

Prevention, Diagnosis and Management of Delirium – Full Clinical Guideline

Reference No: CG-T/2014/024

Introduction

Delirium (acute confusional state) is a common clinical syndrome characterised by a disturbance of consciousness and a change in cognition, which has an acute onset and fluctuating course. Classified as a medical emergency, delirium is a serious condition often associated with poor outcomes.

Delirium may be reversible if dealt with urgently and up to 40% of delirium is preventable. It is present on admission in 10-20% of acute medical admissions and develops in a further 10-20% during their hospital stay. Post-operative delirium is common on surgical wards, particularly following neck of femur fractures.

A Collateral history from a relative or carer of the onset and course of the confusion is essential to distinguish delirium from dementia. It can be difficult to distinguish between delirium and dementia and some people may have both conditions. If clinical uncertainty exists over the diagnosis, the person should be managed initially for delirium.

Aim

This clinical guideline describes methods of preventing, identifying, diagnosing and treating delirium by using targeted, multicomponent, non-pharmacological interventions that address a number of modifiable risk factors ('clinical factors').

Factors pre-disposing to delirium
Aged 65 or over
Cognitive impairment / Dementia
Current hip fracture
Severe illness
Chronic anticholinergic drug use/Polypharmacy
Psychiatric illness
Malnutrition
Physical frailty
Sensory impairment (deaf, visually impaired)
Pain
Constipation

Types of delirium:

There are three types of delirium: hyperactive, hypoactive and mixed delirium. Be particularly vigilant for behaviour indicating hypoactive delirium (marked*). Hypoactive delirium accounts for up to 80% of cases, although often goes undetected.

Diagnosis:

This can include:

- Worsened concentration*
- Slow responses*
- Confusion
- Restlessness, agitation
- Visual or auditory hallucinations
- Reduced mobility*
- Changes in appetite*
- Sleep disturbance
- Lack of co-operation
- Withdrawal, alterations in mood or communication*

Delirium screening is recommended for all patients aged >65 admitted to hospital. Screening tools may increase recognition of delirium present on admission.

Ensure diagnosis of Delirium has been clearly documented in the patients notes.

Screening for Delirium:

To screen for delirium, use the 4AT – Rapid clinical test for delirium.

The 4AT makes up part of the Delirium and Dementia Screen on Lorenzo for Royal Derby Hospital and FNCH.

A blank 4AT assessment is available on Meditech V6 for patients admitted to Queens Hospital Burton, Samuel Johnson and Sir Robert Peel.

[Download — 4AT - RAPID CLINICAL TEST FOR DELIRIUM \(the4at.com\)](#)

For ICU patients use the CAMICU: [click here](#) (as per ICU guidelines).

Serial measures may help detect new development of delirium or its resolution. A repeat cognitive assessment before discharge is recommended by NICE.

Usually there is evidence of a causative general medical condition, drug withdrawal or intoxication. (See Appendix 1 for list of common drugs causing delirium).

Investigating Delirium:

Minimum Delirium Screen:	Referral criteria for Mental Health Liaison Team (through Extramed for RDH and Meditech for QHB, SJ & SRP)
<ul style="list-style-type: none"> • Collateral history to assess cognitive baseline • NEWS2 review • Blood & urine cultures, U&Es, LFTs, FBC, CRP, TFT, B12/Folate, ABG, blood glucose • Investigations: Bladder scan, PR, ECG, CXR, (CT brain <u>IF</u> trauma, stroke risk factors, focal neurology) 	<ul style="list-style-type: none"> • Challenging behaviour • Persistent delirium • Uncertain capacity • Past psychiatric history • Suspected dementia/depression • Considering use of Mental Health Act

On Discharge:

Inform GP of the delirium diagnosis and request monitoring of cognitive function (increased dementia risk). Recommend interval cognitive screening in the community and onward referral to memory clinic if there is persistent or progressive cognitive decline.

Information for patients and relatives:

Information sheets about delirium should be made available to patients and relatives. An information sheet for patients and relatives should be available on wards and is available at: [click here](#)
An alternative used across Derbyshire is available at: [click here](#)

Enhanced Delirium Pathway for Derby City Patients:

If the patient does not meet the criteria to reside in an acute hospital and lives in Derby City, please consider referring to the acute delirium pathway for early discharge via the IDT. This pathway offers enhanced support in the home environment or Perth House for 2 weeks including night calls.

