California Verbal Learning Test (CVLT)

1. Background and Rationale

The California Verbal Learning Test-Second Edition, Short Form (CVLT-II SF) provides a short assessment of strategies and processes involved in learning and remembering verbal information. It not only assesses the amount of verbal material remembered, but also measures multiple aspects of how verbal learning occurs or fails to occur.

2. Equipment and Supplies

- Black pen or pencil
- Stopwatch

3. Safety Issues or Exclusions

None.

4. Participant and Exam Room Preparation

The physical setting can affect an individual's performance. To minimize potential distractions or interference, conduct the test in a quiet, adequately lit, well-ventilated room. As a rule, no one other than you and the participant should be in the room during testing. Make sure that the participant does not see the test administrator's TeleForms. (It is suggested that that you place the forms on a clipboard.)

4.1 Establishing and Maintaining a Rapport

A cooperative relationship between the participant and the test administrator is an essential part of all assessment situations. An accepting, non-threatening tone of interaction will promote rapport. When the participant seems at ease, briefly introduce the test in terms that are easy to understand. For example, the test administrator could introduce the CVLT by saying:

"We will now do a verbal test of memory and concentration. You're not expected to get all of them right. Just do your best and that will be fine."

If the participant expresses misconceptions or concerns about the testing, address these concerns in a non-threatening, truthful manner.

Once the testing begins, maintain a steady pace, but always be alert for changes in the participant's mood, activity level or cooperativeness.

To measure the participant's ability to learn and remember verbal information most accurately, try to elicit her best performance. First, be certain that the participant understands the task. If the participant appears confused or does not seem to understand

the task, repeat and elaborate upon the instructions, but do not reveal any of the target words on the list prior to the beginning of the test, and do not repeat any target words out of sequence.

To sustain the participant's interest throughout the test, convey your enthusiasm and interest in what the individual is doing. It is always appropriate to give encouragement. If the participant is aware that she is doing poorly on the test, general statements of reassurance, such as, "This is hard for many people," or "Just keep trying to do your best," may provide encouragement to the individual.

If the participant says she cannot remember any of the words on a given trial, encourage her by saying, "Just give it a try," or "Take a moment to see if any of those words come to mind." If the participant still cannot remember any words on a given trial, move on to the next trial.

5. Test Administration

The CVLT-II SF requires participants to learn and remember a list of words under different testing conditions, including free recall, cued recall, and recognition. The CVLT-II SF has two delay intervals that are filled with nonverbal testing. Administer the first part of the CVLT-II SF (up through the Short-Delay Free-Recall trial) to the participant. Approximately 10 minutes later, administer the Long-Delay Free-Recall and the Long-Delay Yes/No Recognition trials of the CVLT-II SF.

Below each Trial is a "Refused" field. At any time during the test, if the participant refuses to participate, mark "Refused." If she refuses to recite the words following the first Trial, ascertain, on a case by case basis, if she refusing to proceed with the entire test, or would be willing to be read the words a 2nd time and attempt Trial 2. If, after any trial, it she refuses to continue with the test and does not appear willing to make another attempt, discontinue Part 1 of the CVLT and do not attempt Part 2 (or the recall tests following the 10 minute delay). Mark "refused" for all remaining tests and leave the time fields blank on the Brief Delay Recall and the Long Delay Recall.

You may mark on the forms which words are correct, incorrect, or repeated to facilitate scoring.

5.1 Intermediate Free Recall

Trial 1

Say:
"I'm going to read a list of words to you. Listen carefully, because when I'm through, I want you to tell me as many of the words as you can. You can say them in any order, just say as many of them as you can. Are you ready?"

Before proceeding, make sure the participant understands the task. Then read aloud the target words from the Word List at an even pace at a rate slightly longer than one second per word. The entire list should take a total of 12 to 14 seconds to read. You can ensure that you read the words at the appropriate rate by practicing in advance, making sure that the total time is between 12 and 14 seconds.

After reading the last word on the list, say:

"Go ahead."

Write all of the participant's responses, including repetitions and intrusions (eg, words that are not on the list), verbatim in the order in which they are given, in the column labeled "Trial I" on the record form. If the participant refuses to respond, mark "Refused" next to Trial 1 and proceed to Trial 2.

