

## SECTION C: COGNITIVE PATTERNS

**Intent:** The items in this section are intended to determine the patient's attention, orientation, and ability to register and recall new information and if the patient has signs and symptoms of delirium.

### C0100. Should Brief Interview for Mental Status (C0200-C0500) be Conducted?

#### Admission

|  |  |
|--|--|
| <b>C0100. Should Brief Interview for Mental Status (C0200-C0500) be Conducted?</b> |  |
| Attempt to conduct interview with all patients.                                    |  |
| Enter Code<br><input type="text"/>   | 0. No (patient is rarely/never understood) → <i>Skip to C0900, Memory/Recall Ability</i><br>1. Yes → <i>Continue to C0200, Repetition of Three Words</i> |

#### Discharge

|  |   |
|--|---|
| <b>C0100. Should Brief Interview for Mental Status (C0200-C0500) be Conducted?</b> |   |
| Attempt to conduct interview with all patients.                                    |   |
| Enter Code<br><input type="text"/>   | 0. No (patient is rarely/never understood) → <i>Skip to C1310, Signs and Symptoms of Delirium</i><br>1. Yes → <i>Continue to C0200, Repetition of Three Words</i> |

#### Item Rationale

- This information identifies if the interview will be attempted.
- Most patients are able to attempt the Brief Interview for Mental Status (BIMS). The BIMS is a structured cognitive interview.
- A structured cognitive test is more accurate and reliable than observation alone for observing cognitive performance.
  - Without an attempted structured cognitive interview, a patient might be mislabeled based on their appearance or assumed diagnosis.
  - Structured interviews will efficiently provide insight into the patient's current condition that will enhance good care.

#### Steps for Assessment

1. Interact with the patient using their preferred language. Be sure they can hear you and/or have access to their preferred method for communication. If the patient appears unable to communicate, offer alternatives such as writing, pointing, sign language, or cue cards.
2. Determine if the patient is rarely/never understood verbally, in writing, or using another method. If rarely/never understood, skip items C0200-C0500, Brief Interview for Mental Status (BIMS) and C0600, Should the Staff Assessment for Mental Status (C0900) be Conducted?

## Coding Instructions

*Complete based on assessments that occur within the 3-day admission assessment time period or the 3-day discharge assessment time period.*

Record whether the cognitive interview should be attempted with the patient.

- **Code 0, No,** if the interview should not be conducted because the patient is rarely/never understood; cannot respond verbally, in writing, or using another method; or an interpreter is needed but not available.
- **Code 1, Yes,** if the interview should be conducted because the patient is at least sometimes understood verbally, in writing, or using another method, and if an interpreter is needed, one is available. Proceed to C0200, Repetition of Three Words.

## Coding Tips

- Attempt to conduct the interview with ALL patients.

## C0200-C0500. Brief Interview for Mental Status (BIMS)

### Item Rationale

- Direct or performance-based testing of cognitive function decreases the chance of incorrect labeling of cognitive ability and improves detection of delirium.
- Cognitively intact patients may appear to be cognitively impaired because of a language barrier, hearing impairment, or lack of social interaction.
- Some patients may appear to be more cognitively intact than they actually are.
- If cognitive impairment is incorrectly diagnosed or missed, appropriate communication, worthwhile activities, and therapies may not be offered.

### Steps for Assessment: Basic Interview Instructions for BIMS (C0200-C0500)

1. Refer to Supplement B for a review of basic approaches to effective interviewing techniques.
2. Interview any patient not screened out by item C0100, Should Brief Interview for Mental Status be Conducted?
3. Conduct the interview in a private setting, if possible.
4. Be sure the patient can hear you.
  - Patients with a hearing impairment should be tested using their usual communication devices/techniques, as applicable.
  - Try an external assistive device (headphones or hearing amplifier) if you have any doubt about hearing ability.
  - Minimize background noise.
5. Sit so that the patient can see your face. Minimize glare by directing light sources away from the patient's face.
6. Give an introduction before starting the interview. Suggested language: "I would like to ask you some questions. We ask everyone these same questions. This will help us provide you with better care. Some of the questions may seem very easy, while others may be more difficult."
7. If the patient expresses concern that you are testing their memory, they may be more comfortable if you reply: "We ask these questions of everyone so we can make sure that our care will meet your needs."
8. Directly ask the patient each item in C0200 through C0400 at one sitting and in the order provided.
9. If the patient chooses not to answer a particular item, accept their refusal and move on to the next questions. For C0200 through C0400, code refusals as incorrect/no answer or could not recall.

## Coding Instructions

*Complete based on assessments that occur within the 3-day admission assessment time period or the 3-day discharge assessment time period.*

- See coding instructions for individual items.

## Coding Tips

- If a staff member is unable to articulate or pronounce any of the cognitive interview items clearly, for any reason (e.g., accent or speech impairment), have a different staff member conduct the BIMS.
- Nonsensical responses, incorrect answers, and questions the patient chooses not to answer should be coded as zero.
  - The interviewer should track the reason for coding answers as zero because this information will be used later for the coding of the summary score in C0500, BIMS Summary Score.
- When staff identify that the patient's primary method of communication is in written format, the BIMS can be administered in writing.
  - See Supplement A for details regarding how to administer the BIMS in writing.
- Rules for stopping the BIMS interview before it is complete:
  - Stop the interview after completing C0300C, Day of the Week if:
    - responses to all items have been nonsensical (i.e., any response that is unrelated, incomprehensible, or incoherent; not informative with respect to the item being rated); OR
    - there has been no verbal or written response to any of the questions up to this point; OR
    - there has been no verbal or written response to some questions up to this point and for all others, the patient has given a nonsensical response.
- If the interview is stopped, do the following:
  1. Code “-” (dash) in C0400A, C0400B, and C0400C.
  2. Code 99 in the summary score in C0500, BIMS Summary Score.
  3. Code 1, Yes in C0600, Should the Staff Assessment for Mental Status (C0900) be Conducted?
  4. Complete the Staff Assessment for Mental Status.

