



CLINICAL GUIDELINE

Delirium Diagnosis, Risk Reduction, and Management in Acute Services

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Important Note:

The Intranet version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

GGC Acute Sector Guidelines on the Risk Reduction, Diagnosis and Management of Delirium

“THINK DELIRIUM”

Key Points

- Be aware that people in hospital may be at risk of delirium. This can have serious consequences (such as increased risk of dementia and/or death), may increase their length of stay in hospital and their risk of new admission to long-term care.
- The TIME checklist should be used to prompt good delirium risk reduction, diagnosis and management – it consists of a 4AT and the 4 steps: Think, Investigate, Manage and Explain & Explore
- It's use is described in this guideline

Triggers, Investigate, Manage and Engage		Date	Date	Date	Date	Date
Triggers	Think possible triggers for delirium	Tick box	Tick box	Tick box	Tick box	Tick box
	Is the patient in pain? Start pain chart, review analgesia and consider need for an aperient					
	Is the patient constipated or at risk of constipation? Commence bowel chart and review daily to assess for constipation, especially if on analgesia. Consider rectal examination					
	Is the patient in urinary retention? Palpate bladder/scan					
	Is the patients oral intake sufficient to prevent dehydration? Encourage hourly fluids, start fluid balance chart					
	Could any drugs trigger delirium? Doctor to review medication					
	Blood sugar, high or low?					
	Is there a history of alcohol intake/drug abuse? Intoxication or withdrawal, start GMAWS/drug misuse guidelines					
	Does the patient have sensory Impairment? Ensure patient is wearing their glasses/hearing aid(s)					
	Is the patient immobile? Promote early mobilisation in order to prevent delirium					
Document 4AT score						
Does the patient have Delirium? (Yes/ No/ Unsure) Please Circle	Y N U	Y N U	Y N U	Y N U	Y N U	
Investigate	Investigate					
	Record NEWS					
	Screen for infection					
Manage	Take bloods and ensure ECG/appropriate imaging					
	Management: Diagnose causes & initiate treatment					
	Document diagnosis of delirium					
Engage	Document potential causes of delirium					
	Document treatment plan					
	Engage and Explore					
	If appropriate, explain diagnosis of delirium to patient/ family/ carers and provide delirium leaflet					
Engage with patient/ family/ carers. Complete "What matters to me"/"Getting to know me" document						
Does the patient have capacity to consent to care? (Yes/No/ Ongoing Assessment)	Y N O	Y N O	Y N O	Y N O	Y N O	
If no, complete AWI document						
Print initials of assessor						

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1) Applicability of this guideline

This guideline can be used in all acute areas managing adult patients. It does not cover primary care (including care homes), children and young people (under 18 years), people receiving end of life care, people with intoxication and/or withdrawing from drugs or alcohol or with delirium associated with these states. Critical Care areas may have effective pathways already established for the diagnosis, prevention and management of delirium – if so then they can be used instead of the strategy suggested here.

Medical, Nursing and Allied Health Professionals (AHPs) who work in areas where people are at risk of delirium should familiarise themselves with the guideline. Key points are presented at the top of the sections, with background explanation and further details below.

2) Introduction

This guideline is based on the recommendations issued in “NICE CG103 Delirium”, the Scottish Delirium Association “Delirium Management Comprehensive Pathway” and the Healthcare Improvement Scotland “THINK DELIRIUM” workstream.

- Delirium is a clinical syndrome characterised by disturbed consciousness, cognitive function or perception, which usually has an acute onset and fluctuating course
- It is a common but serious and complex clinical syndrome associated with poor outcomes including a doubling of mortality and the subsequent development of dementia
- Delirium may be present when a person presents to hospital or may develop during a hospital admission
- People with dementia are particularly vulnerable to delirium (Delirium Superimposed on Dementia) which confers the same set of problems
- 1/3 of cases can be prevented with a multicomponent intervention
- Delirium can be hypoactive (withdrawn, quiet and sleepy), hyperactive (too alert, agitated and often paranoid) or mixed. Hypoactive and mixed delirium can be more difficult to recognize
- As delirium is often poorly recognized it is important to keep a high clinical suspicion and **THINK DELIRIUM**

2.1) Person Centered Care

Key Points

- Use Getting to Know Me Document/ What Matters to Me board to help personalise care
- Assess capacity of the person to give consent and use Adults With Incapacity (Scotland) Act 2000 where needed

Treatment and care should take into account peoples individual needs and preferences – this can be facilitated by the “Getting to Know Me” Document and “What Matters to Me” boards. Good communication is essential to allow people to reach informed decisions about their care.

