



HCHS/SOL INCA 1 Ancillary Study (AS#2013.07) QxQs

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([R01 AG048642](#), H Gonzalez)

CGE - Everyday Cognition QXQ

DLE - Instrumental Activities of Daily Living QXQ

IER - Eligibility and Recruitment QXQ

NEE - Neurocognitive Scoring Summary QXQ

SIX - Six Item Cognitive Screener QXQ



SOL-INCA Everyday Cognition-12 Form (CGE/CGS) - QxQ

General Instructions

Everyday cognition-12 (eCog12) is a brief questionnaire that asks participants to rate any changes in memory and thinking over the past 10-years. Some changes in memory and thinking over time is normal, but when change is extreme it may indicate health problems needing attention.

The SOL-INCA Everyday cognition-12 questionnaire has corresponding forms in English (CGE form) and Spanish (CGS), which should be administered in the language of preference indicated by the participant. The forms can either be administered electronically and entered directly into the HCHS/SOL study data management system (DMS), or administered on paper and then keyed into the DMS. As a general rule, when the CGE/CGS form is entered electronically, the “Don’t know”, “Not applicable” and similar responses are recorded by leaving the response field missing and selecting an appropriate field status in the DMS. If the CGE/CGS form is administered on paper, we have added an additional response choice for “DK”, in order to help the interviewer to keep track of which questions have been asked. When the paper form is later keyed into the DMS, these “DK” responses should be coded as described above, by leaving the response in the DMS missing and selecting the appropriate field status.

Question 0c records the participant’s self-assessment of their cognitive status. Questions 1 through 12 record 10-year changes in ability to perform specific tasks.

QxQ Instructions

Q0c Are you worried or believe that you are having problems with your attention, concentration or memory?

The intent of this question is to determine if the person is aware of subtle attention, concentration and memory problems.

Select the appropriate code from the drop-down menu.

0= No.

Participant is unaware of problems with attention, concentration, or memory.

1= Yes.

Participant is worried or believes that they are having problems with attention, concentration or memory. Or is the key word, that is, any of these 3 examples of cognitive problems is sufficient for a Yes response.

Q1-12 Compared to 10 years ago, have there been any changes in your ability to...

The intent of this question is to assess cognitive decline. To do so, focus the participant on any decline in everyday cognitive function over the past 10-years. It is important to note that if the participant was *always* bad at a task (e.g., balancing the account/checkbook) and/or never managed the account, then there has been “no change.”

- Q1. Remembering where you have placed things (glasses, keys).
Losing belongings is common, but more frequently losing things may suggest cognitive problems.
- Q2. Remembering the current date or day of the week.
Forgetting the date is common, but consistently forgetting dates, especially dates and appointments that really matter (e.g., doctor appointments).
- Q3. Communicating thoughts in a conversation.
Determine if there have been declines in “communicating,” that is, the ability to produce speech. This includes increased difficulty finding the correct word, and saying the words clearly and correctly. It also includes remembering words and names.
- Q4. Understanding spoken directions or instructions.
The ability to comprehend speech. This is not due to hearing problems.
- Q5. Reading a map and helping with directions when someone else is driving.
Reading and understanding maps and providing directions involve complex cognitive processing, and the intent of this question is to determine if there have been declines over the past 10-years.
- Q6. Finding one’s way around a house/building that you have visited many times.
The focus of this question is on getting lost in familiar places, like at home or at work. This does not include getting lost in new settings or large building complexes (e.g., hospitals).
- Q7. Anticipating weather changes and planning accordingly.
Appropriate planning for weather changes requires complex thinking. Assess if there are declines in planning for weather changes (e.g., bringing a coat for rain or cool nights).
- Q8. Thinking ahead.
Thinking ahead means planning for or into the future. For example, planning to stop at the bank on the way to store for tonight’s dinner groceries, and then picking up the kids on the way home.
- Q9. Keeping living and workspace organized.
There are many reasons why households and workplaces are disorganized. The question is to determine if he/she is less organized than 10-years ago. If the participant was *always* disorganized and is now the same, then there is “no change.”
- Q10. Balancing the checkbook/account without error.
The question is intended to determine if the participant can perform basic math skills correctly as well as he/she could 10-years ago. The question is not intended to determine if the participant has sufficient funds. If the participant was *always* bad at balancing the account/checkbook and/or never managed the checkbook then there is “no change.”
- Q11. Doing two things at once.
This is commonly known as “multitasking.” For example, driving and talking to a passenger. It may be more difficult doing two things at once than 10-years ago.