### DEFINITIONS

#### **NONSENSICAL RESPONSE**

Any response that is unrelated, incomprehensible, or incoherent; it is not informative with respect to the item being rated.

#### **COMPLETE INTERVIEW**

The BIMS interview is considered complete if the patient attempted and provided relevant answers to at least four of the questions included in C0200-C0400C. Relevant answers do not have to be correct, but need to be related to the question.

- If all responses to C0200, C0300A, C0300B, and C0300C are 0 because answers are incorrect, continue the interview.

## Examples of Incorrect Answers, Refusals, and Nonsensical Responses

Code 0 is used to represent three types of responses: incorrect answers (unless the item itself provides an alternative response code), nonsensical responses, and questions the patient chooses not to answer (or “refusals”). Since zeros resulting from these three situations are treated differently when coding the summary score in C0500, the interviewer may find it valuable to track the reason for the zero response to aid in accurately calculating the summary score.

1. Interviewer asks patient to state the year. The patient replies that it is 1935. This answer is incorrect but related to the question.

**Coding:** This answer is **coded 0, Incorrect** but would NOT be considered a nonsensical response.

**Rationale:** The answer is wrong, but it is logical and relates to the question.

2. Interviewer asks patient to state the year. The patient says, “Oh what difference does the year make when you’re as old as I am?” The interviewer asks the patient to try to name the year, and the patient shrugs.

**Coding:** This answer is **coded 0, Incorrect** but would NOT be considered a nonsensical response.

**Rationale:** The answer is wrong because a refusal is considered a wrong answer, but the patient’s comment is logical and clearly relates to the question.

3. Interviewer asks the patient to name the day of the week. Patient answers, “Sylvia, she’s my daughter.” The interviewer asks the patient the question again to confirm the patient is not hearing the question incorrectly, and the patient answers with the same response.

**Coding:** The answer is **coded 0, Incorrect**; the response is illogical and nonsensical.

**Rationale:** The answer is wrong, and the patient’s comment clearly does not relate to the question; it is nonsensical.

## C0200. Repetition of Three Words

| Brief Interview for Mental Status (BIMS) |  |
|--|--|
| C0200. Repetition of Three Words         |  |
| Enter Code<br><input type="text"/>       | <p>Ask patient: "I am going to say three words for you to remember. Please repeat the words after I have said all three. The words are: <b>sock, blue and bed</b>. Now tell me the three words."</p> <p><b>Number of words repeated after first attempt</b></p> <p>3. <b>Three</b><br/>         2. <b>Two</b><br/>         1. <b>One</b><br/>         0. <b>None</b></p> <p>After the patient's first attempt, repeat the words using cues ("sock, something to wear; blue, a color; bed, a piece of furniture"). You may repeat the words up to two more times.</p> |

### Item Rationale

- The inability to repeat three words on first attempt may indicate:
  - a memory impairment,
  - a hearing impairment,
  - a language barrier, or
  - inattention that may be a sign of delirium or another health issue.

### Steps for Assessment

*Basic BIMS interview instructions are shown on page C-4. In addition, for repetition of three words:*

1. Say to the patient: "I am going to say three words for you to remember. Please repeat the words after I have said all three. The words are: sock, blue, and bed." Interviewers must use the words and related category cues as indicated. If the interview is being conducted with an interpreter present, the interpreter should use the equivalent words and similar, relevant prompts for category cues.
2. Immediately after presenting the three words, say to the patient: "Now please tell me the three words."
3. After the patient's first attempt to repeat the items:
  - a. If the patient correctly stated all three words, say, "That's right, the words are sock, something to wear; blue, a color; and bed, a piece of furniture" (category cues).
  - b. Category cues serve as a hint that helps prompt patients' recall ability. Putting words in context stimulates learning and fosters memory of the words that patients will be asked to recall in item C0400, Recall, even among patients able to repeat the words immediately.
  - c. If the patient recalled two or fewer words, code C0200, Repetition of three words according to the patient's recall on this first attempt. Next say to the patient: "Let me say

#### DEFINITION

#### CATEGORY CUE

Phrase that puts a word in context to help with learning and to serve as a hint that helps prompt the patient. The category cue for sock is "something to wear." The category cue for blue is "a color." For bed, the category cue is "a piece of furniture."

the three words again. They are sock, something to wear; blue, a color; and bed, a piece of furniture. Now tell me the three words.” If the patient still does not recall all three words correctly, you may repeat the words and category cues one more time.

4. If the patient does not repeat all three words after three attempts, re-assess ability to hear. If the patient can hear, move on to the next question. If the patient is unable to hear, attempt to maximize hearing (alter environment, use hearing amplifier) before proceeding.

## Coding Instructions

*Record the maximum number of words that the patient correctly repeated on the **first** attempt. This will be any number between 0 and 3.*

- The words may be recalled in any order and in any context. For example, if the words are repeated back in a sentence, they would be counted as repeating the words.
- Do not score the number of repeated words on the second or third attempt. These attempts help with learning the item, but only the number correct on the first attempt go into the total score. Do not record the number of attempts that the patient needed to complete.
- **Code 3, Three**, if the patient repeated all three words on the first attempt.
- **Code 2, Two**, if the patient repeated only two of the three words on the first attempt.
- **Code 1, One**, if the patient repeated only one of the three words on the first attempt.
- **Code 0, None**, if the patient did not repeat any of the three words on the first attempt.

## Examples

1. The interviewer says, “The words are sock, blue, and bed. Now please tell me the three words.” The patient replies, “Bed, sock, and blue.” The interviewer repeats the three words with category cues, by saying, “That’s right, the words are sock, something to wear; blue, a color; and bed, a piece of furniture.”

**Coding:** C0200, Repetition of Three Words would be **coded 3, Three** words correct.

**Rationale:** The patient repeated all three items on the first attempt. The order of repetition does not affect the score. Per the Steps for Assessment, the interviewer repeats the words with the category cues after the patient correctly states all three words.

