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<tr>
<th>Policy title</th>
<th>Rapid Tranquillisation Guidance</th>
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<tr>
<td>Policy reference</td>
<td>PHA03</td>
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<td>Policy category</td>
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</tr>
<tr>
<td>Relevant to</td>
<td>All clinical staff who deal with medication in the Trust.</td>
</tr>
<tr>
<td>Date published</td>
<td>January 2019</td>
</tr>
<tr>
<td>Implementation date</td>
<td>January 2019</td>
</tr>
<tr>
<td>Date last reviewed</td>
<td>December 2018</td>
</tr>
<tr>
<td>Next review date</td>
<td>December 2021</td>
</tr>
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<td>Accountable director</td>
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</tr>
<tr>
<td>Approved by (Group):</td>
<td>Drugs and Therapeutic Committee</td>
</tr>
<tr>
<td>Approved by (Committee):</td>
<td>Quality Committee</td>
</tr>
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**Document history**

<table>
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<tr>
<th>Date</th>
<th>Version</th>
<th>Summary of amendments</th>
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<tr>
<td>Nov 2014</td>
<td>8</td>
<td>Reviewed to align with 'Positive and Proactive Care: Reducing the need for restrictive interventions' (Department of Health, 2014). Max dose amendments to haloperidol.</td>
</tr>
<tr>
<td>Oct 2015</td>
<td>9</td>
<td>Updated as per the NICE guidance 2015.</td>
</tr>
<tr>
<td>Jan 2017</td>
<td>10</td>
<td>Monitoring requirement updated for seclusion. Sites of administration discussed</td>
</tr>
<tr>
<td>Jan 2019</td>
<td>11</td>
<td>Updates</td>
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**Membership of the policy development/review team**

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**DO NOT AMEND THIS DOCUMENT**

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1 Introduction

This guidance has been written in light of the following documents:

- NICE Clinical Guideline No. 82. Psychosis and schizophrenia in adults. Treatment and management. March 2014
- Royal College of Psychiatrists 2006. Consensus statement on high-dose antipsychotic medication

2 Aims and objectives

2.1.1 The aim of rapid tranquillisation is to quickly calm the severely agitated patient, in order to reduce the risk of imminent and serious violence to self or others, rather than treat the underlying psychiatric condition. The aim is not to induce sleep or unconsciousness; the patient should be sedated, but still able to participate in further assessment and treatment. This rapid tranquillisation guideline aims to support the management of agitation or aggression in patients when it is related to mental illness and occurs within a psychiatric inpatient setting. The guidance is not intended to guide the management of agitation or aggression associated or caused by an organic or physical illness. In those instances, treatment should be decided with consideration to the underlying condition and specialist advice sought where appropriate.

2.1.2 This document aims to ensure rapid tranquillisation is administered to patients in line with current NICE guidance and best practice recommendations. Rapid tranquillisation should be undertaken in accordance with the Mental Health Act Code of Practice (DH, 2008). This policy complies with the Code of Practice. It also takes into account 'Positive and Proactive Care: Reducing the need for restrictive interventions'(DH, 2014).

2.1.3 Rapid tranquillisation is the administration of medication by the parenteral route (intramuscular) if oral medication is not possible or appropriate or urgent sedation with medication is required.

2.1.4 There is a separate guideline for zuclopenthixol acetate (clopixol acuphase).
3 Scope of the policy

3.1 This guideline is aimed at all clinical, nursing and medical staff who are directly involved in the management of acutely disturbed patients and the administration of rapid tranquillisation. The clinical guidelines outline the short term management (72 hours) of disturbed (violent) behaviour in adult psychiatric inpatient settings. The guidance applies to all persons from the age of 18.

4 Duties and Responsibilities

The responsibilities of the following are shown at Appendix 1:

All clinical staff potentially involved in the rapid tranquillisation:
- Matrons
- Ward managers
- Unregistered nursing staff:
  - Qualified nurses:
  - Doctors
  - Consultants
  - Pharmacy staff

5 General Principles

5.1.1 Patients should only be treated with the following medicines after an assessment of risk and when it has been established that the risk of not doing so is greater than the risk of acute pharmacological treatment.\(^1\)

5.1.2 Intervention should take the form of talking to the patient in a calm manner and by being seen by the patient to be listening to their grievances. Rapid tranquillisation is a restrictive intervention. In line with ‘Positive and proactive care...’(DH, 2014) use of rapid tranquillisation should be a last resort. Those patients for whom rapid tranquillisation might be used should have comprehensive behavioural support plans, detailing the range of strategies for dealing with disturbed behaviour that may be used as less restrictive options. These should be followed.

