stick***

***Wheelchair***

***Walker***

***Other (write in) \_\_\_\_\_***

Coding for equipment:

0= No

1= Yes, always

2= Yes, sometimes

9=Unknown

## **Falls and Fractures**

### 1. Falls

Script: *Since your last exam have you accidentally fallen and hit the floor or ground?  
(code as no if during sports activity)*

Coding

**0** = No

**1** = Yes

**2** = Maybe

**9** = Unknown

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

### 2. Fractures

Script: *Since your last exam or medical history update have you broken any bones?*

Coding

**0** = No

**1** = Yes

**2** = Maybe

**9** = Unknown

List the location of each fracture individually (3 spaces available)

For participants with moderate to severe dementia fracture information is found in the medical history portion of the exam form B.

## Procedure Sheet, and Exit Interview (Clinic & Offsite)

**On the back of the Numerical Data Sheet there is a Procedure Sheet, Adverse Events and Exit Interview.**

### A. Procedure Sheet

Prior to the exit interview staff should check the participant chart to see what procedures were completed. The staff should then fill in the procedure sheet using the corresponding codes.

### B. Adverse Events

The technician conducting the exit interview should complete this section with their technician identification number and any adverse events in clinic.

### C. Exit Interview

Once the procedures are reviewed an exit interview is to be completed with the participant. During the exit interview:

1. Review with the participant any referral recommendations from the FHS physician.
2. Make sure the participant leaves the clinic area with all of their belongings; and
3. Ask for feedback from the participant on how they felt about their examination.
  - a. Enter one of the following codes:  
0=No Feedback  
1=Positive Feedback  
2=Negative Feedback  
3=Other
  - b. Write in any comments that are made.

## **Proxy Form**

If a participant has someone helping them answer FHS exam questions this person is considered their “proxy”. If a proxy is used to help the participant answer any questions the proxy form must be filled out.

A participant may have one or more proxies (for example a home health aide and the participant’s child). The following coding should be used:

Question: ***Proxy used to complete this exam***

Coding: 0=No, 1=Yes, 1 proxy, 2= Yes, more than 1 proxy, 9=Unknown

If the question is answered with code 1 or 2 the following information must also be filled in:

***Proxy Name (write in)*** \_\_\_\_\_

***Relationship to participant (1=1<sup>st</sup> Degree Relative (spouse, child), 2=Other Relative, 3=Friend, 4=Healthcare Professional, 5=Other, 9=Unknown)***

***How long have you known the participant? (Years, months; 99.99=Unknown; Example: 3m=00\*03)***

***Are you currently living in the same household with the participant? (0=No, 1=Yes, 9=Unknown)***

***How often did you talk with the participant during the prior 11 months? (1=Almost every day, 2= Several times a week, 3= Once a week, 4= 1 to 3 times per month, 5=Less than once a month, 9=Unknown)***

There are 2 spaces available to fill in this information if there is more than 1 proxy.



## **Medical History Form A**

The medical history taken from the participant is an update from the Heart Study's last contact with the participant (based on the date of the last Health History Update **or** last examination). The examiner should also refer to the Summary of Findings form in the participant's chart to verify whether a medical encounter is new or has already been identified. This form records the outcome of all Endpoint reviews and therefore documents all cardiovascular disease events adjudicated by the study.

On the top of the medical history form the date of the last exam and the date of the last health history update are pre-printed. All medical encounters should be recorded based on the participant's **last contact**.

The forms from the participant's last examination and/or health update are provided in a folder behind the current medical history form. These forms can be used as reference to data already collected.

### **Medical History Form**

**1<sup>st</sup> Examiner ID and 1<sup>st</sup> Examiner Name** (write in)

#### **Hospitalization (s)**

A hospitalization is considered an overnight stay.

If the participant was in the Emergency Room (E.R.) and then admitted, the event would be considered only for hospitalization and not as E.R. visit.

#### **E.R. visit**

An emergency room visit is when the person is both admitted to and discharged from the emergency room the same day.

#### **Day surgery since last exam or health update**

Day surgery is a surgical procedure performed on an outpatient basis either in an ambulatory surgery department of a hospital or in a physician's office.

The person is in and out the same day.

#### **Major illness with visit to the doctor**

Illness with visit to physician is defined as a visit outside of a regular check-up. It can be further clarified by defining it as a visit to the doctor for a specific reason.

It is imperative that the reason for the visit be documented.

#### **Check-up by doctor or other health care provider?**

A check-up is considered to be a routine visit.

**Details of all hospitalizations, ER visits, day surgeries and physician visits must be provided as follows:**

- A. **Medical Encounter**  
Write the details about the medical event. If the participant cannot provide a “medical condition”, symptoms leading to the medical encounter should be listed (for example, chest pain, shortness of breath).
- B. **Month/Year (of last visit)**  
Record the date of the medical encounter. People often cannot recall the exact month or even the year. Trying to couple the event with a season or holiday sometimes helps.
- C. **Name & Address of Hospital or Office**  
The hospital and the city and state are most important.
- D. **Doctor**  
Record the name of the physician seen. If the participant sees a physician’s assistant or a nurse practitioner in the physician’s office, obtain both names.

## **Medical History – Prescription and Non-Prescription Medication**

On home visits, the participant are asked to show the medical technician his/her medication bottles including over-the counter preparations. In the case of a nursing home visit, the technician should record the medications from the participant's medication orders in their nursing home chart.

Copy the name of the medicine, the strength in units, route, the total number of doses per day/week/month/year or if it is PRN (as needed). Include vitamins and minerals.

Prior to coding the medications the following question must be answered:

**Medication bag with medication brought to exam or med bottles/packs used by examiner to complete form? (0=No, 1=Yes)**

Code ASPIRIN ONLY on screen MD02.

**\*\*\*List ONLY medications taken regularly in the past month/ongoing medications\*\*\***

## Medical History

The physician or offsite medical technician will obtain a medical history using the standardized exam 30 form A. If the participant has moderate to severe dementia the exam 30 form B should be used. The questions should be asked exactly as written on the form and the participant's response recorded according to the response choices provided on the form. In addition a comment area is provided on the form to record a narrative account of cardiovascular symptoms including chest pain, shortness of breath, syncope, exertional leg discomfort and cerebrovascular symptoms. It is critical that a narrative be provided to clarify the symptoms for investigators adjudicating events in Endpoint Review.

It is also critical to record all health care visits (physician, ER, hospital) the participant has had for the symptom. Outside medical records will be obtained to verify the participant's account of their medical condition.

Additional instructions for obtaining the medical history and properly coding the participant's responses are as follows.

### Alcohol Consumption (screen MD06)

Code number of alcoholic beverages as EITHER weekly **OR** monthly as appropriate.

### Chest pain (screen MD09)

When the participant states that they have not experienced any chest discomfort, clarify further using the terms *chest pain*, *chest tightness*, *chest pressure*.

If the participant states that they never used Nitroglycerin as a way to relieve the discomfort be sure to code as 8= not tried, rather than 0= no relief.

### Cerebrovascular (CVA), Neurological and Venous Diseases (screen MD12)

It is important to stress that these CVA symptoms are **sudden**, not a gradual progression of a symptom.

1. Sudden Muscular Weakness  
*Since your last contact, have you experienced any **sudden** muscular weakness?  
For example, face drooping or weakness, particularly on one side of your body.*
2. Sudden Speech Difficulty  
*Since your last contact, have you experienced any **sudden** difficulty with your speech such as understanding spoken words or trouble speaking?*
3. Sudden Visual Defect  
*Since your last contact, have you experienced any **sudden** visual defect?*

4. Sudden Double Vision  
*Since your last contact, have you experienced any **sudden** double vision?*
5. Sudden Loss of Vision in One Eye  
*Since your last contact, have you experienced any **sudden** loss of vision in one eye, like a shade coming down over your eye?*
6. Sudden Numbness, Tingling  
*Since your last contact, have you experienced any **sudden** numbness or tingling on one side of your face or one side of your body?*

If the participant answers yes, ask is numbness and tingling positional?

### **Cardiovascular (CVD) Procedures (MD17)**

The participant is queried regarding CVD procedures since the last Heart Study contact.  
If the participant has had more than one procedure of a particular type code only the first procedure and list all other procedures in the comment section.

Clarify the procedure list for the participant as follows:

#### ***Heart valvular surgery***

Have you had surgery on your heart valves?

#### ***Exercise tolerance test***

Have you had an exercise stress test or a treadmill test of your heart?

#### ***Coronary Arteriogram***

This test is an invasive test done in the hospital. An x-ray is taken of your arteries after you receive an injection of a dye that outlines the blood vessels of your heart.

#### ***Coronary artery angioplasty or stent***

Angioplasty is a procedure in which a balloon is used to open a narrowed or blocked artery in your heart. (This is also known as Percutaneous Coronary Intervention (PCI)). A stent is a wire mesh tube that is placed in the artery to hold it open. The stent is usually placed in the artery during angioplasty.

#### ***Coronary bypass surgery***

Have you had bypass surgery also known as CABG (coronary artery bypass grafting)? During bypass surgery the diseased section of your coronary arteries are bypassed with a healthy artery or a vein in order to increase blood flow to your heart muscle.

#### ***Permanent pacemaker insertion***

Have you had a pacemaker inserted? A pacemaker is used to replace the function of the natural pacemaker in your heart when your heart is beating too slowly. Permanent pacemakers are surgically placed into the chest through a small incision.

***Carotid artery surgery or stent***

The carotid artery is located in your neck and carries blood and oxygen to your brain. Carotid artery surgery is a surgical procedure to restore adequate blood flow to your brain. A stent is inserted into the carotid artery to open a narrowed or blocked area of the artery to help maintain an adequate blood flow to the brain.

***Thoracic aorta surgery***

Have you had surgery on your aorta- the large blood vessel coming from your heart? This surgery is done to repair the aorta for example when there is an aneurysm (a weakening or bulge in the wall of the aorta).

***Abdominal aorta surgery***

Have you had surgery on the large blood vessel in your abdomen (belly) called the aorta? This surgery would be done to repair a problem such as an aneurysm (weakening or bulge in the wall of the artery) or blockage in the aorta.

***Femoral or lower extremity surgery***

Have you had any surgery to improve the circulation in your legs such as bypass surgery or angioplasty?

***Lower extremity amputation***

Have you had an amputation of part of your leg or foot?

***Other cardiovascular procedures (write in)***

Have you had any other tests or procedures on your heart or blood vessels?

For Offsite visits a technician will complete the physician medical history portion of the exam. The chart will then be reviewed and completed by a physician. ALL physicians will be asked to share in this responsibility during their assigned clinic time. The physician chart review includes the following:

1. Review the physician exam form and complete all first opinions regarding endpoints (Angina Pectoris, Myocardial infarct, Coronary Insufficiency, Congestive Heart Failure, stroke, syncope, and Intermittent Claudication) based upon the coded and written narratives the technician obtained at the time of the visit.
2. Code the Electrocardiogram. The physician's ECG reading should be added to the letter to the personal physician.
3. Complete the "clinical diagnostic impression" & Non-Cardiovascular Diagnoses First Examiner Opinions.
3. Review the letter to the personal physician making any deletions/additions/changes in medical terminology that are required. Sign the bottom of the letter.
4. Complete the Referral Tracking Form.
5. Complete the chart while in clinic and return to the Offsite technician the **SAME** day.

## **Medical History Form B**

The Medical History Form B is an abbreviated version of the regular exam 30 form A. Participants with moderate to severe dementia will have this form completed in place of form A. The participants will be pre-identified prior to their FHS examination and form B will be placed in their chart prior to the examination.

The same protocol should be followed for Form B as Form A. With the following exceptions:

1. The questionnaire should **not** be administered to the participant. All questions should be answered by a reliable source. A reliable source is either the participant's proxy or if they are in a nursing home the participant's nurse and nursing home chart records.
2. The "First Opinions" sections is removed.
3. There is no comment sections so if the participant's proxy answers yes to any of the questions the details of the event need to be recorded on the first two pages.
4. For offsite visits, the physician reviewing the chart does not need to complete the "First examiner opinions".



## **Blood Pressure Measurement & Maximum Inflation Level**

### 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 (offsite)
4. BP cuffs in four sizes (all Latex free)

Thigh adult 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.

C. Determination of Maximal Inflation Level

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 10mmHg increments.
4. Deflate the cuff quickly and completely.
5. The maximal inflation level is 30 mmHg **above** the palpated systolic pressure.

D. 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 with both feet remaining flat on the floor.
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.

E. 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.

## Elevated Blood Pressure

If, during a home visit the blood pressure is:

> **200/110** a call is made to a FHS physician who will notify the participant's personal physician. The chart will be marked "expedite" so that the letter to the personal physician is sent out ASAP.

> **180/100** the chart is expedited

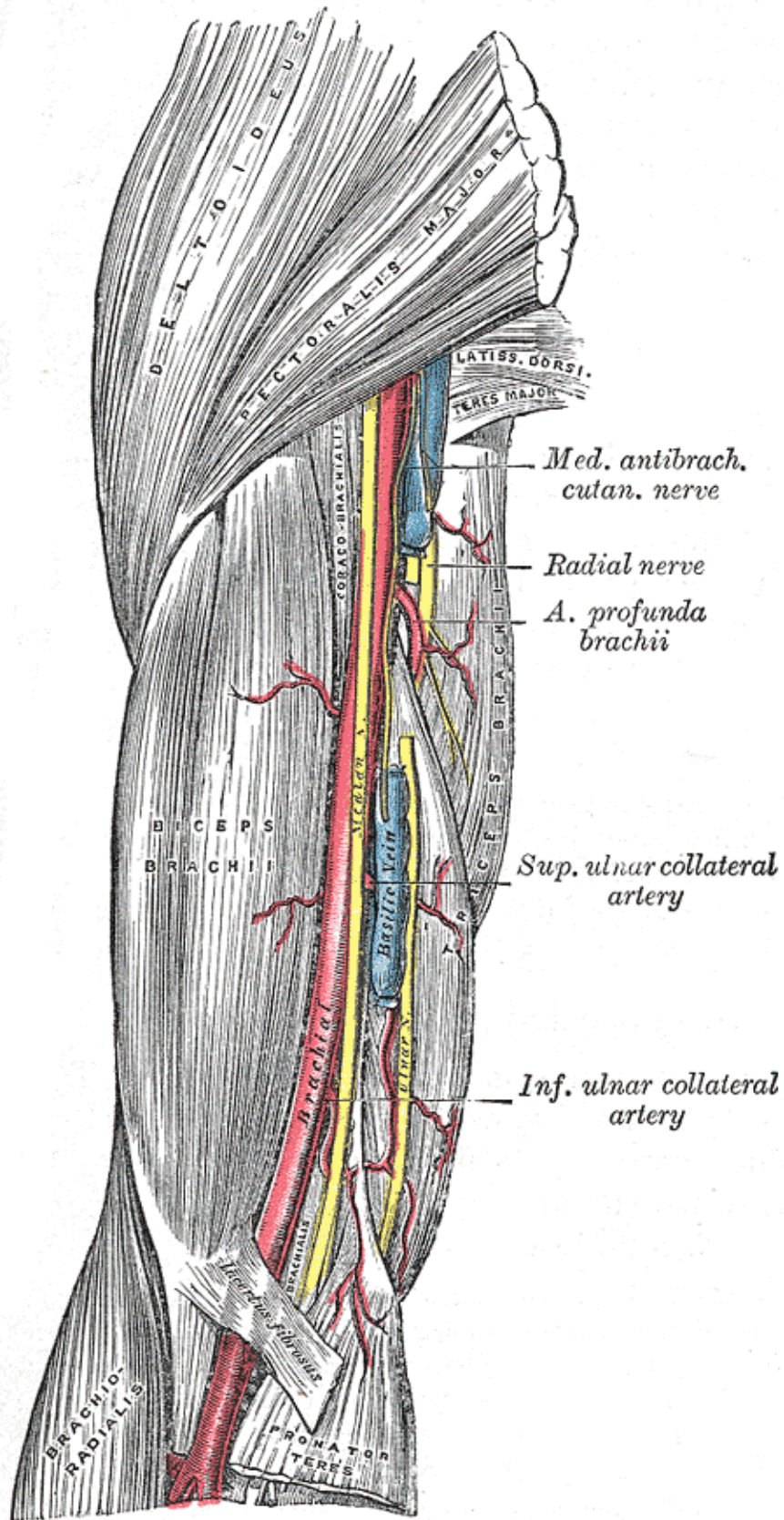
-The Referral sheet is completed to note that contact was made to an FHS MD during the exam.

-If a phone contact was made by an FHS MD to the participant's personal physician, the FHS MD is to complete a "Record of Telephone Encounter" form.

If, during a nursing home visit the blood pressure is:

> **140/90** inform the nurse caring for the participant or the charge nurse

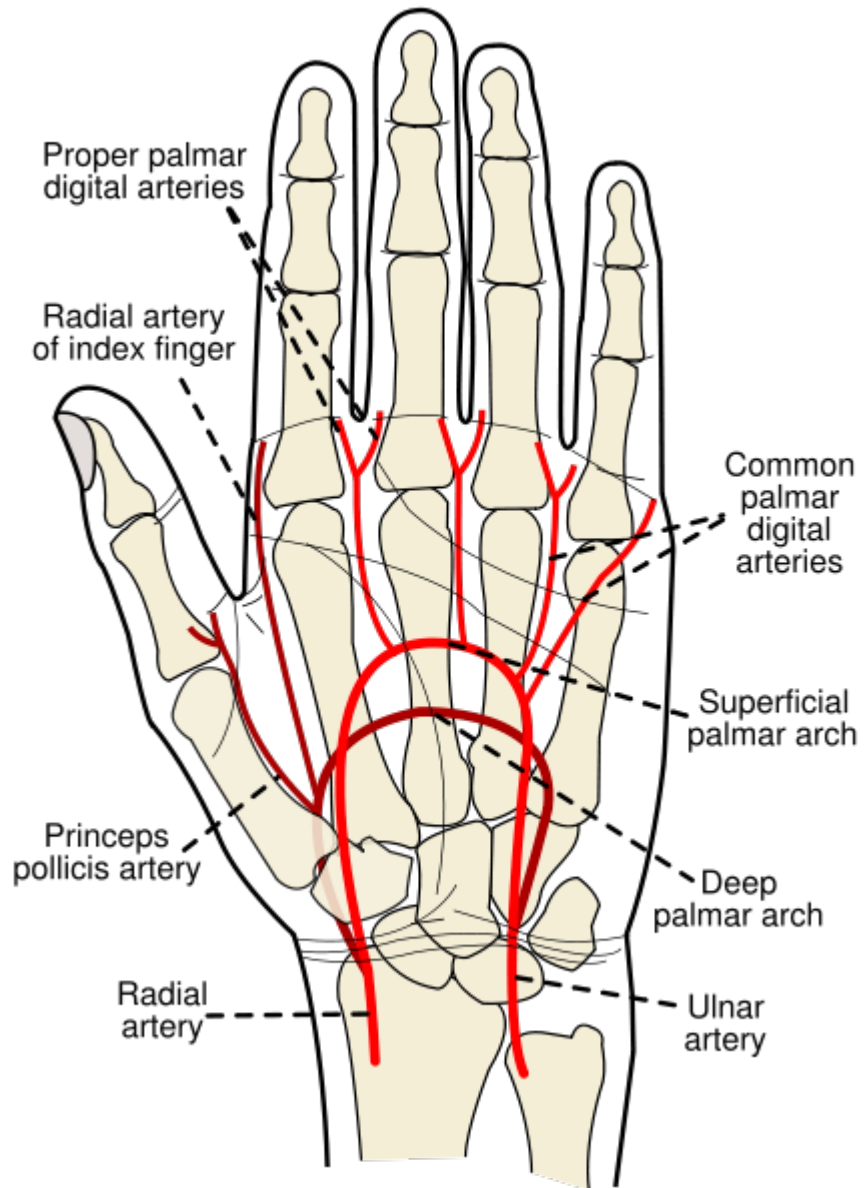
> **180/100** inform the nurse caring for the participant or the charge nurse.  
The chart will be marked "expedite" so that the letter to the personal physician is sent out ASAP.



**Brachial Artery:**

Located between the biceps and triceps, on the medial side of the elbow.

**Radial Artery:** Located on the thumb side of the wrist.



## **Electrocardiogram (ECG) Coding for Framingham Heart Study Examinations**

### **General Comments**

Although the computerized ECGs which are recorded in clinic include measurements of rate, intervals and axis, it is important that the examining physician carefully examine the ECG and record these features on the coding forms. The physician's measurements (not those made by the computer) form the basis of the official ECG interpretation.

An important rule to remember: The physician should ask for help when they are unsure about interpretation of ECGs or the FHS methods of coding. The physician should be sure to always look at the old ECG for interim changes.

### **HEART RATE**

Each physician exam room is equipped with a rate stick with which heart rate can be measured. (The computer does a good job with this measurement).

### **INTERVALS**

PR, QRS and QT intervals are measured in hundredths of a second based upon examination of the ECG recording. (Lead II should be used when possible for these measurements). A QRS of 0.08 seconds is coded as 08.

### **QRS ANGLE**

This refers to frontal plane axis in degrees. Each exam room is equipped with a hexaxial device for measuring QRS axis. (The computer does a good job with this measurement).

### **CONDUCTION ABNORMALITY**

#### **IV BLOCK**

This refers to right and left bundle branch block. Note that the code 1 is used for incomplete BBB and 2 is for complete BBB. For complete BBB the QRS interval should be .12 sec or greater. When the QRS is prolonged, but the pattern is not that of right or left BBB, the indeterminate IV block is coded as follows: 1=QRS .12 or greater, 2=QRS of .11 or .10. Remember that the measurements of QRS duration are those made by the examining physician and not by the computer. An RSR' pattern in the absence of QRS prolongation should be coded as normal. When an RSR' pattern occurs with a QRS duration of .09 sec or greater it represents incomplete RBBB.

## **HEMIBLOCK**

1=left anterior. This is present when the QRS axis is  $-30$  or less and small q wave is present in lead I.

2=left posterior. QRS axis is  $>90$  and small q is present in AVF, in absence of evidence of right ventricular hypertrophy.

## **FASCICULAR BLOCK**

1=bifascicular. A) If complete RBBB + (1<sup>st</sup> degree AV block or a hemiblock) are present. B) Complete LBBB.

2=trifascicular. If RBBB + hemiblock + 1<sup>st</sup> degree AV block. Or LBBB + 1<sup>st</sup> degree AV block.

## **AV BLOCK**

1<sup>st</sup> degree when QRS duration is .20 seconds or greater (measured in lead II).

2<sup>nd</sup> degree when some P waves are not conducted. This comes in two forms a) Mobitz I. When progressive PR prolongation precedes the dropped P wave and b) Mobitz II when QRS complexes are dropped without prior PR prolongation. AV dissociation occurs when P waves and QRS complexes march out independent of each other.

## **WPW**

A short PR interval is present (typically .12 seconds or less) and a slurred upstroke of the QRS is present (so called delta wave). When these features are both fulfilled, WPW=1. When the PR is .12 or less and a delta wave is possibly present, or when a delta wave is present but the PR is marginally short .13 to .14 seconds, WPW=2.

## **ATRIAL ENLARGEMENT**

### Right Atrial Abnormality

The P wave in inferior leads is peaked with a height of 2.5 mm.

### Morris P wave

The terminal portion of the V wave in lead V1 is inverted and measures at least 1mm by 1mm (at normal standardization). This reflects left atrial enlargement.

## **MYOCARDIAL INFARCTION**

This is determined on the basis of the appearance of wide (.04 seconds) or deep (1/4 the height of the R wave) q waves. All tracings should be compared to the prior exam ECG



which is always provided. The appearance of new, but small q waves should also be regarded as suggestive of MI. Loss of R waves in leads where they were previously present (see prior exam's ECG) should also raise suspicion of MI. A posterior MI is present when R > S in V1, R is .04 seconds in duration, and an upright T wave is recorded in that lead. When criteria are largely, but incompletely fulfilled be sure to code this item as maybe!

### **MAXIMUM I WAVE AMPLITUDE <-5mm**

This refers to giant inverted T waves at least 5mm deep. This condition is occasionally seen in hypertrophic cardiomyopathy.

### **LEFT VENTRICULAR HYPERTROPHY**

The physician should carefully code each of the voltage criteria individually. Definite LVH is present when increased voltage is present together with a strain pattern (downsloping ST). Possible LVH is present when voltage criteria are fulfilled but only mild ST-T abnormalities (flattening) are noted. For cohort Exam 21, we have a separate code for LVH by voltage only. When complete BBB is present, LVH should be coded as unknown (9).

### **RIGHT VENTRICULAR HYPERTROPHY**

Definite RVH is present when increased R wave voltage is present in V1 and increase S wave voltage is present in V5 in the absence of RBBB. The sum of RV1 + SV5 should be at least 10.5mm.

### **ARRHYTHMIAS**

The presence of rhythm disturbances should be made on the basis of examination of the ½ speed rhythm strip which accompanies each ECG. This represents a simultaneous 3 lead recording of the entire 12-lead ECG.



3. Method used to inform participant's personal physician of need for further medical evaluation:

This information is to be coded by the physician completed the chart.

**Circle ALL that apply**

- 1= Phone call
- 2= Results letter mailed
- 3= Results letter FAX'd
- 4= Other

Date referral made: \_\_\_\_ -- \_\_\_\_ -- \_\_\_\_ Use 4 digits for year

ID number of person completing this referral: \_\_\_\_\_

Notes documenting conversation with participant or participant's personal physician:

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## Scheduling Offsite Visits

Prior to making a call, review the FHS Participant Tracking System (PTS)

Once you have the participant's information displayed review the main roster screen

1. Check the comment line, the participant's age and their Consent Status and date of Consent Status.
2. Check the Referral screen for additional comments.
3. Check the Bookings screen for scheduled exams and exam history.

The core exam takes priority over ancillary study appointments and should be scheduled first. If, however, a participant has been seen recently or is scheduled for an appointment, wait several months before contacting the participant.

There is a minimum of one year required between exams when starting a new cycle for the Original Cohort. Staff may call a participant directly to schedule an offsite appointment if:

1. There is no notation of cognitive impairment (\*COG IMP\* or \*WAIVER\* on the comment line or the referral screen),
2. Consent Status is less than 3, and
3. There are no comments regarding severe hearing loss or speech difficulties.

### A. Home Visits

If the staff member calls the participant directly, but then has questions about the participant's cognitive status, the staff should call the participants "contact" on the roster. If the contact person denies any problems and says the participant is capable of answering questions, ask the contact if he or she would be willing to provide additional information if necessary after the exam.

If any of the above cognitive issues are noted, the staff should call the participant's designated FHS Proxy or family member first to determine if a Home Visit is feasible. Given the age of the Original Cohort it is preferable to call someone in the next generation who has frequent contact with the participant and, if possible, is a member of the Offspring Cohort. If unable to reach any contacts, (telephones disconnected, etc.), check the participant's Personal and Family History Data sheet (the salmon sheet) and/or any recent medical records in the chart to see who is listed as the responsible party or next of kin.

When it is known in advance that a participant has moderate to severe dementia the staff should ask a family member or caretaker very familiar with the participant to be present at the exam.

### B. Nursing Home Visits

If there is no cognitive impairment noted in the PTS system, the staff may call the nursing home, identifying themselves as a Framingham Heart Study staff member, and ask to speak to the nurse in charge of the care of the participant. When speaking with the nurse, explain why you are calling, what the visit will entail, determine what the best time to visit would be and then schedule an appointment. As a courtesy, call the participant's proxy or a listed contact, starting with the spouse

(unless there are instructions to the contrary on the roster) to inform her/him that we will be going to the nursing home; this person or another family member may wish to be present at the exam.

If the nursing home staff member says the participant is too ill for a visit and/or has had serious medical events since our last visit or health update, the staff member may call a family member for details concerning the participant's condition and ask again about visiting. If the contact also refuses, ask if he/she will complete a telephone health update, using the Medical History Update form.

If a staff member is told by the nursing home that the participant has died since the Heart Study's last visit or health update, she/he will complete a Death Information Form for the Participant Coordinator, who will immediately update the PTS system and give copies to the relevant staff members. If the nursing home can't or won't provide the information needed and the death occurred at least several months ago, the Coordinator may call the proxy or family member for information.

After an appointment has been scheduled, the staff member should give the Cohort Coordinator the details of the appointment. This includes:

1. Date and time of Appointment
2. Date of Last Exam and Last Medical History Update
3. Date of contact (vital status date)
4. Important notes regarding appointment (examples: travel tips, name of person that will be assisting with the exam (if applicable), if the participant is registered in the brain bank)
5. If the participant has moderate or severe dementia (as determined by the neurology study) note that Form B should be used. This will flag the Senior Secretary to put the Medical History Exam Form B to be put in the chart.

The Coordinator will update the PTS system with this information and will email the schedule to the offsite email list and provide a hard copy to the Senior Secretary with the appropriate letter (either the nursing home letter or home visit letter with medical information form attached)

## Preparation for an Offsite Examination

### A. Supplies

The following supplies should be brought to an offsite visit:

- 1 Portable Electrocardiogram (ECG) machine
- 1 Portable ECG acquisition module
- 1-2 Packs of ECG electrodes
- 1 Heart square
- Eyelineer Pencil
- Alcohol wipes
- Gauze
- Adhesive remover pads
- 3 Blood pressure cuffs; large adult, adult and pediatric (Latex Free)
- 1 Pocket Aneroid Sphygmomanometer
- 1 Litman Classic II Stethoscope
- 1 Pencil
- 1 Wristwatch
- 1 Portable scale
- Response sheets for participant
- 1 JAMAR dynamometer
- 1 Stopwatch
- 1 Tape measure
- 1 Pocket Talker (very helpful for hearing impaired participants)
- Masking tape or tape of equal visibility
- Red or Blue Pen
- Exam 30 paperwork ONLY
- Directions

### B. Preparation

On the day of the scheduled Heart Study visit it is best to call the participant or nursing home to confirm the appointment. Instruct the participant that he/she should wear a top that easily opens in the front to facilitate the ECG and remind them to have any available medications they take. With their confirmation letter, a form is included that helps to summarize their medical history since their last exam. Ask them to have this form ready.

