Participant Course Packet: GEDC SF Dementia Care Boot Camp

May 5, 2020

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Welcome Message from GEDC and Hirsch & Associates

For those of you interacting with this project for the first time, you'll see that there is significant material and topic exchange over a relatively short time period. Don't worry about "catching it all"! There will be more extensive follow up with subsequent trainings.

You may know this Boot Camp was originally scheduled as a full-day event. Please don't be surprised if there seems to be a volume of fast-moving content during the 2-hour virtual meeting. Trust that there will be follow-up and responsive approaches to assure your understanding and knowledge will be bolstered by our experienced team's support during the course of your GED planning.

We were delighted with the enthusiasm of the inaugural in person meeting of the three health systems in February. We look forward to helping you make this extraordinary City focused effort an "on the map" initiative that meets a growing pattern and challenging need of addressing older persons who come to emergency departments and also have cognitive impairment.

Time (PST)	**Topic**	**Speaker(s)**
9:00-9:15a 12:00-12:15p	***Why this initiative?*** ***Caregiver experience***	Allison Domicone Elizabeth Edgerly
9:15-9:30a 12:15-12:30p	***GEDC Introductions, Mini-Boot Camp Overview*** ***GED parallel stories***	Ula Hwang Kevin Biese
9:30-9:50a 12:30-12:50p	***3 Case Discussions***	Zoom breakout rooms Mrs. Piedra / Mrs. Schwach / Mr. Kikway
9:50-10:05a 12:50-1:05p	***Case Discussion Debrief***	All
10:05-10:50a 1:05-1:50p	***Overview, 3-course Prix-fixe stations (10-min each)***	Delirium Implementation Care Transitions Dementia screening
10:50-10:55a 1:50-1:55p	***Preview September In-person Conference Agenda***	Laura / Ula / Kevin
10:55-11:00a 1:55-2:00p	***Questions / Feedback***	All

CASE DISCUSSIONS

GEDC San Francisco Dementia Care Boot Camp
CASE STUDY: Mrs. Piedra

Moderator: Kevin Biese

GOALS

1. To increase familiarity with the GED Guidelines;
2. To elicit different perspectives on the same clinical problem;
3. To identify some opportunities for Quality Improvement.

WORKSHEET

1. How would this patient be managed in your ED?
2. What specific problems would you identify with managing her in your ED?

YOUR ASSIGNMENT

Your group's spokesperson will describe:

One barrier to quality care for such a patient and
One opportunity for improvement that you could implement

CASE:

Mrs. Piedra is a 74-year-old woman who is in your department for her third visit in three days.

On Day One, she was complaining of flank pain and a CT showed a 3 mm (small) stone in her distal ureter. She was started on tamsulosin, acetaminophen, low-dose hydromorphone, dimenhydrinate (Gravol).

On Day Two, she was back because of "pain" although the plain X-ray suggested the stone had passed and sent home with reassurance.
On Day Three, a neighbor has called the ambulance because Mrs. Piedra knocked on her door, crying and distressed.

The emergency physician finds no acute findings on physical exam or lab/imaging and makes a referral to Internal Medicine for "failure to cope".

The third-year medical student on the Medicine services conducts a thorough med student exam and notices an MMSE of 18 consistent with moderate dementia. When the student calls the pharmacy, she learns the prescription was filled and she discovers all the empty bottles in the bottom of Mrs. Piedra's purse.

GEDC San Francisco Dementia Care Boot Camp
CASE STUDY: Mrs. Schwach

Moderator: Aaron Malsch

GOALS

1. To increase familiarity with the GED Guidelines;
2. To elicit different perspectives on the same clinical problem;
3. To identify some opportunities for Quality Improvement.

WORKSHEET

1. How would this patient be managed in your ED?
2. What specific problems would you identify with managing her in your ED?
3. What components of the GED Guidelines (Staffing, Education, Transitions of Care, Policies and Procedures, Physical Environment, Quality Improvement) might make her care better?

YOUR ASSIGNMENT

Your group's spokesperson will describe:

One barrier to quality care for such a patient and
One opportunity for improvement that you could implement

CASE:

Mrs. Schwach is an 80 yo old retiree who calls the ambulance on Tuesday morning because she's "not feeling right" on waking at 0800. She looks well and is in no distress so is triaged ESI 4 and placed in a bed.

She can't remember what medications she takes, did not bring her list, and EMS did not bring the bottles. She has had not previous visits at your hospital.

She thinks she may have had some chest pain and so is placed on a monitor. She can't void on the bed pan and so she has a catheter inserted. Her daughter from Ontario reaches her on her cell and subsequently calls the nurse to say that "Mom seems a little off." This information is not recorded or passed on.

It's a busy day in the department so she waits 3 hours before being seen by the doctor. She mentions that she may have had some abdominal pain yesterday so an ultrasound is ordered for 1500 and she is kept NPO for that test. It is reported at 1700 as "unremarkable with no acute findings." Her bloodwork, including two Troponins, is all back and is normal.

She is prepared for discharge at 1800 with diagnosis and plan of "No Acute Medical Problem; Follow up with family doctor." She is very weak and light-headed on standing, and can't find her house keys or any money for a taxi home.

The physician is ready to go home and it's change of shift for the nurses.

GEDC San Francisco Dementia Care Boot Camp
CASE STUDY: Mr. Kostamihk Kikway

Moderator: Michael Malone

GOALS

1. To increase familiarity with the GED Guidelines;
2. To elicit different perspectives on the same clinical problem;
3. To identify some opportunities for Quality Improvement.

WORKSHEET

1. How would this patient be managed in your ED?
2. What specific problems would you identify with managing him in your ED?
3. What components of the GED Guidelines (Staffing, Education, Transitions of Care, Policies and Procedures, Physical Environment, Quality Improvement) might make his care better?

YOUR ASSIGNMENT

Your group's spokesperson will describe:

One barrier to quality care for such a patient and
One opportunity for improvement that you could implement

CASE:

It's Tuesday evening in a community hospital ED. Mr. Kostamihk Kikway is an 82-year-old man who lives with his extended family. He comes to the ED because of increased cough and fever.

He needs assistance most days with dressing and bathing (because of his arthritis); but in the past few days he has become somewhat weaker and needs assistance to get to the toilet. He uses glasses and his family says he needs cueing to do most activities ("but he doesn't have Alzheimer's). He was in your hospital three months ago for an episode of angina (no NSTEMI) and had three new medications added at that time.
(Hint: check ISAR score).