5.1.3 Other non-pharmacological interventions should, where possible, should also be explored, for example increasing the level of observations of the patient, increasing the level of staffing, changing the patients setting; this may include transfer to a Psychiatric ICU.\(^1\)

5.1.4 If such medicines are prescribed and administered for other indications e.g. minor agitation or anxiety, where there is no/minimal aggression or violence, management does not fall under specifications outlined in this guidance this should not be regarded as rapid tranquillisation.\(^1\)

5.1.5 If a patient is acutely disturbed, the nurse in charge should assess the situation to determine whether medical assessment of the patient is required. If a psychiatrist is required to attend, it is vital that the attending psychiatrist obtains as much history as possible from the patient and other sources before medication is given, as the opportunity to make a diagnosis may be lost if the patient is sedated before an understanding of their mental state is reached. However the immediate safety of the patient and staff is of prime concern and if a doctor is not present, in an emergency it may be necessary to administer previously prescribed “prn” medication without the presence of a doctor. Should this situation arise, the patient’s doctor or duty doctor...
should be informed and requested to document the therapeutic goal under the
direction of an SPR/ST4-6 or consultant. Particularly avoid using “high dose”
antipsychotics as attend as soon as practical. Due consideration should be paid to
potential non-psychiatric causes for the disturbed behaviour (e.g. organic,
psychological, intoxication or withdrawal states).

5.1.6 In reaching a decision to use rapid tranquillisation, the senior nurse and doctor
should undertake a risk assessment of the situation, including the risks to the patient,
other patients, staff, and the environment.

5.1.7 The patient must be informed that medication is going to be given and must be given
the opportunity at any stage to accept oral medication voluntarily. All patients should
be given the opportunity to make an informed choice where at all possible.

5.1.8 The minimum effective dose of medication should be used and the maximum daily
dose specified and not inadvertently exceeded when combined with the patient’s
regular standard dose. The BNF maximum doses should only be exceeded in
extreme circumstances, and with the advice of a consultant (refer to appendix 2). The
maximum daily dose (including as required dose, the standard dose and dose of
rapid tranquillisation) should only be exceeded to achieve an agreed and high doses
increase the incidence and severity of adverse effects such as EPSEs, tachycardia,
postural hypotension, sedation and risk of seizures. The risk of QTc prolongation and
associated arrhythmias is also significantly increased with high dose antipsychotics,
and rapid dose escalation. “High dose” refers to:

- the use of a single antipsychotic above the maximum dose in the BNF or the
  manufacturer’s summary of product characteristics, OR
- use of two or more antipsychotics where each is within the maximum dose, but when
each is expressed as a percentage of their BNF maximum and then added together,
exceeds 100%)

5.1.9 If doses in excess of BNF limits are prescribed, it may be advisable for a doctor to be
present. Also see appendix 2. The electronic high dose antipsychotic therapy form
can be completed in electronic patient records under the ‘Medication’ tab.

5.1.10 Attention should be paid to the arrangements for review. If current BNF or SPC
doses are exceeded, it is important that frequent and intensive monitoring is carried
out of the patients’ airway, level of consciousness, pulse, blood pressure, respiratory
effort, temperature and hydration. Also see section 7, table 5. Patients willingness to
comply/permit physical parameters being monitored must be borne in mind when
prescribing and administering medicines for RT, especially IM.

5.1.11 The patient should be able to respond to communication throughout.

6 Pharmacological treatments

For additional information on properties and advisory notes for individual medicines used in
rapid tranquillisation refer to Appendix 3.

When deciding which medication to use, take into account:

- the service user’s preferences or advance statements and decisions
- pre-existing physical health problems
- possible intoxications
- previous response to these medicines, including adverse effects
- potential for interactions with other medicines
6.1 Prescribing medicines for RT

6.1.1 When prescribing 'as required' medicines as part of a strategy to de-escalate or prevent situations that may lead to violence and aggression, do not prescribe 'as required' medicines routinely or automatically on admission. A multidisciplinary team should develop and document an individualised pharmacological strategy for routine and 'as required' medication to calm, relax, tranquillise or sedate the patient who is at risk of violence and aggression as soon as possible after admission. All prescriptions for intramuscular RT medicines can be prescribed for a maximum of three days and then must be reviewed by the prescribing team. Before prescribing, consideration should be given to:-

- the service user's preferences or advance statements and decisions
- pre-existing physical health problems or pregnancy
- possible intoxication
- previous response to these medicines, including adverse effects
- potential for interactions with other medicines
- the total daily dose of medicines prescribed and administered.
6.1.2 All prescriptions for RT medicines should be tailored for the individual patient, include discussion with the patient if possible; consider their preferences, advance statements and decisions. Poly-prescribing within a class of medication (e.g. antipsychotics) should be avoided. Choice of antipsychotic in RT should be guided in part by any existing prescribed antipsychotics that the patient is taking. Consider past experiences with medication as this may influence the choice of medicine including previous response and adverse effects. There should be clarity about the rationale and circumstances in which ‘as required’ medicines may be used and these should be included in the care plan.

6.1.3 Although the aim of RT is to manage the immediate acute situation, and not treat the underlying condition, the provisional diagnosis may guide the prescribers’ choice of medication. For example if there is diagnostic uncertainty, then a clinician may prefer to avoid antipsychotic medication if possible, until the diagnosis is established. Intoxication and withdrawal from substances should also be considered prior to prescribing as these scenarios would impact on treatment choice.

6.1.4 When prescribing ‘as required’ psychotropics for RT, consider the regularly prescribed psychotropics and their total daily doses, recently administered regular medicines (and total daily doses), the differing bioavailabilities of the different routes. These may inadvertently result in the administration of greater than BNF maximum doses, which may put the patient at clinical risk. Only exceed the BNF maximum daily dose (including ‘as required’ dose, the standard dose and dose of rapid tranquillisation) if this is planned to achieve an agreed therapeutic goal, documented and carried out under the direction of a senior doctor. The electronic high dose antipsychotic therapy form in the electronic patient records (medication tab) should be completed.