2. The interviewer says, “The words are sock, blue, and bed. Now please tell me the three words.” The patient replies, “Sock, bed, black.” The interviewer repeats the three words plus the category cues, saying, “Let me say the three words again. They are sock, something to wear; blue, a color; and bed, a piece of furniture. Now tell me the three words.” The patient says, “Oh yes, that’s right, sock, blue, bed.”

**Coding:** C0200, Repetition of Three Words would be **coded 2, Two** of three words correct.

**Rationale:** The patient repeated two of the three items on the first attempt. Patients are scored based on the first attempt.

3. The interviewer says, “The words are sock, blue, and bed. Now please tell me the three words.” The patient says, “Blue socks belong in the dresser.” The interviewer codes according to the patient’s response. Then the interviewer repeats the three words plus the category cues, saying, “Let me say the three words again. They are sock, something to wear; blue, a color; and bed, a piece of furniture. Now tell me the three words.” The patient says, “Oh yes, that’s right, sock, blue, bed.”

**Coding:** C0200, Repetition of Three Words would be **coded 2, Two** of the three words correct.

**Rationale:** The patient repeated two of the three items – blue and sock – on the first attempt. The patient put the words into a sentence, resulting in the patient repeating two of the three words.

4. The interviewer says, “The words are sock, blue, and bed. Now please tell me the three words.” The patient replies, “What were those three words?” The patient’s response is coded and then the interviewer repeats the three words plus the category cues.

**Coding:** C0200, Repetition of Three Words would be **coded 0, None** of the words correct.

**Rationale:** The patient did not repeat any of the three words after the first time the interviewer said them.

## C0300. Temporal Orientation (Orientation to Year, Month, and Day)

| C0300. Temporal Orientation (orientation to year, month, and day) |   |
|---|---|
| Enter Code<br><input type="text"/>                                | Ask patient: "Please tell me what year it is right now."<br><b>A. Able to report correct year</b><br>3. Correct<br>2. Missed by 1 year<br>1. Missed by 2 - 5 years<br>0. Missed by > 5 years or no answer |
| Enter Code<br><input type="text"/>                                | Ask patient: "What month are we in right now?"<br><b>B. Able to report correct month</b><br>2. Accurate within 5 days<br>1. Missed by 6 days to 1 month<br>0. Missed by > 1 month or no answer            |
| Enter Code<br><input type="text"/>                                | Ask patient: "What day of the week is today?"<br><b>C. Able to report correct day of the week</b><br>1. Correct<br>0. Incorrect or no answer  |

### Item Rationale

- A lack of temporal orientation may lead to decreased communication or participation in activities.
- Not being oriented may be frustrating or frightening.

#### DEFINITION

#### TEMPORAL ORIENTATION

In general, the ability to place oneself in correct time. For the BIMS, it is the ability to indicate the correct date in current surroundings.

### Steps for Assessment

*Basic BIMS interview instructions are shown on page C-4.*

1. Ask the patient each of the three questions in item C0300 separately.
2. Allow the patient up to 30 seconds for each answer and do not provide clues.
3. If the patient specifically asks for clues (e.g., "Is it bingo day?") respond by saying, "I need to know if you can answer this question without any help from me."

### Coding Instructions for C0300A, Able to Report Correct Year

- **Code 3, Correct**, if the patient states the correct year.
- **Code 2, Missed by 1 year**, if the patient's answer is incorrect and is within 1 year from the current year.
- **Code 1, Missed by 2-5 years**, if the patient's answer is incorrect and is within 2 to 5 years from the current year.
- **Code 0, Missed by >5 years or no answer**, if the patient's answer is incorrect and is greater than 5 years from the current year or the patient chooses not to answer the item, or the answer is nonsensical.

## Examples

1. The date of interview is May 5, 2024. The patient, responding to the statement, “Please tell me what year it is right now,” states that it is 2024.

**Coding:** C0300A, Able to report correct year would be **coded 3, Correct**.

**Rationale:** 2024 is the current year at the time of this assessment.

2. The date of interview is June 16, 2024. The patient, responding to the statement, “Please tell me what year it is right now,” states that it is 2021.

**Coding:** C0300A, Able to report correct year would be **coded 1, Missed by 2-5 years**.

**Rationale:** 2021 is within 2 to 5 years of 2024.

3. The date of interview is January 10, 2024. The patient, responding to the statement, “Please tell me what year it is right now,” states that it is 1924.

**Coding:** C0300A, Able to report correct year would be **coded 0, Missed by > 5 years**.

**Rationale:** Even though the '24 part of the year would be correct, 1924 is more than 5 years from 2024.

4. The date of interview is April 1, 2024. The patient, responding to the statement, “Please tell me what year it is right now,” states that it is “’24.” The interviewer asks, “Can you tell me the full year?” The patient still responds “’24,” and the interviewer asks again, “Can you tell me the full year, for example, nineteen-eighty-two?” The patient states, “2024.”

**Coding:** C0300A, Able to report correct year would be **coded 3, Correct**.

**Rationale:** Even though '24 is partially correct, the only correct answer is the exact year. The patient must state “2024,” not “’24.”

## Coding Instructions for C0300B, Able to Report Correct Month

*Count the current day as day 1 when determining whether the response was accurate within 5 days or missed by 6 days to 1 month.*

- **Code 2, Accurate within 5 days**, if the patient’s answer is accurate within 5 days, count current date as day 1.
- **Code 1, Missed by 6 days to 1 month**, if the patient’s answer is accurate within 6 days to 1 month.
- **Code 0, Missed by >1 month or no answer**, if the patient’s answer is incorrect by more than 1 month or if the patient chooses not to answer the item or the answer is nonsensical.

## Coding Tips

- In most instances, it will be immediately obvious which code to select. In some cases, you may need to write the patient’s response in your notes and go back later to count days if you are unsure whether the month given is within 5 days.

## Examples

1. The date of interview is June 25, 2024. The patient, responding to the question, “What month are we in right now?” states that it is June.

