



Outline of Session

- History
- Objectives
- Delirium
- Detecting Delirium
 - ↳ CAM
 - ↳ SMMSE
- Break
- Case Scenario
- Screening Process - Delirium Day
- Post Test
- Questions/Review

* Lunch - End of Session - a.m. session
 - Beginning of Session - p.m. session

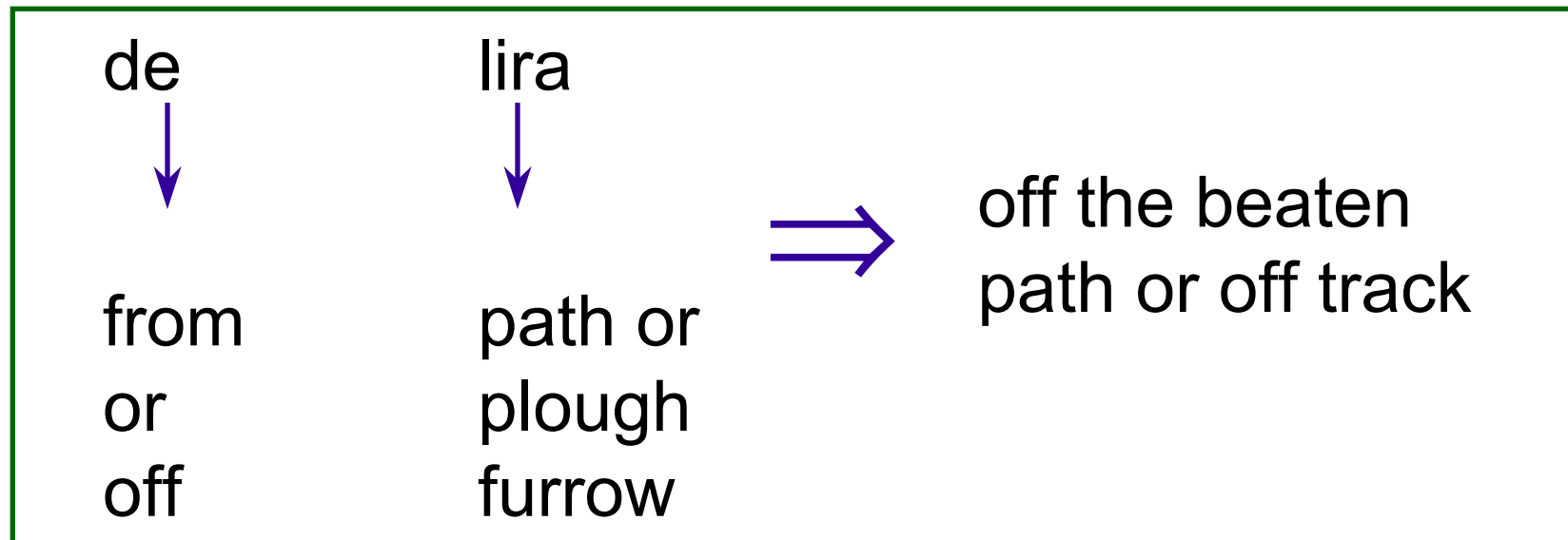


History of Delirium Project

- | | |
|------------------------|--|
| 1999 June | - SHCERP Retreat |
| 1999 September | - Delirium Prevention & Education Committee Struck |
| 2000 | - Literature Review |
| | - Poster Design |
| | - Design Delirium Screening Day |
| 2001 January | - Pilot of CAM SMMSE |
| 2001 April | - Ethics Committee Review and Approval |
| 2001 June | - Letter to VP's |
| | - Meeting with Clinical Managers |
| | - Advertising Materials Complete (Poster/Flyer) |
| 2001 July | - Recruitment of Staff/Volunteers |
| | - Liaise with Professional Practice |
| 2001 August | - Recruitment of Staff |
| | - Meeting with Clinical Educators |
| 2001 September | - Education Sessions |
| | - Advertise Delirium Day |
| 2001 October 17 | - Delirium Day |
-




Delirium Definitions





The delirious state may also be called by:

- Acute confusional state
 - Acute organic brain syndrome
 - Acute brain failure
 - Acute toxic psychosis
- 



Delirium (DSM-IV)

- Disturbance of consciousness
- Change in cognition
- Disturbance develops over a short period of time
- Evidence of etiology

*** All criteria must be met**



Clinical Features of Delirium

Tell me about your last delirious patient?