6.1.5 The summary of product characteristics for haloperidol recommends a baseline electrocardiogram (ECG). If an ECG is not available, the prescriber should consider the risks and benefits of using this treatment and be able to justify their prescribing decision, because it may be considered an off-label use.

6.1.6 Consider any co-existing medical illnesses, pregnancy, and any regularly prescribed medication (including antipsychotics, clozapine, antidepressants, lithium, diuretics, medicines known to prolong the QT interval). Consider recent use of any illicit substances, as either prescribed or illicit medicines may interact either pharmacodynamically or pharmacokinetically with the proposed rapid tranquillisation medicines, leading to altered dose requirements and potential side effects. (Refer to section 8.2).

6.1.7 Where there is documentation in the patients’ care plans of their preference in medication to be used in the event of an acute episode of illness (an advance directive), this preference should be adhered to if clinically appropriate.

6.1.8 Oral (PO) and intramuscular (IM) medicines should be prescribed separately, and the abbreviation “oral (PO) / intramuscular (I/M)” should not be used, as parenteral and oral doses of medicines may not be bioequivalent. Oral and parenteral haloperidol are not bioequivalent. The intervals between ‘as required’ doses should be specified.

6.1.9 Caution with young male patients as they are prone to dystonic reactions. Consider an antimuscarinic.
6.2 Prescription review

6.2.1 All prescriptions for RT medicines can be prescribed for a maximum of three days (72 hours). Prescriptions must then be reviewed by the prescribing team. It should be reviewed more frequently if events are escalating and restrictive interventions are being planned or used. The review should be recorded and include:-

- clarification of target symptoms.
- likely timescale for response to medication.
- total daily dose of medication, prescribed and administered, including ‘as required’ medication.
- number of and reason for any missed doses.
- therapeutic response.
- emergence of unwanted effects.

6.2.2 If rapid tranquillisation is being used, a senior doctor should review all medication at least once a day. If ‘as required’ medication is to be continued, the rationale for its continuation should be included in the review. If ‘as required’ medication has not been used since last review, consider stopping it. Medical staff should communicate with nursing staff on any medicine management issues and ensure nurses are aware of the feedback threshold. When medication or doses are changed, this should be documented in electronic patient record including the rationale.

6.3 Administering medicines for RT

6.3.1 When selecting medicines to administer from prescriptions previously dated, review the clinical situation, and consider whether the prescribed medicine and dose is still appropriate. If the clinical scenario has changed (e.g. the patients’ physical health has altered or deteriorated, or the patient is now withdrawing form substance, or is intoxicated) nursing staff should call a doctor to review the patient and the prescription. The medicines below are given in addition to regular antipsychotics. If high doses of antipsychotics are given for one day or more then: review therapy and implement the monitoring guidance below. Please see appendix 2 for guidance.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Pre-treatment</th>
<th>Post administration of as required or rapid tranquillisation medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG and QTc interval</td>
<td>Baseline</td>
<td>Repeat a few days after dose increase</td>
</tr>
<tr>
<td>U &amp; Es and LFTs</td>
<td>Baseline</td>
<td>Monitor regularly if abnormal results, according to clinical need.</td>
</tr>
<tr>
<td>Vital signs (BP, pulse and temperature)</td>
<td>Monitor as rapid tranquillisation guidance when the medication was given by the oral or the IM route.</td>
<td>RT; follow the rapid tranquillisation monitoring guidance</td>
</tr>
<tr>
<td>Care plan</td>
<td>On commencement</td>
<td>Review</td>
</tr>
</tbody>
</table>

Physical observations should be documented in the NEWs chart.

If possible the patient and/or carers should be informed about the high dose treatment. A patient information leaflet (Choice and Medication link, handy factsheet: high doses of antipsychotics) should be offered from the trust intranet. Patients should be asked to report side effects they think they may experience.
6.4 Medicines for oral administration

6.4.1 Oral medication should be offered before parenteral (IM) treatment is administered, although

6.4.2 IM medication has a faster onset of action. Tables 1 and 2 list alternative options as oral medication regimens for adults and older adults:

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
<th>Comment</th>
<th>Place in therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam</td>
<td>1-2mg</td>
<td>Consider avoiding in patients tolerant to benzodiazepines.*</td>
<td>Preferred first line option.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The maximum BNF dose is 4mg/day in adults, at times doses higher than this may be required.</td>
<td></td>
</tr>
<tr>
<td>Risperidone</td>
<td>1-2mg</td>
<td>May be given with or without Lorazepam</td>
<td></td>
</tr>
<tr>
<td>Olanzapine</td>
<td>10mg</td>
<td>May be given with or without Lorazepam</td>
<td></td>
</tr>
<tr>
<td>Haloperidol</td>
<td>5-10mg</td>
<td>May be given with or without lorazepam. The maximum daily dose is 20mg/day.</td>
<td>Avoid use as monotherapy where possible, due to the high incidence of EPSEs.</td>
</tr>
<tr>
<td>Promethazine</td>
<td>25-50mg</td>
<td>The maximum dose of promethazine is 100mg over 24 hours.</td>
<td>An option for patients tolerant to benzodiazepines.</td>
</tr>
</tbody>
</table>

There should be a minimum interval of 45 – 60 minutes if a dose is repeated. If promethazine is given, the interval should be a minimum of sixty minutes.

