

Managing Severe Agitation and Acute Behavioural Disturbance in the Emergency Department

Version:	1.4
Category:	Guideline
Summary:	To guide management of agitation and acute behavioural disturbance in the Emergency Department
Valid From:	March 2026
Date of Next Review:	March 2029
Approval Date/ Via:	Emergency Department Clinical Governance
Distribution:	John Radcliffe and Horton Hospital Emergency Departments
Related Documents:	- RCEM Guidelines for the Management of Excited Delirium / Acute Behavioural Disturbance (ABD) - RCEM/RCoA Safe Sedation of Adults in the Emergency Department^[1] - OUH Emergency Department Procedural Sedation Checklist (Intranet) - OUH Safe Sedation by Non-Anaesthetists (Intranet) - OUH Ketamine Sedation of Children in Emergency Departments (Intranet) - MILS - Management of Acutely Disturbed Behaviour for Adults (including Rapid Tranquilisation) - OUH Prescribing, Preparing and Administering Injectable Medicines in Clinical Areas - OUH Controlled Drugs Policy
	Dr SJ Glover, Consultant in Emergency Medicine
Further Information:	Nil
This Document replaces:	ABD section within ED Adult Sedation Policy

Document History

Use this table to record the revisions made to the approved policy and record document history.

Date of revision	Version number	Author	Reason for review or update
April 2023	1.1	Dr S J Glover	Initial document
May 2023	1.2	Dr S J Glover	Review of departmental feedback
January 2024	1.3	Dr S J Glover	Review of external feedback
March 2026	1.4	Dr S J Glover	Updated after review of incidents

Consultation Schedule

Use this table to evidence your involvement of staff and key stakeholders, where appropriate, in the development and review of documents.

Who? Individuals or Committees	Rationale and/or Method of Involvement
Emergency Department Clinical Governance Committee	Clinical responsibility for governance actions and interlink with Risk register
Emergency Department Consultants	Clinical responsibility for safe sedation in Emergency Department
Emergency Department Nurses	Delivery of safe sedation in Emergency Department
Emergency Department Senior Registrars	Delivery of safe sedation in Emergency Department
Trust Sedation Lead	Interlink with wider Trust practices; Interlink with Trust Medicines Safety team
Medicines Management and Therapeutics Committee	Required in order to stock droperidol in ED. Interlink with Trust Medicines Safety team

Endorsement

Use this table to list relevant Divisional and/Directorate leads who have endorsed the policy/procedural document.

Endorsee Name:	Endorsee Job Title
Dr Adham Khalek	Clinical Lead for Emergency Medicine
Dr Aqib Hafeez	Clinical Governance Lead for Emergency Medicine
Dr Iain Edgar	Emergency Department Lead for Pharmacy & Medicines Management
Dr Amar Keiralla	Consultant Anaesthetist and Trust Lead for Sedation
Olivia Prior	Emergency Department Pharmacist
Emergency Department Clinical Governance Meeting (August 2025)	

Contents

Document History	2
Consultation Schedule	2
Endorsement	3
Who should read this document?	5
Key Standards/Messages	5
Background/ Scope	7
Key Updates	7
Aim	7
Guidelines	8
Review	13
References	14
Appendix 1: Acronyms	15
Appendix 2: Monitoring Compliance	16
Appendix 3: Equality Analysis	17

Who should read this document?

Doctors, nurses and pharmacy staff who deliver, assist with, or support the emergency management of adults presenting with Acute Behavioural Disturbance within OUH Emergency Departments.

