

The Ultra-Brief Confusion Assessment Method **(UB-CAM) Version 2** **Training Manual**

The Ultra-Brief Confusion Assessment Method (UB-CAM) can be used for quick bedside assessment of delirium. The UB-CAM is a 2-step protocol that begins with two quick screens: 1) Assessment for severely reduced level of consciousness, severe enough to preclude asking questions—if present, the testing ends and stupor/coma is present. 2) The UB-2, an ultra-brief two item delirium screen. For those who screen negative (get both questions correct), the assessment ends and delirium is not present. Those who do not have stupor/coma and cannot answer both UB-2 questions correctly (screen positive) go on to receive additional items from the 3-Minute Diagnostic Assessment for CAM-defined delirium (3D-CAM) using a skip pattern to shorten administration time. The UB-CAM can be completed in about 1 minute on average (35-40 seconds for the UB-2 only, and 1 minute 30 seconds for UB-2 + additional questions with skip). The UB-CAM performs very well compared to an expert evaluation.

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BACKGROUND

In preliminary studies, the UB-CAM is highly accurate, with sensitivity of 93% and specificity of 95%, and can be completed in about 1 minute (median 40 seconds, mean 74 seconds). While the UB-CAM has 20 items, only a minority are asked in most encounters—in a published study of nearly 2000 UB-CAM administrations, the median number of items administered was 2, and the mean was 6. Moreover, delirium is diagnosed quickly in severely impaired patients, and ruled out quickly in intact patients. So, the most items are administered to those with intermediate levels of impairment, as is appropriate. Given the adaptive testing approach (the questions asked depend on answers to previous questions) we have developed a UB-CAM App, which makes administration even easier, and is available (free of charge) on both the Apple and Google Play stores. The UB-CAM's speed, accuracy, and ability to identify CAM-defined delirium offers advantages over all other brief delirium identification tools available at this time. For questions about the UB-CAM, please reach us at UBCAM@bidmc.harvard.edu.

The UB-CAM is now freely available along with User's Manual at the below urls:

<https://americandeliriumsociety.org/AGS-COCARE>

<https://www.deliriumcentral.org/delirium-instruments/>

<https://help.agscocare.org/table-of-contents/delirium-instruments/H00101>

Delirium Assessment Snapshot

- **A Quick How-To:**

- There are 4 key features of delirium that are identified in 2 ways:
 - By asking the patient questions
 - By observing the patient's speech and behavior
- The 4 Key CAM Features:
 - #1 Acute Change and/or Fluctuation
 - #2 Inattention
 - #3 Disorganized Thinking
 - #4 Altered Level of Consciousness
- Diagnosis requires Features 1 and 2 and either 3 or 4

- **Overview:**

- Each item in the UB-CAM instrument directly informs one of the 4 CAM features in the algorithm that leads to determining the presence or absence of delirium.
- For all items, if the patient's answer is 'incorrect', 'yes', 'don't know', 'no response', or 'non-sensical response', then the feature is present.
- The CAM algorithm is considered positive if the following features are present: Feature 1) Acute onset or fluctuating course **and** Feature 2) Inattention **and either** Feature 3) Disorganized thinking **or** Feature 4) Altered level of consciousness.

- **Important Tips:**

- In the CAM-ICU and bCAM assessments for delirium, features 3 and 4 are reversed. This is likely because Feature 4, Altered Level of Consciousness, is more common in ICU settings. The CAM Feature numbering in the UB-CAM remains consistent with the original CAM algorithm keeping disorganized thinking as Feature 3 and Altered Level of Consciousness as Feature 4
- Also, it is important to code the assessment as you see it and hear it. It is crucial not to explain the behavior with clinical knowledge and experience and it is essential to code the assessment items using whatever you have observed at the bedside. For example:
 - The patient falls asleep while you are at the bedside assessing them: Using clinical judgment, this could be explained by the fact that the patient was up all night in pain and has just received a pain pill. PLEASE STILL CODE POSITIVE either for lethargic if the patient is sleepy, or stupor/coma if they are difficult/impossible to arouse.
 - The patient says or does something that doesn't make sense. Please code for disorganized thinking instead of thinking 'Oh I know what they meant to say/do'
 - Use this item: Was the patient's flow of ideas unclear or illogical?