Causes, Management and Prevention of Delirium

Multi-component interventions have been shown to reduce the incidence and severity of delirium among those at high risk.

Non-pharmacological interventions remain the preferred clinical option in the first instance.

P	Pain	Assess for verbal and non-verbal signs of pain, particularly in patients with communication difficulties - inadequate treatment of pain can cause delirium
		Commence pain relief and review appropriate management of pain
I	Infection	Assess and treat for infection
		Take regular observations, assess for hypoxia and optimise oxygen saturation if necessary
N	Nutrition	Assess, monitor and document nutrition status involving the Dietitian where relevant
		If the patient has dentures, ensure they fit properly
C	Constipation	Attention to bowel and bladder. Avoid unnecessary catheterisation.
		Use a stool chart to keep track of bowel motions
H	Hydration	Avoidance of dehydration. Consider sub-cutaneous or intravenous fluids if necessary
		Seek advice re people with heart failure or chronic kidney disease
M	Medication	Carry out a medication review, considering the type and number of medications (including over the counter medications).
		Establish usual alcohol and nicotine intake. Consider Nicotine patches
	Mobility	Encourage safe mobilisation where possible, particularly after surgery. Walking aids should be accessible at all times
Avoid use of physical restraints		
E	Electrolytes	Review blood tests
	Environment	Good lighting levels
		Reduced noise (pump alarms, pagers)
		Available and working sensory aids (spectacles, hearing aids, deaf aid communicators)
		Avoid movements between wards and rooms and where possible ensure continuity of care from familiar staff
		Regular and repeated visible and verbal reorientation (clocks, calendars and clear signs)
		Maintenance or restoration of normal sleep patterns whilst avoiding sedatives, sleep kits available on Net-i
		Reduce nursing/medical interventions during sleeping hours
	Encourage visits from family and friends	

Pharmacological management of patients with delirium (for patients over 65 years)

The management of delirium is primarily non-pharmacological: treat the cause, discontinue exacerbating drugs, use de-escalation and non-verbal techniques ([Acute Behavioural Disturbance - ED](#); [NICE Violence and Aggression guideline](#)).

Sedation can increase the risk of falls and associated morbidity and mortality.

- Haloperidol can increase the risk of stroke and is **contraindicated** in patients with Parkinson's Disease, Dementia with Lewy Bodies, and patients with prolonged QTc on 12 lead ECG. Review most recent ECG prior to use.
- Lorazepam can paradoxically increase confusion.

Sedation may be necessary in the following circumstances:

- To carry out lifesaving / critical investigation or treatment
- To prevent patients endangering themselves or others when non-pharmacological methods have not been effective
- To relieve distress in a highly agitated or hallucinating patient

It is preferable to use **one drug only**, starting at the lowest possible dose and increasing in increments, if necessary, after an interval of 30 to 60 minutes.

If sedatives are prescribed, the drug should be given regularly from the outset (not prn), reviewed daily, and discontinued as soon as possible. MAXIMUM OF 3 DAYS*

Aim to use **oral** medication first:

1st line: HALOPERIDOL (see contraindications above)

500micrograms to 1mg BD

*If additional doses are needed, this can be given four hourly, up to a MAXIMUM of 2mg/day**

2nd line (1st line for patients with Parkinson's Disease):

LORAZEPAM

500micrograms to 1mg BD

*If additional doses are needed, this can be given two hourly, up to a MAXIMUM of 2mg/day**

If a second line agent is needed for a patient with Parkinson's, Quetiapine 12.5mg every 4 hours can be started and specialist input should be sought (maximum 50mg/day if >65 years).

If needed, a combination of antipsychotic and lorazepam can be used.

If it is not safe to administer treatment orally, IM injection can be used:

- Haloperidol IM (see contraindications) 500micrograms to 1mg, maximum 2mg/day
- Lorazepam IM 500micrograms to 1mg, maximum 2mg/day

*** SpR/Consultant advice should be sought if there is a need to prescribe more than 2 doses**

Patients <65 years please see alternative guidance: [Click here](#)

The BNF should be consulted for full list of cautions, contraindications side effects and other prescribing information.