One type of error, repetition, requires special attention during administration, because you may need to query the participant further. Repetition errors are not considered "correct" and occur when an examinee repeats a previous response during the same trial. If this happens, it is important to try to determine during administration whether the repetition is an error or simply a way of self-cueing(e.g., "Let me see, I've said 'hat,' 'cherries,'" etc.), then the repeated response need not be recorded. If the examinee repeats a response with the same confidence that he or she exhibited while reporting previous responses during the trial, then record the response verbatim; however, it will not be scored as a correct response. If it is unclear why a response is being repeated (e.g., the participant is hesitant in repeating a response on a trial), then record it and ask the participant if she thinks the response had been given before on that trial. If the participant says, "No" or "I don't know," leave the response as recorded; it will not be scored as a correct response. It the participant says "Yes" or I think so," cross out the response and regard it as a self-cueing response. Sometimes, the participant will first ask whether a response has already been given during a trial. If the response has already been given, ask the participant if she thinks it has been said before on that trial. Again, leave the response as is (and do not score it as correct) if the participant says "No" or "I don't know." If the response has not been given previously during the trial, say:

"I can't tell you that."

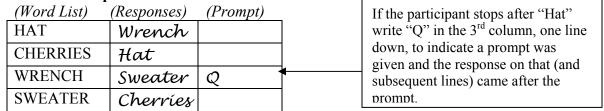Record the response, and later determine if it was correct or incorrect.

Prompting

You may prompt once for each trial (unless participant recites all 9 words). Approximately 15 seconds after the participant appears to have given her last response for each trial, or when the participant indicated that she cannot remember any more words, provide a single prompt, such as:

"Anything else?" or *"See if you can think of any more."*

Mark "Q" on the left side of the next blank line in the response column to indicate when the prompt was given. *Provide only one prompt for each trial.* Record any responses given after the prompt. After an interval of approximately 15 seconds during which the participant gives no further responses, go on to the next trial. See example below:

CVLT Example:

(Word List)	(Responses)	(Prompt)
HAT	*Wrench*	
CHERRIES	*Hat*	
WRENCH	*Sweater*	*Q*
SWEATER	*Cherries*	

If the participant stops after "Hat" write "Q" in the 3rd column, one line down, to indicate a prompt was given and the response on that (and subsequent lines) came after the prompt.

Note: This prompting procedure is to be followed for every recall trial in which the participant fails to recall all target items correctly.

Trial 2

Say:
"I'm going to read the same list again. Like before, tell me as many of the words as you can, in any order. Be sure to also say words from the list you told me the first time."

Again, read the Word List aloud at an even pace at a rate slightly longer than one second per word. The entire list should take a total of 12 to 14 seconds to read. Record the participant's responses in the column labeled Trial 2 on the TeleForm. Follow the same procedures for recording and prompting as were used for Trial 1.

Trial 3

Say:
"I'm going to read the same list again. Like before, tell me as many of the words as you can, in any order, including words from the list you've said before."

Follow the same procedures for reading the Word List, recording responses, and prompting as were used for the previous trials. Record the participant's responses in the column labeled Trial 3 on the TeleForm.

Trial 4

Say:
"I'm going to read the same list again. Like before, tell me as many of the words as you can, in any order, including words from the list you've said before."

Follow the same procedures for reading the Word List, recording responses, and prompting as were used for the previous trials. Record the participant's responses in the column labeled Trial 4 on the TeleForm.

5.2 30-Second Distracter Task

When Trial 4 is completed, say:

"Now I want you to count backwards from 100 like this: 99, 98, 97, and so on, until I say stop. Ready? Begin."

Allow the participant to count backwards for 30 seconds, then proceed with the Short-Delay Free-Recall Trial. If the participant has difficulty counting backwards from 100, provide assistance as needed. Proceed with the Short-Delay Free-Recall trial after 30 seconds regardless of whether or not the participant required assistance performing the distractor task. Note in the margin of the TeleForm any difficulties the participant had in counting backwards.

5.3 Short-Delay Free Recall

After completion of the 30-Second Distractor task, say:

"Now tell me as many words as you can from the list I just read you."

Record the participant's responses verbatim in the column labeled Short-Delay Free Recall, following the recording and prompting procedures used for Trials 1-4. Record the time that this test was completed on the Short-Delay Recall Form. This is to ensure that there is a 10-15 minute delay between this test and the Long-Delay Free Recall. **Note:** Do not inform the participant that there will be more CVLT-II SF trials.

