INSTRUCTION MANUAL FOR THE COHEN-MANSFIELD AGITATION INVENTORY (CMAI)

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WHAT IS AGITATION?

Agitation is operationally defined by Cohen-Mansfield and Billig (1986) as: inappropriate verbal, vocal, or motor activity that is not judged by an outside observer to result directly from the needs or confusion of the agitated individual. Agitation is not a diagnostic term, but rather a term used by clinicians for a group of symptoms that may reflect an underlying disorder.

Agitated behavior is always socially inappropriate, and can be manifested in three ways:

- It may be abusive or aggressive toward self or other.
- It may be appropriate behavior performed with inappropriate frequency, such as constantly asking questions.
- It may be inappropriate according to social standards for the specific situation, as in taking off clothes in the activity room.

(Cohen-Mansfield, Marx, and Rosenthal, 1989)

USING THE COHEN-MANSFIELD AGITATION INVENTORY

The purpose of the Cohen-Mansfield Agitation Inventory (CMAI) is to assess the frequency of manifestations of agitated behaviors in elderly persons.

The CMAI was developed for use in the nursing home. Originally, trained research staff have administered it to nursing staff in a one-to-one interview, rating each resident separately. It has been used also by family caregivers, social workers, activity directors of senior day care centers and others. Although originally developed for research purposes, it has also been used for clinical purposes, such as deciding whether withdrawal of psychotropic medication resulted in an increase in agitation in an elderly woman. The CMAI may be self-administered by a caregiver or it may be completed by interviewing a staff of family caregiver.

The CMAI is a caregivers' rating questionnaire consisting of 29 agitated behaviors, each rated on a 7-point scale of frequency. Ratings pertain to the two weeks preceding the administration of the CMAI.

In completing the CMAI, note that each behavior is actually a group of related behaviors. Read carefully the long form with the expanded descriptions. If the person to be rated manifests an inappropriate behavior which is close to a behavior on the CMAI but not spelled out exactly, add it to that category. For example, if a person squeaks, and this behavior is not listed, use the category of "making strange noises," even though it is not included in the examples. Recognize that it is impossible to include all possible examples, but each line is intended to capture a group of closely related behaviors.
Do not try to judge if the behavior can be explained or not, just rate the frequency at which it actually occurs. The CMAI does not contain "severity" of a behavior because the nature of most

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.

<u>Suggested introduction to be said by interviewer prior to administering the CMAI:</u>

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.

PSYCHOMETRIC PROPERTIES

In the nursing home:

Reliability: Inter-rater agreement rates were calculated for each behavior on the CMAI (using 0- or 1-point discrepancy as agreement) for 3 sets of raters (in 3 units of a nursing home). These averaged .92 (n = 16), .92 (n = 23), and .88 (n = 31). For the **short version** of the CMAI, inter-rater reliability was as follows: exact agreement = .82; 0-1 point discrepancy = .93.

Validity: Factor analysis (using the generalized least squares approach) revealed the following three factors of agitation in the nursing home:

Factor 1 - Aggressive behavior: Hitting, kicking, pushing, scratching, tearing things, cursing or verbal aggression, grabbing (biting, spitting).

Factor 2 - Physically nonaggressive behavior: Pacing, inappropriate robing or disrobing, trying to get to a different place, handling things inappropriately, general restlessness, repetitious mannerisms.

Factor 3 - Verbally agitated behavior: Complaining, constant requests for attention, negativism, repetitious sentences or questions, screaming.

For additional information on nursing home reliability, please see:
Whall, A. L., Black, M. E. A., Yankou, D. J., Groh, C. J., et al. (1999). Nurse aides' identification of onset and level of agitation in late stage dementia patients. American Journal of Alzheimer's Disease, 14(4): 202-206.

In the community:

Reliability: Inter-rater agreement rates for 20 community-dwelling elderly by independent ratings of activity leaders at adult day care centers (using 0-1 point discrepancy as agreement) averaged .92.

