Network Recording Declaration

During this ECHO session discussions will be recorded so that people who cannot attend will be able to benefit at another time. Filming is regarded as ‘personal data’ under the Data Protection Act 2018 General Data Protection Regulations (GDPR), under that law we need you to be aware that:

• This Data will be stored with password protection on the internet.
• This Data will be available for as long as your network continues to meet and will then be taken down from the internet and either stored securely at the Superhub or deleted.

Your ongoing participation in this ECHO session is assumed to imply your agreement to the use of your data in this way.

If you are NOT willing for your data to be used in this way, please LEAVE the session at this point.
The Palliative and End of Life Care and Dementia ECHO Knowledge Network

Week 2: Delirium
Introductions
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter</th>
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</thead>
<tbody>
<tr>
<td>14:50</td>
<td>Presentation on ‘Delirium in Dementia’</td>
<td><strong>Professor Rowan Hardwood</strong>, Consultant geriatrician and professor of palliative and EoLC, University of Nottingham</td>
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<tr>
<td></td>
<td>Followed by questions and group discussion</td>
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<tr>
<td>15:30</td>
<td>Case presentation 1</td>
<td><strong>Tracey Walshe</strong>, Specialist Mental Health Practitioner, Berkshire Healthcare Foundation Trust</td>
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<td>Followed by Group Discussion</td>
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<tr>
<td>16:00</td>
<td>Case presentation 2</td>
<td><strong>Bridget Willis</strong>, Mental Health Practitioner, Pennine Care NHS Foundation Trust</td>
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<td></td>
<td>Followed by Group Discussion</td>
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ECHO Session Evaluation

Help to shape the sessions
Quick questions with additional comments welcome
3 minutes to complete
Link will be given in the Chatbox towards the end of the session.
Delirium in dementia, especially towards the end of life

Rowan H Harwood
Professor, consultant geriatrician
University of Nottingham and Nottingham University Hospitals NHS Trust
• Who gets delirium?
• What is it? How do we identify it?
• Why is it difficult?
• What can we do about it?
• What are the outcomes?
• How it relates to dementia and dying
Who gets delirium?

- Old people, ill people, people with dementia, hip fracture, people who are dying
- Medical admissions 30%
- Hip fracture 15% at admission, 50% post-op
- ITU 60-80%
- Palliative care 60-80%

General hospital in Ireland, n=358 >18y, excluding A+E, ITU, burns, haematology

Point prevalence - 20%
- <50y 5%
- 65-79y 21%
- >80y 35%

Ryan et al, 2013. BMJ Open;3(1)
• Disturbance in attention and awareness

• Develops over a short period of time (hours to days). A change from baseline. Fluctuates in severity during the course of the day

• Disturbance in cognition (memory, disorientation, language, perception)

• Not better accounted for by a pre-existing, established, or evolving dementia, nor severely reduced arousal (e.g. coma).

• Evidence of direct cause by medical condition, substance intoxication or withdrawal, toxin exposure, or multiple etiologies
Cardinal feature: inattention and awareness

- hypervigilance, distractibility
- reduced vigilance or concentration, drowsy
- impaired awareness of environment

Attention

= Ability to focus the mind, sustain and shift focus, on an environmental stimulus, idea, or series of connected ideas

= Assess during conversation or Mental State Examination

= Tests: digit span; serial 7s; WORLD backwards; tapping A’s; MOYB; DOWB; (count 20 to1)
Cognitive impairment

- can be difficult to test
- don’t overemphasise orientation
- disordered thinking
  - irrelevant, rambling, tangential, unfocused thought
  - loss of logic, abstraction
  - executive functioning, visuo-constructional, language
• ‘Over minutes to hours’

• Abnormal sleep wake cycle
  o fragmented
  o reversed
  o sleeplessness

Poor sleep contributes to fluctuation in level of consciousness, hypo-activity
• Hyperactive (restless, agitated)
• Hypoactive (passive, immobile, sleepy)
• Mixed
• Hallucinations, usually visual
  o Formed or unformed, distorted, bizarre
  o Merge into vivid and frightening dreams
• Delusions, usually paranoid (fleeting, changing)
• Labile mood and emotion (anxiety, fear, anger, depression)
• Autonomic features (incontinence, postural hypotension)
CORE
1. Temporal course: abrupt change, fluctuates
2. Inattention
3. Cognitive impairment
4. Abnormal sleep wake cycle