PMH: Coronary artery disease; Hypertension; Prostate hypertrophy; high cholesterol; and appropriate medications for those conditions

On exam he is alert and attentive and oriented to day, place. No fever. O2 sat 94%. He is able to walk with assistance ("about the way he usually does.")

His Chest xray shows a small area of infiltrate in the RML. His bloodwork is unchanged from his previous admission.

There are medical beds available but only on a floor with an enteric and flu outbreak.

What do you do?

PRIX-FIXE HANDOUTS

Transitions for Discharged Older Adults
Considerations for discharge from ED to home

Sharon Coffey, DNP, MSN, RN, CNS, CEN, ACNS-BC, CCRN

BACKGROUND

Millions of elder patients visit the Emergency Department (ED) each year for a variety of medical or trauma related ailments. Discharge from ED is often a vulnerable period for the older adult. Without appropriate preparation for a safe return to their homes, including ability to manage their recovery, discharge can be a failure leading to a return to the ED in 72 hours or more, medication errors, worsening medical conditions and even death. Below is a list of considerations that EDs can consider when discharging the older patient. This is not an exhausted list (nor are the references listed), but one that may stimulate thought and possibly evoke evidenced-based practice (EBP) change to enhance the health and recovery of the vulnerable older patient population seen in the ED and transitions back to home.

BARRIERS THAT HINDER EFFECTIVE TRANSITION FROM EMERGENCY DEPARTMENT TO HOME		
Area Found to Promote Transition Failure	**Causation**	**Opportunities for Improvement**
ED failure to reconcile medications	Lack of updated or verifiable medication list.	Utilize pharmacy / PharmD; Call patient's pharmacy or PCP to validate Rx; Educate patient and family on importance of current Rx list.
Suboptimal patient education at discharge (d/c)	Consider environmental factors such as lighting, noise, distractors and time allotted for discharge education	Designated discharge RN; better lighting, noise reduction; slower discharge process or "discharge lounge" giving pt. time to understand and validate d/c education
Patient does not follow d/c plan of care	Lack of understandable education; consider healthcare literacy; consider visual / physical limitations (see *Designing for Seniors* section); consider psychiatric limitations	Create d/c forms with senior eyes in mind; provide d/c instruction in well lite and low noise environment.
Lack of follow up and continuity of care post d/c (access to care failure); lack of PCP; suboptimal or lack of insurance especially for specialists	No appointment made for pt.; Lack of understanding of needed follow up; Failure to assess for Primary Care Practitioner (PCP); failure to assess financial status	Make appointment for pt. at time of d/c. Have pt. portal available to access information prn; provide community resources and have them connect with pt.; connect with social services to assist pt. with financial needs/community services.
Failure to assess for and provide ability to care for self at d/c	Lack of assessment for risk of self -care deficit; lack of assessment for cognitive or physical impairment; financial assessment; living conditions-social services/ social environment for support	Standardized tools may include MMSE; Geriatric Depression scale; TUGT;
Failure to use Evidence-Based screening tools to identify patients at risk for readmission	Lack of awareness, knowledge or time	Consider screening tools that fit your ED environment such as: Rowland Questionnaire; Triage Risk Stratification Tool (TRST); Identification of Seniors at Risk (ISAR); Runciman Questionnaire; Hegney Tool; Complex Tool

Many studies have shown that interventions to improve the discharge process aimed for our seniors can and have reduced discharge failures. Below is a categorial summary of the most common interventions based on the evidence from the literature:

1. Discharge education/instructions for seniors;
2. Follow-up; in-home or via telephone are the most studied;
3. Follow up appointments that are made in the ED prior to the discharge and included in the post care instructions provided;
4. Discharge and Care bundles addressing the most common elements of elder care such as cognitive evaluation; social situation (dining, living situation, financial strain);
5. Care Coordination, especially with PCP or specialist referrals and community resources;
6. Transportation assistance (specially to follow up appointments);
7. Prescription assistance (fill prescriptions prior to d/c and communicate this to the PCP);
8. Safe Housing-living assistance

FOR SENIOR EYES ONLY: DESIGNING DISCHARGE

Physiologically our bodies change with age. For our senior patients, many are farsighted and find it difficult to read small print. Designing senior-friendly discharge materials is one EBP method to enhance discharge readiness and reduce the risk of discharge failures. Below is a short suggestion for creating printed materials with the senior eye in mind:

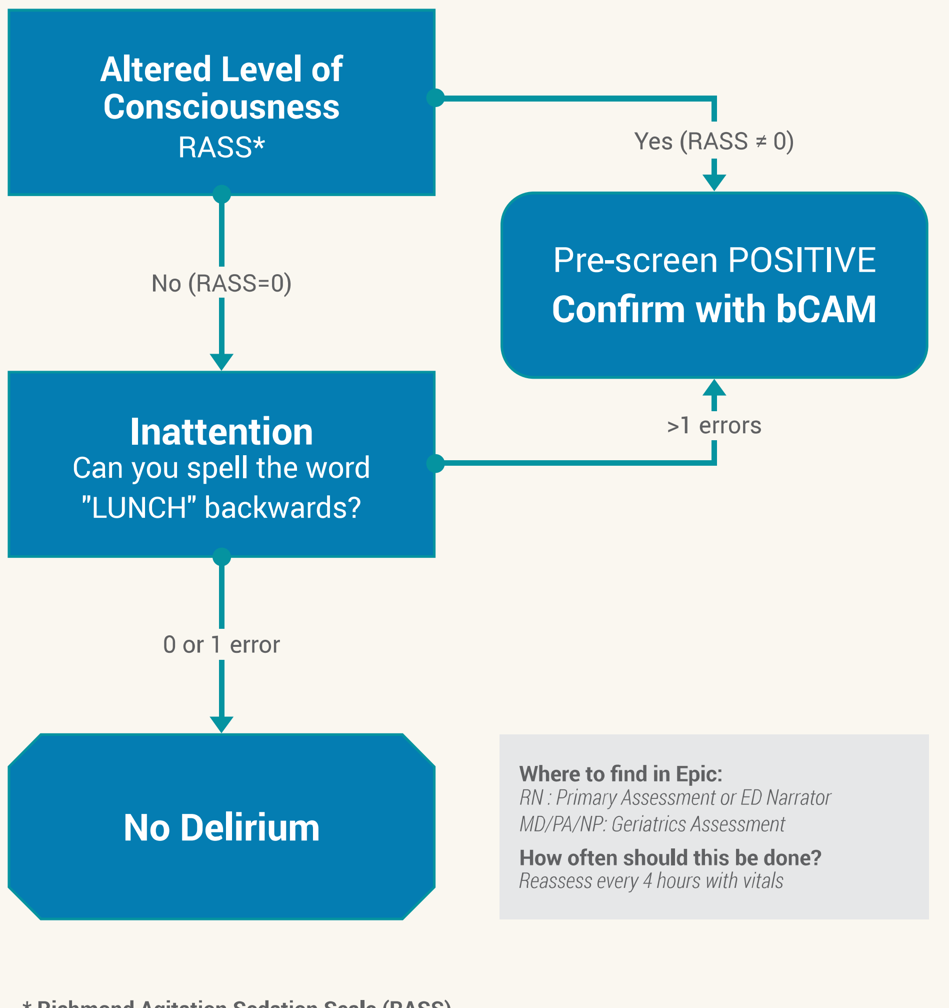
Key changes about seniors to remember:

1. The ocular lens yellows, therefore it becomes harder for older eyes to distinguish blues, greens and purples.
2. The aging ocular lens absorbs more light leaving less light available for seeing and harder to handle glare.
3. Though more internet savvy than ever, the senior brain does not process new information quickly.

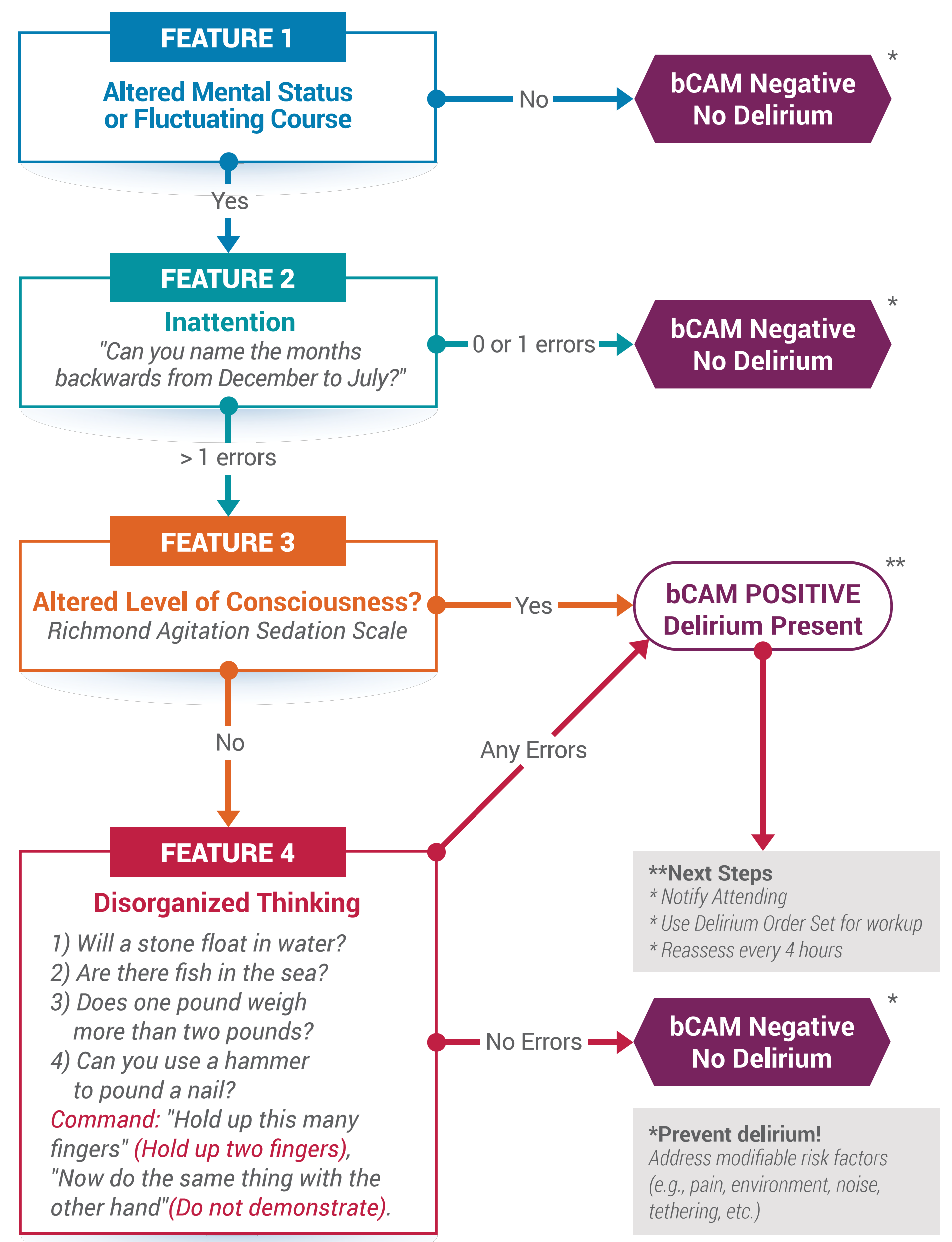
Topic	Suggested Senior Design for Success!
Typestyles	• Use simple, easy-to-read typefaces; avoid s**cripts** and decorative typestyles. Keep the number of fonts per page to a minimum • Avoid condensed fonts; • Avoid Italics where it is 18% more difficult for the senior to read the Times New Roman font; • Use initial caps but not caps throughout; • Don't reverse body copy (white letters on dark background);
Type Size	A good rule of font is 12-14-point text with extra wide leading (more space)
Contrast	• Have strong contrast but not over screened images; • Incorporate lots of white space to reduce eye fatigue; • Add space to the margins, between text sections and around graphics
Pictures/images	• Active seniors see themselves younger than they are; • Use current style of photography and not "Zany" or unique pictures that may offend • No shocking images i.e. deaths, depression, lonely people
Colors	• The photography should compliment the color palette of the printed material; • Black type on a white or very light background is best;
Type of Paper	No glossy papers as it is too much glare for senior eyes. Best to go with dull coat paper which will give the d/c instructions a fresh updated look.