See also:
Koss, E., Weiner, E., Ernesto, C., Cohen-Mansfield, J., Ferris, S., Grundman, M., Schafer, K., Sano, M., Thal, L. J., Thomas, R., Whithouse, P. J., and the Alzheimer's Disease Cooperative Study (1997). Assessing patterns of agitation in Alzheimer's disease patients with the Cohen-Mansfield agitation inventory. Alzheimer's Disease and Associated Disorders, 11(suppl. 2), S45-S50.

Validity: Based on exploratory factor analysis, theoretical considerations and LISREL maximum likelihood analyses the following factors are now utilized:

Factor 1 - Physically nonaggressive behaviors (PNAB): General restlessness, repetitious mannerisms, pacing, trying to get to a different place, handling things inappropriately, hiding, and inappropriate dressing or undressing.

Factor 2 - Physically aggressive behaviors (PAGB): Hitting, pushing, scratching, grabbing things, and grabbing people (kicking, biting).

Factor 3 - Verbally nonaggressive behaviors (VNAB): Negativism, doesn't like anything, constant requests for attention, verbal bossiness, complaining or whining, relevant interruptions, irrelevant interruptions, and repeating sentences.

Factor 4 - Verbally aggressive behaviors (VAGB): Screaming, cursing, temper outbursts, and making strange noises.

*In some cases, the frequency for physically aggressive behaviors (PAGB) were too low to allow for analysis of this syndrome.

See the following references for additonal sources concerning the factor structure:

Choy, C.N.P., Lam, L.C.W., Chan, W.C., Li, S.W., & Chiu, H.F.K. (2001). Agitation in Chinese elderly: Validation of the Chinese version of the Cohen-Mansfield Agitation Inventory. International Psychogeriatrics, 13(3), 325-335.

de Jonghe, J.F.M, & Kat, M.G. (1996). Factor structure and validity of the Dutch version of the Cohen-Mansfield Agitation Inventory (CMAI-D). Journal of the American Geriatrics Society, 44(7), 888-889.

Schreiner AS, Yamamoto E, Shiotani H. Agitated behavior in elderly nursing home residents with dementia in Japan.J Gerontol B Psychol Sci Soc Sci. 2000 May;55(3):P180-6.

Construct Validity: Relationships of agitation to cognitive functioning, depression, and other psychosocial and demographic variables, are described in the references.

EVALUATING THE QUALITY OF THE ADMINISTRATION OF THE CMAI

A questionnaire has been developed for training and quality assurance in the administration of the CMAI. It includes 20 questions which evaluate the method by which the CMAI was administered including the provision of the scale to informants, and the style in which the CMAI was administered.

The questionnaire has been used in the evaluation of the quality of 24 videotapes of the CMAI administered to by 24 different interviewers with 24 different informants.

CITING THE CMAI

TO CITE THE CMAI USE THE FOLLOWING REFERENCE:

Cohen-Mansfield, J., Marx, M. S., & Rosenthal, A. S. (1989). A description of agitation in a nursing home. Journal of Gerontology: Medical Sciences, 44(3), M77-M84.

For the short form cite:
Werner, P., Cohen-Mansfield, J., Koroknay, V., & Braun J. (1994). The impact of a restraint-reduction program on nursing home residents. Geriatric Nursing, 15(3), 142-146.

For the community version:
Cohen-Mansfield, J., Werner, P., Watson, V., & Pasis, S. (1995). Agitation in participants of adult day care centers: The experiences of relatives and staff members. International Psychogeriatrics, 7(3), 447-458.

VERSIONS OF THE COHEN-MANSFIELD AGITATION INVENTORY

1. **Long form** - This is the original assessment used with the nursing home population.

2. **Long form with expanded definitions -** This form gives additional examples of each behavior.

3. **Short form** - Only 14 agitated behavior categories are included, each rated on a 5-point frequency scale instead of a 7-point frequency scale. See above for reliability.

4. **Community form (CMAI-C)** - this 37-item questionnaire has been used with formal and informal caregivers of community-dwelling elderly persons in a longitudinal study of agitation. This instrument is available in two formats: CMAI-C and the CMAI-Relative Form.

