MMG033 GUIDELINES FOR DIAGNOSIS, PREVENTION AND TREATMENT OF DELIRIUM IN THE INPATIENT SETTING

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**Why we need this Policy**
Delirium (acute confusional state) is a condition causing confusion and fluctuating consciousness which is theoretically reversible (although this may not be possible or appropriate in terminally ill patients). It is associated with extreme distress and hallucinations.

**What the Policy is trying to do**
The aim of these guidelines is to aid in the diagnosis and management of delirium, which is often mistaken for agitation or anxiety. Anxiety and agitation can be treated with benzodiazepines, although this group of medicines can be helpful in managing delirium they should not be used alone as they can worsen the psychotic symptoms (i.e. hallucinations).

This guideline is based upon the following national guideline: “The prevention, diagnosis and management of delirium in older people. Developed by the Clinical Effectiveness and Evaluation Unit of Royal College of Physicians and the British Geriatrics Society. June 2006” and will form the basis of management of delirium in patients of all age groups within the inpatient wards of Northamptonshire Healthcare Foundation Trust

**Which stakeholders have been involved in the creation of this Policy**
Specialist Palliative Care, Liaison Psychiatry Older People, Medicines Management Committee

**Any required definitions/explanations**
Delirium is characterised by a disturbance of consciousness (i.e. reduced clarity of awareness of the environment) and a change in cognition (such as memory deficit, disorientation, language disturbance) that develop over a short period of time (usually hours to days). The disorder has a tendency to fluctuate during the course of the day.

NHFT – Northamptonshire Healthcare NHS Foundation Trust
OTC – Over-the-counter
IM – intramuscular
PO – per oral

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Key duties
Medicines Management Committee
Will approve and review these guidelines

Medical Director
Responsible for dissemination of this guideline to their clinical directors and tutors

Clinical Directors and Heads of Service
Responsible for dissemination and implementation of this guideline within their service area

Doctors
Are responsible for diagnosing delirium and prescribing any treatment required as appropriate

Nursing staff
Are responsible for identifying patients who are at risk of developing delirium and bringing them to the attention of the doctor.

Policy detail

Types of Delirium

Hyperactive: increased motor activity with agitation, hallucinations and inappropriate behaviour
Hypoactive: reduced motor activity and lethargy and has a poorer prognosis.
Mixed: Showing signs of both hyper and hypo active delirium
Hypoactive and mixed delirium can be more difficult to recognise

Incidence of Delirium

Delirium is a very common symptom affecting up to 30% of older medical inpatients. The hospital environment often precipitates or exacerbates episodes of delirium.

Impact of Delirium

Delirium is associated with:
• Increased length of stay
• Increased mortality

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• Increased risk of institutional placement
• Increased risk of development of dementia

Delirium can be very distressing to patients, their families and the staff. It can be challenging and frustrating to provide even basic care in patients with delirium.

Management of delirium

Delirium is unrecognised in two-thirds of cases, and can be difficult to diagnose. Hence, successful management of delirium requires:
• Identification of patients at high risk of developing delirium
• Early diagnosis
• Identification of reversible causes and their treatment, if appropriate

Patients at risk and preventative strategies

Identification of patients at high risk of developing delirium is important and prevention strategies should be incorporated into the care plans of high risk patients.

Ask on admission, and every day during admission, “is my patient at risk”? For risk and precipitating factors, see Appendix 1

If any of these risk factors is present, the patient is at risk of delirium.