For every patient with cognitive impairment, including those with delirium, an assessment of capacity to consent to medical, nursing and AHP treatment should be made (as described in the Adults with Incapacity (Scotland) Act 2000). Where capacity is not present a Section 47 form should be completed. Every effort should be made to ascertain if the individual has a welfare attorney or welfare guardian and to discuss the individual’s treatment with them if possible – if there is no legal proxy then the next of kin should be consulted. If the person retains capacity, families and carers should still have the opportunity to be involved in decisions about treatment and care should the individual agree.

3) Reducing Risk of Delirium

Key Points

- People aged 65 or older or with cognitive impairment, hip fracture or severe illness are at high risk of delirium in hospital
- The TIME checklist should be used for these individuals on admission and at every transition of care.
- They should have 4AT and TIME part T, along with an assessment as to whether or not they have delirium
- Together with Care Rounds this prompts a comprehensive delirium risk reduction strategy
- If they develop new high risk features they should have repeat 4AT and TIME part T
- Access to familiar people should be promoted and use of intravenous lines and catheters minimised

When people first present to hospital they should be assessed for the following risk factors. If any of these risk factors is present the person is at risk of delirium

- Age 65 years or older
- Cognitive impairment (past or present, including previous delirium) and/or dementia
- Current hip fracture
- Severe illness (people identified as severely unwell, including those who require level 2 or level 3 care)

On admission, patients at risk of delirium should be assessed using the 4AT and have part T of TIME completed, with the checklist being used to guide management and care planning. They also require a clinical assessment as to whether or not they already have delirium (this is prompted by TIME). If they do not have delirium then part T of the TIME checklist together with Care Rounds prompts a multicomponent risk reduction strategy (as fully described in appendix 3).

4AT, part T of TIME and decision as to the presence or absence of delirium require to be repeated at every transition of care (ie ward move), as these are high risk times to develop delirium. If at any time an inpatient's condition changes such as they develop new high risk features then the same procedure should be followed.

Movement of people at risk for delirium within and between rooms and wards should be avoided unless absolutely necessary. If move required consider replicating geographical position within ward or room. Access to familiar people (such as carers and families) should be promoted wherever possible, including outside of visiting times. Intravenous lines and urinary catheters should be avoided if possible.

4) Detection of delirium

Key Points

- All people at high risk should have an assessment for delirium on admission and on every transition of care. This will be prompted by TIME checklist
- 4AT is a screening test and clinical assessment is needed to diagnose delirium
- The person's mental state should be monitored using the Single Question in Delirium and if there is any change repeat 4AT and TIME should be carried out

Any abnormality in mental state is a possible indicator of delirium. This may include confusion, hallucinations, sleepiness, restlessness, withdrawal or change in personality. It may be noticed by the person, their family or carer or the hospital staff caring for them. Families concerns must be taken seriously as they may pick up on subtle changes. Healthcare Support Workers and Allied Health Professionals (including Physiotherapists, Occupational Therapists, Dieticians and Speech and Language therapists) may be well placed to notice these changes – they should be delirium aware, Complete a 4AT and report findings immediately to medical or nursing staff.

On admission high risk individuals should have these factors asked about, with particular emphasis on a change from baseline, and a 4AT carried out. As prompted by the TIME checklist, a healthcare professional who is trained and competent in diagnosing delirium should carry out a clinical assessment. This process should be repeated at every transfer of care.

Throughout a hospital stay a person's mental state should be monitored using the Single Question in Delirium (SQiD) – “Is the person more confused or drowsy than normal”? If there is any concern of change then a 4AT and part T of TIME checklist with a further delirium assessment should be carried out. This is described in appendix 2.

The presence or absence of delirium should be noted in the person's medical record. If the assessor is unsure then a diagnosis of “possible delirium” can be made, and it may be useful for the procedure for management of delirium to be followed until the diagnosis can be confirmed or refuted.

People with a 4AT of 1,2 or 3 may still have cognitive impairment and require further investigation and follow up.

5) Initial management of delirium

Key Points

- If delirium is diagnosed, then parts I, M and E of TIME should be completed
- The entire TIME checklist will prompt good initial management, including identifying and managing all causes and contributors, communication and consideration of capacity for ongoing treatment
- Delirium should be seen as “brain failure” and dealt with immediately and thoroughly
- Discharge should be considered if can be achieved safely

Delirium should be seen as a medical emergency. Remember that delirium may be caused by critical illness – this is especially likely in previously fit people though can also be the case in the frail. However in up to 30% of cases no cause is found. Good immediate management of delirium can be triggered by using the TIME checklist – all four parts T, I, M and E should be completed where delirium is diagnosed. A full history (including collateral history), medications review and examination including neurological examination and assessment of pain should be performed.