Clinical Features (continued)

- ***Acute onset***
 - ***Poor attention***
 - ***Fluctuating course***
 - ***Disorganized thinking***
 - ***Altered Level of Consciousness***
 - Disorientation
 - Memory impairment
 - Sleep/wake disturbance
 - Psychomotor agitation/retardation
 - Hallucinations/misperceptions
-



Risk Factors

Predictive Model



Prevention

- Promote health, rest and sleep
- Promote mental stimulation
- Promote healthy vision
- Promote healthy hearing
- Promote healthy eating
- Promote adequate hydration
- Promote physical activity



Prevention (continued)

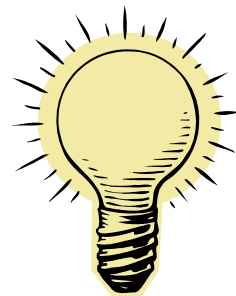
- Family visits and involvement in care.



- Early ambulation or ROM 3x/day.

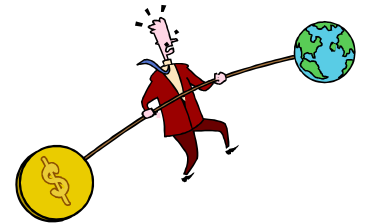


- Adequate lighting.



Prevention (continued)

➤ Correct electrolyte imbalance and severe anemia.



➤ Minimize use of drugs - impact mental status.



➤ Follow Least Restraint Policy.






Management

- Investigate cause
 - Optimal sensory input
 - Familiar persons, consistent staffing
 - Early mobilization
 - Toileting routine
-



Comfort Measures (continued)

- Avoid restraints
 - Adequate nutrition
 - Sleep
 - 👉 conservative measures
 - 👉 short acting benzodiazepine, lorazepam, 0.5 - 1mg prn
- 



Comfort Measures (continued)

➤ Agitation/Hallucination/Delusion


☞ conservative measures

☞ high potency antipsychotic:

↳ Haloperidol .25-0.5 mg po/IM
q 6h prn x 24 hr.

↳ Risperidone .5-1 mg po

↳ Olanzapine 2.5-5 mg po SL or IM





Data Collection Tool





Delirium Alert






Confusion Assessment

Method

Acute Onset

Is there evidence of an acute change in mental status from the patient's baseline?





Confusion Assessment (continued)

Inattention

Did the patient have difficulty focusing attention, for example, being easily distracted or having difficulty keeping track of what was being said?

Did this behaviour fluctuate during the interview, that is tend to come and go or increase and decrease in severity?




Confusion Assessment (continued)

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?

Altered Level of Consciousness

Overall, how would you rate this patient's level of consciousness?





Confusion Assessment (continued)

Disorientation


Was the patient disoriented at any time during the interview, such as thinking that he or she was somewhere other than the hospital, using the wrong bed, or misjudging the time of day?



Confusion Assessment (continued)

Memory Impairment

Did the patient demonstrate any memory problems during the interview, such as inability to remember events in the hospital or difficulty remembering instructions?






Confusion Assessment (continued)

Perceptual Disturbances

Did the patient have any evidence of perceptual disturbances, for example, hallucinations, illusions, or misinterpretation (such as thinking something was wrong when it was not?)





Confusion Assessment (continued)

Psychomotor Agitation

Part I - At any time during the interview, did the patient have an unusually increased level of motor activity, such as restlessness, picking at bedclothes, tapping fingers, or making frequent sudden changes in position?


Part II - At any time during the interview, did the patient have an unusually decreased level of motor activity, such as sluggishness, staring into space, staying in one position for a long time, or moving very slowly?



Confusion Assessment (continued)

Altered Sleep-Wake Cycle

Did the patient have evidence of disturbance of the sleep-wake cycle, such as excessive daytime sleepiness with insomnia at night?





