

	<b>Title:</b>	<b>Timed-based Prospective Memory Test (TMT)</b>		
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<b>Data Collection Site (DCS)</b>	<b>Version:</b>	3.2	<b>Number of Pages:</b>	6

### 1.0 Purpose:

The purpose of this document is to describe the standard administration of the Time-based Prospective Memory Test (TMT) cognitive test.

### 2.0 Scope:

This document is to be used by the DCS staff when administering the TMT cognitive test to a study participant.

### 3.0 Responsibilities:

It is the responsibility of the DCS staff to perform the procedures as described in the current and approved version of the standard operating procedure.

### 4.0 Related Documents:

- Disease Symptoms Questionnaire

### 5.0 Definitions:

- **Intention to Perform:** the degree to which the signal (i.e., the alarm going off) elicits a self-initiated response from the participant.
- **Accuracy of Response:** the degree to which the target action is performed as originally instructed. It is scored based on the correspondence between object (i.e., what card is selected) and participant (i.e., what person gets the card).
- **Need of Reminders:** the number of reminders (up to three) needed by the participant to initiate and/or to complete the task.

### 6.0 Equipment:

- Westclox 10611QA Big Ben Clock Alarm Key Wound Silver; and,
- VWR Traceable Alarm Timer/Stopwatch.

### 7.0 Supplies:

- Envelope containing numbered cards; and,
- TMT reference sheet.

### 8.0 Procedure Steps:

#### Contraindications:

- Participant cannot tell time correctly,
- Cannot see the clock face, or
- Is unable to remove the cards from the envelope.

Administer the tasks in the order in which they appear in this document. \*\*Note that this will require moving back and forth between two different modules\*\*.

Precise adherence to time limits and standardized instructions is critical.

**Please ask the participant if they need to use the bathroom before the test begins, as it is not advisable to interrupt this stage.**

**Pausing a Module in Onyx;**

**Step 1:** Click on **Administration**,

**Step 2:** Click on **Pause**.

**Step 3:** Enter your **password**, choose **Interviewer's decision** from the drop down menu, if required.

**Step 4:** Add **Pause** to the comment section.

**Step 5:** Click on **Continue**.

**Task 1 – TMT Module**

**Step 1:** Reference is made to the written instructions and variable names found in the Disease Symptoms Questionnaire.

**Step 2:** **\*\*At the *Interview tab* in Onyx locate the Time Based Prospective Memory Task module and click start in that row. \*\***

**Step 1:** Select the correct language and choose **Next**.

**Step 2:** From Onyx read the introductions to the participant.

**Step 3:** Set the large clock face to 8:00, as shown here.



**Step 4:** Point to the clock and ask the participant, "According to the clock, what time is it?".

<b>Response</b>	<b>Steps</b>
Correct Time Indicated	i. In Onyx, click <b>Yes</b> and <b>Next</b>
Incorrect Time Indicated	<p>i. Tell participant the correct time</p> <p>ii. Repeat <b>0</b> and <b>0</b> with the following practice times:</p> <ul style="list-style-type: none"> <li>• 3:00</li> <li>• 12:15</li> <li>• 12:30</li> <li>• 8:00</li> </ul> <p><b>NOTE:</b> Only do 1 practice time if the participant gets it correct</p> <p>iii. Indicate in Onyx if participant passed the practice trial by:</p> <p><b>Passed 2<sup>nd</sup> practice trial</b></p> <ul style="list-style-type: none"> <li>• Click <b>Yes</b> and <b>Next</b>.</li> </ul> <p><b>Fails 2<sup>nd</sup> Practice Trial</b></p>

Response	Steps
	<ul style="list-style-type: none"> <li>If participant fails any of the practice trials, discontinue the test</li> <li>In Onyx click <b>No</b> and <b>Next</b>.</li> </ul>

- Step 5:** Using the script in Onyx;
- Explain and demonstrate the task to the participant.
  - Re-order the cards and put them back in the envelope.
  - Inform participant that you are going to repeat the instructions. Be sure to present the cards in a different order from the one used in the first presentation.

**Step 6:** Put the cards back into the envelope, arranging them so that the card with the #17 cannot be the first card pulled out of the envelope, as indicated in the instructions in Onyx.

**Step 7:** Using the script in Onyx verify that participant understands what they are supposed to do.

Response	Steps
Repeats Instructions Correctly	i. In Onyx, click <b>Yes</b> and <b>Next</b>
Repeats Instructions Incorrectly	i. Repeat instructions provide ii. Make sure s/he knows the target time, the request and action iii. Repeat instructions 2 more times if required iv. Indicate in Onyx if participant is able to complete the test by: <b>Able (repeated instructions correctly)</b> <ul style="list-style-type: none"> <li>Click <b>Yes</b> and <b>Next</b>.</li> </ul> <b>Unable (couldn't repeat instructions correctly)</b> <ul style="list-style-type: none"> <li>In Onyx click <b>No</b> and <b>Next</b>.</li> <li>Enter the factors that prevented the participant from doing the test, click <b>Next</b>.</li> <li>Click <b>Finish</b> (this will end the module)</li> </ul>

**Step 8:** Place the envelope on the table, out of reach but in view of the subject as s/he works on other tasks.

**Step 9:** Reset the clock to 8:00. Place the clock on the table between yourself and the participant, to the left or right hand side of the work surface (see diagram), in a position where the participant can clearly see the time.