*for further details on the management of benzodiazepine tolerant patients refer to section 8.1. The combination of lorazepam and promethazine is not a recommended option.

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<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
<th>Comment</th>
<th>Place in therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam (first line option)</td>
<td>250 micrograms -1mg</td>
<td>Consider avoiding in patients tolerant to benzodiazepines*. The maximum BNF dose is 2mg/day. Higher doses higher may be required.</td>
<td>Preferred first line option. Also consider avoiding in patients tolerant to benzodiazepines*.</td>
</tr>
<tr>
<td>Risperidone</td>
<td>500 micrograms-1mg</td>
<td>May be given with or without lorazepam.</td>
<td>Antipsychotics for rapid tranquillisation should only be prescribed to patients with dementia or a history of</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>2.5-5mg</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloperidol</td>
<td>500 micrograms-2.5mg</td>
<td>May be given with or without lorazepam. Cerebrovascular events after careful consideration, where lorazepam alone is insufficient / inappropriate. Avoid haloperidol as monotherapy where possible, due to the high incidence of EPSEs. Haloperidol: up to a maximum of 5 mg daily. Doses above 5 mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk.</td>
</tr>
<tr>
<td>Promethazine</td>
<td>25-50mg</td>
<td>The maximum dose of promethazine is 50mg over 24 hours. An option for patients tolerant to benzodiazepines.</td>
</tr>
</tbody>
</table>

There is a minimum interval of 60 minutes if a dose is repeated.

"for further details on the management of benzodiazepine tolerant patients refer to section 8.1. The combination of lorazepam and promethazine is not a recommended option.

6.5 **Medicines for Intramuscular Administration**

6.5.1 If oral medication is repetitively refused, the decision to forcibly medicate a patient will be taken jointly by medical and nursing staff. The following steps are recommended as parenteral (IM) medication regimes for patients who have not been adequately settled by non-medication measures or oral medication, or who are refusing oral medication.

6.5.2 The first line option in adults and older adults is intramuscular lorazepam monotherapy.

6.5.3 When there is insufficient information to guide the choice of medication or the patient has not taken antipsychotic medication before, use intramuscular lorazepam.

6.5.4 If necessary, intramuscular haloperidol and intramuscular promethazine may be considered as an alternative.

6.5.5 The combination of lorazepam and promethazine is not a recommended option.

6.5.6 The combination of haloperidol and lorazepam is not a recommended option in the NICE guidance and is to be phased out.
<table>
<thead>
<tr>
<th>Medicines</th>
<th>Dose</th>
<th>Comment</th>
<th>Place in therapy</th>
</tr>
</thead>
</table>
| Lorazepam (first line option) NICE recommended | 2mg | Repeat after 30 minutes if there is partial response, or give orally. The maximum BNF is 4mg/day, at times doses higher than this may be required. For further details refer to Appendix 4. If there is no response to intramuscular lorazepam, intramuscular haloperidol combined with intramuscular promethazine should be considered. | NICE recommended:- Consider as a first line option:-  
- where there is inadequate information to guide choice of medication or the patient has not taken antipsychotic medication before.  
- if there is evidence of cardiovascular disease.  
- Avoid in patients tolerant to benzodiazepines*. |
| Haloperidol and Promethazine NICE recommended | 5mg / 25-50mg | Repeat after 60 minutes if there is a partial response. Maximum of 20mg haloperidol IM over 24 hours. The maximum dose of promethazine is 100mg over 24 hours. If there is no response to intramuscular haloperidol combined with intramuscular promethazine, intramuscular lorazepam should be considered if not already used during the episode. If intramuscular lorazepam has already been used, an urgent team meeting to carry out a review should be convened and seek a second opinion if needed. For further details refer to Appendix 5. | Lorazepam injection is the first line option. Haloperidol/promethazine should be considered where the patient history is known and considered clinically appropriate to administer antipsychotic. Avoid the combination where there is a known risk of EPSEs. The combination should be avoided if there is evidence of cardiovascular disease and intramuscular lorazepam should be used instead. |
| Haloperidol and Lorazepam | 5mg 2mg | Repeat after 30 minutes if necessary. Maximum of 20mg haloperidol IM over 24 hours. | The use of haloperidol should be avoided where there is a known risk of EPSEs. The combination should be avoided if there is evidence of cardiovascular disease and intramuscular lorazepam should be used instead. |
Aripiprazole and Lorazepam

<table>
<thead>
<tr>
<th>Medicines</th>
<th>Dose</th>
<th>Comment</th>
<th>Place in therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole 9.75mg</td>
<td>Lorazepam 2mg</td>
<td>A second injection of aripiprazole 5.25 – 9.75mg may be given two hours later. A maximum of three injections may be administered over a 24 hour period (30mg/day via any route). This may be an alternative in patients who experience EPSEs with haloperidol.</td>
<td></td>
</tr>
<tr>
<td>Promethazine 25-50mg</td>
<td></td>
<td>Repeat after 60 minutes if there is partial response. The maximum dose of promethazine is 100mg over 24 hours. An option for patients tolerant to benzodiazepines.</td>
<td></td>
</tr>
<tr>
<td>NB: The combination of lorazepam and promethazine is not a recommended option.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: IM regimens for OLDER ADULTS (These are alternative options)\(^1,4,5,37\)