ASSOCIATED
1. Psychosis in 50%
2. Psychomotor features
3. Altered or labile affect
4. Autonomic features
- Overlap with normality (cat naps, insomnia)
- Variability, fluctuation, broad range of features
- Poorly understood words
- Recognising things you are not used to when you see them
- Cognition can be difficult to assess in an ill person
- Co-morbidity
- 6-10 x commoner in dementia
- Overlap with dementia, ‘BPSD’
**The 4 A's Test (4AT)**

- **Alertness**
- **AMT4: Cognition (Place, Age, Date of birth, Year)**
- **Attention: Months of year backwards**
- **Acute change: SQID**

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### The 4 AT Test: screening instrument for cognitive impairment and delirium

<table>
<thead>
<tr>
<th>1) Alertness</th>
<th>CIRCLE</th>
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<tbody>
<tr>
<td>Normal (fully alert, but not agitated, throughout assessment)</td>
<td>0</td>
</tr>
<tr>
<td>Mild sleepiness for &lt;10 seconds after waking, then normal</td>
<td>0</td>
</tr>
<tr>
<td>Clearly abnormal</td>
<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2) AMT4</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Age, date of birth, place (name of the hospital or building), current year</td>
<td></td>
</tr>
<tr>
<td>No mistakes</td>
<td>0</td>
</tr>
<tr>
<td>1 mistake</td>
<td>1</td>
</tr>
<tr>
<td>2 or more mistakes/inittalable</td>
<td>2</td>
</tr>
</tbody>
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<table>
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<tr>
<th>3) Attention</th>
<th></th>
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<tbody>
<tr>
<td>Ask the patient: “Please tell me the months of the year in backwards order, starting at December.” To assist with understanding, one prompt is “what is the month before December?” is permitted.</td>
<td></td>
</tr>
<tr>
<td>Months of the year backwards:</td>
<td></td>
</tr>
<tr>
<td>Achieves 7 months or more correctly</td>
<td>0</td>
</tr>
<tr>
<td>Starts but scores &lt; 7 months / refuses to start</td>
<td>1</td>
</tr>
<tr>
<td>Undeniable (cannot say) (because anamn.), disoriented, inattentive</td>
<td>2</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>4) Acute Change or Fluctuating Course</th>
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<tbody>
<tr>
<td>Evidence of significant change or fluctuation in: alertness, cognition, other mental function (e.g., perception, hallucinations) arising over the last 2 weeks and still evident in last 24hrs.</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>

4 or above: possible delirium + cognitive impairment
3: possible cognitive impairment
2: delirium or cognitive impairment unlikely (but delirium still possible if 5th item incomplete)

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A. MacLullich

www.the4AT.com
The Confusion Assessment Method (CAM) Diagnostic Algorithm

Feature 1: Acute Onset or Fluctuating Course
This feature is usually obtained from a family member or nurse and is shown by positive responses to the following questions: Is there evidence of an acute change in mental status from the patient’s baseline? Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity?

Feature 2: Inattention
This feature is shown by a positive response to the following question: Did the patient have difficulty focusing attention, for example, being easily distractible, or having difficulty keeping track of what was being said?

Feature 3: Disorganized thinking
This feature is shown by a positive response to the following question: 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?

Feature 4: Altered Level of consciousness
This feature is shown by any answer other than “alert” to the following question: Overall, how would you rate this patient’s level of consciousness? (alert [normal]), vigilant [hyperalert], lethargic [drowsy, easily aroused], stupor [difficult to arouse], or coma [unarousable])

The diagnosis of delirium by CAM requires the presence of features 1 and 2 and either 3 or 4.
Mental State Examination

A process of observation and questioning:

- Alertness, arousal, attention, behaviour
- Understanding and expression
- Mood and emotion
- Delusions and hallucinations
- Cognition (use a scale)
- Insight, risk, mental capacity
• Careful prescribing, drug review
• Vaccination, vascular prevention, bone protection
• Avoid urinary catheters, moving locations (hospitalisation, ‘sleeping out’)
• Careful peri-operative care, avoid general anaesthesia
• Hospital Elder Life Programme (HELP)
  – Hydration
  – Orientation
  – Mobilisation
  – Sleep
  – Hearing and vision
“strong evidence that multi-component interventions can prevent delirium”

RR 0.69, 95% CI 0.59 to 0.81
7 studies, 1950 participants
moderate-quality evidence

“There is no clear evidence that cholinesterase inhibitors, antipsychotic medication or melatonin reduce the incidence of delirium”
• Population: n=126, hip #, >65 years
• Intervention: geriatric consult (61% pre-op), protocols, daily follow-up
• Control: usual care
• Outcomes:
  – delirium 32% vs 66%, RR 0.64;
  – severe delirium 12% vs 29%
  – LOS no different

Comments: Prevention trial

Marcantonio 2001
The PiTSTOP study: a feasibility cluster randomized trial of delirium prevention in care homes for older people

Najma Siddiqi1,2, Francine Cheater3, Michelle Collinson4, Amanda Farrin4, Anne Forster5, Deepa George2, Mary Godfrey6, Elizabeth Graham7, Jennifer Harrison7, Anne Heaven8, Peter Heudtlass1, Claire Hulme9, David Meads1, Chris North2, Angus Sturrock2, John Young8

1Health Sciences, University of York Ringgold Standard Institution, York, UK
2Bradford District Care NHS Foundation Trust, Bradford, UK
3School of Health Sciences, University of East Anglia Ringgold Standard Institution, Norwich, Norfolk, UK
4Leeds Institute for Clinical Trials Research, University of Leeds Ringgold Standard Institution, Leeds, UK
5Academic Unit of Elderly Care and Rehabilitation, Bradford Institute for Health Sciences, University of Leeds, Bradford, UK
6Academic Unit of Elderly Care and Rehabilitation, Leeds Institute of Health Sciences, Leeds, West Yorkshire, UK
7Centre for Cognitive Ageing and Cognitive Epidemiology, University of Edinburgh, Edinburgh, UK
8Academic Unit of Elderly Care and Rehabilitation, Bradford Institute for Health Research Ringgold Standard Institution, Bradford, UK
9Academic Unit of Health Economics, University of Leeds Ringgold Standard Institution, Leeds, UK

Address correspondence to: Najma Siddiqi. Tel: (+44) 1904 321681; Fax: (+44) 1904 321651. Email: najmasiddiqi@york.ac.uk

Abstract

Background and objectives: Delirium is a distressing but potentially preventable condition common in older people in long-term care. It is associated with increased morbidity, mortality, functional decline, hospitalization, and significant healthcare costs. Multicomponent interventions, addressing delirium risk factors, have been shown to reduce delirium by one-third in hospitals. It is not known whether this approach is also effective in long-term care. In previous work, we designed a bespoke delirium prevention intervention, called ‘Stop Delirium!’ In preparation for a definitive trial of Stop Delirium, we sought to address key aspects of trial design for the particular circumstances of care homes.

Design: A cluster randomized feasibility study with an embedded process evaluation.

Setting and participants: Residents of 14 care homes for older people in one metropolitan district in the UK.
In DSM it isn’t delirium unless you can specify the underlying cause

- <50% have single cause
- 10-20% no apparent cause

Think more in terms of vulnerabilities and precipitants
• meds
• meds
• meds
• infections
• hypoxia
• metabolic
• brain diseases
• some combination
• something else

Rockwood 2001
• Find the cause and treat it
• Supportive, person-centred care
• Avoid complications
• Explain to relatives and engage patient
• WAIT: don’t make the wrong plans too soon
• Anti-psychotic drugs?
• Post episode debrief?
16 RCTs and 10 observational studies

No difference between haloperidol or second-generation antipsychotics vs. placebo:
- sedation
- delirium duration,
- hospital length of stay
- mortality

No difference for haloperidol vs. second-generation antipsychotics or in direct comparisons of different second generation antipsychotics

Conclusion: Current evidence does not support routine use of haloperidol or second-generation antipsychotics to treat delirium in adult inpatients.