**Coding:** C0300B, Able to Report Correct Month would be **coded 2, Accurate within 5 days**.

**Rationale:** The patient correctly stated the month.

2. The date of interview is June 28, 2024. The patient, responding to the question, “What month are we in right now?” states that it is July.

**Coding:** C0300B, Able to Report Correct Month would be **coded 2, Accurate within 5 days**.

**Rationale:** The patient correctly stated the month within 5 days, even though the correct month is June. June 28th (day 1) + 4 more days is July 2nd, so July is within 5 days of the interview.

3. The date of interview is June 25, 2024. The patient, responding to the question, “What month are we in right now?” states that it is July.

**Coding:** C0300B, Able to Report Correct Month would be **coded 1, Missed by 6 days to 1 month**.

**Rationale:** The patient missed the correct month by six days. June 25th (day 1) + 5 more days = June 30th. Therefore, the patient’s answer is incorrect within 6 days to 1 month.

4. The date of interview is June 30, 2024. The patient, responding to the question, “What month are we in right now?” states that it is August.

**Coding:** C0300B, Able to Report Correct Month would be **coded 0, Missed >1 month**.

**Rationale:** The patient missed the month by more than 1 month.

5. The date of interview is June 2, 2024. The patient, responding to the question, “What month are we in right now?” states that it is May.

**Coding:** C0300B, Able to Report Correct Month would be **coded 2, Accurate within 5 days**.

**Rationale:** June 2nd minus 5 days = May 29th. The patient correctly stated the month within 5 days even though the current month is June.

## Coding Instructions for C0300C, Able to Report Correct Day of the Week

- **Code 1, Correct**, if the answer is correct.
- **Code 0, Incorrect or no answer**, if the answer is incorrect or the patient chooses not to answer the item or the answer is nonsensical.

## Coding Tips

- In order to code 1, Correct, the patient must be able to report the correct day of the week. Reporting the date is not considered a day of the week.

## Examples

- The day of interview is Monday, June 24, 2024. The interviewer asks: “What day of the week is today?” The patient responds, “It’s Monday.”

**Coding:** C0300C, Able to Report Correct Day of the Week would be **coded 1, Correct.**

**Rationale:** The patient correctly stated the day of the week.

- The day of interview is Monday, June 24, 2024. The patient, responding to the question, “What day of the week is today?” states, “Tuesday.”

**Coding:** C0300C, Able to Report Correct Day of the Week would be **coded 0, Incorrect.**

**Rationale:** The patient incorrectly stated the day of the week.

- The day of interview is Monday, June 24, 2024. The patient, responding to the question, “What day of the week is today?” states, “Today is a good day.”

**Coding:** C0300C, Able to Report Correct Day of the Week would be **coded 0, Incorrect.**

**Rationale:** The patient did not answer the question correctly.

## C0400. Recall

| C0400. Recall                      |  |
|------------------------------------|--|
| Enter Code<br><input type="text"/> | <p>Ask patient: “Let’s go back to an earlier question. What were those three words that I asked you to repeat?” If unable to remember a word, give cue (something to wear; a color; a piece of furniture) for that word.</p> <p><b>A. Able to recall “sock”</b></p> <p>2. Yes, no cue required</p> <p>1. Yes, after cueing (“something to wear”)</p> <p>0. No - could not recall</p> |
| Enter Code<br><input type="text"/> | <p><b>B. Able to recall “blue”</b></p> <p>2. Yes, no cue required</p> <p>1. Yes, after cueing (“a color”)</p> <p>0. No - could not recall</p>  |
| Enter Code<br><input type="text"/> | <p><b>C. Able to recall “bed”</b></p> <p>2. Yes, no cue required</p> <p>1. Yes, after cueing (“a piece of furniture”)</p> <p>0. No - could not recall</p>  |

## Item Rationale

- Many persons with cognitive impairment can be helped to recall if provided cues.
- Providing memory cues can help maximize patient cognitive function and decrease frustration for those patients who respond.

## Steps for Assessment

*Basic BIMS interview instructions are shown on page C-4.*

1. Ask the patient the following: “Let’s go back to an earlier question. What were those three words that I asked you to repeat?”
2. Allow up to 5 seconds for spontaneous recall of each word.
3. For any word that is not correctly recalled after 5 seconds, provide the category cue used in C0200, Repetition of Three Words (refer to “Steps for Assessment,” page C-7 for the definition of category cue). Category cues should be used only after the patient is unable to recall one or more of the three words.
4. Allow up to 5 seconds after category cueing for each missed word to be recalled.

## Coding Instructions

*For each of the three words the patient is asked to remember:*

- **Code 2, Yes, no cue required**, if the patient correctly remembers the word spontaneously without cueing.
- **Code 1, Yes, after cueing**, if the patient requires the category cue to remember the word.
- **Code 0, No - could not recall**, if the patient cannot recall the word even after being given the category cue or if the patient responds with a nonsensical answer or chooses not to answer the item.

## Coding Tips

- If on the first try (without cueing), the patient names multiple items in a category, one of which is correct, they should be coded as correct for that item.
- If, however, the interviewer gives the patient the cue and the patient then names multiple items in that category, the item is coded as could not recall, even if the correct item was in the list.

## Examples

1. The patient is asked to recall the three words that were initially presented. The patient chooses not to answer the question and states, “I’m tired, and I don’t want to do this anymore.”

**Coding:** C0400A-C0400C, Recall would be **coded 0, No - could not recall**, for each of the three words.

**Rationale:** Choosing not to answer a question often indicates an inability to answer the question, so refusals are **coded 0, No - could not recall**. This is the most accurate way to score cognitive function, even though, on occasion, patients might choose not to answer for other reasons.

2. The patient is asked to recall the three words. The patient replies, “Socks, shoes, and bed.” The examiner then cues, “One word was a color.” The patient says, “Oh, the shoes were blue.”

