



## The Prevention, Recognition and Management of Delirium in Adult in-patients.

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NB This policy relates to the Isle of Wight NHS Trust hereafter referred to as the Trust

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## 1 Executive Summary

The National Institute for Health and Care Excellence Delirium: Prevention, diagnosis and management Clinical Guideline CG103(NICE, 2010) identifies a fundamental requirement for the NHS to ensure that patients who present with Delirium are diagnosed and managed at the earliest opportunity and that preventing patients from experiencing Delirium is a key priority.

Delirium is a common neuropsychiatric condition that is also known by various other names including organic brain syndrome, intensive care psychosis and acute confusional state. Patients with delirium can be found in all specialties of the hospital with delirium occurring in 10-20% of medical patients on admission and a further 10 to 30% developing delirium as an inpatient. Delirium occurs in 15 to 53% of surgical patients postoperatively and in 70 to 87% in intensive care.

Patients with delirium have an increased length of stay, increased mortality and increased risk of institutional placement. Hospital mortality rates of patients with delirium range from 6% to 18% and are twice that of matched controls. There is a higher risk of hospital acquired complications such as pressure sores and falls. The one-year mortality rate associated with cases of delirium is 35-40%. Up to 60% of individuals suffer persistent cognitive impairment following delirium and they are also three times more likely to develop dementia.

This guideline provides support for clinicians in the recognition, diagnosis and management of older people presenting with the symptoms of Delirium within the acute hospital environment

## 2 Introduction

Delirium is common in hospitalised patients with a range between 10 and 50% reported in different studies. It occurs most frequently in older people (up to 30% of older inpatients) but also commonly in Intensive Care Unit (ICU) patients, in the alcohol dependent and in the terminally ill. It can occur in a wide variety of medical situations.

Delirium is often not recognised by clinicians (missed in up to 2/3 of cases) and is frequently poorly managed. Lack of recognition is important and may occur for a number of reasons including the fluctuating nature of it, overlap with dementia, lack of formal cognitive assessments being used, failure to appreciate the clinical consequences and failure to consider the diagnosis important.

It is vital that delirium is recognised and appropriately managed because patients who develop delirium have high mortality (twice as likely to die), institutionalisation and complication rates, and have longer lengths of stay than non-delirious patients (up to 8 days has been described). There is potential to prevent the onset of delirium in up to 30% of older in-patients. The National Service Framework for Older People (DOH 2001) identifies a fundamental requirement for the NHS to ensure the

good and effective management of patients with mental health needs wherever they are being cared for.

### **Delirium**

- is a neuropsychiatric syndrome characterised by acute onset of fluctuating cognition and inattention linked to triggering factors
- is very commonly encountered in hospital medicine
  - Complicating at least 10% of all medical admissions
  - 20-30% prevalence on medical wards
  - 15-53% of patients postoperatively
  - 70-87% of those in intensive care
- is a **medical emergency** independently associated with serious adverse outcomes
  - Increased mortality in older people - 35-40% at one year
  - Increased risk of institutional placement
  - Increased risk of in-hospital complications
- is **preventable**
  - Up to 1/3 of cases
- is **treatable** if identified and managed appropriately and urgently

Delirium is everybody's business. We all need to know how to prevent delirium and make sure that someone with suspected delirium receives rapid assessment and appropriate management,

## **3 Definitions**

AMTS- Abbreviated Mental Test a tool developed in 1972 for determining the presence of cognitive impairment.

Delirium is a common neuropsychiatric condition that is also known by various other names including organic brain syndrome, intensive care psychosis and acute confusional state

MMSE- Mini Mental State Examination a commonly used tool for screening cognitive function. It is not suitable for making a diagnosis but can be used to indicate the presence of cognitive impairment.

## **4 Scope**

This policy applies to all IOW NHS Trust employees including bank staff and locum staff.

This document provides detailed, evidence-based clinical guidance for the care and management of patients who present on admission with delirium or develop this condition during their hospital stay. The guidance primarily relates to older patients who are particularly prone to developing this condition, although the guidance may

also be relevant to younger patients who are confused. Clinical staff will be at the forefront of delivering this guideline and depending on their clinical role may have varying levels of experience. All staff should be supported by their line manager to receive the Education and training required to recognise and treat Delirium.