DRUGS USED FOR THE ACUTE MANAGEMENT OF DELIRIUM ARE TEMPORARY. PATIENTS SHOULD BE WEANED AT EARLIEST OPPORTUNITY AND NOT BE ON THE DISCHARGE PRESCRIPTION

The following antidotes should be available for reversal of potential side effect- in conjunction with advice from senior clinician

Procyclidine 5-10mg (5mg in older persons) IM – for reversal of dystonic reactions associated with haloperidol and quetiapine. Repeated doses may be required.

Flumazenil – for reversal of respiratory depression associated with benzodiazepines only. **Do not give unless you are sure the patient is not on long term benzodiazepines.** Consider flumazenil infusion if more than 5 doses are required. See doses in BNF.

Post sedation care:

Vigilant monitoring, particularly for signs of; airway obstruction, respiratory depression, hypotension and extrapyramidal reactions is mandatory.

Monitoring should be performed in a safe environment within the clinical setting.

Some flexibility in observations is acceptable, so as not to unnecessarily wake or irritate the patient further and to permit sufficient patient rest.

Patient with decreased level of consciousness:

Requires one to one nursing

Need continuous oxygen saturation monitoring

Vital signs (temp, HR and rhythm, BP, respiratory rate) and neurological observations should be performed every 15 minutes until stability is clinically evident. After last sedation medication this can be stepped down to half hourly observations for 2 hours for calm alert patients. **Agitated patients need continuous clinical observation.**

Unresolved Agitation:

Seek advice from MHLT, SpR/Consultant, reconsider non-pharmacological measures, review identified causes of delirium and medications.

Information for patients and relatives:

Information sheets about delirium should be made available to patients and relatives. An information sheet for patients and relatives should be available on wards and is available at: [click here](#)

An alternative used across Derbyshire is available at: [click here](#)

The Scottish intercollegiate guidelines network also produces a suitable leaflet: [click here](#)

Communication with the General Practitioner:

Delirium is associated with an increased risk of developing dementia. Include the diagnosis of delirium on the patient's discharge summary.

These guidelines are based on the NICE clinical guideline 103; February 2023, Delirium: diagnosis, prevention and management.

Documentation Control

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Some common drugs causing delirium:

Drug type	Examples	Risk	Comments
Benzodiazepines	Diazepam Temazepam Lorazepam Chlordiazepoxide	HIGH	Benzodiazepine withdrawal is also a common cause of delirium
Antidepressants	Amitriptyline Dothiepin Trazodone	HIGH	Risk greatest in drugs with sedative or anticholinergic properties
Analgesics	Dihydrocodeine Codeine Morphine Tramadol NSAIDs	HIGH LOW	Opiates have very high risk of causing confusion. <u>INADEQUATE TREATMENT OF PAIN CAN ALSO CAUSE DELIRIUM.</u>
Antiparkinson drugs	Co-careldopa (Sinemet) Co-beneldopa (Madopar) Trihexyphenidyl Ropinirole Pramipexole Selegiline	HIGH	High risk of confusion and visual hallucinations. <u>AVOID HALOPERIDOL</u> Seek expert help from PD specialist nurse Ex 83535.
Lithium		HIGH	Check Lithium level, seek advice from psychiatrist.
Steroids		HIGH	Risk may be dose related
Antihypertensive drugs	Methyl Dopa Diuretics Beta-blockers ACE inhibitors	HIGH MEDIUM LOW	Diuretics may cause significant dehydration and electrolyte disturbance.
Antiarrhythmic drugs	Lignocaine Digoxin	MEDIUM	Lignocaine has highest risk. Risk with digoxin is dose related. Check digoxin level.
Antipsychotic drugs	Promazine Trifluoperazine Sulpiride Haloperidol	MEDIUM LOW	Sedating drugs with anticholinergic effects are worse.
Anticholinergic drugs	Oxybutynin Tolterodine Procyclidine Hyoscine	HIGH	Anticholinergic drugs should be avoided.
H2 blockers	Cimetidine Ranitidine	LOW	Cimetidine more likely to cause confusion.

The above table is based upon the Modified anticholinergic risk scales (mARS)

See also: [B140i. Anticholinergic drugs 2.1 \(derbyshiremedicinesmanagement.nhs.uk\)](http://B140i.derbyshiremedicinesmanagement.nhs.uk)