 <b>clsa élcv</b> Canadian Longitudinal Study on Aging Étude longitudinale canadienne sur le vieillissement	<b>Title:</b>	<b>Cognition (COG) – In-home Visit</b>		
	<b>Version Date:</b>	2014-NOV-27	<b>Document Number:</b>	SOP_DCS_0054
	<b>Effective Date:</b>	2014-NOV-27		
<b>Data Collection Site (DCS)</b>	<b>Version:</b>	2.1	<b>Number of Pages:</b>	6

### 1.0 Purpose:

The purpose of this document is to describe the standardized procedure for administering cognitive tests during the In-home Interview. These tests include the Rey Auditory Verbal Learning Test (REYI), Verbal Fluency (Category) – Animal Naming (AFT), Mental Alternation Test (MAT), and a Delayed Recall trial related to the RAVLT (REYII).

### 2.0 Scope:

This document is to be used by the In-home Interviewer and the DCS staff when administering the Cognition Module of the CLSA In-home Questionnaire.

### 3.0 Responsibilities:

It is the responsibility of the In-home Interviewer to perform the procedures as described in the current and approved version of the standard operating procedure.

### 4.0 Related Documents:

- **MAN\_DCS\_0054\_2** - In-home Questionnaire Guidance Manual
- **MAN\_DCS\_0212** - Supplemental Training Manual

### 5.0 Definitions:

Not applicable

### 6.0 Equipment:

- In-home interviewer laptop;
- External microphone; and
- Headphones

### 7.0 Supplies:

Not applicable

### 8.0 Procedure Steps:


#### Contraindications:

- Participant cannot hear the audio recording (REYI and REYII only).

#### Recording a Participant:

Anytime you record a participant's response in Onyx, follow the steps as outlined below.

**Step 1:** Before asking the participant to start each test listed in this SOP, click on the "O" radio button before the timer.

**Step 2:** Click on the “ record” button to begin recording the participant.

**Step 3:** Watch the time and inform the participant when the time has elapsed.

**Step 4:** Press the “ Stop” Button once completed.

**NOTE:** The timer will count up. The timer cannot be reset or paused, but can be stopped at any time by pressing  **Stop**.

**Assisting a Participant:**

- If the respondent is silent for 15 seconds or indicates that they cannot list any more words before the time is up, encourage them by saying, “Can you think of any more words?”
  - Be careful not to jump in too quickly when the respondent pauses as this can disrupt the respondent’s train of thought.
  - It is common for a respondent to list several words at the beginning, pause to think, and resume listing words.
- It is important NOT to engage a respondent in conversation while the timer is running.
- During the task do not interrupt the participant unless the time allotted for the task is up.

**Cognition Module:**

**Step 1:** Administer the tasks in the order in which they appear in the Cognition Module of the [CLSA In-home Questionnaire](#). Precise adherence to time limits and standardized instructions is critical. Read the introduction to the Cognition Module to the participant.

**Step 2:** Obtain the participant’s permission to be recorded. If permission is given, record yes to “Do you consent to be recorded?” in Onyx. Click on **Next**.  
**NOTE:** If participant does not consent to be recorded, all four tasks will be skipped and the Cognition Module will come to an end. Then go to Step 33.

**Step 3:** Inform the participant that they are to complete these tasks without help from anyone else or without the use of any tools or aids, e.g., pen and paper.

**Step 4:** Read instructions to the participant, as outlined in the Cognition Module.

**Step 5:** Prior to administering the first task, make sure the participant can clearly hear the audio recording. The participant will listen to the audio recording using the headphones.

→ Headphone instructions: Plug the headphones into the perimeter of the laptop via the stereo headphone/microphone combo jack, located on the bottom-right hand corner of the laptop. Have the participant put on the headphones.

→ To conduct the sound test, click on the **Play button** of the recording. The recorded voice will say, “Before starting the first task, we would like to know if you can clearly hear this recorded voice. Please answer yes or no.”

→ If participant has no difficulties hearing the recorded voice, choose **Yes** and then **Next**. If participant did not clearly hear the recorded voice and/or finds the volume to be too loud or too soft, use the volume control on the headphones to adjust the volume accordingly. Inform the participant that you have adjusted the volume and will re-play the audio recording. Press the **Play button** to re-play the recording.

