

Cognitive Vital Signs to Identify Delirium in the Emergency Department

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Disclosure

- I, Sangil Lee, am Supported by a Health Resources and Services Administration Geriatric Workforce Enhancement Program Award, U1QHP28731.

Learning Objectives

- 1. Understand the definition of delirium
- 2. List evaluation tools for delirium in the acute care setting
- 3. Familiarize with Delirium Triage Screen and the application of DTS in the ED.

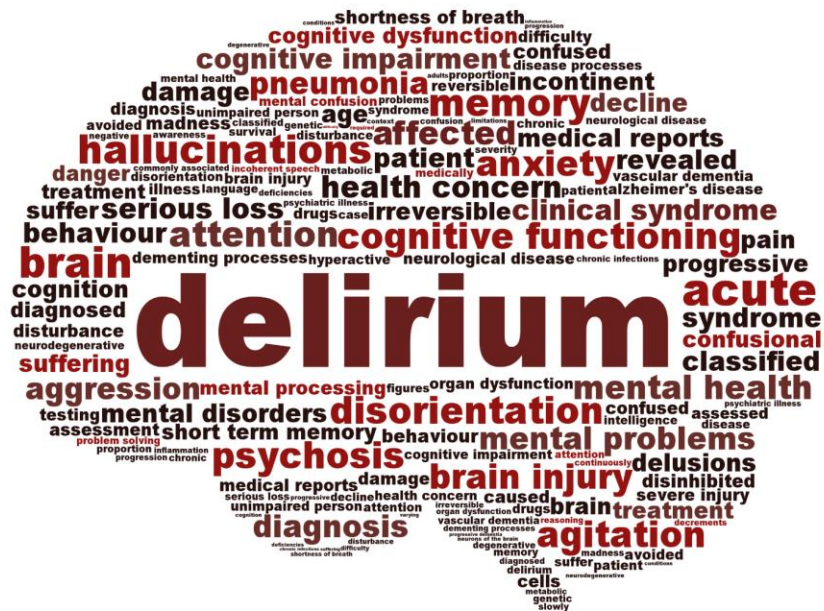
Delirium - case scenario



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You are taking care of a 78-year-old female who fell and presented to the ED with left sided hip pain. Her LE has severe pain with ROM and is externally rotated. Patient is trying to pull IV and not answering any of your questions. Her caregiver states she is usually conversant.

What is delirium?



- Delirium is a global brain dysfunction that is common, serious and fatal.
- The incidence of delirium is 8-16% in the ED, 20-40% in the inpatient unit.
- 80% of delirium cases are missed by clinical gestalt alone.

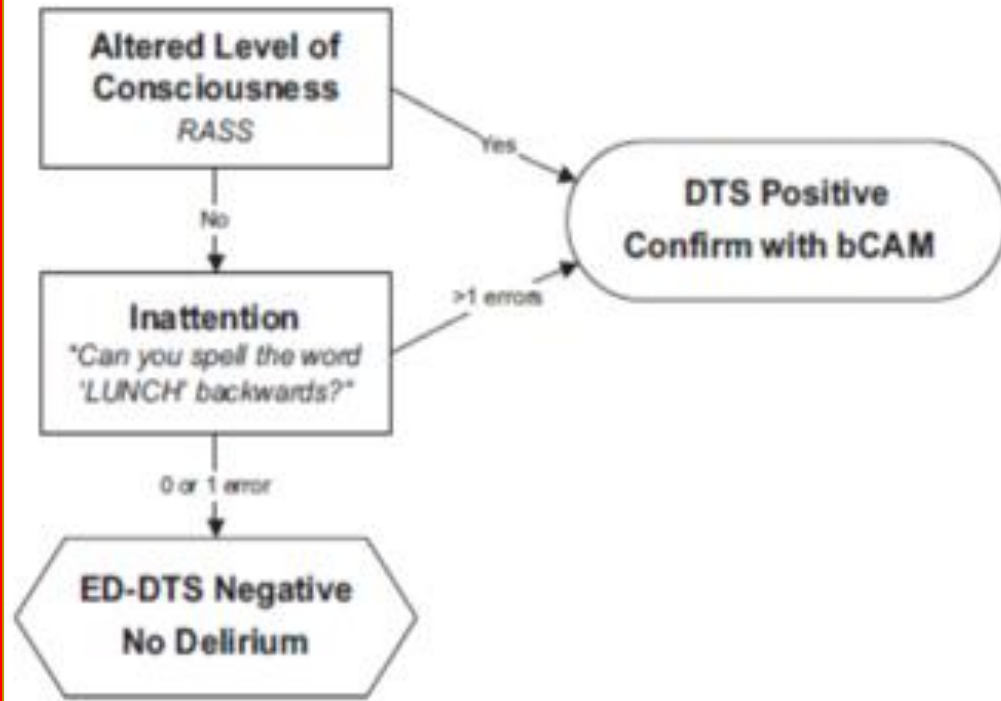
Routine delirium screening will lead to:

1. Accurate diagnosis
2. Early identification of high risk population (agitation, fall, 1 to 1 care, code green), and
3. Increased reimbursement.

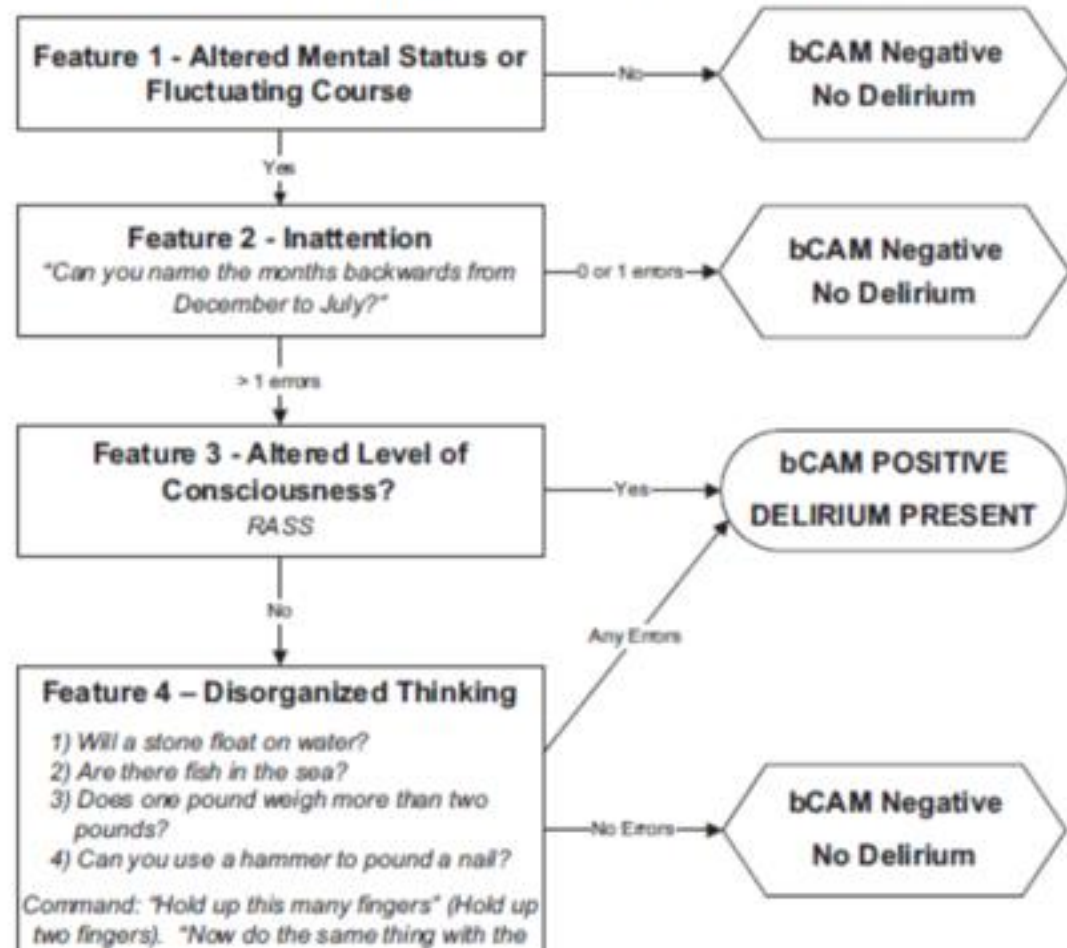
What is the best way to screen for delirium?