Nikooie 2019
Persistence

- 61% after 24h
- 45% at discharge
- 33% at 1 month
- 26% at 3 months
- 21% at 6 months

- 40% mortality at 6 months

Cole 2009
• Missed or persisting cause
• Recurrence
• Missed/unappreciated prior dementia
  - Incipient or previously undiagnosed
• Wrong diagnosis
  - Dementia with Lewy Bodies
  - Progression of vascular dementia
  - Decompensation of dementia, ‘BPSD’
  - Agitation
• Not all delirium recovers
  - Delirium causes brain damage?
People with dementia are most at risk of delirium

But the dementia might be ‘incipient’ or not diagnosed

It can be difficult to distinguish delirium and dementia (especially DLB and VaD)

Delirium recovery can be slow

Delirium does not always recover; delirium damages the brain

HENCE: the 6 months criterion for diagnosing dementia
• Assess and explain problems. Consider treating the treatable.
• Talk, reassure, respect. Validate emotions, avoid challenge and confrontation.
• Treat symptoms
  – Psychosis (antipsychotics with care, benzodiazepines if DLB, PD, alcohol withdrawal)
  – Pain (paracetamol, opiates but care)
  – Sleep
  – Bladder and bowels
• Avoid complications, but mitigate e.g. night time observations or turning
• Be vigilant for reversible causes or improvement
• Minimise treatment burden: high priority on mental awareness
• Family involvement and information, shared decision-making
COMMENTARY

Delirium at the end of life

MEERA R. AGAR1,2,3
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2South West Sydney Clinical School, University of New South Wales, Sydney, Australia
3Ingham Institute for Applied Medical Research, Sydney, Australia

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Abstract

Delirium is highly prevalent in people with advanced life limiting illness(es), and current evidence can inform how we provide best delirium care in this setting. Whilst strategies to prevent and reverse delirium are the cornerstones of optimal care, the care for delirious patients who are approaching the end of life and their families pose specific challenges particularly if delirium is refractory flagging a grave prognosis. These include addressing additional supportive care needs, clinical decision-making about the degree of investigation and intervention, minimising distress from the symptoms of delirium itself and considering other concurrent problems contributing to agitation. A fine balance is needed to address other symptoms such as pain whilst minimizing psychoactive medication load. There is need for regular and clear information and communication about prognosis and goals of care. Witnessing a delirium episode in a loved one in close proximity to death requires consideration of the needs of the family into bereavement care.

Palliative care is person and family-centred care provided for a person with an active, progressive, advanced disease who has little or no prospect of cure and who is expected to die, and for whom the primary treatment goal is to optimise quality of life. It is an approach which can be provided regardless of setting and diagnosis, and by both specialist palliative care teams and other health professionals.

Keywords: delirium, palliative care, end of life, older people
• If it’s there we need to identify it
• It is more than a 4AT
• Complex relationship with dementia
• Treatment largely supportive
• Explain to family and patients
• Prognosis generally poor, but may recover
Delirium case study

Tracey Walshe, RMN Integrated Care Home Service
Background

- 83 year old lady
- Diagnosed with Alzheimer’s Disease in 2015
- Admitted to residential care home in Jan 2021 due to being unable to manage at home.
- Unwitnessed fall in April 2021 resulting in #NOF.
- Post surgical stroke resulting in acute hemiplegia and dysphasia.
- Catharised due to retention secondary to constipation.
• Discharged to nursing home in 26\textsuperscript{th} March.
• Two subsequent re-admissions to acute hospital within a week of discharge with behavioural concerns (not eating / drinking and eating her own faeces) and pulling out catheter.
• Bloods NAD and catheterised (retention secondary to constipation). Started on laxatives.
• Referred to RRATS on second discharge.
Staff feedback

• Possible delirium was mentioned on her discharge summary but no clear assessment/treatment plan in place.
• Care home advised poor food/ fluid intake and compliancy with medication.
• They did not feel that she was in pain and reported that her bowels were opening.
• Assumption from staff was that this was BPSD.
Review of notes:

• Had been back in the care home 3 days prior to my review.
• Had not been taking her prescribed medication which included laxatives and pain relief.
• Bowel charts indicate that BO- day 1 none
  day 2- small type 7
  day 3- small type 3
• RESPECT- ward based care- avoid hospital for “simple delirium”.