## 5 Purpose

The following guideline aims to provide support for clinicians in the recognition, diagnosis and management of older people presenting with the symptoms of Delirium within the acute hospital environment. It is important to remember that patients with delirium can be found in all specialties of the hospital

### Objectives:

- All patients at risk of developing delirium will be routinely screened on admission to hospital and periodically reviewed thereafter.
- Patients presenting with delirium will receive the appropriate medical investigations in order to identify the underlying causative factors and instigate appropriate treatment
- All patients will have evidence-based multidisciplinary care plans that reflect their individual needs and take into account the needs of relatives/informal carers.
- Patients with delirium will be regularly reviewed to assess the progress of this condition in order to make adjustments to their care and treatment plans.
- Discharge plans will clearly identify the patients' future risk of delirium and incorporate preventative measures.

## 6 Roles and Responsibilities

### Executive Medical Director and Executive Director of Nursing / Quality Director

The Organisation is responsible for minimising the risk of harm for patients and for ensuring that appropriate training is available to all healthcare practitioners involved in managing patient care.

**Heads of Nursing and Quality** hold overall responsibility within their Care Groups for monitoring the effectiveness of the policy's implementation. They will ensure that regular audits are undertaken to ensure the clinical area is compliant with the policy

### Lead Nurses /Clinicians / multidisciplinary team

The responsibility for the implementation of the policy lies with the Ward Sisters/Charge Nurses, Modern Matrons.

### Managers

The responsibility for the introduction of the Policy to staff lies with the line manager and should be included in the local clinical induction process for new staff. It should also form part of appraisal.

The line manager will ensure all their clinical team and members have read the policy and understand their role, actions, and responsibilities they have for patients experiencing delirium.

**Registered staff** have a responsibility to carry out appropriate assessments of patients who may be experiencing delirium and to ensure appropriate actions are taken

**Healthcare Support Workers** must ensure the registered practitioners are informed if there are any concerns i.e. change in symptoms or the patient becomes confused.

## 7 Policy detail / Course of Action

### 7.1 Predisposing and precipitating factors of delirium

#### At risk groups

A number of risk factors are associated with an increased probability of developing delirium, shown in the table below. Those highlighted in bold have the greatest impact and when any of these risk factors is present, the person is at risk of delirium. When people first present to hospital, documented assessment should be carried out for:

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

<b>Common risk factors:</b>			
<b>Co-existing medical conditions</b>	<b>Severe illness</b> <b>Current hip fracture</b> Significant co-morbidity Chronic renal or hepatic impairment History of stroke Infection with HIV	<b>Drugs</b>	Polypharmacy (>3 drugs) Treatment with multiple psychoactive drugs Alcohol/recreational drug dependency
<b>Cognitive status</b>	<b>Dementia</b> <b>Cognitive impairment</b> History of delirium Depression	<b>Functional status</b>	Functional dependence Immobility Low level of activity History of falls Incontinence
<b>Demographics</b>	<b>Age &gt; 65 years old</b>	<b>Sensory Impairment</b>	Visual and hearing
<b>Decreased oral intake</b>	Dehydration Malnutrition	<b>Metabolic abnormalities</b>	Hepatic failure Renal failure Thiamine deficiency

#### Precipitating factors

The cause of delirium is almost invariably multi-factorial and there are numerous potential precipitants. These include any condition that can induce disordered body chemistry; any illness that compromises the body's circulation and oxygenation; any medication that affects the central nervous system; any infection when the patient is in a high-risk group or is severe. A careful assessment must be made to exclude all common causes. Delirium may be the only manifestation of severe disease (eg myocardial infarction) in an older person.

<b>Common precipitating factors:</b>			
<b>Environmental factors</b>	Change of environment Loss of spectacles or hearing aid Inappropriate noise and lighting Immobility Sleep deprivation Catheters and lines Change of staff and ward Falls Physical restraint	<b>Drugs</b>	Alcohol or sedative withdrawal Sedative hypnotics Opioids Anticholinergics Antiparkinsonian drugs Antidepressants Anticonvulsants Corticosteroids Acute recreational drug toxicity or withdrawal
<b>Fluid and electrolyte abnormality</b>	Hypo/hyponatremia Hypercalcaemia Renal failure Dehydration	<b>Infections</b>	Chest Urine (do urinalysis) Skin / ulcers Abdominal CNS
<b>Neurological illness</b>	Stroke Seizures Subdural haematoma	<b>Surgery</b>	Orthopaedic Vascular/cardiac Gastro-intestinal
<b>Pain</b>	Acute pain Acute on chronic pain	<b>Urinary and faecal retention</b>	Specifically examine to exclude, history is unreliable
<b>Respiratory/ Cardiovascular</b>	Hypoxia e.g. Pulmonary embolus, pneumonia Hypercapnia Cardiac failure Myocardial infarction Organ/tissue ischemia	<b>Endocrine/ metabolic</b>	Thiamine deficiency Hypo /hyperthyroidism

