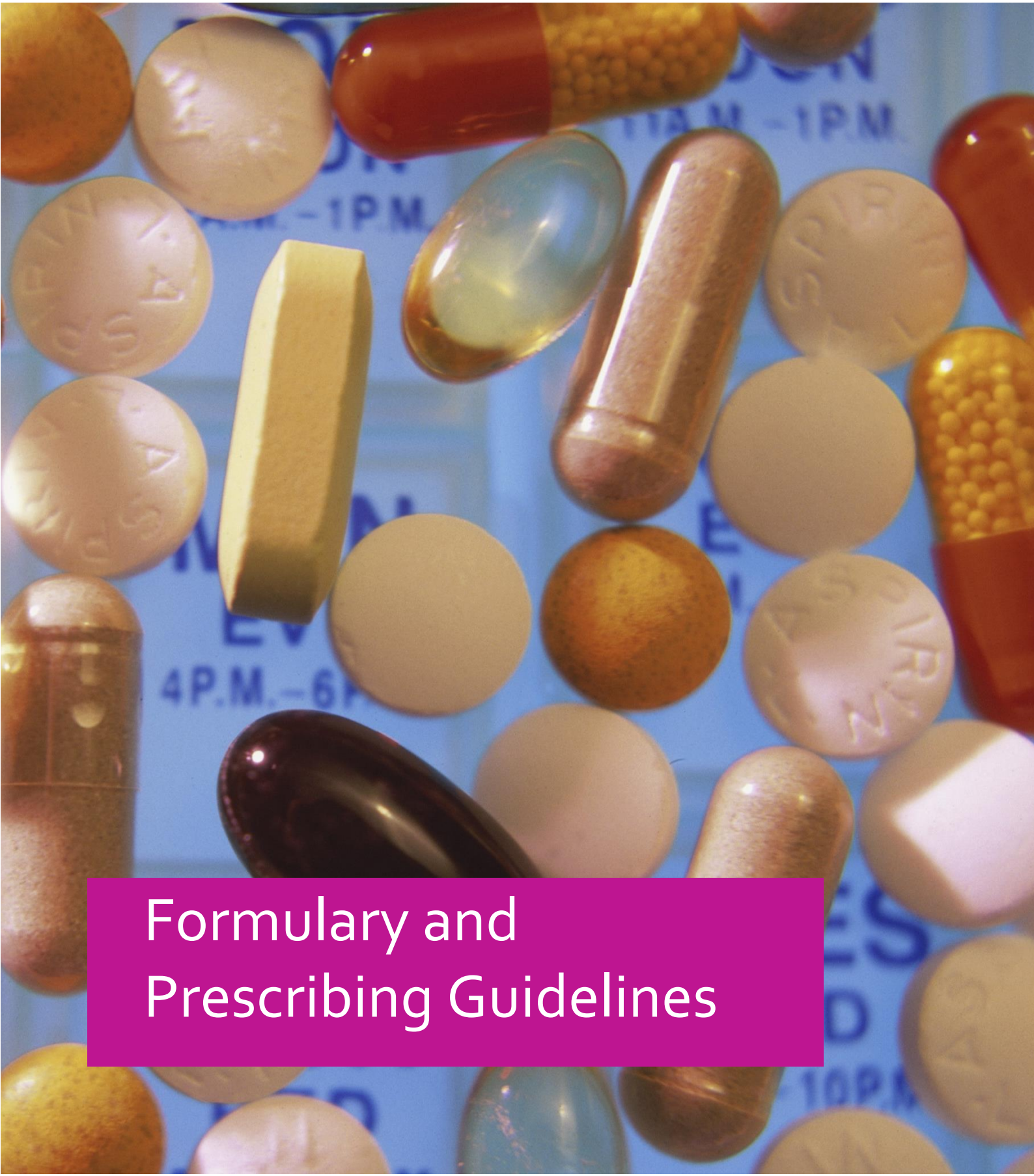
Essex Partnership University
NHS Foundation Trust

SECTION 8: MANAGEMENT OF ACUTELY DISTURBED BEHAVIOUR



Formulary and Prescribing Guidelines

8.1 Introduction

The pharmacological treatment of acutely disturbed behaviour is a strategy used to manage the high risk of imminent violence. The aim of this treatment is to achieve a state of calm sufficient to minimise the risk posed to the patient or to others, without excessive sedation/sleep.[1]

This guideline is based on the Trust's clinical guideline, Pharmacological Management of Acutely Disturbed Behaviour (CG52).

The use of sedative medication is one of several strategies commonly used in the management of severely disturbed behaviour in inpatient settings. Others include de-escalation, distraction techniques, physical restraint and seclusion. The severity of the disturbed behaviour, associated risk to the patient or to other people, and the imminence of that risk, determines the strategies to be employed in a particular situation. Where the risk is assessed as both severe and imminent, treatment with medicines may be employed.

Service users who participated in the Royal College of Psychiatrists Research Unit's discussion group reported that when they behaved violently, medication was their preferred option compared with seclusion or prolonged physical restraint.[2] Treatment with medicines in these situations is often viewed as punitive by patients.[2]

Treatment of acutely disturbed behaviour with medicines has a limited evidence base because clinical trials in this area are difficult to conduct. The British Association for Psychopharmacology and the National Association of Psychiatric Intensive Care and Low Secure Units recently published their joint evidence-based consensus guidelines[10] for the clinical management of acute disturbance: de-escalation and rapid tranquilisation, and these provide a useful overview of best practice. This Trust guideline, and CG52 provides medical and nursing staff with information that will allow them to make appropriate clinical decisions based on the characteristics of the individual patient and situation.

This guideline also takes into account National Institute for Health and Clinical Excellence (NICE) guidelines on psychosis and schizophrenia in adults: prevention and management[4], NICE guidelines on Violence and Aggression: short-term management in mental health, health and community settings[1], NICE guidelines on Bipolar disorder: Assessment and management[5], NICE guidelines on antenatal and postnatal mental health: Clinical management and service guidance[6], and the independent inquiry into the death of David Bennett.[7]

8.2 Drugs approved for management of acute disturbed behaviour

See latest BNF for licensed indications.

Drug and form	Time to max. plasma Conc.	Half life	Comments
Aripiprazole IM injection	1-3 hours	75-146 hours	
Haloperidol IM injection	15-60 mins	10-36 hours	The maximum daily dose (IM) for adults (20mg) reflects the latest BNF/SPC. Note that the previous maximum was 12mg/24hours. Use lowest doses possible. The lower dose

			of 12mg is based on that published in older BNFs and SPCs, and recent consensus guidelines[8] from BAP/NAPICU (2018), which state: the IM dose required to give the same plasma concentration as any given oral dose is approximately 30% lower (due to the difference in the magnitude of first pass liver metabolism) [8]. A 12mg adult maximum for IM is used by several other MH&LD Trusts in the UK [9]
Haloperidol solution	3-6 hours	10-36 hours	
Haloperidol tab	3-6 hours	10-36 hours	
Lorazepam IM injection	60-90 mins	12-16 hours	Lorazepam should be used with caution in elderly due to the risk of sedation and/or musculoskeletal weakness that can increase risk of falls, with serious consequences. These patients should be given a reduced dose (50%) and titrated accordingly. [4] The FDA has warned of a serious risk of death when benzodiazepines are used in combination with Opioid analgesic or cough preparations.[6]
Lorazepam tabs	2 hours	12 hours	
Olanzapine dispersible tab.	5-8 hours	32-50 hours	IM olanzapine may produce a 5-fold increase in plasma conc. vs. the same dose given orally
Olanzapine injection	15-45 mins	32-50 hours	
Olanzapine tab	5-8 hours	32-50 hours	
Promethazine IM injection	2-3 hours	5-14 hours	
Promethazine tablet	1.5 -5 hours	10-19 hours	
Promethazine liquid	1.5 -5 hours	10-19 hours	
Quetiapine tablet (immediate release)	1.5 hours	7 hours	
Risperidone dispersible tab.	1-2 hours	24 hours	
Risperidone liquid	1-2 hours	24 hours	
Risperidone tablet	1-2 hours	24 hours	

Clonazepam IM is non-formulary due to the fact that it is an unlicensed preparation in the UK. It is an intravenous product and IM use is an “Off label” indication. If clonazepam is required it should be requested on a non-formulary request form and there should be an entry in the patient’s healthcare record that a full discussion has taken place with the patient and that they have given informed consent for it to be prescribed.