Key Standards/Messages

1. In contrast to psychiatry and medical wards, Emergency Department patients are undifferentiated. Furthermore, the Emergency Department has ready access to staff and equipment with airway management skills. As such, it is justified that management of agitated patients in the Emergency Department might differ compared to the wards.
2. Management of adults presenting with Acute Behavioural Disturbance must be conducted with patient safety as the principle priority and utilise the least restrictive option.
3. Clinicians carrying out rapid tranquilisation must be at least an ST4+ Registrar in Emergency Medicine (Red Lanyard equivalent) who:
 - Have achieved the Initial Assessment of Competencies from the Royal College of Anaesthetists (or equivalent),
 - Are up to date with either Advanced Life Support (ALS) or Immediate Life Support (ILS) certification and
 - Have had OUH Trust ALS refresher training within the preceding 12-months.
 - Have completed statutory and mandatory training regarding Conflict Resolution
4. It is strongly recommended that nurses assisting with rapid tranquilisation have completed the OUH ED Airway / Sedation assistant training
5. Nurses assisting in rapid tranquilisation must be in-date for Immediate Life Support (ILS) competency, or equivalence.
6. A sedation checklist and powerplan prescription must be completed for every patient receiving rapid tranquilisation.
7. Drug dosing should adhere to recommendations wherever feasible.
8. A clear, contemporaneous clinical note must be completed to rationalize the degree of behavioural disturbance, outlining de-escalation attempts and any ongoing risks resulting in the need for rapid tranquilisation
9. Serious dosing errors can occur if the incorrect ketamine or midazolam preparation is selected.
 - IntraVENOUS ketamine administration - use a concentration of 10 mg per mL (selecting the 200 mg in 20 mL vial)
 - IntraMUSCULAR ketamine administration - use a concentration of 50 mg per mL (selecting the 500 mg in 10 mL vial)
 - IntraVENOUS midazolam administration – use a concentration of 1mg per mL (selecting the 5mg in 5mL ampoule)
 - IntraMUSCULAR midazolam administration – use a concentration of 5mg per mL (selecting the 10mg in 2mL ampoule)
10. Vials of controlled drugs are signed out against a patient name. Any remaining drug must be disposed of and cannot be used for any other patient.

WARNING

PATIENTS PRESENTING WITH ACUTE BEHAVIOURAL DISTURBANCE
MAY BE AT AN INCREASED RISK OF SERIOUS UNDERLYING
PATHOLOGY AND **HAVE AN INCREASED RISK OF DEATH**

RAPID TRANQUILISATION OF PATIENTS WITH ACUTE BEHAVIOURAL
DISTURBANCE MAY RESULT IN CARDIOVASCULAR COLLAPSE, AND /
OR CARDIORESPIRATORY ARREST

**CLINICIANS UNDERTAKING RAPID TRANQUILISATION MUST
ANTICIPATE THESE OUTCOMES AND BE PREPARED FOR THESE
EVENTUALITIES**

WARNING

Ketamine must only be used in 10mg/ml concentration for Intravenous use

**KETAMINE 50MG/ML IS STRICTLY RESERVED FOR INTRAMUSCULAR
USE IF BEING ADMINISTERED FOR SEDATION OR TRANQUILISATION**

Midazolam must only be used in 1mg/ml concentration for intravenous use

**MIDAZOLAM 10MG/2ML IS STRICTLY RESERVED FOR
INTRAMUSCULAR USE IF ADMINISTERED FOR SEDATION OR
TRANQUILISATION**

Background / Scope.

Agitation is common in the Emergency Department, but only a minority of agitated patients have acute behavioural disturbance (ABD, also previously called excited delirium, acute behavioural disorder, or agitated delirium)

ABD is an umbrella term used to describe a presentation which may include abnormal physiology and/or behaviour.

Clinical features which may be present:

- Agitation
- Constant physical activity
- Bizarre behaviour (incl. paranoia, hypervigilance)
- Fear, panic
- Unusual or unexpected strength
- Sustained non-compliance with police or ambulance staff
- Pain tolerance, impervious to pain
- Hot to touch, sweating
- Rapid breathing
- Tachycardia

Key Updates.

11. This document updates the previous guidance “Adult Procedural Sedation Protocol for the Oxford University Hospital Trust Emergency Departments - John Radcliffe and Horton General Hospitals (Nov 2021)”.¹

Aim

12. The aim of this policy is:
 - To standardise and improve practice of surrounding the management of adult patients presenting with Acute Behavioural Disturbance (ABD) in OUH Emergency Departments.