5. **Disruptiveness form** - The disruptiveness of each behavior is rated along with frequency.

Detailed Descriptions of Behaviors

1. **Pacing and aimless wandering** - constantly walking back and forth, including wandering when done in a wheelchair. Does not include normal purposeful walking.

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, rated under sexual advances). Does not include a person's ability to dress/undress as in ADL's.

3. **Spitting (including while feeding)** - spitting onto floor, other people, etc.; does not include uncontrollable salivating, 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. Does not include unintelligible noises (rated under screaming or strange noises).

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, addressed to a particular person or to no one (complaining, even if oriented and possibly warranted is rated under the complaining section).

7. **Hitting (including self)** - physical abuse, striking others, pinching others, banging self/furniture.

8. **Kicking** - striking 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 another.

11. **Throwing things** - hurling objects, violently tossing objects up in air, tipping off surfaces, flinging, dumping food.

12. **Making strange noises** - including crying, weeping, moaning, weird laughter, grinding teeth, does not include intelligible words.

13. **Screaming** - shouting, piercing howl, making loud shrills.

14. **Biting** - chomping, gnashing, gnawing, either other people or self.

15. **Scratching** - clawing, scraping with fingernails either other people or self.

16. **Trying to get to a different place** - inappropriately entering or leaving a place, such as trying to get out of the building, off the property, sneaking out of room, trying to get into locked areas, trespassing within unit, offices, or 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 physical environment or other people.

19. **Negativism** - bad attitude, doesn't like anything, nothing is right, does not include overt verbal anger, such as what can be rated as verbal aggression.

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 out of sight, under or behind something.

24. **Hoarding things** - putting many or inappropriate objects in purse, pockets, or drawers, keeping too many of an item. (Does not include regular collection such as collecting dolls).

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, does not include repetitious words or vocalizations.

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.

In the CMAI-Community Version the following are also included

Exhibiting temper outbursts - exhibiting verbal and nonverbal expressions of anger that are more complex and of longer duration than single agitated behaviors. Can include but not limited to hitting, throwing, cursing, etc.

Exhibiting strange movements - any random or aimless moving of parts of the body, i.e., twitching, rising, pursing lips, chewing, grinding teeth, moving arms or legs in strange ways. Does not include repetitive movements

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Additional Resources:

Two Spanish versions of the CMAI are available.

The Spanish version for Spain is available through:
Dr. Jorge Cervilla
Research Fellow and Lecturer in Psychiatry
SEGP, Institute of Psychiatry
University of London
De Crespigny Park
Denmark Hill
London SE5 8AZ
UK

The Spanish version for Latin America is available through:
Dr. Kimberly Schafer
8950 Villa La Jolla Drive, Suite 2200
La Jolla, CA 92037
Tel. 858-622-5863
Fax 858-452-0573
e-mail kschafer@ucsd.edu

A French version is available through either:
Philippe Landreville, Ph.D
Associate Professor
School of Psychology
Laval University
Quebec City, QC G1K 7P4
Canada
Tel: 418-656-2131 ext. 3024
Fax: 418-656-3646
Email: philippe.landreville@psy.ulaval.ca

M. Micas
Unites de soins Aigus
Departemente de Medecine Interne et Gerontologue Clinique
CHU Purpan
170 avenue de Casselardit
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Toulouse
France

A Chinese version is currently being translated and will be available through:

Claudia K Y Lai, RN, PhD
Associate Professor & Associate Head
School of Nursing
The Hong Kong Polytechnic University
Hung Hom, Kowloon
Hong Kong
Off: (852) 2766-6544
fax: (852) 2364-9663
email:hsclai@inet.polyu.edu.hk

Citation of publication in English of the Chinese version-CMAI (The publication in Chinese is shorter and more current.)
Lai, C. K. Y. (2002). The use of the Cohen-Mansfield Agitation Inventory in the assessment of agitation in people with dementia: Applicability in Hong Kong. The Hong Kong Journal of Gerontology, 14 (1 & 2), 66-69.

