Delirium Screening – DRAT & 4AT

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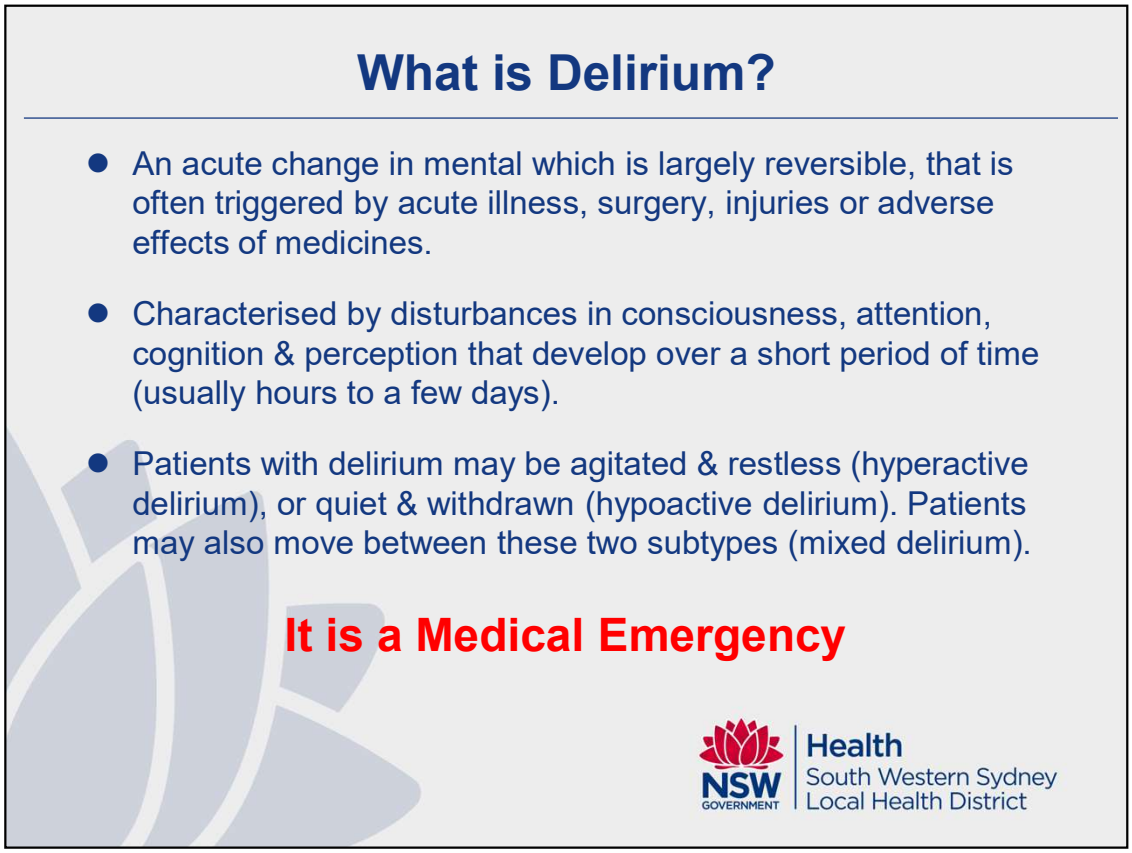
- This presentation has been designed to provide education about Delirium, Delirium Screening and Assessment and the use of the Delirium Risk Assessment Tool (DRAT) and 4AT tool inline with the Delirium Clinical Care standard and National Standard 5, Comprehensive Care to ensure that risk of harm for patients during health care are prevented and managed.



