

TELEPHONE INTERVIEW FOR COGNITIVE STATUS (TICS)**TABLE OF CONTENTS**

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TELEPHONE INTERVIEW FOR COGNITIVE STATUS (TICS)**1. Background and rationale**

The Telephone Interview for Cognitive Status (TICS) is a brief, standardized test of cognitive functioning that is designed to be administered over the telephone. It is intended for use in situations where in-person cognitive screening is impossible or impractical.

The TICS is composed of 11 test items and usually takes less than 10 minutes to administer and score. Among elderly community residents, TICS scores approximate a normal distribution and are not subject to ceiling effects, a limitation of many mental status examinations. The TICS correlates highly with the Mini-Mental State Examination (MMSE; Folstein, Folstein, and McHugh, 1975); it has high test-retest reliability, and its sensitivity and specificity for the detection of cognitive impairment are excellent.

2. Equipment and supplies

- Pen
- Clock or watch (to record start and stop time)
- Pages 13 through 15 of the Telephone Interview (Quarter 2 and Quarter 4)

3. Safety issues and exclusions

None.

4. Detailed measurement procedures**4.1 General issues**

Although the TICS is simple to administer and score, examiners should be well practiced. Ideally, they should be native English speakers; any variance in pronunciation due to foreign accents should be minimal. Examiners should speak clearly and articulate distinctly.

The examiner should ascertain the examinee's ability to hear spoken language at a conversational volume, as well as the street address where they are located. The room where the examinee will be interviewed should be quiet and free from distractions. In administering the TICS, the following guidelines should also be taken into consideration.

- 1) In general, the examinee's answers should precisely match the given scoring criteria. If a precise answer is not given, the examiner should probe for the correct response. For example, if the examinee's response to "What animal does wool come from?" (Page 14, Question #30d) is "a ram" or "ewe" the examiner should say, "Is there another name for that?"
- 2) Reasonable judgment should be exercised regarding allowing the examinee sufficient time to answer a question before proceeding on to the next question.

- 3) If an examinee changes an incorrect response to a correct response at any time during the TICS administration session, credit should be given for the new correct response.
- 4) If an examinee changes a correct response to an incorrect response at any time during the TICS administration session, the new response should be recorded and credit should not be given.

4.2 Other scoring issues

The TICS examination asks the participants to provide information and to perform specific tasks as instructed by the examiner to assess cognitive function. Based on the response or performance of the task, the interviewer marks the appropriate level of "correctness" of the response.

Due to the complexity of the scoring mechanism in this exam, examiners will not be asked to tally a preliminary score for each participant. The TICS scores will be generated by a computer algorithm after data entry.

- 1) If you cannot determine how to code the response, record notes in the left-hand margin so that the scoring can be reviewed later. Bring ambiguities to the attention of the clinic quality control officer.
- 2) If a task is not attempted due to a physical limitation such as hearing impairment that task is scored "Not attempted due to disability."
- 3) Mark "Refused" if the participant refuses to answer the question.
- 4) Mark "Incorrect" if the task is not successfully completed for any other reason. This includes errors due to cognitive dysfunction, refusals when no hearing disability is present, lack of response, or the participant says they can't remember.
- 5) Let the participant attempt all tasks unless you determine that the participant cannot do the task. In these cases, score the question "Incorrect." This includes instances in which you perceive:
 - the participant is unable to do the task;
 - the participant appears to be experiencing excess stress; or
 - no response is received from the participant after a reasonable time period.

4.3 Administration

Introduce test to participant.

Script: “Now we’re going to switch gears and do something different, sort of like being back at school. Some questions may be challenging, but some you may find interesting and fun. I’m going to ask you some questions that require concentration and memory. Some of these are likely to be easy for you, but some may be difficult. Please try to answer all the questions as best you can. If you can’t answer a question, don’t worry. There is no passing or failing here – the only important thing is to try your best.

“Please do not use or look at any papers, pencils, books, calendars, or newspapers, during the testing sessions. No one else that may be with you can help you answer the questions. Also, please make sure that the room is quiet (e.g., turn off any music, radio, or televisions) so that you can hear me.

“Are you ready?”

These instructions may be repeated verbatim or paraphrased, if necessary. For each of the TICS items, except Page 14, Question #28, and Page 15, Question #31, single repetitions are permitted. When the examinee is ready, begin administering the TICS items according to the following instructions.

Record Start time.

4.3.1 Orientation to name

Question 24a-b – “Please tell me your full name.”

If the participant provides the correct first name, fill in the “Correct” response option. A nickname is acceptable. If the participant provides the correct last name, fill in the “Correct” response option. The maximum score is 2 points; i.e., two “correct” bubbles.