### **Memory aid for delirium precipitants – think DELIRIUM**

- D**rugs (withdrawal/toxicity, anticholinergics) / **D**ehydration
- E**lectrolyte imbalance
- L**evel of pain
- I**nfection/Inflammation (post surgery)
- R**espiratory failure (hypoxia, hypercapnia)
- I**mpaction of faeces
- U**rinary retention
- M**etabolic disorder (liver/renal failure, hypoglycaemia)/**M**yocardial infarction



## 7.2 Delirium Prevention

Preventing delirium is the most effective strategy for reducing its frequency and complications. Up to one third of cases have been shown to be preventable. Patients found to be at risk of delirium as detailed above should be assessed for clinical factors that may contribute to delirium within 24 hours of admission. Following the multi-component Do's and Don'ts intervention package (see Appendix 1) will provide a framework to prevent delirium, and interventions should be tailored to suit individual's needs. Those highlighted in bold are specifically endorsed by NICE.

## 7.3 Clinical Features and Diagnosis of Delirium

### Clinical features of delirium

The clinical indicators of delirium are shown in the table below. At presentation, people at risk should be assessed for recent (within hours or days) changes or fluctuations in behaviour. These may be reported by the person at risk, or a carer or relative. Delirium is frequently missed by clinicians and therefore a high index of suspicion is required to detect cases.

<b>Clinical Features of Delirium:</b>	
Altered cognitive function	Typically global or multiple deficits in cognition, including disorientation, memory deficits and language impairment.
Inattention	Difficulty focusing, sustaining, and shifting attention. Difficulty maintaining conversation or following commands.
Disorganised thinking	Manifested by disorganised or incoherent speech. Rambling or irrelevant conversation or an unclear or illogical flow of ideas.
Altered Perception	Illusions or hallucinations in about 30% of patients.
Altered physical function	Hyperactive: marked by agitation, restlessness, vigilance. Hypoactive: marked by lethargy, decreased mobility, reduced movement, reduced appetite.
Altered social behaviour	Common. Manifested by intermittent and labile change in mood or attitude with symptoms of fear, paranoia, anxiety, depression, irritability, apathy, anger or euphoria.
Altered level of consciousness	Clouding of consciousness, with reduced clarity of awareness of the environment and slow responses.
Altered sleep-wake cycle	Characteristic sleep-cycle disturbances. Typically daytime drowsiness, night time insomnia, fragmented sleep or complete sleep cycle reversal.
Acute onset	Occurs abruptly usually over a period of hours or days. Important to try to establish that the symptoms are a new phenomenon.
Fluctuating course	Symptoms tend to come and go or increase and decrease in severity over a 24 hour period. There is often a characteristic lucid interval.

## Delirium sub-types

There are three clinical subtypes of delirium: **hyperactive** (characterised by heightened arousal, restlessness, agitation and aggression); **hypoactive** (characterised by sleepiness, lack of interest in daily activities, and being quiet and withdrawn) or **mixed** (in which patients move between the two subtypes). Delirium without agitation occurs in >50% of patients with delirium. Hypoactive and mixed delirium can be more difficult to recognise. If in doubt, ask for help from a healthcare professional experienced at managing delirium.

## **7.4 Diagnosis**

### **Confusion Assessment Method (CAM)**

In those patients with clinical indicators of delirium, diagnosis should be confirmed using the **Confusion Assessment Method (CAM)**. CAM should be used by a person competent in identifying delirium.

Requires point 1 **and 2 and either 3 or 4**

- 1) **Acute onset and fluctuating course** (use collateral history and consider serial AMTS/MMSE) *and*
- 2) **Inattention** (distractible, can't focus, can't follow a conversation, playing with bedclothes) *and either*
- 3) **Disorganised thinking** (rambling, illogical flow of ideas, switching of subjects)
- 4) **Altered level of consciousness** (vigilant, lethargic / drowsy, stupor, coma)

### **Memory aid mnemonic for CAM - think CA2MS:**

Delirium diagnosis requires **CA2 and either M or S**

**C**hangeable course

**A**cute onset + **A**ttention poor

**M**uddled thinking

**S**hifting consciousness

### **Differential diagnosis**

Common diagnoses that can be mistaken for delirium are dementia, depression, schizophrenia, dysphasia, hysteria/mania, non convulsive epilepsy. Your patient may have dementia, delirium or both.

### ***If uncertain treat for delirium first***

### **History (usually including collateral history)**

From carers, next of kin, relatives, nursing home staff, social worker, friends, GP. Establish that the confusion is a new phenomenon, onset and the course of the Confusion (Aids: usual function or Barthel score, usual mental/intellectual function, check old notes for previous AMTS/MMSE, previous history of confusion). Also check history of incontinence, full drug history, use of spectacles or hearing aids, functional status (Activities of Daily Living), history of diet and food intake.