**Coding:** C0400A, Able to recall “sock,” would be **coded 2, Yes, no cue required.**

**Rationale:** The patient’s initial response to the question included “sock.” The patient is given credit for this response, even though they also listed another item in that category (shoes), because the patient was answering the initial question, without cueing.

**Coding:** C0400B, Able to recall “blue,” would be **coded 1, Yes, after cueing.**

**Rationale:** The patient did not recall spontaneously but did recall after the category cue was given. Responses that include the word in a sentence are acceptable.

**Coding:** C0400C, Able to recall “bed,” would be **coded 2, Yes, no cue required.**

**Rationale:** The patient independently recalled the item on the first attempt.

3. The patient is asked to recall the three words. The patient answers, “I don’t remember.” The assessor then says, “One word was something to wear.” The patient says, “Clothes.” The assessor then says, “OK, one word was a color.” The patient says, “Blue.” The assessor then says, “OK, the last word was a piece of furniture.” The patient says, “Couch.”

**Coding:** C0400A, Able to recall “sock,” would be **coded 0, No - could not recall.**

**Rationale:** The patient did not recall the item, even with a cue.

**Coding:** C0400B, Able to recall “blue,” would be **coded 1, Yes, after cueing.**

**Rationale:** The patient did recall the item after being given the cue.

**Coding:** C0400C, Able to recall “bed,” would be **coded 0, No - could not recall.**

**Rationale:** The patient did not recall the item, even with a cue.

## C0500. BIMS Summary Score

|  |  |
|--|--|
| Brief Interview for Mental Status (BIMS) – Continued |  |
| C0500. BIMS Summary Score                            |  |
| Enter Score<br><input type="text"/>                  | Add scores for questions C0200-C0400 and fill in total score (00-15)<br>Enter 99 if the patient was unable to complete the interview |

### Item Rationale

- The total score:
  - Decreases the chance of incorrect labeling of cognitive ability and improves detection of delirium.
  - Provides staff with a more reliable estimate of patient function and allows staff interactions with patients that are based on more accurate impressions about patient ability.
- The BIMS total score is highly correlated with Mini-Mental State Exam (MMSE; Folstein, Folstein, & McHugh, 1975) scores. Scores from a carefully conducted BIMS assessment where a patient can hear all questions and the patient is not delirious suggest the following distributions:
  - 13-15: cognitively intact
  - 8-12: moderately impaired
  - 0-7: severe impairment

### Steps for Assessment

*After completing C0200-C0400:*

1. Add up the values for all questions from C0200 through C0400.
2. Do not add up the score while you are interviewing the patient. Instead, focus your full attention on the interview.

### Coding Instructions

- Enter the total score as a two-digit number. The total possible BIMS score ranges from 00 to 15.
  - If the patient chooses not to answer a specific question(s), that question is coded as incorrect and the item(s) counts in the total score. If, however, the patient chooses not to answer four or more items, then the interview is coded as incomplete and a staff assessment (item C0900, Memory/Recall Ability) is completed.
  - To be considered a completed interview, the patient had to attempt and provide relevant answers to at least four of the questions included in C0200-C0400C. To be relevant, a response only has to be related to the question (logical); it does not have to be correct. See general coding tips on page C-4 for patients who choose not to participate at all.

- **Code 99, Unable to complete interview, if:**
  - a) the patient chooses not to participate in the BIMS,
  - b) four or more items were coded 0 because the patient chose not to answer or gave a nonsensical response, or
  - c) any but not all of the BIMS items are coded with a “-” (dash).
- Note: a zero score does not mean the BIMS was incomplete. To be incomplete, a patient had to choose not to answer or give completely unrelated, nonsensical responses to four or more items.

## Coding Tips

- Occasionally, a patient can communicate but chooses not to participate in the BIMS and therefore does not attempt any of the items in the section. This would be considered an incomplete interview; enter code 99 for C0500, BIMS Summary Score, and complete the staff assessment of mental status.
- If all of the BIMS items are coded with a “-” (dash), then C0500 - BIMS Summary Score must also be coded with a “-” (dash).

## Examples

1. The patient’s scores on items C0200-C0400 were as follows:

|                        |   |
|------------------------|---|
| C0200 (repetition)     | 3 |
| C0300A (year)          | 2 |
| C0300B (month)         | 2 |
| C0300C (day)           | 1 |
| C0400A (recall “sock”) | 2 |
| C0400B (recall “blue”) | 2 |
| C0400C (recall “bed”)  | 0 |

**Coding:** C0500, BIMS Summary Score would be coded 12 (sum of C0200-C0400C). C0600, Should the Staff Assessment for Mental Status (C0900) be Conducted? is coded as 0, No and follow the skip pattern.

2. The patient’s scores on items C0200-C0400C were as follows:

|                        |   |
|------------------------|---|
| C0200 (repetition)     | 2 |
| C0300A (year)          | 2 |
| C0300B (month)         | 2 |
| C0300C (day)           | 1 |
| C0400A (recall “sock”) | 0 |
| C0400B (recall “blue”) | 0 |
| C0400C (recall “bed”)  | 0 |

**Coding:** C0500, BIMS Summary Score would be coded as 07 (sum of C0200-C0400C). C0600, Should the Staff Assessment for Mental Status (C0900) be Conducted? is coded as 0, No and follow the skip pattern.

3. STOP the interview after C0300C if C0200-C0300C are all coded as 0, because a patient chose not to participate in the BIMS and/or has provided nonsensical answers and/or does not provide verbal or written responses.

Example: The patient's scores on items C0200-C0400C were as follows:

|                        |                                       |
|------------------------|---------------------------------------|
| C0200 (repetition)     | 0                                     |
| C0300A (year)          | 0                                     |
| C0300B (month)         | 0                                     |
| C0300C (day)           | 0 (Interview is stopped after C0300C) |
| C0400A (recall "sock") | (-)                                   |
| C0400B (recall "blue") | (-)                                   |
| C0400C (recall "bed")  | (-)                                   |

**Coding:** C0200-C0300C are coded 0 and dashes entered for C0400A-C. For C0500, BIMS Summary Score, enter code 99, unable to complete interview. C0600, Should the Staff Assessment for Mental Status (C0900) be Conducted? is coded 1, Yes and complete the Staff Assessment for Mental Status.