For patients identified as being at risk, assess for recent changes or fluctuations in behaviour. These may be reported by the patient, carer or relative and may include:

- **Cognitive function** - worsened concentration, slow responses
- **Perception** - visual or auditory hallucinations
- **Physical function** - reduced mobility, movement
- **Social behaviour** - withdrawal, lack of cooperation

For prevention and diagnosis see Appendix 2

Diagnosis of Delirium

The following diagnostic tools may be useful in aiding the diagnosis of delirium

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Abbreviated Mental Test Score

- Identify patients with a cognitive impairment
- Use the Abbreviated Mental Test Score (AMTS) on patients identified as being at risk and who have recent changes or fluctuations in behaviour
- Score one point for each correct answer, less than 8/10 correct answers should be considered to be abnormal
- It does not differentiate delirium from dementia,
- Language and literacy/numeracy skills should also be considered

<table>
<thead>
<tr>
<th></th>
<th>Correct</th>
<th>Incorrect</th>
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<tbody>
<tr>
<td>What is your age?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is your date of birth?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the time to the nearest hour?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address for recall at end of test '42 West Street'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What year is it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognition of 2 people 'nurse' 'doctor' 'wife'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date World War 2 (1939-1945)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name present monarch (Queen Elizabeth)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count backwards 20-1 (this also tests attention)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Confusion Assessment Method

For any patient with a cognitive impairment OR ANY change in mental state screen with the Confusion Assessment Method (CAM). To have a positive CAM result the patient must display:

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Acute onset and fluctuating course

AND

Inattention (20-1 test reduced ability to maintain attention)

AND EITHER

Disorganised thinking (speech disorganised or incoherent)

OR

Altered level of consciousness

If positive: consider delirium

**Proceed to identify treatable or reversible cause**

**Patient Assessment**

**Clinical assessment:**

The underlying cause of delirium is often multifactorial. Common contributory medical causes include:

- Infection
- Cardiological illness
- Respiratory disorder
- Electrolyte imbalance
- Endocrine and metabolic disorders
- Urinary retention
- Faecal impaction
- Severe pain
- Drugs (particularly those with anticholinergic side effects, e.g. tricyclic antidepressants, anti-parkinsonian)
- Drugs, (opiates, analgesics, steroids)
- Drug (especially benzodiazepine) and alcohol withdrawal
- Neurological problem (e.g. stroke, subdural haematoma, epilepsy, encephalitis)

**History:**

Many patients with delirium are unable to provide an accurate history. Wherever possible, corroboration from family or carers, GPs or any source of good knowledge of the patient should be sought. Consider:

- Previous mental function
- Onset/course of confusion
- Medication history and recent changes
- Alcohol and drugs - including cessation

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- Bowel and bladder function
- Symptoms suggestive of underlying cause i.e. infection
- Co-morbid illness

Medicines causing delirium:

- Opiates
- Benzodiazepines
- Hyoscine
- Tricyclic antidepressants
- Anti-Parkinson medicines
- Steroids

If in doubt, check most up to date BNF

Do not forget, OTC/Complimentary/Alternative treatments.

- Alcohol & illegal drugs
- Mandrake
- Henbane
- Jimson Weed

Examination:

- Conscious level
- Pyrexia
- Search for infection: lungs, UTI, abdomen, skin
- Nutritional status
- Neurological examination
- Signs of impaction of stool/retention of urine
- Signs of drug/alcohol withdrawal

Investigations

The following are nearly always required to find the underlying cause

- FBC & CRP
- U&Es and Calcium
- LFTs
- Urinalysis

Always consider:

- Blood culture
- Pulse oximetry
- Specific cultures: urine, sputum

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According to the clinical findings and patient status other investigations include:

- TFTs
- B12 and folate
- ECG
- CT head (if suspecting reversible intra-cranial pathology)
- EEG (differentiates epilepsy and focal/global pathology)
- LP (meningism, headache and fever)

Differential Diagnosis

- Dementia
- Depression
- Hysteria
- Mania
- Schizophrenia
- Dysphasia
- Non-convulsive epilepsy/temporal lobe epilepsy

Treatment: Delirium

- if appropriate treat underlying cause
- symptomatic management
- non-pharmacological

Patients should be nursed in a good sensory environment with a reality orientating approach with involvement of the MDT.
Use a friendly approach

ENSURE:

- Appropriate levels of lighting for time of day
- Regular and repeated orientating as well as clocks and calendars
- Continuity of care from nursing staff
- Encouragement of mobility and engagement with other people
- Approach and handle patient gently
- Eliminate unexpected/unfamiliar noises
- Fluid and dietary intake if appropriate
- Good sleep pattern (milky drinks at night/ activity during the day)
- Encourage relatives/friends to visit and bring in familiar objects/pictures from home
- Explain cause of confusion to relatives and how to approach the patient