### **Physical examination**

Check and document conscious level, temperature, signs of infection (lung, urine, skin, abdomen, CNS), neurological examination, rectal examination, alcohol abuse or Withdrawal (Tremor). Check for pressure sores and pain. AMTS or MMSE.

A score of 7 or less on the AMT or a score of 24 or less on the MMSE is considered to be indicative of cognitive impairment requiring further investigation.

### **Helpful initial investigations**

Pulse oximetry, urinalysis, FBC, CRP, renal profile, calcium, LFTs, glucose, blood cultures, arterial blood gas, ECG, CXR.

<b>Dementia Screening</b>		
Has this person been forgetful in the past 12 months to the extent that it has significantly affected their life?  YES <input type="checkbox"/> NO <input type="checkbox"/> 		If yes ensure AMTS is completed, collateral history, consider referral to memory service and complete dementia screen bloods
<b>Assess for indicators of delirium</b>		
<b>THINK DELIRIUM</b> Drugs (withdrawal/toxicity, anticholinergics)/Dehydration Electrolyte imbalance Level of pain Infection/Inflammation (post -surgery) Respiratory failure (hypoxia, hypercapnia) Impaction of faeces Urine retention Metabolic disorder (liver/renal failure, hypoglycaemia)/Myocardial infarction	<b>Confusion Assessment Method (CAM)</b>  <input type="checkbox"/> <b>1)</b> Acute onset and fluctuating course of abnormal behaviour <input type="checkbox"/> <b>2)</b> Inattention (e.g. easily distractible, fail 20–1 test or months of year backwards) <input type="checkbox"/> <b>3)</b> Disorganized thinking (very rambling or irrelevant conversation) <input type="checkbox"/> <b>4)</b> Altered level of consciousness (drowsy or lethargic or agitated) <b>Delirium = 1 + 2 + (3 OR 4)</b> <b>Complete dementia / delirium screen</b> 	<b>Essential Investigations</b> - Blood tests: FBC, U&E, LFT, Calcium, Glucose, CRP - Thyroid function, vitamin B12 and folate levels - Oxygen saturations - Urine dipstick: - CXR - ECG conversation) <b>Additional investigations</b> (if cause not apparent or delirium not improving with treatment) - Blood cultures - Abdominal X-ray &/or other imaging - CT head - Lumbar puncture for encephalitis or other CNS infection - Toxicology / drug levels

## **7.5 Documentation**

Ensure that the diagnosis of delirium is documented in the patient’s medical notes and document the treatment plan. Include the diagnosis in the patient’s discharge letter/summary as well as the discharge AMTS/MMSE.

Patients should be given the opportunity to make informed decisions about their health care and clinicians should take into account their needs and preferences. Often patients with Delirium will lack capacity to make to some decisions for themselves. If this is the case clinicians should make a Best Interests decision and complete the appropriate documentation <http://intranet.iow.nhs.uk/MCA-and-DoLS> (in conjunction with the family if possible).

## **7.6 Prevention and Treatment**

### **Capacity**

Management should be patient centred, giving patients the opportunity to make informed decisions about their health care and taking into account the individuals’

needs and wishes. Often patients with delirium lack capacity for some decisions. If this is the case, the code of practice detailed in the Mental Capacity Act should be followed (for more information see [www.publicguardian.gov.uk](http://www.publicguardian.gov.uk) or trust link <http://gti/clinical/assurance/clinicalgovernance/mentalcapacityact/mentalcapacityact.aspx> )

An assessment of Capacity should be carried out and documented followed by a Best Interests Decisions form <http://intranet.iow.nhs.uk/MCA-and-DoLS> (in conjunction with the family if possible) (see Appendix 2 and 3)

Good communication between members of the team caring for the patient is vital. Written communication should be clear and appropriately detailed. Family and carers should have the opportunity to be involved in treatment strategies.

### **Delirium management**

Delirium is a medical emergency and often associated with severe underlying illness. Rapid identification and treatment of underlying causes should be the first aim of management. Provide symptomatic and supportive care until recovery by continuing to follow the do's and don'ts. Non-confrontational and empathic de-escalation techniques may be required in a distressed and agitated patient. Pay particular attention to re-orientation and re-assurance, often with the aid of familiar family and friends. A suitable calming and stable care environment is important. Continue to look for new and missed causes.

Using pharmacological treatment to prevent delirium, for example giving haloperidol preoperatively, has not been shown to reduce the incidence of delirium. However there is evidence of it having a positive effect on the duration and severity of established delirium. Pharmacological management should be reserved for patients whose symptoms of delirium would threaten their own safety or the safety of other persons or would result in the interruption of essential therapy.