8.3 DEFINITIONS

‘Acute disturbance’ is defined as an acute mental state associated with an underlying mental and/or physical disorder in the form of: (i) agitation and distress, which is excessive verbal or motor activity that may or may not lead to aggression or violence; or (ii) actual aggression or violence entailing harm, hurt or injury to another person, or damage to property regardless

of whether it is verbally or behaviourally expressed, physical harm is sustained, or the intention is clear. [10]

The pharmacological management of acutely disturbed behaviour encompasses a number of strategies involving pharmacological intervention:

- Pre-RT (pre rapid tranquilisation). This refers to the time period when oral medicine is administered. This may be the only pharmacological intervention, although in some cases rapid tranquilisation (RT) will be administered subsequently.[10]

- Rapid Tranquilisation (RT). Its goal is to achieve a state of calmness without sedation, sleep or unconsciousness, thereby reducing the risk to self and/or others while maintaining the ability of the patient to respond to communication[11]. However, for acute disturbance, sedation may also be considered to be an appropriate interim strategy[1]. RT is defined by NICE as parenteral, rather than oral – "RT: use of medication by the parenteral route (usually intramuscular or, exceptionally, intravenous) if oral medication is not possible or appropriate and urgent sedation with medication is needed." [1]

The aims of management are three-fold [3]:

- to reduce suffering for the patient – psychological or physical (through self-harm or accidents)

- to reduce risk of harm to others by maintaining a safe environment

- to do no harm (by prescribing safe regimens and monitoring physical health)

All medication given in the urgent management of severely disturbed/ violent behaviour including *pro re nata* (PRN) medication should be administered from an agreed protocol or as part of an advance directive.

NICE have defined "PRN" as "the use of medication as part of a strategy to de-escalate or prevent situations that may lead to violence or aggression"; it does not refer to PRN medication used on its own for rapid tranquillisation during an episode of violence of aggression.

8.4 UNDERPINNING PRINCIPLES

The need for treatment of acutely disturbed behaviour requires careful clinical judgement. Treatment of acutely disturbed behaviour should not be carried out without an assessment of the physical health of the patient, non-chronological age (frailty), and consideration of concurrent medication. In particular the presence of delirium or intoxication should be considered before treatment is commenced.

The consultant psychiatrist and multidisciplinary team, including a specialist clinical pharmacist, should undertake a full assessment. Extra care should be taken in the following circumstances:

- the presence of prolonged QTc syndromes
- the concurrent use of medication that lengthens the QTc interval (see Annex 1 for a list of drugs known to prolong QT interval)
- the presence of certain disorders affecting metabolism, e.g. dehydration, hypo/hyperthermia, stress, extreme emotion, extreme physical exertion, physical illness and dementia

Attention should be given to advance directives or parental consent if appropriate.[4]

The dose of medication must be individualised for each patient. The prescription will depend on several factors including age, non-chronological age (frailty), associated physical disorders, and other medication prescribed.

Treatment of acutely disturbed behaviour is potentially hazardous. Medical support should normally be available, and attendance of medical staff required if requested by the nurse in charge when this treatment is undertaken, in order to deal with adverse drug reactions, over sedation or the need to reverse benzodiazepine-induced respiratory depression through the administration of intravenous flumazenil.

Resuscitation equipment must be available and easily accessible (within 3 minutes) at sites where treatment of acutely disturbed behaviour may be undertaken. Equipment available must include an automatic external defibrillator, a bag valve mask, oxygen and suction equipment. All equipment must be properly maintained and checked on a weekly basis, and a record maintained.

Procyclidine injection must be available before treatment is commenced.

Flumazenil must be available at all sites, wherever parenteral benzodiazepines are prescribed[10].

In the event of a medical emergency, for example respiratory compromise, where a doctor is not available to attend, an ambulance should be requested via the normal ‘999’ route.

Plans for the management of individual patients should, ideally, be made in advance with the aim of preventing disturbed behaviour and reducing the risk of violence. Nursing interventions (de-escalation), increasing nursing levels, transfer to a PICU and pharmacological strategies are all options that may be employed.[3]

Some patients may express a particular preference through an advance directive for the medication they wish to be considered, or other strategies to be utilised in managing their aggression. These should be respected, although health and safety consideration may determine that other methods of treatment are used.

All staff need to be aware of the legal framework that authorises the use of treatment of acutely disturbed behaviour, physical intervention and seclusion. The guidance of the Mental Health Act Code of Practice[18] should be followed, with any departures clearly recorded and justified as being in the patient’s best interest.

Mental Health Act Code of Practice[18] paragraph 26.99 states:

> “*Physical restraint may, on occasion, need to be used to administer rapid tranquilisation by IM injection to an unwilling patient, where the patient may lawfully be treated without consent. It must not be used unless there is such*

legal authority, whether under the Act, the MCA or otherwise. Rapid tranquilisation must not be used to treat an informal patient who has the capacity to refuse treatment and who has done so."

8.5 DRUGS USED FOR THE PHARMACOLOGICAL TREATMENT OF ACUTELY DISTURBED BEHAVIOUR

The BAP/NAPICU[10] treatment recommendations are summarised below, with their efficacy and safety concerns, together with the categories of evidence (I to IV), and strength of recommendation (A-D, S).

Pre-RT: *Oral, oral-inhaled and buccal.*

RECOMMENDED	Comment
Oral lorazepam may be effective (IV; D).	
Oral promethazine may be effective (S).	
Oral formulations of aripiprazole, olanzapine and risperidone are effective (Ib; A).	Aripiprazole has a slow onset, which needs to be considered.
Oral haloperidol is effective and a baseline ECG is advised before use due to the risk of QTc prolongation (III; C).	
Oral quetiapine is effective (III; C).	
Oral-inhaled loxapine is effective although a brief respiratory assessment is required beforehand, as it is contraindicated in patients with asthma or chronic obstructive pulmonary disease, and a short-acting beta-agonist bronchodilator (e.g. salbutamol) should be available (Ib; A).	Not formulary
Buccal midazolam is effective (III; C).	Not formulary

NOT RECOMMENDED	
Oral formulations of clonazepam and diazepam are **not recommended** due to lack of evidence for use in RT together with the risk of accumulation with repeated dosing and the resultant risk of cumulative adverse effects (S).	Not recommended
Oral levomepromazine is **not recommended** due to lack of evidence for use in RT (S).	Not recommended

RT: *IM monotherapy.*

RECOMMENDED	Comment
IM lorazepam is effective (Ib; A).	