Guideline

1. All ED staff should be aware of the OUH Acute Behavioral Disturbance MIL.
2. **Acute Behavioral Disturbance may be the manifestation of potentially life-threatening illness and should be considered a medical emergency. In the most extreme of cases this may culminate in cardiac arrest and the treating team should be actively anticipating rapid deterioration.**
3. The use of physical restraint should be a last resort and there should be recognition of the increased risk of death associated with physical restraint among ABD patient cohorts.
4. At the more mild end of the spectrum may reflect cases requiring relatively low-dose benzodiazepines used in an anxiolytic manner to aid and support patient interaction with staff and to allow safe assessment and investigation.
5. Acute Behavioural Disturbance may occur as a result of a variety of conditions:
 - a. Acute psychiatric disorders
 - b. Use or withdrawal of drugs or alcohol
 - Sympathomimetic intoxication
 - Alcohol intoxication or withdrawal
 - Anticholinergic syndrome/serotonin syndrome
 - Neuroleptic malignant syndrome
 - c. Acute medical illness
 - Hypoxia
 - Hypoglycaemia
 - Head injury
 - Seizure / post-ictal state
 - Heat stroke
 - Electrolyte disturbance
 - Sepsis, including intracranial infections
 - Thyroid storm
6. The previously described fundamentals for safe sedation practice within the ED are to be adhered to whenever possible. This is arguably even more important for ABD cases due to the high risks of undifferentiated and undetected physiological dysfunction or instability that may only become apparent following sedation / tranquilisation. All staff must be prepared for the necessity to initiate resuscitative interventions in these cases.
7. If emergency, or rapid, tranquilisation is deemed necessary for patient or staff safety AND it is unfeasible to achieve pre-oxygenation and monitoring requirements, sedation / tranquilisation may still be undertaken. In such events the following criteria must be met:
 - a. Senior ED clinician is to be aware of the case and has been involved with case management
 - b. A clearly verbalized plan for the sedation / tranquilisation is present with medication and safety nets prescribed
 - c. Portable monitoring, portable oxygen and emergency airway equipment (e.g., ED transfer bag) is immediately accessible (caution – ensure equipment cannot be used by patient to injure themselves or staff)
 - d. Once desired clinical effect has been achieved, appropriate supportive measures and monitoring should be applied, and the patient moved to an appropriate resus environment if deemed clinically appropriate. A decision not to move the patient to a resus environment should mandate clear documentation and rationale for this decision

Verbal de-escalation

- Verbal de-escalation should be used before any other intervention where possible and physical restraint used as the last resort.
- This should be calm and non-confrontational.
- Changes that can be made to help facilitate de-escalation include changing the environment, as well as the staff involved in managing the patient.
- Attempts at de-escalation should continue even if restraint is employed.

Physical restraint

- Physical restraint is a last resort, to be used only when de-escalation is impossible or has failed and when there is clear, imminent danger of injury to patient or staff.
- **Acute Behavioural Disturbance may be the manifestation of potentially life-threatening illness and should be considered a medical emergency. In the most extreme of cases this may culminate in cardiac arrest and the treating team should be actively anticipating rapid deterioration. Patients requiring physical restraint for agitated delirium are at high risk of cardiac arrest.**
- Factors that contribute to risk of cardiac arrest include the precipitating condition, the direct risks of restraint and the metabolic acidosis that results from fighting against restraint.
- If physical restraint is used the patient should be calmly reassured at all times that this is being done out of concern for their health and that staff are here to help them.
- Physical restraint should therefore be applied for the shortest time possible and with the minimum amount of force required until no longer required
- Best practice in physical restraint involves
 - Having one member of staff per limb
 - A “hands-off” team leader
 - Two additional staff members available for checking/administering medications
 - Where possible, a non-rebreathe oxygen mask should be connected to 15L/minute oxygen supply and applied to the patients face. This pre-oxygenates the patient as well as minimising risk of spitting
 - The hands-off team lead should ensure the patient’s face, neck, chest and abdomen are unobstructed at all times, except by an oxygen mask
 - The patient should never be in the prone or “face-down” position
- The team leader should
 - Ensure the patient’s face, neck, chest and abdomen are unobstructed at all times, except by an oxygen mask
 - Provide verbal de-escalation to the patient (unless another individual with more familiarity with the patient is felt better to assume this role)
- Prolonged restraint is not recommended, and if verbal de-escalation cannot be achieved, rapid tranquilisation should be considered to enable restraint to be removed.