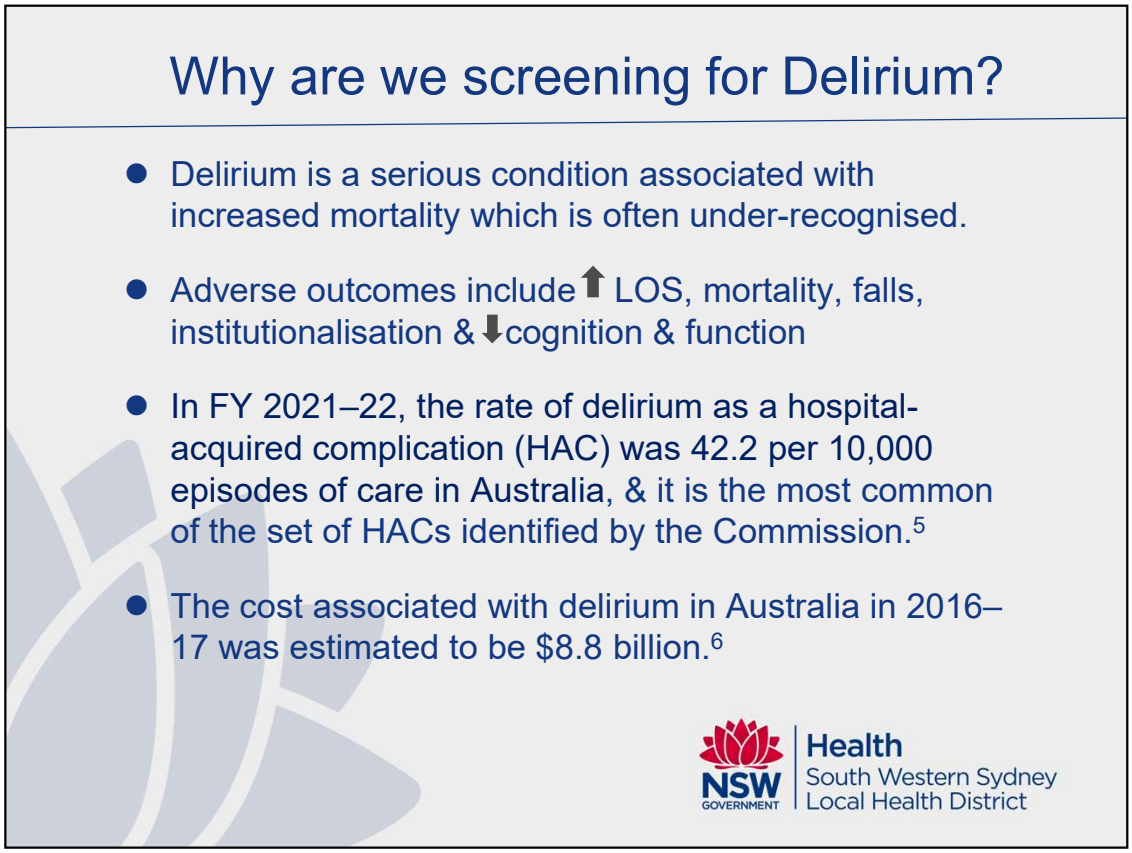
So what is delirium?

Delirium is an acute change in mental state, that is characterised by a disturbance in consciousness, attention, cognition and perception.

It develops over a short period of time, usually hours to days and is considered a medical emergency. It is often missed or misdiaganosed as dementia.

Delirium is often triggered by an acute illness, surgery, injuries or adverse effects of medication and is reversible if the underlying cause is treated.

30-40% of all deliriums are preventable if simple person centred care strategies are implemented on admission to your ward.



Why is it essential to screen for delirium?

Delirium is associated and an independent predictor for multiple adverse outcomes:

Patients with delirium have increased mortality rates, increased lengths of stays, higher risk of injurious falls, Increased risk of institutionalisation post discharge and a decrease in cognition and functioning.

In 2021-22, the rate of delirium as a hospital- acquired complication (HAC) was 42.2 per 10,000.00 admissions Nationally and according to the Australian Commission on Safety and Quality, is the most common HAC identified.

And finally The cost associated with delirium in Australia in 2016-17 was estimated to be $8.8 billion dollars annually.

Common causes of Delirium- 2 useful Mnemonics

So what are some of the most common causes of delirium. These two mneumonics shown here can assist us in identifying potential causes.

It is important to remember the causes of delirium are generally multifactorial and can coexist together.

The PINCHME aronym stands for pain, infection, nutrition, constipation, hydration, medication and the environment

While the 5ps stands for pee, poo, pain, pills and pus.

As you can see many of these causes can be minimised or prevented with simple, yet effective person centred care strategies.

For example if your patient has pain administer analgesia, if they are constipated they will aperients, if they are dehydrated rehydrate and ensure you maintain a fluid balance chart to monitor hyration status.