AVOID:

- Anti-cholinergic medicines
- Use of physical restraint
- Inter/intra ward transfers

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• Use of physical restraint
• Constipation
• Catheters when possible

Liaise with Older Adult Psychiatry if appropriate

Symptom management:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Suggested action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wandering</td>
<td>Try to establish cause: pain, thirst, need for the toilet</td>
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</table>
<pre><code>      | Provide close observation with a safe and reasonably closed environment |
      | Try distraction techniques - ask relatives for meaningful distraction |
      | Act in the patient’s best interests to keep them safe |
      | Use sedation as a final option |
</code></pre>
<p>| Rambling | Acknowledge the feelings expressed - not the content |
| Tactfully disagree (if the topic is not sensitive) |
| Change the subject |</p>

Pharmacological management

KEEP THE USE OF SEDATIVES TO A MINIMUM: ALL SEDATIVES CAN CAUSE OR WORSEN DELIRIUM (ESPECIALLY THOSE WITH ANTI-CHOLINERGIC SIDE EFFECTS, e.g. Levomepromazine)

The main aim of drug treatment is to treat distressing or dangerous behavioural disturbances (e.g. agitation and hallucinations). Many older people have hypoactive delirium (quiet delirium) and do not require sedation.

Drug sedation may be necessary in the following circumstances:

• To relieve distress in a highly agitated or hallucinating patient
• To prevent the patient endangering themselves or others

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To allow necessary investigations to take place

Use ONE drug only to start with:

Haloperidol is recommended as first line starting at the lowest possible dose and increasing in increments if necessary after an interval of 2 hours

Review all drugs at least every 24 hours. Record in notes indication for the use of drugs and severity of that indication

If haloperidol is unsuitable, lorazepam is an alternative

Haloperidol

Initial dose: 0.5mg orally, or 1 - 2mg intramuscularly, the dose can be repeated every two hours if necessary.
A maximum of 5mg (PO/IM) can be given in 24hrs but may need to be exceeded depending on severity of distress/psychotic symptoms, weight and sex

DO NOT USE IN PARKINSON'S OR DEMENTIA WITH LEWY BODIES

Lorazepam

Initial dose: 0.5 - 1mg orally, if necessary 0.5 - 1mg can be given intramuscularly, the dose can be repeated every two hours if necessary.
A maximum of 3mg can be given in 24 hours by either route

Sedation is only a small part of the management and should be kept to a minimum. It should only be used if a patient seems to be at risk of injuring themselves or others and all other appropriate means of controlling delirium have been exhausted. If sedatives are prescribed, the prescription should be reviewed regularly and discontinued as soon as possible. The aim should be to tail off any sedation after 24 - 48 hours

Other drugs that may be used are:
Olanzapine: 2.5 - 5 mg daily
Risperidone: 0.5 mg bd
Quetiapine: 25 mg bd
Levomepromazine: 12.5 - 25 mg or more as needed

One-to-one care of the patient is often needed and should be provided whilst the psychotropic medication is titrated upwards in a safe and controlled manner. Sedation should only be used in the situations described above and should NOT be used as a restraint.

Delirium due to alcohol withdrawal

A benzodiazepine, usually chlordiazepoxide, is used in a reducing course. See most recent BNF for more details.

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Training requirements associated with this Policy

Mandatory Training

There is no mandatory training associated with this policy.

Specific Training not covered by Mandatory Training

Ad hoc training sessions based on an individual’s training needs as defined within their annual appraisal or job description.

How this Policy will be monitored for compliance and effectiveness

There is no monitoring associated with this guideline.