<table>
<thead>
<tr>
<th>Medicines</th>
<th>Dose</th>
<th>Comment</th>
<th>Place in therapy</th>
</tr>
</thead>
</table>
| Lorazepam (first line option) 250micrograms | Lorazepam 1mg | Repeat after 1 hour if necessary, or give orally. Seek advice from senior colleagues if two or more doses are required or ≥2mg lorazepam. The maximum BNF dose is 2mg/day, at times doses higher than this may be required. For further details refer to Appendix 4. | Preferred first line option. NICE approved. Consider as a first line option:-
  - where there is inadequate information to guide choice of medication or the patient has not taken antipsychotic medication before.
  - if there is evidence of cardiovascular disease.
  - Avoid in patients tolerant to benzodiazepines*. |
<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Instructions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloperidol and Promethazine (NICE approved)</td>
<td>2.5mg/12.5-25mg</td>
<td>Repeat after 60 minutes if there is a partial response. Haloperidol: up to a maximum of 5 mg daily. Doses above 5 mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk. The maximum dose of promethazine is 50mg over 24 hours. If there is no response to intramuscular haloperidol combined with intramuscular promethazine, intramuscular lorazepam should be considered if not already used during the episode. If intramuscular lorazepam has already been used, an urgent team meeting to carry out a review should be convened and seek a second opinion if needed. For further details refer to Appendix 5.</td>
<td>Lorazepam injection is the first line option. Haloperidol/promethazine should be considered where the patient history is known and considered clinically appropriate to administer antipsychotic. Avoid the combination where there is a known risk of EPSEs. The combination should be avoided if there is evidence of cardiovascular disease and intramuscular lorazepam should be used instead.</td>
</tr>
<tr>
<td>Promethazine</td>
<td>12.5-25mg</td>
<td>Repeat after sixty minutes if necessary. The maximum dose of promethazine is 50mg over 24 hours.</td>
<td>An option for patients tolerant to benzodiazepines.</td>
</tr>
<tr>
<td>Aripiprazole and Lorazepam</td>
<td>5.25mg 250 micrograms – 1mg</td>
<td>A second injection of aripiprazole 5.25 – 9.75mg may be given two hours later. A maximum of three injections may be administered over a 24 hour period, with a maximum cumulative daily dose of 15mg, including oral.</td>
<td>This may be an alternative in patients who experience EPSEs with haloperidol. There are no trials using the IM in the elderly. For patients with a known diagnosis of dementia or a history of cerebrovascular events antipsychotics should only be prescribed for rapid tranquillisation after careful consideration, and where lorazepam alone is insufficient/inappropriate.</td>
</tr>
</tbody>
</table>

Rapid Tranquillisation Guidelines_PHA03_January 2019
Haloperidol and Lorazepam

2.5mg
250 micrograms-1mg

Do not repeat within ONE hour of administering.

Haloperidol: up to a maximum of 5 mg daily. Doses above 5 mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk.

The use of haloperidol should be avoided where there is a known risk of EPSEs.

The combination should be avoided if there is evidence of cardiovascular disease and intramuscular lorazepam should be used instead.

For patients with a known diagnosis of dementia or a history of cerebrovascular events antipsychotics should only be prescribed for rapid tranquillisation after careful consideration, and where lorazepam alone is insufficient/inappropriate.

*for further details on the management of benzodiazepine tolerant patients refer to section 8.1. NB: The combination of lorazepam and promethazine is not a recommended option*.

6.5.7 The prescribing team should always be informed as soon as possible after the IM administration of RT. If further doses of IM RT is required, the team doctor (or if unavailable the duty doctor) should be called to review the patient and the overall treatment plan. For older adults, IM administration should be discussed with the medical team first.

6.5.8 At times, it may be clinically appropriate to give total daily doses exceeding the BNF maximum or a combined daily dose greater than 100% of more than one antipsychotic. In such circumstances advice should be sought from senior colleagues (SPR/ST4-6 or consultant). A risk-benefit analysis should be recorded in the notes, and the rationale should be recorded in the care plan¹. The high dose antipsychotic therapy form in the electronic patient records (medication tab) should be completed.

6.5.9 Studies supports the recommendation that in situations where lorazepam cannot be used (e.g. where benzodiazepine are contra-indicated, or lorazepam supplies are unavailable), promethazine may be used, alone or in combination with haloperidol.

6.5.10

Table 5: Sites of administration of intramuscular medication.

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Deltoid</th>
<th>Vastus lateralis</th>
<th>Dorsogluteal</th>
<th>Ventrogluteal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>√.</td>
<td>√.</td>
<td>√.</td>
<td>√.</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>No specified site. Discretion of the clinician.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lorazepam</td>
<td>No specified site. Discretion of the clinician.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promethazine</td>
<td>No specified site. Discretion of the clinician.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procyclidine</td>
<td>No specified site. Discretion of the clinician.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above information has been reported by the pharmaceutical companies from their data.

Avoidance of prone restraint is sufficient reason for the use of an alternative injection site.