When calling a nursing home inform the nurse that access to their patient's chart is necessary. Most nursing homes are accommodating and have the chart set aside for the visit.

Take only exam 30 paperwork to the exam and leave the last exam folder and all of the originals at FHS. Originals should never leave the FHS building. The Senior Secretary makes photocopies of all of the forms needed and will put them in the exam 30 chart.

## **Proposed Sequence of Exam (offsite)**

A. The following procedures should be done in the following order:

1. Informational Sheet Review
2. Admitting Form (Salmon Sheet)
3. HIPPA Medical Release Form
4. Medical History Update
5. 2 Blood Pressures
6. Weight
7. ECG
8. Questionnaires
9. Observed Performance
10. Nursing Home Chart Review-Update any incomplete information (offsite NH exam only)
11. Proxy Interview (if needed)
12. Chart Completion

## **Visiting the Cognitively Impaired**

The physical component of the exam requires the cooperation of the participant. The following are some suggestions to be able to effectively communicate with those with dementia.

### **Effective Communication Suggestions:**

1. Be patient
2. Do not try to reason
3. Keep information simple
4. Use given names
5. Use eye contact
6. Give one direction at a time
7. Give clear instructions instead of asking questions
8. Keep communication in the present
9. Use sensitive touch when possible
10. Give frequent acknowledgment and encouragement
11. Ignore misinformation and simply acknowledge the communication



## Nursing Home Chart Review Protocol

When visiting a participant in a Nursing Home most of the necessary information may be obtained through the review of the participants Nursing Home chart. When calling to confirm the offsite visit to the Nursing Home, the staff member should inform the nurse taking care of the participant that we will need review the participant's chart. Most nurses will ensure that the chart will be available upon arrival.

### 1. Updating Sociodemographic Data and Family History

Upon opening the nursing home chart, one should see a face sheet. This sheet contains all the personal demographic data on their patient, including their next of kin. If the name(s) vary from the most recent ones on the Personal and Family History it should be documented, along with their addresses and phone numbers.

At the bottom of the face sheet it often lists the admission diagnosis of the patient. This is extremely important, especially if this is their first Nursing Home offsite visit.

### 2. Medications

Most charts contain an up-to-date list of the patient's medications. Some facilities keep the medications in a separate chart. If the patient's medications are not listed in their chart, the staff member should ask for the medication book. Many times the medication sheets for months prior may also still be in the chart, the staff should make sure they are using the most recent medication list (the effective dates will be at the bottom of the form).

### 3. Medical History

The two sections that are most helpful in locating medical history information are "Consults" and "Medical History". Some nursing homes keep copies of all hospitalization records in a clear sleeve. The "Physician's Notes" and "Nurses Notes" sections are also helpful.

NOTE: Since all facilities have their own chart organization system it is best to thoroughly examine the whole chart. Some facilities thin their charts more frequently and if only the last month's information is present, then ask to see the whole interim period. This will ensure that nothing is missed.

### 4. Activities of Daily Living

To update a participant's activities of daily living the best reference is the MDI or minimum data sheet. This is a computer sheet, usually at the front of the chart, and it is updated about every 4 to 6 months. This sheet lists activities of daily living, hospitalizations, falls, etc. The staff should always refer back to notes and daily documented information to corroborate data, but this gives a nice head start. To truly confirm the current level of functioning of the patient consult with his or her nurse and list nurse as the Proxy.

### 5. Weight

Weight is typically done weekly at nursing home facilities. If obtaining a weight measurement if not possible it may be taken from the nursing home records. Most facilities have a separate with book. The staff member should ask to see this and record the most recent weight obtained and the date of measurement. This should be recorded on the Numerical Data Sheet.

## Offsite Visit Chart Completion

After returning to the Heart Study the following procedures are followed to ensure that the chart is processed in an efficient manner.

### A. Chart Review Protocol

1. The Offsite technician should complete and review all forms to ensure that all areas are completed.
2. A Routing Sheet is placed on the front of the chart and is used to ensure that the doctor, the Cohort Participant Coordinator, the Offsite Technician and Data technician review the chart.
3. When preparing the chart for the MD to review in clinic, the following documents should be clipped together and filed in the front of the chart:
  - a) ECG – current and from last exam
  - b) Medical History Form
  - c) Summary Sheet to MD
  - d) Letter to Participant
  - e) Referral Tracking Form
  - f) Photocopied Summary of Findings from previous letter
4. The chart should be left for the MD to review in clinic in a secure area. A participant label should be put on the float sheet and the person working the float position should inform the MD that they have a chart to review.
5. It is the responsibility of the MD to review the chart in clinic that morning. The chart should not be brought upstairs.
6. Once the chart is reviewed by the MD in clinic the chart should be returned to the offsite technician. The offsite technician should again review the chart for completeness and put the chart in order.
7. The chart should then be given to the Cohort Participant Coordinator. The Cohort Participant Coordinator will update the roster and give the chart to the data technician to type the MD letter.
8. Once the data technician is finished with the chart he/she should return only the routing sheet to the offsite technician. Once this is returned this will indicate the chart is completed.

Note: The field visit technician will complete the chart the day of the visit or the next day if the visit occurred late in the day or was out of the Metrowest area. Field visit charts will be processed within 1-2 days of the visit and the Routing Sheet will be returned to the offsite technician for confirmation of completion.

*Recruiter, Hospital Surveillance or Other Referral*

**Participant's Name:**

**FHS ID Number:**

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

**Date of Referral:**

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**Name of Person Making the Referral:**

**1. Person Interviewed:**

1 = Participant (skip A-F) 2 = Proxy 3= Hospital Surveillance, **No Interview (skip A-G)**

**A. If Proxy, Name:**

**B. Relationship to Participant:** 1 = 1<sup>st</sup> degree relative (spouse, child) 2 = other relative

3 = friend 4 = health care professional 5 = other \_\_\_\_\_ 8 = N/A 9 = unknown

**C. Are you:**

1 = Legal Guardian 2 = Power of Attorney 8 = N/A 9 = unknown

**D. How long have you known the Participant (Years, Months)?**

(example: 3 months, 00.03) 88.88 = N/A 99.99 = unknown

|  |  |  |  |
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**E. Are you currently living in the same household with the participant?**

0 = No, 1 = Yes, 8 = N/A, 9 = Unknown

**F. How often in the past year have you talked with the Participant?**

1 = Almost every day 2 = Several times a week 3 = Once a week 4 = 1 to 3 times per month 5 = Less than once a month 8 = N/A 9 = Unknown

**G. Have changes in memory or thinking skills prevented you/them from doing things they did in the past (ex. handling finances, driving or social activities)?**

0 = No, 1 = Yes, 8 = N/A, 9 = Unknown

**2. Hospital Surveillance (A-D):**

**A. Change in mental status:**

0 = No, 1 = Yes, 8 = N/A, 9 = Unknown

Description: \_\_\_\_\_  
\_\_\_\_\_

**B. Physical Examination Shows Cognitive deficits:** 0 = No, 1 = Yes, 8 = N/A, 9 = Unknown

Description: \_\_\_\_\_  
\_\_\_\_\_

**C. Supporting Imaging:**

0 = No, 1 = Yes, 8 = N/A, 9 = Unknown

Description: \_\_\_\_\_  
\_\_\_\_\_

**D. Additional Information:**

0 = No, 1 = Yes, 8 = N/A, 9 = Unknown

Description: \_\_\_\_\_  
\_\_\_\_\_

**3. Other Type of Referral:**

0 = No, 1 = Yes Description: \_\_\_\_\_

\_\_\_\_\_

**Clinic Staff:**

If yes (#1) in box above, be alert to possible cognitive deficits.

**Examiner's Number:**

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

**Date of FHS Exam:**

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

**Is a cognitive impairment apparent during FHS Cycle Exam?**

0 = No 1 = Yes, referral to Cognitive clinic 2 = Yes, refuses Cognitive Clinic



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**FRAMINGHAM HEART STUDY**

**Framingham, MA 01702**

**RECORD OF IN-CLINIC MEDICAL ENCOUNTER**  
**(to be filed in chart)**

Participant's ID#: \_\_\_\_\_ Participant's Name: \_\_\_\_\_

Date of incident: \_\_\_\_\_

**Description of incident:**

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Physician: \_\_\_\_\_

**Follow up (if any)**

Date of follow-up: \_\_\_\_\_

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Physician/Staff: \_\_\_\_\_

**Record of Telephone Encounter**  
(to be filed in chart)

Participant's ID#: \_\_\_\_ - \_\_\_\_ Participant's Name: \_\_\_\_\_

Date of Incident: \_\_\_\_/\_\_\_\_/\_\_\_\_

Person Contacted: \_\_\_\_\_

\_\_\_\_\_

Regarding: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

Contact Made By: \_\_\_\_\_

**Stroke Tracking Referral Form**  
**The Framingham Study**

\* Please complete the upper portion of this form if you identify a new neurological event.

ID#: \_\_\_\_\_ Name: \_\_\_\_\_  
Date Opened: \_\_\_/\_\_\_/\_\_\_ Date Type: \_\_\_ (0=Exact, 1= Approximate)  
Date of Event: \_\_\_/\_\_\_/\_\_\_  
Source of Referral: \_\_\_\_\_  
1 = Hospital Admission      5 = Medical Records  
2 = Biennial Exam            6 = Review  
3 = Offspring Exam          7 = Other (Please specify)  
4 = Family  
Initials: \_\_\_\_\_  
Reason for Referral: \_\_\_\_\_  
Reason for Hospitalization: \_\_\_\_\_ (1=Neurology, 2=Other, 3=N/A)  
Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DISPOSITION (FOR TRACKING PERSONNEL TO COMPLETE)

1. Dictation: \_\_\_\_\_ (0=Awaiting, 1=In)
2. To be Scheduled in Stroke Clinic: \_\_\_\_\_ (0=No, 1= Yes, 2=Pending)
3. Date Seen in Stroke Clinic: \_\_\_/\_\_\_/\_\_\_
4. Reason Not Seen in Clinic: \_\_\_\_\_ (1=N/A, 2=Refused, 3=Deceased, 4=Out of State)
5. Part of PSIP Follow-Up Protocol: \_\_\_\_\_ (0=No, 1=Yes, 9=Unknown)
6. Previously Seen: \_\_\_\_\_ (0=No, 1=Stroke, 2=Dementia, 3=Other)
7. Medical Records needed: \_\_\_\_\_ (0=No, 1=Yes)
8. Date: \_\_\_/\_\_\_/\_\_\_
9. CT/MRI/MRA to be obtained: \_\_\_\_\_ (0=No, 1= Yes)
10. Date: \_\_\_/\_\_\_/\_\_\_
11. Review Status: \_\_\_\_\_ (1=Awaiting Review, 2=Reviewed, 3=Need Info)
12. Date Reviewed: \_\_\_/\_\_\_/\_\_\_
13. Status of Case: \_\_\_\_\_ (0=Opened, 1=Closed)
14. Date: \_\_\_/\_\_\_/\_\_\_
15. Diagnosis: \_\_\_\_\_  
(1=Stroke, 2=TIA, 3=?TIA, 4=Parkinson's, 5=No CVA, 6=Other Neuro, 7=Migraine, 10=?Stroke, 20=Recurrent TIA, 9=Unknown, 11=Multiple Sclerosis)

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### Berkman Social Network Questionnaire Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | BSNQ  |
|-----|----|---|
|     |    | Before administering the BSNQ, read the following statement, <i><b>The next questions ask about your social support. Please tell me the response that most closely describes your current situation.</b></i>  |
|     |    | The technician hands the response card to the participant and explains the answer options   |
|     |    | * <i><b>Unknown</b></i> can be used only when participant is unable to answer, refuses, or if the question was not asked. The participant is not told this is an option for an answer.  |
|     |    | The technician reads the questions exactly as they are written on the form.   |
|     |    | <i><b>How many close friends do you have, people that you feel at ease with and can talk to about private matters?</b></i><br>The response should be based on whom the participant can talk to, in person and telephone contact.  |
|     |    | <i><b>How many of these close friends do you see at least once a month?</b></i><br>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 |
|     |    | <i><b>How many relatives do you have, people that you feel at ease with and can talk to about private matters?</b></i><br>The response should be based on relatives whom the participant can talk to, in person and telephone contact   |
|     |    | <i><b>How many of these relatives do you see at least once a month?</b></i><br>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.  |
|     |    | <i><b>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</b></i>   |

Berkman Social Network Cohort Exam 30  
Supervisor Checklist

|  |  |  |
|--|--|--|
|  |  | <b><i>community group?</i></b><br>This can include volunteer work or groups where the participant physically works or joins others. Again, it does not include telephone contact.  |
|  |  | <b><i>About how often do you go to religious meetings or services?</i></b><br>The answer should reflect how often the participant <b>goes</b> 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 <b>joins</b> others in this particular activity. |
|  |  | <b><i>Do you have health insurance other than Medicare or Medicaid?</i></b>  |
|  |  | The technician reads questions 8-12 exactly as they are written on the form  |
|  |  | The technician hands the response card to the participant and explains the answer options  |
|  |  | The technician does not try to explain any of the questions.   |
|  |  | Questions 1-4 & 8-12 should not be asked of participants with moderate to severe dementia and the questions should not be asked of the participant's proxy.  |

| Yes | No | Technician Review   |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

| Yes                                     | No | Deviations                                 |
|---|----|--|
|   |    | Did the tech perform any minor deviations? |
|   |    | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |    |  |
| <b>Supervisor Signature:</b>            |    |  |
| <b>Date:</b>                            |    |  |



Berkman Social Network Cohort Exam 30  
Supervisor Checklist

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### CES-D Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | CES-D  |
|-----|----|--|
|     |    | Each question is read to the participant who responds with one of four answers   |
|     |    | Response alternatives should be printed on paper which is placed in front of the participant for reference   |
|     |    | Each category of response should be explained to the participant prior to administering the scale.   |
|     |    | 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   |
|     |    | The technician checks that the participant understands that the questions refer to his/her feelings <u>only</u> during the past week   |
|     |    | The technician begins with the following script: <i>The questions below ask about your feelings. For each of the following statements, please say if you felt that way during the past week.</i>                 |
|     |    | The technician hands the response sheet to the participant and explains the response options   |
|     |    | The technician reads each item as it is written on the form, prefacing each question with the statement <i>During the past week</i> , then continuing with the response categories.                              |
|     |    | The technician discontinues reading the responses when the participant provides a response before they are finished.   |
|     |    | The technician circles the response on the form  |
|     |    | If the participant asks about the meaning of any item or tries to qualify a statement, the technician simply repeats the statement   |
|     |    | When the participant still asks about the meaning or says he/she does not understand, check <b>9</b> = refused or do not know. The technician <u>does not</u> try to interpret the statement for the participant |

CES-D Cohort Exam 30  
Supervisor Checklist

| Yes | No | <b>Technician Review</b>  |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

| Yes | No | <b>Deviations</b>                          |
|-----|----|--|
|     |    | Did the tech perform any minor deviations? |
|     |    | Did the tech perform any major deviations? |

**Comments/Corrections/Deviations:**

**Supervisor Signature:**

**Date:**

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### ECG Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | ECG Procedures  |
|-----|----|---|
|     |    | Participant is informed that ECG is going to be done. Procedure is explained. Participant is asked to lie on bed, get comfortable.  |
|     |    | Tech establishes a rapport with participant so participant is at ease with procedure. Answers any questions participant may have.   |
|     |    | Electrode location V2 is located in the 4 <sup>th</sup> intercostals space at the left sternal border, a mark is made with pencil.  |
|     |    | V1 is found at the same level as V2 but at the right sternal border, a mark is made.  |
|     |    | The E point is located at the intersection of the 5 <sup>th</sup> intercostal space and the mid-clavicular line, a mark is made.  |
|     |    | A line is drawn at mid axillary in exact vertical center plane of the thorax.   |
|     |    | V6 is located in the mid axilla at the same level as the E point. (The heart square should be firmly placed on the body and kept on a horizontal plane from the E point to the mid-axillary point). |
|     |    | The difference between the E0 measurement and V6 measurement is calculated.   |
|     |    | The difference from the above calculation is located in the heart square and V4 is located on the chest, a mark is made.  |
|     |    | V3 is located midway between V2 and V4, a mark is made.   |
|     |    | V5 is located midway between V4 and V6, a mark is made  |
|     |    | Alcohol wipe is used to clean each area, V1, V2, V3, V4, V5, V6 and RA, LA, RL, LL  |
|     |    | Chest Electrodes are placed at V1, V2, V3, V4, V5, V6 with the body of the electrode placed centrally on each pencil measurement, tab extending down.   |
|     |    | RA electrode is located on the upper (dorsal) surface of right forearm, placed with tab extending away from body.   |
|     |    | LA electrode is located on the upper (dorsal) surface of left forearm, placed with tab extending away from body.  |
|     |    | RL electrode is located on the inside surface of the right lower leg, placed with tab extending away from body.   |
|     |    | LL electrode is located on the inside surface left lower leg, placed with tab extending away from body.   |
|     |    | Leads are connected to electrodes in the following order: RL, LL, RA, LA, V1, V2, V3, V4, V5, V6.   |

ECG Cohort Exam 30  
Supervisor Checklist

| Yes | No | <b>ECG Procedures (cont'd)</b>   |
|-----|----|--|
|     |    | All leads are rechecked for proper placement   |
|     |    | The participant's identifying information is typed into the MAC.                     |
|     |    | Participant is requested to relax and lie quietly while ECG recording is in process. |
|     |    | When tracing appears acceptable, the ECG is printed and reviewed for errors          |
|     |    | Leads are disconnected and electrodes gently removed                                 |
|     |    | 2 copies of the ECG is printed and stamped with the correct exam number.             |

| Yes | No | <b>Technician Review</b>  |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

| Yes                                     | No | <b>Deviations</b>                          |
|---|----|--|
|   |    | Did the tech perform any minor deviations? |
|   |    | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |    |  |
|   |    |  |
| <b>Supervisor Signature:</b>            |    |  |
|   |    |  |
| <b>Date:</b>                            |    |  |
|   |    |  |

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### Standing Height Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | Standing Height Measurement  |
|-----|----|--|
|     |    | The 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.   |
|     |    | 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.   |
|     |    | Participant faces straight ahead with his/her head positioned in the Frankfort horizontal plane. 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). |
|     |    | 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.  |
|     |    | 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.   |
|     |    | Record measurement to the <b>nearest 1/4 inch, rounding down.</b>  |

Note: Measurement is not taken during offsite visits.

| Yes | No | Technician Review   |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

Standing Height Cohort Exam 30  
Supervisor Checklist

| <b>Yes</b>                              | <b>No</b> | <b>Deviations</b>                          |
|---|-----------|--|
|   |           | Did the tech perform any minor deviations? |
|   |           | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |           |  |
| <b>Supervisor Signature:</b>            |           |  |
| <b>Date:</b>                            |           |  |

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### Self-Reported Performance – KATZ-ADL’s Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | Activities of Daily Living   |
|-----|----|--|
|     |    | Ask the participant: <i>During the course of a normal day, can you do the following activities independently or do you need help from another person or use special equipment or use a device?</i> The answers will be coded by the examiner as:<br><b>0</b> = No help needed, independent<br><b>1</b> = Uses device, independent<br><b>2</b> = Human assistance needed, minimally dependent<br><b>3</b> = Dependent<br><b>4</b> = Does not do during a normal day<br><b>9</b> = Unknown |
|     |    | Dressing <ul style="list-style-type: none"> <li>• Undressing and redressing</li> <li>• Devices such as: velcro, elastic laces.</li> </ul>  |
|     |    | Bathing <ul style="list-style-type: none"> <li>• Including getting in and out of tub or shower</li> <li>• Devices such as: bath chair, long handled sponge, hand held shower, safety bars.</li> </ul>  |
|     |    | Eating <ul style="list-style-type: none"> <li>• Devices such as: rocking knife, spork, long straw, plate guard</li> </ul>  |
|     |    | Transferring <ul style="list-style-type: none"> <li>• Getting in and out of a chair</li> <li>• Devices such as: sliding board, grab bars, special seat.</li> </ul>   |
|     |    | Toileting activities <ul style="list-style-type: none"> <li>• Using the bathroom facilities and handling clothing</li> <li>• Devices such as: special toilet seat, commode</li> </ul>  |



KATZ-ADL'S Cohort Exam 30  
Supervisor Checklist

| Yes | No | Activities of Daily Living cont'd  |
|-----|----|--|
|     |    | Bladder Continence <ul style="list-style-type: none"> <li>• Ask if the person has "accidents"</li> <li>• Code =5 if use special products</li> <li>• Devices such as external catheter, drainage bags, ileal appliance, protective devices</li> </ul> |
|     |    | Bowel Continence <ul style="list-style-type: none"> <li>• Ask if the person has "accidents"</li> <li>• Code = 5 if use special products</li> <li>• Devices such as suppositories, bedpan, regular enemas, colostomy</li> </ul>                       |
|     |    | Walking on Level Surface about 50 Yards <ul style="list-style-type: none"> <li>• Devices such as: cane, crutches or walker</li> </ul>  |
|     |    | Walking up and down one Flight of Stairs <ul style="list-style-type: none"> <li>• Devices such as: handrail, cane</li> </ul>   |

| Yes | No | Technician Review   |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

| Yes                                     | No | Deviations                                 |
|---|----|--|
|   |    | Did the tech perform any minor deviations? |
|   |    | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |    |  |
|   |    |  |
| <b>Supervisor Signature:</b>            |    |  |
|   |    |  |
| <b>Date:</b>                            |    |  |
|   |    |  |

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### LAWTON IADL's Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | LAWTON IADL'S  |
|-----|----|--|
|     |    | Instructions: Use the prompt cards when asking questions.  |
|     |    | Questions are not administered to nursing home residents   |
|     |    | <b>1. Can you use the phone?</b><br>01: Completely unable to use phone<br>02: With some help<br>03: Without help (operates phone on own initiative, looks up, dials number, etc.)  |
|     |    | <b>2. Can you get to places out of walking distance?</b><br>01: Completely unable to travel unless special arrangements are made (taxi or car with human assistance)<br>02: With some help (when assisted or accompanied by another)<br>03: Without help (travels independently: drives car, public transportation or use of taxi) |
|     |    | <b>3. Can you go shopping for groceries?</b><br>01: Completely unable to do any shopping<br>02: With some help (needs to be accompanied on any shopping trip)<br>03: Without help<br>88: Resides in assisted living facility, does not do  |
|     |    | <b>4. Can you prepare your own meals?</b><br>01: Completely unable to prepare meals (needs meals prepared and served)<br>02: With some help (heat and serve prepared meals)<br>03: Without help (plans, prepares, serves meals)<br>88: Resides in assisted living facility, does not do  |
|     |    | <b>5. Can you do your own housework?</b><br>01: Completely unable to do any housework<br>02: With some help<br>03: Without help (performs light daily tasks- dishwashing, bed making, etc.)<br>88: Resides in assisted living facility, does not do  |
|     |    | <b>6. Can you do your own handyman work?</b><br>01: Completely unable to do any handyman work  |

LAWTON IADL'S Cohort Exam 30  
Supervisor Checklist

|  |  |   |
|--|--|---|
|  |  | 02: With some help<br>03: Without help<br>88: Resides in assisted living facility, does not do  |
|  |  | <b>7. Can you do your own laundry?</b><br>01: Completely unable to use the laundry<br>02: With some help (such as using laundry service)<br>03: Without help (does personal laundry completely)<br>88: Resides in assisted living facility, does not do |
|  |  | <b>8A Do you take medicines or use any medication?</b><br>01: Yes <i>Go to question 8B</i><br>02: No <i>Go to question 8C</i>   |
|  |  | <b>8B Do you take your own medicines</b><br>01: Completely unable to take own medicine<br>02: With some help (if someone prepares it or reminds you)<br>03: Without help (in the right doses at the right time)   |
|  |  | <b>8C If you had to take medicine, could you do it:</b><br>01: Completely unable to take own medicine<br>02: With some help (if someone prepares it or reminds you)<br>03: Without help (in the right doses at the right time)                          |
|  |  | <b>9. Can you manage your own money?</b><br>01: Completely unable to manage own money<br>02: With some help (manages day-to-day purchases, needs help with banking, major purchases)<br>03: Without help  |

| Yes | No | Technician Review   |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

LAWTON IADL'S Cohort Exam 30  
Supervisor Checklist

| <b>Yes</b>                              | <b>No</b> | <b>Deviations</b>                          |
|---|-----------|--|
|   |           | Did the tech perform any minor deviations? |
|   |           | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |           |  |
| <b>Supervisor Signature:</b>            |           |  |
| <b>Date:</b>                            |           |  |

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### Leisure Time Cognitive and Physical Activity Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | Leisure Time Cognitive and Physical Activities   |
|-----|----|--|
|     |    | Show and explain the answer key <i>before</i> administering the questionnaire.   |
|     |    | The participant is to choose one of the following answers for each activity:<br>Never<br>Daily (7 days/week)<br>Several Days Per Week (2-6 days/week)<br>Once Weekly (1 day/week)<br>Monthly (once a month)<br>Occasionally (less than once a month) |
|     |    | Ask each question individually. Start with, <i><b>During the past year, how often have you participated in the following leisure time activities?</b></i>  |
|     |    | <b>Reading books/newspapers</b><br>Note if pt is legally blind and listens to books on tape this should be marked yes  |
|     |    | <b>Writing for pleasure</b>  |
|     |    | <b>Doing crossword puzzles</b><br>Note: This includes word searches  |
|     |    | <b>Playing board games or cards</b>  |
|     |    | <b>Participating in organized group discussions</b>  |
|     |    | <b>Group exercises</b>   |
|     |    | <b>Housework</b>   |
|     |    | <b>Playing musical instruments</b>   |

| Yes | No | Technician Review   |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

Leisure Time Cognitive and PA Cohort Exam 30  
Supervisor Checklist

| <b>Yes</b>                              | <b>No</b> | <b>Deviations</b>                          |
|---|-----------|--|
|   |           | Did the tech perform any minor deviations? |
|   |           | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |           |  |
| <b>Supervisor Signature:</b>            |           |  |
| <b>Date:</b>                            |           |  |

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### MMSE Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | MMSE Methods   |
|-----|----|--|
|     |    | The MMSE asks questions to ascertain cognitive status. Responses are scored:<br>0=incorrect<br>1=correct<br>6=item administered, participant does not answer<br>9=test item not administered/unknown   |
|     |    | <b>Scoring for Administered Individual Items</b>   |
|     |    | Score <b>0</b> for the following reasons:<br>1. Incorrect response<br>2. <i>I don't know</i><br>3. Unintelligible response in context of other intelligible responses (see scoring of <b>9</b> as well).<br>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). |

| Yes | No | Questions: Scripts and Procedures for Each Question  |
|-----|----|--|
|     |    | <b>Introductory Script:</b> <i>I'm going to start by asking questions that require concentration and memory. Some questions are more difficult than others and some will be asked more than one time</i>   |
|     |    | Read each question on the form.  |
|     |    | Record the response on the form.   |
|     |    | <b>What is the date today?</b> (3 = correct score for month (1 pt), day (1 pt) and year (1 pt))<br><br>a. Ask for the date. Then ask specifically for parts omitted (e.g. <i>Can you also tell me what month, year it is?</i> )<br>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. |
|     |    | <b>What is the season?</b><br>Since distinctions between seasons can be difficult during certain months, one week leeway is allowed on either side of the actual date.   |

MMSE Cohort Exam 30  
Supervisor Checklist

|  |  |  |
|--|--|--|
|  |  | <p><b><i>What day of the week is it?</i></b></p> <p><b><i>What Town, County and State Are We in?</i></b><br/>For offsite visits, refer to the section of the manual titled “New England Counties” for a complete list of all counties.</p>   |
|  |  | <p><b><i>What is the name of this place?</i></b><br/>Ask the participant where they are. Any appropriate answer is okay. On home visits, the examiner can ask, <i>What is the address of this place?</i></p>   |
|  |  | <p><b><i>What floor of the building are we on?</i></b></p>   |
|  |  | <p><b><i>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.</i></b></p> <ol style="list-style-type: none"> <li>a. Make sure participant is attentive when beginning the question.</li> <li>b. Read the list of objects slowly. <b>DO NOT REPEAT ITEMS UNTIL AFTER THE FIRST TRIAL.</b></li> <li>c. If participant asks you to repeat the 3 items, respond, <i>Can you tell me the items I just mentioned?</i> or <i>Just do the best you can.</i></li> <li>d. Read <i>Apple, Table, Penny.</i></li> <li>e. Script: <i>Could you repeat the three items for me?</i></li> <li>f. Record the score for the first trial.</li> <li>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.</li> <li>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, <i>apple, table, penny</i>, they may repeat <i>April, tablet, pencil</i> -- these alternate responses should be accepted both under the repetition and recall conditions).</li> </ol> |
|  |  | <p><b><i>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.</i></b> 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).</p> <ol style="list-style-type: none"> <li>a. Read the question slowly. Where <i>world</i> has hyphens between the letters, spell out the word.</li> <li>b. Repeat the spelling if necessary.</li> </ol>   |