→ When the audio recording ends, have the participant remove the headphones.

**NOTE:** The timer cannot be reset or paused once the recording starts. Timer/recording can only be reset if there is a technical difficulty.

### **Task 1: Rey Auditory Verbal Learning Test (RAVLT)**

**Step 6:** Read instructions to the participant, as outlined in Onyx. Check **Yes** when they are ready to start the recording, then choose **Next**.

**Step 7:** Tell the participant you are going to begin the recording now. Press the **Play** button of the recording to begin the list of words.

**Step 8:** When the recording has finished reciting the list of words, using the script in ONYX, ask the participant to recite the words and immediately start the recording.

**Step 9:** When 90 seconds has elapsed, immediately stop the timer, and then press **Next**.

**Step 10:** Thank the participant and let them know that the task is finished. Click on **Next**.

### **Task 2: Verbal Fluency (Category) – Animal Naming**

**Step 11:** Read the animal naming instructions to the participant. Ask the participant if s/he is ready to begin. If they are ready, check **Yes**, then **Next**.

**Step 12:** Say "Please begin," then immediately start recording the participant's responses.

**Step 13:** When 60 seconds has elapsed, immediately stop the timer.

**NOTE:**

- ONLY if the respondent asks for clarification, explain that animals include birds, insects, fish, etc.
- Do NOT give any clues on an animal's habitat, for example, farm, house, jungle, zoo, water, etc.

### **Acceptable interviewer prompts**

- a. Interviewer "...you can start at any time."  
Participant "naming animals?"  
Interviewer "yes"
- b. Participant "do birds (fish, etc) count?"

Interviewer "yes"

- c. Interviewer "Can you think of any more?"
- d. Interviewer "Can you think of any more animals?"
- e. Interviewer "Are there any other animal names you can think of?"

**Step 14:** When 60 seconds have elapsed, inform the participant the task is finished, then click **Next**.

**NOTE:** The timer automatically stops.

### **Task 3: Mental Alternation Test**

**NOTE:** The timer automatically stops for these three tasks

#### Sub-Task 1: Counting from 1 to 20

**Step 15:** Read instructions to the participant for counting from 1 to 20. Ask the participant when they are ready to begin. Click on **Yes**, then **Next**.

**Step 16:** Say "Please begin," then immediately begin recording the participant's responses.

**Step 17:** When the participant has successfully counted from 1 to 20, immediately stop the timer.  
→ If the participant does not complete the task before the 30 seconds are up, then ask the participant to stop when the timer reaches 30 seconds.

**Step 18:** Inform the participant that this task is finished. Click on **Next**.

#### Sub-Task 2: Reciting the Alphabet

**Step 19:** Read instructions to the participant, and when they are ready, click on **Yes** and then **Next**.

**Step 20:** Say "Please begin," then immediately begin recording the participant's responses.

**Step 21:** When the participant has successfully recited the alphabet from A to Z, immediately stop recording the participant's responses.  
→ If the participant does not complete the task before the 30 seconds are up, then ask the participant to stop when the timer reaches 30 seconds.

**Step 22:** Inform the participant that this task is finished. Click on **Next**.

#### Sub-Task 3: Alternating Consecutive Numbers and Letters

The participant MUST be able to complete the first 2 sub-tasks. If the participant was unable to complete the first 2 sub-tasks, then do not administer the MAT Alternation and proceed to Task 4.

**Step 23:** Read instructions to participant, and when they are ready, click on **Yes** and then **Next**.

**Step 24:** Say "Please begin," then immediately start recording the participant's responses.

**NOTE:** If the participant begins with Alpha instead of numeric, then stop the timer, repeat the instructions, and restart the task.  
If, after three tries, the participant is unable to complete the task, then please skip the test and proceed to task 4.

**Step 25:** When 30 seconds have elapsed or the participant has successfully recited the numbers and alphabet from 1-A to 26-Z, immediately stop the timer.  
→ If the participant does not complete the task before the 30 seconds are up, then ask the participant to stop when the timer reaches 30 seconds.

**NOTE:**

- If the participant loses their place in the alternation, do NOT prompt them or repeat their previous alternation, but encourage them to continue.
- You may permit the participant to re-start the task; however, the timer will continue and cannot be restarted.