A German version is currently being translated and will be available through:

Dr. Grit Wenzel and Dr. Stefan Schruder
Westf. Zentrum Psychiatrie
Alexandrinenstraae 1
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A Dutch version (CMAI-D) should be available through:

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As mentioned in:

de Jonghe, J. F. M., & Kat, M. G. (1996). Factor Structure and Validity of the Dutch Version of the Cohen-Mansfield Agitation Inventory (CMAI-D). Journal of the American Geriatrics Society, (7), 888-9.

A Danish version should be available through:

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A Greek version should be available through:

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A Japanese version should be available through:
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A Hebrew version should be available through:
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The 7 Linguistic validation of the CMAI long forms in Canadian French, Czech, Estonian, Hebrew, Polish, Russian for Estonia and Russian for Israel should be available through:

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A training videotape for the CMAI has been prepared by Dr. Cohen-Mansfield.

Various Forms of the Cohen-Mansfield Agitation Inventory

1. CMAI long-form
2. CMAI long-form with expanded definitions
3. CMAI short-form
4. CMAI for community-dwelling elderly
5. CMAI for relatives
6. CMAI with disruptiveness rating
7. CMAI-version used by ADCS

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

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

Never	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
1	2	3	4	5	6	7

8 - Would be o ccurring 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** - sterotypic 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	Less than once a week	Once or several times a week	Once or several times a day	A few times an hour or continuous for half an hour or more
	1	2	3	4	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

COHEN-MANSFIELD AGITATION INVENTORY - COMMUNITY (CMAI-C)

We would like to ask about certain specific behaviors sometimes seen in older persons. Some are verbal, some are physical. Some are quiet behaviors and others are disruptive. We do not expect that all these behaviors will apply to the subject [S]. I will read you descriptions of all behaviors on this list. We will want to know how often the behavior has occurred in the past two weeks. We would like you to indicate the frequency of each behavior on the card I have given you. The frequencies are:

FREQUENCY:
- **Never**
- **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**

1. During the past two weeks how often did [S] repeat sentences or questions? (was **repetitive**, whether or not addressed at any particular person)

2. During the past two weeks how often did [S] verbally **interrupt** or cut short others' interactions or conversations saying something that is are **relevant** to the conversation?

3. During the past two weeks how often did [S] verbally **interrupt** or cut short others interactions or conversations saying something that is **not relevant** to the conversation (has nothing to do with ongoing activity)?

4. During the past two weeks how often did [S] make **strange noises**, including strange laughter, moaning or crying?

5. During the past two weeks how often did [S] **scream**, shout, or howl?

6. During the past two weeks how often did [S] **complain** or whine?

7. During the past two weeks how often did [S] make unwarranted **requests for attention** or help? (includes nagging, pleading, calling out)

8. During the past two weeks how often was [S] **negative**, uncooperative or unwilling to participate in activities? (bad attitude, doesn't like anything, nothing is right; includes social activities, eating, bathing)

9. During the past two weeks how often did [S] **curse** or was [S] verbally threatening or insulting? (**verbal aggression**; score only if intelligible words are used; otherwise score under item 4)

10. During the past two weeks how often did [S] **spit** (including during meals)? (do not include involuntary salivation; i.e., drooling)

11. During the past two weeks how often was [S] **verbally bossy or pushy**?

12. During the past two weeks how often did [S] make **verbal sexual advances**? (includes direct sexual propositioning or obvious sexual hints)

13. During the past two weeks how often did [S] make **physical sexual advances** or **expose** his/her sexual parts? (include inappropriate sexual touching of self or others)

14. During the past two weeks how often was [S] **restless** or fidgety, or tend to move around when in a seat or repeatedly get up and sit down? (can't sit still)

15. During the past two weeks how often did [S] **pace**, walk repeatedly back and forth or **wander** aimlessly? (include wandering when done in a wheelchair)

16. During the past two weeks how often did [S] try to **get out** of doors inappropriately, sneak out or inappropriately enter other places?

