State if the document is a Trust Policy/Procedure or a Clinical Guideline / Drugs Therapeutic Committee Document	Guideline
Document Title:	Guidelines for the prevention, recognition and management of delirium in Adults in the acute hospital setting.
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Target Audience:	Clinicians & Nursing staff involved in the management and care of the person with Delirium as an inpatient.
Key Words:	Delirium, NICE guidance QS63 2014 SQiD –Single Question in Delirium, CAM – Confusion assessment method, Fluctuating Inattention, Non –pharmacological
Associated Trust Documents:	CG327 Enhanced Care policy,CG232 Antibiotic guidelines,M08 Mental Capacity Policy
Reason for current amendments:	Due for review

Background

Delirium (sometimes referred to as 'acute confusional state') is a common clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which has an acute onset and fluctuating course developing over 1–2 days. It is a serious condition that maybe associated with poor outcomes; Patients who develop delirium have high mortality, institutionalisation and complication rates, and have longer lengths of stay than non-delirious patients. The British Geriatric society (2006) reported that Delirium is often not recognised by clinicians and is often poorly managed. It can be prevented and the symptoms treated if dealt with urgently. The prevalence of delirium tends to rise with increasing age, but reporting of delirium is poor in the UK, indicating that awareness and reporting procedures need to be improved.
www.guidance.nice.org.uk/qs63
BSG.org.uk/delirium,

1. Predisposing risk and precipitating factors of Delirium

Risk factors; It is estimated that around 20–30% of people on medical wards in hospital have delirium, and between 10% and 50% of people who have surgery develop delirium, with considerable variation across different types of surgery and settings. There are many factors associated with an increased risk of developing delirium and it is recommended that when a person first presents to hospital a documented assessment of risk should be carried out for the following groups of patients;

- Age 65years or older
- Current hip fracture
- Cognitive impairment or Dementia
- Severe illness (a condition deteriorating or at risk of deterioration)

Precipitating factors; The cause of Delirium can be multifactorial and these include conditions that can induce chemical imbalance; illness that can compromise circulation and oxygenation; introducing or stopping medications that affects the central nervous system; an infection especially if the patient is in the high risk group.

Table 1: Common precipitating factors to consider (Guy's & St Thomas'2011)

Environmental factors	Inappropriate noise Sleep deprivation Falls physical restraint Change of staff Loss of spectacles or hearing aid unfamiliar environment catheters/ lines	**Drugs**	Alcohol or sedative withdrawal Recreation drugs Sedative hypnotics Opioids Anticholinergics Anti parkinsonian drugs Antidepressants Anticonvulsants Corticosteroid
Fluid & electrolyte imbalance	Hypo/hypernatremia Hyperkalaemia	**Infections**	Chest, urine Skin

	Renal failure dehydration		Abdominal CNS
Neurological illness	Stroke Seizures Subdural haematoma	**Surgery**	Orthopaedic Vascular/cardiac Gastro-intestinal
Pain	Acute Acute on chronic	**Urinary or faecal retention**	Specifically examine to exclude
Respiratory/ cardiovascular	Hypoxia Hypercapnia Cardiac failure MI Organ ischaemic	**Endocrine metabolic**	Thiamine deficiency Hyper/hypothyroidism Hyper/hypoglycaemia Liver failure

2. Diagnosing Delirium and Clinical features

On presentation to hospital those people at risk should be assessed for recent (within hours or days) changes or fluctuation in behaviours. The Single Question in Delirium should be asked SQUiD.

'Has (named person)….. been more confused in the last 72 hours?'

In those patients with a positive answer to SQiD a diagnosis should be made using the confusion assessment method (CAM). The diagnosis of delirium using the CAM requires the presence of clinical features 1 and 2 and either 3 or 4.

1. Disturbance of consciousness (i.e. reduced clarity of awareness of the environment) with reduced ability to focus, sustain or shift attention.
2. A change in cognition (such as memory deficit, disorientation, language disturbance) or the development of a perceptual disturbance that is not better accounted for by a pre- existing or evolving dementia.
3. The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.
4. There is evidence from the history, physical examination, or laboratory findings that the disturbance is caused by the direct physiological consequences of a general medical condition, substance intoxication or substance withdrawal.