Investigations should be dictated by the history and examination findings, but as a minimum would usually include NEWS, baseline blood screen including Glucose, calcium and TFT's, ECG, urinalysis/culture and blood/sputum/stool culture as appropriate. CT brain may be indicated if there is head injury, focal neurological signs, persistent symptoms or if the person is anti-coagulated.

In people diagnosed with delirium, identify and manage all possible underlying causes.

Contributory factors such as constipation, dehydration, pain, sensory impairment, background noise and sleep disturbance should be proactively addressed. Mobility should be supported if at all possible. A well lit environment should be provided and bed moves avoided unless absolutely necessary for the individuals care. Care Rounds should usually be carried out at least 2 hourly initially.

Ensure that the diagnosis is documented in the notes and discussed with the patient or their proxy. An information leaflet should be offered.

Ensure effective communication and reorientation (for example explaining where the person is, who they are and what your role is) and provide reassurance – this should be done by all involved members of medical, nursing and AHP staff. The Welcoming Ward project recognises the important role carers and family have in the care team and they should be invited to be involved wherever possible, not just during visiting times. Ask them how they wish to participate in the persons care, including ascertaining if they would like to be supported to stay or to be contacted if the person becomes distressed.

Delirium often settles more quickly at home, and if a person's clinical and social situation is such that this can be achieved safely, discharge should be considered.

6) Treatment of delirium symptoms

Key Points

- Initial management of symptoms should be aimed at causative and contributory factors
- Use person centred approach and utilise family and Getting To Know Me document
- If despite these measures there is severe distress or risk to the person or others, drug treatment may be used
- First line treatment **if no contraindications** is
 - Haloperidol 0.5-1mg PO (max 2 mg/24 hours) or only if oral route not possible
 - Haloperidol 0.5mg IM (max 2 mg/24 hours)

QTc interval should be monitored. See Drugs and Therapeutics handbook for details

- Medications should be regularly reviewed and weaned as soon as possible

Managing underlying and contributory factors, and using a person centred approach, including use of the Getting To Know Me document and allowing families to reassure and support care, may help symptoms. The Patient Behaviour Monitoring Chart and associated guidance may be useful if there is stressed or distressed behaviours, as may the GGC restraint policy. People may require increased nursing observation as described in "Guidelines for the observation of patients with acute behavioural disturbance in acute division

wards". <http://www.staffnet.ggc.scot.nhs.uk/Applications/PM/Policy%20Documents/Guidelines%20for%20the%20Observation%20of%20Patients%20with%20Acute%20Behavioural%20Disturbance%20in%20Acute%20Division%20Wards.pdf>

However if despite these measures there are psychotic symptoms causing significant distress, or symptoms which threaten the safety of the patient (including their ability to accept necessary medical or

nursing care) or of others, low dose medication can be considered. A doctor of FY2 grade or higher should always be involved in the decision to start sedation.

Emergency sedation can be given under common law. More routine sedation requires assessment of the person's capacity to consent (usually not present) and normally can be administered under Section 47 of the Adults with Incapacity Act – see Drugs and Therapeutics Handbook for further details.

Pharmaceutical treatment of delirium is outlined in the Diagnostics and Therapeutics Handbook. First line treatments if there are no signs of Parkinson's disease, Lewy Body Dementia, QTc prolongation or other drugs that can cause QTc prolongation are

- Haloperidol 0.5-1mg orally (max 2 mg/24 hours) or, only if oral route not possible
- Haloperidol 0.5mg IM (max 2 mg/24 hours)

If Haloperidol can not be used because the person is already on drugs that can prolong QTc but cannot be stopped, consider

- Oral Risperidone 250 to 500mcg (up to a maximum of 2mg in 24 hours)
Use lower dose range in frail or elderly patients

An ECG should be recorded to check the QT interval prior to treatment with antipsychotics or as soon as possible afterwards if the patient is too agitated. QTc interval should be rechecked during the period of treatment. Ensure modifiable risk factors for QTc prolongation are minimised e.g. electrolyte abnormalities (hypokalaemia, hypomagnesaemia, hypocalcaemia), discontinue other drugs known to prolong QTc if possible.

