

behaviors reflect their severity (e.g., “constantly requesting help or attention” is by nature less severe than “screaming or shouting”).

A disruptiveness scale was added to later versions of the CMAI. In addition to the frequency of each behavior, the rater is asked to give information as to how disruptive each behavior is. The rating scale is a 5-point scale of disruptiveness (i.e., 1 = never, 5 = extremely). This scale relies on subjective information given by the rater. Inter-rater reliability does not exist for judging disruptiveness, and we do not necessarily expect raters to agree on this aspect of the CMAI. It is however useful for assessing the impact of the behavior in clinical trials, especially when the study objective is to accommodate the behavior rather than changing it.

In some versions of the CMAI, we have in addition to the 7-point frequency scale, two other options for rating the behavior: 1) “8 - would occur if not prevented” (e.g., a person is physically restrained so he/she cannot pace), and 2) “9 - not applicable” (e.g., a non-verbal resident not being able to repeat sentences or questions, or a person who cannot walk or move a wheelchair not being able to pace, an amputated person not being able to kick). Try to use these ratings only if the behavior really has never occurred in the past two weeks. If it has occurred, then the 1-7 point frequency scale should be used.

INSTRUCTIONS FOR THE INTERVIEWER

1. Explain why this assessment is important for research or clinical purposes.
2. Try to conduct the interview in a quiet area where there is minimum interruption so as to increase attention to the rating.
3. Most frequently, the CMAI is conducted as a face-to-face interview, where a research assistant reads aloud each category to the caregiver. Providing a copy of the CMAI for the respondent helps with comprehension of each behavior as well as facilitates a better understanding of the 7-point rating scale. To further improve the interview, mail or show the respondent the instrument several days before the interview, allowing him/her to think about the questions in advance.
4. Make sure that you do not influence the respondent by anything you say or do. Notice your body language and nonverbal communication. Make sure you convey a calm atmosphere and use a respectful tone.
5. When interviewing a staff member or a family member, recognize that caregivers know more about the elderly person than you do.
6. To complete the CMAI thoroughly, allow 20 minutes for the interview. This is important to keep in mind when scheduling an interview with a busy nursing home staff member.
7. If the respondent cannot be visited in person, it may be necessary to access the nursing assistant or family member by telephone. In these cases, we recommend sending a copy of the CMAI to the respondent before calling, so they may follow along with the interviewer’s questions.
8. Make sure the respondent is giving sufficient time and attention to each category. In some cases it is advisable to read each category of behavior aloud. If the caregiver just “runs

through” the items, stop him/her and change to a slower pace. Make sure the respondent understands the frequency scale. Supply all the examples and encourage the respondent to think of all related instances during the past two weeks.

9. Sometimes respondents are reluctant to assign a high frequency, feeling that this may signify disapproval of the older person or of their care. Explain that the purpose of the interview is to find out what exactly is going on, this is not a negative reflection on anyone.
10. Sometimes behaviors occur at irregular frequencies such as rarely during one week and more frequently during another. Try to average over the past two weeks to get the frequency which best reflects its occurrence.
11. In some cases, a respondent may be tempted to rationalize or explain away a behavior. Do not accept explanations or rationalizations. Be persistent in obtaining a frequency rating for each behavior despite any explanations or excuses made for the behavior by the respondent.
12. Obtain as complete information as possible. If the respondent is unsure about a certain behavior or incident, encourage him/her to consult with other informants. For example, if the nursing assistant was out for a few days, he/she may want to get the person who filled in for him/her. A family member may wish to discuss it with a spouse or another relative. Remember, the goal is to achieve the most accurate reflection of the frequency at which these behaviors occurred.
13. Notice that each behavior on the CMAI is actually a group of behaviors. It is impossible to list all examples of all the behaviors which may occur. When you are made aware of an unlisted behavior, try to find a behavior on the CMAI that is most similar. Be attentive to what a respondent says, they sometimes mention a certain behavior in another context.
14. Some behaviors described by respondents may be very complex. In these cases it is best to try and break down the complex behavior into several simple behaviors that may be found on the CMAI, and score each behavior separately.