MMSE Cohort Exam 30  
Supervisor Checklist

|            |           |  |
|------------|-----------|--|
|            |           | c. Record the participant's response. Write in the letter as the participant has spelled the word.   |
| <b>Yes</b> | <b>No</b> | <b>Questions (Continued)</b>   |
|            |           | <b><i>What are the 3 objects I asked you to remember a few moments ago?</i></b><br>Items may be repeated in any order  |
|            |           | <b><i>What is this called? (Watch)</i></b><br>Show the wristwatch to the participant<br>Correct responses include: watch, wristwatch, timepiece<br>Code 1 = correct answer   |
|            |           | <b><i>What is this called? (Pencil)</i></b><br>a. Show the pencil to the participant. NOTE: the pencil should be a standard sharpened wooden pencil with eraser.<br>b. Correct responses include: Pencil, number 2 pencil<br>Code 1 = correct for correct answer.  |
|            |           | <b><i>Please repeat the following: No ifs, ands or buts.</i></b><br>a. Enunciate clearly -- include the "S" at the end of <i>ifs</i> , <i>ands</i> , or <i>buts</i> , (if you think the participant heard you but repeated it incorrectly, make a note of what was missed and score 0).<br>b. Allow only <b>one</b> attempt.<br>Code 1 = correct when the participant correctly repeated the phrase.<br>Code 0 = incorrect when the participant did not repeat the phrase <u>exactly</u> .<br>Occasionally hearing impairments prevent participants from correctly hearing test questions. In the case of repeating <i>no ifs, ands, or buts</i> , some judgment must be made on the part of the examiner as to whether the participant could hear the "s" or not. |
|            |           | <b><i>Please read the following and do what it says.</i></b><br>a. Hand participant the "Please Close Your Eyes" card.<br>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.<br>Code 1 = correct when the participant closes his/her eyes.<br>Code 0 = incorrect when the participant did not close his/her eyes.  |
|            |           | <b><i>Please write a sentence.</i></b><br>a. Script: <i>Write any complete sentence on this piece of paper for me.</i><br>b. Repeat the instructions to participant if necessary.<br>c. Written commands, such as <i>sit down</i> , where the subject is implied, are considered correct responses.  |

MMSE Cohort Exam 30  
Supervisor Checklist

|  |  |  |
|--|--|--|
|  |  | <p>d. Spelling and/or punctuation errors are not counted as errors.<br/>Code <b>1</b> = correct if the participant wrote a complete sentence as directed. 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.<br/>Code <b>0</b> = incorrect when the participant did not write a complete sentence as directed. Code <b>6</b> = Low vision</p>   |
|  |  | <p><b><i>Please copy this drawing.</i></b><br/>a. Script: <i>Here is a drawing. Please copy the drawing on the same piece of paper.</i><br/>b. If the participant asks if the figures should be drawn separately or together the examiner should respond, <i>Draw the figures as you see them.</i><br/>c. To be correct, each pentagon must have 5 sides, 5 sides that point outward. The two figures must be overlapping.<br/>d. The overlap figures must have 4 sides.<br/>Code “<b>0</b>” = incorrect when the participant’s figure did not match.</p>  |
|  |  | <p><b><i>Take this piece of paper in your right hand, fold it in half with both hands, and put it in your lap.</i></b></p> <p>(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. )</p> <p>a. Read the full statement <b>BEFORE</b> handing the paper to the participant.<br/>b. <b>DO NOT</b> 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.<br/>c. <b>DO NOT</b> 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).</p> <p>Code: <b>1</b> for <u>each</u> correctly performed act (code <b>6</b> if low vision).</p> |

MMSE Cohort Exam 30  
Supervisor Checklist

| Yes | No | Factors Affecting Mental Status Testing |            |              |                |   |
|-----|----|---|------------|--------------|----------------|---|
|     |    | <u>NO</u>                               | <u>YES</u> | <u>MAYBE</u> | <u>UNKNOWN</u> |   |
|     |    | Illiteracy or low education             | 0          | 1            | 2              | 9 |
|     |    | Poor eyesight                           | 0          | 1            | 2              | 9 |
|     |    | Poor hearing                            | 0          | 1            | 2              | 9 |
|     |    | Depression/Possible Depression          | 0          | 1            | 2              | 9 |
|     |    | Other                                   | 0          | 1            | 2              | 9 |

| Yes | No | Technician Review  |
|-----|----|--|
|     |    | Did the technician ask the questions exactly as written on the form? |
|     |    | Did the technician correctly use the handouts?                       |
|     |    | Did the technician score the participant's responses correctly?      |
|     |    | Did the technician review the form for completeness?                 |
|     |    | Did the technician review the form for neurology referrals/waiver?   |

| Yes | No | Deviations                                 |
|-----|----|--|
|     |    | Did the tech perform any minor deviations? |
|     |    | Did the tech perform any major deviations? |

**Comments/Corrections/Deviations:**

**Supervisor Signature:**

**Date:**

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

### NAGI & Rosow-Breslau Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | Nagi Questions   |
|-----|----|--|
|     |    | Show and explain the answer key <i>before</i> administering the questionnaire. The participant is to choose one of the following answers for each activity:<br>No Difficulty<br>A Little Difficulty<br>Some Difficulty<br>A Lot of Difficulty<br>Unable to Do<br>Don't Do on MD Orders<br>Unable to Assess Difficulty Because Not Done as Part of Daily Activities |
|     |    | Start with, <i>For each activity, tell me whether you have No Difficulty, A little Difficulty, Some Difficulty, A Lot of Difficulty, if you are Unable to do it, if you Do not do it on MD Orders, or if you are Unable to Assess Difficulty Because the activity is not done as part of your daily activities.</i>  |
|     |    | Read each activity separately, and go through the level of difficulty for each one until the participant understands the response choices.   |
|     |    | <b>Pulling or pushing large objects like a living room chair</b>   |
|     |    | <b>Either stooping, crouching, or kneeling</b>   |
|     |    | <b>Reaching or extending arms below shoulder level</b>   |
|     |    | <b>Reaching or extending arms above shoulder level</b>   |
|     |    | <b>Either writing, or handling or fingering small objects</b>  |
|     |    | <b>Standing in one place for long periods, say 15 minutes</b>  |
|     |    | <b>Sitting for long periods, say 1 hour</b>  |
|     |    | <b>Lifting or carrying weights under 10 pounds (like a bag of potatoes)</b>  |
|     |    | <b>Lifting or carrying weights over 10 pounds (like a very heavy bag of groceries)</b>   |

NAGI & Rosow-Breslau Cohort Exam 30  
Supervisor Checklist

| Yes | No | Rosow-Breslau Questions  |
|-----|----|--|
|     |    | <b>Are you able to do heavy work around the house, like shovel snow or wash windows, walls, or floors without help?</b> (Scrub floors, wash windows, rake leaves, mow lawn). <i>(Note: Code 2 if person does not do this activity).</i>                            |
|     |    | <b>Are you able to walk half a mile without help?</b> (Walk one half mile or 4-6 blocks without stopping for more than 5 minutes). <i>(Note: Code 2 if person does not do this activity).</i> If the participant answers no the technician asks the next question. |
|     |    | <b>If no, then: Are you able to walk a quarter of a mile without help?</b> (about 2-3 blocks)  |
|     |    | <b>Are you able to walk up and down stairs to the second floor without any help?</b> If the participant answers no the technician asks the next question.  |
|     |    | <b>If no, then: Are you able to climb up 10 steps without help?</b>  |
|     |    | <b>Do you drive now?</b><br>If the participant answers no the technician asks the next question  |
|     |    | <b>If no, then, Reason for <u>not</u> driving now</b><br>(1=Health, 2=Other non-health related reasons, 3=never licensed, 8=N/A, current driver, 9=Unknown).   |

| Yes | No | Technician Review   |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician correctly use the answer key?                          |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

| Yes                                     | No | Deviations                                 |
|---|----|--|
|   |    | Did the tech perform any minor deviations? |
|   |    | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b> |    |  |
| <b>Supervisor Signature:</b>            |    |  |
| <b>Date:</b>                            |    |  |

NAGI & Rosow-Breslau Cohort Exam 30  
Supervisor Checklist

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

**Observed Physical Performance Supervisor Checklist**

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | <b>JAMAR Hand Grip Strength Test</b>  |
|-----|----|---|
|     |    | Introductory script: <i>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.</i>               |
|     |    | Participant is seated in chair with arms, forearm resting on chair arm, elbow at about a 90 degree angle.   |
|     |    | Participant should hold JAMAR in upright position, wrist in neutral position, JAMAR facing the technician.  |
|     |    | Make sure that red peak-hold needle is set to zero.   |
|     |    | 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.  |
|     |    | 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. |
|     |    | Repeat steps until three measurements are recorded with the right hand.   |
|     |    | Repeat steps for three trials with the left hand.   |

| Yes | No | <b>Repeated Chair Stands</b>  |
|-----|----|---|
|     |    | Repeated Chair Stands is explained to participant   |
|     |    | A demonstration of the Chair Stands is provided to participant.   |
|     |    | Participant is asked if s/he would feel safe doing a Chair Stand. (If no, test is over. If yes, continue)                   |
|     |    | Participant is asked to demonstrate the Chair Stand once, without using arms. (arms are folded across chest)                |
|     |    | The safety and ability of participant is assessed   |
|     |    | The Participant is asked if s/he thinks it would be safe to try and stand up from a chair five times without using his arms |
|     |    | It is explained to Participant that s/he will be timed for the five Chair Stands  |
|     |    | The command "Ready, Stand" and timing begin   |

Observed Physical Performance Measures Cohort Exam 30  
Supervisor Checklist

|  |  |  |
|--|--|--|
|  |  | simultaneously   |
|  |  | The stopwatch is started on the word “Stand”.  |
|  |  | Once participant completes each stand, tester counts out loud.   |
|  |  | Data sheet is completely and accurately filled out, questions are answered and pulse rate is recorded. |

| Yes | No | <b>Stand 1: Side by Side</b>  |
|-----|----|---|
|     |    | Instruction for the stand is explained to participant   |
|     |    | Demonstration of stand is provided to participant.  |
|     |    | Participant is wearing comfortable shoes/no bare feet or slippers.                                    |
|     |    | The participant is able to stand unaided.   |
|     |    | “Are you ready? Begin.”   |
|     |    | Participant is allowed to hold onto something for balance before timing begins.                       |
|     |    | Results recorded on data sheet  |
|     |    | If participant is unable to hold for 10 seconds, then the next two stands are skipped.                |
| Yes | No | <b>Stand 2: Semi-Tandem</b>   |
|     |    | Instruction for the stand is explained to participant   |
|     |    | Demonstration of stand is provided to participant.  |
|     |    | Timing begins once the participant is balanced  |
|     |    | Participant is allowed to hold onto something for balance before timing begins.                       |
|     |    | “Are you ready? Begin.”   |
|     |    | Results recorded on data sheet  |
|     |    | If the participant is unable to complete the semi-tandem stand for 10 seconds, skip the tandem stand. |
| Yes | No | <b>Stand 3: Tandem</b>  |
|     |    | Instruction for the stand is explained to participant   |
|     |    | Demonstration of stand is provided to participant.  |
|     |    | Timing begins once the participant is balanced  |
|     |    | Participant is allowed to hold onto something for balance before timing begins                        |
|     |    | “Are you ready? Begin”  |
|     |    | Results recorded on data sheet  |



Observed Physical Performance Measures Cohort Exam 30  
Supervisor Checklist

| Yes | No | <b>Walk One</b>   |
|-----|----|---|
|     |    | <i>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.</i>   |
|     |    | <i>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?</i>  |
|     |    | If participant says that it would not be safe indicate this on the data sheet and abort walks.  |
|     |    | <i>Please watch while I demonstrate. When I want you to start, I will say "Ready, begin."</i>   |
|     |    | Have the participant line up his or her toes behind the line on the floor. Start timing when you see the participant move and stop timing when the participant breaks the plane of the line at the end of the course. Record the time on data sheet.  |
|     |    | <b>Walk Two</b>   |
|     |    | <i>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.<br/>Ready? Begin.</i>  |
|     |    | <b>Walk Three</b>   |
|     |    | <i>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.<br/>Ready? Begin.</i>   |
|     |    | If a walking aid is used, this will be recorded.<br><b>Coding</b><br>0=No aid 1=Cane 2=Walker 3=Wheelchair<br>4=Other 9=Unknown   |
|     |    | For each walk, the following questions will be answered:<br><i>Was this test completed?</i><br><b>Coding</b><br>0 = No 1=Yes 8=Not attempted 9=Unknown<br><i>If the test was not attempted or completed, why not?</i><br><b>Coding</b><br>1 = Physical limitation<br>2 = Refused<br>3 = Other (write in)<br>9 = Unknown |
|     |    | If offsite, code course length in meters (3 or 4)   |
|     |    | Walk time for each walk is recorded.  |

Observed Physical Performance Measures Cohort Exam 30  
Supervisor Checklist

| Yes | No | <b>Technician Review</b>  |
|-----|----|---|
|     |    | Did the technician introduce the set of questions with clear explanation? |
|     |    | Did the technician ask the questions exactly as written on the form?      |
|     |    | Did the technician correctly clarify any questions the participant had?   |
|     |    | Did the technician score the participant's responses correctly?           |
|     |    | Did the technician review the form for completeness?                      |

| Yes | No | <b>Deviations</b>                          |
|-----|----|--|
|     |    | Did the tech perform any minor deviations? |
|     |    | Did the tech perform any major deviations? |

**Comments/Corrections/Deviations:**

**Supervisor Signature:**

**Date:**

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_ Participant Label \_\_\_\_\_

**Sociodemographics, Use of Services, Falls & Fractures  
 Supervisor Checklist**

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | Sociodemographics  |
|-----|----|--|
|     |    | <p><b><i>Where do you live?</i></b><br/> <u>Coding</u><br/> <b>0</b> = Private residence<br/> <b>1</b> = Nursing home<br/> <b>2</b> = Other institution, such as: assisted living, retirement community<br/> <b>9</b> = Unknown</p>  |
|     |    | <p><b><i>Does anyone live with you?</i></b> (NOTE: Code nursing home resident as NO to these questions.)<br/> <u>Coding</u><br/> <b>0</b> = No<br/> <b>1</b> = Yes<br/> <b>9</b> = Unknown</p>   |
|     |    | <p>If the answer to the above question was <b>0</b> or <b>9</b> you may skip the following section. If the answer was yes, the examiner needs to determine who lives in the same household.</p> <ul style="list-style-type: none"> <li>Spouse</li> <li>Children</li> <li>Other Relative</li> </ul> <p><u>Coding</u><br/> <b>0</b> = No<br/> <b>1</b> = Yes, less than 3 months per year<br/> <b>2</b> = Yes, more than 3 months per year<br/> <b>9</b> = Unknown</p> |
|     |    | <p><b><i>Are you currently working at a paying job or doing unpaid volunteer or community work?</i></b><br/> <u>Coding</u><br/> <b>0</b>= No<br/> <b>1</b>= Yes</p>  |
|     |    | <p><b><i>During the past 6 months (180 days) how many days were you so sick that you were unable to carry out your usual activities? (999=Unknown)</i></b></p>   |

**Sociodemographics, Use of Services, Falls and Fractures  
Supervisor Checklist**

| Yes | No | Self-assessment questions (Proxy may NOT be used to help complete this section)   |
|-----|----|---|
|     |    | <b>In general, how is your health now?</b><br>1= Excellent, 2=Good, 3=Fair, 4= Poor, 9=Unknown  |
|     |    | <b>Compare your health to most people your own age:</b><br>1=Better, 2=About the same, 3=Worse than most people your own age, 9=Unknown |
|     |    | <b>As I get older , things are:</b><br>1=better than I thought they'd be, 2=About the same that I thought they'd be, 3=Worse, 9=Unk.    |

| Yes | No | Use of Services  |
|-----|----|--|
|     |    | <b><i>Have you been admitted to a nursing home (or skilled facility) since your last exam or medical history update?</i></b><br><br>If a participant moved into a nursing home prior to the two year interim, then the first question 1 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 = No.  |
|     |    | <b><i>Since you last exam, have you been visited by a nursing service, or used home, community, or outpatient programs?</i></b><br>If yes, check all services:<br><div style="text-align: center;">                     Home Health aides<br/>                     Homemaker visits<br/>                     Visiting Nurses<br/>                     Other (write it) _____                 </div>  |
|     |    | <b><i>Are you in bed or a chair for most or all of the day (on the average)?</i></b><br><i>Note: this is a <b>lifestyle</b> question, not related to poor health.</i>  |
|     |    | <b><i>Do you need a special aid (wheelchair, cane, walker) to get around?</i></b> If the participant answers yes, ask which equipment they use:<br><div style="text-align: center;">                     Cane or walking stick<br/>                     Wheelchair<br/>                     Walker<br/>                     Other (write in) _____                 </div> <div style="text-align: center;"> <u>Coding:</u><br/>                     0= No<br/>                     1= Yes, always<br/>                     2= Yes, sometimes<br/>                     9=Unknown                 </div> |

**Sociodemographics, Use of Services, Falls and Fractures  
Supervisor Checklist**

| <b>Yes</b> | <b>No</b> | <b>Falls and Fractures</b>   |
|------------|-----------|--|
|            |           | <i>Since your last exam have you accidentally fallen and hit the floor or ground? (code as no if during sports activity)</i><br>If yes, the next question is asked |
|            |           | If yes, How many times did you fall in the past year?  |
|            |           | <i>Since your last exam or medical history update have you broken any bones?</i>   |
|            |           | If yes, the location of the 1 <sup>st</sup> three fractures are listed individually  |

| <b>Yes</b> | <b>No</b> | <b>Technician Review</b>  |
|------------|-----------|---|
|            |           | Did the technician introduce the set of questions with clear explanation? |
|            |           | Did the technician ask the questions exactly as written on the form?      |
|            |           | Did the technician correctly clarify any questions the participant had?   |
|            |           | Did the technician score the participant's responses correctly?           |
|            |           | Did the technician review the form for completeness?                      |

| <b>Yes</b> | <b>No</b> | <b>Deviations</b>                          |
|------------|-----------|--|
|            |           | Did the tech perform any minor deviations? |
|            |           | Did the tech perform any major deviations? |

**Comments/Corrections/Deviations:**

**Supervisor Signature:**

**Date:**

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: I, II, III, IV (circle one)  
 Supervisor: Elizabeth Oberacker Participant label: \_\_\_\_\_

### Height & Weight Supervisor Checklist

Check that each procedure is carried out correctly. Check yes if correct or no if incorrect. Provide an explanation of the incorrect item. Items are presented in the sequence of the examination procedure, but may require confirmation before or after the exam.

| Yes | No | Weight Measurement   |
|-----|----|--|
|     |    | Ask participant to wear FHS gown for measurement if he/she brought a heavy gown from home. The participant should remove slippers or shoes.  |
|     |    | Prior to asking the participant to step onto the scale, lift the counter poise and position it at zero.  |
|     |    | Ask the participant to step onto the scale, facing measurement beam.   |
|     |    | 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. |
|     |    | 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.   |
|     |    | Adjust the top poise until the beam is evenly balanced.  |
|     |    | 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.   |
|     |    | Record the weight to the nearest pound; <b>round up if <math>\geq 0.5</math>, round down if <math>&lt; 0.5</math>.</b>   |

| Yes | No | Standing Height Measurement  |
|-----|----|--|
|     |    | The 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.   |
|     |    | 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.   |
|     |    | Participant faces straight ahead with his/her head positioned in the Frankfort horizontal plane. 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). |
|     |    | 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.  |
|     |    | 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.   |

Date: \_\_\_\_\_ Tech ID# \_\_\_\_\_ Quarter: I, II, III, IV (circle one)  
Supervisor: Elizabeth Oberacker Participant label: \_\_\_\_\_

| <b>Yes</b>  | <b>No</b> | <b>Deviations</b>                          |
|---|-----------|--|
|   |           | Did the tech perform any minor deviations? |
|   |           | Did the tech perform any major deviations? |
| <b>Comments/Corrections/Deviations:</b><br><br><br><br><br><br><br><br><br><br> |           |  |
| <b>Supervisor Initials:</b><br><br>   |           |  |
| <b>Date:</b><br><br>  |           |  |

## MD Chart Review - Offsite Visits

Cohort exam 30 has started including off-site visits to participants in either a nursing home or personal residence. Elizabeth Oberacker will continue to do the off-site visits. As a technician she will complete the physician portion of the exam. The physician medical history portion of the form has been changed for participants with moderate to severe cognitive impairment since the participant can not provide the details needed for the standard physician form. The format is very similar to the medical history update. The exam will then need to be completed by a physician. ALL physicians will be asked to share in this responsibility during their assigned clinic time. Clinic staff will distribute the charts as equitably as possible.

The physician chart review includes the following:

- Review the physician exam form and complete all physician opinions regarding endpoints (AP, MI, CI, CHF, stroke, IC, etc) based upon the coded and written narratives Elizabeth obtained at the time of the visit. Cohort charts do **NOT require a second opinion**.
- Read and compare the current ECG to the previous ECG. **Code the ECG on the exam form. Add your ECG reading to the letter to the personal physician. Expedite the chart or call the participant's physician if a new major change in the ECG is detected that requires medical follow up.**
- Review the letter to the personal physician making any deletions/additions/changes in medical terminology that are required **and sign the letter**.
- Complete the Referral Tracking (page: REF1)
- Initial and date the routing sheet attached to the front of the chart.
- Return the chart the SAME day to the clinic tech at the board in clinic. **Charts are not to leave the clinic area.**

Important Notes:

1. There is a Form A medical history form for cognitively intact participants and a Form B for cognitively impaired participants. Form B does not include physician opinions at the bottom of each page because the participants are not asked to report symptoms.
2. Elizabeth may call the clinic during an offsite visit and ask to speak to a doctor. She will do this if the participant is experiencing problems with their blood pressure or any other health related issues that need immediate follow-up. If Elizabeth calls it is the **responsibility of the MD** to contact the participants doctor (Elizabeth will provide you with the contact information) if they find it necessary. If a doctor is contacted then the clinic doctor is to call Elizabeth back with the plan of action.

Thanks for your help with this very important task. Please direct any questions to [REDACTED] at ext. [REDACTED]



**Cohort Exam 30**  
**Home Visit/Nursing Home Visit**  
**Routing Sheet**

Participant Label: \_\_\_\_\_

Date of Visit: \_\_\_/\_\_\_/\_\_\_

Offsite Technician: \_\_\_\_\_

| <b>Chart Flow</b>                  | <b>Initial &amp; Date Completed</b> |
|------------------------------------|-------------------------------------|
| MD Chart/ECG Review<br>in Clinic ↓ |                                     |
| Offsite Technician ↓               |                                     |
| Cohort Coordinator ↓               |                                     |
| Neurology Group ↓                  |                                     |
| Vicki Peterson                     |                                     |

\* Routing Sheet to be returned to Offsite Technician \*

## **Cognitive Function: MMSE WORLD Scoring Protocol**

- A. 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.
- B. If a participant has an evident cognitive impairment and the MMSE must be scored to determine if the participants consent should be waived, then “WORLD” will need a score.
- C. In order to score world, a staff member must use the master sheet listing all of the possible word combinations with the points for each spelling.

```

/*PROGRAM CREATED BY ██████████ AND ██████████ MODIFIED 05/21/04
   modified version of ██████████ rom j ██████████ is for examCYCLE#*/

/*program masterworld.sas*/
/*purpose: for scoring "WORLD" at a particular exam cycle "CYCLE#"*/
/*to use this program - copy this program, replace CYCLE# = exam cycle number*/
/*you must create a data set from the minimal exam (either clean from
/ fram/data or unclean from exam tables, prior to running this program*/
/*call the incoming exam data set examCYCLE#*/

/*DO NOT MAKE CHANGES TO THIS MASTER PROGRAM
   COPY THIS PROGRAM TO A PROGRAM CALLED WORLDCYCLE#.sas,
   where the cycle# is the number of the exam cycle you are working with*/

libname in '.';
libname out '.';
libname fram '/fram/data';

options nocenter ls = 80 ps=59;

/*take in world variable from examCYCLE# data*/
/*pad spaces with # to make data fit program*/
/*replace g485 with appropriate variable for cycle*/

data change; set fram.examCYCLE#;                                *update;
if g485 = "-1" then g485 = " ";
if g485 = "0" then g485 = " ";
if g485 = "6" then g485 = " ";
if g485 = "66666" then g485 = " ";
if g485 = "9" then g485 = " ";
if g485 = "99999" then g485 = " ";
if g485 = "blank" then g485 = " ";

data pad; length g485 $5; set change;
keep id g485;
g485=translate(g485,"#"," ","#####", "####.");

data name; set pad;
rw_worCYCLE# = lowercase(g485);                                *update;

/*FROM MASTER PROGRAM FOR SCORING WORLD*/
data scoreCYCLE#; set name;                                    *update;

           /*****5 points*****/

if rw_worCYCLE# in ('dlrow', 'd;rpw') then worldCYCLE#=5;    *update;

           /*****4 points*****/
else if rw_worCYCLE# in
('d#row', 'dl#ow', 'dlow#', 'dlowr', 'dlr#w', 'dlro#', 'dlrod',
 'dlroe', 'dlrof', 'dlrol', 'dlrw#', 'dlrwo', 'dluow', 'dorow', 'drow#',
 'lrow#', 'ldow', 'dloow', 'dlror', 'dlros', 'drrow', 'dwrow', 'dlrow',
 'dlrou', 'dltow', 'drowl', 'lrowd', 'dlrdw', 'dlowf', 'dloww', 'dlrlw',
 'dllro', 'dlraw', 'dliow', 'slrow', 'dlaow', 'dlowa', 'dlowd',
 'rlrow', 'dlvow', 'dlroo', 'dlowo', 'dlowl', 'dl-ow', 'tlrow')
then worldCYCLE#=4;                                          *update;

```

```

                /*****3 points*****/
else if rw_worCYCLE# in
    ('#dlow', '#dlrw', '#lrow', '#rowl', 'dl##w', 'dl#ol', 'dlaw#', 'dld#w',
     'dlerw', 'dlo##', 'dlo#w', 'dloa#', 'dloaw', 'dlolo', 'dlorw', 'dlot#',
     'dlouw', 'dlr##', 'dlw##', 'dlwo#', 'dlwod', 'dlwor', 'dlwro', 'dolow',
     'dorod', 'dow##', 'dowl#', 'dowr#', 'dr#ow', 'dr##w', 'drlow', 'dro##',
     'droid', 'drolo', 'drolw', 'drorl', 'drorw', 'dros#', 'drwro',
     'dulrw', 'ldrow', 'llow#', 'lrw##', 'dlarw', 'dldrw', 'dldw#', 'dleiw',
     'dloh', 'dlold', 'dlolw', 'dloro', 'dlral', 'dlrdl', 'dlwao',
     'dlwol', 'dlwow', 'drdw#', 'dro#d', 'dro#w', 'drol#', 'low##',
     'lro##', 'dlodw', 'dlol#', 'dlrld', 'dluo#', 'dluod', 'dlw#o', 'dlwoo',
     'drlw#', 'drouw', 'drw##', 'lrorw', 'dl0#w', 'dla#w', 'delro', 'dlod#',
     'dlood', 'dlore', 'dlurw', 'dlwr#', 'dlwr#', 'dlwr#', 'droww', 'ldraw', 'clowr', 'elorr#',
     'lrod#', 'dl-lw', 'dlbob', 'doroy', 'drawr', 'elow#', 'lrdwr', 'lrouo',
     'alrod', 'dldou', 'dlrd#', 'dlrf#', 'dluw#', 'dlwr#', 'dowlo', 'drod#',
     'dowo#', 'drew#', 'dowld', 'douw#', 'droiw', 'dlrlo', 'dloy#', 'dro-w',
     'olrw#', 'lowrd', 'lowld', 'lorow', 'dulow', 'dlour', 'ddrw#', 'darw#',
     'dlolr', 'dlo-w', 'druow', 'lrolw')
    then worldCYCLE#=3;
                *update;

                /*****2 points *****/
else if rw_worCYCLE# in
    ('#lord', 'd#old', 'der##', 'dlord', 'dluro', 'do###', 'dol#w',
     'dolfw', 'dolw#', 'dor##', 'dor#w', 'dorld', 'dorlw', 'dorw#', 'dr###',
     'drl#w', 'dwl##', 'dwo##', 'dwold', 'dworl', 'jrood', 'ldow#', 'ldowr',
     'ldwor', 'llaw#', 'lod##', 'lr###', 'lword', 'lwr##', 'soaow', 'd-o-#',
     'd-o-l', 'd-r-l', 'd-r-o', 'd-w-o', 'dl###', 'dlaro', 'dlorg', 'do##w',
     'do#w#', 'dol##', 'dold#', 'dolro', 'dolwd', 'dor#l', 'dord#', 'dorl#',
     'drl##', 'duorw', 'dwrl', 'lerod', 'lo#w#', 'now_i', 'oww##', 'rod##',
     'd###w', 'dly##', 'drl#', 'dw###', 'dwrol', 'elw##', 'ldrol', 'ldrw#',
     'lw###', 'd-l-r', 'd-lr-', 'd_l_r', 'lro#w', 'd#r##', 'd#w##',
     'dla##', 'dlrd#', 'dolor', 'dolr#', 'dwlro', 'dwor#', 'dworw', 'dwow#',
     'rolow', 'darlw', 'dlorh', 'draof', 'drlod', 'dwolw', 'dwr##', 'dwro#',
     'elhw#', 'dlld#', 'doold', 'doldo', 'dwlro', 'ealow', 'iow##', 'lorw#',
     'dlor#', 'dlorl', 'dolrw', 'dolod', 'dool#', 'doul#', 'drlrw', 'dwol#',
     'elorr', 'ldro#', 'lold#', 'lorwd', 'dlndr', 'dalw#', 'daw##', 'dplw#',
     'dldlo', 'driow', 'docb#', 'dwrld', 'edrol', 'wlrl', 'rolw#', 'roldw',
     'owold', 'lduow', 'duolw', 'dolrl', 'dolhw', 'doldw', 'dluor', 'dllor',
     'dle##', 'dlc##', 'dlbla', 'loaw#', 'dlorb', 'drd##')
    then worldCYCLE#=2;
                *update;

                /*****1 point*****/
else if rw_worCYCLE# in
    ('d####', 'daeni', 'dole#', 'dolm#', 'dolrd', 'ldo#w', 'ldorw', 'lordw',
     'odo#w', 'orldw', 'wod##', 'world', 'wrold', 'odnom', 'wlo#w', 'd#-r-',
     'd-l-o', 'l####', 'ldouw', 'lno#w', 'lord#', 'rdo##', 'srow', 'wlrod',
     'htor#', 'norlw', 'wol##', 'word#', 'wlrow', 'd_l_o', 'dna##', 'ld###',
     'ler##', 'old##', 'rdl##', 'wload', 'worl#', 'wsic#', 'dile#', 'ldolo',
     'rld##', 'warld', 'dolwr', 'w####', 'wlorl', 'dorli', 'dylor', 'ldw##',
     'odw##', 'wl###', 'worar', 'odn##', 'drlor', 'drlro', 'ldok#', 'to###',
     'dlon#', 'dwal#', 'wlor#', 'rdld#', 'wyde#', 'wld##', 'wrroc', 'wr###',
     'wlrol', 'rldwo', 'dwld#', 'dalyo')
    then worldCYCLE#=1;
                *update;

                /*****0 points*****/
else if rw_worCYCLE# in ('ldorl', 'ldor#', 'wold#', 'smmp#', 'ord##', '#####',
    'gorl#', '24ing', 'worlc', 'wolmd', 'worlt', 'wolc#', 'ole##')