Q12. Cooking or working, and talking at the same time.

This is a specific type of “multitasking.” Work includes chores, like washing dishes.
“Multitasking” may be more difficult or effortful than 10-years ago.

For all questions 1-12, select the appropriate response code from the drop-down menu:

1= Better or no change.

Participant has improved or not noticeably changed since 10-years ago. Improvement can occur after a major illness or the loss of a loved one.

2= Questionable or occasionally worse.

Participant has not noticed much or just a little cognitive change over the past 10-years. Little cognitive problems occur infrequently, just once in a while.

3= Consistently a little worse.

Participant has noticed mild decline over the past 10-years in his/her attention, thinking or memory. The mild cognitive problems occur almost all or all of the time.

4= Consistently much worse.

Participant has noticed a moderate to severe decline in his/her attention, thinking or memory.

The interviewer can help the participant decide what response category a specific amount change falls into if he/she is having difficulty deciding, but the interviewer should not volunteer the response.

Q13. If the eCog questionnaire was discontinued, note it as Yes or No for Q13 and the reason (e.g., difficulty understanding questions) for discontinuation in Q13a.



SOL-INCA Instrumental Activities of Daily Living (IADL) CDART Form (DLE/DLS) - QxQ

General Instructions

The Instrumental Activities of Daily Living (IADL) questionnaire provides a tool to assess overall individual functioning and can be used for both clinical purposes and in large community dwelling population surveys. **IADL information is essential for assessing a person's ability to function independently. If a person has problems with these activities (e.g., managing medications), he/she may need informal (i.e., family) or formal (i.e., visiting nurse) assistance.**

The SOL-INCA Activities of Daily Living questionnaire has corresponding forms in English (DLE form) and Spanish (DLS), which should be administered in the language of preference indicated by the participant. The forms can either be administered electronically and entered directly into the HCHS/SOL study data management system (DMS), or administered on paper and then keyed into the DMS. As a general rule, when the DLE/DLS form is entered electronically, the "Not answered" responses are recorded by leaving the response field missing and selecting the "No response" field status in the DMS. If the DLE/DLS form is administered on paper, we have added an additional response choice "N" for "Not answered", in order to help the interviewer to keep track of which questions have been asked. When the paper form is later keyed into the DMS, these "N" responses should be coded as described above, by leaving the response in the DMS missing and selecting the "No response" field status.

Questions 1 through 7 record a participant's ability to function independently. In response to each question, study participants will report their ability to perform the specific task independently (i.e., without help), with some help, or not (able to perform the task) at all.

QxQ Instructions

For all questions 1-7, select the appropriate response code from the drop-down menu.

The interviewer can help the participant decide what response category a specific amount of change falls into if he/she is having difficulty deciding, but the interviewer should not volunteer the response.

Q1. Can you use the telephone ...

2= without help, including looking up numbers and dialing;

1= with some help (can answer phone or dial operator (911) in an emergency, but need a special phone or help in getting the number or dialing); or

0= are you completely unable to use the telephone?

Q2. Can you get to places out of walking distance ...

2= without help (drive your own car, or travel alone on buses, subways or taxis);

1= with some help (need someone to help you or go with you when traveling); or

0= are you unable to travel unless emergency arrangements are made for a specialized vehicle like an ambulance?

Q3. Can you go shopping for groceries or clothes [ASSUMING S HAS TRANSPORTATION] ...
2= without help (taking care of all shopping needs yourself, assuming you had transportation);
1= with some help (need someone to go with you on all shopping trips); or
0= are you completely unable to do any shopping?

Q4. Can you prepare your own meals ...
2= without help (plan and cook full meals yourself);
1= with some help (can prepare some things but unable to cook full meals yourself); or
0= are you completely unable to prepare any meals?

Q5. Can you do your housework ... [requires cognitive planning and motivation]
2= without help (can clean floors, etc.);
1= with some help (can do light housework but need help with heavy work); or
0= are you completely unable to do any housework?