**The common errors in managing delirium are to use antipsychotic medications in excessive doses, give them too late or overuse benzodiazepines.**

There is a role for regular low dose antipsychotics when as "prn" doses are required frequently. Specialist advice should be sought in this scenario.

### **ECG Monitoring for Haloperidol**

The summary of product characteristics for haloperidol recommended that all patients should have an ECG before and after initiation of haloperidol. Haloperidol causes corrected QT interval (QTc) prolongation which may lead to Torsade de Pointes and sudden death.

The risk of increased QTc elongation is thought to be higher with parenteral administration and higher doses. All patients prescribed IV haloperidol should be on a cardiac monitor. Small doses, regularly, are preferable in delirium which should mean larger doses may be avoided.

The risk and benefit of prescribing haloperidol must be considered in patients who have risk factors for ventricular arrhythmias such as: cardiac disease, family history of sudden death and/or QT prolongation, uncorrected electrolyte disturbances,

subarachnoid haemorrhage, starvation or alcohol abuse, these patients should be monitored carefully. It is recommended that ECG's and Potassium levels are monitored particularly in the initial phases of treatment to ensure that steady plasma levels are maintained.

Concomitantly prescribing medicines that may also elongate the QTc should be avoided.

The normal QTc value for women is <470ms and <440ms in men. QTc's of over 500ms have a strong association with an increased risk of arrhythmias.

Any patient who has a QTc of over 500ms or has an increased QTc of 25% or greater than 20ms from base-line, should not be prescribed haloperidol. Where QTc intervals are greater than 440ms in men or 470ms in women but less than 500ms, a repeat ECG should be performed, the risk/benefit of prescribing haloperidol and a switch to lorazepam must be considered.

## **8 Consultation**

This policy has been circulated in draft format to:

- Consultant Psychiatrist
- Consultant Physician
- Dementia Nurses
- Patient Safety Lead
- Members of the Delirium Steering Group

The policy has been out to consultation to members of the Delirium steering group and relevant professionals.

## **9 Training**

This Recognition and Prevention of Delirium Policy will not have mandatory training requirement. However, all clinical staff must have an awareness of recognition, management and treatment of Delirium, training on Delirium will be provided locally through taught sessions and e-learning. This will include how to use the Confusion Assessment Method Tool –CAM's.

## **10 Monitoring Compliance and Effectiveness**

Clinical Nurse Leaders are responsible for ensuring that the policy is implemented and embedded in the organisation .

This policy will be audited Quarterly to ensure the policy is adhered to in practice, auditing will be undertaken by Ward staff, and overseen by Heads of Nursing and Quality.

## 11 Links to other Organisational Documents

This Policy should be read in association with the following documents:

- Department of Health (2005). Mental Capacity Act. London, HMSO.
- Isle of Wight NHS Trust : Falls Policy
- Delirium: prevention, diagnosis and management. NICE Guideline 103. July 2010.

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### **13 Appendices**

Appendix 1 Do's and Don't for All members of the Multidisciplinary Team

Appendix 2 Drug Risks

Appendix 3 Pharmacological Management of Delirium

Appendix 4 Financial and Resourcing Impact Assessment on Policy Implementation

Appendix 5 Equality Impact Assessment (EIA) screening tool.

## Do's and Don'ts

All members of the Multi-disciplinary Team

Do's	Don'ts
<p><b><u>Observe the patient:</u></b> High risk of falls. Patients at high falls risk should be observed at arm's length away from a nurse at all times. Consider using a bed close to the nursing station.</p> <p><b><u>Environment and Communication:</u></b> Use calm speech and gentle manner. Be courteous and polite even if the patient isn't. Acknowledge their feelings and show concern.</p> <p><b><u>Orientate patient frequently: who and where they are and what your role is.</u></b></p> <p>Explain unfamiliar noises/equipment/personnel.</p> <p><b><u>Provide easily visible clocks and calendars, good lighting and signage.</u></b></p> <p><b><u>Facilitate visits from friends and family.</u></b></p> <p>Use familiar pictures/items around bed.</p> <p><b><u>Use cognitively stimulating activities such as reminiscence.</u></b></p> <p><b><u>Optimise any sensory deficit (remove wax, provide hearing aids/spectacles).</u></b></p> <p><b><u>Hydrate patients, offer drinks when visiting. Consider nutrition by providing dentures, performing a MUST score and involving dietetics if necessary.</u></b></p> <p><b><u>Encourage early mobility, under supervision if required. Encourage all people, including those unable to walk, to carry out active range-of-motion exercises.</u></b></p> <p>Use interventions that are least restrictive to the patient. Let patients wander within a safe environment.</p> <p><b><u>Documentation:</u></b> Patient's capacity if absent and how you acted in the patient's best interest.</p>	<p><b><u>Environment and Communication:</u></b> Don't insist on performing unnecessary tasks (washing/ dressing/ shaving etc).</p> <p>Don't argue and avoid commands: reasoning is usually impaired in delirium.</p> <p>Don't frequently change nurses, wards or bays.</p> <p>Don't use side rooms if possible.</p> <p>Don't expose patient to disturbances such as sudden noise or bright lights at night.</p> <p><b><u>Don't prevent sleep at night: reduce loud bleeps/noises and bright lights.</u></b></p> <p>Don't ignore Trust bedrail policy (intranet), avoid bedrails if patient is able and likely to climb over them.</p> <p>Don't physically restrain patients to the bed / chair. Wherever possible mobilise patient instead e.g. take for regular walks to toilet or for washing/shower.</p>