If there is a good clinical reason for using a site less routinely used e.g. the amount of subcutaneous (fatty tissue) is too great for the needle to deposit the medication into the
muscle or the patient chooses not to have the injection in the clinically preferred site, a full discussion including a risk assessment should take place. The discussion should involve the consultant psychiatrist, the prescriber (if not the consultant) and the administering nurse and patient (if possible). This discussion and its conclusion should then be fully recorded in the patient’s electronic patient records. The member of staff must have completed the relevant training and supervised practice to equip them to administer in the alternative site safely e.g. the deltoid site.

6.6 Intravenous administration

In view of the safety considerations and the actual practical considerations of restraint and administration of boluses, intravenous (IV) rapid tranquillisation is not recommended. The IV route should not be used in the Trust. It may rarely be considered in the acute medical trust in conjunction with the anaesthetist. Lorazepam is licensed to be administered IV\(^6\). The other medicines listed in this guidance are not.

6.7 Resuscitation equipment

6.7.1 RT should only occur with access to resuscitation equipment including:

- An automatic external defibrillator, a bag valve mask, oxygen, cannulas, intravenous fluids, suction and first-line resuscitation medicines. The resuscitation council advises the use of adrenaline in advanced life support\(^7\). Adrenaline IV 1 in 10, 000 syringes are included in the trust emergency medicine bags.

- Maintain equipment and check it every week.
6.7.2 Staff trained in immediate life support and a doctor trained to use resuscitation equipment should be immediately available to attend an emergency if restrictive interventions might be use.

6.8 Other medication

6.8.1 Anticholinergics: If IM haloperidol is used procyclidine 5-10mg IM/IV) should be immediately available to reduce the risk of dystonia. When using anticholinergic medication, attention should be paid to the total anticholinergic effect of all medicines being used.

6.8.2 Flumazenil should be given if respiratory rate drops below 10/min due to benzodiazepine administration. Repeated doses may be required as its duration of action is shorter than benzodiazepines. Flumazenil is best avoided in epileptic patients – start mechanical ventilation instead. Flumazenil must be available and easily accessible in all sites where the benzodiazepine (i.e. lorazepam) injection is stored. See Appendix 7.

6.8.3 Zuclopenthixol acetate (Clopixol Acuphase®) -refer to the Trust’s prescribing guidelines on zuclopenthixol acetate (Clopixol Acuphase®).

6.8.4 Diazepam should not be administered IM due to its erratic pattern of absorption.

6.8.5 Midazolam: There is insufficient UK evidence regarding the safety of IM midazolam alone or in combination with IM haloperidol in rapid tranquillisation, to recommend its routine use. Midazolam has not been approved for inclusion in the Trust formulary.

7 Monitoring requirements

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

7.1.2 The level of observation required should be risk assessed (all patients given IM rapid tranquillisation must be placed on Intermittent observation for at least 2 hours). The risk assessment, level of observation and the justification for this must all be recorded in EPR.

7.1.3 Vital signs and level of consciousness (as per the table below) must be monitored and recorded regularly, on MEWS monitoring chart and EPR, until the patient becomes active again. Refusals should also be documented on the monitoring charts and electronic patient record. Difficulties obtaining observations should be discussed with the wider clinical team. If a patient refuses vital sign monitoring, continue to attempt monitoring throughout the timeframe outlined in Table 5, or longer if clinically concerned. “Baseline” parameters refer to those most recently recorded prior to the administration of the RT medicines. Judgment of the patients’ relative level of activity/inactivity should be assessed on a clinical assessment, on a case by case basis.
### Table 5: Vital signs monitoring after RT\(^1,2\)

<table>
<thead>
<tr>
<th>Route of administration</th>
<th>Parameters</th>
<th>Frequency of measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral only</td>
<td>Blood pressure, Pulse, Temperature, Respiratory rate, Hydration, Blood oxygen saturation (using pulse oximeters), level of consciousness and side effects</td>
<td>If patient is inactive, or has any physical health or drug and alcohol complications, nursing staff must use their clinical judgment on the level of monitoring required, taking account of risk factors outlined in sections 5 of this document.</td>
</tr>
<tr>
<td>Intramuscular</td>
<td></td>
<td>Every hour until no further concerns about their physical health status. If any of the following criteria apply, monitoring should be carried out every fifteen minutes: – BNF maximum dose has been exceeded or the patient; – Appears to be asleep or sedated; – Has taken illicit drugs or alcohol; – Has pre-existing physical health problem or relevant concurrent medicine; – Has experienced any harm as a result any restrictive intervention; – If an older adults’ mobility is affected, or they are at high risk of falls. More frequent monitoring may be instigated following the clinical judgment of the nurse or doctor (by appropriately trained staff) and discussion with the team. This should be recorded in the care plan. Due to the onset of action of aripiprazole injection (two hours) or promethazine injection (one to two hours), monitoring should continue for a minimum of four hours following the injection.</td>
</tr>
<tr>
<td>Seclusion.</td>
<td>When a patient is in seclusion a nurse must constantly observe the patient using either direct observation or audio-visual equipment. At a minimum, every hour the patient’s respiratory rate and level of consciousness must be monitored through the window of the seclusion room. These observations must be documented. Staff must enter the seclusion room once every two hours to perform a seclusion review to assess the patient and decide on whether continued seclusion is needed. Staff must attempt to make physical observations (heart rate, temperature, oxygen saturations, blood pressure and level of consciousness) at each seclusion review. The nurse responsible for directly observing the patient throughout the period of seclusion is responsible for initiating an earlier than planned review if any concerns about the patient’s physical welfare arise. If any urgent concerns about a patient’s physical health arise then seclusion must be terminated immediately.</td>
<td></td>
</tr>
<tr>
<td>Patient who refuse vital sign monitoring.</td>
<td>If a patient refuses vital sign monitoring the refusal must be documented. At a minimum the patient’s respiratory rate and level of consciousness should be monitored and documented at the minimum specified frequency.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluid balance &amp; electrolyte balance should be monitored as clinically indicated and documented.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ECG monitoring – an ECG should be done when the patient is calm.</td>
<td></td>
</tr>
</tbody>
</table>
If a patient is unconscious, the airway must be protected. Continuous pulse oximetry is recommended to monitor oxygen levels. The level of alertness and respiratory effort should be assessed by attempting to wake a sleeping patient. (If the patient is breathing normally, observe respiratory effort whilst asleep.) The vital sign monitoring schedule recommended in these guidelines must also be followed. Unconscious patients must not be secluded and must be observed by an appropriately trained member of staff at all times.