ED Quick Delirium Screen

aka: Delirium Triage Screen (DTS)



Brief Confusion Assessment Method (bCAM) Flow Sheet



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Example of a Brief Confusion Assessment Method (bCAM) Flow Sheet

Note: Your workflow may differ

FEATURE 1

Altered Mental Status or Fluctuating Course

No → **bCAM Negative No Delirium** *

Yes ↓

FEATURE 2

Inattention

"Can you name the months backwards from December to July?"

0 or 1 errors → **bCAM Negative No Delirium** *

> 1 errors ↓

FEATURE 3

Altered Level of Consciousness?

Richmond Agitation Sedation Scale

Yes → **bCAM POSITIVE Delirium Present** **

No ↓

FEATURE 4

Disorganized Thinking

1) Will a stone float in water?
2) Are there fish in the sea?
3) Does one pound weigh more than two pounds?
4) Can you use a hammer to pound a nail?
Command: "Hold up this many fingers" (Hold up two fingers), "Now do the same thing with the other hand"(Do not demonstrate).

Any Errors → **bCAM POSITIVE Delirium Present** **

No Errors → **bCAM Negative No Delirium** *

bCAM POSITIVE Delirium Present ↓

****Next Steps**
** Notify Attending*
** Use Delirium Order Set for workup*
** Reassess every 4 hours*

***Prevent delirium!**
Address modifiable risk factors (e.g., pain, environment, noise, tethering, etc.)

Copyright © 2012. Vanderbilt University. The Brief Confusion Assessment Method (bCAM) is adapted from: Ely EW, et al. JAMA. 2001; 286: 2703-2710. Confusion Assessment Method for the Intensive Care Unit. Copyright © 2002, Vanderbilt University. 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

Example Delirium bCAM Workflow

Note: Your workflow may differ

High Risk patients
ESI 3. TRST ≥2

DTS - done in triage

\+

\-

BCAM - done when patient roomed

\+

\-

Notify provider as workup may need to be adjusted AND implement safety measures

Screening complete

Suggested Process and Outcome Measures to Track for ED-Delirium Program

Domain	Measure and Definition	Rationale
Process Measures		
Delirium Risk Assessment	Percentage of patients age 65 and older screened for delirium risk during triage or clinical evaluation	Assessment for delirium risk is the essential first step to identify older adults at high risk for delirium and for whom the delirium prevention protocol is indicated.
Delirium Prevention Protocol	Percentage of at-risk patients who had a delirium prevention protocol initiated	Providing prompt nonpharmacologic intervention to patients at high risk reduces the likelihood of adverse delirium outcomes, including functional decline, increased ED LOS, hospital costs, falls, and death.[2]
Mobility	Percentage of at-risk patients who walked at least once per shift in ED	Mobility is a key intervention for prevention and management of delirium
Hydration	Percentage of at-risk patients who received adequate hydration (IV or PO) in ED	Dehydration is a leading risk factor for delirium in the ED. Attending to patient's fluid and nutritional status is key to prevention.
Non-Pharmacologic Management of Delirium	Percentage of patients with delirium who were managed with non-pharmacologic approaches for delirium symptoms or agitation	Non-pharmacologic management for delirium has demonstrated effectiveness for reducing agitation and delirium symptoms.
Use of Beers Criteria medications	Percentage of at-risk patients who received Beers Criteria medications	Goal is to reduce the percentage. Beers criteria medications are potentially inappropriate medications for older adults, and may increase the risk of delirium and other adverse outcomes.
Benzodiazepine Use	Percentage of patients with agitated delirium receiving a benzodiazepine (except in those with active benzodiazepine or alcohol use)	Goal is to reduce. Benzodiazepines increase the risk of delirium, functional/ cognitive decline, falls, and other adverse outcomes in older adults.[4]
Antipsychotic Use	Percentage of patients with agitated delirium receiving an antipsychotic	Goal is to reduce. Antipsychotics are ineffective to treat delirium, may prolong delirium, increase the risk of functional/cognitive decline, falls, and other adverse outcomes in older adults.
Use of Physical Restraints and/or Bed-Chair Alarms	Percentage of patients at-risk or with delirium who were physically restrained or alarmed at any time during ED stay	Goal is to reduce. Use of physical restraints (or bed/chair alarms) is a precipitating factor for delirium.[3]
Outcome Measures		
Emergency Department Length of Stay (LOS)	Number of hours/days spent in emergency department or observation unit	Goal is to reduce. Delirium increases ED LOS, and conversely, ED LOS greater than 10 hours is associated with a higher risk of delirium in older adults.[1]
Emergency Department Discharge Disposition	Proportion of patients transferred to observation unit; transferred to floor; discharged home without services; discharged home with services; discharged to post-acute care or other setting	This measure allows for assessment of patient's status following ED visit.

Other measures to consider: % with new delirium; transitional care received; discharge with delirium

1. Bo M, et al. Length of Stay in the Emergency Department and Occurrence of Delirium in Older Medical Patients. J Am Geriatr Soc 2016;64(5):1114-9.
2. Josephson SA, et al. Quality Improvement in Neurology: Inpatient and Emergency Care Quality Measure Set: Executive Summary. Neurology 2017;89.
3. Inouye SK, et al. Precipitating Factors for Delirium in Hospitalized Elderly Persons: Predictive Model and Interrelationship with Baseline Vulnerability. JAMA 1996;275(11):852-7.
4. American Geriatrics Society Beers Criteria Update Expert Panel. 2019 Updated AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. JAGS 2019;[Epub ahead of print]:1-21.
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Example Delirium Workflow (Initiating at Bedside)