5.4 10-Minute Delay Interval

This completes the first part of the CVLT-II SF and begins the 10 minute delay interval. This interval should last approximately 10 to 15 minutes. During this delay interval, administer other nonverbal tasks (Digit Span, Trails B, Moods and Feelings). Then administer the next part of the CVLT-II SF (the Long-Delay Free Recall trial).

5.5 Long-Delay Free Recall

Begin by recording the start time on the top of the form. This is to ensure that there was a 10-15 minute delay between this test and the prior test (Short-Delay Recall).

Say:

"A few minutes ago, I read a list of words to you several times, remember? Tell me all the words you can that were from that list. Go ahead."

Records the participant's responses in the column labeled Long-Delay Free Recall, following the same recording and prompting procedures used for the earlier trials.

5.6 Long-Delay Yes/No Recognition

Say:

"I'm going to read more words to you. After I read each one, say "Yes" if that word was from the list, or say "No" if it was not from the list."

Read aloud the 27 words listed under Long-Delay Yes/No Recognition on the TeleForm. If the participant responds "Yes" to a word, put a check mark in the blank space to the right of the word; if the participant responds "No," leave the space blank. If the participant says "I don't know" or does not respond at all, provide a single prompt such as:

"Tell me whether you think_____ (repeat the word) was on the first list."

If the participant still says "I don't know" or does not respond, score the refusal to respond as a "No" and leave the space blank.

6. Scoring

The scoring instructions for the first four tests Intermediate Free Recall (Trials 1-4), Short-Delay Free Recall, and Long-Delay Free Recall) are as follows:

Correct Response: A response is classified as correct when it is the first recall of a correct word from the target list on each Trial. Singular and plural variations of a target word are considered correct. Following the test, simply add up the number of correct responses and record that number in the "Correct" field. You do not need to add up the number of repeated words or intrusions (see definitions below). It is possible that the participant will recite more than the 9 target words, but will still be given the full credit (9/9) for the 9 correct words she remembered.

We will only record "Correct" responses as described above. Below are definitions of responses that would not be considered "Correct."

Repetition Error: A Repetition Error or repeated target word should not be scored as correct. If the participant appeared to be repeating responses as a way of self-cueing (an informed repetition), cross out the response on the form. If two responses on the same

trial differ only in terms of whether they are singular or plural, these responses are considered the same, and the second response should not be counted as "Correct."

Intrusion Errors: A response is classified as an Intrusion Error or incorrect, when the response is not on the current target list.

Scoring for the Long-Delay Yes/No Recognition
The Long-Delay Yes/No Recognition classifies responses as Correct, Prototype and Unrelated.

Correct: The number of checks in the "C" column corresponds to the number of correct words that were recognized.

Prototype: The number of checks in the "P" column corresponds to the number of prototypical words that were thought to be part of the list. These are words that are in the same categories as other words on the list, but are false positives.

Unrelated: The number of checks in the "U" column corresponds to the number of unrelated words that were thought to be part of the list. These are words that are *not* in the same categories as other words on the list and are false positives.

7. Procedures for Performing the Measurement at Home

Same as for in-clinic measurement.

8. Alert Values/Follow-up/Reporting

See Cognitive Function Battery Overview.

9. Quality Assurance

9.1 Training Requirements

The examiner requires no special qualifications or prior experience to perform this assessment. Training should include:

- Read and study manual
- Attend SOF training session on techniques (or observe administration by experienced examiner)
- Practice on volunteers
- Discuss problems and questions with local expert or QC officer

9.2 Certification Requirements

- Complete training requirements
- Explain how to score a question if:
    - Participant has a physical limitation making task impossible
    - Participant has cognitive limitation
    - Participant does not respond or can't remember
    - Participant answers correctly but not within time allotted
- Conducts exam using three test scripts while being observed by QC officer

9.3 Quality Assurance Checklist

- ❑ Exam performed in quiet, private area without interruptions
- ❑ Correct instructions given in clear, slow speaking voice
- ❑ Word List read at an even pace at a rate slightly longer than one second per word.
- ❑ Stopwatch used discreetly
- ❑ Repeated words clarified as self-cueing or repetition errors.
- ❑ A single prompt is given 15 seconds after last response or after participant indicates she can not remember any more words.
- ❑ Responses correctly coded (QC officer should independently fill out scoring sheet)
- ❑ Reviews form for completeness
- ❑ Correctly completes form