Rapid tranquilisation – practical considerations

- Where possible, these patients should be managed in resus. If it is necessary to restrain and sedate a patient in another area they should be transferred to resus as soon as it is safe to do so. A decision not to move the patient to a resus environment should mandate clear documentation and rationale for this decision
- When not managed in resus, portable oxygen, portable monitoring and emergency airway equipment (e.g. ED transfer bag) should be immediately accessible
- A rapid tranquilisation “grab box” is kept in the resus room drug cupboard, and contains a quick reference guide regarding suggested drugs and doses, as well as syringes, needles and 4x2.5mg ampoules of droperidol.
- With 24 hour consultant presence, it is recommended that the ED consultant be aware of any cases of rapid tranquilisation.
- Where possible, full monitoring and pre-oxygenation should be applied as per OUH and AAGBI guidelines for procedural sedation
- Monitoring and pre-oxygenation is particularly valuable in ABD due to the high risks of undifferentiated and undetected physiological dysfunction or instability that may only become apparent following sedation / tranquilisation
- It is recognised that it may not be feasible to apply full monitoring to a patient with ABD, but it is usually possible to apply a portable oxygen saturation monitor
- Rapid tranquilisation can be administered by the intramuscular or intravenous route. Senior medical and nursing staff members should jointly select the route on a case-by-case basis, based on:
 - Whether the patient has intravenous access
 - The likelihood of being able to gain prompt IV access
 - The safety of team-members
- If the IM route has been used, IV access should then be obtained as soon as it is safe to do so.
- Traditional teaching suggests a maximum volume of 5mL per intraMUSCULAR injection, though some studies have suggested that volumes up to 30mL are safe to inject through the intraMUSCULAR route^[2]. If more than 5mL volume is required, the theoretical risks of large volume injection should be weighed up against the risks (both to patient and staff) of repeated intraMUSCULAR injections
- Once safe to do so, full monitoring should be applied, oxygen and fluids given, treatable causes of acute behavioural disturbance should be sought and addressed
- Suggested drugs and doses are included in Appendix 2
- In the event of cardiac arrest, commence Advanced Life Support, considering toxicological causes
- In the absence of clear national guidelines, it is generally accepted that if a patient still requires restraint 15 minutes after administration of rapid tranquilisation, a further dose should be considered.

Rapid tranquilisation – first line medications

The three groups of medications most commonly used are dissociatives, antipsychotics and benzodiazepines. The dissociative ketamine or the antipsychotic droperidol are first line agents^[3]

Ketamine

- **Caution:** Ketamine comes in various strengths. Use the 50mg/mL strength for intraMUSCULAR sedation.
- **Pharmacology:** A short acting, rapid onset dissociative agent which at low doses provides analgesia, at intermediate doses causes dissociative sedation with amnesia and at higher doses causes anaesthesia. Use of ketamine is typically associated with nystagmus, mild tachycardia and mild hypertension, though in the acute behavioural disturbance patient the removal of agitation can result in a normalisation of heart rate and blood pressure.
- **Dosage:** For rapid tranquilisation, an intraMUSCULAR injection of 4mg/kg is recommended as an initial dose.
Ketamine is stocked in 2 doses: a concentrated 500mg/10mL (i.e., 50mg/mL) vial for intraMUSCULAR sedation and a dilute 200mg/20mL (i.e., 10mg/mL) vial for intraVENOUS sedation / anaesthesia.
For an average 70kg adult, this approximates to 300mg intraMUSCULAR ketamine (6mL of 50mg/mL)
- **Complications:**
 - Airway reflexes are generally preserved, though laryngospasm can occur and a clinician giving ketamine should be prepared to intubate the patient if required.
 - Pharyngeal and respiratory reflexes are typically preserved so the patient will typically 'stare at the ceiling', breathing spontaneously.
 - As the effect of ketamine wears off, agitation can occur in "emergence phenomenon". This is generally managed with benzodiazepines.
- **Recommended use:** Ketamine has the quickest onset of any of the listed agents, and is recommended when immediate control of the situation is required, and when the sedating doctor is prepared to intubate the patient if required.
- **Onset** 3-4 mins^[4]
- **Exclusions:** Mothers should avoid breastfeeding for 12h after rapid tranquilisation.