17. During the past two weeks how often did [S] **dress or undress** inappropriately? (such as undressing in public, or constantly dressing; it does <u>not</u> refer to ability to get dressed; if only genitals are exposed, rate on item 13)

18. During the past two weeks how often did [S] perform **repetitious mannerisms**? (includes rocking, rubbing, tapping, picking at skin)

19. During the past two weeks how often did [S] **handle things inappropriately**? (rummaging through drawers, picking up others' possessions or things that should not be touched)

20. During the past two weeks how often did [S] **grab** or snatch **things** from others? (including food from others' plates)

21. During the past two weeks how often did [S] **hoard** or collect objects?

22. During the past two weeks how often did [S] **hide** objects?

23. During the past two weeks how often did [S] have a **temper outburst**, including verbal or non-verbal expression of **anger**?

24. During the past two weeks how often did [S] **hit** people, self or objects?

25. During the past two weeks how often did [S] **kick** people or objects?

26. During the past two weeks how often did [S] **throw things** such as food or knock objects off surfaces?

27. During the past two weeks how often did [S] **tear or destroy objects** or property?

28. During the past two weeks how often did [S] **grab on to or cling to people** physically?

29. During the past two weeks how often did [S] **push** other persons?

30. During the past two weeks how often did [S] **bite** people or things?

31. During the past two weeks how often did [S] **scratch** people, self, or things?

32. During the past two weeks how often did [S] **hurt him/herself** by cutting, burning or other means? (with **harmful object**)

33. During the past two weeks how often did [S] **hurt others** by cutting, burning or other means? (with **harmful object**)

34. During the past two weeks how often did [S] appear to **fall intentionally**? (include from bed or wheelchair)

35. During the past two weeks how often did [S] attempt to or did [S] actually **eat or drink nonfood substances**?

36. During the past two weeks, was there any other inappropriate behavior? If so, what?

How often?

37. Did agitated behavior occur most often

In morning __ In afternoon __ In evening __ No time more than others
Different times for different behaviors

FREQUENCY:

Never

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

COHEN-MANSFIELD AGITATION INVENTORY - Relatives

We would like to ask about specific behaviors. We have listed behaviors that are sometimes associated with elderly persons; they are arranged from physical to verbal and from benign to aggressive. We do not expect that all these behaviors will apply to your relative. Read each of the behaviors, and circle how often (from 1 - 7) each applied to your relative over the last 2 weeks:

FREQUENCY: 1 - Never
2 - Less than once a week
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

1.	General restlessness, fidgeting, always moving around	1 2 3 4 5 6 7
2.	Performing repetitious mannerisms (tapping, rocking, rubbing)	1 2 3 4 5 6 7
3.	Pacing, aimless wandering, constantly walking back and forth (include wandering while in wheelchair)	1 2 3 4 5 6 7
4.	Trying to get to a different place (sneaking out of room, out of the house, off property)	1 2 3 4 5 6 7
5.	Handling things inappropriately (rummaging through drawers, moving furniture)	1 2 3 4 5 6 7
6.	Hiding or hoarding things	1 2 3 4 5 6 7
7.	Grabbing things from others (food from other's plate)	1 2 3 4 5 6 7
8.	Tearing things or destroying property	1 2 3 4 5 6 7
9.	Inappropriate dressing or undressing (put on clothes in strange way or take off when in public)	1 2 3 4 5 6 7
10.	Spitting, including at meals	1 2 3 4 5 6 7
11.	Eating/drinking inappropriate substances	1 2 3 4 5 6 7
12.	Grabbing onto people	1 2 3 4 5 6 7
13.	Hitting (including self)	1 2 3 4 5 6 7
14.	Kicking	1 2 3 4 5 6 7
15.	Pushing, shoving	1 2 3 4 5 6 7
16.	Throwing things, hurling, flinging	1 2 3 4 5 6 7