Suggested introduction to be said by interviewer prior to administering the CMAI:

My name is *****. I am working for *****. Today we are going to talk about Ms. A. I'm going to ask you some questions about certain specific behaviors that occur in older people. Let me explain what we are going to be doing. The purpose of this evaluation is *****. The purpose of using this form, the CMAI is to assess agitated behaviors in elderly persons. The reason that I am asking you is that you have the most contact with Ms. A. as her direct caregiver, and so you know her best. Thank you for agreeing to help with this assessment.

These questions should take us approximately 20 minutes to complete. I will read you a list of behaviors. Some of these will apply to Ms. A., and some will not. Some of the behaviors listed here on the CMAI may sound like they are negative or bad behaviors, but please answer honestly. We are only trying to figure out how often these behaviors occur, not judge whether a person is good or bad. I am going to read the description for you, and then you tell me how often Ms. A. has behaved this way in the past two weeks during your work shift. To make it easier to remember the options, I have this card that can remind you of how you should be answering. So as you can see the frequency would be either never; less than once a week; once or twice a week; several times a week; once or twice a day, several times a day, or several times an hour. If a

behavior is not applicable then just let me know. For every behavior that has occurred, I will also ask if it is disruptive to you or to the staff. Please indicate how disruptive using, from the card, Not at All; A little; Moderately; Very Much; and Extremely. Rate only what you see and hear on your shift. I would also like you to look at a copy of the questions that I'll be asking you. It just might make it easier for you to follow along. Just remember the period to rate is the last two weeks. Any questions? Great, let's begin. The first behavior is.... How often has Ms. A.?

SCORING THE CMAI

The rating scale for the agitated behaviors is as follows:

- 1 - Never
- 2 - Less than once a week but still occurring
- 3 - Once or twice a week
- 4 - Several times a week
- 5 - Once or twice a day
- 6 - Several times a day
- 7 - Several times an hour

When a behavior has occurred rarely during one week, and more frequently during another, try to average over the past two weeks to get the frequency which best reflects its occurrence.

If a behavior would occur but is prevented (e.g, pacing prevented by physical restraints or fights prevented by removing person), two approaches can be used: 1) rate the behavior as a separate category "8 - would occur if not prevented" and analyze these cases separately, or: 2) estimate the frequency at which the behavior would occur if not prevented, or the frequency at which it actually occurs when not prevented. Behaviors at irregular frequencies should be averaged. It is important to handle these cases in a consistent manner throughout the project in which the CMAI is used.

Calculating agitation scores: The CMAI contains a diversified group of behaviors. For analysis purposes, it is not useful to calculate a total score by adding all the categories. Analysis can pertain to either specific behaviors of interest, or each of the three factors of agitation described below (see section on psychometric properties). However, researchers may want to do their own factor analysis because factors depend on the population studied. Another possibility is to weigh behaviors according to their disruptive impact and then combine them accordingly. Different agitated behaviors occur under different circumstances and in different people. Therefore, the behaviors do not all have the same meaning, e.g., some may need to be discouraged, and others need to be accommodated. You need to conceptualize your understanding of these behaviors in order to aggregate the behaviors in a meaningful way. Some means of aggregating the behaviors are illustrated in the referenced articles.

Criteria for agitated/not agitated status: The criteria we used were:

Aggressive behavior occurring at least several times a week, i.e.,
at least one aggressive behavior occurring at a frequency of 4
or at least two aggressive behaviors occurring at a frequency of 3
or at least three aggressive behaviors occurring at a frequency of 2
or two aggressive behaviors occurring at a frequency of 2 and one at a frequency of 3

Physically nonaggressive behavior occurring at least once a day, i.e.,
at least one physically nonaggressive behavior occurring at a frequency of 5
or least two physically nonaggressive behaviors occurring at a frequency of 4
or least three physically nonaggressive behaviors occurring at a frequency of 3
or least four physically nonaggressive behaviors occurring at a frequency of 2

Verbally agitated behavior occurring at least once a day, i.e.,
at least one verbally agitated behavior occurring at a frequency of 5
or least two verbally agitated behaviors occurring at a frequency of 4
or least three verbally agitated behaviors occurring at a frequency of 3
or least four verbally agitated behaviors occurring at a frequency of 2

For other studies, different criteria may be needed, depending on the research question, and on the disruptive impact of the behaviors in the particular setting studied.