In terms of the environment use noise reduction strategies and avoid multiple room changes.

Like all health care provision collaboration with family and carers is essential.

Screening for Delirium.

The 2 tools that are to be used for screening of Delirium include:-

- D.R.A.T. (Delirium Risk Assessment Tool) that identifies people at risk of developing delirium
- The 4AT Assessment that screens for cognitive impairment and the presence of delirium

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How do we screen for delirium?

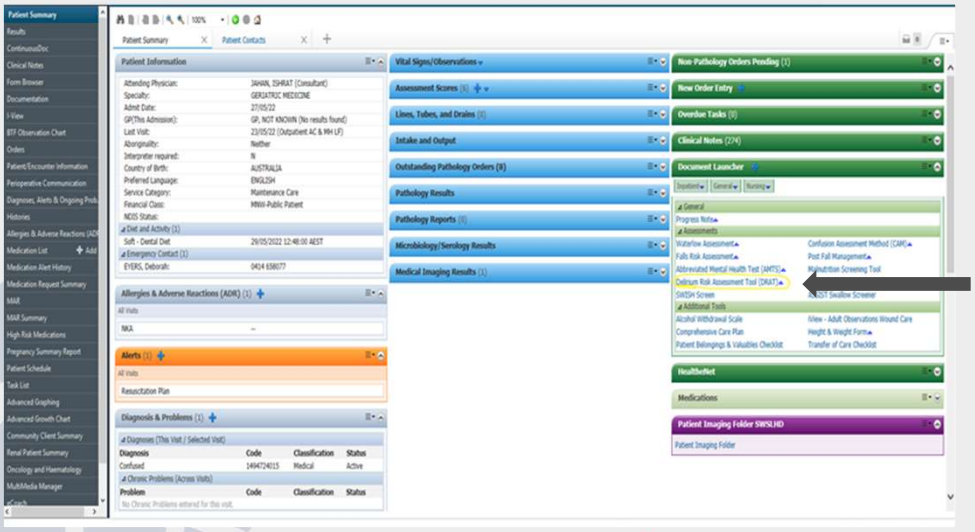
To screen and assess for delirium a validated tool is required in accordance to the Delirium Clinical Standards 2021.

The DRAT (Delirium Risk Assessment Tool) identifies **key risk factors** that predispose the patient to delirium, and risk factors that may precipitate or trigger delirium and recommends further investigations, if there is a change in behaviour.

It is to be performed on all adult patients upon arrival to the ED, in the pre admission clinic or within 24 hours of presentation to hospital for admitted patients.

The 4AT is a Validated screening instrument designed for the initial rapid assessment of delirium and cognitive impairment and should be completed on all patients who have identified Key risk factors.

How to access the DRAT Assessment on Powerchart.



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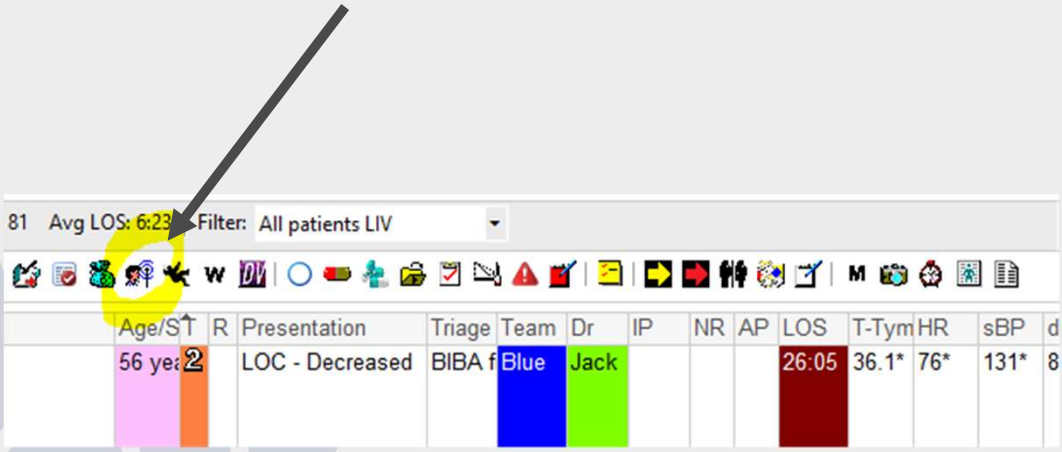
For those Clinicians working on the wards within the hospital setting, The DRAT is located on the Patient Summary on EMR under the assessment heading on the right hand column of the screen as shown here on this slide.