		FREQUENCY: **1 - Never** **2 - Less than once a week** **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**
17.	Biting people or things	1 2 3 4 5 6 7
18.	Scratching people or self	1 2 3 4 5 6 7
19.	Intentional falling (including from wheelchair or bed)	1 2 3 4 5 6 7
20.	Hurting self (burns, cuts, etc.)	1 2 3 4 5 6 7
21.	Hurting others (burns, cuts, etc.)	1 2 3 4 5 6 7
22.	Making physical sexual advances, exposing self	1 2 3 4 5 6 7
23.	Relevant verbal interruptions (i.e., cut short others who are speaking to relative; being rude - even if it does not seem to be intentioned)	1 2 3 4 5 6 7
24.	Unrelated verbal interruptions (i.e., having nothing to do with ongoing conversation or activity)	1 2 3 4 5 6 7
25.	Repetitive sentences or questions (do not include complaining)	1 2 3 4 5 6 7
26.	Constant requests for attention or help (nagging, pleading, calling out)	1 2 3 4 5 6 7
27.	Verbal bossiness or pushiness	1 2 3 4 5 6 7
28.	Complaining, whining	1 2 3 4 5 6 7
29.	Negativism, bad attitude, doesn't like anything, nothing is right (uncooperative, refusing)	1 2 3 4 5 6 7
30.	Cursing or verbal aggression; threatening, insulting	1 2 3 4 5 6 7
31.	Temper outburst (verbal or non-verbal expression of anger)	1 2 3 4 5 6 7
32.	Strange noises (weird laughter, moaning, crying)	1 2 3 4 5 6 7
33.	Screaming, shouting, howling	1 2 3 4 5 6 7
34.	Making verbal sexual advances	1 2 3 4 5 6 7

COHEN-MANSFIELD AGITATION INVENTORY - DISRUPTIVE

FREQUENCY	DISRUPTIVENESS
1 = Never	1 = Not at all
2 = Less than once a week	2 = A little
3 = Once or twice a week	3 = Moderately
4 = Several times a week	4 = Very much
5 = Once or twice a day	5 = Extremely
6 = Several times a day	9 = Don't know
7 = Several times an hour	
9 = Don't know	

Please read each of the agitated behaviors, and circle the frequency and disruptiveness of each during the past two weeks.
(Defintition of disruptiveness: How disturbing it is to staff, other residents, or family members. If disruptive to anyone, rate the highest it is for those for which it disrupts.)

	FREQUENCY	**DISRUPTIVENESS**
1. Pace, aimless wandering	1 2 3 4 5 6 7 9	1 2 3 4 5 9
2. Inappropriate dress disrobing	1 2 3 4 5 6 7 9	1 2 3 4 5 9
3. Spitting (include at meals)	1 2 3 4 5 6 7 9	1 2 3 4 5 9
4. Cursing or verbal aggression	1 2 3 4 5 6 7 9	1 2 3 4 5 9
5. Constant unwarranted request for attention or help	1 2 3 4 5 6 7 9	1 2 3 4 5 9
6. Repetitive sentences or questions	1 2 3 4 5 6 7 9	1 2 3 4 5 9
7. Hitting(including self)	1 2 3 4 5 6 7 9	1 2 3 4 5 9
8. Kicking	1 2 3 4 5 6 7 9	1 2 3 4 5 9
9. Grabbing onto people	1 2 3 4 5 6 7 9	1 2 3 4 5 9
10. Pushing	1 2 3 4 5 6 7 9	1 2 3 4 5 9
11. Throwing things	1 2 3 4 5 6 7 9	1 2 3 4 5 9
12. Strange noises (weird laughter or crying)	1 2 3 4 5 6 7 9	1 2 3 4 5 9
13. Screaming	1 2 3 4 5 6 7 9	1 2 3 4 5 9