Note: A zero score does not mean the BIMS was incomplete. To be incomplete, a patient had to choose not to answer or give completely unrelated, nonsensical responses to four or more items. If one or more of the zeros in C0200-C0300 are due to incorrect answers, the interview should continue.

## C0600. Should the Staff Assessment for Mental Status (C0900) be Conducted?

| C0600. Should the Staff Assessment for Mental Status (C0900) be Conducted? |  |
|--|--|
| Enter Code<br><input type="checkbox"/>                                     | 0. No (patient was able to complete Brief Interview for Mental Status) → <i>Skip to C1310, Signs and Symptoms of Delirium</i><br>1. Yes (patient was unable to complete Brief Interview for Mental Status) → <i>Continue to C0900, Memory/Recall Ability</i> |

### Item Rationale

- Direct or performance-based testing of cognitive function using the BIMS is preferred as it decreases the chance of incorrect labeling of cognitive ability and improves detection of delirium. However, a minority of patients are unable or unwilling to participate in the BIMS.
- Mental status can vary among persons unable to communicate or who do not complete the interview.
  - Therefore, report of observed behavior is needed for persons unable to complete the BIMS interview.
  - When cognitive impairment is incorrectly diagnosed or missed, appropriate communication techniques, activities, and therapies may not be offered.
- Abrupt changes in cognitive status (as indicative of delirium) often signal an underlying potentially life-threatening illness and a change in cognition may be the only indication of an underlying problem.
  - This remains true for persons who are unable to communicate or to complete the BIMS.

### Steps for Assessment

1. Review whether C0500, BIMS Summary Score item is coded 99, Unable to complete interview.

### Coding Instructions

*Complete during the 3-day admission assessment period.*

- **Code 0, No**, if the BIMS was completed and scored between 00 and 15. Skip to C1310, Signs and Symptoms of Delirium.
- **Code 1, Yes**, if the patient chose not to participate in the BIMS or if four or more items were coded 0 because the patient chose not to answer and/or gave a nonsensical response. Continue to C0900, Memory/Recall Ability. Note: C0500, BIMS Summary Score should be coded 99, Unable to Complete Interview.

### Coding Tips

- If a patient is scored 00 on C0500, BIMS Summary Score, C0900, Memory/Recall Ability, should not be completed. 00 is a legitimate value for C0500 and indicates that the interview was complete. To have an incomplete interview, a patient had to choose not to answer and/or had to give completely unrelated, nonsensical responses to four or more BIMS items resulting in the interview being stopped.

## C0900. Memory/Recall Ability

| Staff Assessment for Mental Status   |  |
|--|--|
| Do not conduct if Brief Interview for Mental Status (C0200-C0500) was completed. |  |
| C0900. Memory/Recall Ability   |  |
| ↓ Check all that the patient was normally able to recall                         |  |
| <input type="checkbox"/>   | A. Current season                            |
| <input type="checkbox"/>   | B. Location of own room                      |
| <input type="checkbox"/>   | C. Staff names and faces                     |
| <input type="checkbox"/>   | E. That they are in a hospital/hospital unit |
| <input type="checkbox"/>   | Z. None of the above were recalled           |

### Item Rationale

- An observed “memory/recall problem” with these items may indicate:
  - cognitive impairment and the need for additional support with reminders to support increased independence; or
  - delirium, if this represents a change from the patient’s baseline.

### Steps for Assessment

- Ask the patient about each item. For example, “What is the current season? Is it fall, winter, spring, or summer?” “What is the name of this place?” If the patient is not in their room, ask, “Will you show me to your room?” Observe the patient’s ability to find the way.
- For patients with limited communication skills, in order to determine the most representative level of function, ask direct care staff across all shifts and family or caregivers about recall ability.
  - Ask whether the patient gave indications of recalling these subjects or recognizing them during the assessment period.
- Observations should be made by staff across all shifts and departments and others with close contact with the patient.
- Review the medical record for indications of the patient’s recall of these subjects during the assessment period.

### Coding Instructions

*For each item that the patient recalls, check the corresponding answer box. If the patient recalls none, check “none of the above.”*

*Complete as close to the time of admission as possible.*

- Check C0900A, Current season,** if patient is able to identify the current season (e.g., correctly refers to weather for the time of year, legal holidays, religious celebrations).
- Check C0900B, Location of own room,** if patient is able to locate and recognize their own room. It is not necessary for the patient to know the room number, but they should be able to find the way to the room.

- **Check C0900C, Staff names and faces,** if patient is able to distinguish staff members from family members, strangers, visitors, and other patients. It is not necessary for the patient to know the staff member's name, but they should recognize that the person is a staff member and not the patient's relative, etc.
- **Check C0900E, That they are in a hospital/hospital unit,** if patient is able to determine that they are currently in a hospital/hospital unit. To check this item, it is not necessary that the patient be able to state the name of the hospital, but they should be able to refer to the hospital by a term such as a "hospital" or "rehabilitation center" or "where I am getting therapy."
- **Check C0900Z, None of above were recalled,** if none of the above items were recalled.

### Coding Tips

- When coding C0900, the clinician can use information gathered from various resources such as consulting with the direct care staff and clinical documentation. Observing the patient's interactions with others in different locations and circumstances is important for a comprehensive understanding of the patient's mental status.