IM promethazine may be effective (extrapolated Ia; D)	Not licensed for RT, but supported by evidence in NICE and BAP. Use with caution in LD and dementia due to its anticholinergic effects
IM aripiprazole is effective (Ia; A).	Supported by BAP. Not included in NICE recommendations.
IM olanzapine is effective, but it should only be administered by itself and not concurrently with IM benzodiazepines due to risk of hypotension, sedation and cardiorespiratory depression; thus, there should be an interval of at least 1 hour between the two (Ia; A).	Caution
RT IM monotherapy should be considered before RT IM combinations	

NOT RECOMMENDED	
IM clonazepam is **not recommended** due to a relative lack of supporting evidence for use in RT (S).	Not recommended. Unlicensed. Non-formulary.
IM diazepam is **not recommended** due to lack of evidence for use in RT (S).	IM diazepam has erratic absorption; its effect may be unpredictable and potentially overwhelming.
IM midazolam is **not recommended** due to the risk of respiratory depression (Ia; A).	
IM haloperidol is **not recommended** as monotherapy even though it has evidence of effectiveness, and a baseline ECG is advised, as measures need to be in place to offset its adverse effects and especially for the risk of acute dystonia (Ia; A).	
IM levomepromazine is **not recommended**, even though it has some evidence of effectiveness, as there is potential evidence for a risk of cardiovascular adverse effects, especially hypotension (III; C).	

RT: ***IM combinations.***

RECOMMENDED	Comment
IM promethazine plus IM haloperidol is **effective** and a baseline ECG is advised before haloperidol use due to the risk of QTc prolongation (Ia; A).	

IM lorazepam plus IM haloperidol is **effective** and a baseline ECG is advised before haloperidol use due to the risk of QTc prolongation (Ia; A).	

NOT RECOMMENDED	
IM lorazepam plus IM promethazine is **not recommended** due to lack of evidence for efficacy for this combination (S).	

RT: *IV monotherapy.*

RECOMMENDED	Comment
Both IV lorazepam and IV midazolam are effective (Ib; A).	
IV olanzapine has evidence of effectiveness but caution is advised due to the risk of respiratory depression and the lack of a reversing agent (III; C).	Caution

NOT RECOMMENDED	
IV diazepam is not recommended due to lack of evidence for use in RT (S).	
IV haloperidol is not recommended due to a lack of evidence for its use in RT (S).	

Non-response to pre-RT and RT interventions.

RECOMMENDED	Comment
Seeking senior advice, conducting a comprehensive case review and a reviewing the appropriateness of the clinical setting should all be considered (S).	
Zuclopenthixol acetate is not recommended for use as RT as the evidence does not support it, particularly as its onset of action takes several hours. However, after other strategies have failed to achieve a required response, its use may be considered. A baseline ECG is advised before use due to the risk of QTc prolongation (III; C).	
ECT may also be considered when other strategies have failed to achieve a required response, and particularly if the underlying disorder has an evidence base for the use of ECT (e.g. mania) or if there is a history of good response for the individual patient (IV; D).	
IM ketamine is effective but it is not recommended due to risk of respiratory depression (III; C).	

Choice of medicine for RT

Based on the review of RT above, the evidence suggests that two strategies may have benefits that outweigh risk of harm:

- an IM benzodiazepine (lorazepam) used alone
- a combination of IM haloperidol plus IM promethazine. (This combination may reduce EPSE).

While IM haloperidol is effective alone, its side effect profile means that it is not recommended as a monotherapy.

The combination of IM benzodiazepine plus IM haloperidol does not appear to be more effective than IM benzodiazepine alone. But the combination is still effective.

Olanzapine IM is effective, and remains an option; although there is no UK- licensed product, EU-licensed products are still available.

Choosing a drug for RT for an individual patient

Use either intramuscular lorazepam on its own or intramuscular haloperidol combined with intramuscular promethazine for rapid tranquillisation in adults.

If there is insufficient information to guide the choice of medication for rapid tranquillisation, or the service user has not taken antipsychotic medication before, use intramuscular lorazepam.

If there is evidence of cardiovascular disease, including a prolonged QT interval, or no electrocardiogram has been carried out, avoid intramuscular haloperidol combined with intramuscular promethazine and use intramuscular lorazepam instead.

A baseline ECG is advised before haloperidol use (in any formulation) due to the risk of QTc prolongation. It is therefore advised, as the licence for haloperidol recommends, that a baseline ECG should available before administering IM haloperidol. Consequently, as it is often not possible in the scenario of acute disturbance to carry out an ECG, and if one has not been done recently, haloperidol should be avoided, and an alternative IM drug used. If haloperidol is used when no ECG is available the prescriber should consider the risks and benefits of using this treatment and be able to justify their prescribing decision as this would be considered an ‘off-label use’. Where possible, and where facilities exist, ECG monitoring is strongly recommended whenever antipsychotics are administered and especially where high doses or parenteral route are be used. High stress levels, restraint, agitation, and hypokalaemia all place the patient at high risk of developing cardiac arrhythmias. As a **minimum**, ECG’s need to be less than 3 months old to be considered appropriate for use assuming there have been no significant cardiac changes since the ECG was obtained. Preferably ECG monitoring should happen as close to the RT as possible.

If there is a partial response to intramuscular lorazepam, consider a further dose.

If there is no response to intramuscular lorazepam, consider intramuscular haloperidol combined with intramuscular promethazine.

If there is a partial response to intramuscular haloperidol combined with intramuscular promethazine, consider a further dose.

If there is no response to intramuscular haloperidol combined with intramuscular promethazine, consider intramuscular lorazepam if this hasn't been used already during this episode. If intramuscular lorazepam has already been used, arrange an urgent team meeting to carry out a review and seek a second opinion if needed.

Prescribing

When deciding which drug to use, take into account:

- the service user's preferences or advance statements and decisions
- pre-existing physical health problems or pregnancy
- possible intoxication
- previous response to these medications, including adverse effects
- potential for interactions with other medications
- the total daily dose of medications prescribed and administered
- cumulative antipsychotic dose per day, including regular medication and any depot that may have been administered during the period within which it remains active
- use of RT in patients receiving clozapine (additional antipsychotic may increase cardiac and haematological risks)
- use of RT in patients receiving lithium (risk of neurotoxicity with haloperidol)

The Mental Health Act Code of Practice[18] states in paragraph 26.97: "*Where a prescription indicates a choice of administration routes for rapid tranquilisation (e.g. oral or IM injection), the person prescribing the medication should list factors which should be considered in deciding which route to use under any reasonably forseeable circumstances*".

Prescribing oral

The reason for prescribing should be documented in the clinical record, including the treatment plan and any recommended monitoring.

Where prescribed in the context of pre-RT treatment, the indication on the treatment chart should be clearly endorsed as "severe agitation and anxiety only".

Do not prescribe any oral PRN medication(s) routinely or automatically on admission on the 'as required' section of the drug chart.

Where clinically indicated, ensure oral prn medication for acute & severe agitation is prescribed on the "as required" section of the drug chart and prescribe initially for a maximum of 96 hours.

Only when oral prn medication for acute & severe agitation oral medication continues to be required should it be prescribed beyond the initial 96 hours on the 'as required' section of the drug chart. Including indication, maximum dose, interval and maximum daily dose. This should be reviewed at least once weekly and if not used within the last 2 weeks, consider stopping it.

Oral prn medication for acute & severe agitation should only be offered after non-drug de-escalation techniques have not been successful, and before IM medication is considered.

If more than one medication is prescribed, the care plan should include the preferred order of administration of medicines and time interval between the medicines.

If two medications are intended to be given at the same time this should be clearly stated.

Prescribing RT (parenteral)

The reason for prescribing should be documented in the clinical record, including the treatment plan.

Do not prescribe RT medication routinely or automatically on admission on the drug chart. NICE guidance states that RT should initially only be a single dose. When RT is deemed clinically appropriate, initial dose(s) must be prescribed as a stat dose within the “once only” section of the drug chart, and the reason recorded in the patient clinical record.

After reviewing the effect of any initial stat dose, further doses can be re-prescribed if essential, as either further stat doses, or in the “PRN antipsychotics” section of the drug chart. RT should only be re-prescribed when deemed appropriate to continue. This should be reviewed at least once weekly and if not used within the last two weeks, consider stopping it. Antipsychotics prescribed as PRN for RT should be reviewed at least once weekly and if not used within the last one week, consider stopping it. (Whether they are used in the framework of RT, pre-RT, or non-RT, all antipsychotics prescribed PRN are to be reviewed after six PRN doses or 7 days).