Note: Your workflow may differ

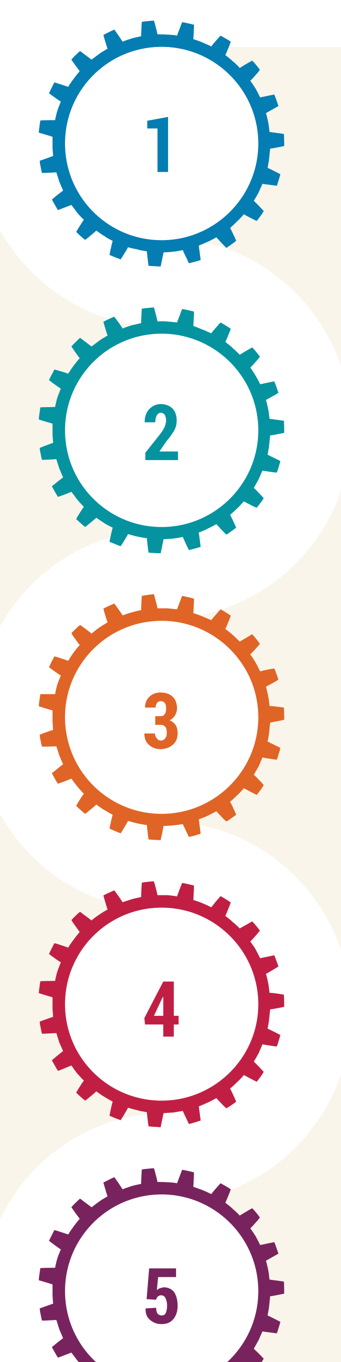
Primary ED nurse RASS and LUNCH

- **+** → **In-depth delirium assessment bCAM**
  - **+** → **Notify MD / PA**
    - → **Begin Delirium work up:**
      1. Geri Pharmacist review of med list – what to do with this info?
      2. UA for UTI – what is considered positive? What to do with this info? Treat vs. not?
      3. Bladder scan for urinary retention
      4. EKG for cardiac changes, troponins?
      5. Check for constipation bowel regimen
      6. Pain assessment / treatment
      7. Pneumonia w/u, head CT?
      8. Falls precautions
    - →
      1. Initiate pre- / intervention measures for worsening delirium
      2. Volunteer-patient orienting
    - → **Admit / obs. vs discharge post evaluation**
      - → TCN evaluation
      - → Admission / Obs
      - → SW evaluation
  - **-** → **Re-screen Interval? By whom? When?**
- **-** → **Re-screen as needed (Reference your ED's protocol for who should screen and how often)**

Example Delirium Screening Workflow in the ED

Note: Your workflow may differ

Stepwise workflow for using two evidence-based scales to improve screening for delirium in the ED:
The **Richmond Agitation-Sedation Scale** (RASS) and the **Brief Confusion Assessment Method** (BCAM)



The primary nurse will open the Primary Assessment tab in Epic and complete the delirium screening along with the rest of the necessary documentation for new ED patients 65 years and older. The first step in screening will be documentation of altered level of consciousness using the RASS.

2a. If the RASS is anything but 0, you will be prompted to complete the bCAM (see 3a). If the patient receives a RASS of 0, the next step is to ask the patient to spell the word 'LUNCH' backwards to test for inattention. (Note: This can only be done for patients who speak English.) If the patient successfully spells lunch backwards, delirium screening is negative.

2b. If the patient cannot spell lunch backwards, this is a sign of inattention. You then move on to completion of the bCAM.

3a. When completing the bCAM, first answer Feature 1: Is there altered mental status of fluctuating course?

3b. In Feature 2, you assess inattention by asking the patient to name the months of the year backwards between December and July. If the patient makes <1 error, screening is negative.

3c. If the patient makes >1 error, the nurse will be prompted to re-document the RASS score in Feature 3.

In Feature 4, the patient is screened for disorganized thinking using the following questions:
- Will a stone float on water?
- Are there fish in the sea?
- Does one pound weigh more than two pounds?
- Can you use a hammer to pound a nail?

If the patient makes any errors, the delirium screening is positive. The nurse will be prompted to notify the attending and a delirium workup will follow with use of an order set in Epic.

The expectation is that the delirium screening will be completed Q4 hours by the RN on all patients at the same time as vital signs (2am, 6am, etc.) to screen for changes in mental status. This delirium screening can also be found in the ED navigator under Suggested Documentation > Delirium Screening.
This screening will only populate for patients 65 years and older.

Delirium Screening Tool: RASS

RICHMOND AGITATION-SEDATION SCALE (RASS)

Scale	Label	Description	
+4	COMBATIVE	Combative, violent, immediate danger to staff	
+3	VERY AGITATED	Pulls to remove tubes or catherers; aggressive	
+2	AGITATED	Frequent non-purposeful movement, fights ventilator	
+1	RESTLESS	Anxious, apprehensive, movements not aggressive	
0	ALERT & CALM	Spontaneously pays attention to caregiver	
-1	DROWSY	Not fully alert, but has sustained awakening to voice (eye opening & contact >10sec)	VOICE
-2	LIGHT SEDATION	Briefly awakens to voice (eyes open & contact <10sec)	
-3	MODERATE SEDATION	Movement or eye opening to voice (no eye contact)	
-4	DEEP SEDATION	No response to voice, but movement or eye opening to physical stimulation	TOUCH
-5	UNAROUSABLE	No response to voice or physical stimulation	

RASS, Richmond Agitation-Sedation Scale
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Suggested Roles and Responsibilites

TIP
Schedule at least 1 Delirium Champion per ED shift

Delirium Champion

Key Attributes

- Health care professionals (often MD, RN, or SW)
- Committed to quality improvement
- Knowledge of delirium
- Proactive leadership and communication skills

Key Responsibilities

- Educational outreach to team members
- Remind staff to complete delirium protocols and ensure adherence
- Lead meetings regarding delirium
- Offers tools for success including staff recognition and incentives
- Gains support from administration and hospital/ED leadership

Delirium Team Members

Key Attributes

Professionals with a variety of perspectives (physicians, nurses, techs, case managers, social workers, pharmacists, physical therapists, geriatrician, geriatric nurse specialist)

Key Responsibilities

- Determine who will be screened (all patients, high risk patients, etc)
- Decide on a screening tool
- Decide who will perform the screening and where
- Determine follow-up protocol for positive screens
- Determine safety measures to be implemented within the ED following a positive screen.