**Step 26:** Inform the participant that this task is finished, then click on **Next**.

**Task 4: Delayed Recall for Task 1 (RAVLT)**

**Step 27:** Read instructions to participant and have them repeat any of the words that they can remember from the first task.

**Step 28:** Immediately after asking the participant to begin, start recording the participant's responses.

**Step 29:** When 60 seconds have elapsed, immediately stop the timer and ask the participant to stop, if they have not stopped before that time.

**Step 30:** Inform the participant that the tasks are over.

**Step 31:** Unplug the microphone headset from the laptop.

**DO NOT SCORE THE COGNITION TESTS.**

After the conclusion stage is complete, go to the **In-home – Scoring** stage and select **Skip**. You will need to enter a canned reason and a comment. Then press **Continue**.

**9.0 Documentation & Forms:**

- In-home Questionnaire
- **CRF\_DCS\_0054\_1** - In-home Questionnaire Case Report Form

**10.0 References:**

- Canadian Community Health Survey on Healthy Aging Interviewer's Manual 4.2\_04; [date unknown].

- Strauss E, Sherman EMS, Spreen O. A compendium of neuropsychological tests: administration, norms, and commentary. 3<sup>rd</sup> ed. Oxford: Oxford University Press; 2006.
- Teng EL. The Mental Alternation Test (MAT) Instructions; 1994.

**Baseline Revision History:**

New Version #	Revision Date	Revision Author	Content Approval
2.1	2014-Nov-27	Lorraine Moss	Mark Oremus
<b>Summary of Revisions</b>			
Sub-Task 3: Step 25: When <del>30</del> 60 seconds have elapsed . . .			
New Version #	Revision Date	Revision Author	Content Approval
2.0	2014-Oct-03	Lorraine Moss	Mark Oremus
<b>Summary of Revisions</b>			
Moved section ' <b>Recording a Participant</b> ' to the beginning of Section 8.0.			
Added section ' <b>Assisting a Participant</b> ', moved from Step 9 and Step 13.			
Added <b>Note</b> to <b>Step 5</b> : Timer cannot be reset or paused once recording starts. Timer/recording can only be reset if there is a technical difficulty.			
<del>Removed Step 9: Check off all the words that the participant is able to remember in Onyx.</del>			
<b>Added Step 11</b> : Read animal naming instructions to participant. As the participant if they are ready to begin. If they are ready, check <b>Yes</b> , then <b>Next</b> .			
<b>Edited Step 13</b> : <del>When Timer will count to 60 seconds has elapsed, immediately stop the timer. Timer cannot be reset, paused, or stopped.</del>			
Added section ' <b>Acceptable interviewer prompts</b> '.			
Removed all references to scoring, as this is now done by the NCC.			
Under Step 14, added <b>NOTE</b> : The timer automatically stops.			
Under Task 3: Mental Alternation test added <b>NOTE</b> : The timer automatically stops for these three tests.			
<del>Removed Step 18, Step 22, and Step 27 (renumbered steps below): Enter in Onyx the exact time, to the nearest second, the participant took to complete this task. Note: the maximum time allowed is 30 seconds.</del>			
Added under <b>Sub-Task 3: Alternating Consecutive Numbers and Letters</b> : The participant must complete the first 2 sub-tasks. If the participant was unable to complete the first 2 sub-tasks, do not administer the MAT Alternation and proceed to Task 4.			
Edited <b>Step 25</b> : When <b>60 seconds has elapsed or the participant has successfully recites recited</b> the numbers and alphabet from 1-A and 26-Z, immediately <del>press Step</del> to stop the timer.			
<b>Added box under Step 31</b> : DO NOT SCORE THE COGNITION TESTS. After the conclusion stage is complete, to go the <b>In-home – Scoring</b> stage and select <b>Skip</b> . You will need to enter a canned reason and a comment. Then press <b>Continue</b> .			
SOP formatting updated.			
New Version #	Revision Date	Revision Author	Content Approval
1.1	2013-Feb-22	Lorraine Moss	Mark Oremus
<b>Summary of Revisions</b>			
Added the note to step 27.			
Updated section 7.0			
Deleted scoring section and referred interviewers to the scoring manual			