For further information

See Nice guidance as below
Equality considerations
See MMP001 - Control of Medicines Policy

Reference Guide

Royal College of Physicians and the British Geriatric Society. The Prevention, Diagnosis and Management of Delirium in older people. NO 6 2006 Clinical Effectiveness and Evaluation Unit National Guideline


Document control details

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<th>Version No.</th>
<th>Date Ratified/Amended</th>
<th>Date of Implementation</th>
<th>Next Review Date</th>
<th>Reason for Change (e.g. full rewrite, amendment to reflect new legislation, updated flowchart, minor amendments, etc.)</th>
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<td>May 2014</td>
<td>May 2014</td>
<td>May 2016</td>
<td>Minor Amendments</td>
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<td>V2.0</td>
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<td>30.03.2020</td>
<td>31.03.2020</td>
<td>31.12.2020</td>
<td>Decision made by the Chief Nurse and Chief Executive to extend review date to December 2020 due to Covid-19.</td>
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Appendix 1

Risk factors:

Old age
Severe illness
Dementia
Physical frailty
Admission with infection or dehydration
Visual impairment
Polypharmacy
Surgery, e.g. fracture neck of femur
Alcohol excess
Renal impairment

Precipitating factors:

Immobility
Use of physical restraint
Use of bladder catheter
Iatrogenic events
Malnutrition
Psychoactive medications
Intercurrent illness
Dehydration
Appendix 2

Preventing and diagnosing delirium

Person presents to hospital or long-term care

Has person any of the following risk factors?
- 65 years or older
- Cognitive impairment and/or dementia
- Current hip fracture
- Severe illness

Yes

At risk

Yes

Change in risk factors?

No

Not at risk

Has person any indicators of delirium? These are recent (within hours or days) changes in:
- Cognitive function
- Perception
- Physical function
- Social behaviour

These may be reported by the person at risk, a carer or relative. Be particularly vigilant for signs of hypovolaemic delirium

Yes

Daily observations for indicators of delirium

No

Daily observations for indicators of delirium

(People already at risk of delirium)

Carry out clinical assessment based on DSM-V or short CAM to confirm the diagnosis. In critical care or in the recovery room after surgery, CAM-ICU should be used?

Delirium diagnosed?

Yes

Difficult distinguishing between delirium, dementia or delirium with dementia, treat for delirium first

No (all people)

Record diagnosis in the person’s hospital record and primary care health record

Treatment

3 Haloperidol and olanzapine do not have UK marketing authorisation for this indication.

*If cognitive impairment is suspected, confirm using a standardised and validated cognitive impairment measure. If dementia is suspected, refer to 'Dementia: supporting people with dementia and their carers in health and social care' (NICE clinical guideline 42).
*For further information on recognising and responding to acute illness in adults in hospital see ‘Acutely ill patients in hospital’ (NICE clinical guideline 50).
*A healthcare professional trained and competent in the diagnosis of delirium should carry out this assessment.
Appendix 3

Treating delirium

1. Identify and manage underlying cause or combination of causes
   - Ensure effective communication and reorientation, provide reassurance
   - Consider involving family, friends and carers to help with this

2. Ensure that people are cared for by a team of healthcare professionals familiar to them
   - Avoid moving people within and between wards or rooms unless necessary

   Delirium symptoms not resolved

3. Is person distressed or considered a risk to themselves or others?
   - Distress may be less evident in people with hypoactive delirium
   - Use verbal and non-verbal techniques to de-escalate situation if appropriate

   Delirium symptoms not resolved

   Verbal and non-verbal de-escalation techniques not appropriate

4. Consider short-term (usually 1 week or less) haloperidol or olanzapine
   - In people with conditions such as Parkinson's disease or dementia with Lewy bodies use antipsychotics with caution or not at all

   Delirium symptoms not resolved

5. Re-evaluate for underlying causes
   - Follow up and assess for possible dementia

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2 See 'Violence' (NICE clinical guideline 25).
6 Haloperidol and olanzapine do not have UK marketing authorisation for this indication.
10 For more information on the use of antipsychotics for these conditions, see 'Parkinson's disease' (NICE clinical guideline 35) and 'Dementia' (NICE clinical guideline 42).
11 For more information on dementia see 'Dementia' (NICE clinical guideline 42).