If more than one medication is prescribed, the care plan should include the preferred order of administration of medicines and time interval between the medicines.

8.6 ROUTES OF ADMINISTRATION

Oral medication should always be offered before parenteral medication.[4]

If parenteral administration proves necessary, the intramuscular (IM) route should be preferred over the intravenous route.[4] Absorption after IM administration can occur far more rapidly when the patient is agitated, excited or physically overactive.[1]

Intravenous (IV) administration should only be used in exceptional circumstances. This decision should be made by a consultant psychiatrist and not by junior medical staff.[4]

Oral	safest, but slow onset of action compared with parenteral (except for lorazepam, where oral and IM have similar speed of onset)
IM	Faster onset of action than oral route (except lorazepam). Injection may be painful and absorption can be erratic
IV	Provides rapid onset of action, but potentially hazardous and not recommended except in exceptional circumstances. Consultant involvement mandatory. Requires resuscitation facilities and suitably trained staff to be available. Nursing staff not permitted to administer drugs intravenously

If combinations of injections are used they should not be mixed together in the same syringe.[1]

There is a drive internationally to reduce restrictive practices. In the UK, there is a government directive[12] to reduce all forms of restrictive practices, with an objective of ending the use of prone (face-down) restraint; restrictive practices should only be used as a last resort in emergency situations.

> "*People must not be deliberately restrained in a way that impacts on their airway, breathing or circulation. The mouth and/or nose must never be covered and techniques should not incur pressure to the neck region, rib cage and/or abdomen. There must be no planned or intentional restraint of a person in a prone/face down position on any surface, not just the floor*."[12]

The Mental Health Act Code of Practice[18] states in paragraph 26.98:

> "*Where rapid tranquilisation in the form of an IM injection is needed, the person prescribing the injection should state the preferred injection site, having taken full account of the need to avoid prone restraint…"*

Consideration should be given to the choice of restraint positions (prone/ supine (face-up)/ semi-seated), to the choice of techniques and equipment (e.g. safety pods) and suitable injection sites.

Annex 2 lists the intramuscular sites specified in the summary of product characteristics for the common medicines used in rapid tranquilisation. This list should be referred to when choosing a site to administer the intramuscular injection.

Sites for IM injection, and their recommended maximum volumes of fluid[15] for each are:

Muscle group	Recommended maximum volumes of fluid for each muscle group
Dorsogluteal (buttocks)	4ml
Deltoid (upper arm)	1ml
Vastus lateralis (thigh)	5ml
Ventrogluteal (hip)	2.5ml

BAP have also published guidelines for preconception, in pregnancy and postpartum[14]. They describe how restraint procedures should be adapted to avoid possible harm to the foetus and mother. This will mean that the woman must not be laid supine (risk of obstruction to major blood vessels) or prone (risk to fetus). Any unit that has a pregnant woman admitted should have large beanbags available so that the woman can be lowered into the beanbag and therefore retain a semi-seated position where she is supported. As the patient will be sitting, and is neither lying supine nor prone, careful consideration must be given to the choice of administration site of any intramuscular injection.

8.7 PRE-TREATMENT CHECKS

Before prescribing medication for treatment of acutely disturbed behaviour , the prescriber should:

- scrutinise the patient's notes with regard to his/her general medical history and consider the possibility of carrying out a physical examination
- check for recent ECG[1], U&Es and urine drug screen results, previous history of severe extrapyramidal effects, previous response to treatment of acutely disturbed behaviour or other methods of managing imminent violence
- Review current prescribed medication regimen and check for any recently administered doses of regular and PRN medication

Every effort should be made to obtain baseline measurements of temperature, blood pressure, pulse rate, respiratory rate and the level of consciousness prior to the administration of drugs.

8.8 ADDITIONAL FACTORS TO CONSIDER WHEN PRESCRIBING

Those patients undergoing treatment of acutely disturbed behaviour who are heavily sedated or suspected of using illicit drugs or alcohol should not be secluded.[4] There may be exceptional circumstances were this is necessary, in which case an increased level of observations must be maintained because of the risk of collapse and sudden death. This should comply with level 3 (maintaining the patient within eyesight) of the Trust's policy on engagement and formal observation, CLP8.

If seclusion is used in other patients the potential complications of treatment of acutely disturbed behaviour should be taken particularly seriously.[4] Level 3 observations must be maintained by a qualified nurse at least until clinical monitoring of the patient's vital signs is possible.

Lower doses may be required if alcohol/drug abuse is suspected, or if the patient is antipsychotic naive.

If the patient has recently used illicit benzodiazepines, or already receives regular benzodiazepines, an antipsychotic should be used alone.

If the patient is established on antipsychotics, lorazepam may be used alone.

Caution should be used if the patient is receiving regular antipsychotics, antidepressants or lithium, as drug combinations may increase CNS toxicity.

The maximum dose of olanzapine is 20mg/ 24 hours by any (combined) route(s). This should not be exceeded. Not more than three IM doses are to be given in any 24-hour period, for up to 3 days. Wait 2 hours between each IM dose.

[1] The SPC for haloperidol recommends that an ECG should be performed prior to administration, although it is recognised that this may not be feasible if the patient is very disturbed. Ideally, an ECG should be obtained for all patients as soon as possible after admission (to check for QTc prolongation), in case treatment of acutely disturbed behaviour subsequently needs to be used.

Caution should be used with antipsychotics in young male patients as they are prone to dystonia reactions. Procyclidine should be considered.

Older patients (>65 years) should normally be commenced on no more than half of the recommended adult doses, and special care is required. Frailty should be taken into consideration.

In dementia, haloperidol is licensed for the treatment of persistent aggression and psychotic symptoms in patients with moderate to severe Alzheimer's dementia and vascular dementia when non-pharmacological treatments have failed and when there is a risk of harm to self or others. Risperidone is indicated for the short-term treatment (up to 6 weeks) of persistent aggression in patients with moderate to severe Alzheimer's dementia unresponsive to non-pharmacological approaches and when there is a risk of harm to self or others.

Lorazepam and promethazine can both worsen confusion, and doses should be kept to a minimum.

Lower doses may be needed in patients with learning disabilities. Evidence is limited and extrapolated. Particular consideration needs to be given to the higher susceptibility of patients with learning disability to side effects, and the potential for paradoxical reactions to benzodiazepines.

If a woman with bipolar disorder develops severe manic or psychotic symptoms and behavioural disturbance during pregnancy or the intrapartum period treatment of acutely disturbed behaviour with an antipsychotic should be considered in preference to a benzodiazepine. If an antipsychotic is used, it should be at the minimum effective dose because of neonatal extrapyramidal symptoms; if a benzodiazepine is use, the risks of floppy baby syndrome should be taken into account. During the perinatal period treatment should be in collaboration with an anaesthetist and/or paediatrician.[5,6]

Severe behavioural disturbance in children and adolescents with bipolar disorder should be managed as for adults except that treatment of acutely disturbed behaviour with haloperidol is not recommended because of the increased risk of extrapyramidal side effects in this age group.[5]

Risperidone, olanzapine and aripiprazole are available as orodispersible formulations which may be easier for some patients to take and more difficult to spit out.[5] The orodispersible formulations of these drugs are not more rapidly absorbed than conventional tablets, but they do render covert non-adherence more difficult.