Droperidol

- **Pharmacology:** A typical antipsychotic, principally antagonizing the D2 dopamine receptor.
- **Dosage:** An initial dose of 10mg intraMUSCULAR injection is recommended, reduced to 5mg if elderly. It is stocked in 1mL ampoules containing 2.5mg droperidol, so a 10mg dose is 4 ampoules.
- **Complications:**
 - All antipsychotics can prolong the QT interval. However, more recent studies have shown that the risk of an arrhythmia is rare ($<0.1\%$)^[5]
An ECG should be taken once safe to do so
 - Similarly, antipsychotics theoretically lower seizure threshold, though seizure after sedative-dose droperidol is also rare ($<0.1\%$)^[5]
 - For all medications used in rapid tranquilisation, the main concerns are regarding suppression of airway protective reflexes, respiratory drive and hypotension. Droperidol has been shown to have lower rates of complication for the above compared to benzodiazepines^[6].
 - Oculogyric crisis is a rare complication, and can be treated with procyclidine.
 - Should be avoided in patients with Parkinson's disease or Lewy Body dementia.
- **Onset** in 3-10 mins^[7]
- **Peak effect** in 30 mins^[7]
- **Exclusions:** Mothers should avoid breastfeeding for 12h after rapid tranquilisation.

Rapid tranquilisation – Second line medications

Benzodiazepines are generally used if there is a specific indication for benzodiazepines (such as alcohol withdrawal) or if ketamine and droperidol are not available or not thought appropriate

Midazolam

- **Caution:** Midazolam comes in various strengths. Use the 5mg/5mL strength for intraVENOUS sedation and the 10mg/2mL for intraMUSCULAR sedation.
- **Pharmacology:** Benzodiazepines act as GABA agonists.
- **Dosage:** Stocked in 5ml ampoules of 1mg/ml and 10mg/2ml (2ml of 5mg/ml). Both are to be drawn up neat and should not be diluted. An initial dose of 10mg intraMUSCULAR is commonly used, or 5mg intraMUSCULAR if elderly.
- **Complications:**
 - The commonest complication is airway obstruction and respiratory depression. Be prepared to ventilate the patient and to reverse its effect with flumazenil, slow intraVENOUS injection of 200micrograms.
 - Hypotension can also occur and regular BP monitoring should be undertaken.
- **Onset** in 15 mins^[8]
- **Peak effect** in 30-60 mins^[8]
- **Exclusions:** Mothers should avoid breastfeeding for 12h after rapid tranquilisation.

Lorazepam with haloperidol

- **Pharmacology:** Benzodiazepines act as GABA agonists.
- **Dosage:** Lorazepam 2mg intraMUSCULAR combined with haloperidol 5mg intraMUSCULAR has better sedation than either medication alone, with no increased adverse events^[9,10]
- **Complications:**
 - The commonest complication is airway obstruction and respiratory depression. Be prepared to ventilate the patient and to reverse its effect with flumazenil, slow intraVENOUS injection of 200micrograms.
 - Hypotension can also occur and regular BP monitoring should be undertaken.
 - All antipsychotics can prolong the QT interval. An ECG should be taken once safe to do so.
- **Onset** likely to be greater than 15 mins. This is not well studied, but lorazepam and haloperidol each have longer onset times than midazolam when administered via the intraMUSCULAR route.
- **Exclusions:** Mothers should avoid breastfeeding for 12h after rapid tranquilisation.

8. Review

This policy will be reviewed every 3 years, as set out in the Policy for the Development and Implementation of Procedural Documents.