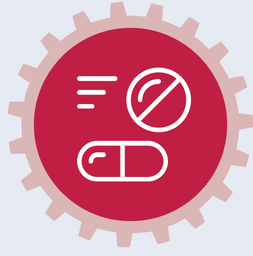
Administrative Leader

Key Attributes

- Senior member of the management team with substantial decision-making capacity

Key Responsibilities

- Allocate personnel and resources
- Remove barriers
- Provide financial support
- Lay groundwork for staff empowerment



Pharmacist

Key Attributes

- Clinical pharmacist with knowledge of delirium

Key Responsibilities

- Medication review for patients at high risk of delirium
- Recognition of potentially deliriogenic medications
- Education of staff about high risk medications
- Discharge education of patients/families about their medications

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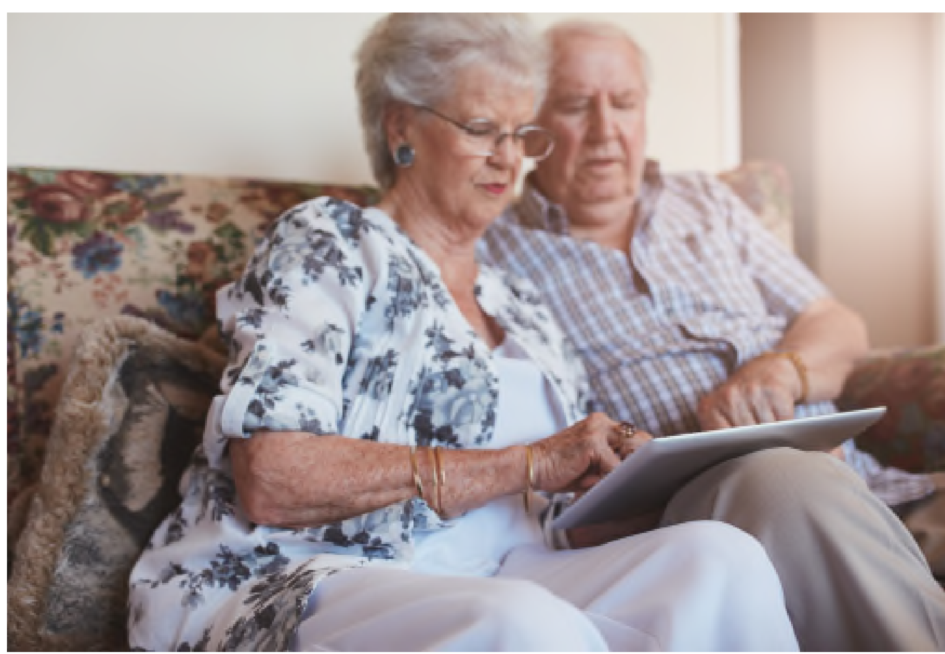
THE ROLE OF THE **DELIRIUM CHAMPION**

CLINICAL DELIRIUM CHAMPION:

A delirium champion is a health care provider (typically MD, RN, or SW) who has an interest in improving care for older adults who come to the emergency department. Delirium champions are supported by senior management and should be proactive clinician leaders with credibility among staff.

The delirium champion will spearhead education efforts and utilization of delirium assessment, recognition, and prevention tools in the emergency department.



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Delirium Champions have:

A commitment to quality care for older adults

Leadership experience

Excellent interpersonal skills

The ability to influence and engage others in a course of action

Delirium Champions Tasks:

Educational outreach to team members

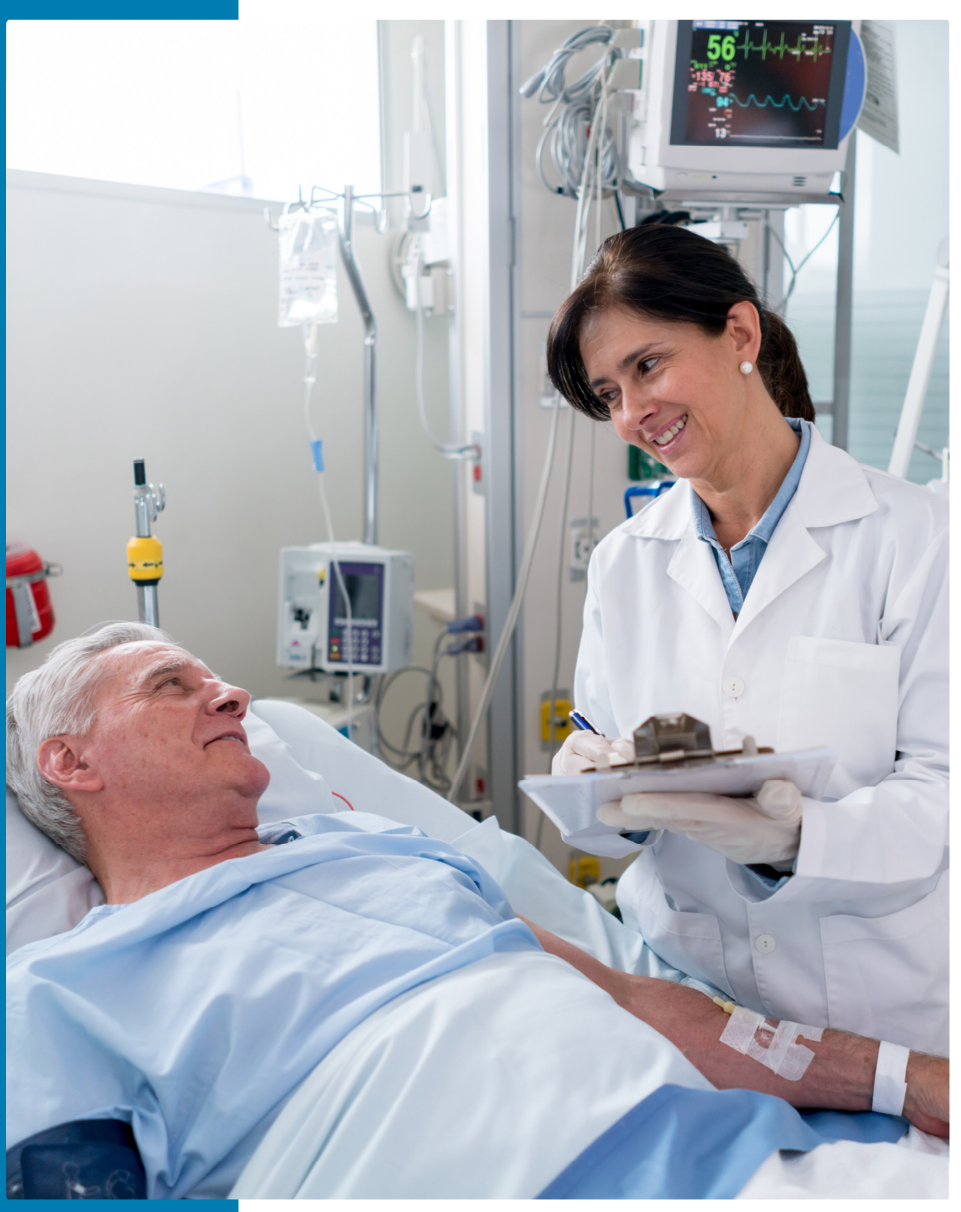
Remind staff to complete identified delirium protocols and ensure adherence

Review charts and provide feedback regarding delirium in the ED

Lead meetings or interdisciplinary rounds regarding delirium

Offer tools for success including staff recognition and incentives

It is recommended that each ED has multiple delirium champions, ideally at least one on each shift in the ED in order to fully promote your delirium protocol.