Q6. Can you take your own medicine ... [if the participant does not take meds, they score 2 since no help is needed]
2= without help (in the right doses at the right time);
1= with some help (able to take medicine if someone prepares it for you and/or reminds you to take it); or
0= are you completely unable to take your medicines?

Q7. Can you handle your own money ...
2= without help (write checks, pay bills on time, etc.);
1= with some help (manage day-to-day buying but need help with managing your checkbook and paying your bills on time); or
0= are you completely unable to handle money?

Q8. If the participant had a 1 or 2 (i.e., 1="Need for Some Help" or 0="Unable to Perform a Task") on any of questions 1-7, go to question 8. Begin by saying:

"You mentioned that you needed help with one or more tasks..."

8. Is that because of problems with attention, concentration or remembering?

The intent of this question is to determine if, for example, the inability to use a telephone is not due to a hand injury or missing a limb.

Q9. If the IADL questionnaire was discontinued, note it as Yes or No for Q9 and the reason (e.g., difficulty understanding questions) for discontinuation in Q9a.



SOL-INCA Eligibility and Recruitment Form

IER- QxQ

General Instructions

SOL-INCA Eligibility and Recruitment Form (IER) is completed at the time of HCHS/SOL Visit 2 for participants recruited during Visit 2, or during the call-back for participants who have already had Visit 2 and are invited to return for a SOL-INCA visit. This form is designed to identify factors that may affect the participants' ability to participate in SOL-INCA study. The IER form will be also used to link the data from the Picture Vocabulary Test (PVT) administered via a standalone NIH Toolbox server during the SOL-INCA visit with other HCHS/SOL and SOL-INCA data. The IER form contains a field for a special SOL-INCA ID (question 9) which should be entered into the NIH Toolbox registration screen.

The IER form should be entered only electronically directly into the HCHS/SOL study data management system (DMS) because the field with the special SOL-INCA ID will be automatically pre-populated by the DMS in order to minimize the transcription error.

Question 0c records the actual individual enrollment status in the SOL-INCA study. Questions 1a, 1b, 1c, and 2, 2a, and 2b record administrative information about the SOL-INCA visit which will allow verifying the link of the PVT test data with the rest of the SOL-INCA data. Questions 3 through 9 are pre-populated by the DMS and contain information needed to assess eligibility, provide demographic information, and facilitate the visit. These questions should not be read to participants. Specifically, Question 3 determines the eligibility for SOL-INCA. Questions 4-8 provide demographic information. Question 7 provides the participants language preference which will also facilitate the questionnaires administration. Question 9 is the SOL-INCA ID to be used for the PVT test.

QxQ Instructions

Q0c Enrollment Status in Ancillary Study:

This question is for administrative purposes only. It is a status code for the individual level eligibility and enrollment. Select the appropriate code from the drop-down menu.

0= Ineligible.

Participant doesn't have any neurocognitive data at HCHS/SOL Visit 1 as indicated by pre-filled response "No=0" to Question 3.

1= Eligible but refused to participate.

Participant have some non-missing neurocognitive data at HCHS/SOL Visit 1 as indicated by pre-filled response "Yes=1" to Question 3, but refuses to participate.

2= Eligible and agreed.

Participant have some non-missing neurocognitive data at HCHS/SOL Visit 1 as indicated by pre-filled response "Yes=1" to Question 3 and agrees to participate.

If the responses to Q0c are 0=Ineligible or 1=Eligible but refused to participate then save the form and do not continue.

If the response to Q0c is 2=Eligible and agreed then continue to questions 1a-1c and 2.

SOL-INCA Eligibility and Recruitment form QxQ - IER

- Q1a Exam Date:
Enter the exam date in mm/dd/yyyy format.
- Q1b Exam Start Time:
Enter the start time of the SOL-INCA exam in 24-hour format. Together with question 1c this will allow checking afterwards if the participant records were linked correctly to the PVT data, by using the time stamp of the PVT administration.
- Q1c Exam End Time:
Enter the end time of the SOL-INCA exam in 24-hour format. Together with question 1b this will allow checking afterwards if the participant records were linked correctly to the PVT data, by using the time stamp of the PVT administration.

Q2 **Picture Vocabulary Test administered:**
This question refers to ONLY 'NIH-Web-Assessment Center PVT test'
Select Yes=1 or No=0 from the drop-down menu. If the test was administered (=Yes), then go to Q2a to report if the Test was discontinued, and Q2b to provide reason for discontinuation, if applicable.