(2003 Sharon K. Inouye, MD, MPH)

Table 2: Clinical features of Delirium

Altered cognitive function	Typically global or multi deficits in cognition; disorientation, memory language.
Inattention	Difficulties focusing, shifting attention, unable to follow conversation or commands.
Disorganised thinking	Rambling or irrelevant conversation, unclear or illogical flow of ideas.
Altered perception	Hallucinations, illusions (30% may present)
Altered physical function	Hyperactive; agitation, restlessness, vigilance Hypoactive; lethargy, reduced mobility/movement, reduced appetite
Altered social behaviour	Very common. Intermittent and labile change to mood or attitude, paranoia or fear, irritability, apathy, anger or euphoria.

Altered consciousness	Reduced clarity of awareness, slow response.
Acute onset	Occurs abruptly usually over a period of hours or days. important to establish the onset
Altered sleep/wake cycle	Characteristic sleep disturbances. Typically daytime drowsiness, night time insomnia. Fragmented sleep pattern or complete reversal of sleep cycle.
Fluctuating course	Symptoms may come and go or increase and decrease in a 24 hour period. There is often a lucid interval.

It can be difficult to distinguish between delirium and dementia because symptoms overlap, and some people may have both conditions. Dementia tends to develop slowly, whereas delirium is characterised by sudden changes. Delirium is a potentially reversible condition if the causes are identified and they are treatable. If clinical uncertainty exists over the diagnosis, initial management should be for delirium.
Delirium may have more than one causal factor (i.e. multiple aetiologies). A diagnosis of delirium can also be made when there is insufficient evidence to support criterion 4, if the clinical, presentation is consistent with delirium, and the clinical features cannot be attributed to any other diagnosis, for example delirium due to sensory deprivation. (BGS 2006)

Delirium can be hyperactive or hypoactive, but some people show signs of both (known as mixed delirium). People with hyperactive delirium have heightened arousal and can be restless, agitated with increased motor activity and display aggressive behaviours. People with hypoactive delirium become withdrawn, quiet and lethargic, characterised by reduced motor activity. Hypoactive and mixed delirium can be more difficult to recognise and is often unrecognised by doctors and nurses in up to two-thirds of cases.

3. Treatment and Management of delirium

Delirium needs to be considered as a medical emergency. It is often associated with severe illness, therefore rapid identification and treatment of the underlying cause is required. The management should be person centred. Management approaches need to be supportive. A non-confrontational and empathetic approach is required with patients who are displaying increased hyperactivity, agitation or distress.

It is common for the patient with delirium to be incapacitious on presentation; in these cases the code of practice detailed within the mental capacity policy (Act 2007) should be followed.

- Incriminated drugs should be withdrawn wherever possible. In the cases of opiates causing delirium, it may be possible to reduce the dose or change to an alternative.
- Biochemical derangements should be corrected promptly.
- Infection is one of the most frequent precipitants of delirium. If there is a high likelihood of infection (e.g. abnormal urinalysis, abnormal chest examination etc.), appropriate cultures should be taken and antibiotics commenced promptly, selecting a drug to which the likely infective organism will be sensitive (see antibiotic guideline).
- Parenteral thiamine should be administered when alcohol abuse or under nutrition is apparent.
- Treat constipation if presentation is suspected (see management of constipation guidelines)

Discharge summaries should be completed promptly with appropriate follow up arrangements recommended. Prior to discharge it is useful to assess the patient's cognitive and functional status (e.g. using standardised tools such as AMT and Barthel Index).

3.1 Symptom management

Patients who actively walk with symptoms of agitation or restlessness require close observation within a safe and reasonably closed environment. The least restrictive option should always be used when acting in the best interests of the patient to keep them safe from assessed risk (MCA 2007). Firstly, attempts should be made to identify and remedy possible cause of agitation e.g. pain, thirst, or a need for toilet. Allowing the patient to walk will help promote and maintain functional ability, and reduce the risk of pressure damage occurring.