Scoring

To have a positive CAM result, the patient must:

1. Presence of acute onset or fluctuating course.

AND

2. Inattention.

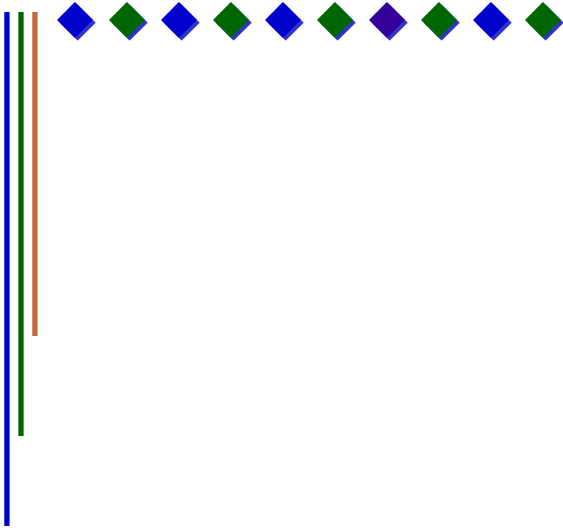
AND EITHER

3. Disorganized thinking.
 4. Altered level of consciousness.
-



Inter-rater and intra-rater reliability





Practice





Standardized Mini-Mental State Examination (SMMSE)

Say: *I am going to ask some questions and give you some problems to solve. Please try to answer the best that you can.*

SECTION 1 - ORIENTATION

Allow 10 SECONDS FOR each reply

1. **What year is this?** (accept exact answer only taking the last answer given) _____/1
2. **What season is this?** (during the last week of the old season or first week of new season, accept either) _____/1
3. **What month of the year is this?** (on the first day of the month accept previous month, on the last day of month, accept next month) _____/1
4. **What is today's date?** (accept previous or next day's date) _____/1
5. **What day of the week is this?** (accept exact answer only) _____/1
6. **What country are we in?** (accept exact answer only) _____/1
7. **What province are we in?** (accept exact answer only) _____/1





8. *What city/town are we in?* (accept exact answer only) _____/1

9. *What is the name of this hospital/building?* (accept name of hospital or institute only) _____/1

10. *What floor of the building are we on?* (accept exact answer only) _____/1

SECTION 2 - COGNTIION

11. Say: *I am going to name three objects. After I have said all three objects,* _____/3

I want you to repeat them. Remember what they are, because I am going to ask you to name them again in a few minutes.

(say them slowly at approximately 1-second intervals)

Ball Car Man For repeated use: Bell, jar, fan; Bill, tar, can; Bull, war, pan

Please repeat the three items for me. (score 1 point for each correct reply on the first attempt) If subject did not repeat all three, repeat until they are learned, or up to a maximum of five times.

Allow 20 SECONDS FOR REPLY

12. Say: *Spell the word WORLD.* (You may help the subject to spell it correctly) _____/5

Now spell it backwards pleaseD L R O W

(If the subject cannot spell even with assistance, score 0) _____

Allow 30 SECONDS TO SPELL BACKWARDS





13. Ask: ***Now what were the three objects that I asked you to remember?***

____/3

(score 1 point for each correct response regardless of order).

Allow 10 SECONDS FOR REPLY

14. Show wristwatch. Ask: ***What is this called?***

____/1

(score 1 point for correct response; accept only “wristwatch”, “watch” or “timepiece”;
do not accept “clock” or “time”, etc.)

Allow 10 SECONDS FOR REPLY

15. Show pencil. Ask: ***What is this called?*** (score 1 point for correct response.

____/1

Accept “pencil” only - score 0 for pen)

Allow 10 SECONDS FOR REPLY

16. Say: ***I’d like you to repeat this phrase after me: “no ifs, ands or buts”***

____/1

(Score 1 point for correct repetition. Must be exact)

Allow 10 SECONDS FOR REPLY

17. Say: ***Please read the words on this page and then do what it says.***

____/1

Then, hand subject the sheet with CLOSE YOUR EYES on it.