Drugs, particularly in the context of restraint, should be used with caution because of the risk of:

- loss of consciousness
- loss of airway
- over-sedation with loss of alertness
- cardiovascular and respiratory complications and collapse
- seizures
- interactions with medicines already prescribed or illicit substances
- akathisia which can worse aggression

- possible damage to the therapeutic relationship between patient and clinician
- specific issues relating to diagnosis and physical conditions[4]

Antipsychotics are best avoided in those with cardiovascular disease. Potent 'typical' antipsychotics such as haloperidol are best avoided in patients who are antipsychotic naïve or have a history of severe extrapyramidal side effects. Benzodiazepines are best avoided in those with compromised respiratory function.

Suitable drugs for treatment of acutely disturbed behaviour need to have a rapid onset of action. Frequent small doses are safer and more effective than a single large dose, but this may lead to a risk of accumulation. Therefore the drugs used should have a short duration of action. Previous medication taken and the pharmacokinetics of the agents used should be considered (e.g. time to peak plasma level).

Where possible, use of a single agent is preferred to a combination.[4] Two drugs of the same class should not be used for the purpose of rapid tranquillisation.[1]

Concomitant use of two or more antipsychotics should be avoided on the basis of risk associated with QT prolongation (common to almost all antipsychotics). This is particularly important where the patient's history or physical state indicates higher risk of cardiac arrhythmia.[3]

When using IM haloperidol (or any other 'typical' antipsychotics) as a means of managing disturbed/violent behaviour, an antimuscarinic agent, such as procyclidine should be immediately available and should be given orally, intramuscularly in line with the manufacturer's instructions.[1]

Sufficient time should be allowed for a clinical response to occur between IM doses of medication.[1]

Clinicians need to understand the cardio-respiratory effects of the acute administration of drugs used in treatment of acutely disturbed behaviour and the need to titrate dosage to effect. There is a risk of respiratory depression when benzodiazepines are given in high doses or in combination with other hypno-sedatives, including alcohol and some illicit drugs.[1]

Violent behaviour can be managed without prescribing unusually high doses of drugs. The minimum effective dose should be used and the British National Formulary (BNF) and BNF for Children recommendations for maximum doses should be adhered to unless exceptional circumstances arise.[4]

When IM lorazepam is unavailable IM promethazine is recommended as the first line alternative for monotherapy.

8.9 CLINICAL MONITORING OF VITAL SIGNS

Refer to CG52 for details.

8.10 ENTRIES IN CLINICAL NOTES

Prescribers

When medicines are first prescribed for treatment of acutely disturbed behaviour (either as PRN in anticipation of disturbed behaviour, or at the time of an event) the prescriber should take into consideration:

- review of general medical history
- review of ECG, physical investigations if possible
- physical examination (or reason why not possible)
- previous response to drugs used for treatment of acutely disturbed behaviour and any adverse effects
- assessment of potential for illicit drug/alcohol use
- review of current prescribed medications
- the frequency of physical monitoring agreed with the clinical/nursing team
- whether the choice of medicines is covered by an advance statement

When parenteral medicines are prescribed for the management of acutely disturbed behaviour, the medical notes should make reference to the circumstances that may necessitate the use of parenteral administration rather than oral, e.g. the patient refuses oral medication.

Nursing Staff

A full written account of the incident must be made as soon as possible, in the nursing notes detailing why treatment of acutely disturbed behaviour was necessary. This should include:

- the nature of acutely disturbed behaviour – precipitants, victim, weapon, severity etc
- the time course of events from the onset of the behaviour until the offering of oral medication
- the impact of non-drug strategies, including the timing
- the acceptance or refusal of oral medication
- the name, formulation and dose of medicine given, (including route and muscle site if intramuscular, and the nature of any restraint in place during injection, e.g. prone/ supine/ sitting)
- the time the medicine dose was given, and the time of any repeated doses
- the impact of the administration of medication
- details of all physical observations as agreed with the clinical team.
- subsequent revisions to the management plan

8.11 REMEDIAL MEASURES

The administration of treatment of acutely disturbed behaviour is not without the risk of resulting adverse effects.

Problem	**Remedial Measures**
Acute dystonia (including oculogyric crises)	Give procyclidine 5-10 mg IM Procyclidine 1.25-2.5 mg in children
Reduced respiratory rate (<10/minute) or oxygen saturation <90%	Given oxygen; raise legs; ensure patient is not lying face down Give flumazenil if benzodiazepine-induced respiratory depression suspected (see section 13) If induced by any other sedative agent ventilate mechanically
Irregular or slow pulse (<50/minute)	Refer to specialist medical care immediately
Fall in blood pressure (>30mmHg orthostatic drop or <50mmHg diastolic)	Lie patient flat; tilt bed towards head. Monitor closely
Increased temperature	Withhold antipsychotics (Risk of NMS and arrhythmias. Check creatinine kinase levels urgently)

8.12 USE OF FLUMAZENIL FOR BENZODIAZEPINE REVERSAL

Flumazenil is a specific reversal agent for benzodiazepine-induced respiratory depression. It is held at all sites where injectable lorazepam is stocked.

Indications for use	If the respiratory rate falls below 10/minute after the administration of lorazepam (diazepam or midazolam)
Contra-indications	Patients with epilepsy who have been receiving long-term benzodiazepines
Caution	Dose should be carefully titrated in hepatic impairment
Dose and route of administration	Initially 200 micrograms **intravenously*** over 15 seconds (10 micrograms/kg max single dose 200 micrograms in children under 12 years) If the required level of consciousness is not achieved after 60 seconds then subsequent

	dose: 100 micrograms intravenously over 10 seconds ** IV injection of flumazenil must be given by a doctor.*
Time before dose can be repeated	60 seconds Further doses of 100 micrograms can be repeated at 60 second intervals where necessary to a maximum of 1 mg
Maximum dose	1 mg in 24 hours (one initial dose and eight subsequent doses)
Side effects	Patients may become agitated, anxious or fearful on awakening Seizures may occur in regular benzodiazepine users
Management	Side effects usually subside
Monitoring • What to monitor? • How often?	Respiratory rate Continuously until respiratory rate returns to baseline level. Flumazenil has a very short half life so respiratory function may appear to recover and then deteriorate again. Note: if respiratory rate does not return to normal or patient is not alert after initial doses given then assume sedation due to some other cause.

8.13 USE OF ZUCLOPENTHIXOL ACETATE (CLOPIXOL ACUPHASE®)

Zuclopenthixol acetate (Clopixol Acuphase®) is not an appropriate drug for use in rapid tranquillisation, although it is used in the pharmacological treatment of acute psychosis. It has a significantly delayed onset of action and a relatively long duration of action.

It may have a role in the ongoing management of a risk of violence once tranquillisation has been satisfactorily achieved, and should only be used after an acutely psychotic patient has required repeated injections of short achieving antipsychotic drugs such as haloperidol and olanzapine, or sedative drugs such as lorazepam.

It is important to consider the pharmacokinetics of other drugs when prescribing it. For example, caution is necessary in a patient who has recently received a dose of a depot antipsychotic which has not yet reached peak levels.

It should only be given when enough time has elapsed to assess the full response of previously injected drugs. Consideration should be given to leaving at least 15 minutes after IV injections and 60 minutes after IM injections.

It should never be administered:

- in an attempt to 'hasten' the antipsychotic effect of any other antipsychotic therapy
- for rapid tranquilisation (onset of effect is too slow), unless judged necessary
- at the same time as other parenteral antipsychotics or benzodiazepines (may lead to oversedation)
- at the same time as depot medication
- as a 'test dose' for zuclopenthixol decanoate depot
- to patients who accept a regimen of oral medication that will mitigate their presentation
- to a patient who is unconscious
- to a patient who is physically resistive (risk of intravasation and oil embolus)
- to those with cardiac disease, hepatic or renal impairment or in pregnancy or under 12 years old
- to those who are sensitive to extrapyramidal side effects
- to those who the neuroleptic-naive

Doses of 50-150mg may be given up to a maximum of 400mg over a two week period, with at least 24 hours between doses. There is no such thing as a 'course of Acuphase' and the patient should be assessed before each administration. The maximum dose per 2 weeks is intended to allow a treatment plan to be put in place and does not indicate that there are known harmful effects from more prolonged use. However, such use would be exceptional.