If respiratory rate drops below 10/min or oxygen saturation <90%, consider supporting respiration. Call the duty doctor or the ward doctor immediately. Flumazenil injection should be readily available for benzodiazepine induced respiratory depression (<10/min) — see page 31 of this policy. Flumazenil injection is available on each ward in the emergency medicine bag. When giving IM haloperidol, consider an antimuscarinic (e.g. IM procyclidine) which should be available. Procyclidine injection is available on each ward in the emergency medicine bag.

7.1.4 If verbal responsiveness is lost as a consequence of medication, the team or on-call doctor should be called and they must follow the emergency life support procedure.

7.1.5 Baseline ECG is recommended prior to treatment with haloperidol, especially in the elderly and those with a positive personal or family history of cardiac disease or abnormal findings on cardiac clinical examination, prior to treatment with IM haloperidol[3]. If necessary, the ECG may be offered when the patient is calm. In all patients prescribed antipsychotics, the following should also be considered:

- New admission[12]
- High doses[12] or parenteral (IM) medication were given.
- When used in combination with any other medicines known to prolong the QTc interval[12] (see a current copy of the Maudsley prescribing guidelines and the specification of product characteristics).
- If the baseline ECG was abnormal, additional risk factor[12] or a baseline ECG was not available.
- If there was any clinical indication to repeat the ECG.

7.1.6 Whilst on haloperidol if the QT is prolonged, the dose should be reduced. Haloperidol should be discontinued if the QTc exceeds 500ms[3].

7.1.7 Periodic electrolyte monitoring is recommended, especially for patients taking diuretics, occurring intercurrent illness[3]. Consider checking electrolytes if not checked within the last three to four days. Check for signs of dehydration e.g. thirst, dry mouth, lips and a reduction in urine output[3].

7.2 Equipment[1,7]:

The following equipment should be available in all settings where RT medicines may be given (are stored):

- Pulse oximeters.
- ECG machines should be available at all sites where IM haloperidol may be given.
- A grab bag, automatic external defibrillator and oxygen must be available.
and easily accessible. This equipment should be maintained and checked in accordance with the Trust Cardiopulmonary Resuscitation (CPR) Policy and staff should be familiar with their use.

First-line resuscitation medicines (where applicable), including flumazenil and adrenaline 1 in 10,000, should be readily available (see emergency bag). Procyclidine injection should also be available.

8 Risks and complications with rapid tranquillisation

There are specific risks associated with the different classes of medication that are used in rapid tranquillisation as detailed below, staff should be aware of these. The specific properties of the individual medicines should be taken into consideration, when combinations are used, risks may be compounded.

<table>
<thead>
<tr>
<th>Medicines</th>
<th>Specific risks of medicines&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzodiazepines</td>
<td>Loss of consciousness</td>
</tr>
<tr>
<td></td>
<td>Respiratory depression or arrest</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular collapse (in patients receiving both clozapine and benzodiazepines)</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Loss of consciousness</td>
</tr>
<tr>
<td></td>
<td>Excessive sedation.</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular and respiratory complications and collapse</td>
</tr>
<tr>
<td></td>
<td>Subjective experience of restlessness (akathisia)</td>
</tr>
<tr>
<td></td>
<td>Acute muscular rigidity (dystonia)</td>
</tr>
<tr>
<td></td>
<td>Involuntary movements (dyskinesia)</td>
</tr>
<tr>
<td></td>
<td>Neuroleptic malignant syndrome (NMS)</td>
</tr>
<tr>
<td></td>
<td>Seizures.</td>
</tr>
</tbody>
</table>