## C1310: Signs and Symptoms of Delirium (from CAM<sup>®</sup>)

| C1310. Signs and Symptoms of Delirium (from CAM <sup>®</sup> )   |  |
|--|--|
| Code <b>after completing</b> Brief Interview for Mental Status or Staff Assessment, and reviewing medical record.  |  |
| A. Acute Onset Mental Status Change  |  |
| Enter Code<br><input type="text"/>   | Is there evidence of an acute change in mental status from the patient's baseline?<br>0. No<br>1. Yes  |
| Coding:<br>0. Behavior not present<br>1. Behavior continuously present, does not fluctuate<br>2. Behavior present, fluctuates (comes and goes, changes in severity)                                | ↓ Enter Code in Boxes  |
|  | <input type="text"/> B. Inattention - Did the patient have difficulty focusing attention, for example being easily distractible or having difficulty keeping track of what was being said?   |
|  | <input type="text"/> C. Disorganized thinking - Was the patient's thinking disorganized or incoherent (rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject)?   |
| <input type="text"/>   | D. Altered level of consciousness - Did the patient have altered level of consciousness as indicated by any of the following criteria?<br><ul style="list-style-type: none"> <li>• <b>vigilant</b> - startled easily to any sound or touch</li> <li>• <b>lethargic</b> - repeatedly dozed off when being asked questions, but responded to voice or touch</li> <li>• <b>stuporous</b> - very difficult to arouse and keep aroused for the interview</li> <li>• <b>comatose</b> - could not be aroused</li> </ul> |
| <i>Adapted from: Inouye SK, et al. Ann Intern Med. 1990; 113: 941-948. Confusion Assessment Method. Copyright 2003, Hospital Elder Life Program, LLC. Not to be reproduced without permission.</i> |  |

### Item Rationale

- Delirium is associated with:
  - increased mortality;
  - functional decline;
  - development or worsening of incontinence;
  - behavior problems;
  - withdrawal from activities; and/or
  - rehospitalizations and increased length of IRF stay.
- Delirium can be misdiagnosed as dementia.
- A recent deterioration in cognitive function may indicate delirium, which may be reversible if detected and treated in a timely fashion.

#### DEFINITION

##### DELIRIUM

A mental disturbance characterized by new or acutely worsening confusion, disordered expression of thoughts, change in level of consciousness, or hallucinations.

### Steps for Assessment

*Complete based on assessments that occur within the 3-day admission assessment time period or the 3-day discharge assessment time period.*

1. Observe patient's behavior during the cognitive assessment [BIMS items (C0200-C0400), Staff Assessment for Mental Status (C0900), if completed, or other cognitive assessment for the signs and symptoms of delirium].

2. Review medical record documentation to determine the patient's baseline status, fluctuations in behavior, and behaviors that might have occurred during the assessment period that were not observed during the cognitive assessment (e.g., BIMS).
3. Observe patient's behavior during patient interactions and consult with other staff, family members/caregivers, and others in a position to observe the patient's behavior during the assessment period.

## Coding Instructions for C1310A, Acute Mental Status Change

- **Code 0, No**, if there is no evidence of acute mental status change from the patient's baseline.
- **Code 1, Yes**, if patient has an alteration in mental status observed in the assessment period or in the cognitive assessment (e.g., BIMS) that represents an acute change from baseline.

## Coding Tips

- Examples of acute mental status changes:
  - A patient who is usually noisy or belligerent becomes quiet, lethargic, or inattentive.
  - A patient who is normally quiet and content suddenly becomes restless or noisy.
  - A patient who is usually able to find their way around their living environment begins to get lost.
- At discharge, compare the patient's current mental status to their baseline mental status (prior to the discharge assessment time period).

## Examples

1. Patient was admitted to the IRF 1 day ago. The patient's family reports that the patient was alert and oriented prior to admission. During the BIMS interview and assessment, the patient is lethargic and incoherent.

**Coding:** C1310A, Acute Onset Mental Status Change, would be **coded 1, Yes**.

**Rationale:** There is an acute change of the patient's mental status from alert and oriented (caregiver report prior to admission) to lethargic and incoherent during admission assessment.

2. Clinician reports that a patient with poor short-term memory and disorientation to time has suddenly become agitated, calling out to their dead relative, tearing off their clothes, and being completely disoriented to time, person, and place.

**Coding:** C1310A, Acute Onset Mental Status Change, would be **coded 1, Yes**.

**Rationale:** The new behaviors represent an acute change in mental status.

## Steps for Assessment for C1310B, Inattention

1. Assess attention separately from level of consciousness.

2. An additional step to identify difficulty with attention is to ask the patient to count backwards from 20.

## Coding Instructions for C1310B, Inattention

- **Code 0, Behavior not present**, if the patient remains focused during the interview and all other sources agree that the patient was attentive during other activities.
- **Code 1, Behavior continuously present, does not fluctuate**, if the patient had difficulty focusing attention, was easily distracted, or had difficulty keeping track of what was said AND the inattention did not vary during the assessment period. All sources must agree that inattention was consistently present to select this code.
- **Code 2, Behavior present, fluctuates**, if inattention is noted during the interview or any source reports that the patient had difficulty focusing attention, was easily distracted, or had difficulty keeping track of what was said AND the inattention varied during interview or during the assessment period or if information sources disagree in assessing level of attention.

## DEFINITIONS

### INATTENTION

Reduced ability to maintain attention to external stimuli and to appropriately shift attention to new external stimuli. Patient seems unaware or out of touch with environment (e.g., dazed, fixated, or darting attention).

### FLUCTUATION

The behavior tends to come and go and/or increase or decrease in severity. The behavior may fluctuate over the course of the interview or during the assessment period. Fluctuating behavior may be noted by the interviewer, reported by staff or family, or documented in the medical record.

## Examples

1. The patient tries to answer all questions during the BIMS. Although the patient answers several items incorrectly and responds “I don’t know” to others, the patient pays attention to the interviewer. Medical record and staff indicate that this is the patient’s consistent behavior.

**Coding:** C1310B, Inattention would be **coded 0, Behavior not present**.

**Rationale:** The patient remained focused throughout the interview, and this was constant during the assessment period.

2. Questions during the BIMS must be frequently repeated because the patient’s attention wanders. This behavior occurs throughout the interview. Medical records and staff agree that this behavior is consistently present. The patient has a diagnosis of dementia.