How to access the DRAT Assessment on FirstNet



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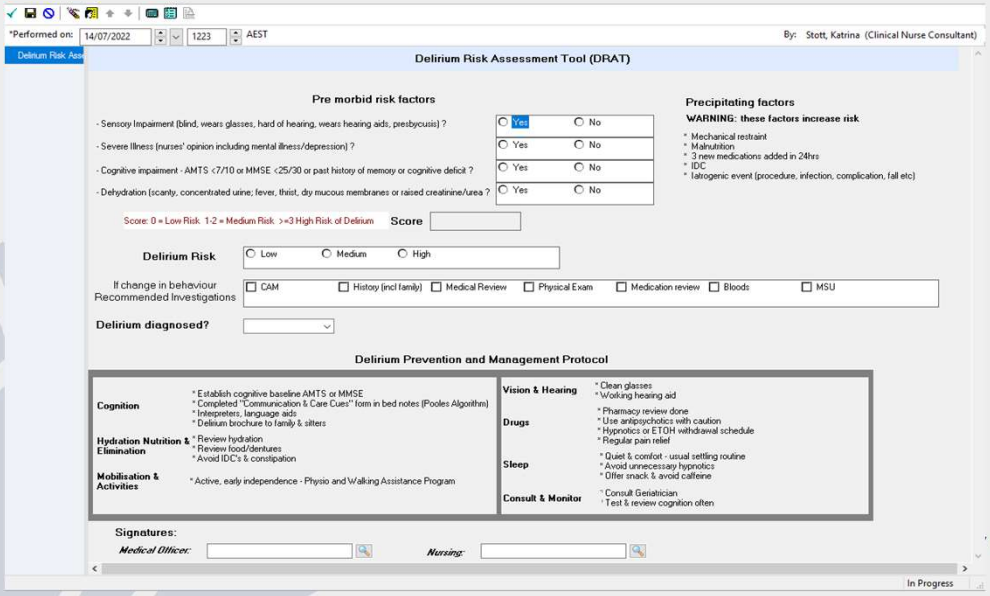
If you are working in the Emergency Department, the DRAT is located on the Firstnet tool bar as shown here on this slide.

DRAT Assessment on Powerchart

Always keep in mind All people > 70, or > 50 for First Nations populations are at risk of delirium



This is a copy of the DRAT, As you can see It highlights pre morbid risk factors, precipitating factors at top of the document as awell as prompts for prevention and management strategies

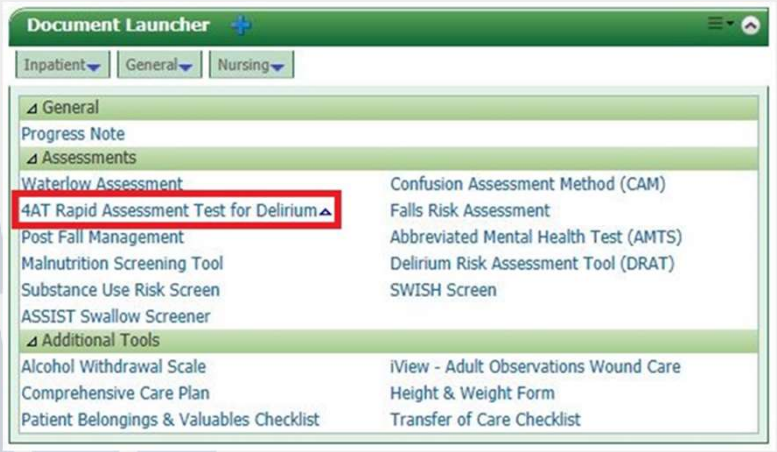
A score of 0 is considered low risk, 1-2 medium risk and greater than 3 is a high risk .

Delirium prevention strategies should be implemented on all patients who score greater than 1.