Sedative effects usually begin to be seen 2 - 4 hours after injection. Peak plasma concentrations occur after 36 hours. At 72 hours, plasma concentrations are around a third of those at 36 hours.

A significant reduction in psychosis is first evident **only after 8 hours**. The usefulness is therefore limited by a somewhat delayed onset of both sedation and antipsychotic actions. **If given to a restrained patient, their behaviour on release from restraint is likely to be unchanged, and will remain as such for several hours.**

The BNF advises obtaining an ECG prior to the use of zuclopentixol acetate.

References

1 NICE NG10. Violence and aggression: Short-term management in mental health, health and community settings. May 2015.

2 Royal College of Psychiatrists. *Management of Imminent Violence*. Occasional Paper OP41, 1998.

3 Taylor D, Barnes T, Young A. The Maudsley Prescribing Guidelines in Psychiatry, 13th Edition, 2018

4 Psychosis and schizophrenia in adults: prevention and management. NICE Clinical Guideline CG178, updated March 2014.

5 Bipolar disorder: assessment and management NICE. Clinical Guideline CG185, updated February 2016

6 Antenatal and postnatal mental health: clinical management and service guidance. NICE Clinical Guideline CG192, updated June 2015

7 *Independent Inquiry into the death of David Bennett*. Pub: Norfolk, Suffolk & Cambridgeshire Strategic Health Authority, December 2003.

8 British National Formulary. On-line. Available at www.bnf.org

9 British National Formulary for Children. On-line. Available at www.bnfc.org

10 British Association for Psychopharmacology and the National Association of Psychiatric Intensive Care and Low Secure Units. Joint BAP NAPICU evidence-based consensus guidelines for the clinical management of acute disturbance: de-escalation and rapid tranquilisation. 2018. Journal of Psychopharmacology, 1 - 40.

11 NICE CG25. Violence and aggression: The short-term management of disturbed and violent behaviour in inpatient psychiatric settings and emergency departments. 2005.

12 Department of Health (2014) Positive and Proactive Care: Reducing the Need for Restrictive Interventions.

13 Mental Health Network (2014) Positive and Proactive Care: Reducing the Need for Restrictive Intervention. London: Mental Health Network, NHS Confederation, Briefing; September 2014, Issue 277. https://www.nhsconfed.org/news/2014/04/positive-and-proactive-care-reducing-the-need-for-restrictive-interventions . Accessed 11/10/2019.

14 British Association for Psychopharmacology consensus guidance on the use of psychotropic medication preconception, in pregnancy and postpartum. 2017. Journal of Psychopharmacology, 1- 34.

15 The Royal Marsden Manual of Clinical Nursing Procedures, 9th edition. Accessed 11/10/2019.

16 Influence of promethazine on cardiac repolarisation: a double-blind, midazolam-controlled study. R. Owczuk, P. Twardowski, A. Dylczyk-Sommer, M. A. Wujtewicz, W. Sawicka, B. Drogoszewska, M. Wujtewicz. 1/5/2009. Anaesthesia, Vol. 64(6), p.609-614, June 2009. https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2044.2009.05890.x Accessed 18/10/2019.

17 Summary of product characteristics, Haloperidol injection. https://www.medicines.org.uk/emc/product/514/smpc Accessed 18/10/19.

Annex 1

Effects of antipsychotics on QTc [3]

No effect	Low effect	Moderate effect	High effect	Unknown effect
Brexpiprazole Cariprazine Lurasidone	Aripiprazole Asenapine Clozapine Flupentixol Fluphenazine Loxapine Perphenazine Prochlorperazine Olanzapine Paliperidone Risperidone Sulpiride	Amisulpride Chlorpromazine Haloperidol Iloperidone Levomepromazine Melperone Quetiapine Ziprasidone	Any intravenous antipsychotic Pimozide Sertindole Any drug or combination of drugs used in doses exceeding recommended maximum	Pipothiazine Trifluoperazine Zuclopentixol
See original table in Maudsley for full details of individual risks.				

Cautions for haloperidol [17]

Haloperidol is contraindicated in combination with medicinal products known to prolong the QTc interval. Examples include:
• Class IA antiarrhythmics (e.g. disopyramide, quinidine).
• Class III antiarrhythmics (e.g. amiodarone, dofetilide, dronedarone, ibutilide, sotalol).
• Certain antidepressants (e.g. citalopram, escitalopram).
• Certain antibiotics (e.g. azithromycin, clarithromycin, erythromycin, levofloxacin, moxifloxacin, telithromycin).
• Other antipsychotics (e.g. phenothiazine derivatives, sertindole, pimozide, ziprasidone)
• Certain antifungals (e.g. pentamidine).
• Certain antimalarials (e.g. halofantrine).
• Certain gastrointestinal medicinal products (e.g. dolasetron).
• Certain medicinal products used in cancer (e.g. toremifene, vandetanib).
• Certain other medicinal products (e.g. bepridil, methadone).
This list is not exhaustive.

Caution is advised when haloperidol is used in combination with medicinal products known to cause electrolyte imbalance. Electrolyte disturbances such as hypokalaemia and hypomagnesaemia increase the risk for ventricular arrhythmias and **must be corrected** before treatment with haloperidol is started. Therefore, baseline and periodic electrolyte monitoring is recommended.

Effect of promethazine on QTc [16]

Promethazine induces significant QTc prolongation in people without cardiovascular disorders, but the lack of simultaneous changes in transmural dispersion of repolarisation (TDR) makes the risk of its torsadogenic action very low. Among many drugs that prolong ventricular repolarisation, only a subset of them is able to provoke torsade de pointes (TdP). This originates from the fact that induction of QT lengthening must be accompanied by a parallel increase in TDR to promote torsadogenesis. Since most QT prolonging drugs, including promethazine, are not able to provoke a simultaneous increase in TDR, the number of drugs that induce TdP is fortunately low. [16]

Annex 2

Recommendations on injection site for common IM drugs.

Drug	BNF	SPC	Maudsley[3]
Lorazepam IM	By intramuscular injection no site specified	Ativan 4mg/ml Injection, Pfizer IM, no site specified	"Can be administered in gluteal, deltoid or frontal thigh area, according to manufacturer".
Promethazine IM	By deep intramuscular injection no site specified	Phenergan 25mg/ml Injection, Aventis Deep IM, no site specified perform carefully to avoid inadvertent SC which can lead to local necrosis	Deep IM. Can be administered into thigh, upper arm, or gluteal. Ensure muscle mass is sufficient for the volume being injected.
Haloperidol IM	By intramuscular injection no site specified	Haloperidol 5mg/ml Injection, Mercury IM, no site specified.	Preferably, select gluteal when dose volume high. Deltoid preferred for low doses. There is no information on dose limits for specific muscle groups, choice is at discretion of prescriber.
Olanzapine IM	By intramuscular injection	Zyprexa 10mg Injection, Eli Lilly IM, no site specified	Inject slowly, deep into muscle. Exact site not specified, choice is a clinical decision.
Aripiprazole IM	By intramuscular injection	Abilify 7.5mg/ml Injection, Otsuka IM. Injection into deltoid or deep into gluteus is recommended.	As per SPC. Avoid adipose regions.

SPC: Summary of product characteristics.