```

```

        then worldCYCLE#=0;                                *update;
else worldCYCLE#=. ;                                     *update;

/*      removed so no unscored fall through
if rw_worCYCLE# in ('""###', '#-#-#', 'no_tr') then worldCYCLE# = . ; *update;
*/

data score0 score1 score2 score3 score4 score5 unscored problem;
  set scoreCYCLE#;
if worldCYCLE#=0 then output score0;                    *update;
else if worldCYCLE#=1 then output score1;               *update;
else if worldCYCLE#=2 then output score2;               *update;
else if worldCYCLE#=3 then output score3;               *update;
else if worldCYCLE#=4 then output score4;               *update;
else if worldCYCLE#=5 then output score5;               *update;
else if worldCYCLE#=. then output unscored;              *update;
else output problem;

title2 'worldCYCLE# score from karens modified program, score=5'; *update;
proc freq data=score5; table rw_worCYCLE#; run;          *update;

title2 'worldCYCLE# score from karens modified program, score=4'; *update;
proc freq data=score4; table rw_worCYCLE#; run;          *update;

title2 'worldCYCLE# score from karens modified program, score=3'; *update;
proc freq data=score3; table rw_worCYCLE#; run;          *update;

title2 'worldCYCLE# score from karens modified program, score=2'; *update;
proc freq data=score2; table rw_worCYCLE#; run;          *update;

title2 'worldCYCLE# score from karens modified program, score=1'; *update;
proc freq data=score1; table rw_worCYCLE#; run;          *update;

title2 'worldCYCLE# score from karens modified program, score=0'; *update;
proc freq data=score0; table rw_worCYCLE#; run;          *update;

                                                                    *update;
title2 'worldCYCLE# score form karens modified program, not scored or missing';
proc freq data=unscored; table rw_worCYCLE#; run;
*update;
title 'CK FREQS AND RERUN 04/13/04 ALL ARE NOW SCORED - NO PRINTOUT EXPECTED';

data chcase; set scoreCYCLE#;                            *update;
rw_worCYCLE#=upcase(rw_worCYCLE#);                       *update;

data out.worldCYCLE#; set chcase;                          *update;
keep id worldCYCLE# rw_worCYCLE#;                         *update;
proc sort; by id;

```

## Massachusetts Counties

|                 |                          |
|-----------------|--------------------------|
| Abington        | <u>Plymouth County</u>   |
| Acton           | <u>Middlesex County</u>  |
| Acushnet        | <u>Bristol County</u>    |
| Adams           | <u>Berkshire County</u>  |
| Agawam          | <u>Hampden County</u>    |
| Alford          | <u>Berkshire County</u>  |
| Allston         | <u>Suffolk County</u>    |
| Amesbury        | <u>Essex County</u>      |
| Amherst         | <u>Hampshire County</u>  |
| Andover         | <u>Essex County</u>      |
| Aquinnah        | <u>Dukes County</u>      |
| Aquinnah        | <u>Dukes County</u>      |
| Arlington       | <u>Middlesex County</u>  |
| Ashburnham      | <u>Worcester County</u>  |
| Ashby           | <u>Middlesex County</u>  |
| Ashfield        | <u>Franklin County</u>   |
| Ashland         | <u>Middlesex County</u>  |
| Ashley Falls    | <u>Berkshire County</u>  |
| Assonet         | <u>Bristol County</u>    |
| Athol           | <u>Worcester County</u>  |
| Attleboro       | <u>Bristol County</u>    |
| Attleboro Falls | <u>Bristol County</u>    |
| Auburn          | <u>Worcester County</u>  |
| Auburndale      | <u>Middlesex County</u>  |
| Avon            | <u>Norfolk County</u>    |
| Ayer            | <u>Middlesex County</u>  |
| Babson Park     | <u>Norfolk County</u>    |
| Baldwinville    | <u>Worcester County</u>  |
| Barnstable      | <u>Barnstable County</u> |
| Barre           | <u>Worcester County</u>  |
| Bass River      | <u>Barnstable County</u> |
| Becket          | <u>Berkshire County</u>  |
| Bedford         | <u>Middlesex County</u>  |
| Belchertown     | <u>Hampshire County</u>  |
| Bellingham      | <u>Norfolk County</u>    |
| Belmont         | <u>Middlesex County</u>  |
| Berkley         | <u>Bristol County</u>    |
| Berlin          | <u>Worcester County</u>  |
| Bernardston     | <u>Franklin County</u>   |
| Beverly         | <u>Essex County</u>      |
| Billerica       | <u>Middlesex County</u>  |
| Blackstone      | <u>Worcester County</u>  |
| Blandford       | <u>Hampden County</u>    |
| Bolton          | <u>Worcester County</u>  |
| Bondsville      | <u>Hampden County</u>    |
| Boston          | <u>Suffolk County</u>    |
| Boston College  | <u>Middlesex County</u>  |

|                   |                                   |
|-------------------|-----------------------------------|
| Bourne            | <a href="#">Barnstable County</a> |
| Boxborough        | <a href="#">Middlesex County</a>  |
| Boxford           | <a href="#">Essex County</a>      |
| Boylston          | <a href="#">Worcester County</a>  |
| Bradford          | <a href="#">Essex County</a>      |
| Braintree         | <a href="#">Norfolk County</a>    |
| Brant Rock        | <a href="#">Plymouth County</a>   |
| Brewster          | <a href="#">Barnstable County</a> |
| Bridgewater       | <a href="#">Plymouth County</a>   |
| Brighton          | <a href="#">Suffolk County</a>    |
| Brimfield         | <a href="#">Hampden County</a>    |
| Brockton          | <a href="#">Plymouth County</a>   |
| Brookfield        | <a href="#">Worcester County</a>  |
| Brookline         | <a href="#">Norfolk County</a>    |
| Brookline Village | <a href="#">Norfolk County</a>    |
| Bryantville       | <a href="#">Plymouth County</a>   |
| Buckland          | <a href="#">Franklin County</a>   |
| Burlington        | <a href="#">Middlesex County</a>  |
| Buzzards Bay      | <a href="#">Barnstable County</a> |
| Byfield           | <a href="#">Essex County</a>      |
| Cambridge         | <a href="#">Middlesex County</a>  |
| Canton            | <a href="#">Norfolk County</a>    |
| Carlisle          | <a href="#">Middlesex County</a>  |
| Carver            | <a href="#">Plymouth County</a>   |
| Cataumet          | <a href="#">Barnstable County</a> |
| Centerville       | <a href="#">Barnstable County</a> |
| Charlemont        | <a href="#">Franklin County</a>   |
| Charlestown       | <a href="#">Suffolk County</a>    |
| Charlton City     | <a href="#">Worcester County</a>  |
| Charlton Depot    | <a href="#">Worcester County</a>  |
| Charlton          | <a href="#">Worcester County</a>  |
| Chartley          | <a href="#">Bristol County</a>    |
| Chatham           | <a href="#">Barnstable County</a> |
| Chelmsford        | <a href="#">Middlesex County</a>  |
| Chelsea           | <a href="#">Suffolk County</a>    |
| Cherry Valley     | <a href="#">Worcester County</a>  |
| Cheshire          | <a href="#">Berkshire County</a>  |
| Chester           | <a href="#">Hampden County</a>    |
| Chesterfield      | <a href="#">Hampshire County</a>  |
| Chestnut Hill     | <a href="#">Middlesex County</a>  |
| Chicopee          | <a href="#">Hampden County</a>    |
| Chilmark          | <a href="#">Dukes County</a>      |
| Clarksburg        | <a href="#">Berkshire County</a>  |
| Clinton           | <a href="#">Worcester County</a>  |
| Cohasset          | <a href="#">Norfolk County</a>    |
| Colrain           | <a href="#">Franklin County</a>   |
| Concord           | <a href="#">Middlesex County</a>  |
| Conway            | <a href="#">Franklin County</a>   |
| Cotuit            | <a href="#">Barnstable County</a> |

|                   |                          |
|-------------------|--------------------------|
| Cummaquid         | <u>Barnstable County</u> |
| Cummington        | <u>Hampshire County</u>  |
| Cushman           | <u>Hampshire County</u>  |
| Cuttyhunk         | <u>Dukes County</u>      |
| Dalton            | <u>Berkshire County</u>  |
| Danvers           | <u>Essex County</u>      |
| Dartmouth         | <u>Bristol County</u>    |
| Dedham            | <u>Norfolk County</u>    |
| Deerfield         | <u>Franklin County</u>   |
| Dennis Port       | <u>Barnstable County</u> |
| Dennis            | <u>Barnstable County</u> |
| Dighton           | <u>Bristol County</u>    |
| Dorchester        | <u>Suffolk County</u>    |
| Dorchester Center | <u>Suffolk County</u>    |
| Douglas           | <u>Worcester County</u>  |
| Dover             | <u>Norfolk County</u>    |
| Dracut            | <u>Middlesex County</u>  |
| Drury             | <u>Berkshire County</u>  |
| Dudley Hill       | <u>Worcester County</u>  |
| Dudley            | <u>Worcester County</u>  |
| Dunstable         | <u>Middlesex County</u>  |
| Duxbury           | <u>Plymouth County</u>   |
| East Boston       | <u>Suffolk County</u>    |
| East Bridgewater  | <u>Plymouth County</u>   |
| East Brookfield   | <u>Worcester County</u>  |
| East Dennis       | <u>Barnstable County</u> |
| East Falmouth     | <u>Barnstable County</u> |
| East Freetown     | <u>Bristol County</u>    |
| East Harwich      | <u>Barnstable County</u> |
| East Longmeadow   | <u>Hampden County</u>    |
| East Lynn         | <u>Essex County</u>      |
| East Mansfield    | <u>Bristol County</u>    |
| East Orleans      | <u>Barnstable County</u> |
| East Princeton    | <u>Worcester County</u>  |
| East Sandwich     | <u>Barnstable County</u> |
| East Taunton      | <u>Bristol County</u>    |
| East Templeton    | <u>Worcester County</u>  |
| Eastham           | <u>Barnstable County</u> |
| Easthampton       | <u>Hampshire County</u>  |
| Easton            | <u>Bristol County</u>    |
| Edgartown         | <u>Dukes County</u>      |
| Egremont          | <u>Berkshire County</u>  |
| Elmwood           | <u>Plymouth County</u>   |
| Erving            | <u>Franklin County</u>   |
| Essex             | <u>Essex County</u>      |
| Everett           | <u>Middlesex County</u>  |
| Fairhaven         | <u>Bristol County</u>    |
| Fall River        | <u>Bristol County</u>    |
| Falmouth          | <u>Barnstable County</u> |



|                        |                   |
|------------------------|-------------------|
| Fayville               | Worcester County  |
| Feeding Hills          | Hampden County    |
| Fiskdale               | Hampden County    |
| Fiskdale               | Worcester County  |
| Fitchburg              | Worcester County  |
| Florence               | Hampshire County  |
| Florida                | Berkshire County  |
| Forestdale             | Barnstable County |
| Foxborough             | Norfolk County    |
| Framingham             | Middlesex County  |
| Franklin               | Norfolk County    |
| Freetown               | Bristol County    |
| Gardner                | Worcester County  |
| Georgetown             | Essex County      |
| Gilbertville           | Worcester County  |
| Gill                   | Franklin County   |
| Glendale               | Berkshire County  |
| Gloucester             | Essex County      |
| Goshen                 | Hampshire County  |
| Gosnold                | Dukes County      |
| Grafton                | Worcester County  |
| Granby                 | Hampshire County  |
| Graniteville           | Middlesex County  |
| Granville              | Hampden County    |
| Great Barrington       | Berkshire County  |
| Green Harbor           | Plymouth County   |
| Greenbush              | Plymouth County   |
| Greenfield             | Franklin County   |
| Groton                 | Middlesex County  |
| Grove Hall             | Suffolk County    |
| Groveland              | Essex County      |
| Hadley                 | Hampshire County  |
| Halifax                | Plymouth County   |
| Hamilton               | Essex County      |
| Hampden                | Hampden County    |
| Hancock                | Berkshire County  |
| Hanover                | Plymouth County   |
| Hanscom Air Force Base | Middlesex County  |
| Hanson                 | Plymouth County   |
| Hardwick               | Worcester County  |
| Harvard Square         | Middlesex County  |
| Harvard                | Worcester County  |
| Harwich Port           | Barnstable County |
| Harwich                | Barnstable County |
| Hatchville             | Barnstable County |
| Hatfield               | Hampshire County  |
| Hathorne               | Essex County      |
| Haverhill              | Essex County      |
| Hawley                 | Franklin County   |

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|----------------|--------------------------|
| Haydenville    | <u>Hampshire County</u>  |
| Heath          | <u>Franklin County</u>   |
| Hingham        | <u>Plymouth County</u>   |
| Hinsdale       | <u>Berkshire County</u>  |
| Holbrook       | <u>Norfolk County</u>    |
| Holden         | <u>Worcester County</u>  |
| Holland        | <u>Hampden County</u>    |
| Holliston      | <u>Middlesex County</u>  |
| Holyoke        | <u>Hampden County</u>    |
| Hopedale       | <u>Worcester County</u>  |
| Hopkinton      | <u>Middlesex County</u>  |
| Housatonic     | <u>Berkshire County</u>  |
| Hubbardston    | <u>Worcester County</u>  |
| Hudson         | <u>Middlesex County</u>  |
| Hull           | <u>Plymouth County</u>   |
| Humarock       | <u>Plymouth County</u>   |
| Huntington     | <u>Hampshire County</u>  |
| Hyannis        | <u>Barnstable County</u> |
| Hyannis Port   | <u>Barnstable County</u> |
| Hyde Park      | <u>Suffolk County</u>    |
| Indian Orchard | <u>Hampden County</u>    |
| Ipswich        | <u>Essex County</u>      |
| Jamaica Plain  | <u>Suffolk County</u>    |
| Jefferson      | <u>Worcester County</u>  |
| Kingston       | <u>Plymouth County</u>   |
| Lake Pleasant  | <u>Franklin County</u>   |
| Lakeville      | <u>Plymouth County</u>   |
| Lancaster      | <u>Worcester County</u>  |
| Lanesboro      | <u>Berkshire County</u>  |
| Lanesborough   | <u>Berkshire County</u>  |
| Lawrence       | <u>Essex County</u>      |
| Lee            | <u>Berkshire County</u>  |
| Leeds          | <u>Hampshire County</u>  |
| Leicester      | <u>Worcester County</u>  |
| Lenox Dale     | <u>Berkshire County</u>  |
| Lenox          | <u>Berkshire County</u>  |
| Leominster     | <u>Worcester County</u>  |
| Leverett       | <u>Franklin County</u>   |
| Lexington      | <u>Middlesex County</u>  |
| Leyden         | <u>Franklin County</u>   |
| Lincoln        | <u>Middlesex County</u>  |
| Linwood        | <u>Worcester County</u>  |
| Littleton      | <u>Middlesex County</u>  |
| Longmeadow     | <u>Hampden County</u>    |
| Lowell         | <u>Middlesex County</u>  |
| Ludlow         | <u>Hampden County</u>    |
| Lunenburg      | <u>Worcester County</u>  |
| Lynn           | <u>Essex County</u>      |
| Lynnfield      | <u>Essex County</u>      |

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|-----------------------|-----------------------------------|
| Malden                | <a href="#">Middlesex County</a>  |
| Manchaug              | <a href="#">Worcester County</a>  |
| Manchester            | <a href="#">Essex County</a>      |
| Manchester by the Sea | <a href="#">Essex County</a>      |
| Manomet               | <a href="#">Plymouth County</a>   |
| Mansfield             | <a href="#">Bristol County</a>    |
| Marblehead            | <a href="#">Essex County</a>      |
| Marion                | <a href="#">Plymouth County</a>   |
| Marlborough           | <a href="#">Middlesex County</a>  |
| Marshfield Hills      | <a href="#">Plymouth County</a>   |
| Marshfield            | <a href="#">Plymouth County</a>   |
| Marstons Mills        | <a href="#">Barnstable County</a> |
| Mashpee               | <a href="#">Barnstable County</a> |
| Mattapan              | <a href="#">Suffolk County</a>    |
| Mattapoisett          | <a href="#">Plymouth County</a>   |
| Maynard               | <a href="#">Middlesex County</a>  |
| Medfield              | <a href="#">Norfolk County</a>    |
| Medford               | <a href="#">Middlesex County</a>  |
| Medway                | <a href="#">Norfolk County</a>    |
| Melrose               | <a href="#">Middlesex County</a>  |
| Mendon                | <a href="#">Worcester County</a>  |
| Menemsha              | <a href="#">Dukes County</a>      |
| Merrimac              | <a href="#">Essex County</a>      |
| Methuen               | <a href="#">Essex County</a>      |
| Middleboro            | <a href="#">Plymouth County</a>   |
| Middleborough         | <a href="#">Plymouth County</a>   |
| Middlefield           | <a href="#">Hampshire County</a>  |
| Middleton             | <a href="#">Essex County</a>      |
| Milford               | <a href="#">Worcester County</a>  |
| Mill River            | <a href="#">Berkshire County</a>  |
| Millbury              | <a href="#">Worcester County</a>  |
| Millers Falls         | <a href="#">Franklin County</a>   |
| Millis                | <a href="#">Norfolk County</a>    |
| Millville             | <a href="#">Worcester County</a>  |
| Milton                | <a href="#">Norfolk County</a>    |
| Milton Village        | <a href="#">Norfolk County</a>    |
| Minot                 | <a href="#">Plymouth County</a>   |
| Mission Hill          | <a href="#">Suffolk County</a>    |
| Monponsett            | <a href="#">Plymouth County</a>   |
| Monroe Bridge         | <a href="#">Franklin County</a>   |
| Monroe                | <a href="#">Franklin County</a>   |
| Monson                | <a href="#">Hampden County</a>    |
| Montague              | <a href="#">Franklin County</a>   |
| Monterey              | <a href="#">Berkshire County</a>  |
| Montgomery            | <a href="#">Hampden County</a>    |
| Monument Beach        | <a href="#">Barnstable County</a> |
| Mount Hermon          | <a href="#">Franklin County</a>   |
| Mount Tom             | <a href="#">Hampshire County</a>  |
| Mount Washington      | <a href="#">Berkshire County</a>  |

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|-----------------------------|--------------------------|
| Nahant                      | <u>Essex County</u>      |
| Nantucket                   | <u>Nantucket County</u>  |
| Natick                      | <u>Middlesex County</u>  |
| Needham                     | <u>Norfolk County</u>    |
| New Ashford                 | <u>Berkshire County</u>  |
| New Bedford                 | <u>Bristol County</u>    |
| New Braintree               | <u>Worcester County</u>  |
| New Marlborough             | <u>Berkshire County</u>  |
| New Salem                   | <u>Franklin County</u>   |
| New Town                    | <u>Middlesex County</u>  |
| Newbury                     | <u>Essex County</u>      |
| Newburyport                 | <u>Essex County</u>      |
| Newton Center Carrier Annex | <u>Middlesex County</u>  |
| Newton                      | <u>Middlesex County</u>  |
| Newton Highlands            | <u>Middlesex County</u>  |
| Newton Lower Falls          | <u>Middlesex County</u>  |
| Newton Upper Falls          | <u>Middlesex County</u>  |
| Newtonville                 | <u>Middlesex County</u>  |
| Nonantum                    | <u>Middlesex County</u>  |
| Nonquitt                    | <u>Bristol County</u>    |
| Norfolk                     | <u>Norfolk County</u>    |
| North Adams                 | <u>Berkshire County</u>  |
| North Amherst               | <u>Hampshire County</u>  |
| North Andover               | <u>Essex County</u>      |
| North Attleboro             | <u>Bristol County</u>    |
| North Attleboro             | <u>Norfolk County</u>    |
| North Attleborough          | <u>Bristol County</u>    |
| North Billerica             | <u>Middlesex County</u>  |
| North Brookfield            | <u>Worcester County</u>  |
| North Carver                | <u>Plymouth County</u>   |
| North Chatham               | <u>Barnstable County</u> |
| North Chelmsford            | <u>Middlesex County</u>  |
| North Dartmouth             | <u>Bristol County</u>    |
| North Dighton               | <u>Bristol County</u>    |
| North Eastham               | <u>Barnstable County</u> |
| North Falmouth              | <u>Barnstable County</u> |
| North Marshfield            | <u>Plymouth County</u>   |
| North Oxford                | <u>Worcester County</u>  |
| North Reading               | <u>Middlesex County</u>  |
| North Scituate              | <u>Plymouth County</u>   |
| North Truro                 | <u>Barnstable County</u> |
| North Uxbridge              | <u>Worcester County</u>  |
| Northampton                 | <u>Hampshire County</u>  |
| Northborough                | <u>Worcester County</u>  |
| Northbridge                 | <u>Worcester County</u>  |
| Northfield                  | <u>Franklin County</u>   |
| Norton                      | <u>Bristol County</u>    |
| Norwell                     | <u>Plymouth County</u>   |
| Norwood                     | <u>Norfolk County</u>    |

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|------------------|--------------------------|
| Nutting Lake     | <u>Middlesex County</u>  |
| Oak Bluffs       | <u>Dukes County</u>      |
| Oakham           | <u>Worcester County</u>  |
| Ocean Bluff      | <u>Plymouth County</u>   |
| Onset            | <u>Plymouth County</u>   |
| Orange           | <u>Franklin County</u>   |
| Orleans          | <u>Barnstable County</u> |
| Osterville       | <u>Barnstable County</u> |
| Otis             | <u>Berkshire County</u>  |
| Oxford           | <u>Worcester County</u>  |
| Palmer           | <u>Hampden County</u>    |
| Paxton           | <u>Worcester County</u>  |
| Peabody          | <u>Essex County</u>      |
| Pelham           | <u>Hampshire County</u>  |
| Pembroke         | <u>Plymouth County</u>   |
| Pepperell        | <u>Middlesex County</u>  |
| Peru             | <u>Berkshire County</u>  |
| Petersham        | <u>Worcester County</u>  |
| Phillipston      | <u>Worcester County</u>  |
| Pinehurst        | <u>Middlesex County</u>  |
| Pittsfield       | <u>Berkshire County</u>  |
| Plainfield       | <u>Hampshire County</u>  |
| Plainville       | <u>Norfolk County</u>    |
| Plymouth         | <u>Plymouth County</u>   |
| Plympton         | <u>Plymouth County</u>   |
| Pocasset         | <u>Barnstable County</u> |
| Prides Crossing  | <u>Essex County</u>      |
| Princeton        | <u>Worcester County</u>  |
| Provincetown     | <u>Barnstable County</u> |
| Quincy           | <u>Norfolk County</u>    |
| Randolph         | <u>Norfolk County</u>    |
| Raynham Center   | <u>Bristol County</u>    |
| Raynham          | <u>Bristol County</u>    |
| Reading          | <u>Middlesex County</u>  |
| Readville        | <u>Suffolk County</u>    |
| Rehoboth         | <u>Bristol County</u>    |
| Revere           | <u>Suffolk County</u>    |
| Richmond         | <u>Berkshire County</u>  |
| Rochdale         | <u>Worcester County</u>  |
| Rochester        | <u>Plymouth County</u>   |
| Rockland         | <u>Plymouth County</u>   |
| Rockport         | <u>Essex County</u>      |
| Roslindale       | <u>Suffolk County</u>    |
| Rowe             | <u>Franklin County</u>   |
| Rowley           | <u>Essex County</u>      |
| Roxbury          | <u>Suffolk County</u>    |
| Roxbury Crossing | <u>Suffolk County</u>    |
| Royalston        | <u>Worcester County</u>  |
| Russell          | <u>Hampden County</u>    |

|                 |                          |
|-----------------|--------------------------|
| Rutland         | <u>Worcester County</u>  |
| Sagamore        | <u>Barnstable County</u> |
| Sagamore Beach  | <u>Barnstable County</u> |
| Salem           | <u>Essex County</u>      |
| Salisbury Beach | <u>Essex County</u>      |
| Salisbury       | <u>Essex County</u>      |
| Sandisfield     | <u>Berkshire County</u>  |
| Sandwich        | <u>Barnstable County</u> |
| Saugus          | <u>Essex County</u>      |
| Savoy           | <u>Berkshire County</u>  |
| Scituate        | <u>Plymouth County</u>   |
| Seekonk         | <u>Bristol County</u>    |
| Sharon          | <u>Norfolk County</u>    |
| Shattuckville   | <u>Franklin County</u>   |
| Sheffield       | <u>Berkshire County</u>  |
| Shelburne Falls | <u>Franklin County</u>   |
| Shelburne       | <u>Franklin County</u>   |
| Sheldonville    | <u>Norfolk County</u>    |
| Sherborn        | <u>Middlesex County</u>  |
| Shirley Center  | <u>Middlesex County</u>  |
| Shirley         | <u>Middlesex County</u>  |
| Shrewsbury      | <u>Worcester County</u>  |
| Shutesbury      | <u>Franklin County</u>   |
| Siasconset      | <u>Nantucket County</u>  |
| Silver Beach    | <u>Barnstable County</u> |
| Somerset        | <u>Bristol County</u>    |
| Somerville      | <u>Middlesex County</u>  |
| South Attleboro | <u>Bristol County</u>    |
| South Barre     | <u>Worcester County</u>  |
| South Boston    | <u>Suffolk County</u>    |
| South Carver    | <u>Plymouth County</u>   |
| South Chatham   | <u>Barnstable County</u> |
| South Dartmouth | <u>Bristol County</u>    |
| South Dennis    | <u>Barnstable County</u> |
| South Egremont  | <u>Berkshire County</u>  |
| South Grafton   | <u>Worcester County</u>  |
| South Hadley    | <u>Hampshire County</u>  |
| South Hamilton  | <u>Essex County</u>      |
| South Harwich   | <u>Barnstable County</u> |
| South Lee       | <u>Berkshire County</u>  |
| South Orleans   | <u>Barnstable County</u> |
| South Walpole   | <u>Norfolk County</u>    |
| South Wellfleet | <u>Barnstable County</u> |
| South Weymouth  | <u>Norfolk County</u>    |
| Southampton     | <u>Hampshire County</u>  |
| Southborough    | <u>Worcester County</u>  |
| Southbridge     | <u>Worcester County</u>  |
| Southfield      | <u>Berkshire County</u>  |
| Southwick       | <u>Hampden County</u>    |