Q2a If PVT Test administered from the NIH-Web-Assessment Center was discontinued? If yes, complete Q2b.

Q2b If PVT Test administered from the NIH-Web-Assessment Center was discontinued then select a reason:
Refusal=1
Task difficulty (i.e. could not understand)=2
Impairment (i.e. visual, hearing, limb/motor problem)=3
Unintentional=4

Q3 At least one neurocognitive score present at Visit 1, from VIN:
Pre-filled by the DMS and no changes allowed. Defined as "Yes=1" if there is at least one non-missing neurocognitive score at the baseline HCHS/SOL Visit 1. "No=0" otherwise.

Q4 Age at Visit 2, from DEM:
Pre-filled by the DMS and no changes allowed. Equals to question 3 on the Demographic form (DEM3) collected during Visit 2. DEM form should be collected prior to the SOL-INCA exam in order for this field to be pre-filled.

It is expected that participants eligible for SOL-INCA are 50 years and older, but this may not always be the case.

Q5 Gender, from DEM:
Pre-filled by the DMS and no changes allowed. Equals to question 1 on the Demographic form (DEM1) collected during Visit 2. DEM form should be collected prior to the SOL-INCA exam in order for this field to be pre-filled.

Q5a Racial group at Visit 1, from VIN- Changes are not allowed
(1=American Indian or Alaskan Native, 2=Asian, 3=Native Hawaiian or Other Pacific Islander, 4=Black or African American, 5=White, 6=More than one race (other), 7=Unknown or Not reported, 9=Refused)

- Q6 Years of education at Visit 1, from VIN:
Pre-filled by the DMS and no changes allowed. Defined as years of education at the baseline HCHS/SOL Visit 1. If the participant did not report the years of education at Visit 1, the mean age group (10-year intervals starting at age 50) education value will be used as a starting value instead.
- Q7 Language preference at Visit 2, from ELE:
Pre-filled by the DMS and no changes allowed. Equals to question 1 on the Eligibility Checklist form (ELE1) collected during screening for Visit 2. ELE form should be collected prior to the SOL-INCA exam in order for this field to be pre-filled.
- Q8 Hispanic/Latino background, from VIN:
Pre-filled by the DMS and no changes allowed. Defined as Hispanic/Latino background as recorded at the baseline HCHS/SOL Visit 1.
- Q9 SOL-INCA participant ID to use for the Picture Vocabulary Test, from VIN:
Pre-filled by the DMS and no changes allowed. Generated by the HCHS/SOL Coordinated Center to use with the NIH Toolbox server in order to administer the Picture Vocabulary Test, because HCHS/SOL security requirements do not allow using HCHS/SOL cohort IDs on external servers.
- The ID is 10 symbols long and has the following format:
'IN' + <1 character site mnemonic> + 7 digits
- This ID should be copied from the HCHS/SOL DMS entry screen and pasted into the NIH Toolbox participant registration screen during the participant registration with the NIH Toolbox.



SOL-INCA Neurocognitive Scoring Summary

NEE-Scoring QXQ

Updated on: 3/18/2016

General Instructions

The last page of the Neurocognitive booklet is the scoring sheet for the following questionnaires of the battery: SEVLT, DSS, DSST and TMT. The Six item screener which score is contained within the form in CDART.

The NEE-Scoring sheet and the SIX-Six item screener are both available for data entry in CDART.

QXQ Instructions:

PART A: SIX Item Screener: Q1 – 9

The six item screener SIX form is available on CDART for data entry. Use the system form to obtain the score in Q9.

PART B: SEVLT: Q10-13

Record the number of correct words recalled for each trial on Part B.

In paper form Enter “=” as the score for any trials that were skipped or discontinued.

In CDART Select "Field Status=No Response."

Report discontinuation and the reason for discontinuation for **SEVLT** in **Q20b1.** and **20c1.**

PART C: DSS-Word Fluency: Q14-15

Record the number of acceptable words produced for each letter (F and A) on Part C.

In paper form Enter “=” as the score for any letters that were skipped or discontinued.

In CDART Select "Field Status=No Response."