Appendix 1: Management of acutely disturbed patients - ADULTS

PRINCIPLES

Multidisciplinary approach *Effective interventions* *Proportionality of intervention* *Treatment individualisation/choice* *Treatment optimisation of underlying disorder*	***Continuous monitoring/review of:*** *Mental/physical health* *Risk to self/others* *Treatment effectiveness/harm* *Patient engagement level*	***Consider modifiers:*** *Pregnancy* *Drugs and alcohol* *Medical frailty/physically compromised* *Psychotropic naivety* *Regular prescribed psychotropics* *Learning disability* *Extremes of age*

PRE-RT: DE-ESCALATION

Continual risk assessment	*Passive intervention and watchful waiting*	*Identification of patient needs*
Self-control techniques	*Empathy*	*Distraction*
Avoidance of provocation	*Reassurance*	*Negotiation*
Respect patient space	*Respect and avoidance of shame*	*Reframing events for patient*
Management of environment	*Appropriate use of humour*	*Non-confrontational limit setting*

PRE-RT: ORAL MEDICINES

Offer oral medicines first	*Consult any advance decision/ statements*	*Note all previous medicines used in last 24 hours*	*Contact consultant if total dose above BNF limits*

Unknown or psychotropic naïve patient	**Known history of psychotropic use**				
Lorazepam	Lorazepam	or	Promethazine	or or or or	Olanzapine Quetiapine (immediate-release) Risperidone Haloperidol with Promethazine

Allow at least 1 hour for response to oral. Repeat, if necessary. Consider combining sedative and antipsychotic treatment. Progress to RT if two doses fail, or sooner if patient or others at significant risk, or oral refused. Continue non-drug approaches.

RT: INTRAMUSCULAR MEDICINES

Unknown or psychotropic naïve patient	**Known history of psychotropic use**					
	No cardiac disease (confirmed by ECG)			**Unknown or confirmed cardiac disease**		
Lorazepam	Lorazepam	or or or or or	Promethazine Aripiprazole Olanzapine (monotherapy) Haloperidol with Promethazine Haloperidol with Lorazepam	Lorazepam	or	Olanzapine
Wait 30 minutes for response, repeat if partial response.	Wait 30 minutes for response (2 hours for olanzapine / aripiprazole), repeat if partial response.			Wait 30 minutes for lorazepam response. Wait 2 hours between olanzapine doses. Repeat if partial response.		
If no response: Olanzapine (only after >1 hour post lorazepam IM) <u>or</u> Haloperidol* with promethazine <u>or</u> Haloperidol* with lorazepam (* if an ECG excludes cardiac disease)	If no response to lorazepam: Haloperidol with Promethazine	If no response: Lorazepam (if not already used) <u>or</u> Olanzapine (leave >1 hour between lorazepam IM and olanzapine IM)		If no response: Lorazepam <u>or</u> Olanzapine (leave >1 hour between lorazepam IM and olanzapine IM)		

Oral doses:		**IM doses:**
Lorazepam 1-2mg (Max 4mg/24 hours) Haloperidol 3-10mg (Max 20mg/24 hours) Promethazine 25-50mg (Max 100mg/24 hours)	Olanzapine 5-10mg (Max 20mg/24 hours) Quetiapine immediate-release 50-100mg (Max as low as possible / 750mg/24 hours) Risperidone 1-2mg (Max 4mg/24 hours)	Lorazepam 1-2mg (Max 4mg/24 hours) Haloperidol 2.5-5mg (Max 20mg/24 hours) Promethazine 25-50mg (Max 100mg/24 hours) Olanzapine 5-10mg (Max 20mg/24 hours) Aripiprazole 5.25mg – 15mg (Max 30mg in 24 hours)

Haloperidol IM: maximum of 20mg/24 hours reflects the latest BNF/SPC. Note the previous max was 12mg/24hours. Use lowest doses possible.
Aripiprazole IM: Recommended initial dose is 9.75mg. A 2nd injection may be given 2 hours after the 1st injection. Max 3 injections in 24 hours.

Monitoring: After oral doses, monitor hourly for minimum 1 hour, then as clinically appropriate. After IM doses, monitor every 10 minutes for first hour, then every 30 minutes for next 3 hours at least, and until ambulatory, then as per guideline. Record monitoring on MEWS chart.

Post review: Discuss in MDT. Review PRN. Document as DATIX, with full details, and on medical record. Undertake 72 hour review with patient.

Appendix 2: Management of acutely disturbed patients - OLDER PEOPLE (excluding dementia)

PRINCIPLES

Multidisciplinary approach *Effective interventions* *Proportionality of intervention* *Treatment individualisation/choice* *Treatment optimisation of underlying disorder*	***Continuous monitoring/review of:*** *Mental/physical health* *Risk to self/others* *Treatment effectiveness/harm* *Patient engagement level*	***Consider modifiers:*** *Pregnancy* *Drugs and alcohol* *Medical frailty/physically compromised* *Psychotropic naivety* *Regular prescribed psychotropics* *Learning disability* *Extremes of age*

PRE-RT: DE-ESCALATION

Continual risk assessment	*Passive intervention and watchful waiting*	*Identification of patient needs*
Self-control techniques	*Empathy*	*Distraction*
Avoidance of provocation	*Reassurance*	*Negotiation*
Respect patient space	*Respect and avoidance of shame*	*Reframing events for patient*
Management of environment	*Appropriate use of humour*	*Non-confrontational limit setting*

PRE-RT: ORAL MEDICINES

Offer oral medicines first	*Consult any advance decision/ statements*	*Note all previous medicines used in last 24 hours*	*Contact consultant if total dose above BNF limits*

Unknown or psychotropic naïve patient	**Known history of psychotropic use**				
Lorazepam	Lorazepam	or	Promethazine	or or or or	Olanzapine Quetiapine (immediate release) Risperidone Haloperidol with Promethazine

Allow at least 1 hour for response to oral. Repeat, if necessary. Consider combining sedative and antipsychotic treatment. Progress to RT if two doses fail, or sooner if patient or others at significant risk, or oral refused. Continue non-drug approaches.

RT: INTRAMUSCULAR MEDICINES

Unknown or psychotropic naïve patient	**Known history of psychotropic use**					
	No cardiac disease (confirmed by ECG)			**Unknown or confirmed cardiac disease**		
Lorazepam	Lorazepam	or or or or or	Promethazine Aripiprazole Olanzapine (monotherapy) Haloperidol with Promethazine Haloperidol with Lorazepam	Lorazepam	or	Olanzapine
Wait 30 minutes for response, repeat if partial response.	Wait 30 minutes for response (2 hours for olanzapine), repeat if partial response.			Wait 30 minutes for lorazepam response. Wait 2 hours between olanzapine doses. Repeat if partial response.		
If no response: Olanzapine (only after >1 hour post lorazepam IM) <u>or</u> Haloperidol* with promethazine <u>or</u> Haloperidol* with lorazepam (* if an ECG excludes cardiac disease)	If no response to lorazepam: Haloperidol with Promethazine	If no response: Lorazepam (if not already used) <u>or</u> Olanzapine (leave >1 hour between lorazepam IM and olanzapine IM)		If no response: Lorazepam <u>or</u> Olanzapine (leave >1 hour between lorazepam IM and olanzapine IM)		

Oral doses:		**IM doses: as low as possible**
Lorazepam 0.5-1mg (Max 2mg/24 hours) Haloperidol 0.5-2.5mg (Max 5mg/24 hours) Promethazine 10-25mg (Max 50mg/24 hours)	Olanzapine 2.5-5mg (Max 20mg/24 hours) Quetiapine immediate-release 25-50mg (Max as low as possible/ 750mg/24 hours) Risperidone 0.5-1mg (Max 4mg/24 hours)	Lorazepam 0.5-1mg (Max 2mg/24 hours) Haloperidol 2.5mg initially, then lower (Max 5mg/24 hours) Promethazine 12.5-25mg (Max 50mg/24 hours) Olanzapine 2.5 -5mg (Max 20mg/24 hours) Aripiprazole 5.25mg – 15mg (Max 30mg in 24 hours)

Monitoring: After oral doses, monitor hourly for minimum 1 hour, then as clinically appropriate. After IM doses, monitor every 10 minutes for first hour, then every 30 minutes for next 3 hours at least, and until ambulatory, then as per guideline. Record monitoring on MEWS chart.