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|------------------|-------------------|
| Spencer          | Worcester County  |
| Springfield      | Hampden County    |
| Squantum         | Norfolk County    |
| Sterling         | Worcester County  |
| Still River      | Worcester County  |
| Stockbridge      | Berkshire County  |
| Stoneham         | Middlesex County  |
| Stoughton        | Norfolk County    |
| Stow             | Middlesex County  |
| Sturbridge       | Worcester County  |
| Sudbury          | Middlesex County  |
| Sunderland       | Franklin County   |
| Sutton           | Worcester County  |
| Swampscott       | Essex County      |
| Swansea          | Bristol County    |
| Taunton          | Bristol County    |
| Teaticket        | Barnstable County |
| Templeton        | Worcester County  |
| Tewksbury        | Middlesex County  |
| Thorndike        | Hampden County    |
| Three Rivers     | Hampden County    |
| Tisbury          | Dukes County      |
| Tolland          | Hampden County    |
| Topsfield        | Essex County      |
| Tower Square     | Hampden County    |
| Townsend         | Middlesex County  |
| Truro            | Barnstable County |
| Tufts University | Middlesex County  |
| Turners Falls    | Franklin County   |
| Tyngsboro        | Middlesex County  |
| Tyngsborough     | Middlesex County  |
| Tyringham        | Berkshire County  |
| Uphams Corner    | Suffolk County    |
| Upton            | Worcester County  |
| Uxbridge         | Worcester County  |
| Vineyard Haven   | Dukes County      |
| Waban            | Middlesex County  |
| Wakefield        | Middlesex County  |
| Wales            | Hampden County    |
| Walpole          | Norfolk County    |
| Waltham          | Middlesex County  |
| Waquoit          | Barnstable County |
| Ward Hill        | Essex County      |
| Ware             | Hampshire County  |
| Wareham          | Plymouth County   |
| Warren           | Worcester County  |
| Warwick          | Franklin County   |
| Washington       | Berkshire County  |
| Watertown        | Middlesex County  |

|                         |                          |
|-------------------------|--------------------------|
| Waverley                | <u>Middlesex County</u>  |
| Wayland                 | <u>Middlesex County</u>  |
| Webster                 | <u>Worcester County</u>  |
| Wellesley Hills         | <u>Norfolk County</u>    |
| Wellesley               | <u>Norfolk County</u>    |
| Wellfleet               | <u>Barnstable County</u> |
| Wendell Depot           | <u>Franklin County</u>   |
| Wendell                 | <u>Franklin County</u>   |
| Wenham                  | <u>Essex County</u>      |
| West Barnstable         | <u>Barnstable County</u> |
| West Boxford            | <u>Essex County</u>      |
| West Boylston           | <u>Worcester County</u>  |
| West Bridgewater        | <u>Plymouth County</u>   |
| West Brookfield         | <u>Worcester County</u>  |
| West Chatham            | <u>Barnstable County</u> |
| West Chesterfield       | <u>Hampshire County</u>  |
| West Chop               | <u>Dukes County</u>      |
| West Dennis             | <u>Barnstable County</u> |
| West Falmouth           | <u>Barnstable County</u> |
| West Harwich            | <u>Barnstable County</u> |
| West Hatfield           | <u>Hampshire County</u>  |
| West Hyannisport        | <u>Barnstable County</u> |
| West Lynn               | <u>Essex County</u>      |
| West Medford            | <u>Middlesex County</u>  |
| West Millbury           | <u>Worcester County</u>  |
| West Newbury            | <u>Essex County</u>      |
| West Newton             | <u>Middlesex County</u>  |
| West Otis               | <u>Berkshire County</u>  |
| West Roxbury            | <u>Suffolk County</u>    |
| West Somerville         | <u>Middlesex County</u>  |
| West Springfield        | <u>Hampden County</u>    |
| West Stockbridge        | <u>Berkshire County</u>  |
| West Tisbury            | <u>Dukes County</u>      |
| West Townsend           | <u>Middlesex County</u>  |
| West Wareham            | <u>Plymouth County</u>   |
| West Yarmouth           | <u>Barnstable County</u> |
| Westborough             | <u>Worcester County</u>  |
| Westfield               | <u>Hampden County</u>    |
| Westford                | <u>Middlesex County</u>  |
| Westhampton             | <u>Hampshire County</u>  |
| Westminster             | <u>Worcester County</u>  |
| Weston                  | <u>Middlesex County</u>  |
| Westover Air Force Base | <u>Hampden County</u>    |
| Westport Point          | <u>Bristol County</u>    |
| Westport                | <u>Bristol County</u>    |
| Westwood                | <u>Norfolk County</u>    |
| Weymouth                | <u>Norfolk County</u>    |
| Whately                 | <u>Franklin County</u>   |
| Wheelwright             | <u>Worcester County</u>  |



|                    |                          |
|--------------------|--------------------------|
| White Horse Beach  | <u>Plymouth County</u>   |
| Whitinsville       | <u>Worcester County</u>  |
| Whitman            | <u>Plymouth County</u>   |
| Wilbraham          | <u>Hampden County</u>    |
| Wilkinsonville     | <u>Worcester County</u>  |
| Williamsburg       | <u>Hampshire County</u>  |
| Williamstown       | <u>Berkshire County</u>  |
| Willimansett       | <u>Hampden County</u>    |
| Wilmington         | <u>Middlesex County</u>  |
| Winchendon Springs | <u>Worcester County</u>  |
| Winchendon         | <u>Worcester County</u>  |
| Winchester         | <u>Middlesex County</u>  |
| Windsor            | <u>Berkshire County</u>  |
| Winter Hill        | <u>Middlesex County</u>  |
| Winthrop           | <u>Suffolk County</u>    |
| Woburn             | <u>Middlesex County</u>  |
| Wollaston          | <u>Norfolk County</u>    |
| Woods Hole         | <u>Barnstable County</u> |
| Woodville          | <u>Middlesex County</u>  |
| Worcester          | <u>Worcester County</u>  |
| Woronoco           | <u>Hampden County</u>    |
| Worthington        | <u>Hampshire County</u>  |
| Wrentham           | <u>Norfolk County</u>    |
| Yarmouth Port      | <u>Barnstable County</u> |
| Yarmouth           | <u>Barnstable County</u> |

## New Hampshire Counties

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| Acworth                              | <a href="#">Sullivan County</a>     |
| Albany                               | <a href="#">Carroll County</a>      |
| Alexandria                           | <a href="#">Grafton County</a>      |
| Allenstown                           | <a href="#">Merrimack County</a>    |
| Alstead                              | <a href="#">Cheshire County</a>     |
| Alton Bay                            | <a href="#">Belknap County</a>      |
| Alton                                | <a href="#">Belknap County</a>      |
| Amherst                              | <a href="#">Hillsborough County</a> |
| Andover                              | <a href="#">Merrimack County</a>    |
| Antrim                               | <a href="#">Hillsborough County</a> |
| Ashland                              | <a href="#">Grafton County</a>      |
| Ashuelot                             | <a href="#">Cheshire County</a>     |
| Atkinson and Gilmanton Academy Grant | <a href="#">Coos County</a>         |
| Atkinson                             | <a href="#">Rockingham County</a>   |
| Auburn                               | <a href="#">Rockingham County</a>   |
| Barnstead                            | <a href="#">Belknap County</a>      |
| Barrington                           | <a href="#">Strafford County</a>    |
| Bartlett                             | <a href="#">Carroll County</a>      |
| Bath                                 | <a href="#">Grafton County</a>      |
| Beans Grant                          | <a href="#">Coos County</a>         |
| Beans Purchase                       | <a href="#">Coos County</a>         |
| Bedford                              | <a href="#">Hillsborough County</a> |
| Belmont                              | <a href="#">Belknap County</a>      |
| Bennington                           | <a href="#">Hillsborough County</a> |
| Benton                               | <a href="#">Grafton County</a>      |
| Berlin                               | <a href="#">Coos County</a>         |
| Bethlehem                            | <a href="#">Grafton County</a>      |
| Boscawen                             | <a href="#">Merrimack County</a>    |
| Bow                                  | <a href="#">Merrimack County</a>    |
| Bradford                             | <a href="#">Merrimack County</a>    |
| Brentwood                            | <a href="#">Rockingham County</a>   |
| Bretton Woods                        | <a href="#">Coos County</a>         |
| Bridgewater                          | <a href="#">Grafton County</a>      |
| Bristol                              | <a href="#">Grafton County</a>      |
| Brookfield                           | <a href="#">Carroll County</a>      |
| Brookline                            | <a href="#">Hillsborough County</a> |
| Cambridge Township                   | <a href="#">Coos County</a>         |
| Campton                              | <a href="#">Grafton County</a>      |
| Canaan                               | <a href="#">Grafton County</a>      |
| Candia                               | <a href="#">Rockingham County</a>   |
| Canterbury                           | <a href="#">Merrimack County</a>    |
| Carroll                              | <a href="#">Coos County</a>         |
| Center Barnstead                     | <a href="#">Belknap County</a>      |
| Center Conway                        | <a href="#">Carroll County</a>      |
| Center Harbor                        | <a href="#">Belknap County</a>      |
| Center Ossipee                       | <a href="#">Carroll County</a>      |
| Center Sandwich                      | <a href="#">Carroll County</a>      |
| Center Strafford                     | <a href="#">Strafford County</a>    |

|                     |                            |
|---------------------|----------------------------|
| Center Tuftnboro    | <u>Carroll County</u>      |
| Center Tuftnboro    | <u>Carroll County</u>      |
| Chandler's Purchase | <u>Coos County</u>         |
| Charlestown         | <u>Sullivan County</u>     |
| Chatham             | <u>Carroll County</u>      |
| Chester             | <u>Rockingham County</u>   |
| Chesterfield        | <u>Cheshire County</u>     |
| Chichester          | <u>Merrimack County</u>    |
| Chocorua            | <u>Carroll County</u>      |
| Claremont           | <u>Sullivan County</u>     |
| Clarksville         | <u>Coos County</u>         |
| Colebrook           | <u>Coos County</u>         |
| Columbia            | <u>Coos County</u>         |
| Concord             | <u>Merrimack County</u>    |
| Contoocook          | <u>Merrimack County</u>    |
| Conway              | <u>Carroll County</u>      |
| Cornish Flat        | <u>Sullivan County</u>     |
| Cornish             | <u>Sullivan County</u>     |
| Crawford's Purchase | <u>Coos County</u>         |
| Croydon             | <u>Sullivan County</u>     |
| Cutts Grant         | <u>Coos County</u>         |
| Dalton              | <u>Coos County</u>         |
| Danbury             | <u>Merrimack County</u>    |
| Danville            | <u>Rockingham County</u>   |
| Deerfield           | <u>Rockingham County</u>   |
| Deering             | <u>Hillsborough County</u> |
| Derry               | <u>Rockingham County</u>   |
| Dix's Grant         | <u>Coos County</u>         |
| Dixville Township   | <u>Coos County</u>         |
| Dorchester          | <u>Grafton County</u>      |
| Dover               | <u>Strafford County</u>    |
| Drewsville          | <u>Cheshire County</u>     |
| Dublin              | <u>Cheshire County</u>     |
| Dummer              | <u>Coos County</u>         |
| Dunbarton           | <u>Hillsborough County</u> |
| Dunbarton           | <u>Merrimack County</u>    |
| Durham              | <u>Strafford County</u>    |
| East Candia         | <u>Rockingham County</u>   |
| East Hampstead      | <u>Rockingham County</u>   |
| East Lempster       | <u>Sullivan County</u>     |
| East Wakefield      | <u>Carroll County</u>      |
| Easton              | <u>Grafton County</u>      |
| Eaton               | <u>Carroll County</u>      |
| Effingham           | <u>Carroll County</u>      |
| Elkins              | <u>Merrimack County</u>    |
| Ellsworth           | <u>Grafton County</u>      |
| Enfield Center      | <u>Grafton County</u>      |
| Enfield             | <u>Grafton County</u>      |
| Epping              | <u>Rockingham County</u>   |

|                      |                                     |
|----------------------|-------------------------------------|
| Epsom                | <a href="#">Merrimack County</a>    |
| Errol                | <a href="#">Coos County</a>         |
| Erving's Location    | <a href="#">Coos County</a>         |
| Etna                 | <a href="#">Grafton County</a>      |
| Exeter               | <a href="#">Rockingham County</a>   |
| Farmington           | <a href="#">Strafford County</a>    |
| Fitzwilliam          | <a href="#">Cheshire County</a>     |
| Francestown          | <a href="#">Hillsborough County</a> |
| Franconia            | <a href="#">Grafton County</a>      |
| Franklin             | <a href="#">Merrimack County</a>    |
| Freedom              | <a href="#">Carroll County</a>      |
| Fremont              | <a href="#">Rockingham County</a>   |
| Georges Mills        | <a href="#">Sullivan County</a>     |
| Gilford              | <a href="#">Belknap County</a>      |
| Gilmanton Iron Works | <a href="#">Belknap County</a>      |
| Gilmanton Ironworks  | <a href="#">Belknap County</a>      |
| Gilmanton            | <a href="#">Belknap County</a>      |
| Gilsum               | <a href="#">Cheshire County</a>     |
| Glen                 | <a href="#">Carroll County</a>      |
| Glencliff            | <a href="#">Grafton County</a>      |
| Goffstown            | <a href="#">Hillsborough County</a> |
| Gorham               | <a href="#">Coos County</a>         |
| Goshen               | <a href="#">Sullivan County</a>     |
| Grafton              | <a href="#">Grafton County</a>      |
| Grantham             | <a href="#">Sullivan County</a>     |
| Greenfield           | <a href="#">Hillsborough County</a> |
| Greenland            | <a href="#">Rockingham County</a>   |
| Greens Grant         | <a href="#">Coos County</a>         |
| Greenville           | <a href="#">Hillsborough County</a> |
| Groton               | <a href="#">Grafton County</a>      |
| Groveton             | <a href="#">Coos County</a>         |
| Guild                | <a href="#">Sullivan County</a>     |
| Hadleys Purchase     | <a href="#">Coos County</a>         |
| Hale's Location      | <a href="#">Carroll County</a>      |
| Hampstead            | <a href="#">Rockingham County</a>   |
| Hampton Falls        | <a href="#">Rockingham County</a>   |
| Hampton              | <a href="#">Rockingham County</a>   |
| Hancock              | <a href="#">Hillsborough County</a> |
| Hanover              | <a href="#">Grafton County</a>      |
| Harrisville          | <a href="#">Cheshire County</a>     |
| Harts Location       | <a href="#">Carroll County</a>      |
| Hart's Location      | <a href="#">Carroll County</a>      |
| Haverhill            | <a href="#">Grafton County</a>      |
| Hebron               | <a href="#">Grafton County</a>      |
| Henniker             | <a href="#">Merrimack County</a>    |
| Hill                 | <a href="#">Merrimack County</a>    |
| Hillsboro            | <a href="#">Hillsborough County</a> |
| Hillsborough         | <a href="#">Hillsborough County</a> |
| Hinsdale             | <a href="#">Cheshire County</a>     |

|                        |                                     |
|------------------------|-------------------------------------|
| Holderness             | <a href="#">Grafton County</a>      |
| Hollis                 | <a href="#">Hillsborough County</a> |
| Hooksett               | <a href="#">Merrimack County</a>    |
| Hopkinton              | <a href="#">Merrimack County</a>    |
| Hudson                 | <a href="#">Hillsborough County</a> |
| Intervale              | <a href="#">Carroll County</a>      |
| Jackson                | <a href="#">Carroll County</a>      |
| Jaffrey                | <a href="#">Cheshire County</a>     |
| Jefferson              | <a href="#">Coos County</a>         |
| Kearsarge              | <a href="#">Carroll County</a>      |
| Keene                  | <a href="#">Cheshire County</a>     |
| Kensington             | <a href="#">Rockingham County</a>   |
| Kilkenny Township      | <a href="#">Coos County</a>         |
| Kingston               | <a href="#">Rockingham County</a>   |
| Laconia                | <a href="#">Belknap County</a>      |
| Lancaster              | <a href="#">Coos County</a>         |
| Landaff                | <a href="#">Grafton County</a>      |
| Langdon                | <a href="#">Sullivan County</a>     |
| Lebanon                | <a href="#">Grafton County</a>      |
| Lee                    | <a href="#">Strafford County</a>    |
| Lempster               | <a href="#">Sullivan County</a>     |
| Lincoln                | <a href="#">Grafton County</a>      |
| Lisbon                 | <a href="#">Grafton County</a>      |
| Litchfield             | <a href="#">Hillsborough County</a> |
| Littleton              | <a href="#">Grafton County</a>      |
| Livermore              | <a href="#">Grafton County</a>      |
| Lochmere               | <a href="#">Belknap County</a>      |
| Londonderry            | <a href="#">Rockingham County</a>   |
| Loudon                 | <a href="#">Merrimack County</a>    |
| Low and Burbanks Grant | <a href="#">Coos County</a>         |
| Lyman                  | <a href="#">Grafton County</a>      |
| Lyme Center            | <a href="#">Grafton County</a>      |
| Lyme                   | <a href="#">Grafton County</a>      |
| Lyndeborough           | <a href="#">Hillsborough County</a> |
| Madbury                | <a href="#">Strafford County</a>    |
| Madison                | <a href="#">Carroll County</a>      |
| Manchester             | <a href="#">Hillsborough County</a> |
| Marlborough            | <a href="#">Cheshire County</a>     |
| Marlow                 | <a href="#">Cheshire County</a>     |
| Martins Location       | <a href="#">Coos County</a>         |
| Mason                  | <a href="#">Hillsborough County</a> |
| Meadows                | <a href="#">Coos County</a>         |
| Melvin Village         | <a href="#">Carroll County</a>      |
| Meredith               | <a href="#">Belknap County</a>      |
| Meriden                | <a href="#">Sullivan County</a>     |
| Merrimack              | <a href="#">Hillsborough County</a> |
| Middleton              | <a href="#">Strafford County</a>    |
| Milan                  | <a href="#">Coos County</a>         |
| Milford                | <a href="#">Hillsborough County</a> |

|                     |                            |
|---------------------|----------------------------|
| Millsfield Township | <u>Coos County</u>         |
| Milton Mills        | <u>Stafford County</u>     |
| Milton              | <u>Stafford County</u>     |
| Mirror Lake         | <u>Carroll County</u>      |
| Monroe              | <u>Grafton County</u>      |
| Mont Vernon         | <u>Hillsborough County</u> |
| Moultonboro         | <u>Carroll County</u>      |
| Moultonborough      | <u>Carroll County</u>      |
| Mount Washington    | <u>Coos County</u>         |
| Munsonville         | <u>Cheshire County</u>     |
| Nashua              | <u>Hillsborough County</u> |
| Nelson              | <u>Cheshire County</u>     |
| New Boston          | <u>Hillsborough County</u> |
| New Castle          | <u>Rockingham County</u>   |
| New Durham          | <u>Stafford County</u>     |
| New Hampton         | <u>Belknap County</u>      |
| New Ipswich         | <u>Hillsborough County</u> |
| New London          | <u>Merrimack County</u>    |
| Newbury             | <u>Merrimack County</u>    |
| Newfields           | <u>Rockingham County</u>   |
| Newington           | <u>Rockingham County</u>   |
| Newmarket           | <u>Rockingham County</u>   |
| Newport             | <u>Sullivan County</u>     |
| Newton Junction     | <u>Rockingham County</u>   |
| Newton              | <u>Rockingham County</u>   |
| North Hampton       | <u>Rockingham County</u>   |
| North Haverhill     | <u>Grafton County</u>      |
| North Stratford     | <u>Coos County</u>         |
| North Swanzey       | <u>Cheshire County</u>     |
| North Woodstock     | <u>Grafton County</u>      |
| Northfield          | <u>Belknap County</u>      |
| Northfield          | <u>Merrimack County</u>    |
| Northumberland      | <u>Coos County</u>         |
| Northwood           | <u>Rockingham County</u>   |
| Nottingham          | <u>Rockingham County</u>   |
| Odell Township      | <u>Coos County</u>         |
| Orange              | <u>Grafton County</u>      |
| Orford              | <u>Grafton County</u>      |
| Ossipee             | <u>Carroll County</u>      |
| Pelham              | <u>Hillsborough County</u> |
| Pembroke            | <u>Merrimack County</u>    |
| Penacook            | <u>Merrimack County</u>    |
| Peterborough        | <u>Hillsborough County</u> |
| Piermont            | <u>Grafton County</u>      |
| Pike                | <u>Grafton County</u>      |
| Pinkhams Grant      | <u>Coos County</u>         |
| Pittsburg           | <u>Coos County</u>         |
| Pittsfield          | <u>Merrimack County</u>    |
| Plainfield          | <u>Sullivan County</u>     |

|                      |                            |
|----------------------|----------------------------|
| Plaistow             | <u>Rockingham County</u>   |
| Plymouth             | <u>Grafton County</u>      |
| Portsmouth           | <u>Rockingham County</u>   |
| Randolph             | <u>Coos County</u>         |
| Raymond              | <u>Rockingham County</u>   |
| Richmond             | <u>Cheshire County</u>     |
| Rindge               | <u>Cheshire County</u>     |
| Rochester            | <u>Strafford County</u>    |
| Rollinsford          | <u>Strafford County</u>    |
| Roxbury              | <u>Cheshire County</u>     |
| Rumney               | <u>Grafton County</u>      |
| Rye Beach            | <u>Rockingham County</u>   |
| Rye                  | <u>Rockingham County</u>   |
| Salem                | <u>Rockingham County</u>   |
| Salisbury            | <u>Merrimack County</u>    |
| Sanbornton           | <u>Belknap County</u>      |
| Sanbornville         | <u>Carroll County</u>      |
| Sandown              | <u>Rockingham County</u>   |
| Sandwich             | <u>Carroll County</u>      |
| Sargents Purchase    | <u>Coos County</u>         |
| Seabrook             | <u>Rockingham County</u>   |
| Second College Grant | <u>Coos County</u>         |
| Sharon               | <u>Hillsborough County</u> |
| Shelburne            | <u>Coos County</u>         |
| Silver Lake          | <u>Carroll County</u>      |
| Somersworth          | <u>Strafford County</u>    |
| South Acworth        | <u>Sullivan County</u>     |
| South Newbury        | <u>Merrimack County</u>    |
| South Sutton         | <u>Merrimack County</u>    |
| South Tamworth       | <u>Carroll County</u>      |
| Spofford             | <u>Cheshire County</u>     |
| Springfield          | <u>Sullivan County</u>     |
| Stark                | <u>Coos County</u>         |
| Stewartstown         | <u>Coos County</u>         |
| Stinson Lake         | <u>Grafton County</u>      |
| Stoddard             | <u>Cheshire County</u>     |
| Strafford            | <u>Strafford County</u>    |
| Stratford            | <u>Coos County</u>         |
| Stratham             | <u>Rockingham County</u>   |
| Success Township     | <u>Coos County</u>         |
| Sugar Hill           | <u>Grafton County</u>      |
| Sullivan             | <u>Cheshire County</u>     |
| Sunapee              | <u>Sullivan County</u>     |
| Suncook              | <u>Merrimack County</u>    |
| Surry                | <u>Cheshire County</u>     |
| Sutton               | <u>Merrimack County</u>    |
| Swanzey              | <u>Cheshire County</u>     |
| Tamworth             | <u>Carroll County</u>      |
| Temple               | <u>Hillsborough County</u> |

|                                |                            |
|--------------------------------|----------------------------|
| Thompson and Meserves Purchase | <u>Coos County</u>         |
| Thornton                       | <u>Grafton County</u>      |
| Tilton                         | <u>Belknap County</u>      |
| Troy                           | <u>Cheshire County</u>     |
| Tuftonboro                     | <u>Carroll County</u>      |
| Twin Mountain                  | <u>Coos County</u>         |
| Union                          | <u>Stafford County</u>     |
| Unity                          | <u>Sullivan County</u>     |
| Wakefield                      | <u>Carroll County</u>      |
| Walpole                        | <u>Cheshire County</u>     |
| Warner                         | <u>Merrimack County</u>    |
| Warren                         | <u>Grafton County</u>      |
| Washington                     | <u>Sullivan County</u>     |
| Waterville Valley              | <u>Grafton County</u>      |
| Weare                          | <u>Hillsborough County</u> |
| Webster                        | <u>Merrimack County</u>    |
| Wentworth Location             | <u>Coos County</u>         |
| Wentworth                      | <u>Grafton County</u>      |
| West Chesterfield              | <u>Cheshire County</u>     |
| West Lebanon                   | <u>Grafton County</u>      |
| West Nottingham                | <u>Rockingham County</u>   |
| Westmoreland                   | <u>Cheshire County</u>     |
| Whitefield                     | <u>Coos County</u>         |
| Wilmot                         | <u>Merrimack County</u>    |
| Wilton                         | <u>Hillsborough County</u> |
| Winchester                     | <u>Cheshire County</u>     |
| Windham                        | <u>Rockingham County</u>   |
| Windsor                        | <u>Hillsborough County</u> |
| Winnisquam                     | <u>Belknap County</u>      |
| Wolfeboro Falls                | <u>Carroll County</u>      |
| Wolfeboro                      | <u>Carroll County</u>      |
| Wonalancet                     | <u>Carroll County</u>      |
| Woodstock                      | <u>Grafton County</u>      |
| Woodsville                     | <u>Grafton County</u>      |



## Maine Counties

|                |                                     |
|----------------|-------------------------------------|
| Abbot          | <a href="#">Piscataquis County</a>  |
| Acton          | <a href="#">York County</a>         |
| Addison        | <a href="#">Washington County</a>   |
| Albion         | <a href="#">Kennebec County</a>     |
| Alexander      | <a href="#">Washington County</a>   |
| Alfred         | <a href="#">York County</a>         |
| Allagash       | <a href="#">Aroostook County</a>    |
| Alna           | <a href="#">Lincoln County</a>      |
| Alton          | <a href="#">Penobscot County</a>    |
| Amherst        | <a href="#">Hancock County</a>      |
| Amity          | <a href="#">Aroostook County</a>    |
| Andover        | <a href="#">Oxford County</a>       |
| Anson          | <a href="#">Somerset County</a>     |
| Appleton       | <a href="#">Knox County</a>         |
| Argyle         | <a href="#">Penobscot County</a>    |
| Arrowsic       | <a href="#">Sagadahoc County</a>    |
| Arundel        | <a href="#">York County</a>         |
| Ashland        | <a href="#">Aroostook County</a>    |
| Athens         | <a href="#">Somerset County</a>     |
| Atkinson       | <a href="#">Piscataquis County</a>  |
| Auburn         | <a href="#">Androscoggin County</a> |
| Augusta        | <a href="#">Kennebec County</a>     |
| Aurora         | <a href="#">Hancock County</a>      |
| Avon           | <a href="#">Franklin County</a>     |
| Bailey Island  | <a href="#">Cumberland County</a>   |
| Baileyville    | <a href="#">Washington County</a>   |
| Baldwin        | <a href="#">Cumberland County</a>   |
| Bancroft       | <a href="#">Aroostook County</a>    |
| Bangor         | <a href="#">Penobscot County</a>    |
| Bar Harbor     | <a href="#">Hancock County</a>      |
| Bar Mills      | <a href="#">York County</a>         |
| Baring         | <a href="#">Washington County</a>   |
| Bass Harbor    | <a href="#">Hancock County</a>      |
| Bath           | <a href="#">Sagadahoc County</a>    |
| Bayville       | <a href="#">Lincoln County</a>      |
| Beals          | <a href="#">Washington County</a>   |
| Beaver Cove    | <a href="#">Piscataquis County</a>  |
| Beddington     | <a href="#">Washington County</a>   |
| Belfast        | <a href="#">Waldo County</a>        |
| Belgrade Lakes | <a href="#">Kennebec County</a>     |
| Belgrade       | <a href="#">Kennebec County</a>     |
| Belmont        | <a href="#">Waldo County</a>        |
| Benedicta      | <a href="#">Aroostook County</a>    |
| Benton         | <a href="#">Kennebec County</a>     |
| Bernard        | <a href="#">Hancock County</a>      |
| Berwick        | <a href="#">York County</a>         |
| Bethel         | <a href="#">Oxford County</a>       |
| Biddeford      | <a href="#">York County</a>         |

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|---------------------|---------------------------|
| Biddeford Pool      | <u>York County</u>        |
| Bingham             | <u>Somerset County</u>    |
| Birch Harbor        | <u>Hancock County</u>     |
| Birch Island        | <u>Cumberland County</u>  |
| Blaine              | <u>Aroostook County</u>   |
| Blanchard           | <u>Piscataquis County</u> |
| Blue Hill Falls     | <u>Hancock County</u>     |
| Blue Hill           | <u>Hancock County</u>     |
| Boothbay Harbor     | <u>Lincoln County</u>     |
| Boothbay            | <u>Lincoln County</u>     |
| Bowdoin             | <u>Sagadahoc County</u>   |
| Bowdoinham          | <u>Sagadahoc County</u>   |
| Bowerbank           | <u>Piscataquis County</u> |
| Bradford            | <u>Penobscot County</u>   |
| Bradley             | <u>Penobscot County</u>   |
| Bremen              | <u>Lincoln County</u>     |
| Brewer              | <u>Penobscot County</u>   |
| Bridgewater         | <u>Aroostook County</u>   |
| Bridgton            | <u>Cumberland County</u>  |
| Brighton Plantation | <u>Somerset County</u>    |
| Bristol             | <u>Lincoln County</u>     |
| Brooklin            | <u>Hancock County</u>     |
| Brooks              | <u>Waldo County</u>       |
| Brooksville         | <u>Hancock County</u>     |
| Brookton            | <u>Washington County</u>  |
| Brownfield          | <u>Oxford County</u>      |
| Brownville Junction | <u>Piscataquis County</u> |
| Brownville          | <u>Piscataquis County</u> |
| Brunswick           | <u>Cumberland County</u>  |
| Bryant Pond         | <u>Oxford County</u>      |
| Buckfield           | <u>Oxford County</u>      |
| Bucks Harbor        | <u>Washington County</u>  |
| Bucksport           | <u>Hancock County</u>     |
| Burlington          | <u>Penobscot County</u>   |
| Burnham             | <u>Waldo County</u>       |
| Bustins Island      | <u>Cumberland County</u>  |
| Buxton              | <u>York County</u>        |
| Byron               | <u>Oxford County</u>      |
| Calais              | <u>Washington County</u>  |
| Cambridge           | <u>Somerset County</u>    |
| Camden              | <u>Knox County</u>        |
| Canaan              | <u>Somerset County</u>    |
| Canton              | <u>Oxford County</u>      |
| Cape Cottage        | <u>Cumberland County</u>  |
| Cape Elizabeth      | <u>Cumberland County</u>  |
| Cape Neddick        | <u>York County</u>        |
| Cape Porpoise       | <u>York County</u>        |
| Capitol Island      | <u>Lincoln County</u>     |
| Caratunk            | <u>Somerset County</u>    |