4.3.2 Orientation to time

Question 25 – “What is today’s date?”

- 1) Probe for month, date, year, day of week, and season if any not provided spontaneously, (e.g., “What day of the week is it?” or “what season is it?”.)
- 2) Precisely correct answers are required (e.g., a hot day in early June is not summer).
- 3) The maximum score is 5 “Correct.”

4.3.3 Orientation to place

Question 26 – “Where are you right now?”

- 1) Probe for house number, street, city, state, and zip code if any not provided spontaneously. If any are not given spontaneously, probe (e.g., “What number is that?” or “What is your zip code?”)
- 2) If the participant is in a facility with no house number (e.g., a hospital or nursing home), the name of the facility may be substituted for the house number.
- 3) The maximum score is 5 “Correct.”

4.3.4 Counting backward from 20 to 1

Question 27 – “Please count backward from 20 to 1.”

If the participant makes an error on Trial 1, ask them to try again. If correct on first try, mark “Correct on first try” (2 points); if correct on second try, mark “Correct on second try” (1 point).

4.3.5 Remembering a word list

Question 28 – “I am going to read you a list of 10 words. Please listen carefully and try to remember them. When I am done, tell me as many of the words as you can, in any order. Ready? The words are (pause) cabin, pipe, elephant, chest, silk, theater, watch, whip, pillow, giant. (Pause.) Now tell me all the words you can remember.”

- 1) The words should be read at approximately one word every 2 seconds. No repetitions of the word list are permitted by the examiner.
- 2) Repetitions of listed words and intrusions of words not on the list do not count as correct.
- 3) Record the total correct responses. The maximum score is 10 points.

4.3.6 Serial 7 subtractions

Question 29 – “I would like you to take the number 100 and subtract 7.” (Pause for a response) “Now keep subtracting 7 from the answer until I tell you to stop.”

- 1) No further prompts or instructions are given, except to “keep going.”
- 2) Stop the examinee after five serial subtractions.
- 3) Score 1 point for a correct subtraction, even if the subtraction was from a previously incorrect response. For example, “93, 85, 78, 71, 65” would be awarded 3 points. The maximum score is 5 points.

4.3.7 Naming to verbal description

Question 30a – “What do people usually use to cut paper?” Pause for a response.

If participant answers “scissors” or “shears,” mark “Correct.”

Question 30b – “How many things are in a dozen?” Pause for a response.

If participant answers “12,” mark “Correct.”

Question 30c – “What do you call the prickly green plant that lives in the desert?” Pause for a response.

If participant answers “cactus,” mark “Correct.”

Question 30d – “What animal does wool come from?” Pause for a response.

If a participant answers “a ram” or “ewe” the examiner should say, “Is there another name for that?” If participant answers “sheep” or “lamb,” mark “Correct.”

The maximum number of “Correct” responses for Question #30 is 4.

4.3.8 Repetition

Question 31a – “Please repeat this after me: ‘No ifs, ands, or buts.’” Pause for a response.

- 1) Pronounce the individual words distinctly but with normal tempo of a spoken sentence. Give no credit if the participant misses the “s.”
- 2) No repetitions of the phrase by the examiner is permitted.
- 3) If participant repeats all of the words correctly, mark “Correct.”

Question 31b – “Now please repeat this after me. ‘Methodist Episcopal.’” Pause for a response.

- 1) No repetitions of the phrase by the examiner is permitted.
- 2) If participant repeats the words correctly, mark “Correct.”

The maximum number of “Correct” responses for Question #31 is 2.

4.3.9 Recent memory

Question 32a – “Who is the President of the United States right now?” Pause for a response.

The participant must provide both the first and last name in order to receive credit for the question. If only the last name is given, probe for the full name. If the participant provides both the first and last name of the President, mark “Correct.”

Question 32b – “Who is the Vice-President of the United States right now?” Pause for a response.

The participant must provide both the first and last name in order to receive credit for the question. If only the last name is given, probe for the full name. If the participant provides both the first and last name of the Vice-President, mark “Correct.”

The maximum number of “Correct” responses for Question #32 is 2.

4.3.10 Praxis

Question 33 – “With your finger, tap five times on the part of the phone you speak into.”

If the participant is using a cell phone, ask them to tap on something hard nearby, such as a counter or table.

- 1) If five taps are heard, mark the “Five taps are clearly heard” bubble (this counts as 2 points).
- 2) If more than or fewer than five taps are heard, mark the “More than or fewer than five taps are heard” bubble (this counts as 1 point).
- 3) If no taps are heard, mark the “No taps are heard” bubble.

The maximum number of “Correct” responses for Question #33 is 2.