Delirium Screening Tools

Step 1: Delirium Triage Screen Rule-out Screen: Highly Sensitive



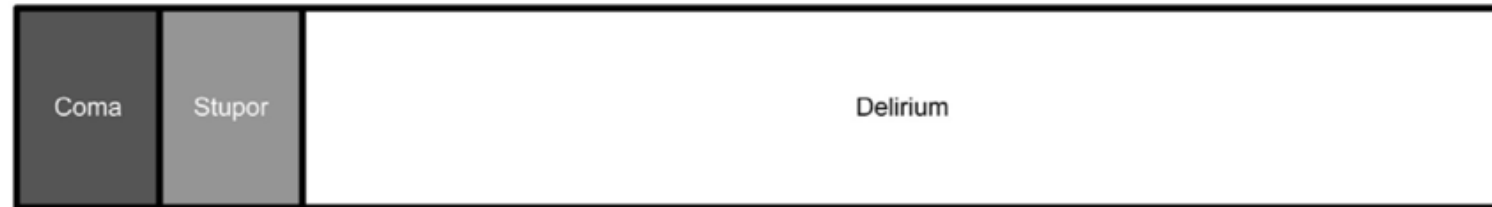
Confirmation: Highly Specific



Delirium Screening Tools -

RASS: Richmond Agitation-Sedation Scale

Spectrum of Acute Brain Dysfunction



RASS	-5	-4	-3	-2	-1	0	+1	+2	+3	+4
	Unarousable: No response to voice or physical stimulation	Deep sedation: No response to voice, but responds to physical stimulation	Moderate Sedation: Responds to voice, but does not make eye contact	Light Sedation: Responds to voice, but can only make eye contact for < 10 seconds	Drowsy: Responds to voice and can make eye contact for > 10 seconds	Alert and calm	Restless: Anxious, but movements not aggressive	Agitated: Frequent, non-purposeful movement	Very Agitated: Pulls or removes tubes or catheters, aggressive	Combative: Overtly combative, violent, danger to staff



Delirium Screening Tools - Testing Inattention

- Ask patient to spell “LUNCH” backwards
- 0 or 1 error = Negative DTS
- > 1 = Positive DTS

Delirium Screening Tools – DTS Negative

- Patient does not appear to have altered consciousness (0 on RASS)
AND does not display inattention = Negative DTS
 - 98% Sensitivity
 - 55% Specificity

Delirium Screening Tools – EPIC

Arrival Plan
Suicide Screen

TRIAL DISPOSITION
Called from Waiting
Disposition

EXTENDED ARRIVAL
Allergies
Medication History
Treatment PTA
Mechanism of Injury
Assessments
OB/Gyn Status
Tobacco and Nico...
Med/Surg History
Alcohol/Drug Hist...
Facility/Agency Info
Advance Directives
Assess Adv Direc...