Please be mindful however All patients over the age of 70 or 50 for First nations people are at risk of devloping delirium and require delirium prevention care strategies implemented regardless of score.

Where to locate the 4AT on Powerchart

Via Document Launcher



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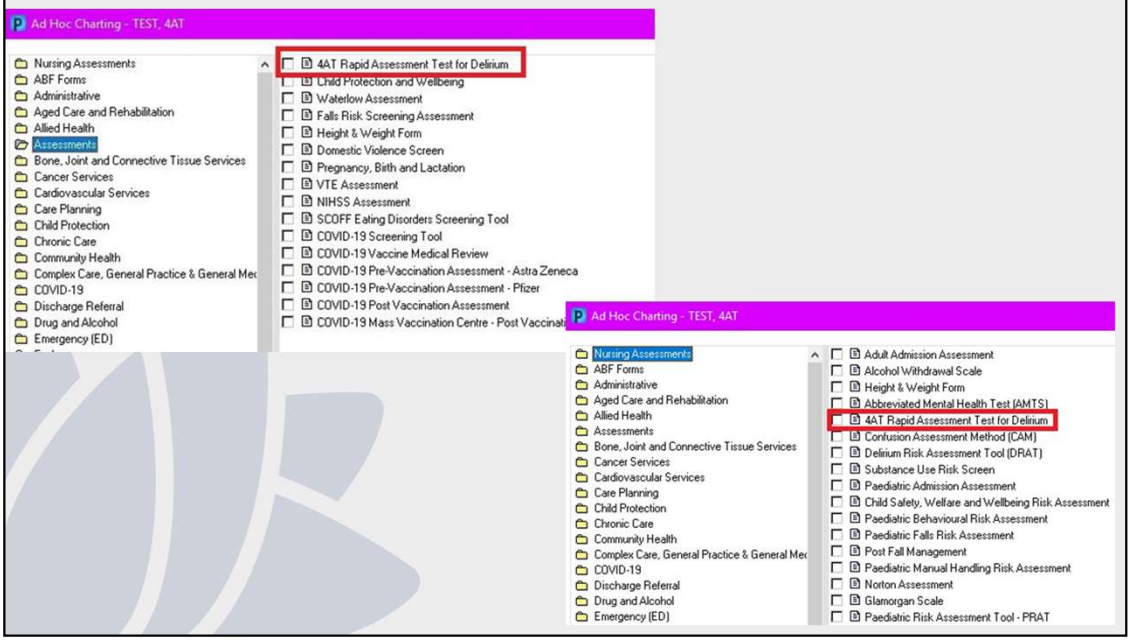
There are a number of ways to access the 4AT on Powerchart

One is to simply go to Assessments which again is located on the Patient summary page, as shown here on this slide.

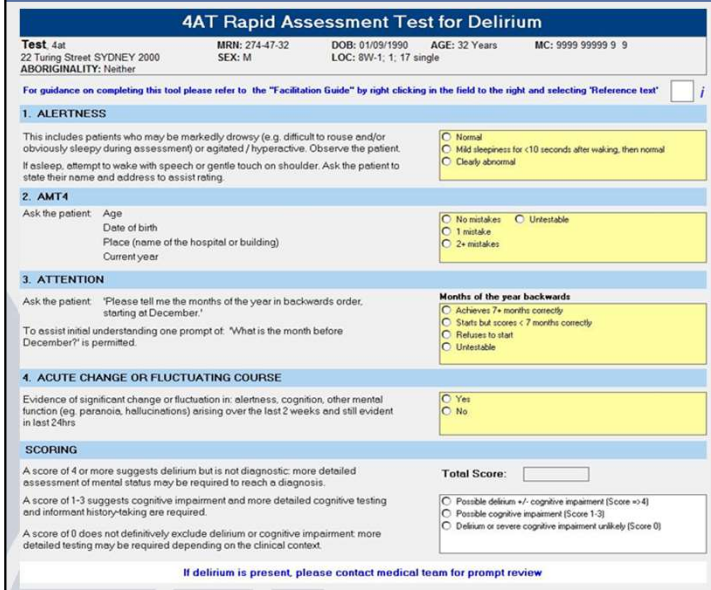
Where to locate the Powerchart 4AT.