THE COHEN-MANSFIELD AGITATION INVENTORY - Long Form

Please read each of the 29 agitated behaviors, and circle how often (from 1-7) each was manifested by the resident during the last 2 weeks:

	Never 1	Less than once a week 2	Once or twice a week 3	Several times a week 4	Once or twice a day 5	Several times a day 6	Several times an hour 7
1. Pace, aimless wandering	1	2	3	4	5	6	7
2. Inappropriate dress or disrobing	1	2	3	4	5	6	7
3. Spitting (include at meals)	1	2	3	4	5	6	7
4. Cursing or verbal aggression	1	2	3	4	5	6	7
5. Constant unwarranted request for attention or help	1	2	3	4	5	6	7
6. Repetitive sentences or questions	1	2	3	4	5	6	7
7. Hitting (including self)	1	2	3	4	5	6	7
8. Kicking	1	2	3	4	5	6	7
9. Grabbing onto people	1	2	3	4	5	6	7
10. Pushing	1	2	3	4	5	6	7
11. Throwing things	1	2	3	4	5	6	7
12. Strange noises (weird laughter or crying)	1	2	3	4	5	6	7
13. Screaming	1	2	3	4	5	6	7
14. Biting	1	2	3	4	5	6	7
15. Scratching	1	2	3	4	5	6	7

	Never 1	Less than once a week 2	Once or twice a week 3	Several times a week 4	Once or twice a day 5	Several times a day 6	Several times an hour 7
16. Trying to get to a different place (e.g., out of the room, building)	1	2	3	4	5	6	7
17. Intentional falling	1	2	3	4	5	6	7
18. Complaining	1	2	3	4	5	6	7
19. Negativism	1	2	3	4	5	6	7
20. Eating/drinking inappropriate substances	1	2	3	4	5	6	7
21. Hurt self or other (cigarette, hot water, etc.)	1	2	3	4	5	6	7
22. Handling things inappropriately	1	2	3	4	5	6	7
23. Hiding things	1	2	3	4	5	6	7
24. Hoarding things	1	2	3	4	5	6	7
25. Tearing things or destroying property	1	2	3	4	5	6	7
26. Performing repetitious mannerisms	1	2	3	4	5	6	7
27. Making verbal sexual advances	1	2	3	4	5	6	7
28. Making physical sexual advances	1	2	3	4	5	6	7
29. General restlessness	1	2	3	4	5	6	7

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THE COHEN-MANSFIELD AGITATION INVENTORY - Long Form
with expanded descriptions of behaviors

AGITATION - SEE SCALE Rate behaviors as they occur on your shift (during past two weeks).

Rating Scale for Agitated Behaviors

	Less than once a week	Once or twice a week	Several times a week	Once or twice a day	Several times a day	Several times an hour
Never 1	2	3	4	5	6	7

8 - Would be occurring if not prevented (e.g., would pace if not restrained)

9 - Not applicable (e.g., cannot pace because cannot walk or move wheelchair)

☞ If prevented part of the time, estimate how frequently it would happen if not prevented.

☞ Do not include rare behaviors that are clearly explained by situational factors.

1. **Pacing and aimless wandering** - constantly walking back and forth, does not indicate normal purposeful walk, include wandering when done in a wheelchair _____
2. **Inappropriate dressing or disrobing** - putting on too many clothes, putting on clothing in a strange manner (e.g., putting pants on head), taking off clothing in public or when it is inappropriate (if only genitals are exposed, do not rate; see item # 28.) Do not rate person's ability to dress/undress as in ADL's _____
3. **Spitting (including while feeding)** - spitting onto floor, other people, etc.; do not include salivating of which person has no control, or spitting into tissue, toilet, or onto ground outside _____
4. **Cursing or verbal aggression** - only when using words; swearing, use of obscenity, profanity, unkind speech or criticism, verbal anger, verbal combativeness. Nonverbal will be marked under screaming _____
5. **Constant unwarranted request for attention or help** - verbal or nonverbal unreasonable nagging, pleading, demanding (indicate also for oriented people) _____
6. **Repetitive sentences or questions** - repeating the same sentence or question one right after the other (Do not include complaining - see item # 18; even if oriented and even if possibly warranted) _____
7. **Hitting (including self)** - physical abuse, striking others, pinching others, banging self/furniture _____
8. **Kicking** - strike forcefully with feet at people or objects _____
9. **Grabbing onto people or things inappropriately** - snatching, seizing roughly, taking firmly, or yanking _____
10. **Pushing** - forcefully thrusting, shoving, moving putting pressure against _____
11. **Throwing things** - hurl, violently tossing up in air, tipping off surfaces, flinging, intentionally spilling food _____