If the subject just reads and does not close eyes, you may repeat;

Read the words on this page and then do what it says,

a maximum of three times. Score 1 point only if subject closes eyes.

Subject does not have to read aloud.

Allow 10 SECONDS FOR REPLY





18. Hand the subject a pencil and paper. Say: **Write any complete sentence on that piece of paper.** Score 1 point. The sentence should make sense and must have subject, verb and object. Ignore spelling errors . _____/1
Allow 30 SECONDS FOR REPLY

19. Place design, pencil, eraser and paper in front of the subject. _____/1
Say: **Copy this design please.** Allow multiple tries. Wait until the patient is finished and hands it back. Score 1 point for a correctly copied diagram
The subject must have drawn a four-sided figure between two five-sided figures.
Maximum time: ONE MINUTE

**** OBSERVE WHICH HAND IS DOMINANT (I.E. HOLDING THE PENCIL) ****

20. Ask the subject if he or she is right handed. Alternate right/left in statement, e.g. if the subject is right handed,
Take a piece of paper, hold it up in front of the subject and say:
Take this paper in your right/left hand (opposite to the dominant hand), fold the paper in half once with both hands and put the paper down on the floor.
Score 1 point for each instruction executed correctly.
Takes paper in correct hand _____/1
Folds in half _____/1
Puts on floor _____/1

Allow 30 SECONDS FOR REPLY

TOTAL SCORE: _____/30

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Goal of the Project

Building on experience of other clinical projects and using evidence from the literature, this project will enhance the awareness of delirium in staff of our local hospitals, and advocate the implementation of protocols for the effective prevention of delirium in hospitalized older patients.