4.3.11 Opposites

Question 34 – “I am going to say a word and I want you to give me its opposite. For example, if I said ‘hot,’ you would say ‘cold.’”

Question 34a – “What is the opposite of West?” Pause for a response.

If participant answers, “East,” mark “Correct.”

Question 34b – “What is the opposite of generous?” Pause for a response.

Mark as “Correct” any of the following antonyms or other correct antonym: cheap, chintzy, frugal, greedy, hoarding, meager, mean, miserly, niggardly, parsimonious, penurious, restrictive, scrooge, selfish, skimpy, skinflint, sparse, stingy, tight, tightwad, ungenerous (not generous).

Scoring: If a participant gives a reasonable response to a misheard word, e.g., hears the word “west” as “wet” and gives “dry” as the opposite, do not score as correct: score as “Not attempted due to disability.”

The maximum number of “Correct” responses for Question #34 is 2.

Record Stop time.

5. Alert values/follow-up/reporting

When the interview is completed, thank the participant without offering specific feedback on their performance. You might say, “Thank you for doing this portion of the interview.”

6. Quality assurance

6.1 Training requirements

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

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

6.2 Certification requirements

- Complete training requirements
- Explain how to score a question if:
 - Participant has a hearing limitation, making task impossible
 - Participant has cognitive limitation
 - Participant does not respond or can’t remember
 - Participant answers correctly but not within time allotted

6.3 Quality assurance checklist

- Exam performed in quiet, private area without interruptions
- Correct instructions given in clear, slow speaking voice
- Start time recorded
- Participant asked for full name
- Today’s date asked for, including month, day, year, day of the week, and season, with probes, if necessary

- Participant asked where they are now, with probes (house number, street, city, state, and zip code), if necessary
- Participant asked to count backwards from 20; numbers ticked off on form
- List of words read at approximately one word every 2 seconds
- Participant instructed to tell all words they can remember from list read to them and words scored properly
- Correct instructions given to participant for taking the number 100 and subtracting 7
- Correct number of correct responses recorded
- Participant asked what people do to cut paper
- Participant asked how many things are in a dozen
- Participant asked what the prickly green plant that lives in the desert is called
- Participant asked what animal wool comes from
- Individual words and "s's" in phrase "NO IFS..." clearly enunciated
- Individual words "Methodist Episcopal" clearly enunciated
- Participant asked who the President of the United States is right now
- Participant asked who the Vice-President of the United States is right now
- Participant asked to tap five times on the part of the phone you speak into (or a hard object nearby)
- Participant asked what is opposite of West
- Participant asked what is opposite of generous
- Stop time recorded
- Responses correctly coded (QC officer should independently fill out scoring sheet)
- Reviews form for completeness
- Correctly completes form

7. Reference

1. Jason Brandt and Marshal F. Folstein, Telephone Interview for Cognitive Status™: Professional Manual.

8. Data collection form

HABC Enrollment ID #	Acrostic	Year and Quarter of Interview							
H		15Q1	15Q2	15Q3	15Q4	16Q1	16Q2	16Q3	16Q4
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		17Q1	17Q2	17Q3	17Q4	18Q1	18Q2	18Q3	18Q4
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		19Q1	19Q2	19Q3	19Q4	20Q1	20Q2	20Q3	20Q4
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TELEPHONE INTERVIEW FOR COGNITIVE STATUS (TICS)

I am going to ask you some questions that require concentration and memory. Some of these are likely to be easy for you, but some may be difficult. Please try to answer all the questions as best you can. If you can't answer a question, don't worry. Just try your best. Are you ready?

Start time: : am pm
Hours Minutes

★ 24. Please tell me your full name.

★ a. First name: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ b. Last name: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ 25. What is today's date? / /
(Examiner Note: Probe for month, date, year, day of week, and season if any not provided spontaneously. (e.g., "What day of the week is it?" or "What season is it?").)

★ a. Month: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ b. Day: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ c. Year: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ d. Day of the week: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ e. Season: Correct
 Incorrect
 Refused
 Not attempted due to disability

★ 26. Where are you right now?
(Examiner Note: Probe for house number, street, city, state, and zipcode if any not provided spontaneously. If any are not given spontaneously, probe [e.g., "What number is that?" or "What is your zipcode?"])

