### 3J: Delirium Evaluation Bundle: Digit Span, Short Portable Mental Status Questionnaire, and Confusion Assessment Method

Background:Patients found to have impaired mental activity as a risk factor for falls require further evaluation. The Delirium Evaluation Bundle is designed to help determine if the patient has delirium.

Reference:

Digit Span: Scoring guidelines from Montreal Cognitive Assessment are available at the Veterans Affairs (VA) Web page for the National Parkinson’s Disease Research, Education, and Clinical Center & VA PD Consortium, [www.parkinsons.va.gov/consortium/moca.asp](http://www.parkinsons.va.gov/consortium/moca.asp).

Short Portable Mental Status Questionnaire: Adapted from (1) Hospital Elder Life Program and (2) Pfeiffer E. A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. J Am Geriatr Soc 1975;23:433-41.

Confusion Assessment Method: Adapted from Inouye SK, van Dyck CH, Alessi CA, et al. Clarifying confusion. Ann Intern Med 1990;113(12):941-8.

How to use this tool:A proper evaluation for delirium requires both standardized testing and direct observation of the patient’s behavior. Performing the Digit Span Test and the Short Portable Mental Status Questionnaire will provide information that can be used in the Confusion Assessment Method (CAM). Instructions for each test are explained below. Use the provided link to access the CAM training manual.

This tool should be used in any patient whose mental status is unclear on admission or transfer to a unit, or whose mental status has acutely declined. The tool will allow you to determine if a patient is delirious and therefore requires further medical evaluation for delirium. Physicians, nurse practitioners, and physician assistants can carry out this assessment, but training is required (use links provided below to access material). The training is particularly important to distinguish delirium from behavioral symptoms of dementia.

Consider having clinical champions for delirium assessment who can be called in to evaluate a patient if needed. If your hospital uses an electronic health record, consult your hospital’s information systems staff about integrating this tool into the electronic health record.

##### Digit Span

Now I am going to say some numbers. Please repeat them back to me.

[SAY DIGITS AT RATE OF ONE PER SECOND]

| DIGITS FORWARD (DF) | Response |
| --- | --- |
| 2 - 9 - 1 | \_\_\_\_ - \_\_\_\_ - \_\_\_\_ |
| 3 - 5 - 7 - 4 | \_\_\_\_ - \_\_\_\_ - \_\_\_\_ - \_\_\_\_ |
| 6 - 1 - 9 - 2 - 7 | \_\_\_\_ - \_\_\_\_ - \_\_\_\_ - \_\_\_\_ - \_\_\_\_ |

Now I am going to read some more numbers, but I want you to repeat them in backward order from the way I read them to you. So, for example, if I said 6-4, you would say 4-6.

[SAY DIGITS AT RATE OF ONE PER SECOND]

| DIGITS BACKWARD (DB) | Response |
| --- | --- |
| 7 - 4 – 2 | \_\_\_\_ - \_\_\_\_ - \_\_\_\_ |
| 5 - 3 - 8 - 4 | \_\_\_\_ - \_\_\_\_ - \_\_\_\_ - \_\_\_\_ |

SCORING: Patients should be able to repeat 5 digits forward and 3 digits backward under normal conditions. Inability to do so represents an abnormal test result.

##### Short Portable Mental Status Questionnaire

| **Question** | **Response** | | | **Error?** |
| --- | --- | --- | --- | --- |
| What are the date, month, and year?\* | Date | Month | Year |  |
| What is the day of the week? |  | | |  |
| What is the name of this place? |  | | |  |
| What is your phone number? |  | | |  |
| How old are you? |  | | |  |
| When were you born? |  | | |  |
| Who is the current president? |  | | |  |
| Who was the president before him? |  | | |  |
| What was your mother’s maiden name? |  | | |  |
| Can you count backward from 20 by 3s? |  | | |  |

\*A mistake on ANY part of this question should be scored as an error.

Total Errors: \_\_\_\_\_\_\_

SCORING\*:

0-2 errors: normal mental functioning

3-4 errors: mild cognitive impairment

5-7 errors: moderate cognitive impairment

8 or more errors: severe cognitive impairment

\*One more error is allowed in the scoring if a patient has had a grade school education or less. One less error is allowed if the patient has had education beyond the high school level.

The Short Portable Mental Status Questionnaire was originally published as Pfeiffer E. A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. J Am Geriatr Soc 1975;23:433-41. The version shown here is adapted from the Hospital Elder Life Program ([www.hospitalelderlifeprogram.org](http://www.hospitalelderlifeprogram.org/) ). Used with permission. © E. Pfeiffer, 1994.

##### Confusion Assessment Method

After checking the patient’s orientation and performing the Digit Span Test and Short Portable Mental Status Questionnaire, rate the patient using the Confusion Assessment Method. This is best done after going through a training process, available at [www.hospitalelderlifeprogram.org](http://www.hospitalelderlifeprogram.org/). After agreement to conditions of use, download the Confusion Assessment Method Training Manual at [www.hospitalelderlifeprogram.org/pdf/TheConfusionAssessmentMethodTrainingManual.pdf](http://www.hospitalelderlifeprogram.org/pdf/TheConfusionAssessmentMethodTrainingManual.pdf).

A brief summary of the Confusion Assessment Method for nurses is also available through the Hartford Institute for Geriatric Nursing at: <http://consultgerirn.org/uploads/File/trythis/try_this_13.pdf>.

A 50-minute training video for nurses is available through the Hartford Institute for Geriatric Nursing at: <http://consultgerirn.org/resources/media/?vid_id=4361983#player_container>.

To rate the patient with the Confusion Assessment Method, use the worksheet on the next page.

Confusion Assessment Method Shortened Version Worksheet

| EVALUATOR: | | | DATE: | |
| --- | --- | --- | --- | --- |
| I. ACUTE ONSET AND FLUCTUATING COURSE | | |  | BOX 1 |
| a. Is there evidence of an acute change in mental status from the patient’s baseline? | | | No | Yes |
| b. Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go or increase and decrease in severity? | | | No | Yes |
| II. INATTENTION | | |  |  |
| Did the patient have difficulty focusing attention, for example, being easily distractible or having difficulty keeping track of what was being said? | | | No | Yes |
| III. DISORGANIZED THINKING | | |  |  |
| Was the patient’s thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject? | | |  | BOX 2 |
| No | Yes |
| IV. ALTERED LEVEL OF CONSCIOUSNESS | | |  |  |
| Overall, how would you rate the patient’s level of consciousness? | | |  |  |
| Alert (normal) | | |  |  |
|  | Vigilant (hyperalert)  Lethargic (drowsy, easily aroused)  Stupor (difficult to arouse)  Coma (unarousable) |  |  |  |
| Do any checks appear in this box? | | | No | Yes |

If all items in Box 1 are checked and at least one item in Box 2 is checked, a diagnosis of delirium is suggested.

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