	FREQUENCY	DISRUPTIVENESS
14. Biting	1 2 3 4 5 6 7 9	1 2 3 4 5 9
15. Scratching	1 2 3 4 5 6 7 9	1 2 3 4 5 9
16. Trying to get to a different place (e.g., out of the room, building)	1 2 3 4 5 6 7 9	1 2 3 4 5 9
17. Intentional falling	1 2 3 4 5 6 7 9	1 2 3 4 5 9
18. Complaining	1 2 3 4 5 6 7 9	1 2 3 4 5 9
19. Negativism	1 2 3 4 5 6 7 9	1 2 3 4 5 9
20. Eating/drinking inappropriate substances	1 2 3 4 5 6 7 9	1 2 3 4 5 9
21. Hurt self or other (cigarette, hot water, etc.)	1 2 3 4 5 6 7 9	1 2 3 4 5 9
22. Handling things inappropriately	1 2 3 4 5 6 7 9	1 2 3 4 5 9
23. Hiding things	1 2 3 4 5 6 7 9	1 2 3 4 5 9
24. Hoarding things	1 2 3 4 5 6 7 9	1 2 3 4 5 9
25. Tearing things or destroying property	1 2 3 4 5 6 7 9	1 2 3 4 5 9
26. Performing repetitious mannerisms	1 2 3 4 5 6 7 9	1 2 3 4 5 9
27. Making verbal sexual advances	1 2 3 4 5 6 7 9	1 2 3 4 5 9
28. Making physical sexual advances	1 2 3 4 5 6 7 9	1 2 3 4 5 9
29. General restlessness	1 2 3 4 5 6 7 9	1 2 3 4 5 9
30. Other inappropriate behavior specify:_____	1 2 3 4 5 6 7 9	1 2 3 4 5 9

CMAI Administration Evaluation

Rater_____ Date_____ **ID**_____

Listen to the first five minutes of the tape and answer the first 5 questions:

1. Did the interviewer provide an introduction?
   a. Did the interviewer explain why this assessment is important **for research or clinical purposes?**
   Yes No
   b. Did the interviewer provide any other introduction to the assessment procedures?
   Yes No Minimal

2. Was a copy of the CMAI provided to the respondent (or shared with the respondent)?
   Yes No cannot see Yes but not explained or referred

3. Was a copy of the scale provided to (or shared with) and read to the respondent?
   Yes No cannot see Provided but not explained or referred to or read aloud
   Read in the beginning but not provided physically
   Provided, but not in the beginning of the interview

After viewing the complete tape, answer the following questions:

4. Is the interviewer providing the correct timeframe (e.g., behaviors occurred over the past two weeks) for which to rate the behavior?
   Yes No Yes, but not in the beginning of interview Only in the beginning of the interview Provided an incorrect timeframe

5. Did the interviewer influence the respondent by anything they said?
   Yes Some of the time Most of the time but not all No
   Yes, by reading an incomplete frequency scale

6. Did the interviewer influence the respondent by nonverbal communication?
   Yes Some of the time Most of the time but not all No
   cannot see

7. Did the interviewer treat the respondent with respect?
Yes Some of the time Most of the time but not all No Indifferent.

8. Is the interviewer giving sufficient time and attention to each category?
Yes Some of the time Most of the time but not all No

9. Is the interviewer reading each category of behavior aloud?
   Yes Some Most but not all No

10. Is the interviewer reading the behaviors in a clear fashion (i.e., clear pronounciation)?
   Yes Some of the time Most of the time but not all No

11. Were all behavior read correctly?

Yes Some of the time Most of the time but not all All but one No

Did not read There were mistakes, but those were corrected

12. Is the interviewer providing all the examples on the questionnaire for each category?
    Yes Some of the time Most of the time but not all No

13. Is the interviewer providing examples beyond those on the questionnaire for each category?
    Yes Some of the time Most of the time but not all No

14. Was the interview conducted in a quiet area?
    Yes Some of the time Most of the time but not all
    Yes, with the exception of telephone calls No

15. Is the interviewer allaying worries about assigning high frequencies?
    Yes No There were no issues about assigning high frequencies

16. Is the interviewer responding correctly to questions?
    Yes Some of the time Most of the time but not all No There were no questions

17. Did the interviewer clarify the frequency when the respondent was not clear?

    Yes Some of the time Most of the time but not all No
    There were no instances in which the frequency was not clear.

18. Is the interviewer encouraging the respondent to elaborate, asking for additional details?

    Yes No

19. Is the interviewer engaging the respondent?

    Yes Some of the time Most of the time but not all No