12. **Making strange noises** - including crying, weeping, moaning, weird laughter, grinding teeth _____
13. **Screaming** - loud shrill, shouting, piercing howl _____
14. **Biting** - chomp, gnash, gnaw (people, objects, or self) _____
15. **Scratching** - clawing, scraping with fingernails (people, objects, or self) _____
16. **Trying to get to a different place** - trying to get out of the building, off the property - sneaking out of room, leaving inappropriately, trying to get into locked areas, trespassing within unit, into offices, other resident's room or closet _____
17. **Intentional falling** - purposefully falling onto floor, include from wheelchair, chair, or bed _____
18. **Complaining** - whining, complaining about self, somatic complaints, personal gripes or complaining about external things or other people _____
19. **Negativism** - bad attitude, doesn't like anything, nothing is right _____
20. **Eating or drinking inappropriate substances** - putting into mouth and trying to swallow items that are inappropriate _____
21. **Hurting self or other** - burning self or other, cutting self or other, touching self or other with harmful objects, etc. _____
22. **Handling things inappropriately.** - picking up things that don't belong to them, rummaging through drawers, moving furniture, playing with food, fecal smearing _____
23. **Hiding things** - putting objects under or behind something _____
24. **Hoarding things** - putting many or inappropriate objects in purse or pockets, keeping too many of an item _____
25. **Tearing things or destroying property** - shredding, ripping, breaking, stomping on something _____
26. **Performing repetitious mannerisms** - stereotypic movement, such as patting, tapping, rocking self, fiddling with something, twiddling with something, rubbing self or object, sucking fingers, taking shoes on and off, picking at self, clothing, or objects, picking imaginary things out of air or off floor, manipulation of nearby objects in a repetitious manner _____
27. **Making verbal sexual advances** - sexual propositions, sexual innuendo, or "dirty" talk _____
28. **Making physical sexual advances or exposing genitals** - touching a person in an inappropriate sexual way, rubbing genital area, inappropriate masturbation, when not alone in own room or bathroom, unwanted fondling or kissing _____
29. **General Restlessness** - fidgeting, always moving around in seat, getting up and sitting down inability to sit still _____

THE COHEN-MANSFIELD AGITATION INVENTORY - short form

Please read each of the agitated behaviors, and check how often (from 1-5) they were manifested by the participant over the last 2 weeks; if more than one occurred within a group, add the occurrences, e.g., if hitting occurred on 3 days a week, and kicking occurred on 4 days a week, 3 + 4 = 7 days; circle 4, once or several times a day.

	Never 1	Less than once a week 2	Once or several times a week 3	Once or several times a day 4	A few times an hour or continuous for half an hour or more 5
1. Cursing or verbal aggression	1	2	3	4	5
2. Hitting (including self), Kicking, Pushing, Biting, Scratching, Aggressive Spitting (include at meals)	1	2	3	4	5
3. Grabbing onto people, Throwing things, Tearing things or destroying property	1	2	3	4	5
4. Other aggressive behaviors or self abuse including: Intentional falling, Making verbal or physical sexual advances, Eating/drinking/ chewing inappropriate substances, Hurt self or other	1	2	3	4	5
5. Pace, aimless wandering, Trying to get to a different place (e.g., out of the room, building)	1	2	3	4	5
6. General restlessness, Performing repetitious mannerisms, tapping, strange movements	1	2	3	4	5
7. Inappropriate dress or disrobing	1	2	3	4	5
8. Handling things inappropriately	1	2	3	4	5
9. Constant request for attention or help	1	2	3	4	5

	Never 1	Less than once a week 2	Once or several times a week 3	Once or several times a day 4	A few times an hour or continuous for half an hour or more 5
10. Repetitive sentences, calls, questions or words	1	2	3	4	5
11. Complaining, Negativism, Refusal to follow directions	1	2	3	4	5
12. Strange noises, (weird laughter or crying)	1	2	3	4	5
13. Hiding things, Hoarding things	1	2	3	4	5
14. Screaming	1	2	3	4	5

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