References

- [1] Safe Sedation of Adults in the Emergency Department – Royal College of Emergency Medicine 2012.
- [2] Harrington L. Administer single-site 30-mL intramuscular injection? Medsurg Nurs. 2005 Dec;14(6):379-82. PMID: 16447828.
- [3] The Royal College of Emergency Medicine Best Practice Guidelines for the Acute Behavioural Disturbance in the Emergency Department V2 September 2022. Available at: https://res.cloudinary.com/studio-republic/images/v1664186048/Acute_Behavioural_Disturbance_in_Emergency_Departments_Sep2022_V2/Acute_Behavioural_Disturbance_in_Emergency_Departments_Sep2022_V2.pdf?i=AA
- [4] Rosenbaum et al. Ketamine [Updated 2022 Nov 24]. In StatPearls [Internet]. StatPearls Publishing; 2023 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470357/>
- [5] Calver L et al. The Safety and Effectiveness of Droperidol for Sedation of Acute Behavioral Disturbance in the Emergency Department. Ann Emerg Med (2015) 66(3): 230-238.e1
- [6] Isbister GK, Calver LA, Page CB, Stokes B, Bryant JL, Downes MA. Randomized Controlled Trial of Intramuscular Droperidol Versus Midazolam for Violence and Acute Behavioral Disturbance: The DORM Study. Ann Emerg Med (2010) 56(4): 392-401.e1
- [7] Cressman WA et al. Absorption, metabolism and excretion of droperidol by human subjects following intramuscular and intravenous administration. Anesthesiology. 1973;38:363-9.
- [8] Federal Drug Administration. Midazolam. March 2017. Available from: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/208878Orig1s000lbl.pdf
- [9] Battaglia et al. Haloperidol, lorazepam, or both for psychotic agitation? A multicenter, prospective, double-blind emergency department study. Am J Emerg Med. 1997;15(4):335- 340.
- [10] Bieniek et al. A double-blind study of lorazepam versus the combination of haloperidol and lorazepam in managing agitation. Pharmacotherapy. 1998;18(1):57-62.

Appendix 1: Acronyms

AAGBI	Association of Anaesthetists of Great Britain and Ireland
ABD	Acute Behavioural Disturbance
ACCS	Acute Common Care Stem
ALS	Advanced Life Support
ASA	American Association Anesthesiologists
CD	Controlled Drug
ECG	Electrocardiogram
ED	Emergency Department
EOL	End of Life
GCS	Glasgow Coma Score
ILS	Intermediate Life Support
LOC	Loss of Consciousness
ST3	Specialist Trainee Year 3

Appendix 2: Monitoring Compliance

Compliance with the document will be monitored in the following ways.

What is being monitored:	How is it monitored:	By whom and when:	Minimum standard	Reporting to:
Use of recommended drugs & dosages	3 yearly audits of 30 cases.	Audit Lead – delegated	98% compliance	Emergency Department Clinical Governance
Episodes of respiratory depression (apnoea or hypoxia) or hypotension (BP less than 90mmHg systolic).	3 yearly audits of 30 cases.	Audit lead – delegated	< 1%	Emergency Department Clinical Governance

Appendix 3: Equality Analysis (This is a mandatory heading)

Have you considered how the Policy will affect people:	Yes	No	How have these groups been included in the development of the Policy?	How will the Policy affect them?
Who have a physical or sensory impairment? Have you consulted with them?	X			Provision for hearing impairment incorporated into the policy.
With a disability?	X			No difference.
Of different gender?	X			No difference.
Of different ages?	X			Adjustment for elderly patients made in policy.
With different racial heritages?		x		No difference
With different sexual orientations?		x		No difference.
Who are pregnant or recently had a baby?	x			Impact on breastfeeding patients incorporated into policy.
With different religions or beliefs?		X		No difference.
Who are going through gender re-assignment or have transitioned?		X		No difference.
Of different marital/partnership status?		X		No difference.
Who are carers?	X			Advice for use of certain machinery is given in leaflet provided to patients.
Any other group who may be affected by this policy		x		

Summary of Analysis

Does the analysis show evidence of:	Yes	No	Please explain your answer
The potential to discriminate?		x	
The advancement of equality of opportunity?	x		Provision made to reduce the risk of complications in elderly patients in particular.
The promotion of good relations between groups?		x	