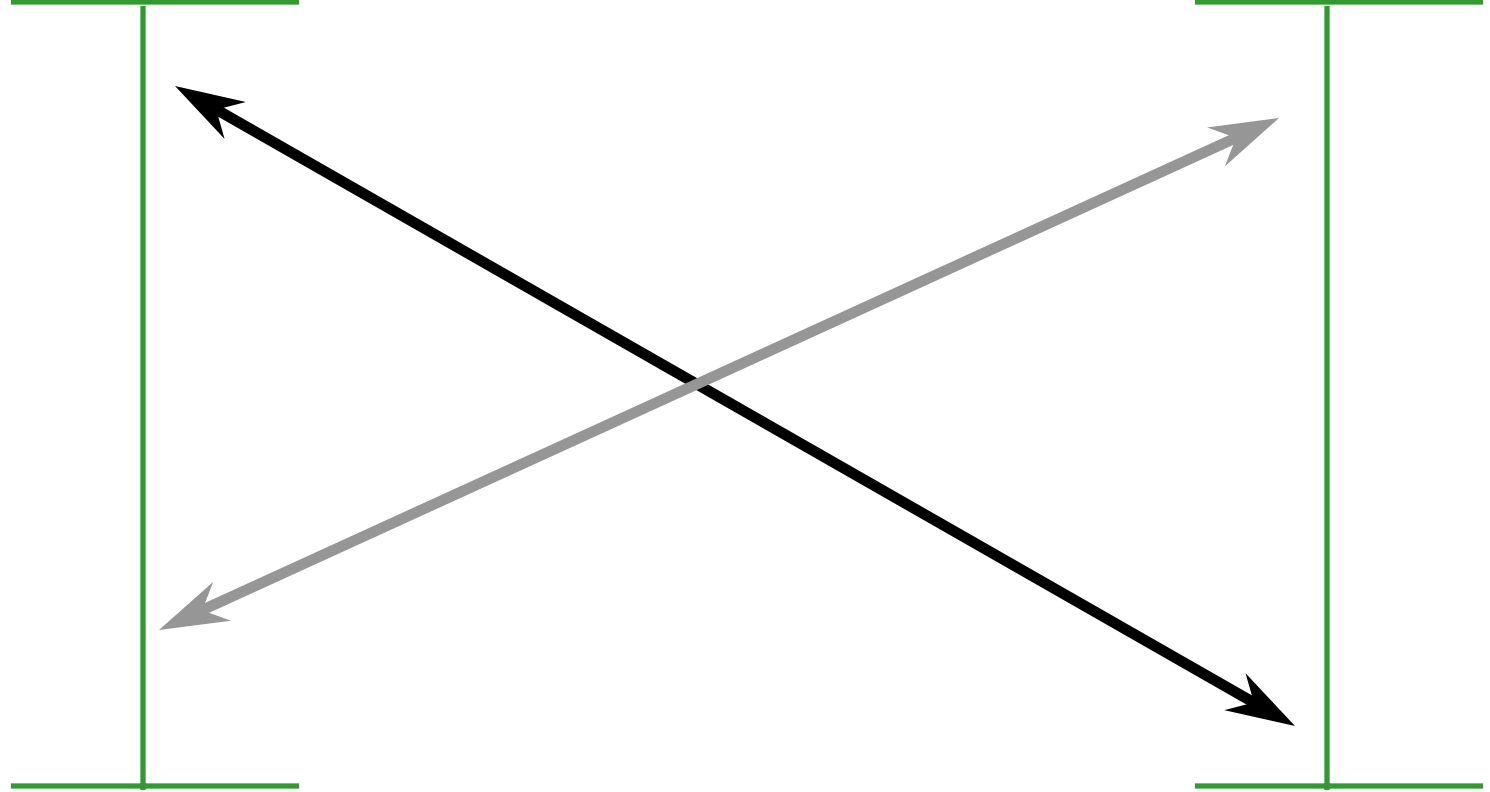


**Predisposing
Factors/Vulnerability**

**Precipitating
Factors/Insults**

High Vulnerability

Noxious Insult



Low Vulnerability

Less Noxious Insult

Inouye SK, Charpentier PA: Precipitating factors for delirium in hospitalized elderly persons: predictive model and interrelationship with baseline vulnerability. JAMA 1996;275:852-7.





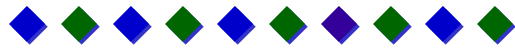
What the Literature Says:

Prevalence

- variable populations (acute care)
- 20-80%
- community studies in progress

Correlates

- age
 - severe illness
 - multiple medications
 - sensory impairment
 - hospital procedures
-



What the Literature Says (continued)

Costs

- 4 billion - 1994 US \$
- increased LOS, delayed rehab, increased NH, increased suffering and mortality

Prevention

- prevent 30% by changing care routines





Who Gets Delirious

Predictive Model

Baseline Vulnerability

- cognitive impairment
- visual impairment
- hydration status
- severe illness

+

Triggering Event

- physical
- environmental
- psychological

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DELIRIUM



Delirium

Definition:

Delirium is a disturbance of consciousness with reduced ability to focus, sustain and shift attention. It is also characterized by acute onset and/or fluctuating course.

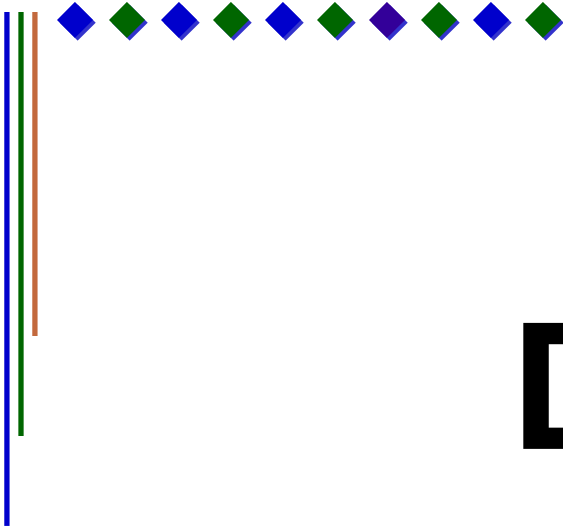




$$100 - 92x - 85\sqrt{} - 77x - 70\sqrt{} - 64x$$

$$100 - 93\sqrt{} - 84x - 77\sqrt{} - 70\sqrt{} - 65x$$





D L R O W



D O W

D R L O W

D L O W

D L O R W