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|----------------------|-----------------------------------|
| Caribou              | <a href="#">Aroostook County</a>  |
| Carmel               | <a href="#">Penobscot County</a>  |
| Carrabassett Valley  | <a href="#">Franklin County</a>   |
| Carroll Plantation   | <a href="#">Penobscot County</a>  |
| Carthage             | <a href="#">Franklin County</a>   |
| Cary Plantation      | <a href="#">Aroostook County</a>  |
| Casco                | <a href="#">Cumberland County</a> |
| Castine              | <a href="#">Hancock County</a>    |
| Castle Hill          | <a href="#">Aroostook County</a>  |
| Caswell              | <a href="#">Aroostook County</a>  |
| Center Lovell        | <a href="#">Oxford County</a>     |
| Centerville          | <a href="#">Washington County</a> |
| Central Aroostook    | <a href="#">Aroostook County</a>  |
| Central Hancock      | <a href="#">Hancock County</a>    |
| Central Somerset     | <a href="#">Somerset County</a>   |
| Chamberlain          | <a href="#">Lincoln County</a>    |
| Chapman              | <a href="#">Aroostook County</a>  |
| Charleston           | <a href="#">Penobscot County</a>  |
| Charlotte            | <a href="#">Washington County</a> |
| Chebeague Island     | <a href="#">Cumberland County</a> |
| Chelsea              | <a href="#">Kennebec County</a>   |
| Cherryfield          | <a href="#">Washington County</a> |
| Chester              | <a href="#">Penobscot County</a>  |
| Chesterville         | <a href="#">Franklin County</a>   |
| China                | <a href="#">Kennebec County</a>   |
| Clayton Lake         | <a href="#">Aroostook County</a>  |
| Cliff Island         | <a href="#">Cumberland County</a> |
| Clifton              | <a href="#">Penobscot County</a>  |
| Clinton              | <a href="#">Kennebec County</a>   |
| Codyville Plantation | <a href="#">Washington County</a> |
| Columbia Falls       | <a href="#">Washington County</a> |
| Columbia             | <a href="#">Washington County</a> |
| Connor Township      | <a href="#">Aroostook County</a>  |
| Connor               | <a href="#">Aroostook County</a>  |
| Cooper               | <a href="#">Washington County</a> |
| Coopers Mills        | <a href="#">Lincoln County</a>    |
| Coplin Plantation    | <a href="#">Franklin County</a>   |
| Corea                | <a href="#">Hancock County</a>    |
| Corinna              | <a href="#">Penobscot County</a>  |
| Corinth              | <a href="#">Penobscot County</a>  |
| Cornish              | <a href="#">York County</a>       |
| Cornville            | <a href="#">Somerset County</a>   |
| Costigan             | <a href="#">Penobscot County</a>  |
| Cranberry Isles      | <a href="#">Hancock County</a>    |
| Crawford             | <a href="#">Washington County</a> |
| Criehaven            | <a href="#">Knox County</a>       |
| Crouseville          | <a href="#">Aroostook County</a>  |
| Crystal              | <a href="#">Aroostook County</a>  |
| Cumberland Center    | <a href="#">Cumberland County</a> |

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| Cumberland Foreside     | <a href="#">Cumberland County</a>   |
| Cumberland              | <a href="#">Cumberland County</a>   |
| Cundys Harbor           | <a href="#">Cumberland County</a>   |
| Cushing Island          | <a href="#">Cumberland County</a>   |
| Cushing                 | <a href="#">Knox County</a>         |
| Cutler                  | <a href="#">Washington County</a>   |
| Cyr Plantation          | <a href="#">Aroostook County</a>    |
| Dallas Plantation       | <a href="#">Franklin County</a>     |
| Damariscotta            | <a href="#">Lincoln County</a>      |
| Danforth                | <a href="#">Washington County</a>   |
| Danville                | <a href="#">Androscoggin County</a> |
| Dayton                  | <a href="#">York County</a>         |
| Deblois                 | <a href="#">Washington County</a>   |
| Dedham                  | <a href="#">Hancock County</a>      |
| Deer Isle               | <a href="#">Hancock County</a>      |
| Denmark                 | <a href="#">Oxford County</a>       |
| Dennistown              | <a href="#">Somerset County</a>     |
| Dennistown Plantation   | <a href="#">Somerset County</a>     |
| Dennysville             | <a href="#">Washington County</a>   |
| Derby                   | <a href="#">Piscataquis County</a>  |
| Detroit                 | <a href="#">Somerset County</a>     |
| Dexter                  | <a href="#">Penobscot County</a>    |
| Diamond Cove            | <a href="#">Cumberland County</a>   |
| Diamond Island          | <a href="#">Cumberland County</a>   |
| Dixfield                | <a href="#">Oxford County</a>       |
| Dixmont                 | <a href="#">Penobscot County</a>    |
| Dover-Foxcroft          | <a href="#">Piscataquis County</a>  |
| Dresden                 | <a href="#">Lincoln County</a>      |
| Drew Plantation         | <a href="#">Penobscot County</a>    |
| Dryden                  | <a href="#">Franklin County</a>     |
| Durham                  | <a href="#">Androscoggin County</a> |
| Dyer Brook              | <a href="#">Aroostook County</a>    |
| Eagle Lake              | <a href="#">Aroostook County</a>    |
| East Andover            | <a href="#">Oxford County</a>       |
| East Baldwin            | <a href="#">Cumberland County</a>   |
| East Blue Hill          | <a href="#">Hancock County</a>      |
| East Boothbay           | <a href="#">Lincoln County</a>      |
| East Central Franklin   | <a href="#">Franklin County</a>     |
| East Central Penobscot  | <a href="#">Penobscot County</a>    |
| East Central Washington | <a href="#">Washington County</a>   |
| East Dixfield           | <a href="#">Franklin County</a>     |
| East Hancock            | <a href="#">Hancock County</a>      |
| East Holden             | <a href="#">Penobscot County</a>    |
| East Livermore          | <a href="#">Androscoggin County</a> |
| East Machias            | <a href="#">Washington County</a>   |
| East Millinocket        | <a href="#">Penobscot County</a>    |
| East Newport            | <a href="#">Penobscot County</a>    |
| East Orland             | <a href="#">Hancock County</a>      |
| East Parsonfield        | <a href="#">York County</a>         |

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| East Poland         | <a href="#">Androscoggin County</a> |
| East Stoneham       | <a href="#">Oxford County</a>       |
| East Vassalboro     | <a href="#">Kennebec County</a>     |
| East Waterboro      | <a href="#">York County</a>         |
| East Wilton         | <a href="#">Franklin County</a>     |
| East Winthrop       | <a href="#">Kennebec County</a>     |
| Eastbrook           | <a href="#">Hancock County</a>      |
| Easton              | <a href="#">Aroostook County</a>    |
| Eastport            | <a href="#">Washington County</a>   |
| Eddington           | <a href="#">Penobscot County</a>    |
| Edgecomb            | <a href="#">Lincoln County</a>      |
| Edinburg            | <a href="#">Penobscot County</a>    |
| Eliot               | <a href="#">York County</a>         |
| Ellsworth           | <a href="#">Hancock County</a>      |
| Embden              | <a href="#">Somerset County</a>     |
| Enfield             | <a href="#">Penobscot County</a>    |
| Estcourt Station    | <a href="#">Aroostook County</a>    |
| Etna                | <a href="#">Penobscot County</a>    |
| Eustis              | <a href="#">Franklin County</a>     |
| Exeter              | <a href="#">Penobscot County</a>    |
| Fairfield           | <a href="#">Somerset County</a>     |
| Falmouth            | <a href="#">Cumberland County</a>   |
| Farmingdale         | <a href="#">Kennebec County</a>     |
| Farmington Falls    | <a href="#">Franklin County</a>     |
| Farmington          | <a href="#">Franklin County</a>     |
| Fayette             | <a href="#">Kennebec County</a>     |
| Fort Fairfield      | <a href="#">Aroostook County</a>    |
| Fort Kent Mills     | <a href="#">Aroostook County</a>    |
| Fort Kent           | <a href="#">Aroostook County</a>    |
| Frankfort           | <a href="#">Waldo County</a>        |
| Franklin            | <a href="#">Hancock County</a>      |
| Freedom             | <a href="#">Waldo County</a>        |
| Freeport            | <a href="#">Cumberland County</a>   |
| Frenchboro          | <a href="#">Hancock County</a>      |
| Frenchville         | <a href="#">Aroostook County</a>    |
| Friendship          | <a href="#">Knox County</a>         |
| Fryeburg            | <a href="#">Oxford County</a>       |
| Gardiner            | <a href="#">Kennebec County</a>     |
| Garfield Plantation | <a href="#">Aroostook County</a>    |
| Garfield Plt        | <a href="#">Aroostook County</a>    |
| Garland             | <a href="#">Penobscot County</a>    |
| Georgetown          | <a href="#">Sagadahoc County</a>    |
| Gilead              | <a href="#">Oxford County</a>       |
| Glen Cove           | <a href="#">Knox County</a>         |
| Glenburn            | <a href="#">Penobscot County</a>    |
| Glenwood Plantation | <a href="#">Aroostook County</a>    |
| Gorham              | <a href="#">Cumberland County</a>   |
| Gouldsboro          | <a href="#">Hancock County</a>      |
| Grand Isle          | <a href="#">Aroostook County</a>    |

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|------------------------------|-------------------------------------|
| Grand Lake Stream            | <a href="#">Washington County</a>   |
| Grand Lake Stream Plantation | <a href="#">Washington County</a>   |
| Gray                         | <a href="#">Cumberland County</a>   |
| Great Diamond Island         | <a href="#">Cumberland County</a>   |
| Great Pond                   | <a href="#">Hancock County</a>      |
| Greenbush                    | <a href="#">Penobscot County</a>    |
| Greene                       | <a href="#">Androscoggin County</a> |
| Greenville Junction          | <a href="#">Piscataquis County</a>  |
| Greenville                   | <a href="#">Piscataquis County</a>  |
| Greenwood                    | <a href="#">Oxford County</a>       |
| Guilford                     | <a href="#">Piscataquis County</a>  |
| Hallowell                    | <a href="#">Kennebec County</a>     |
| Hamlin                       | <a href="#">Aroostook County</a>    |
| Hammond                      | <a href="#">Aroostook County</a>    |
| Hampden                      | <a href="#">Penobscot County</a>    |
| Hancock                      | <a href="#">Hancock County</a>      |
| Hanover                      | <a href="#">Oxford County</a>       |
| Harborside                   | <a href="#">Hancock County</a>      |
| Harmony                      | <a href="#">Somerset County</a>     |
| Harpswell                    | <a href="#">Cumberland County</a>   |
| Harrington                   | <a href="#">Washington County</a>   |
| Harrison                     | <a href="#">Cumberland County</a>   |
| Hartford                     | <a href="#">Oxford County</a>       |
| Hartland                     | <a href="#">Somerset County</a>     |
| Haynesville                  | <a href="#">Aroostook County</a>    |
| Hebron                       | <a href="#">Oxford County</a>       |
| Hermon                       | <a href="#">Penobscot County</a>    |
| Hersey                       | <a href="#">Aroostook County</a>    |
| Hibberts gore                | <a href="#">Lincoln County</a>      |
| Highland Plantation          | <a href="#">Somerset County</a>     |
| Hinckley                     | <a href="#">Somerset County</a>     |
| Hiram                        | <a href="#">Oxford County</a>       |
| Hodgdon                      | <a href="#">Aroostook County</a>    |
| Holden                       | <a href="#">Penobscot County</a>    |
| Hollis Center                | <a href="#">York County</a>         |
| Hollis                       | <a href="#">York County</a>         |
| Hope                         | <a href="#">Knox County</a>         |
| Houlton                      | <a href="#">Aroostook County</a>    |
| Howland                      | <a href="#">Penobscot County</a>    |
| Hudson                       | <a href="#">Penobscot County</a>    |
| Hulls Cove                   | <a href="#">Hancock County</a>      |
| Industry                     | <a href="#">Franklin County</a>     |
| Island Falls                 | <a href="#">Aroostook County</a>    |
| Isle au Haut                 | <a href="#">Knox County</a>         |
| Isle of Springs              | <a href="#">Lincoln County</a>      |
| Islesboro                    | <a href="#">Waldo County</a>        |
| Islesford                    | <a href="#">Hancock County</a>      |
| Jackman                      | <a href="#">Somerset County</a>     |
| Jackson                      | <a href="#">Waldo County</a>        |

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| Jay                   | <a href="#">Franklin County</a>     |
| Jefferson             | <a href="#">Lincoln County</a>      |
| Jonesboro             | <a href="#">Washington County</a>   |
| Jonesport             | <a href="#">Washington County</a>   |
| Kenduskeag            | <a href="#">Penobscot County</a>    |
| Kennebunk             | <a href="#">York County</a>         |
| Kennebunkport         | <a href="#">York County</a>         |
| Kents Hill            | <a href="#">Kennebec County</a>     |
| Kezar Falls           | <a href="#">York County</a>         |
| Kingfield             | <a href="#">Franklin County</a>     |
| Kingman               | <a href="#">Penobscot County</a>    |
| Kingsbury Plantation  | <a href="#">Piscataquis County</a>  |
| Kittery Point         | <a href="#">York County</a>         |
| Kittery               | <a href="#">York County</a>         |
| Knox                  | <a href="#">Waldo County</a>        |
| Lagrange              | <a href="#">Penobscot County</a>    |
| Lake View Plantation  | <a href="#">Piscataquis County</a>  |
| Lakeville             | <a href="#">Penobscot County</a>    |
| Lambert Lake          | <a href="#">Washington County</a>   |
| Lamoine               | <a href="#">Hancock County</a>      |
| Lebanon               | <a href="#">York County</a>         |
| Lee                   | <a href="#">Penobscot County</a>    |
| Leeds                 | <a href="#">Androscoggin County</a> |
| Levant                | <a href="#">Penobscot County</a>    |
| Lewiston              | <a href="#">Androscoggin County</a> |
| Liberty               | <a href="#">Waldo County</a>        |
| Lille                 | <a href="#">Aroostook County</a>    |
| Limerick              | <a href="#">York County</a>         |
| Limestone             | <a href="#">Aroostook County</a>    |
| Limington             | <a href="#">York County</a>         |
| Lincoln Center        | <a href="#">Penobscot County</a>    |
| Lincoln Plantation    | <a href="#">Oxford County</a>       |
| Lincoln               | <a href="#">Penobscot County</a>    |
| Lincolnvile Center    | <a href="#">Waldo County</a>        |
| Lincolnvile           | <a href="#">Waldo County</a>        |
| Linneus               | <a href="#">Aroostook County</a>    |
| Lisbon Falls          | <a href="#">Androscoggin County</a> |
| Lisbon                | <a href="#">Androscoggin County</a> |
| Litchfield            | <a href="#">Kennebec County</a>     |
| Little Deer Isle      | <a href="#">Hancock County</a>      |
| Little Diamond Island | <a href="#">Cumberland County</a>   |
| Littleton             | <a href="#">Aroostook County</a>    |
| Livermore Falls       | <a href="#">Androscoggin County</a> |
| Livermore             | <a href="#">Androscoggin County</a> |
| Long Island           | <a href="#">Cumberland County</a>   |
| Lovell                | <a href="#">Oxford County</a>       |
| Lowell                | <a href="#">Penobscot County</a>    |
| Lubec                 | <a href="#">Washington County</a>   |
| Ludlow                | <a href="#">Aroostook County</a>    |

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|---------------------------|----------------------------|
| Lyman                     | <u>York County</u>         |
| Mac Mahan                 | <u>Sagadahoc County</u>    |
| Machias                   | <u>Washington County</u>   |
| Machiasport               | <u>Washington County</u>   |
| Macwahoc Plantation       | <u>Aroostook County</u>    |
| Madawaska                 | <u>Aroostook County</u>    |
| Madison                   | <u>Somerset County</u>     |
| Madrid                    | <u>Franklin County</u>     |
| Magalloway Plantation     | <u>Oxford County</u>       |
| Manchester                | <u>Kennebec County</u>     |
| Manset                    | <u>Hancock County</u>      |
| Mapleton                  | <u>Aroostook County</u>    |
| Mariaville                | <u>Hancock County</u>      |
| Mars Hill                 | <u>Aroostook County</u>    |
| Marshfield                | <u>Washington County</u>   |
| Masardis                  | <u>Aroostook County</u>    |
| Matinicus                 | <u>Knox County</u>         |
| Matinicus Isle Plantation | <u>Knox County</u>         |
| Mattawamkeag              | <u>Penobscot County</u>    |
| Maxfield                  | <u>Penobscot County</u>    |
| Mechanic Falls            | <u>Androscoggin County</u> |
| Meddybemps                | <u>Washington County</u>   |
| Medford                   | <u>Piscataquis County</u>  |
| Medomak                   | <u>Lincoln County</u>      |
| Medway                    | <u>Penobscot County</u>    |
| Mercer                    | <u>Somerset County</u>     |
| Merepoint                 | <u>Cumberland County</u>   |
| Merrill                   | <u>Aroostook County</u>    |
| Mexico                    | <u>Oxford County</u>       |
| Milbridge                 | <u>Washington County</u>   |
| Milford                   | <u>Penobscot County</u>    |
| Millinocket               | <u>Penobscot County</u>    |
| Milo                      | <u>Piscataquis County</u>  |
| Milton                    | <u>Oxford County</u>       |
| Minot                     | <u>Androscoggin County</u> |
| Minturn                   | <u>Hancock County</u>      |
| Monhegan                  | <u>Lincoln County</u>      |
| Monhegan Plantation       | <u>Lincoln County</u>      |
| Monmouth                  | <u>Kennebec County</u>     |
| Monroe                    | <u>Waldo County</u>        |
| Monson                    | <u>Piscataquis County</u>  |
| Monticello                | <u>Aroostook County</u>    |
| Montville                 | <u>Waldo County</u>        |
| Moody                     | <u>York County</u>         |
| Moose River               | <u>Somerset County</u>     |
| Moro Plantation           | <u>Aroostook County</u>    |
| Morrill                   | <u>Waldo County</u>        |
| Moscow                    | <u>Somerset County</u>     |
| Mount Chase               | <u>Penobscot County</u>    |



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| Mount Desert          | <a href="#">Hancock County</a>      |
| Mount Vernon          | <a href="#">Kennebec County</a>     |
| Naples                | <a href="#">Cumberland County</a>   |
| Nashville Plantation  | <a href="#">Aroostook County</a>    |
| Nashville Plt         | <a href="#">Aroostook County</a>    |
| New Canada            | <a href="#">Aroostook County</a>    |
| New Gloucester        | <a href="#">Cumberland County</a>   |
| New Harbor            | <a href="#">Lincoln County</a>      |
| New Limerick          | <a href="#">Aroostook County</a>    |
| New Portland          | <a href="#">Somerset County</a>     |
| New Sharon            | <a href="#">Franklin County</a>     |
| New Sweden            | <a href="#">Aroostook County</a>    |
| New Vineyard          | <a href="#">Franklin County</a>     |
| Newagen               | <a href="#">Lincoln County</a>      |
| Newburgh              | <a href="#">Penobscot County</a>    |
| Newcastle             | <a href="#">Lincoln County</a>      |
| Newfield              | <a href="#">York County</a>         |
| Newport               | <a href="#">Penobscot County</a>    |
| Newry                 | <a href="#">Oxford County</a>       |
| Nobleboro             | <a href="#">Lincoln County</a>      |
| Norridgewock          | <a href="#">Somerset County</a>     |
| North Amity           | <a href="#">Aroostook County</a>    |
| North Anson           | <a href="#">Somerset County</a>     |
| North Berwick         | <a href="#">York County</a>         |
| North Bridgton        | <a href="#">Cumberland County</a>   |
| North Franklin        | <a href="#">Franklin County</a>     |
| North Fryeburg        | <a href="#">Oxford County</a>       |
| North Haven           | <a href="#">Knox County</a>         |
| North Jay             | <a href="#">Franklin County</a>     |
| North Monmouth        | <a href="#">Kennebec County</a>     |
| North New Portland    | <a href="#">Somerset County</a>     |
| North Oxford          | <a href="#">Oxford County</a>       |
| North Penobscot       | <a href="#">Penobscot County</a>    |
| North Shapleigh       | <a href="#">York County</a>         |
| North Sullivan        | <a href="#">Hancock County</a>      |
| North Turner          | <a href="#">Androscoggin County</a> |
| North Vassalboro      | <a href="#">Kennebec County</a>     |
| North Washington      | <a href="#">Washington County</a>   |
| North Waterboro       | <a href="#">York County</a>         |
| North Waterford       | <a href="#">Oxford County</a>       |
| North Yarmouth        | <a href="#">Cumberland County</a>   |
| Northeast Harbor      | <a href="#">Hancock County</a>      |
| Northeast Piscataquis | <a href="#">Piscataquis County</a>  |
| Northeast Somerset    | <a href="#">Somerset County</a>     |
| Northfield            | <a href="#">Washington County</a>   |
| Northport             | <a href="#">Waldo County</a>        |
| Northwest Aroostook   | <a href="#">Aroostook County</a>    |
| Northwest Hancock     | <a href="#">Hancock County</a>      |
| Northwest Piscataquis | <a href="#">Piscataquis County</a>  |

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| Northwest Somerset                  | <a href="#">Somerset County</a>    |
| Norway                              | <a href="#">Oxford County</a>      |
| Oakfield                            | <a href="#">Aroostook County</a>   |
| Oakland                             | <a href="#">Kennebec County</a>    |
| Ocean Park                          | <a href="#">York County</a>        |
| Ogunquit                            | <a href="#">York County</a>        |
| Olamon                              | <a href="#">Penobscot County</a>   |
| Old Orchard Beach                   | <a href="#">York County</a>        |
| Old Town                            | <a href="#">Penobscot County</a>   |
| Oquossoc                            | <a href="#">Franklin County</a>    |
| Orient                              | <a href="#">Aroostook County</a>   |
| Orland                              | <a href="#">Hancock County</a>     |
| Orono                               | <a href="#">Penobscot County</a>   |
| Orrington                           | <a href="#">Penobscot County</a>   |
| Orrs Island                         | <a href="#">Cumberland County</a>  |
| Osborn                              | <a href="#">Hancock County</a>     |
| Otis                                | <a href="#">Hancock County</a>     |
| Otisfield                           | <a href="#">Oxford County</a>      |
| Otter Creek                         | <a href="#">Hancock County</a>     |
| Owls Head                           | <a href="#">Knox County</a>        |
| Oxbow                               | <a href="#">Aroostook County</a>   |
| Oxbow Plantation                    | <a href="#">Aroostook County</a>   |
| Oxford                              | <a href="#">Oxford County</a>      |
| Palermo                             | <a href="#">Waldo County</a>       |
| Palmyra                             | <a href="#">Somerset County</a>    |
| Paris                               | <a href="#">Oxford County</a>      |
| Parkman                             | <a href="#">Piscataquis County</a> |
| Parsonsfield                        | <a href="#">York County</a>        |
| Passadumkeag                        | <a href="#">Penobscot County</a>   |
| Passamaquoddy Indian Township       | <a href="#">Washington County</a>  |
| Passamaquoddy Pleasant Point        | <a href="#">Washington County</a>  |
| Patten                              | <a href="#">Penobscot County</a>   |
| Peaks Island                        | <a href="#">Cumberland County</a>  |
| Pejepscot                           | <a href="#">Sagadahoc County</a>   |
| Pemaquid                            | <a href="#">Lincoln County</a>     |
| Pembroke                            | <a href="#">Washington County</a>  |
| Penobscot Indian Island Reservation | <a href="#">Penobscot County</a>   |
| Penobscot                           | <a href="#">Hancock County</a>     |
| Perham                              | <a href="#">Aroostook County</a>   |
| Perkins                             | <a href="#">Sagadahoc County</a>   |
| Perry                               | <a href="#">Washington County</a>  |
| Peru                                | <a href="#">Oxford County</a>      |
| Phillips                            | <a href="#">Franklin County</a>    |
| Phippsburg                          | <a href="#">Sagadahoc County</a>   |
| Pine Point                          | <a href="#">Cumberland County</a>  |
| Pittsfield                          | <a href="#">Somerset County</a>    |
| Pittston                            | <a href="#">Kennebec County</a>    |
| Pleasant Ridge Plantation           | <a href="#">Somerset County</a>    |
| Plymouth                            | <a href="#">Penobscot County</a>   |

|                        |                                     |
|------------------------|-------------------------------------|
| Poland Spring          | <a href="#">Androscoggin County</a> |
| Poland                 | <a href="#">Androscoggin County</a> |
| Pond Cove              | <a href="#">Cumberland County</a>   |
| Port Clyde             | <a href="#">Knox County</a>         |
| Portage                | <a href="#">Aroostook County</a>    |
| Portage Lake           | <a href="#">Aroostook County</a>    |
| Porter                 | <a href="#">Oxford County</a>       |
| Portland               | <a href="#">Cumberland County</a>   |
| Pownal                 | <a href="#">Cumberland County</a>   |
| Prentiss               | <a href="#">Penobscot County</a>    |
| Presque Isle           | <a href="#">Aroostook County</a>    |
| Princeton              | <a href="#">Washington County</a>   |
| Prospect Harbor        | <a href="#">Hancock County</a>      |
| Prospect               | <a href="#">Waldo County</a>        |
| Quimby                 | <a href="#">Aroostook County</a>    |
| Randolph               | <a href="#">Kennebec County</a>     |
| Rangeley Plantation    | <a href="#">Franklin County</a>     |
| Rangeley               | <a href="#">Franklin County</a>     |
| Raymond                | <a href="#">Cumberland County</a>   |
| Readfield              | <a href="#">Kennebec County</a>     |
| Reed Plantation        | <a href="#">Aroostook County</a>    |
| Richmond               | <a href="#">Sagadahoc County</a>    |
| Ripley                 | <a href="#">Somerset County</a>     |
| Robbinston             | <a href="#">Washington County</a>   |
| Rockland               | <a href="#">Knox County</a>         |
| Rockport               | <a href="#">Knox County</a>         |
| Rockwood               | <a href="#">Somerset County</a>     |
| Rome                   | <a href="#">Kennebec County</a>     |
| Roque Bluffs           | <a href="#">Washington County</a>   |
| Round Pond             | <a href="#">Lincoln County</a>      |
| Roxbury                | <a href="#">Oxford County</a>       |
| Rumford Center         | <a href="#">Oxford County</a>       |
| Rumford Point          | <a href="#">Oxford County</a>       |
| Rumford                | <a href="#">Oxford County</a>       |
| Sabattus               | <a href="#">Androscoggin County</a> |
| Saco                   | <a href="#">York County</a>         |
| Saint Agatha           | <a href="#">Aroostook County</a>    |
| Saint Albans           | <a href="#">Somerset County</a>     |
| Saint David            | <a href="#">Aroostook County</a>    |
| Saint Francis          | <a href="#">Aroostook County</a>    |
| Saint George           | <a href="#">Knox County</a>         |
| Saint John Plantation  | <a href="#">Aroostook County</a>    |
| Salsbury Cove          | <a href="#">Hancock County</a>      |
| Sandy Point            | <a href="#">Waldo County</a>        |
| Sandy River Plantation | <a href="#">Franklin County</a>     |
| Sanford                | <a href="#">York County</a>         |
| Sangerville            | <a href="#">Piscataquis County</a>  |
| Sargentville           | <a href="#">Hancock County</a>      |
| Scarborough            | <a href="#">Cumberland County</a>   |

|                       |                                    |
|-----------------------|------------------------------------|
| Seal Cove             | <a href="#">Hancock County</a>     |
| Seal Harbor           | <a href="#">Hancock County</a>     |
| Searsmont             | <a href="#">Waldo County</a>       |
| Searsport             | <a href="#">Waldo County</a>       |
| Sebago Lake           | <a href="#">Cumberland County</a>  |
| Sebago                | <a href="#">Cumberland County</a>  |
| Sebasco Estates       | <a href="#">Sagadahoc County</a>   |
| Sebec Lake            | <a href="#">Piscataquis County</a> |
| Sebec                 | <a href="#">Piscataquis County</a> |
| Seboeis               | <a href="#">Penobscot County</a>   |
| Seboeis Plantation    | <a href="#">Penobscot County</a>   |
| Seboomook Lake        | <a href="#">Somerset County</a>    |
| Sedgwick              | <a href="#">Hancock County</a>     |
| Shapleigh             | <a href="#">York County</a>        |
| Shawmut               | <a href="#">Somerset County</a>    |
| Sheridan              | <a href="#">Aroostook County</a>   |
| Sherman Mills         | <a href="#">Aroostook County</a>   |
| Sherman Station       | <a href="#">Penobscot County</a>   |
| Sherman               | <a href="#">Aroostook County</a>   |
| Shirley Mills         | <a href="#">Piscataquis County</a> |
| Shirley               | <a href="#">Piscataquis County</a> |
| Sidney                | <a href="#">Kennebec County</a>    |
| Sinclair              | <a href="#">Aroostook County</a>   |
| Skowhegan             | <a href="#">Somerset County</a>    |
| Small Point           | <a href="#">Sagadahoc County</a>   |
| Smithfield            | <a href="#">Somerset County</a>    |
| Smyrna Mills          | <a href="#">Aroostook County</a>   |
| Smyrna                | <a href="#">Aroostook County</a>   |
| Soldier Pond          | <a href="#">Aroostook County</a>   |
| Solon                 | <a href="#">Somerset County</a>    |
| Somerville            | <a href="#">Lincoln County</a>     |
| Sorrento              | <a href="#">Hancock County</a>     |
| South Aroostook       | <a href="#">Aroostook County</a>   |
| South Berwick         | <a href="#">York County</a>        |
| South Bristol         | <a href="#">Lincoln County</a>     |
| South Casco           | <a href="#">Cumberland County</a>  |
| South China           | <a href="#">Kennebec County</a>    |
| South Franklin        | <a href="#">Franklin County</a>    |
| South Freeport        | <a href="#">Cumberland County</a>  |
| South Gardiner        | <a href="#">Kennebec County</a>    |
| South Gouldsboro      | <a href="#">Hancock County</a>     |
| South Harpswell       | <a href="#">Cumberland County</a>  |
| South Oxford          | <a href="#">Oxford County</a>      |
| South Paris           | <a href="#">Oxford County</a>      |
| South Portland        | <a href="#">Cumberland County</a>  |
| South Thomaston       | <a href="#">Knox County</a>        |
| South Waterford       | <a href="#">Oxford County</a>      |
| South Windham         | <a href="#">Cumberland County</a>  |
| Southeast Piscataquis | <a href="#">Piscataquis County</a> |