GAINING ADMINISTRATIVE SUPPORT:

The Delirium Champion should also gain administrative support from the ED and hospital leadership. Administrative leaders have a unique, behind-the-scenes role in establishing and supporting a delirium program in the ED. Administrators will lay the groundwork for staff empowerment and can ensure that the different clinical teams gel in this effort. We recommend approaching a senior member of the hospital management team with decision-making capacity. This individual can help support implementation efforts and provide resources to start and sustain your program.

You will need to convince your administrative leadership that a delirium protocol in the ED is an essential paradigm shift which may require providing additional education or hiring staff. Administrative leaders can help advocate for the change within the hospital decision-making hierarchy and help transmit the importance of the program to other administrative leaders.

Delirium in the Emergency Department (ED): Things for Caregivers to Know

Delirium is common and usually temporary

You can play an important role for your loved one

Immediately report any sudden changes in behavior or other symptoms of delirium to your healthcare provider

Reducing the risk of delirium in the ED

1. Try to bring all medications (or a list of all medications) with you to the ED.
2. If possible, bring a medical information sheet that lists all allergies, current physicians, medical conditions and usual pharmacy.
3. Try to bring eyeglasses, hearing aids, dentures and familiar objects to the ED.
4. Help orient your loved one throughout their stay by speaking calmly in a reassuring tone. Explain where they are and why.
5. If giving instructions, keep them simple and state only one task at a time.
6. As much as possible, stay with your loved one in the Emergency Department and/or hospital.
7. Inform the nurse or doctor immediately whenever you notice subtle changes in your loved one.

Adapted from: Delirium handout for family, Aging Brain Center, Harvard Institute for Aging Research and Delirium brochure by the Care of the Confused Hospitalized

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Caring for your loved one with delirium

1. Seeing familiar people is reassuring for people with delirium. Encourage family and friends to visit.
2. When speaking to someone with delirium, use a slow, clear voice. It's helpful to identify yourself and the person (with delirium) by name.
3. Encourage and assist with adequate food and fluid intake.
4. Not knowing the time of day can increase confusion. Open the curtains and remind them where they are and what day and time it is.
5. Visual or hearing impairment can also worsen confusion. Help them put on their hearing aids and glasses if they are normally worn.
6. Do not try to restrain someone with delirium who is agitated or aggressive. Let them walk around but make sure they are safe from fall hazards.
7. When possible, bring personal items that remind your loved one of home (pictures, dressing gown, favorite music).
8. Talk with staff about any special personal information that may help orient your loved one (hobbies, significant events and people in their lives).

Post-Discharge Family Education

SIGNS OF POTENTIAL DELIRIUM INVOLVE CHANGES IN:

ATTENTION:

- Difficulty focusing attention
- Easily distracted
- Trouble keeping track of what you are saying

SPEECH:

- Rambling or unrelated speech
- Difficult to follow thoughts
- Words that do not make sense
- Switching from subject to subject

SLEEP:

- Excessively sleepy or drowsy during the daytime
- Change from normal sleep behavior during the day

DISORIENTATION:

- Confused about times, places and people

VISUAL OR AUDITORY:

- Seeing or hearing things not actually there

DISTURBANCE:

- Mistaking one thing for something else

BEHAVIOR:

- Inappropriate behavior such as wandering, yelling out, being combative or agitated
- Fearful that others are trying to harm them

RECOGNIZING DELIRIUM:

Possible symptoms of delirium include a sudden change in your loved one's behavior and tend to come and go throughout the day. The earlier you can spot delirium the better, so any suspected change in thinking or behavior should be reported to a medical professional right away.

WHAT TO DO:

Call your loved one's physician right away if any changes noted above occur.

Be prepared to provide the following information:

- Your loved one's name, date of birth, and date of discharge from the ED or hospital
- When you first noticed the signs or changes
- The specific signs noted and if they come and go
- Patient's current temperature
- All current medications (including over the counter) and when last taken
- Diagnoses and details of recent ED visits, hospitalizations, or procedures
- Name and phone numbers of pharmacy and primary care physician

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Accuracy of Dementia Screening Instruments in Emergency Medicine: A Diagnostic Meta-analysis

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ABSTRACT

Background: Dementia is underrecognized in older adult emergency department (ED) patients, which threatens operational efficiency, diagnostic accuracy, and patient satisfaction. The Society for Academic Emergency Medicine geriatric ED guidelines advocate dementia screening using validated instruments.

Objectives: The objective was to perform a systematic review and meta-analysis of the diagnostic accuracy of sufficiently brief screening instruments for dementia in geriatric ED patients. A secondary objective was to define an evidence-based pretest probability of dementia based on published research and then estimate disease thresholds at which dementia screening is most appropriate. This systematic review was registered with PROSPERO (CRD42017074855).

Methods: PubMed, EMBASE, CINAHL, CENTRAL, DARE, and SCOPUS were searched. Studies in which ED patients ages 65 years or older for dementia were included if sufficient details to reconstruct 2 × 2 tables were reported. QUADAS-2 was used to assess study quality with meta-analysis reported if more than one study evaluated the same instrument against the same reference standard. Outcomes were sensitivity, specificity, and positive and negative likelihood ratios (LR+ and LR–). To identify test and treatment thresholds, we employed the Pauker-Kassirer method.