REQUIRED ASSESSMENTS
Abuse Risk
Cognitive/Functional
Delirium Triage S...
KINDER1 Fall Risk

ORDERS
Orders Report
Order Sets
Orders

Delirium Triage Screen

Time taken: 1456 1/22/2020 Values By

Show: Row Info Last Filed Details

Delirium Triage Screen (DTS)

Richmond Agitation Sedation Scale (RASS)

+4=Combative +3=Very agitated +2=Agitated +1=Restless **0=Alert and calm** -1=Drowsy -2=Light sedation -3=Moderate sedation -4=Deep sedation -5=Unarousable sedation

Criteria	Definition	Points
Combative	Overtly combative, violent, immediate danger to staff	+4
Very agitated	Pulls or removes tube(s) or catheter(s); aggressive	+3
Agitated	Frequent non-purposeful movement, fights ventilator	+2
Restless	Anxious but movements not aggressive vigorous	+1
Alert and calm		0
Drowsy	Not fully alert, but has sustained awakening (eye-opening/eye contact) to voice (>10 seconds)	-1
Light sedation	Briefly awakens with eye contact to voice (<10 seconds)	-2
Moderate sedation	Movement or eye opening to voice (but no eye contact)	-3
Deep sedation	No response to voice, but movement or eye opening to physical stimulation	-4
Unarousable	No response to voice or physical stimulation	-5

Sessler CN, Grap MJ, Brophy GM. Multidisciplinary management of sedation and analgesia in critical care. *Semin Respir Crit Care Med.* 2001;22(2):211-26.

Ask the patient to spell the word "LUNCH" backwards and record the number of errors, correct response is "H-C-N-U-L."

No errors **1 error** 2 or more errors Unable to complete task Patient refused

Stop the task if there is a significant pause or if the patient perseverates on a specific letter for > 15 seconds and choose "Unable to complete task." Count each missing or out of order letter as one error.