Report discontinuation and the reason for discontinuation for Word Fluency in **Q20b2.** and **20c2.**

PART D: DSST-Digit Symbol Substitution: Q16

Apply the DSST scoring template to the responses on Part D and enter the number of correct symbols.

In paper form Enter “=” as the score if the DSST was skipped or discontinued.

In CDART Select "Field Status=No Response."

Report discontinuation and the reason for discontinuation in for DSST in **Q20b3.** and **20c3.**

PART E: TMT-Trails A: Q17a-17b

Record (a) the total time to complete the test in minutes and seconds, and (b) the total number of errors committed by the participant.

If participant refused to participate in this section select "Field Status=Refused" in CDART. Code as discontinued in **Q20b4** and select “Refusal=1” for **Q20c4.**

If participant was unable to finish the task, record time in **17a** (max time=4 min) and errors in **17b** (max errors=5.)

PART F: TMT- Trails B: Q18a-18b

Record (a) the total time to complete the test in minutes and seconds, and (b) the total number of errors committed by the participant.

If participant refused to participate in this section select "Field Status=Refused" in CDART. Code as discontinued in **Q20b5** and select “Refusal=1” for **Q20c5.**

If participant was unable to finish the task, record time in **18a** (max time=4 min) and errors in **18b** (max errors=5.)

Q19: What language were tests administered in? Enter language selected by the participant.

Q20a-20b5: Were any of the cognitive function test discontinued (from Parts B-F)?
Test may be discontinued due to participant refusal, task difficulty (i.e., meaning the participant never understood the instructions), or if the examiner determines that the participant is unable to perform the task due to a physical impairment such as hearing loss. If discontinued, the reason is recorded on the Neurocognitive Scoring Summary Form.

If a test(s) is (are) discontinued record the appropriate reason for each discontinued test as it applies: Refusal = 1', 'Task Difficulty (i.e., could not understand)= 2', and 'Impairment (i.e., Visual, Hearing, Limb/Motor Problem)= 3'.



SOL INCA-Six item Cognitive Screener- Bilingual SIX QxQ

1. Introduction

The Six-Item Screener, derived from the Mini-Mental Status Examination, is a short measure of global mental status. It includes 3 recall and 3 temporal orientation questions. The Six-Item Screener was administered during the SOL INCA examination as part of a neurocognitive assessment, in conjunction with the Spanish English Verbal Learning Test, the Word Fluency Test (Part C), and the Digit Symbol Substitution Test (WAIS-R) and others. See SOL INCA MOP1 section 2.1.

3. Procedures

The setting and interviewer behavior may affect the results. During administration of the Six-Item Screener there should be no extraneous background noise or interruptions in the interviewer's immediate surroundings. Instructions and questions should be presented at a measured pace (not too fast). If a participant is hard of hearing, speaking in a lower tone is often more effective than trying to speak more loudly.

It is important for the interviewer's attitude to be friendly, non-threatening, reassuring and supportive. Do not indicate whether specific responses are correct or incorrect, however. Participants who express concern about missing an item or two on the Six-Item Screener may be reassured that "you're doing fine" or that "many people can have difficulty at times with some of the questions."

Participants are often curious as to how well they did on "this test." The interviewer can reassure a participant who asks that he/she did as well as others who have taken this test. Do not indicate to the participant whether specific responses are correct or incorrect.

4. Administration of the Six-Item Screener

Only trained and certified SOL INCA personnel administer the Six-Item Screener. Following the introductory script in the form header the interviewer proceeds with the instructions for the six-item. See INCA MOP 1, section 2.1 for detail instructions on how to administer the questionnaire.

5. Recording the Responses

All responses to questions 3 – 8 on the Six-Item Screener are recorded as Correct (or Self-corrected), Incorrect (which includes Don't know), or Not Attempted/Refusal. An incorrect response includes a response of "I don't know" or "I can't remember." A self-corrected response is recorded as "Correct." If an item is not attempted due to a physical impairment (such as hearing loss), verify that Item 1.a is recorded as "Hearing loss" or Other, if another disability. In this instance, continue on to the next question without delay.

When no response is received after 30 seconds check "Not Attempted/Refusal."

6. Scoring the Six-Item Screener

Six item screener QXQ

The numeric score for in SOL INCA Six-Item Screener form is administered as a CDART form included in the SOL INCA data entry management system (CDART). The scoring is performed by the system placed in Q9.