Relatives could be encouraged to assist in this kind of management as they will have information about the person which will help when offering meaningful distractions (refer to the 'This is me' document). If it is deemed appropriate, family and carers should be given the opportunity to be involved in treatment, offer them the hospital delirium information leaflet (available on hospital intranet).

The use of restraint or pharmacological management should only be considered necessary in cases where the symptoms are considered to be threatening to the patient's safety and that of others or would result in the interruption of essential care and should only be used as a final option.

3.2 The Do's and Don'ts

Depending on the layout and nature of the ward, the medical and nursing team may need to consider what is in the best interest for the patient. Consider the following:

Table 3; Do's and don'ts guide for staff (Guy's and St Thomas' NHS Trust)

All members of MDT **Do's** **Don'ts**	
Observe the patient; Generally at high risk of falls, consider the enhanced care risk assessment and falls risk assessment and careplan. Consider using a bed close to the nursing station or in a cohorted bay. **Environment & communication;** use calm speech and a gentle manner Be courteous and polite even if the patient is not Acknowledge their feelings and emotions Orientate the patient frequently: who and where they are, who you are.	**Environment & communication;** Don't insist on performing unnecessary tasks (washing/dressing/shaving). Don't argue and avoid commands. Don't frequently change bays, wards. Don't use siderooms where possible. Don't expose patient to sudden disturbances such as bright lights, noise at night. Don't prevent sleep at night; reduce noise, bleeps, telephones, alarms. Don't avoid the Trust siderail guidelines/assessment; avoid use of siderails if

Explain unfamiliar noises personnel. Have visible calendar clocks and signage. Facilitate extended visiting for family and carers Use cognitively stimulation activities such as reminiscences. Optimise any sensory deficit; hearing aids/glasses. Hydrate patients offer nutrition, involve dietetics if required. Encourage early mobility under supervision if required. Use interventions that are the least restrictive. Allow patients to wander within the safe environment. **Documentation**; Mental capacity assessment. Behaviour chart documenting any antecedent or triggers and actions taken to reduce any distress or agitation. **Management;** Correct Hypoxia and hypotension Remain vigilant for infection and deterioration Correct dehydration Monitor bowels and treat constipation Identify and treat pain using non communicative pain tool. Explain diagnosis to family or carer Document in medical notes and on discharge letters the clear diagnosis. Consider psychiatric review if hallucinations and delusions present. Consider Baywatch/cohort nursing according to risk assessment. **Prescribing;**	patient is able to climb over them. Don't physically restrain the patient or prevent their mobility if safe to do so. **Management;** Don't delay attendance –delirium has a high mortality Don't catheterise unnecessarily. Don't use IV lines unnecessarily and follow Trust cannulation guidelines. Don't order unnecessary tests or investigations. Don't disturb the patients sleep with procedures and medication rounds if possible. Don't use antipsychotics unless other interventions have failed Don't use large amounts of antipsychotics particularly in the elderly. Don't give antipsychotics to patients with prolonged QT's, Parkinson's disease or Lewy body dementia- use Lorazepam instead.

Review appropriateness of all medications Ascertain the use of non prescriptive/recreational drugs. Consider medication for patients at risk to self or others according to these guidelines. Consider regular low dose haloperidol, if the patient required frequent doses (consensus)	

3.3 Medication

For all patients on ICU/HDU please refer to critical care CAM-ICU Delirium tools found in appendix 3, 4.

If verbal and non-verbal de-escalation techniques are not appropriate or are ineffective and a patient with delirium remains distressed or is considered a risk to themselves or others, then consider the use of short-term (**usually a week or less**) treatment with an appropriate antipsychotic. It is preferable to use one drug only, starting at the lowest possible dose and increasing in increments if necessary after an interval of two hours.