If the participant is in a facility with no house number [e.g., a hospital or nursing home], the name of the facility may be substituted for the house number.)

a. House number (or facility name):
 Correct
 Incorrect
 Refused
 Not attempted due to disability

b. Street:
 Correct
 Incorrect
 Refused
 Not attempted due to disability

c. City:
 Correct
 Incorrect
 Refused
 Not attempted due to disability

d. State:
 Correct
 Incorrect
 Refused
 Not attempted due to disability

e. Zipcode:
 Correct
 Incorrect
 Refused
 Not attempted due to disability

★ Page 13 ★

Telephone Interview
Q2,4
AN



HABC Enrollment ID #	Acrostic	Year and Quarter of Interview							
H <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	15Q1	15Q2	15Q3	15Q4	16Q1	16Q2	16Q3	16Q4
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		17Q1	17Q2	17Q3	17Q4	18Q1	18Q2	18Q3	18Q4
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		19Q1	19Q2	19Q3	19Q4	20Q1	20Q2	20Q3	20Q4
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TELEPHONE INTERVIEW FOR COGNITIVE STATUS (TICS)

27. Please count backwards from 20 to 1.
(Examiner Note: If the participant makes an error on the first try, ask them to try again.)

20 19 18 17 16 15 14 13 12 11
10 9 8 7 6 5 4 3 2 1

Correct on first try
 Correct on second try
 Incorrect
 Refused
 Not attempted due to disability

29. I would like you to take the number 100 and subtract 7.
(Examiner Note: Pause for response.)

Now keep subtracting 7 from the answer until I tell you to stop.

(Examiner Note: No further prompts or instructions are given, except to "keep going." Stop the examinee after five serial subtractions.)

93 86 79 72 65

Score (total correct responses):

Refused
 Not attempted due to disability

28. I am going to read you a list of 10 words. Please listen carefully and try to remember them. When I am done, tell me as many of the words as you can, in any order. Ready?

(Examiner Note: The words should be read at approximately one word every 2 seconds. Do not repeat any of the words.)

The words are:

**Cabin Pipe Elephant Chest
Silk Theater Watch Whip
Pillow Giant**

Now tell me all the words you can remember.

Score (total correct responses):

Refused
 Not attempted due to disability

30a. What do people usually use to cut paper?
(Examiner Note: Accept only "scissors" or "shears" as correct.)

Correct
 Incorrect
 Refused
 Not attempted due to disability

b. How many things are in a dozen?
(Examiner Note: Accept only "12" as correct.)

Correct
 Incorrect
 Refused
 Not attempted due to disability

c. What do you call the prickly green plant that lives in the desert?
(Examiner Note: Accept only "cactus" as correct.)

Correct
 Incorrect
 Refused
 Not attempted due to disability

d. What animal does wool come from?
(Examiner Note: Accept only "sheep" or "lamb" as correct.)

Correct
 Incorrect
 Refused
 Not attempted due to disability



HABC Enrollment ID #	Acrostic	Year and Quarter of Interview							
H		15Q1	15Q2	15Q3	15Q4	16Q1	16Q2	16Q3	16Q4
		17Q1	17Q2	17Q3	17Q4	18Q1	18Q2	18Q3	18Q4
		19Q1	19Q2	19Q3	19Q4	20Q1	20Q2	20Q3	20Q4



TELEPHONE INTERVIEW FOR COGNITIVE STATUS (TICS)

31a. Please repeat this after me:
"No ifs, ands, or buts."
(Examiner Note: Pronounce the individual words distinctly but with normal tempo of a spoken sentence. Give no credit if the participant misses the "s.")

Correct
 Incorrect
 Refused
 Not attempted due to disability

b. Now please repeat this after me.
"Methodist Episcopal."
 Correct
 Incorrect
 Refused
 Not attempted due to disability

33. With your finger, tap five times on the part of the phone you speak into.

Five taps are clearly heard
 More than OR fewer than five taps are heard
 No taps are heard
 Refused
 Not attempted due to disability

34a. I am going to say a word and I want you to give me its opposite. For example, if I said "hot," you would say "cold."
What is the opposite of "West"?
(Examiner Note: Accept only "East" as correct.)

Correct
 Incorrect
 Refused
 Not attempted due to disability

32a. Who is the President of the United States right now?
(Examiner Note: The participant must provide both first and last name in order to receive credit for the question. If only the last name is given, probe for the full name.)

Correct
 Incorrect
 Refused
 Not attempted due to disability

b. Who is the Vice-President?
 Correct
 Incorrect
 Refused
 Not attempted due to disability

b. What is the opposite of "generous"?
(Examiner Note: Accept any one of the following antonyms or other correct antonym: cheap, chintzy, frugal, greedy, hoarding, meager, mean, miserly, niggardly, parsimonious, penurious, restrictive, scotch, scrooge, selfish, skimpy, skinflint, sparse, stingy, tight, tightwad, ungenerous [not generous].)

Correct
 Incorrect
 Refused
 Not attempted due to disability

Stop time: : am pm
Hours Minutes