All Members of the MDT	All Members of the MDT
<b>Do's</b>	<b>Don't</b>
<p><b>Management</b>  <b>Correct hypoxia (see oxygen prescription guidelines) and hypotension.</b></p> <p><b>Remain vigilant for infection (e.g. urinalysis, bloods, chest).</b></p> <p><b>Correct dehydration (may need SC/IV if oral intake poor).</b></p> <p><b>Monitor bowels and treat constipation. Identify (including non-verbal signs) and treat pain.</b></p> <p>If delirium develops, follow a step by step approach to identify and treat the causes.            Explain diagnosis of delirium to family.            Ensure diagnosis is documented clearly in the notes.            Consider urgent psychiatric review especially if hallucinations or delusions are present.</p> <p>Consider security involvement            Consider arm length observations at all times including contacting senior nurses for extra staffing.</p> <p><b>Prescribing</b>  <b>Review appropriateness of all medications (anticholinergic medication ought to be stopped).</b></p> <p>Ascertain use of non-prescription/recreational drugs</p> <p>Consider medication for patients at risk to self/others or with distress or to enable essential investigations as per attached guidance in Appendix 3, with maximum dose in 24 hours also clearly documented.</p> <p>Consider regular low dose haloperidol to treat delirium (usually 1/52 or less) if the patient requires frequent doses of haloperidol (consensus).</p>	<p><b>Management</b>            Don't delay attendance – delirium has a high mortality.</p> <p><b>Don't catheterise unnecessarily.</b></p> <p>Don't use IV lines unnecessarily and follow trust guidance in use of IV cannulas.</p> <p>Don't order unnecessary tests (CT, EEG or frequent bloods).</p> <p><b>Don't disturb patient's sleep with procedures and medication rounds if possible.</b></p> <p>Don't use antipsychotics unless other interventions have failed.</p> <p>Don't use large amounts of antipsychotics, particularly in the elderly. General rule is use less more often.</p> <p>Don't give antipsychotics to patients with a prolonged QTc, with parkinsonism or with Lewy body dementia – use lorazepam instead.</p>

## Drug Risks

Drug Type	Examples	Risk	Comments
Benzodiazepines	Diazepam	High	Benzodiazepine withdrawal is also a common cause of Delirium
Antidepressants	Amitriptyline, Doxepin, Trazodone	High	Risk greatest in drugs with anticholinergic and sedative effects
Antiparkinsonian drugs	Levodopa Bromocriptine Selegiline Trihexyphenidyl Orphenadrine Pergolide	High	All have anticholinergic or dopaminergic effects, which can cause confusion
Analgesics	NSAIDs Opiates Aspirin	High	All analgesics (except paracetamol) can cause confusion. Of the NSAIDs indomethacin is most likely to cause delirium. Confusion due to aspirin is dose related. Opiates have a very high risk of causing confusion.
Lithium		High	Only if blood levels are High
Steroids		High	Risk may be dose related
Antihypertensive Medications	a-Blockers b-Blockers ACE Inhibitors CA- Channel Blockers Diuretics	Medium Low	Diuretics may lead to delirium by causing electrolyte disturbances
Antiarrhythmics	Digoxin Amiodarone Disopyramide Lignocaine	Medium	Lignocaine has highest risk Risk. Risk with Digoxin is dose related