Over sedation of the patient can increase complications and all sedatives may cause delirium, especially those with anticholinergic side effects .Therefore, caution is needed with the use of sedatives and major tranquillisers and their use should be kept to a minimum.

The main aim of drug treatment is to treat distressing or dangerous behavioural disturbance [e.g. agitation and hallucination]

Drug sedation may be necessary in the following circumstances

- in order to carry out essential investigations or treatment
- to prevent patient endangering themselves or others
- to relieve distress in a highly agitated or hallucinating patient

Table 4. Recommended medication

	Adults (18 - 75 years old)	Older Adults (>75 years old)
Haloperidol *Do not use in Parkinson's or Lewy Body Dementia*	0.5 – 1mg PO/IM Max dose 10mg in 24 hours Min interval 2 hours	0.5 – 1mg PO/IM Max dose 5mg in 24 hours Min interval 2 hours
Olanzapine *Do not use in Parkinson's or Lewy Body Dementia*	2.5 – 5mg PO Max dose 20mg in 24 hours Min interval 2 hours	2.5mg PO Max dose 10mg in 24 hours Min interval 2 hours
Lorazepam *Use in Parkinson's or Lewy Body Dementia, Prolonged QTs (>470ms)*	0.5mg – 1mg PO/IV/IM Max dose 4mg in 24 hours	0.5mg – 1mg PO/IV/IM Max dose 3mg in 24 hours

DO NOT PRESCRIBE HALOPERIDOL DECANOATE (This is a depot injection)

IV/IM Lorazepam: Comes in 4mg in 1ml vial. Can be diluted with 1ml 0.9% Saline or water for injection to make it 4mg in 2ml.

All medication should be reviewed at least every 24 hours with a view to stopping the sedatives as early as possible. The aim should be to tail off any sedation after 24 – 48 hours. Sedation should only be used in situations as indicated above and should not be used as a form of restraint.

If there is a clinical requirement to continue the medication for longer than one week it must be reviewed prior to discharge. If there is an intention for the medication to continue after discharge, it must be clearly communicated on the discharge letter that the patient's GP must review the need for the medication and its duration.

3.4 Liaison Psychiatry

Psychiatry Liaison services (PLS) have an advisory role and help should be sought if the behavioural problems persist or becomes dangerous. Many patients with delirium have an underlying dementia or cognitive impairment, which may require follow-up and management by an Old Age Psychiatrist. This does not necessarily have to take place in an acute hospital setting, local services are provided in the community and referral is made via GP or by the PLS if they assess as necessary. This information is required on the electronic discharge summary and should form part of our medical recommendation.

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) behaviour 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 =unrousable)

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

Think Delirium

D rugs / Dehydration

E lectrolytes

L evel of pain

I nfection / Inflammation (post-surgery)

R espiratory function (Hypoxia/Hypercapnia)

I mpaction – constipation

U rine retention (avoid catheters where possible)

M etabolic disorder (TFT's, Glucose)

Appendix 2

Think Delirium Step 1. **Assess the patient for the presence of risk factors**

Age >65 Severe illness
Cognitive impairment
Neck of Femur

Step 2. **Single Question in Delirium** (SQiD)

Has.. *(Named person)…* been more confused than normal in past 4[illegible]

Yes **No** → **Monitor daily for clinical changes as part of management and prevention plan.**

NEWS2 (ACVPU)

Step 3. **Carry out a CAM assessment**

CAM positive **CAM negative** →

Step 4. **Assess for precipitating factors (often >1)**

Drugs (toxicity/withdrawal)
Dehydration

Electrolyte imbalance

Level of Pain

Infection/ Inflammation (post op)

Respiration (hypoxia/Hypercapnia)

Impaction (constipation)

Urine retention

Metabolic disorder (hypo/hyperglycaemia, thyroid, LFT, renal

→ **Treat, Manage & document all precipitating factors**

If no improvement observed after 72 hours re- evaluate and optimise treatment.