Post review: Discuss in MDT. Review PRN. Document as DATIX, with full details, and on medical record. Undertake 72 hour review with patient.

Appendix 3: Management of acutely disturbed patients – DEMENTIA SERVICES

PRINCIPLES

Multidisciplinary approach *Effective interventions* *Proportionality of intervention* *Treatment individualisation/choice* *Treatment optimisation of underlying disorder*	***Continuous monitoring/review of:*** *Mental/physical health* *Risk to self/others* *Treatment effectiveness/harm* *Patient engagement level*	***Consider modifiers:*** *Pregnancy* *Drugs and alcohol* *Medical frailty/physically compromised* *Psychotropic naivety* *Regular prescribed psychotropics*	*Learning disability* *Extremes of age*

PRE-RT: DE-ESCALATION

Continual risk assessment	*Passive intervention and watchful waiting*	*Identification of patient needs*
Self-control techniques	*Empathy*	*Distraction*
Avoidance of provocation	*Reassurance*	*Negotiation*
Respect patient space	*Respect and avoidance of shame*	*Reframing events for patient*
Management of environment	*Appropriate use of humour*	*Non-confrontational limit setting*

PRE-RT: ORAL MEDICINES

Offer oral medicines first	*Consult any advance decision/ statements*	*Note all previous medicines used in last 24 hours*	*Contact consultant if total dose above BNF limits*

Unknown or psychotropic naïve patient	**Known history of psychotropic use**				
					SEE CAUTION IN NOTES BELOW
Lorazepam or Promethazine	Lorazepam	or	Promethazine	or	Risperidone or Haloperidol with Promethazine **(Do not use haloperidol, and use quetiapine or risperidone with caution, in Lewy Body dementia or Parkinson's disease dementia)**

Allow at least 1 hour for response to oral. Repeat, if necessary. Consider combining sedative and antipsychotic treatment. Progress to RT if two doses fail, or sooner if patient or others at significant risk, or oral refused. Continue non-drug approaches.

RT: INTRAMUSCULAR MEDICINES

Unknown or psychotropic naïve patient	**Known history of psychotropic use**	
	No cardiac disease (confirmed by ECG)	**Unknown or confirmed cardiac disease**
Lorazepam	**SEE CAUTION IN NOTES BELOW** Haloperidol with Promethazine **(Do not use haloperidol in Lewy Body dementia or Parkinson's disease dementia)**	Lorazepam
Wait 30 minutes for response, repeat if partial or no response.	Wait 30 minutes for response, repeat if partial response. If no response: Lorazepam	Wait 30 minutes for response. Repeat if partial or no response.

Oral doses:		**IM doses:**
Lorazepam 0.5-1mg (Max 2mg/24 hours) Haloperidol 0.5-2.5mg (Max 5mg/24 hours) Promethazine 10-25mg (Max 50mg/24 hours)	Risperidone 0.5-1mg (Max 4mg/24 hours) Quetiapine immediate release 25mg (Max as low as possible / 750mg/24 hours)	Lorazepam 0.5-1mg (Max 2mg/24 hours) Haloperidol 1-2.5mg (Max 5mg/24 hours) Promethazine 12.5-25mg (Max 50mg/24 hours)

Monitoring:
After oral doses, monitor hourly for minimum 1 hour, then as clinically appropriate. After IM doses, monitor every 10 minutes for first hour, then every 30 minutes for next 3 hours at least, and until ambulatory, then as per guideline. Record monitoring on MEWS chart.

Notes:
Lorazepam and promethazine can worsen confusion, and benzodiazepines can cause paradoxical reactions.

If the patient has a diagnosis of Lewy body dementia or Parkinson's disease dementia, avoid antipsychotics. Where an antipsychotic is essential for these diagnoses, consider prescribing quetiapine orally (unlicensed in dementia), or risperidone orally (licensed in dementia, including Lewy body and Parkinson's disease dementia). Increase the level and duration of observations to identify and treat side effects from psychotropic medication, including Neuroleptic Malignant Syndrome

Post review:
Discuss in MDT. Review PRN. Document as DATIX, with full details, and on medical record. Undertake 72 hour review with patient.

Appendix 4: Management of acutely disturbed patients – CHILD AND ADOLESCENT

PRINCIPLES

Multidisciplinary approach *Effective interventions* *Proportionality of intervention* *Treatment individualisation/choice* *Treatment optimisation of underlying disorder*	***Continuous monitoring/review of:*** *Mental/physical health* *Risk to self/others* *Treatment effectiveness/harm* *Patient engagement level*	***Consider modifiers:*** *Pregnancy* *Drugs and alcohol* *Medical frailty/physically compromised* *Psychotropic naivety* *Regular prescribed psychotropics*	*Learning disability* *Extremes of age*

PRE-RT: DE-ESCALATION

Continual risk assessment	*Passive intervention and watchful waiting*	*Identification of patient needs*
Self-control techniques	*Empathy*	*Distraction*
Avoidance of provocation	*Reassurance*	*Negotiation*
Respect patient space	*Respect and avoidance of shame*	*Reframing events for patient*
Management of environment	*Appropriate use of humour*	*Non-confrontational limit setting*

PRE-RT: ORAL MEDICINES

Non-psychotic illness or psychotropic naïve patient	**Psychotic illness**
Lorazepam or Promethazine	Risperidone or Olanzapine or Quetiapine (immediate-release) (With or without Lorazepam or Promethazine)
Allow at least 1 hour for response to oral. Repeat, if necessary. Consider combining sedative and antipsychotic treatment. Progress to RT if two doses fail, or sooner if patient or others at significant risk, or oral refused. Continue non-drug approaches.	

RT: INTRAMUSCULAR MEDICINES

Non-psychotic illness or psychotropic naïve patient	**Known history of psychotropic use**
Lorazepam or Promethazine	Olanzapine or Aripiprazole
Wait 30 minutes for response, Repeat if partial response.	Wait 30 minutes for response, Repeat if partial response.
If no response, wait a further 30 minutes. If still no response, seek medical advice.	If no response, wait a further 30 minutes. If still no response, seek medical advice.

Oral doses: Lorazepam <12 years: 0.5-1mg (Max 2mg/24 hours); >12 years: 0.5-2mg (max 4mg/24 hours). Promethazine 10+ years: 10-50mg (Max 50mg/24 hours). Quetiapine (immediate-release) >12 years 25-50mg / under 12 years 12.5-25mg. Max dose: as low as possible.	Risperidone 12-17 years: 2-10mg daily (Max 16mg/24 hours). Olanzapine 12-17 years: 2.5-5mg (Max 20mg/24 hours)	**IM doses:** Lorazepam <12 years (unlicensed): 0.5-1mg (Max 4mg/24 hours); >12 years: 0.5-2mg (Max 4mg/24 hours). Promethazine 12–17 years: 10–25 mg (Max 50mg/24 hours) Olanzapine (unlicensed <18 years) 2.5-10mg (Max 20mg/24 hours) Aripiprazole (unlicensed <18 years) 5.25mg (Max 3 injections in 24 hours)
Monitoring: After oral doses, monitor hourly for minimum 1 hour, then as clinically appropriate. After IM doses, monitor every 10 minutes for first hour, then every 30 minutes for next 3 hours at least, and until ambulatory, then as per guideline. Record monitoring on MEWS chart.		
Post review: Discuss in MDT. Review PRN. Document as DATIX, with full details, and on medical record. Undertake 72 hour review with patient.		