Download the App

To download the app onto your phone or tablet device, use these QR codes:

Apple



Android



UB-CAM Key Steps and Item by Item Guidance

These training instructions will provide item-by-item guidance for every possible question although many may not be asked due to the skip pattern.

Step 1 – Rule out severe ALOC:

Severe lethargy or severe altered level of consciousness (no or minimal response to voice/touch).

- First approach bedside to see if the respondent notices your presence
- Assessing level of consciousness: Utilize the following 3 successive stimuli for arousal:
 - Soft voice then louder voice
 - Gentle touch (hand, then arm)
 - Loud voice and gentle shaking of one shoulder
 - For contact precautions - just use progressively louder voice, no touching or shaking
- Minimal response might be a brief opening of eyes or some movement

Step 2: Administer UB-2 Screen

Please tell me the day of the week.

- Tap Incorrect if the response is: The wrong day, “I don’t know”, no response given, non-sensical response
- CAM Feature #3

Please tell me months of the year backwards, say "December" as your first month

- Tap Incorrect if the response is: Anything other than 12 months in the right order, “I don’t know”, no response given, non-sensical response
- Tip: If the patient does not seem to understand the task, an initial prompt for clarification is allowed: “What is the month that comes before December?”
- If the patient cannot continue after they have been prompted once, mark as incorrect
- CAM Feature #2

****The majority of patients will get the two UB-2 items correct and then you’re done (app will indicate delirium negative).****

Step 3: Administer 3D-CAM with Skip Pattern

If 1 or more items in the UB-2 are incorrect, you MAY be prompted to ask one or more of the following items:

Direct Patient Questions (from the 3D-CAM)

Please tell me the year we are in right now.

- Tap Incorrect if the response is: The wrong year, “I don’t know”, no response given, non-sensical response
- CAM Feature #3

Please tell me what type of place is this.

- A correct answer must be exact, for example: hospital, a rehabilitation center and/or nursing home, or home as appropriate. The patient does not have to know the actual name of the facility, just that it is a facility providing care to those who are acutely ill (if in a hospital). However, if the patient voluntarily gives the wrong name for the facility, then code incorrect
 - Tap Incorrect if the response is: The wrong location, “I don’t know”, no response given, non-sensical response
- CAM Feature #3

Days of the Week Backwards

- Tap Incorrect if the response is: Anything other than 7 days in the right order, “I don’t know”, no response given, non-sensical response
 - Tip: If the patient does not seem to understand the task, an initial prompt for clarification is allowed: “What is the day that comes before Saturday?”
 - If the patient cannot continue after they have been prompted once, mark as incorrect
- If the patient starts to give the days of the week backward and stops midway through or makes ANY other error (omits a day, transposes days), mark the task as incorrect and proceed to the next question.
- If patient is able to complete through Sunday after initial clarifying prompt, count as correct even if they didn’t say Saturday
- CAM Feature #2

Digits Backwards

- Tap Incorrect if the response is: Any error made, “I don’t know”, no response given, non-sensical response
 - Tip: Interviewer must only say the #s one time—please pronounce clearly and slowly, approximately one number per second.
- CAM Feature #2

Over the past day have you felt confused?

- Tap 'yes' if endorses confusion in the last 24 hours
 - Tip: Can rephrase if needed to something like: Have you felt mixed up about something you wouldn't normally feel mixed up about
 - Exclude confusion about details of medical care or the current questioning
- CAM Feature #1

During the past day did you think that you were not really here [in the hospital]?

- Tap 'yes' if this happened to them in the last 24 hours
 - Tip: Can rephrase to say: Did you forget where you were?
 - Do not tap yes if just Transient disorientation upon waking (i.e. <15 seconds after waking)
- CAM Feature #1

During the past day, did you see things that were not really there?