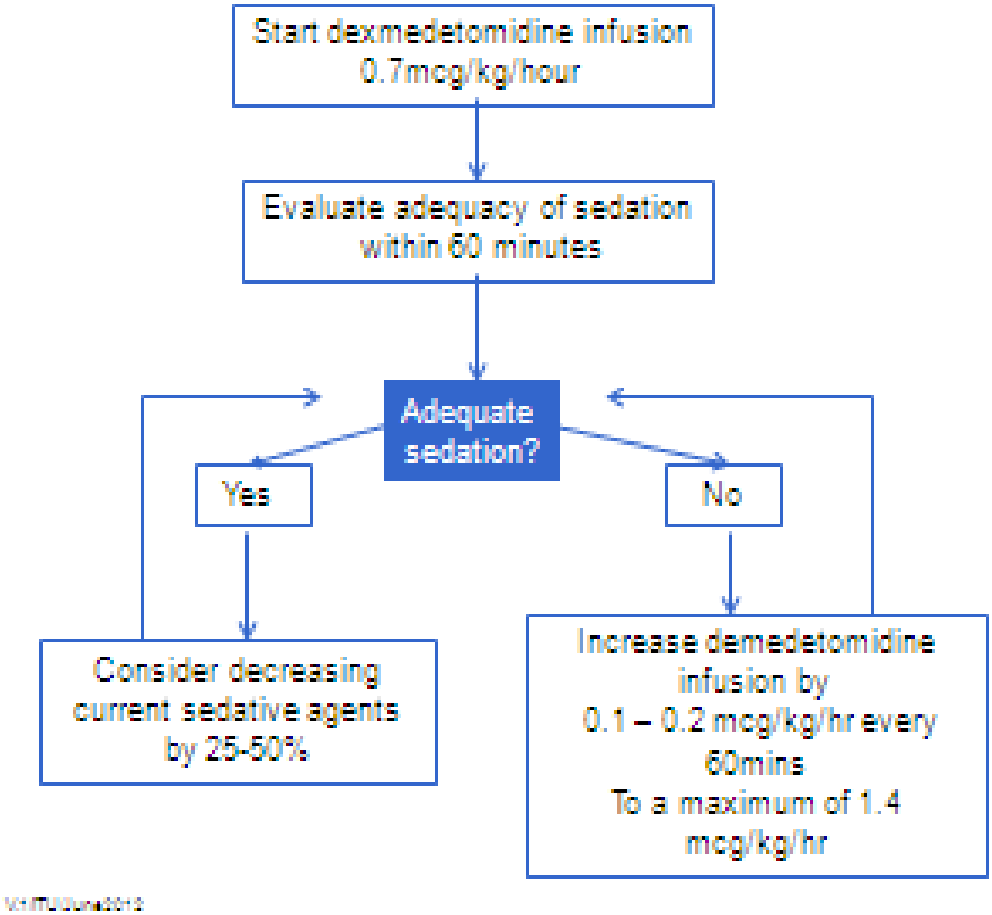
Dexmedetomidine (Dexdor®) use in ITU

Indication:

- For sedation of adult patients requiring a RASS score of 0 to -3 (sedation level not deeper than arousal in response to verbal stimulation)
- Patients difficult to wean from sedation to extubate
- Highly agitated patients or patients with delirium
- Patients must have adequate analgesia

- Use of dexmedetomidine is a Consultant decision
- Not to be used as the 1st line choice of sedative
- Not for patients requiring continuous deep sedation
- Not suitable for patients with severe cardiovascular instability.
- If no improvement within 72hrs – discontinue dexmedetomidine

No dose adjustment required in renal impairment.
Use with caution in liver disease. A reduced maintenance dose may be considered.



Reference

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British Geriatric society (2006) BSG.org.uk/delirium

Mental capacity act 2007 – mental capacity code of practice www.gov.uk/mental-capacity-actcodeofpractice

Guys & St Thomas delirium guidelines – www.guysandstthomas.nhs.uk/resources/our-services/acute-medicine-gi-surgery/elderly-care/delirium-adult-inpatients.pdf