Antipsychotics	Chlorpromazine Trifluoperazine Haloperidol	Medium  Low	Sedating drugs, with anticholinergic effects (e.g Chlorpromazine) have higher risk than non-sedating drugs such as haloperidol
Anticonvulsants	Primidone Phenytoin Carbamazepine Valproate	Low	Risk highest with primidone Lowest risk with valproate and carbamazepine Risk with Phenytoin may be dose related
Anticholinergic drugs Antihistamines Antispasmodics	Chlorpheniramine Atropine	Medium	Drugs in this group are often bought over the counter
Histamine Blockers	Cimetidine Ranitidine Famotidine	Low	Cimetidine may be more likely to cause confusion than the other drugs in this group
Antibiotics	All	Low- Medium	Although delirium has been attributed to most antibiotics, most cases of confusion occurring during antibiotic treatment are likely to be due to the infection rather than the treatment
Respiratory Drugs	Aminophylline	Low	May cause dose related confusion
Oral hypoglycaemic agents	Tolbutamide	Uncertain	These drugs may cause hypoglycaemic and hyponatraemia, both of which can cause delirium
Antineoplastic drugs	Methotrexate, Vinca Alkaloids Fluorouracil Altretamine Asparaginase Procarbazine Carmustine Dacabazine Interferon-a	Uncertain	Delirium frequently occurs in malignant disease, therefore it is difficult to attribute the confusion to the drugs. However the drugs listed have been associated with confusion more often than others

## Pharmacological Management of delirium

Consider Medications only after behavioural approaches and following discussion with specialists such as elderly care Psychiatrists, elderly care physicians or palliative and end of life care team (see do's and don'ts list; see also Palliative Care Symptom Control Guidelines)

### Treatment Principles:

- Prefer oral route, review all medications every 24 hours
- Judge starting dose by age, body size and degree of agitation
- Give smallest dose 1-2 hourly until desired sedation achieved up to max daily dose, prescribe on prn section of the drug chart.
- Consider psychiatric review if frequent doses/daily max doses are reached.

Special indications for Benzodiazepines

Yes

### Indications for first line Benzodiazepines:

Parkinson's disease/parkinsonism, Lewy Body dementia, seizures, elongated QTc (>470ms), alcohol withdrawal (see separate trust protocol), GHB/GBL withdrawal/intoxication and recreational drug intoxication (note often higher benzodiazepine doses required than suggested below in this case – consult clinical toxicology service). Prefer oral route.

NO

Patient takes oral medication

### Oral treatment (write as prn medication)

#### Haloperidol

>65yrs: 0.5mg orally 2 hourly, max 5mg in 24hrs

#### Younger adults >18yrs only:

2mg-5mg 1-2 hourly, daily max 10mg

### IM treatment (write as prn medication)

#### Haloperidol IM:

>65 yrs: 0.5-1mg 2 hourly, daily max 5mg

#### Younger adults >18yrs only:

1mg to 3mg 1-2 hourly, daily max 10mg

Peak effect 20-40mins

### Notes:

**Check ECG for elongated QTc (>470ms) before and after starting haloperidol.** If it is impractical to perform an ECG (e.g. patient agitation) use lorazepam until an ECG is possible.

**Monitor** sedated patients with respiratory rate, pulse oximetry, BP, Pulse and Temperature. Follow trust observation policy and charts. Monitor especially for respiratory depression and call doctor if respiratory rate <10.

**Refer to BNF for drug information;** be aware of adverse events in patients with long QT interval taking Haloperidol.

**Acute dystonic reactions:** More common with IM haloperidol and in antipsychotic naive patients. Treatment: Procyclidine 5mg po/im.

**Combined oral/IM dosing:** If combination of Haloperidol IM and oral is used, transfer sum of oral doses into IM dose by multiplying with 0.6, add to it all IM doses and ensure max dose of 18mg is not exceeded in 24 hour period before calling for specialist advice.

**Olanzapine 2.5 - 5 mg orally 2 hourly, daily max 20mg (10mg in elderly)** can be used in patients with history of dystonia. Dispersible formulations available for enteral feeding tube use or those with dysphagia. Olanzapine may be better tolerated if antipsychotics are needed for longer time periods.

**Financial and Resourcing Impact Assessment on Policy Implementation**

*NB this form must be completed where the introduction of this policy will have either a positive or negative impact on resources. Therefore this form should not be completed where the resources are already deployed and the introduction of this policy will have no further resourcing impact.*

<b>Document title</b>	<b>The Prevention, Recognition and Management of Delirium in Adult in-patients.</b>
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Totals	WTE	Recurring £	Non Recurring £
Manpower Costs			
Training Staff			
Equipment & Provision of resources			

**Summary of Impact:**

**Risk Management Issues:**

**Benefits / Savings to the organisation:**

**Equality Impact Assessment**

- Has this been appropriately carried out? YES/NO
- Are there any reported equality issues? YES/NO

If "YES" please specify:

**Use additional sheets if necessary.**

Please include all associated costs where an impact on implementing this policy has been considered. A checklist is included for guidance but is not comprehensive so please ensure you have thought through the impact on staffing, training and equipment carefully and that ALL aspects are covered.