**Coding:** C1310B, Inattention would be **coded 1, Behavior continuously present, does not fluctuate**.

**Rationale:** The patient’s attention consistently wandered throughout the assessment period. The patient’s dementia diagnosis does not affect the coding.

3. During the BIMS interview, the patient was not able to focus on all questions asked, and their gaze wandered. However, several notes in the patient’s medical record indicate that the patient was attentive when staff communicated with them, and family confirmed this.

**Coding:** C1310B, Inattention would be **coded 2, Behavior present, fluctuates**.

**Rationale:** Evidence of inattention was found during the BIMS, but medical record documentation and family indicated the patient was attentive. This disagreement shows possible fluctuation in the behavior. If any information source reports the symptom as present, C1310B cannot be coded as 0, Behavior not present.

4. Patient is dazedly staring at the television for the first several questions. When you ask a question, the patient looks at you momentarily but does not answer. Midway through questioning, the patient pays more attention and tries to answer.

**Coding:** C1310B, Inattention would be **coded 2, Behavior present, fluctuates**.

**Rationale:** Patient's attention fluctuated during the interview. If as few as one source notes fluctuation, then the behavior should be coded 2.

## Coding Instructions for C1310C, Disorganized Thinking

- **Code 0, Behavior not present**, if all sources agree that the patient's thinking was organized and coherent, even if answers were inaccurate or wrong.
- **Code 1, Behavior continuously present, does not fluctuate**, if, during the interview and according to other sources, the patient's responses were consistently disorganized or incoherent, conversation was rambling or irrelevant, ideas were unclear or flowed illogically, or the patient unpredictably switched from subject to subject.
- **Code 2, Behavior present, fluctuates**, if, during the interview or according to other data sources, the patient's responses fluctuated between disorganized/incoherent and organized/clear. Also code as fluctuating if information sources disagree.

### DEFINITION

#### DISORGANIZED THINKING

Evidenced by rambling, irrelevant, and/or incoherent speech.

## Examples

1. The interviewer asks the patient, who is often confused, to give the date, and the patient's response is: "Let's go get the sailor suits!" The patient continues to provide irrelevant or nonsensical responses throughout the interview, and medical record and staff indicate this is constant.

**Coding:** C1310C, Disorganized thinking would be **coded 1, Behavior continuously present, does not fluctuate**.

**Rationale:** All sources agree that the disorganized thinking is constant.

2. The patient responds that the year is 1837 when asked to give the date. The medical record and staff indicate that the patient is never oriented to time but has relevant conversations and does not ramble with incoherent speech. For example, staff reports the patient often discusses their passion for baseball.

**Coding:** C1310C, Disorganized thinking would be **coded 0, Behavior not present.**

**Rationale:** The patient's answer was related to the question, even though it was incorrect. No other sources report disorganized thinking.

- The patient was able to tell the interviewer their name, the year and where they were. The patient was able to talk about the activity they just attended and the patients and staff that also attended. Then the patient suddenly asked the interviewer, "Who are you? What are you doing in my daughter's home?"

**Coding:** C1310C, Disorganized thinking would be **coded 2, Behavior present, fluctuates.**

**Rationale:** The patient's thinking fluctuated between coherent and incoherent at least once. If as few as one source notes fluctuation, then the behavior should be coded 2.

## Coding Instructions for C1310D, Altered Level of Consciousness

- Code 0, Behavior not present,** if all sources agree that the patient was alert and maintained wakefulness during conversation, interview(s), and activities.
- Code 1, Behavior continuously present, does not fluctuate,** if, during the interview and according to other sources, the patient was consistently lethargic, stuporous, vigilant, or comatose.
- Code 2, Behavior present, fluctuates,** if, during the interview or according to other sources, the patient's level of consciousness varied. For example, the patient was at times alert and responsive, while at other times the patient was lethargic, stuporous, or vigilant. Code as fluctuating if information sources disagree.

### DEFINITIONS

#### ALTERED LEVEL OF CONSCIOUSNESS

**VIGILANT** – startles easily to any sound or touch;

**LETHARGIC** – repeatedly dozes off when you are asking questions, but responds to voice or touch;

**STUPOR** – very difficult to arouse and keep aroused for the interview;

**COMATOSE** – cannot be aroused despite shaking and shouting.

## Coding Tips

- A diagnosis of coma or stupor does not have to be present for staff to note the behavior in this section.

## Examples

- At discharge, the patient is alert and conversational and answers all questions during the BIMS interview, although not all answers are correct. Medical record documentation and staff report during the assessment period consistently noted that the patient was alert.

**Coding:** C1310D, Altered level of consciousness would be **coded 0, Behavior not present.**

**Rationale:** All evidence indicates that the patient is alert during conversation, interview(s), and activities.

2. The patient is lying in bed. The patient arouses to soft touch but is only able to converse for a short time before their eyes close, and they appear to be sleeping. Again, the patient arouses to voice or touch but only for short periods during the interview. Information from other sources indicates that this was the patient's condition throughout the assessment period.

**Coding:** C1310D, Altered level of consciousness would be **coded 1, Behavior continuously present, does not fluctuate.**

**Rationale:** The patient's lethargy was consistent throughout the interview, and there is consistent documentation of lethargy in the medical record during the assessment period.

3. The patient is usually alert, oriented to time, place, and person per family report. Today, at the time of the BIMS interview, the patient is conversant at the beginning of the interview but becomes lethargic and difficult to arouse.

**Coding:** C1310D, Altered level of consciousness would be **coded 2, Behavior present, fluctuates.**

**Rationale:** The level of consciousness fluctuated during the interview. If as few as one source notes fluctuation, then the behavior should be coded 2, Behavior present, fluctuates.

#### **CAM Assessment Scoring Methodology**

The indication of delirium by the CAM requires the presence of:

Item A = 1 **OR** Item B, C, or D = 2

**AND**

Item B = 1 OR 2

**AND EITHER**

Item C = 1 OR 2 **OR** Item D = 1 OR 2