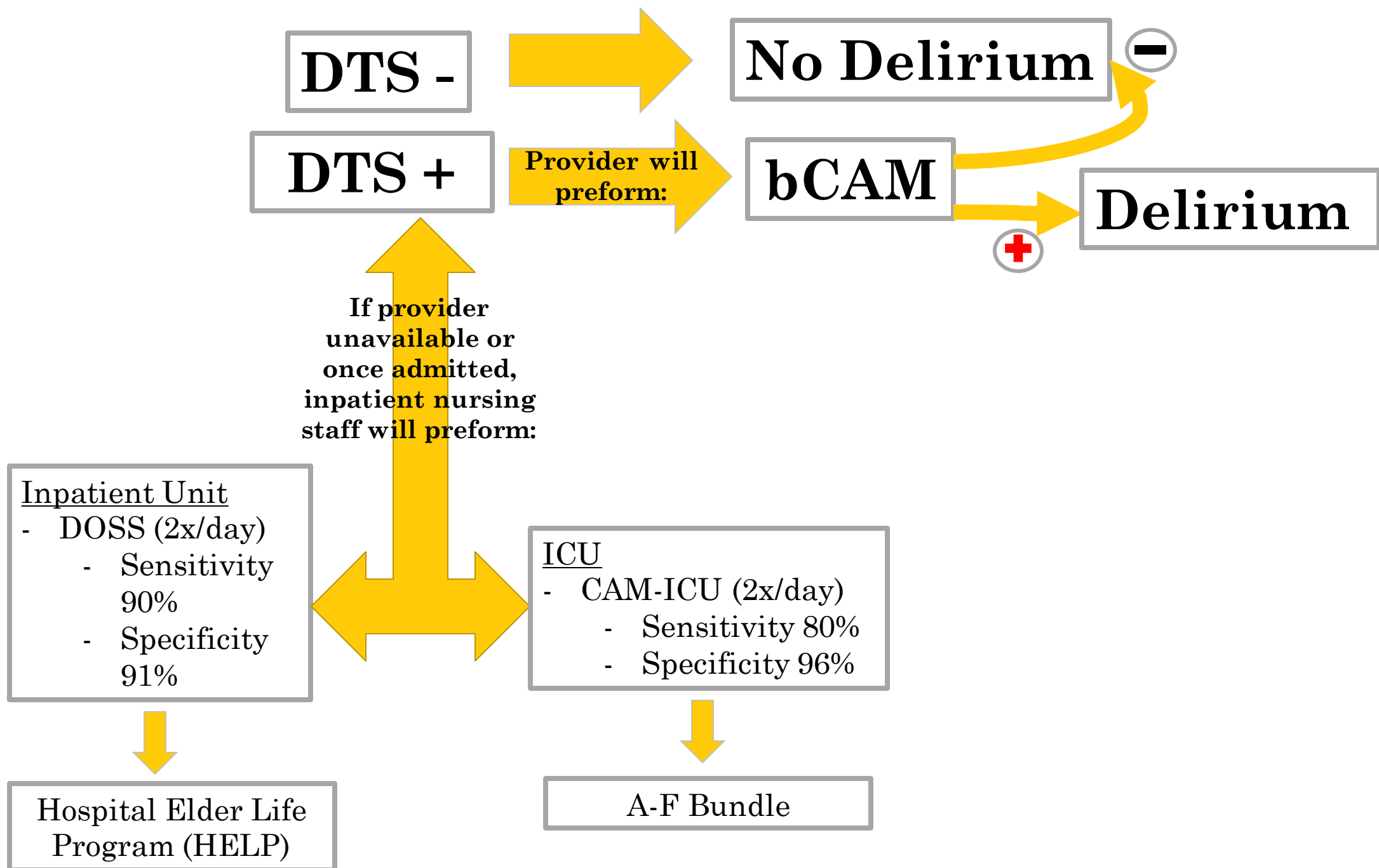
DTS outcome

Negative - No additional delirium assessment required

Han JH, Wilson A, Vasilevskis EE, Shintani A, Schnelle JF, Dittus RS, Graves AJ, Storrow AB, Shuster J, Ely EW. Diagnosing delirium in older emergency department patients: validity and reliability of the delirium triage screen and the brief confusion assessment method. *Ann Emerg Med.* 2013; 62(5):457-465. Used with permission.

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Delirium Screening Tools – What if the patient screens positive for delirium?

- ❖ “Tolerate, Anticipate, Don’t Agitate” (TADA)
 - *Tolerate* patient’s behavior
 - Allow patient to feel sense of control
 - May indicate an underlying issue the patient cannot adequately communicate
 - *Anticipate* what the patient might do
 - Avoid factors that may cause or exacerbate agitation
 - *Don’t Agitate*
 - Try to reduce distress by avoiding possible agitators such as reorientation, tethers not needed for critical care (nasal cannula oxygen, multiple monitoring devices, etc.), physical restraints

FAQ

- ❖ Q: Is the DTS valid in patients who are illiterate?
 - Answer: Yes. Patients with lower educational attainment are at increased risk for delirium.

- ❖ Q: Do I have to do the "LUNCH" backwards task if the patient has an altered level of consciousness?
 - Answer: No, a patient who has an altered level of consciousness is already DTS positive.

- ❖ Q: How should I rate the DTS if the patient refuses to spell the word "LUNCH" backwards or can't perform this task at all?
 - Answer: The patient is considered DTS positive.

FAQ

- ❖ Q: What if the patient switches two letters during the spelling test?
(ex: H-C-U-N-L)
 - Answer: The patient made 2 errors and is DTS positive.

- ❖ Q: What if the patient takes a long pause or perseverates on a letter during the spelling test?
 - Answer: If the patient pauses or perseverates for > 15 seconds, the DTS is considered positive.

Delirium Screening Tools – here is how you do it!

- Link: <http://eddelirium.org/delirium-assessment/dts/>

Summary

- Delirium is a serious medical condition among older adults.
- DTS is a two-step approach to screen older adults for delirium.
- Positive DTS will be updated to provider who will perform bCAM.