Face to face assessment

Sleepy ++
Restless and fidgety
4AT scored 8 (not including last question) indicating possible delirium

Impression:

Hypoactive delirium
? constipation
? dehydration
? pain
What happened next

Referred back to RRATS who:

- Started fluids for dehydration
- Prescribed nystatin for oral thrush
- Confirmed faecal impaction and prescribed glycerine suppository
- Prescribed antibiotics for presumed UTI based on bloods

Fluctuating presentation
Day 6 RIP
What could we have done differently?

• Wider recognition of delirium and the various presentations
• Appreciation of delirium being a medical emergency
• Don’t assume its dementia
• Clear pathway for supporting/ managing
Delirium

Bridget Willis
Dementia Specialist Palliative Care Nurse

Palliative Care In Dementia Liaison Service
Mental Health Liaison Service for Older People
Pennine Care NHS Foundation Trust
• Mrs C is a 92 year old lady who lives in her own home with her son M and daughter H.
• She was diagnosed with mixed dementia in 2016
• Over the past 12 months her mental state had deteriorated significantly and she experienced episodes of extreme agitation and distress.
• She was becoming frailer and losing weight, she was starting to loose her mobility and was developing pressure damage from being in bed
• She was referred to me by memory service as they felt she was in the last 12 months of life and had discussed with her GP she should be on their GSF register.
• Family were finding it increasing difficult to care for her at home but did not want to consider 24 hour care.
Treatment

- Mrs C had tried many different psychiatric drugs with little effect including:
  - Memantine
  - Antipsychotics
  - Benzodiazepines
  - Anti depressants
  - Clomethiazole
  - When I started seeing her she was taking:
    - Trazodone 50mg prn
    - Promazine 25mg
    - Sertraline 50mg
Past medical history

- 2013 Malignant neoplasm of breast,
- 2006 Chronic renal impairment, 2020 eGFR 41
- 2017 Basal cell carcinoma,
- Bowen's disease,
- Dysphagia,
- 1990 Hypothyroidism,
- Tinnitus
- Recurrent UTI
- Constipation
Physical and mental health

- No way to separate her physical and mental health, I needed to look at a more holistic approach:
  - Recurrent UTI’s – on prophylactic antibiotics
  - Frequently constipated needing DN intervention with enema.
  - Mrs C was in a constant cycle of delirium from these.
• Didn’t recognise her home anymore and repeatedly tried to leave
• Very distressing for her family to see her so agitated
• Involved speech and language therapist because of poor dietary intake & swallowing.
• Mrs C was not a religious lady but her family are very important to her
• Verbal communication was very impaired and only her son could really understand her. She was very distressed by her Tinnitus and would say ‘ringing ringing’ repeatedly.
• Appeared uncomfortable and ? In pain at times although family did not feel this was an issue.
Involvement

- I had been seeing her regularly and prescribed Sertraline for anxiety, also started paracetamol regularly for agitation.
- These seemed to be helping and had had periods of calm. However as soon as she became constipated she became agitated and the constipation lead onto a UTI.
Challenges

• Family did not really understand delirium so education given around this. Personal and financial reasons for wanting to care for her at home.
• GP kept referring to me although it was physical health reason that was causing the distress
• DN’s were waiting to be contacted when she was very constipated but by this time she was very delirious.
• She was getting so agitated she was pushing food away although she wasn’t actively dying she will be soon if she continues to be so agitated.
Reflections

- Dementia is such a complex mix of physical and mental health needs how can we all work together more collaboratively?
- What is my role in identifying and treating delirium?
- Does anyone have any suggestions regarding this lady?
ECHO Session 1 Evaluation

Help to shape the sessions

https://www.surveymonkey.co.uk/r/ECHO_Dementia_27_July_2021
Thank you for joining today's session

Next session:
19 October 2021, 14:45 – 16:45

Topic:
Frailty and Dementia: Transferable assessment tools for end of life