|                      |                                     |
|----------------------|-------------------------------------|
| Southport            | <a href="#">Lincoln County</a>      |
| Southwest Harbor     | <a href="#">Hancock County</a>      |
| Springfield          | <a href="#">Penobscot County</a>    |
| Springvale           | <a href="#">York County</a>         |
| Spruce Head          | <a href="#">Knox County</a>         |
| Square Lake          | <a href="#">Aroostook County</a>    |
| Squirrel Island      | <a href="#">Lincoln County</a>      |
| Stacyville           | <a href="#">Penobscot County</a>    |
| Standish             | <a href="#">Cumberland County</a>   |
| Starks               | <a href="#">Somerset County</a>     |
| Steep Falls          | <a href="#">Cumberland County</a>   |
| Stetson              | <a href="#">Penobscot County</a>    |
| Steuben              | <a href="#">Washington County</a>   |
| Stillwater           | <a href="#">Penobscot County</a>    |
| Stockholm            | <a href="#">Aroostook County</a>    |
| Stockton Springs     | <a href="#">Waldo County</a>        |
| Stoneham             | <a href="#">Oxford County</a>       |
| Stonington           | <a href="#">Hancock County</a>      |
| Stow                 | <a href="#">Oxford County</a>       |
| Stratton             | <a href="#">Franklin County</a>     |
| Strong               | <a href="#">Franklin County</a>     |
| Sullivan             | <a href="#">Hancock County</a>      |
| Sumner               | <a href="#">Oxford County</a>       |
| Sunset               | <a href="#">Hancock County</a>      |
| Surry                | <a href="#">Hancock County</a>      |
| Swans Island         | <a href="#">Hancock County</a>      |
| Swanville            | <a href="#">Waldo County</a>        |
| Sweden               | <a href="#">Oxford County</a>       |
| Talmadge             | <a href="#">Washington County</a>   |
| Temple               | <a href="#">Franklin County</a>     |
| Tenants Harbor       | <a href="#">Knox County</a>         |
| The Forks Plantation | <a href="#">Somerset County</a>     |
| Thomaston            | <a href="#">Knox County</a>         |
| Thorndike            | <a href="#">Waldo County</a>        |
| Topsfield            | <a href="#">Washington County</a>   |
| Topsham              | <a href="#">Sagadahoc County</a>    |
| Tremont              | <a href="#">Hancock County</a>      |
| Trenton              | <a href="#">Hancock County</a>      |
| Trevett              | <a href="#">Lincoln County</a>      |
| Troy                 | <a href="#">Waldo County</a>        |
| Turner Center        | <a href="#">Androscoggin County</a> |
| Turner               | <a href="#">Androscoggin County</a> |
| Twombly              | <a href="#">Penobscot County</a>    |
| Union                | <a href="#">Knox County</a>         |
| Unity                | <a href="#">Waldo County</a>        |
| Unity                | <a href="#">Kennebec County</a>     |
| Upper Frenchville    | <a href="#">Aroostook County</a>    |
| Upton                | <a href="#">Oxford County</a>       |
| Van Buren            | <a href="#">Aroostook County</a>    |

|                       |                                     |
|-----------------------|-------------------------------------|
| Vanceboro             | <a href="#">Washington County</a>   |
| Vassalboro            | <a href="#">Kennebec County</a>     |
| Veazie                | <a href="#">Penobscot County</a>    |
| Verona                | <a href="#">Hancock County</a>      |
| Vienna                | <a href="#">Kennebec County</a>     |
| Vinalhaven            | <a href="#">Knox County</a>         |
| Wade                  | <a href="#">Aroostook County</a>    |
| Waite                 | <a href="#">Washington County</a>   |
| Waldo                 | <a href="#">Waldo County</a>        |
| Waldoboro             | <a href="#">Lincoln County</a>      |
| Wales                 | <a href="#">Androscoggin County</a> |
| Wallagrass Plantation | <a href="#">Aroostook County</a>    |
| Walpole               | <a href="#">Lincoln County</a>      |
| Waltham               | <a href="#">Hancock County</a>      |
| Warren                | <a href="#">Knox County</a>         |
| Washburn              | <a href="#">Aroostook County</a>    |
| Washington            | <a href="#">Knox County</a>         |
| Waterboro             | <a href="#">York County</a>         |
| Waterford             | <a href="#">Oxford County</a>       |
| Waterville            | <a href="#">Kennebec County</a>     |
| Wayne                 | <a href="#">Kennebec County</a>     |
| Webster Plantation    | <a href="#">Penobscot County</a>    |
| Weeks Mills           | <a href="#">Kennebec County</a>     |
| Weld                  | <a href="#">Franklin County</a>     |
| Wellington            | <a href="#">Somerset County</a>     |
| Wellington            | <a href="#">Piscataquis County</a>  |
| Wells                 | <a href="#">York County</a>         |
| Wesley                | <a href="#">Washington County</a>   |
| West Baldwin          | <a href="#">Cumberland County</a>   |
| West Bath             | <a href="#">Sagadahoc County</a>    |
| West Bethel           | <a href="#">Oxford County</a>       |
| West Boothbay Harbor  | <a href="#">Lincoln County</a>      |
| West Central Franklin | <a href="#">Franklin County</a>     |
| West Enfield          | <a href="#">Penobscot County</a>    |
| West Farmington       | <a href="#">Franklin County</a>     |
| West Forks            | <a href="#">Somerset County</a>     |
| West Forks Plantation | <a href="#">Somerset County</a>     |
| West Gardiner         | <a href="#">Kennebec County</a>     |
| West Kennebunk        | <a href="#">York County</a>         |
| West Minot            | <a href="#">Androscoggin County</a> |
| West Newfield         | <a href="#">York County</a>         |
| West Paris            | <a href="#">Oxford County</a>       |
| West Poland           | <a href="#">Androscoggin County</a> |
| West Rockport         | <a href="#">Knox County</a>         |
| West Scarborough      | <a href="#">Cumberland County</a>   |
| West Tremont          | <a href="#">Hancock County</a>      |
| Westbrook             | <a href="#">Cumberland County</a>   |
| Westfield             | <a href="#">Aroostook County</a>    |
| Westmanland           | <a href="#">Aroostook County</a>    |

|                            |                                    |
|----------------------------|------------------------------------|
| Weston                     | <a href="#">Aroostook County</a>   |
| Westport                   | <a href="#">Lincoln County</a>     |
| Whitefield                 | <a href="#">Lincoln County</a>     |
| Whiting                    | <a href="#">Washington County</a>  |
| Whitney                    | <a href="#">Penobscot County</a>   |
| Whitneyville               | <a href="#">Washington County</a>  |
| Willimantic                | <a href="#">Piscataquis County</a> |
| Wilton                     | <a href="#">Franklin County</a>    |
| Windham                    | <a href="#">Cumberland County</a>  |
| Windsor                    | <a href="#">Kennebec County</a>    |
| Winn                       | <a href="#">Penobscot County</a>   |
| Winslow                    | <a href="#">Kennebec County</a>    |
| Winter Harbor              | <a href="#">Hancock County</a>     |
| Winterport                 | <a href="#">Waldo County</a>       |
| Winterville                | <a href="#">Aroostook County</a>   |
| Winterville Plantation     | <a href="#">Aroostook County</a>   |
| Winthrop                   | <a href="#">Kennebec County</a>    |
| Wiscasset                  | <a href="#">Lincoln County</a>     |
| Woodland                   | <a href="#">Aroostook County</a>   |
| Woodland Washington County | <a href="#">Washington County</a>  |
| Woodstock                  | <a href="#">Oxford County</a>      |
| Woodville                  | <a href="#">Penobscot County</a>   |
| Woolwich                   | <a href="#">Sagadahoc County</a>   |
| Wyman                      | <a href="#">Franklin County</a>    |
| Wytopitlock                | <a href="#">Aroostook County</a>   |
| Yarmouth                   | <a href="#">Cumberland County</a>  |
| York Beach                 | <a href="#">York County</a>        |
| York Harbor                | <a href="#">York County</a>        |
| York                       | <a href="#">York County</a>        |

## Rhode Island Counties

|                  |                                   |
|------------------|-----------------------------------|
| Albion           | <a href="#">Providence County</a> |
| Ashaway          | <a href="#">Washington County</a> |
| Barrington       | <a href="#">Bristol County</a>    |
| Block Island     | <a href="#">Washington County</a> |
| Bradford         | <a href="#">Washington County</a> |
| Bristol          | <a href="#">Bristol County</a>    |
| Brown Station    | <a href="#">Providence County</a> |
| Burrillville     | <a href="#">Providence County</a> |
| Carolina         | <a href="#">Washington County</a> |
| Central Falls    | <a href="#">Providence County</a> |
| Charlestown      | <a href="#">Washington County</a> |
| Chepachet        | <a href="#">Providence County</a> |
| Clayville        | <a href="#">Providence County</a> |
| Coventry         | <a href="#">Kent County</a>       |
| Cranston         | <a href="#">Providence County</a> |
| Cumberland       | <a href="#">Providence County</a> |
| East Greenwich   | <a href="#">Kent County</a>       |
| East Providence  | <a href="#">Providence County</a> |
| Escoheag         | <a href="#">Washington County</a> |
| Exeter           | <a href="#">Washington County</a> |
| Fiskeville       | <a href="#">Providence County</a> |
| Forestdale       | <a href="#">Providence County</a> |
| Foster           | <a href="#">Providence County</a> |
| Friar Station    | <a href="#">Providence County</a> |
| Glendale         | <a href="#">Providence County</a> |
| Glocester        | <a href="#">Providence County</a> |
| Greene           | <a href="#">Kent County</a>       |
| Greenville       | <a href="#">Providence County</a> |
| Harmony          | <a href="#">Providence County</a> |
| Harrisville      | <a href="#">Providence County</a> |
| Hope             | <a href="#">Providence County</a> |
| Hope Valley      | <a href="#">Washington County</a> |
| Hopkinton        | <a href="#">Washington County</a> |
| Jamestown        | <a href="#">Newport County</a>    |
| Johnston         | <a href="#">Providence County</a> |
| Kenyon           | <a href="#">Washington County</a> |
| Kingston         | <a href="#">Washington County</a> |
| Lincoln          | <a href="#">Providence County</a> |
| Little Compton   | <a href="#">Newport County</a>    |
| Manville         | <a href="#">Providence County</a> |
| Mapleville       | <a href="#">Providence County</a> |
| Middletown       | <a href="#">Newport County</a>    |
| Narragansett     | <a href="#">Washington County</a> |
| New Shoreham     | <a href="#">Washington County</a> |
| Newport          | <a href="#">Newport County</a>    |
| North Kingstown  | <a href="#">Washington County</a> |
| North Providence | <a href="#">Providence County</a> |
| North Scituate   | <a href="#">Providence County</a> |



|                     |                          |
|---------------------|--------------------------|
| North Smithfield    | <u>Providence County</u> |
| Oakland             | <u>Providence County</u> |
| Pascoag             | <u>Providence County</u> |
| Pawtucket           | <u>Providence County</u> |
| Peace Dale          | <u>Washington County</u> |
| Point Judith        | <u>Washington County</u> |
| Portsmouth          | <u>Newport County</u>    |
| Providence          | <u>Providence County</u> |
| Prudence Island     | <u>Bristol County</u>    |
| Richmond            | <u>Washington County</u> |
| Riverside           | <u>Providence County</u> |
| Rockville           | <u>Washington County</u> |
| Rumford             | <u>Providence County</u> |
| Saunderstown        | <u>Washington County</u> |
| Scituate            | <u>Providence County</u> |
| Shannock            | <u>Washington County</u> |
| Slatersville        | <u>Providence County</u> |
| Slocum              | <u>Washington County</u> |
| Smithfield          | <u>Providence County</u> |
| South Kingstown     | <u>Washington County</u> |
| Tiverton            | <u>Newport County</u>    |
| Valley Falls        | <u>Providence County</u> |
| Warren              | <u>Bristol County</u>    |
| Warwick             | <u>Kent County</u>       |
| West Greenwich      | <u>Kent County</u>       |
| West Kingston       | <u>Washington County</u> |
| West Warwick        | <u>Kent County</u>       |
| Westerly            | <u>Washington County</u> |
| Wood River Junction | <u>Washington County</u> |
| Woonsocket          | <u>Providence County</u> |
| Wyoming             | <u>Washington County</u> |

## Connecticut Counties

|                 |                                   |
|-----------------|-----------------------------------|
| Abington        | <a href="#">Windham County</a>    |
| Allingtown      | <a href="#">New Haven County</a>  |
| Amston          | <a href="#">Tolland County</a>    |
| Andover         | <a href="#">Tolland County</a>    |
| Ansonia         | <a href="#">New Haven County</a>  |
| Ashford         | <a href="#">Windham County</a>    |
| Avon            | <a href="#">Hartford County</a>   |
| Ballouville     | <a href="#">Windham County</a>    |
| Baltic          | <a href="#">New London County</a> |
| Bantam          | <a href="#">Litchfield County</a> |
| Barkhamsted     | <a href="#">Litchfield County</a> |
| Beacon Falls    | <a href="#">New Haven County</a>  |
| Berlin          | <a href="#">Hartford County</a>   |
| Bethany         | <a href="#">New Haven County</a>  |
| Bethel          | <a href="#">Fairfield County</a>  |
| Bethlehem       | <a href="#">Litchfield County</a> |
| Bishops Comer   | <a href="#">Hartford County</a>   |
| Bloomfield      | <a href="#">Hartford County</a>   |
| Bolton          | <a href="#">Tolland County</a>    |
| Botsford        | <a href="#">Fairfield County</a>  |
| Bozrah          | <a href="#">New London County</a> |
| Branford        | <a href="#">New Haven County</a>  |
| Bridgeport      | <a href="#">Fairfield County</a>  |
| Bridgewater     | <a href="#">Litchfield County</a> |
| Bristol         | <a href="#">Hartford County</a>   |
| Broad Brook     | <a href="#">Hartford County</a>   |
| Brookfield      | <a href="#">Fairfield County</a>  |
| Brooklyn        | <a href="#">Windham County</a>    |
| Burlington      | <a href="#">Hartford County</a>   |
| Canaan          | <a href="#">Litchfield County</a> |
| Canterbury      | <a href="#">Windham County</a>    |
| Canton Center   | <a href="#">Hartford County</a>   |
| Canton          | <a href="#">Hartford County</a>   |
| Centerbrook     | <a href="#">Middlesex County</a>  |
| Central Village | <a href="#">Windham County</a>    |
| Chaplin         | <a href="#">Windham County</a>    |
| Cheshire        | <a href="#">New Haven County</a>  |
| Chester         | <a href="#">Middlesex County</a>  |
| Clinton         | <a href="#">Middlesex County</a>  |
| Cobalt          | <a href="#">Middlesex County</a>  |
| Colchester      | <a href="#">New London County</a> |
| Colebrook       | <a href="#">Litchfield County</a> |
| Collinsville    | <a href="#">Hartford County</a>   |
| Columbia        | <a href="#">Tolland County</a>    |
| Cornwall Bridge | <a href="#">Litchfield County</a> |
| Cornwall        | <a href="#">Litchfield County</a> |
| Cos Cob         | <a href="#">Fairfield County</a>  |
| Coventry        | <a href="#">Tolland County</a>    |

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|-------------------|-----------------------------------|
| Cromwell          | <a href="#">Middlesex County</a>  |
| Danbury           | <a href="#">Fairfield County</a>  |
| Danielson         | <a href="#">Windham County</a>    |
| Darien            | <a href="#">Fairfield County</a>  |
| Dayville          | <a href="#">Windham County</a>    |
| Deep River        | <a href="#">Middlesex County</a>  |
| Derby             | <a href="#">New Haven County</a>  |
| Durham            | <a href="#">Middlesex County</a>  |
| East Berlin       | <a href="#">Hartford County</a>   |
| East Canaan       | <a href="#">Litchfield County</a> |
| East Glastonbury  | <a href="#">Hartford County</a>   |
| East Granby       | <a href="#">Hartford County</a>   |
| East Haddam       | <a href="#">Middlesex County</a>  |
| East Hampton      | <a href="#">Hartford County</a>   |
| East Hampton      | <a href="#">Middlesex County</a>  |
| East Hartford     | <a href="#">Hartford County</a>   |
| East Hartland     | <a href="#">Hartford County</a>   |
| East Haven        | <a href="#">New Haven County</a>  |
| East Killingly    | <a href="#">Windham County</a>    |
| East Lyme         | <a href="#">New London County</a> |
| East Windsor Hill | <a href="#">Hartford County</a>   |
| East Windsor HI   | <a href="#">Hartford County</a>   |
| East Windsor      | <a href="#">Hartford County</a>   |
| East Woodstock    | <a href="#">Windham County</a>    |
| Eastford          | <a href="#">Windham County</a>    |
| Easton            | <a href="#">Fairfield County</a>  |
| Ellington         | <a href="#">Tolland County</a>    |
| Enfield           | <a href="#">Hartford County</a>   |
| Essex             | <a href="#">Middlesex County</a>  |
| Fairfield         | <a href="#">Fairfield County</a>  |
| Falls Village     | <a href="#">Litchfield County</a> |
| Farmington        | <a href="#">Hartford County</a>   |
| Franklin          | <a href="#">New London County</a> |
| Gales Ferry       | <a href="#">New London County</a> |
| Gaylordsville     | <a href="#">Litchfield County</a> |
| Georgetown        | <a href="#">Fairfield County</a>  |
| Gilman            | <a href="#">New London County</a> |
| Glasgo            | <a href="#">New London County</a> |
| Glastonbury       | <a href="#">Hartford County</a>   |
| Goshen            | <a href="#">Litchfield County</a> |
| Granby            | <a href="#">Hartford County</a>   |
| Greens Farms      | <a href="#">Fairfield County</a>  |
| Greenwich         | <a href="#">Fairfield County</a>  |
| Griswold          | <a href="#">New London County</a> |
| Grosvenor Dale    | <a href="#">Windham County</a>    |
| Groton            | <a href="#">New London County</a> |
| Guilford          | <a href="#">New Haven County</a>  |
| Haddam Neck       | <a href="#">Middlesex County</a>  |
| Haddam            | <a href="#">Middlesex County</a>  |

|                     |                                   |
|---------------------|-----------------------------------|
| Hadlyme             | <a href="#">New London County</a> |
| Hamden              | <a href="#">New Haven County</a>  |
| Hampton             | <a href="#">Windham County</a>    |
| Hanover             | <a href="#">New London County</a> |
| Hartford            | <a href="#">Hartford County</a>   |
| Hartland            | <a href="#">Hartford County</a>   |
| Harwinton           | <a href="#">Litchfield County</a> |
| Hawleyville         | <a href="#">Fairfield County</a>  |
| Hebron              | <a href="#">Tolland County</a>    |
| Higganum            | <a href="#">Middlesex County</a>  |
| Ivoryton            | <a href="#">Middlesex County</a>  |
| Jewett City         | <a href="#">New London County</a> |
| Kensington          | <a href="#">Hartford County</a>   |
| Kent                | <a href="#">Litchfield County</a> |
| Killingly           | <a href="#">Windham County</a>    |
| Killingworth        | <a href="#">Middlesex County</a>  |
| Lakeside            | <a href="#">Litchfield County</a> |
| Lakeville           | <a href="#">Litchfield County</a> |
| Lebanon             | <a href="#">New London County</a> |
| Ledyard             | <a href="#">New London County</a> |
| Lisbon              | <a href="#">New London County</a> |
| Litchfield          | <a href="#">Litchfield County</a> |
| Lyme                | <a href="#">New London County</a> |
| Madison             | <a href="#">New Haven County</a>  |
| Manchester          | <a href="#">Tolland County</a>    |
| Manchester          | <a href="#">Hartford County</a>   |
| Mansfield Center    | <a href="#">Tolland County</a>    |
| Mansfield Depot     | <a href="#">Tolland County</a>    |
| Mansfield           | <a href="#">Tolland County</a>    |
| Maple Hill          | <a href="#">Hartford County</a>   |
| Marion              | <a href="#">Hartford County</a>   |
| Marlborough         | <a href="#">Hartford County</a>   |
| Mashantucket        | <a href="#">New London County</a> |
| Melrose             | <a href="#">Hartford County</a>   |
| Meriden             | <a href="#">New Haven County</a>  |
| Middle Haddam       | <a href="#">Middlesex County</a>  |
| Middlebury          | <a href="#">New Haven County</a>  |
| Middlefield         | <a href="#">Middlesex County</a>  |
| Middletown          | <a href="#">Middlesex County</a>  |
| Milford (remainder) | <a href="#">New Haven County</a>  |
| Milford             | <a href="#">New Haven County</a>  |
| Milldale            | <a href="#">Hartford County</a>   |
| Monroe              | <a href="#">Fairfield County</a>  |
| Montville           | <a href="#">New London County</a> |
| Moodus              | <a href="#">Middlesex County</a>  |
| Moosup              | <a href="#">Windham County</a>    |
| Morris              | <a href="#">Litchfield County</a> |
| Mystic              | <a href="#">New London County</a> |
| Naugatuck           | <a href="#">New Haven County</a>  |

|                         |                                   |
|-------------------------|-----------------------------------|
| New Britain             | <a href="#">Hartford County</a>   |
| New Canaan              | <a href="#">Fairfield County</a>  |
| New Fairfield           | <a href="#">Fairfield County</a>  |
| New Hartford            | <a href="#">Litchfield County</a> |
| New Haven               | <a href="#">New Haven County</a>  |
| New London              | <a href="#">New London County</a> |
| New Milford             | <a href="#">Litchfield County</a> |
| New Preston             | <a href="#">Litchfield County</a> |
| New Preston Marble Dale | <a href="#">Litchfield County</a> |
| Newington               | <a href="#">Hartford County</a>   |
| Newtown                 | <a href="#">Fairfield County</a>  |
| Niantic                 | <a href="#">New London County</a> |
| Norfolk                 | <a href="#">Litchfield County</a> |
| North Branford          | <a href="#">New Haven County</a>  |
| North Canaan            | <a href="#">Litchfield County</a> |
| North Canton            | <a href="#">Hartford County</a>   |
| North Franklin          | <a href="#">New London County</a> |
| North Granby            | <a href="#">Hartford County</a>   |
| North Grosvenordale     | <a href="#">Windham County</a>    |
| North Haven             | <a href="#">New Haven County</a>  |
| North Stonington        | <a href="#">New London County</a> |
| North Westchester       | <a href="#">New London County</a> |
| North Windham           | <a href="#">Windham County</a>    |
| Northford               | <a href="#">New Haven County</a>  |
| Norwalk                 | <a href="#">Fairfield County</a>  |
| Norwich                 | <a href="#">New London County</a> |
| Oakdale                 | <a href="#">New London County</a> |
| Old Greenwich           | <a href="#">Fairfield County</a>  |
| Old Lyme                | <a href="#">New London County</a> |
| Old Mystic              | <a href="#">New London County</a> |
| Old Saybrook            | <a href="#">Middlesex County</a>  |
| Oneco                   | <a href="#">Windham County</a>    |
| Orange                  | <a href="#">New Haven County</a>  |
| Oxford                  | <a href="#">New Haven County</a>  |
| Pawcatuck               | <a href="#">New London County</a> |
| Pequabuck               | <a href="#">Litchfield County</a> |
| Pine Meadow             | <a href="#">Litchfield County</a> |
| Plainfield              | <a href="#">Windham County</a>    |
| Plainville              | <a href="#">Hartford County</a>   |
| Plantsville             | <a href="#">Hartford County</a>   |
| Pleasant Valley         | <a href="#">Litchfield County</a> |
| Plymouth                | <a href="#">Litchfield County</a> |
| Pomfret Center          | <a href="#">Windham County</a>    |
| Pomfret                 | <a href="#">Windham County</a>    |
| Poquonock               | <a href="#">Hartford County</a>   |
| Portland                | <a href="#">Middlesex County</a>  |
| Preston                 | <a href="#">New London County</a> |
| Prospect                | <a href="#">New Haven County</a>  |
| Putnam                  | <a href="#">Windham County</a>    |

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|-------------------|-----------------------------------|
| Quaker Hill       | <a href="#">New London County</a> |
| Quinebaug         | <a href="#">Windham County</a>    |
| Redding Center    | <a href="#">Fairfield County</a>  |
| Redding Ridge     | <a href="#">Fairfield County</a>  |
| Redding           | <a href="#">Fairfield County</a>  |
| Ridgefield        | <a href="#">Fairfield County</a>  |
| Ridgeway          | <a href="#">Fairfield County</a>  |
| Riverside         | <a href="#">Fairfield County</a>  |
| Riverton          | <a href="#">Litchfield County</a> |
| Rockfall          | <a href="#">Middlesex County</a>  |
| Rocky Hill        | <a href="#">Hartford County</a>   |
| Rogers            | <a href="#">Windham County</a>    |
| Roxbury           | <a href="#">Litchfield County</a> |
| Salem             | <a href="#">New London County</a> |
| Salisbury         | <a href="#">Litchfield County</a> |
| Sandy Hook        | <a href="#">Fairfield County</a>  |
| Scotland          | <a href="#">Windham County</a>    |
| Seymour           | <a href="#">New Haven County</a>  |
| Sharon            | <a href="#">Litchfield County</a> |
| Shelton           | <a href="#">Fairfield County</a>  |
| Sherman           | <a href="#">Fairfield County</a>  |
| Silver Lane       | <a href="#">Hartford County</a>   |
| Simsbury          | <a href="#">Hartford County</a>   |
| Somers            | <a href="#">Tolland County</a>    |
| Somersville       | <a href="#">Tolland County</a>    |
| South Britain     | <a href="#">New Haven County</a>  |
| South Glastonbury | <a href="#">Hartford County</a>   |
| South Kent        | <a href="#">Litchfield County</a> |
| South Lyme        | <a href="#">New London County</a> |
| South Willington  | <a href="#">Tolland County</a>    |
| South Windham     | <a href="#">Windham County</a>    |
| South Windsor     | <a href="#">Hartford County</a>   |
| South Woodstock   | <a href="#">Windham County</a>    |
| Southbury         | <a href="#">New Haven County</a>  |
| Southington       | <a href="#">Hartford County</a>   |
| Southport         | <a href="#">Fairfield County</a>  |
| Sprague           | <a href="#">New London County</a> |
| Stafford Springs  | <a href="#">Tolland County</a>    |
| Stafford          | <a href="#">Tolland County</a>    |
| Staffordville     | <a href="#">Tolland County</a>    |
| Stamford          | <a href="#">Fairfield County</a>  |
| Sterling          | <a href="#">Windham County</a>    |
| Stevenson         | <a href="#">Fairfield County</a>  |
| Stonington        | <a href="#">New London County</a> |
| Storrs Mansfield  | <a href="#">Tolland County</a>    |
| Stratford         | <a href="#">Fairfield County</a>  |
| Suffield          | <a href="#">Hartford County</a>   |
| Taconic           | <a href="#">Litchfield County</a> |
| Taftville         | <a href="#">New London County</a> |

|                   |                                   |
|-------------------|-----------------------------------|
| Tariffville       | <a href="#">Hartford County</a>   |
| Terryville        | <a href="#">Litchfield County</a> |
| Thomaston         | <a href="#">Litchfield County</a> |
| Thompson          | <a href="#">Windham County</a>    |
| Tolland           | <a href="#">Tolland County</a>    |
| Torrington        | <a href="#">Litchfield County</a> |
| Trumbull          | <a href="#">Fairfield County</a>  |
| Uncasville        | <a href="#">New London County</a> |
| Union             | <a href="#">Tolland County</a>    |
| Unionville        | <a href="#">Hartford County</a>   |
| Vernon Rockville  | <a href="#">Tolland County</a>    |
| Vernon            | <a href="#">Tolland County</a>    |
| Versailles        | <a href="#">New London County</a> |
| Voluntown         | <a href="#">New London County</a> |
| Wallingford       | <a href="#">New Haven County</a>  |
| Warren            | <a href="#">Litchfield County</a> |
| Warrenville       | <a href="#">Windham County</a>    |
| Washington Depot  | <a href="#">Litchfield County</a> |
| Washington        | <a href="#">Litchfield County</a> |
| Waterbury         | <a href="#">New Haven County</a>  |
| Waterford         | <a href="#">New London County</a> |
| Watertown         | <a href="#">Litchfield County</a> |
| Wauregan          | <a href="#">Windham County</a>    |
| Weatogue          | <a href="#">Hartford County</a>   |
| West Cornwall     | <a href="#">Litchfield County</a> |
| West Granby       | <a href="#">Hartford County</a>   |
| West Hartford     | <a href="#">Hartford County</a>   |
| West Hartland     | <a href="#">Hartford County</a>   |
| West Haven        | <a href="#">New Haven County</a>  |
| West Mystic       | <a href="#">New London County</a> |
| West Redding      | <a href="#">Fairfield County</a>  |
| West Simsbury     | <a href="#">Hartford County</a>   |
| Westbrook         | <a href="#">Middlesex County</a>  |
| Weston            | <a href="#">Fairfield County</a>  |
| Westport          | <a href="#">Fairfield County</a>  |
| Wethersfield      | <a href="#">Hartford County</a>   |
| Whitneyville      | <a href="#">New Haven County</a>  |
| Willimantic       | <a href="#">Windham County</a>    |
| Willington        | <a href="#">Tolland County</a>    |
| Wilton            | <a href="#">Fairfield County</a>  |
| Winchester Center | <a href="#">Litchfield County</a> |
| Winchester        | <a href="#">Litchfield County</a> |
| Windham           | <a href="#">Windham County</a>    |
| Windsor Locks     | <a href="#">Hartford County</a>   |
| Windsor           | <a href="#">Hartford County</a>   |
| Windsorville      | <a href="#">Hartford County</a>   |
| Winsted           | <a href="#">Litchfield County</a> |
| Wolcott           | <a href="#">New Haven County</a>  |
| Woodbridge        | <a href="#">New Haven County</a>  |

|                  |                          |
|------------------|--------------------------|
| Woodbury         | <u>Litchfield County</u> |
| Woodmont         | <u>New Haven County</u>  |
| Woodstock        | <u>Windham County</u>    |
| Woodstock Valley | <u>Windham County</u>    |
| Yalesville       | <u>New Haven County</u>  |
| Yantic           | <u>New London County</u> |