If antipsychotics are contraindicated then consider

- Lorazepam 0.5-1mg orally (max 2 mg/24 hours) or, only if oral route not possible
- Midazolam 2 mg IM (max 6 mg/24 hours)

NOTE: benzodiazepines such as Lorazepam can worsen delirium and so should be used with caution.

Pharmaceutical treatment should be started at the lowest clinically appropriate dose and titrated cautiously. It should usually be given regularly (once or twice daily) for short periods of time rather than purely as required.

If the person's symptoms are not controlled despite the above measures consult senior medical staff. Psychiatry advice may be required.

7) Ongoing management of delirium

Key Points

- Delirium should be regularly reassessed
- If it settles diagnosis should be documented on the Immediate Discharge Letter
- If there is persistent cognitive impairment on discharge, appropriate community follow up should be arranged
- If delirium fails to settle despite appropriate management refer to local specialist (Geriatrician or Psychiatrist)
- Refer psychiatry at any stage if
 - * doubt about diagnosis,
 - *severe agitation or distress unresponsive to standard measures
 - *consideration of detention under Mental Health Act

Once delirium (or possible delirium) has been diagnosed the individual should be assessed regularly for resolution, which should be documented.

If the delirium improves, sedatives should be reviewed and discontinued as appropriate. Post delirium distress (ie recall of delusional states) should be enquired about. The person's mental state should be monitored for the rest of their admission using the SQiD. They should have a formal assessment of cognition prior to discharge and the diagnosis of delirium made explicit on the discharge summary.

If at the time of discharge there is persistent cognitive impairment then appropriate community follow up should be arranged.

If delirium fails to improve despite appropriate management as above, or if the delirium is severe, then the patient should be referred to the appropriate local specialist (usually Liaison Psychiatrist or Geriatrician). Delirium can persist for weeks or months after the cause is treated, and occasionally never fully resolve.

Referral to Liaison Psychiatry should be considered at any time if there is

- Severe agitation or distress not responding to standard measures
- Doubt about diagnosis
- Consideration of detention under the Mental Health Act

8) For further information please see

- The Scottish Delirium Association Comprehensive pathway
- NES: Delirium Learn Pro module
- Delirium Learning Education App – available free on Android platform and App Store

PLEASE SEE THE DELIRIUM PAGE ON STAFFNET FOR THE FULL TOOLKIT TO SUPPORT IMPLEMENTATION OF THIS GUIDELINE.

It is accessed via the Acute Services Dementia Page at

http://www.staffnet.ggc.scot.nhs.uk/Acute/Dementia/Pages/PD_Delirium_ASH_171214.aspx

Affix ID Label



4AT and TIME for Detection, Management and Prevention of Delirium

Complete for patients: age 65 and over; patients of any age with an existing cognitive impairment; previous delirium; current hip fracture; or severe illness. These patients are at high risk of delirium.

This should be done on admission; at each transition of care; if SQiD positive; or if any clinical concerns.

4AT					
(1) Alertness This includes patients who may be markedly drowsy (e.g. difficult to rouse and/or sleepy during assessment) or agitated/hyperactive. Observe the patient. If asleep attempt to wake with speech or gentle touch on shoulder. Ask the patient to state their name and address to assist rating	Ward ____ Date & Time	Ward ____ Date & Time	Ward ____ Date & Time	Ward ____ Date & Time	Ward ____ Date & Time
Normal (fully alert, but not agitated, throughout the assessment)	0	0	0	0	0
Mild sleepiness for <10 seconds after waking, then normal	0	0	0	0	0
Clearly abnormal	4	4	4	4	4
(2) AMT4 Ask the patient their Age, Date of Birth, Place (name of hospital) Current Year					
No mistakes	0	0	0	0	0
1 mistake	1	1	1	1	1
2 or more mistakes	2	2	2	2	2
(3) Attention Ask the patient "Please tell me the months of the year in backward order, starting at December". To assist, one prompt of "What is the month before December" is permitted.					
Achieves 7 months or more correctly	0	0	0	0	0
Starts but scores < 7 months or refuses to start	1	1	1	1	1
Unstable (cannot participate because too drowsy or inattentive)	2	2	2	2	2
(4) Acute change or fluctuating course Evidence of significant change of fluctuation in: alertness, cognition, other mental function (e.g. hallucinations, paranoia) over the past 2 weeks and still present in preceding 24 hrs.					
No	0	0	0	0	0
Yes	4	4	4	4	4
4AT TOTAL SCORE					
Print initials of assessor					
Score >4 This is a possible DELIRIUM +/- COGNITIVE IMPAIRMENT, start 'T' and 'I' of TIME and escalate to medical staff to confirm diagnosis	Score 1-3 This is a possible COGNITIVE IMPAIRMENT, and requires further assessment			Score 0 DELIRIUM or SEVERE COGNITIVE impairment unlikely	