Results: A total of 1,616 publications were identified, of which 16 underwent full text-review; nine studies were included with a weighted average dementia prevalence of 31% (range, 12%–43%). Eight studies used the Mini Mental Status Examination (MMSE) as the reference standard and the other study used the MMSE in conjunction with a geriatrician's neurocognitive evaluation. Blinding to the index test and/or reference standard was inadequate in four studies. Eight instruments were evaluated in 2,423 patients across four countries in Europe and North America. The Abbreviated Mental Test (AMT-4) most accurately ruled in dementia (LR+ = 7.69 [95% confidence interval {CI} = 3.45–17.10]) while the Brief Alzheimer's Screen most accurately ruled out dementia (LR– = 0.10 [95% CI = 0.02–0.28]). Using estimates of diagnostic accuracy for AMT-4 from this meta-analysis as one trigger for more comprehensive geriatric vulnerability assessments, ED dementia screening benefits patients when the prescreening probability of dementia is between 14 and 36%.

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Data Supplement S3

Appendix of ED Dementia Screening Instruments

AD8

If the patient has an accompanying reliable informant, they are asked the following questions.

Has this patient displayed any of the following issues? Remember a "Yes" response indicates that you think there has been **a change in the last several years** caused by thinking and memory (cognitive) problems.

1) Problems with judgment (example, falls for scams, bad financial decisions, buys gifts inappropriate for recipients)?
2) Reduced interest in hobbies/activities?
3) Repeats questions, stories, or statements?
4) Trouble learning how to use a tool, appliance, or gadget (VCR, computer, microwave, remote control)?
5) Forgets correct month or year?
6) Difficulty handling complicated financial affairs (for example, balancing checkbook, income taxes, paying bills)?
7) Difficulty remembering appointments?
8) Consistent problems with thinking and/or memory?

Each affirmative response is one-point. A score of ≥ 2 is considered high-risk for dementia.

Abbreviated Mental Test-4

1) How old are you?
2) What is your birthday?
3) What is the name of this place?
4) What year is this?

Any error is considered high-risk for dementia.

Animal Fluency

Name as many animals as possible in 60 seconds.

Investigators explored both <10 animals named and <15 animals named as high-risk for dementia.

Brief Alzheimer's Screen

Instructions to the patient: I would like to ask you some questions that ask you to use your memory. I am going to name three objects. Please wait until I say all three words, then repeat them. Remember what they are because I am going to ask you to name them again in a few minutes. Please repeat these words for me: APPLE – TABLE – PENNY
(May repeat names 3 times if necessary, repetition not scored)

Did the patient correctly repeat all three words? **YES** **NO**

1) What is the date? (D) **Correct** **Incorrect**
2) Name as many animals as you can in 30-seconds. (A) ___________ (number)

3) Spell "world" backwards (S) Number correct
   0 1 2 3 4 5

4) Three-item recall (R) Number correct
   0 1 2 3

Brief Alzheimer's Screen = (3.03 x R) + (0.67 x A) = (4.75 x D) + (2.01 x S)

BAS ≤ 26 is consistent with dementia

Mini-Cog

Instructions for the patient: I would like to do some things to test your memory. I am going to name three objects. Please wait until I say all three words, and then repeat them. Remember what they are because I am going to ask you to name them again in a few minutes. Please remember these words for me: APPLE – TABLE – PENNY.

Now, instruct the patient to draw the face of a clock on the back of this paper. After the patient puts the numbers on the clock face, ask him to draw the hands of the clock to read ten minutes after eleven. These instructions may be repeated, but no additional instructions should be given. Give the patient as much time as necessary to complete. The clock is considered normal if all numbers are present in the correct sequence and position, and the hands readably display the requested time.

What are the three objects I asked you to remember?

1. Apple __________ (1)
2. Table __________ (1)
3. Penny __________ (1)

Total Score: __________ **(3)**

High-risk for dementia if score = 0 or if score ≤2 with an abnormal clock.

Ottawa 3DY

1) What day is today?	**Correct**	**Incorrect**				
2) What is the date?	**Correct**	**Incorrect**				
3) Spell "world" backwards	Number correct					
	0	**1**	**2**	**3**	**4**	**5**
4) What year is this?	**Correct**	**Incorrect**				

A single incorrect response on any of these four items is consistent with dementia.

Six Item Screener

Instructions to the patient: I would like to ask you some questions that may ask you to use your memory. I am going to name three objects. Please wait until I say all three words, then repeat them. Remember these words for me: GRASS – PAPER – SHOE. (May repeat names 3 times if necessary, repetition not scored).

1) What year is this?
2) What month is this?
3) What is the day of the week?

After one-minute. What are the three objects that I asked you to remember?

4) [Grass]
5) [Paper]
6) [Shoe]

Each correct response is awarded one-point. Two or more errors is considered high-risk for dementia.

Short Blessed Test*

Instructions to the patient: Now I would like to ask you some questions to check your memory and concentration. Some of them may be easy and some of them may be hard.

		Correct	**Incorrect**
1)	What year is it now?	**0**	**1**
2)	What month is this?	**0**	**1**

Please repeat this name and address after me:

John Brown, 42 Market Street, Chicago
John Brown, 42 Market Street, Chicago
John Brown, 42 Market Street, Chicago
(underline words repeated correctly in each trial)
Trials to learn _____ (if unable to do in 3 trials = C)

3) Without looking at your watch or clock, tell me what time it is. (If response is vague, prompt for specific response within 1-hour)

Correct	**Incorrect**
0	**1**

4) Count aloud backwards from 20 to 1 (mark correctly sequenced numerals – if subject starts counting forward or forgets the task, repeat instructions and score one error)

0 1 2 Errors

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

5) Say the months of the year in reverse order. If the tester needs to prompt with the last name of the month of the year, one error should be scored – mark correctly sequenced months.

D N O S A JL JN MY AP MR F J **0 1 2 Errors**

6) Repeat the name and address you were asked to remember.

(John Brown, 42 Market Street, Chicago) **0 1 2 3 4 5 Errors**

______, _____, ___, __________, ________

Item	Errors	Weighting Factor	Final Item Score
1		x 4	
2		x 3	
3		x 3	
4		x 2	
5		x 2	
6		x 2	

Sum Total (range 0-28) =
0-4 = normal cognition
5-9 = questionable impairment
≥ 10 = impairment consistent with dementia

* Also known as Orientation-Memory-Concentration Test, Quick Confusion Scale, and the 6-Item Cognitive Impairment Test.