Via AdHoc Folder



Alternatively it can be accessed via the ADHOC folder under Assessments and Nursing assessments as shown here.

The 4AT Assessment.



4AT Rapid Assessment Test for Delirium

Test, 4at
22 Turing Street SYDNEY 2000
ABORIGINALITY: Neither
MRN: 274-47-32 **SEX:** M
DOB: 01/09/1990 **AGE:** 32 Years **LOC:** 8W-1; 1; 17 single
MC: 9999 99999 9 9

For guidance on completing this tool please refer to the "Facilitation Guide" by right clicking in the field to the right and selecting 'Reference text'

1. ALERTNESS

This includes patients who may be markedly drowsy (e.g. difficult to rouse and/or obviously sleepy during assessment) or agitated / hyperactive. Observe the patient.
If asleep, attempt to wake with speech or gentle touch on shoulder. Ask the patient to state their name and address to assist rating.

- Normal
- Mild sleepiness for <10 seconds after waking, then normal
- Clearly abnormal

2. AMT4

Ask the patient: Age
Date of birth
Place (name of the hospital or building)
Current year

- No mistakes
- Untestable
- 1 mistake
- 2+ mistakes

3. ATTENTION

Ask the patient: 'Please tell me the months of the year in backwards order, starting at December.'

To assist initial understanding one prompt of: 'What is the month before December?' is permitted.

Months of the year backwards

- Achieves 7+ months correctly
- Starts but scores < 7 months correctly
- Refuses to start
- Untestable

4. ACUTE CHANGE OR FLUCTUATING COURSE

Evidence of significant change or fluctuation in: alertness, cognition, other mental function (eg. paranoia, hallucinations) arising over the last 2 weeks and still evident in last 24hrs

- Yes
- No

SCORING

A score of 4 or more suggests delirium but is not diagnostic: more detailed assessment of mental status may be required to reach a diagnosis.
A score of 1-3 suggests cognitive impairment and more detailed cognitive testing and informant history-taking are required.
A score of 0 does not definitively exclude delirium or cognitive impairment: more detailed testing may be required depending on the clinical context.

Total Score:

- Possible delirium +/- cognitive impairment (Score =>4)
- Possible cognitive impairment (Score 1-3)
- Delirium or severe cognitive impairment unlikely (Score 0)

If delirium is present, please contact medical team for prompt review

- Alertness
- AMT4
- Attention
- Acute Changes

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- The 4AT rapid screening tool for delirium looks at **Alertness** (whether your patient is alert, drowsy or clearly abnormal upon review); **Orientation** (if they can tell you their age, date of birth, place where they are, current year) – this may not be possible for patients with a known cognitive impairment which may be normal for them or if they are unable to communicate, in this case, you can mark the patient as 'untestable'; **Attention** (ask the patient to tell you the months backwards from December) - this may not be possible for patients with a known cognitive impairment which may be normal for them or if they are unable to communicate, in this case, you can mark the patient as 'untestable'; **Acute Changes** (are there changes in the patient's alertness, mentality over the last 2 weeks that are present in the last 24 hrs?) – answer yes or no.
- A score of >4 is suggestive of a positive delirium score -> a medical review is required ASAP.

❑Item 1 – Checking for Alertness

➓- Look for an altered level of alertness: sleepiness/unresponsiveness, or agitation.

❑ **Items 2 & 3 – Checking Orientation & Attention**

- Ask your patient to name the months of the year backwards. If your patient's alertness is preventing them from doing this, score as 'untestable'.

❑ **Item 4 – Assessing for Acute or Fluctuating changes**

- Fluctuations in condition / behaviour can be indicative of a Delirium.

Case Studies

- 54-year-old gentleman BIBA to ED – slurred speech, altered gait, hypotension, desaturating. Recent diagnosis of shingles- T- 37.2,RR -18, SaO2 – 93% on O2, HR - 120. BP – 80/60
- PMH – HT, T2DM, 4 glasses wine/day
- ? Confused at times, usually has a baseline of GCS of 15 had been commenced on Celebrex, valacyclovir, has a shuffling gait, unable to tolerated fluids BNO 2/7
- Bloods of note: Cr- 125, Trop 25, WCC -15.6, CRP -95

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The next few slides will include two case studies.