All patients scoring 0-3 are still at high risk of delirium. Use the Triggers listed overleaf to plan care and reassess daily by asking 'Is the patient more confused or drowsy?' This is the single question in delirium (SQiD)

Affix ID Label

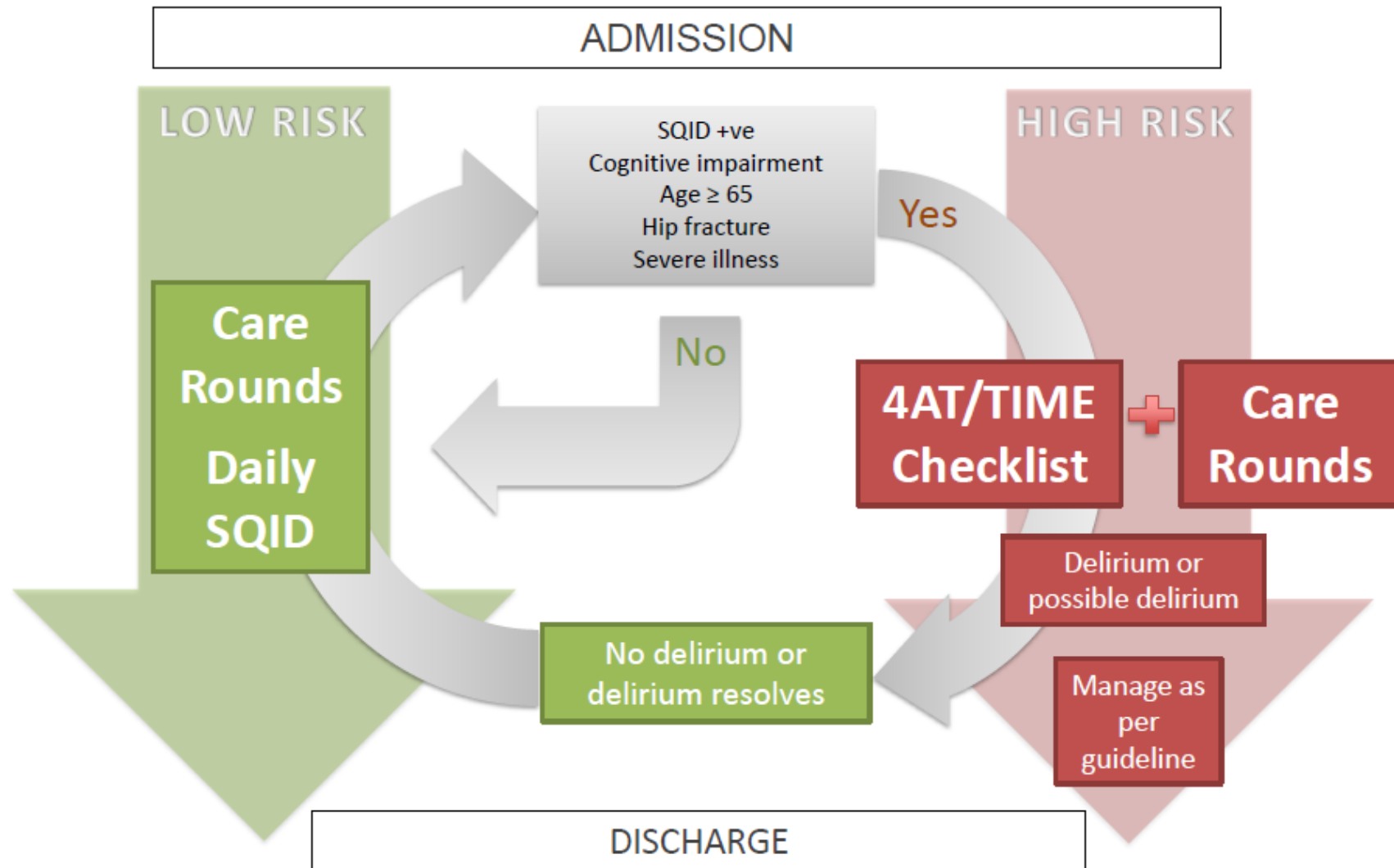


TIME checklist to guide Delirium risk reduction, Identification and Management

The TIME checklist is a joint medical and nursing responsibility.