- Tap 'yes' if this happened to them in the last 24 hours
 - Tip: Can rephrase if needed: Did it seem like your eyes were playing tricks on you
- CAM Feature #1

Interviewer Observation Items

Was the patient sleepy during the interview? (requires that they actually fall asleep)

- Tap 'yes' if they fell asleep at least 1 time during the assessment
 - Tip: Must observe signs of sleep like head bobbing, eyes rolling back, snoring, twitching
- It is important not to come up with reasons for sleepiness (example: the patient just got a pain med or was up all night). Please code it as you see it no matter the reason for the patient falling asleep during your time at the bedside assessment
- It is important to capture sleepiness so please do not pick a different time to complete assessment.
- When entering the room and waking a patient up the first time, this initial 'wake up' is allowed as normal. This item should only be coded when there is evidence of falling asleep while you are still in the room.
- CAM Feature #4

Did the patient show hypervigilance?

- Tap yes if patient startles easily to any sound or touch
- CAM Feature #4

Was the patient's flow of ideas unclear or illogical?

- Tap yes if nonsensical answer to ANY item, contradictory statements, or believing something to be true that isn't
 - Tip: Probe for details if something doesn't make sense
- Nonsensical speech, inappropriate answers to questions, contradictory statements or shifting unpredictably from subject to subject, doing something that doesn't make sense
- CAM Feature #3

Was the patient's conversation rambling, inappropriately verbose, or tangential?

- Tap yes if off target responses or telling a story unrelated to the interview)
 - Tip: Some patients are just very talkative and take a longer time to answer the interviewer's question. The talking must be excessive and off target (something minimally related to the question) to be coded as rambling.
- CAM Feature #3

Was the patient's speech unusually limited or sparse?

- Tap yes if inappropriately brief or stereotyped answers
 - Tip: The patient doesn't initiate any conversation, and responds with only yes/no responses, even when such responses are not appropriate to the question (e.g. "What is your name?")
- In severe cases, there is almost no conversation from the patient
- CAM Feature #3

Did the patient have trouble keeping track of what was said or following instructions?

- Tap yes if any questions needed to be repeated or the patient had trouble following what was being said
- Tip: Lack of engagement and lack of eye contact can indicate inattention
- CAM Feature #2

Did the patient appear inappropriately distracted by external stimuli?

- Tap yes if the patient seems inappropriately diverted by normal stimuli,
 - Tip: If the stimulus is so strong that it also distracts the interviewer, then the patient's distraction is not inappropriate.
- CAM Feature #2

Did the patient's level of consciousness, level of attention or speech/thinking fluctuate during the interview?

- Tap yes if any one of these features fluctuated (symptom tended to come and go)
 - Tip: Cut the interview in half – was there a distinct difference between the 2 halves in these features
- CAM Feature #1

Optional Items

Note: These items, which map to Feature 1, are only asked when Feature 1 is not present based on the above/previous questions and is the only Feature missing to code the presence of delirium.

If no prior assessments, is there evidence an acute change in memory or thinking according to records, or informant?

- Tap yes if any source endorses a change from baseline
 - Tip: Consult the medical record or contact a family member, friend, or health care provider who knows the patient well to find out if the patient is experiencing an acute change
- This question is asking about a recent change in behavior. Is his/her relative confused? Code the item as 'yes' if these changes are NEW and have occurred mainly in the past few hours to days. If they have been problems for many months, answer NO.
- In the medical record look for an explanation of a change in behavior from baseline or presence of delirium "trigger" words such as "altered mental status", "mental status changes", "acute confusion", "disorientation", "hallucinations" or "reorientation".
- CAM Feature #1

OR

If prior assessments, are there any new signs of delirium based on previous questions (new errors, positive ratings) compared to previous assessments?

- Tip: Refer to previous UB-CAM assessments and determine if there has been an acute change in performance for the worse, based on ANY new "positive" items
- CAM Feature #1

Based on the answers you have input to the app, a rating of delirium positive or negative will appear on the final screen.

Here is the algorithm the app is using behind the scenes:

Checkpoint: CAM Delirium feature assessment and rating summary

- At least one sign of Acute Change and/or Fluctuation was noted (CAM Feature 1)
- At least one sign of Inattention was noted (CAM Feature 2)
- At least one sign of Disorganized Thinking was noted (CAM Feature 3)
- At least one sign of Altered Level of Consciousness was noted (CAM Feature 4)

Delirium Diagnosis: Requires presence of Features 1, 2, and either 3 or 4 in checklist above, or if stupor/coma are present (in item 1).

References

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