The first is a 54 year old gentleman who presented to the ED with slurred speech, altered gait

Hypotenson and was desaturating

He was recently diagnosed with shingles and commenced on acylcovir and celebrex

He was confused with a GCS of 14,

Of note his Cr was 125, WCC 15.6 and CRP 95

Concerns for patient

- Shingles
- Commenced on new medication's
- Elevated Creatinine
- Elevated WCC
- 4 drinks a day. ? Standard drink
- Recent confusion – Change in Cognition.
- Hypotension
- Oxygen Saturations ↓
- Hypotension
- Tachycardia
- Pain

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What are our concerns for this gentleman:

Pain associated with shingles

He has slurred speech and recent confusion

He is desaturating, hypotensive, tachycardic

His infective markers are elevated

The commenced of new medication

And he drinks approximatley 40grams or alcohol daily therefore potential for etoh withdrawal

Impact of Delirium for patient

- Increasing agitation ->had multiple code blacks, antipsychotic meds for sedation
- 4 x falls in 24 hours
- Subdural haematoma
- Unwell
- Delirium
- Palliated
- 21/1/19 – RIP - Coroner's

This gentleman was admitted with sespis and diagnosed with hyperactive delirium

He had increasing aggression and agitation with multiple Code Blacks requiring antipsychotics medication

Unfortunately he had 4 falls within a 24 hour period sustaining a subdural hematoma

He subsequently passed away and was referred to the coroner.

- Compliance with correct handover procedure – discussion of strategies / management
- Harm to patient
- Grief and Loss to family
- Reputation to organisation
- Potential Litigation
- Financial burden- altered/no funding
- employee implications e.g. stress potential PTSD

CASE STUDY 2

- Gentleman 68yrs. From home with NDIS carer BIBA to ED – fall > long lie
- Agitated / confused

PMHx –
- Parkinson's , T2DM, CKD, ETOH

Pathology
- Cr 351 (baseline 106) - Rhabdomyolysis with AKI
- CK 144, 200

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The second case study was a 68 year old gentleman

Fall with long lie from home

He presented with agitation, confusion on a background of Parkinsons, Type 2 diabetes, chronic kidney disease and long term alcohol use

His Creatinine was 351, baseline 120 and his Cks were 144,200

He was diagnosed with Rhabdomyolysis and right shoulder injury secondary to the fall.

Concerns for patient

- Fall, long lie
- Rhabdomyolysis
- AKI
- Delirium
- Fevers and tremors – secondary to omitted PD medications
- Right Shoulder pain- secondary to fall
- Dehydration/malnutrition secondary to long lie
- Alcohol withdrawal

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So as you can see their were multiple triggers for delirium
Fall with a long lie,
Rhabdomyolysis
Electrolyte imbalance
Pain
Dehydration and malnutrition
Alcohol withdrawal

Impact of delirium for this patient

- Increased Length of stay
- Administration of Antipsychotic medication- resulting in Neuroleptic Malignancy Syndrome
- Progression of Parkinsons Disease
- Cognitive and functional decline
- Loss of independence
- Institutionalisation

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During his stay he had ongoing delirium resulting in multiple clinical reviews

He was unfortunatley given antipscychotic medication to treat his agitation and hallucinations and subsequently developed neuropletic maligant syndrome

Because of the complications associated with his presentation this gentleman had an extensive length of stay with a significant functional and cognitive decline. He was discharged and placed into a Residential Aged Care facility.

Take home message

- Early screening and identification is key.
- Implementation of person centred delirium prevention and management strategies to minimise harm.

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So from these two case studies we can see how delirium can have a negative impact on patients outcomes, highlighting the importance of delirium screening using the DRAT and 4AT to implement either prevention or management care strategies and consequently minimizing harm to the patient.

References.

- Australian Commission on Safety and Quality in Health Care, Delirium Clinical Care Standard, September 2021.
- Website – Why use the 4AT? https://www.the4at.com/whythe4at
- ACI – Care of Confused Hospitalized Older Persons (CHOPS) https://aci.health.nsw.gov.au/chops/chops-key-principles/delirium-risk-identification-and-preventive-measures/delirium-risk-assessment

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