Triggers, Investigate, Manage and Engage		Date	Date	Date	Date	Date
Triggers	Think possible triggers for delirium	Tick box	Tick box	Tick box	Tick box	Tick box
	Is the patient in pain? Start pain chart, review analgesia and consider need for an aperient					
	Is the patient constipated or at risk of constipation? Commence bowel chart and review daily to assess for constipation, especially if on analgesia. Consider rectal examination					
	Is the patient in urinary retention? Palpate bladder/scan					
	Is the patients oral intake sufficient to prevent dehydration? Encourage hourly fluids, start fluid balance chart					
	Could any drugs trigger delirium? Doctor to review medication					
	Blood sugar, high or low?					
	Is there a history of alcohol intake/drug abuse? Intoxication or withdrawal, start GMAWS/drug misuse guidelines					
	Does the patient have sensory impairment? Ensure patient is wearing their glasses/hearing aid(s)					
	Is the patient immobile? Promote early mobilisation in order to prevent delirium					
	Document 4AT score					
Does the patient have Delirium? (Yes/ No/ Unsure) Please Circle		Y N U	Y N U	Y N U	Y N U	Y N U
Investigate	Investigate					
	Record NEWS					
	Screen for infection					
	Take bloods and ensure ECG/appropriate imaging					
Manage	Management: Diagnose causes & initiate treatment					
	Document diagnosis of delirium					
	Document potential causes of delirium					
	Document treatment plan					
Engage	Engage and Explore					
	If appropriate, explain diagnosis of delirium to patient/ family/ carers and provide delirium leaflet					
	Engage with patient/ family/ carers. Complete "What matters to me"/"Getting to know me" document					
	Does the patient have capacity to consent to care? (Yes/No/Ongoing Assessment)	Y N O	Y N O	Y N O	Y N O	Y N O
If no, complete AWI document						
Print initials of assessor						9

Reducing Risk of and Detecting Delirium using 4AT, TIME and Care Rounds



Appendix 3 Interventions to reduce risk of delirium

Clinical Factor	Preventative Intervention
Cognitive impairment or disorientation	<ul style="list-style-type: none"> • Provide appropriate lighting and clear signage. A clock (consider providing a 24-hour clock in critical care) and a calendar should also be easily visible to the person at risk. • Reorientate the person by explaining where they are, who they are, and what your role is. • Introduce cognitively stimulating activities (e.g., reminiscence). • Facilitate regular visits from family and friends.
Dehydration or constipation	<ul style="list-style-type: none"> • Encourage the person to drink. Consider offering subcutaneous or intravenous fluids if necessary. • Seek advice if necessary when managing fluid balance in people with co morbidities (for example, heart failure or chronic kidney disease).
Hypoxia	<ul style="list-style-type: none"> • Assess for hypoxia and optimise oxygen saturation if necessary.
Immobility or limited mobility	<ul style="list-style-type: none"> • Encourage the person to: <ul style="list-style-type: none"> Mobilise soon after surgery Walk (provide walking aids if needed-these should be accessible at all times) • Encourage all people, including those unable to walk, to carry out active range of motion exercises.
Infection	<ul style="list-style-type: none"> • Look for and treat infection • Avoid unnecessary catheterisation. • Implement infection control procedures in line with “NHS GG&C on line Infection Control Policy”.
Multiple medications	<ul style="list-style-type: none"> • Carry out a medication review for people taking multiple drugs, taking into account both the type and number of medications.
Pain	<ul style="list-style-type: none"> • Assess for pain. Look for non-verbal signs of pain, particularly in people with communication difficulties. • Start and review appropriate pain management in any person in whom pain is identified or suspected.
Poor nutrition	<ul style="list-style-type: none"> • Follow the NHSGG&C Food, Fluid and Nutritional Care Policy. • If the person has dentures, ensure they fit properly.
Sensory impairment	<ul style="list-style-type: none"> • Resolve any reversible cause of the impairment (such as impacted ear wax). • Ensure working hearing and visual aids are available and used by the people who need them.
Sleep disturbance	<ul style="list-style-type: none"> • Avoid nursing or medical procedures during sleeping hours, if possible. • Schedule medication rounds to avoid disturbing sleep. • Reduce noise to a minimum during sleep periods

Appendix 5 - Inpatient management of delirium