## Vermont Counties

|                     |                                   |
|---------------------|-----------------------------------|
| Adamant             | <a href="#">Washington County</a> |
| Addison             | <a href="#">Addison County</a>    |
| Albany              | <a href="#">Orleans County</a>    |
| Alburg              | <a href="#">Grand Isle County</a> |
| Andover             | <a href="#">Windsor County</a>    |
| Arlington           | <a href="#">Bennington County</a> |
| Ascutney            | <a href="#">Windsor County</a>    |
| Athens              | <a href="#">Windsor County</a>    |
| Athens              | <a href="#">Windham County</a>    |
| Averill             | <a href="#">Essex County</a>      |
| Avery's Gore        | <a href="#">Essex County</a>      |
| Bakersfield         | <a href="#">Franklin County</a>   |
| Baltimore           | <a href="#">Windsor County</a>    |
| Barnard             | <a href="#">Windsor County</a>    |
| Barnet              | <a href="#">Caledonia County</a>  |
| Barre               | <a href="#">Washington County</a> |
| Barton              | <a href="#">Orleans County</a>    |
| Beebe Plain         | <a href="#">Orleans County</a>    |
| Beecher Falls       | <a href="#">Essex County</a>      |
| Bellows Falls       | <a href="#">Windham County</a>    |
| Belmont             | <a href="#">Rutland County</a>    |
| Belvidere           | <a href="#">Lamoille County</a>   |
| Bennington          | <a href="#">Bennington County</a> |
| Benson              | <a href="#">Rutland County</a>    |
| Berkshire           | <a href="#">Franklin County</a>   |
| Berlin              | <a href="#">Washington County</a> |
| Bethel              | <a href="#">Windsor County</a>    |
| Bloomfield          | <a href="#">Essex County</a>      |
| Bolton              | <a href="#">Chittenden County</a> |
| Bolton Valley       | <a href="#">Chittenden County</a> |
| Bomoseen            | <a href="#">Rutland County</a>    |
| Bondville           | <a href="#">Bennington County</a> |
| Bradford            | <a href="#">Orange County</a>     |
| Braintree           | <a href="#">Orange County</a>     |
| Brandon             | <a href="#">Rutland County</a>    |
| Brattleboro         | <a href="#">Windham County</a>    |
| Bread Loaf          | <a href="#">Addison County</a>    |
| Bridgewater Corners | <a href="#">Windsor County</a>    |
| Bridgewater         | <a href="#">Windsor County</a>    |
| Bridport            | <a href="#">Addison County</a>    |
| Brighton            | <a href="#">Essex County</a>      |
| Bristol             | <a href="#">Addison County</a>    |
| Brookfield          | <a href="#">Orange County</a>     |
| Brookline           | <a href="#">Windham County</a>    |
| Brownington         | <a href="#">Orleans County</a>    |
| Brownsville         | <a href="#">Windsor County</a>    |
| Brunswick           | <a href="#">Essex County</a>      |
| Buels gore          | <a href="#">Chittenden County</a> |

|                   |                                   |
|-------------------|-----------------------------------|
| Burke             | <a href="#">Caledonia County</a>  |
| Burlington        | <a href="#">Chittenden County</a> |
| Cabot             | <a href="#">Washington County</a> |
| Calais            | <a href="#">Washington County</a> |
| Cambridge         | <a href="#">Lamoille County</a>   |
| Cambridgeport     | <a href="#">Windham County</a>    |
| Canaan            | <a href="#">Essex County</a>      |
| Castleton         | <a href="#">Rutland County</a>    |
| Cavendish         | <a href="#">Windsor County</a>    |
| Center Rutland    | <a href="#">Rutland County</a>    |
| Charleston        | <a href="#">Orleans County</a>    |
| Charlotte         | <a href="#">Chittenden County</a> |
| Chelsea           | <a href="#">Orange County</a>     |
| Chester Depot     | <a href="#">Windsor County</a>    |
| Chester           | <a href="#">Windsor County</a>    |
| Chittenden        | <a href="#">Rutland County</a>    |
| Clarendon         | <a href="#">Rutland County</a>    |
| Colchester        | <a href="#">Chittenden County</a> |
| Concord           | <a href="#">Essex County</a>      |
| Corinth           | <a href="#">Orange County</a>     |
| Cornwall          | <a href="#">Addison County</a>    |
| Coventry          | <a href="#">Orleans County</a>    |
| Craftsbury Common | <a href="#">Orleans County</a>    |
| Craftsbury        | <a href="#">Orleans County</a>    |
| Cuttingsville     | <a href="#">Rutland County</a>    |
| Danby             | <a href="#">Rutland County</a>    |
| Danville          | <a href="#">Caledonia County</a>  |
| Derby Center      | <a href="#">Orleans County</a>    |
| Derby Line        | <a href="#">Orleans County</a>    |
| Derby             | <a href="#">Orleans County</a>    |
| Dorset            | <a href="#">Bennington County</a> |
| Dover             | <a href="#">Windham County</a>    |
| Dummerston        | <a href="#">Windham County</a>    |
| Duxbury           | <a href="#">Washington County</a> |
| East Arlington    | <a href="#">Bennington County</a> |
| East Barre        | <a href="#">Washington County</a> |
| East Berkshire    | <a href="#">Franklin County</a>   |
| East Burke        | <a href="#">Caledonia County</a>  |
| East Calais       | <a href="#">Washington County</a> |
| East Charleston   | <a href="#">Orleans County</a>    |
| East Corinth      | <a href="#">Orange County</a>     |
| East Dover        | <a href="#">Windham County</a>    |
| East Dummerston   | <a href="#">Windham County</a>    |
| East Fairfield    | <a href="#">Franklin County</a>   |
| East Hardwick     | <a href="#">Caledonia County</a>  |
| East Haven        | <a href="#">Essex County</a>      |
| East Middlebury   | <a href="#">Addison County</a>    |
| East Montpelier   | <a href="#">Washington County</a> |
| East Orange       | <a href="#">Orange County</a>     |

|                       |                                   |
|-----------------------|-----------------------------------|
| East Poultney         | <a href="#">Rutland County</a>    |
| East Randolph         | <a href="#">Orange County</a>     |
| East Ryegate          | <a href="#">Caledonia County</a>  |
| East Saint Johnsbury  | <a href="#">Caledonia County</a>  |
| East St Johnsbury     | <a href="#">Caledonia County</a>  |
| East Thetford         | <a href="#">Orange County</a>     |
| East Wallingford      | <a href="#">Rutland County</a>    |
| Eden Mills            | <a href="#">Lamoille County</a>   |
| Eden                  | <a href="#">Lamoille County</a>   |
| Elmore                | <a href="#">Lamoille County</a>   |
| Ely                   | <a href="#">Orange County</a>     |
| Enosburg Falls        | <a href="#">Franklin County</a>   |
| Enosburg              | <a href="#">Franklin County</a>   |
| Essex Junction        | <a href="#">Chittenden County</a> |
| Essex                 | <a href="#">Chittenden County</a> |
| Fair Haven            | <a href="#">Rutland County</a>    |
| Fairfax               | <a href="#">Franklin County</a>   |
| Fairfield             | <a href="#">Franklin County</a>   |
| Fairlee               | <a href="#">Orange County</a>     |
| Fayston               | <a href="#">Washington County</a> |
| Ferdinand             | <a href="#">Essex County</a>      |
| Ferrisburg            | <a href="#">Addison County</a>    |
| Fletcher              | <a href="#">Franklin County</a>   |
| Florence              | <a href="#">Rutland County</a>    |
| Forest Dale           | <a href="#">Rutland County</a>    |
| Franklin              | <a href="#">Franklin County</a>   |
| Gaysville             | <a href="#">Windsor County</a>    |
| Georgia               | <a href="#">Franklin County</a>   |
| Gilman                | <a href="#">Essex County</a>      |
| Glastenbury           | <a href="#">Bennington County</a> |
| Glover                | <a href="#">Orleans County</a>    |
| Goshen                | <a href="#">Addison County</a>    |
| Grafton               | <a href="#">Windham County</a>    |
| Granby                | <a href="#">Essex County</a>      |
| Grand Isle            | <a href="#">Grand Isle County</a> |
| Graniteville          | <a href="#">Washington County</a> |
| Granville             | <a href="#">Addison County</a>    |
| Greensboro Bend       | <a href="#">Orleans County</a>    |
| Greensboro            | <a href="#">Orleans County</a>    |
| Groton                | <a href="#">Caledonia County</a>  |
| Guildhall             | <a href="#">Essex County</a>      |
| Guilford              | <a href="#">Windham County</a>    |
| Halifax               | <a href="#">Windham County</a>    |
| Hancock               | <a href="#">Addison County</a>    |
| Hardwick              | <a href="#">Caledonia County</a>  |
| Hartford              | <a href="#">Windsor County</a>    |
| Hartland Four Corners | <a href="#">Windsor County</a>    |
| Hartland              | <a href="#">Windsor County</a>    |
| Highgate Center       | <a href="#">Franklin County</a>   |

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|--------------------|-----------------------------------|
| Highgate Springs   | <a href="#">Franklin County</a>   |
| Highgate           | <a href="#">Franklin County</a>   |
| Hinesburg          | <a href="#">Chittenden County</a> |
| Holland            | <a href="#">Orleans County</a>    |
| Hubbardton         | <a href="#">Rutland County</a>    |
| Huntington         | <a href="#">Chittenden County</a> |
| Hyde Park          | <a href="#">Lamoille County</a>   |
| Hydeville          | <a href="#">Rutland County</a>    |
| Ira                | <a href="#">Rutland County</a>    |
| Irasburg           | <a href="#">Orleans County</a>    |
| Island Pond        | <a href="#">Essex County</a>      |
| Isle La Motte      | <a href="#">Grand Isle County</a> |
| Jacksonville       | <a href="#">Windham County</a>    |
| Jamaica            | <a href="#">Windham County</a>    |
| Jay Peak           | <a href="#">Orleans County</a>    |
| Jay                | <a href="#">Orleans County</a>    |
| Jeffersonville     | <a href="#">Lamoille County</a>   |
| Jericho            | <a href="#">Chittenden County</a> |
| Johnson            | <a href="#">Lamoille County</a>   |
| Jonesville         | <a href="#">Chittenden County</a> |
| Killington         | <a href="#">Rutland County</a>    |
| Kirby              | <a href="#">Caledonia County</a>  |
| Lake Elmore        | <a href="#">Lamoille County</a>   |
| Landgrove          | <a href="#">Bennington County</a> |
| Leicester          | <a href="#">Addison County</a>    |
| Lemington          | <a href="#">Essex County</a>      |
| Lewis              | <a href="#">Essex County</a>      |
| Lincoln            | <a href="#">Addison County</a>    |
| Londonderry        | <a href="#">Windham County</a>    |
| Lowell             | <a href="#">Orleans County</a>    |
| Lower Waterford    | <a href="#">Caledonia County</a>  |
| Ludlow             | <a href="#">Windsor County</a>    |
| Lunenburg          | <a href="#">Essex County</a>      |
| Lyndon Center      | <a href="#">Caledonia County</a>  |
| Lyndon             | <a href="#">Caledonia County</a>  |
| Lyndonville        | <a href="#">Caledonia County</a>  |
| Maidstone          | <a href="#">Essex County</a>      |
| Manchester Center  | <a href="#">Bennington County</a> |
| Manchester         | <a href="#">Bennington County</a> |
| Marlboro           | <a href="#">Windham County</a>    |
| Marshfield         | <a href="#">Washington County</a> |
| McIndoe Falls      | <a href="#">Caledonia County</a>  |
| Mendon             | <a href="#">Rutland County</a>    |
| Middlebury         | <a href="#">Addison County</a>    |
| Middlesex Center   | <a href="#">Washington County</a> |
| Middlesex          | <a href="#">Washington County</a> |
| Middletown Springs | <a href="#">Rutland County</a>    |
| Milton             | <a href="#">Chittenden County</a> |
| Monkton            | <a href="#">Addison County</a>    |

|                   |                                   |
|-------------------|-----------------------------------|
| Montgomery Center | <a href="#">Franklin County</a>   |
| Montgomery        | <a href="#">Franklin County</a>   |
| Montpelier        | <a href="#">Washington County</a> |
| Moretown          | <a href="#">Washington County</a> |
| Morgan Center     | <a href="#">Orleans County</a>    |
| Morgan            | <a href="#">Orleans County</a>    |
| Morristown        | <a href="#">Lamoille County</a>   |
| Morrisville       | <a href="#">Lamoille County</a>   |
| Moscow            | <a href="#">Lamoille County</a>   |
| Mount Holly       | <a href="#">Rutland County</a>    |
| Mount Snow        | <a href="#">Windham County</a>    |
| Mount Tabor       | <a href="#">Rutland County</a>    |
| New Haven         | <a href="#">Addison County</a>    |
| Newark            | <a href="#">Caledonia County</a>  |
| Newbury           | <a href="#">Orange County</a>     |
| Newfane           | <a href="#">Windham County</a>    |
| Newport Center    | <a href="#">Orleans County</a>    |
| Newport           | <a href="#">Orleans County</a>    |
| North Bennington  | <a href="#">Bennington County</a> |
| North Chittenden  | <a href="#">Rutland County</a>    |
| North Clarendon   | <a href="#">Rutland County</a>    |
| North Concord     | <a href="#">Essex County</a>      |
| North Hartland    | <a href="#">Windsor County</a>    |
| North Hero        | <a href="#">Grand Isle County</a> |
| North Hyde Park   | <a href="#">Lamoille County</a>   |
| North Middlesex   | <a href="#">Washington County</a> |
| North Montpelier  | <a href="#">Washington County</a> |
| North Pomfret     | <a href="#">Windsor County</a>    |
| North Springfield | <a href="#">Windsor County</a>    |
| North Thetford    | <a href="#">Orange County</a>     |
| North Troy        | <a href="#">Orleans County</a>    |
| North Westminster | <a href="#">Windham County</a>    |
| Northfield Falls  | <a href="#">Washington County</a> |
| Northfield        | <a href="#">Washington County</a> |
| Norton            | <a href="#">Essex County</a>      |
| Norwich           | <a href="#">Windsor County</a>    |
| Old Bennington    | <a href="#">Bennington County</a> |
| Orange            | <a href="#">Washington County</a> |
| Orange            | <a href="#">Orange County</a>     |
| Orleans           | <a href="#">Orleans County</a>    |
| Orwell            | <a href="#">Addison County</a>    |
| Panton            | <a href="#">Addison County</a>    |
| Passumpsic        | <a href="#">Caledonia County</a>  |
| Pawlet            | <a href="#">Rutland County</a>    |
| Peacham           | <a href="#">Caledonia County</a>  |
| Perkinsville      | <a href="#">Windsor County</a>    |
| Peru              | <a href="#">Bennington County</a> |
| Pittsfield        | <a href="#">Rutland County</a>    |
| Pittsford         | <a href="#">Rutland County</a>    |

|                        |                                   |
|------------------------|-----------------------------------|
| Plainfield             | <a href="#">Washington County</a> |
| Plymouth               | <a href="#">Windsor County</a>    |
| Pomfret                | <a href="#">Windsor County</a>    |
| Post Mills             | <a href="#">Orange County</a>     |
| Poultney               | <a href="#">Rutland County</a>    |
| Pownal                 | <a href="#">Bennington County</a> |
| Proctor                | <a href="#">Rutland County</a>    |
| Proctorsville          | <a href="#">Windsor County</a>    |
| Putney                 | <a href="#">Windham County</a>    |
| Quechee                | <a href="#">Windsor County</a>    |
| Randolph Center        | <a href="#">Orange County</a>     |
| Randolph               | <a href="#">Orange County</a>     |
| Reading                | <a href="#">Windsor County</a>    |
| Readsboro              | <a href="#">Bennington County</a> |
| Richford               | <a href="#">Franklin County</a>   |
| Richmond               | <a href="#">Chittenden County</a> |
| Ripton                 | <a href="#">Addison County</a>    |
| Riverton               | <a href="#">Washington County</a> |
| Rochester              | <a href="#">Windsor County</a>    |
| Rockingham             | <a href="#">Windham County</a>    |
| Roxbury                | <a href="#">Addison County</a>    |
| Roxbury                | <a href="#">Washington County</a> |
| Royalton               | <a href="#">Windsor County</a>    |
| Rupert                 | <a href="#">Bennington County</a> |
| Rutland                | <a href="#">Rutland County</a>    |
| Ryegate                | <a href="#">Caledonia County</a>  |
| Saint Albans Bay       | <a href="#">Franklin County</a>   |
| Saint Albans           | <a href="#">Franklin County</a>   |
| Saint George           | <a href="#">Chittenden County</a> |
| Saint Johnsbury Center | <a href="#">Caledonia County</a>  |
| Saint Johnsbury        | <a href="#">Caledonia County</a>  |
| Salisbury              | <a href="#">Addison County</a>    |
| Sandgate               | <a href="#">Bennington County</a> |
| Saxtons River          | <a href="#">Windham County</a>    |
| Searsburg              | <a href="#">Bennington County</a> |
| Shaftsbury             | <a href="#">Bennington County</a> |
| Sharon                 | <a href="#">Windsor County</a>    |
| Sheffield              | <a href="#">Caledonia County</a>  |
| Shelburne              | <a href="#">Chittenden County</a> |
| Sheldon Springs        | <a href="#">Franklin County</a>   |
| Sheldon                | <a href="#">Franklin County</a>   |
| Sherburne              | <a href="#">Rutland County</a>    |
| Shoreham               | <a href="#">Addison County</a>    |
| Shrewsbury             | <a href="#">Rutland County</a>    |
| Smugglers Notch        | <a href="#">Lamoille County</a>   |
| Somerset               | <a href="#">Windham County</a>    |
| South Barre            | <a href="#">Washington County</a> |
| South Burlington       | <a href="#">Chittenden County</a> |
| South Duxbury          | <a href="#">Washington County</a> |

|                   |                                   |
|-------------------|-----------------------------------|
| South Hero        | <a href="#">Grand Isle County</a> |
| South Londonderry | <a href="#">Windham County</a>    |
| South Newfane     | <a href="#">Windham County</a>    |
| South Pomfret     | <a href="#">Windsor County</a>    |
| South Reading     | <a href="#">Windsor County</a>    |
| South Royalton    | <a href="#">Windsor County</a>    |
| South Ryegate     | <a href="#">Caledonia County</a>  |
| South Strafford   | <a href="#">Orange County</a>     |
| South Woodstock   | <a href="#">Windsor County</a>    |
| Springfield       | <a href="#">Windsor County</a>    |
| Stamford          | <a href="#">Bennington County</a> |
| Stannard          | <a href="#">Caledonia County</a>  |
| Starksboro        | <a href="#">Addison County</a>    |
| Stockbridge       | <a href="#">Windsor County</a>    |
| Stowe             | <a href="#">Lamoille County</a>   |
| Strafford         | <a href="#">Orange County</a>     |
| Stratton          | <a href="#">Windham County</a>    |
| Sudbury           | <a href="#">Rutland County</a>    |
| Sugarbush Valley  | <a href="#">Washington County</a> |
| Sunderland        | <a href="#">Bennington County</a> |
| Sutton            | <a href="#">Caledonia County</a>  |
| Swanton           | <a href="#">Franklin County</a>   |
| Taftsville        | <a href="#">Windsor County</a>    |
| Thetford Center   | <a href="#">Orange County</a>     |
| Thetford          | <a href="#">Orange County</a>     |
| Tinmouth          | <a href="#">Rutland County</a>    |
| Topsham           | <a href="#">Orange County</a>     |
| Townshend         | <a href="#">Windham County</a>    |
| Troy              | <a href="#">Orleans County</a>    |
| Tunbridge         | <a href="#">Orange County</a>     |
| Underhill Center  | <a href="#">Chittenden County</a> |
| Underhill         | <a href="#">Chittenden County</a> |
| Vergennes         | <a href="#">Addison County</a>    |
| Vernon            | <a href="#">Windham County</a>    |
| Vershire          | <a href="#">Orange County</a>     |
| Victory           | <a href="#">Essex County</a>      |
| Waitsfield        | <a href="#">Washington County</a> |
| Walden            | <a href="#">Caledonia County</a>  |
| Wallingford       | <a href="#">Rutland County</a>    |
| Waltham           | <a href="#">Addison County</a>    |
| Wardsboro         | <a href="#">Windham County</a>    |
| Warner's Grant    | <a href="#">Essex County</a>      |
| Warren            | <a href="#">Washington County</a> |
| Warren's Gore     | <a href="#">Essex County</a>      |
| Washington        | <a href="#">Orange County</a>     |
| Waterbury Center  | <a href="#">Washington County</a> |
| Waterbury         | <a href="#">Washington County</a> |
| Waterford         | <a href="#">Caledonia County</a>  |
| Waterville        | <a href="#">Lamoille County</a>   |

|                      |                          |
|----------------------|--------------------------|
| Weathersfield        | <u>Windsor County</u>    |
| Websterville         | <u>Washington County</u> |
| Wells River          | <u>Orange County</u>     |
| Wells                | <u>Rutland County</u>    |
| West Braintree       | <u>Addison County</u>    |
| West Brookfield      | <u>Orange County</u>     |
| West Burke           | <u>Caledonia County</u>  |
| West Charleston      | <u>Orleans County</u>    |
| West Danville        | <u>Caledonia County</u>  |
| West Dover           | <u>Windham County</u>    |
| West Dummerston      | <u>Windham County</u>    |
| West Fairlee         | <u>Orange County</u>     |
| West Glover          | <u>Orleans County</u>    |
| West Halifax         | <u>Windham County</u>    |
| West Hartford        | <u>Windsor County</u>    |
| West Haven           | <u>Rutland County</u>    |
| West Newbury         | <u>Orange County</u>     |
| West Pawlet          | <u>Rutland County</u>    |
| West Rupert          | <u>Bennington County</u> |
| West Rutland         | <u>Rutland County</u>    |
| West Topsham         | <u>Orange County</u>     |
| West Townshend       | <u>Windham County</u>    |
| West Windsor         | <u>Windsor County</u>    |
| Westfield            | <u>Orleans County</u>    |
| Westford             | <u>Chittenden County</u> |
| Westminster Station  | <u>Windham County</u>    |
| Westminster          | <u>Windham County</u>    |
| Westmore             | <u>Orleans County</u>    |
| Weston               | <u>Windsor County</u>    |
| Weybridge            | <u>Addison County</u>    |
| Wheelock             | <u>Caledonia County</u>  |
| White River Junction | <u>Windsor County</u>    |
| Whiting              | <u>Addison County</u>    |
| Whitingham           | <u>Windham County</u>    |
| Wilder               | <u>Windsor County</u>    |
| Williamstown         | <u>Orange County</u>     |
| Williamsville        | <u>Windham County</u>    |
| Williston            | <u>Chittenden County</u> |
| Wilmington           | <u>Windham County</u>    |
| Windham              | <u>Windham County</u>    |
| Windsor              | <u>Windsor County</u>    |
| Winhall              | <u>Bennington County</u> |
| Winooski             | <u>Chittenden County</u> |
| Wolcott              | <u>Lamoille County</u>   |
| Woodbury             | <u>Washington County</u> |
| Woodford             | <u>Bennington County</u> |
| Woodstock            | <u>Windsor County</u>    |
| Worcester            | <u>Washington County</u> |



# Short Physical Performance Battery

1.

## Balance Tests



**Side-by-Side Stand**  
Feet together side-by-side for 10 sec

< 10 sec (0 pt)

Go to 4-Meter  
Gait Speed Test



10 sec (1 pt)



**Semi-Tandem Stand**  
Heel of one foot against side of big toe of the other for 10 sec

< 10 sec (+0 pt)

Go to 4-Meter  
Gait Speed Test



10 sec (+1 pt)



**Tandem Stand**  
Feet aligned heel to toe for 10 sec

10 sec (+2 pt)  
3-9.99 sec (+1 pt)  
<3 sec (+0 pt)

2.

## Gait Speed Test

Measures the time required to walk  
4 meters at a normal pace (use best of 2 times)

|               |      |
|---------------|------|
| <4.82 sec     | 4 pt |
| 4.82-6.20 sec | 3 pt |
| 6.21-8.70 sec | 2 pt |
| >8.7 sec      | 1 pt |
| Unable        | 0 pt |



3.

## Chair Stand Test

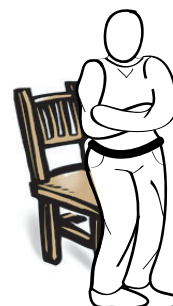
**Pre-test**  
Participants fold their arms across their chest  
and try to stand up once from a chair

unable

Stop (0 pt)

able

**5 repeats**  
Measures the time required to perform five rises  
from a chair to an upright position as fast as  
possible without the use of the arms



|                   |      |
|-------------------|------|
| ≤11.19 sec        | 4 pt |
| 11.20-13.69 sec   | 3 pt |
| 13.70-16.69 sec   | 2 pt |
| >16.7 sec         | 1 pt |
| >60 sec or unable | 0 pt |



Dear \_\_\_\_\_:

Once again, we thank you for participating in the Framingham Heart Study. Your next clinic appointment is scheduled for \_\_\_\_\_ at \_\_\_\_\_

As you probably know, we are now located at \_\_\_\_\_, in the \_\_\_\_\_. Our clinic is located in the wing on the Franklin Street side of the building. The building is handicap accessible and we have reserved parking for you behind the Franklin Street wing.

We suggest you wear comfortable clothes that are easy for you to remove. You should bring slippers and, if you wish, your own robe although we provide hospital robes.

Eat your regular meals and take medications as usual. PLEASE BRING ALL MEDICATIONS YOU TAKE, BOTH PRESCRIPTION AND NON-PRESCRIPTION, WITH YOU. **On the back of this form**, we would appreciate information regarding hospitalizations and/or major illnesses since your last visit or health history update. **PLEASE BRING THIS LETTER WITH YOU TO THE CLINIC.** If you need help completing it, our staff will be happy to assist you at the time of your appointment.

If you have any questions, please call \_\_\_\_\_, Participant Coordinator, at \_\_\_\_\_ or \_\_\_\_\_ at \_\_\_\_\_.

Thank you again for your participation in the Heart Study and your ongoing help in our battle against heart disease

Sincerely yours,

\_\_\_\_\_  
Director  
Framingham Heart Study

OMB No=0925-0216 Exp. 04/30/2011

Dear \_\_\_\_\_:

Once again, we thank you for participating in the Framingham Heart Study. Your next clinic appointment is scheduled for \_\_\_\_\_ at \_\_\_\_\_ P.M. A taxi will pick you up at \_\_\_\_\_ and will bring you home after your appointment

As you probably know, we are now located at \_\_\_\_\_, in the \_\_\_\_\_. Our clinic is in the wing on the Franklin Street side of the building. The building is handicap accessible and we have reserved parking behind the Franklin Street wing.

We suggest you wear comfortable clothes that are easy for you to remove. You should bring slippers and, if you wish, your own robe although we provide hospital robes.

Eat your regular meals and take medications as usual. PLEASE BRING ALL MEDICATIONS YOU TAKE, BOTH PRESCRIPTION AND NON-PRESCRIPTION, WITH YOU. **On the back of this form,** we would appreciate information regarding hospitalizations and/or major illnesses since your last visit or health history update. **PLEASE BRING THIS LETTER WITH YOU TO THE CLINIC.** If you need help completing it, our staff will be happy to assist you at the time of your appointment.

If you have any questions, please call \_\_\_\_\_, Participant Coordinator, at \_\_\_\_\_ or \_\_\_\_\_ at \_\_\_\_\_  
Thank you again for your participation in the Heart Study and your ongoing help in our battle against heart disease

Sincerely yours,

\_\_\_\_\_  
Director  
Framingham Heart Study

OMB No=0925-0216 Exp. 04/30/2011