Participant

x

Examiner

**Step 10:** Set the oven timer for 19 minutes.

- Do not allow the participant to see the interval of time selected.
- Place the oven timer in close proximity to the interviewer in a place where the participant is unable to see the time. Remember to keep track of the time, but do not look at the clock at any time to avoid cueing the participant.

**Step 11:** \*\*Pause the Time Based Prospective Memory Task Module.\*\*

**Task 2 – Disease Symptoms**

**Step 12:** In Onyx at the *Interview Tab* locate the “Disease Symptoms”\_module and click start in that row.

**Step 13:** Scan the participant Interview ID and click **Continue**.

**Step 14:** Select the language and click **Next**.

**Step 15:** Administer the questions in the order in which they appear.

**Time Delay for Task 1 (TMT)**

**Step 16:** When the time has reached 8:15 if the participant initiates a response proceed to **Step 17:**, if the participant doesn’t respond continue to administer the Disease Symptoms module until they initiate a response or 8:19, whichever comes first.

**Step 17:** Using the table below initiate the corresponding steps to complete the TMT:

<b>Response</b>	<b>Steps</b>
<b>Participant initiates a response at 8:15</b>	<ul style="list-style-type: none"> <li>i. Pause the <u>Disease Symptoms</u> module.</li> <li>ii. <u>Click resume on the Time Based Prospective Memory Task</u> Module.</li> <li>iii. Click <b>Next</b></li> <li>iv. Skip over the questions pertaining to the three cues by choosing <b>Not applicable</b> and then <b>Next</b> for each question.</li> </ul>
<b>Participant initiates a response before 8:19</b>	<ul style="list-style-type: none"> <li>i. If the <b>participant does not initiate a response</b>, at <u>8:15</u>, allow a <u>4-minute</u> grace period</li> <li>ii. Once the response is initiated, Pause the <u>Disease Symptoms</u> module.</li> <li>iii. Click resume on the <u>Time Based Prospective Memory Task</u> Module.</li> <li>iv. Click <b>Next</b>.</li> <li>v. Answer the questions pertaining to the three cues, entering any behavioural observations and/or comments about the participant’s performance on the task.</li> </ul>
<b>Participant</b>	<ul style="list-style-type: none"> <li>i. Interrupt whatever s/he is doing</li> </ul>

Response	Steps
<p><b>doesn't initiate a response before 8:19</b></p>	<ul style="list-style-type: none"> <li>ii. Pause the <u>Disease Symptoms</u> module</li> <li>iii. Click resume on the <u>Time Based Prospective Memory Task</u> Module.</li> <li>iv. Click <b>Next</b>.</li> <li>v. Initiate provision of <u>hierarchical cues</u>, beginning with the reminder as indicated in Onyx.</li> <li>vi. The next cue may be introduced in order that it appears in Onyx, until the participant responds correctly to the cue or there are no more cues to give.</li> <li>vii. Record in Onyx any behavioural observations and/or comments about the participant's performance on the task. These comments may be particularly useful when there is uncertainty about the score to be assigned to one or more of the scoring criteria (i.e., Intention to Perform, Accuracy of Response, Need of Reminders).</li> </ul>

**NOTE:** If the participant verbalizes an action that s/he is supposed to do as part of the test, but does not do the action, say: "Please do whatever you think you were supposed to do," regardless of whether the verbalized action is correct or not.

**Step 18:** In Onyx select the statement that most accurately describes the participant's:

- Intention to Perform;
- Accuracy of Response; and,
- Need of Reminders.

**NOTE:** Use the corresponding drop down menu to complete the statement if using answer 2-4 for the Need of Reminders.

**Step 19:** Click on **Next**, then **Finish** and **Continue**.

**Step 20:** If you need to return to the Disease Symptoms Module, go to the *Interview Tab* and click on **Resume**. Complete the remainder of the questions in this module.

#### 9.0 Documentation and Forms:

- CRF\_DCS\_0029\_1 – Prospective Memory Test (PMT) Case Report Form
- CRF\_DCS\_0029\_2 – Disease Symptoms Case Report Form

#### 10.0 References:

- Loewenstein D, Acevedo A. The Prospective Memory Test: Administration and scoring manual. Unpublished manuscript. University of Miami School of Medicine; 2001.

#### F1 Revision History:

<b>New Version #</b>	<b>Revision Date</b>	<b>Revision Author</b>	<b>Content Approval</b>
3.2	2017-FEB-16	Lorraine Moss	Mark Oremus
<b>Summary of Revisions</b>			
Updated formatting			
<b>New Version #</b>	<b>Revision Date</b>	<b>Revision Author</b>	<b>Content Approval</b>
3.1	2016-APR-18	Lorraine Moss	Mark Oremus
<b>Summary of Revisions</b>			
Added Equipment model numbers to the equipment section.			
Updated the <b>Documentation and Forms</b> section.			

FOLLOW-UP