Manpower	WTE	Recurring £	Non-Recurring £
Operational running costs			
<b>Totals:</b>			

Staff Training Impact	Recurring £	Non-Recurring £

<b>Totals:</b>		
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<b>Equipment and Provision of Resources</b>	<b>Recurring £ *</b>	<b>Non-Recurring £ *</b>
Accommodation / facilities needed	N/A	
Building alterations (extensions/new)	N/A	
IT Hardware / software / licences	N/A	
Medical equipment	N/A	
Stationery / publicity	N/A	
Travel costs	N/A	
Utilities e.g. telephones	N/A	
Process change	N/A	
Rolling replacement of equipment	N/A	
Equipment maintenance	N/A	
Marketing – booklets/posters/handouts, etc	N/A	
<b>Totals:</b>		

- Capital implications £5,000 with life expectancy of more than one year.

Funding /costs checked & agreed by finance:	N/A
Signature & date of financial accountant:	N/A
Funding / costs have been agreed and are in place:	N/A
Signature of appropriate Executive or Associate Director:	N/A



### Equality Impact Assessment (EIA) Screening Tool

Document Title:	<b>The Prevention, Recognition and Management of Delirium in Adult in-patients.</b>
Purpose of document	To ensure appropriate treatment of patients presenting with Delirium
Target Audience	<i>All NHS Employees, including bank staff and Agency staff</i>
Person or Committee undertaken the Equality Impact Assessment	

1. To be completed and attached to all procedural/policy documents created within individual services.
2. Does the document have, or have the potential to deliver differential outcomes or affect in an adverse way any of the groups listed below?

If no confirm underneath in relevant section the data and/or research which provides evidence e.g. JSNA, Workforce Profile, Quality Improvement Framework, Commissioning Intentions, etc.

If yes please detail underneath in relevant section and provide priority rating and determine if full EIA is required.

		Positive Impact	Negative Impact	Reasons
<b>Gender</b>	Men	<i>no</i>	<i>no</i>	
	Women	<i>no</i>	<i>no</i>	
<b>Race</b>	Asian or Asian British People	<i>no</i>	<i>no</i>	
	Black or Black British People	<i>no</i>	<i>no</i>	
	Chinese people	<i>no</i>	<i>no</i>	
	People of Mixed Race	<i>no</i>	<i>no</i>	
	White people (including Irish people)	<i>no</i>	<i>no</i>	

	People with Physical Disabilities, Learning Disabilities or Mental Health Issues	<i>no</i>	<i>no</i>	
<b>Sexual Orientation</b>	Transgender	<i>no</i>	<i>no</i>	
	Lesbian, Gay men and bisexual	<i>no</i>	<i>no</i>	
<b>Age</b>	Children	<i>no</i>	<i>no</i>	
	Older People (60+)	<i>no</i>	<i>no</i>	
	Younger People (17 to 25 yrs)	<i>no</i>	<i>no</i>	
<b>Faith Group</b>		<i>no</i>	<i>no</i>	
<b>Pregnancy &amp; Maternity</b>		<i>no</i>	<i>no</i>	
<b>Equal Opportunities and/or improved relations</b>		<i>no</i>	<i>no</i>	

Notes:

Faith groups cover a wide range of groupings, the most common of which are Buddhist, Christian, Hindus, Jews, Muslims and Sikhs. Consider faith categories individually and collectively when considering positive and negative impacts.

The categories used in the race section refer to those used in the 2001 Census. Consideration should be given to the specific communities within the broad categories such as Bangladeshi people and the needs of other communities that do not appear as separate categories in the Census, for example, Polish.

### 3. Level of Impact

If you have indicated that there is a negative impact, is that impact:			
		<b>YES</b>	<b>NO</b>
<b>Legal</b> (it is not discriminatory under anti-discriminatory law)			
<b>Intended</b>			

If the negative impact is possibly discriminatory and not intended and/or of high impact then please complete a thorough assessment after completing the rest of this form.

3.1 Could you minimise or remove any negative impact that is of low significance? Explain how below:
3.2 Could you improve the strategy, function or policy positive impact? Explain how below:
3.3 If there is no evidence that this strategy, function or policy promotes equality of opportunity or



improves relations – could it be adapted so it does? How? If not why not?	
Scheduled for Full Impact Assessment	Date:
Name of persons/group completing the full assessment.	
Date Initial Screening completed	

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