---

<sup>1</sup> Other specific risks may occur with the use of rapid tranquillisation.
<table>
<thead>
<tr>
<th>Complication</th>
<th>Symptoms/signs</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute dystonia</td>
<td>Severe painful muscular stiffness and/or oculogyric crisis.</td>
<td>Procyclidine 5-10 mg i.m. Repeat after twenty minutes if necessary. If not severe, syrup may be given.</td>
</tr>
<tr>
<td>Hypotension</td>
<td>Fall in blood pressure (30mmHg orthostatic drop or &lt;50mmHg diastolic).</td>
<td>Lie patient flat and raise legs. Tilt bed head down. Monitor closely. Seek medical advice.</td>
</tr>
<tr>
<td>Neuroleptic Malignant Syndrome</td>
<td>Increasing temperature, fluctuating blood pressure, tachycardia, incontinence, retention, sweating, muscular rigidity, confusion or altered consciousness.</td>
<td>NMS is a potentially serious or fatal side effect. Call the duty doctor or the ward doctor immediately. Withhold antipsychotics. Monitor closely (temperature, pulse, blood pressure). Send bloods for the creatine phosphokinase level. Liaise with the general medical team.</td>
</tr>
<tr>
<td>Respiratory depression</td>
<td>Reducing respiratory rate, reducing consciousness.</td>
<td>Call an ambulance via 999. Call the duty doctor or the ward doctor immediately. Bring the resuscitation equipment. Give oxygen, if patient able to sit upright, this will assist breathing. If unconscious, position in “recovery position” and protect the airway. Give oxygen. If respiratory rate drops below 10/minute or oxygen saturation &lt;90% consider manual ventilation after inserting an airway if necessary. If patient received benzodiazepines, use flumazenil. Continue to monitor after respiratory rate returns to normal. Flumazenil has a short duration of action, so repeated doses may be required as the duration of action is shorter than many benzodiazepines. (May cause seizures in benzodiazepine dependent patients, in epileptic patients/those with head injuries – use mechanical ventilation instead). How to give flumazenil: see appendix 7.</td>
</tr>
</tbody>
</table>

Table 8: Management of side effects and complications

1 NMS is a potentially serious or fatal side effect. Call the duty doctor or the ward doctor immediately. Withhold antipsychotics. Monitor closely (temperature, pulse, blood pressure). Send bloods for the creatine phosphokinase level. Liaise with the general medical team.
8.1 **Circumstances for special care**

8.1.1 Extra care should be taken when implementing rapid tranquillisation in the following circumstances:

- The presence of congenital prolonged QTc syndromes.
- The concurrent prescription or use of other medication that lengthens QTc intervals both directly and indirectly.
- The presence of certain disorders affecting metabolism, such as hypo- and hyperthermia, stress and extreme emotions and extreme physical exertion.
- Use benzodiazepines in preference to antipsychotics in patients with cardiac disease, as these are safer (do not affect cardiac rhythm), but beware of accumulation. Avoid benzodiazepines in patients who are physically unwell, delirious or who have significant respiratory impairment. Consider avoiding in patients who have a significant tolerance to benzodiazepines.
8.2 **Concurrent substance or alcohol misuse**¹

8.2.1 The patients’ medium term and particularly very recent use of non-prescribed medicines medication (licit and illicit) and alcohol should be carefully considered when selecting which medicines to prescribe for RT, and when selecting which of the medicines to administer in RT. It should be remembered that patients’ situations change. Prescriptions made at one point in time for an individual patient, may not be applicable at a later date if a patient has subsequently misused substances (refer to section 6.3). Effort should be made to try and clarify what substances the patient has misused.

8.2.2 Although benzodiazepines are the preferred first line option, this will not be appropriate in patient who are tolerant to benzodiazepines, or who are thought to have recently misused benzodiazepines or other respiratory depressants (e.g. barbiturates, and heavy alcohol use). In patients who are thought to have misused amphetamines and related substances (e.g. ecstasy) it would be advisable to avoid the use of haloperidol and potentially other antipsychotics, due to their potential to affect cardiac rhythm.

8.3 **Head injury**¹,²

8.3.1 The choice of medication to reduce aggression is often guided by the underlying hypothesised mechanism of action or by associated symptoms e.g. antipsychotics in those with paranoid misinterpretation. The use of medicines should be considered in two categories: the treatment of the underlying disorder (e.g. depression) and the treatment of aggression. A partial response should lead to consideration of adjunctive treatment with a medicine that has a different mechanism of action.

8.3.2 Caution should be exercised when using lorazepam in patients with pre-existing brain damage or impulse control problems in case of a paradoxical effect.

8.3.3 Patients are particularly vulnerable to side effects. For example, haloperidol, given to manage agitation, can hinder recovery, and its side effects include motor restlessness (akathisia) and increased confusion. Although haloperidol may be quite appropriate for the management of acute agitation or aggression if the problem persists for more than one or two days, then “as required” medicines should be stopped. A medical review of the patient will be needed before alternative treatment is started.

8.3.4 Atypical antipsychotics with sedative properties, for example olanzapine or quetiapine, are recommended where there is associated psychosis, fear, or suspiciousness, or if urgent sedation is needed. Even newer antipsychotics probably carry a risk of tardive dyskinesia, if prescribed very long term.

8.3.5 Medicines with the fewest side effects are perhaps best, and regular monitoring to titrate treatment to the minimum effective dose is necessary. Longer-term management is beyond the scope of this guidance.
8.4 Older adults

8.4.1 When selecting a dose for older adults, their age should not be the only factor to decide on a regimen. The physical ‘fitness’ of the individual must be considered. Physical causes of disturbed behaviour e.g. chest infection, urinary tract infection, constipation should be considered.

8.4.2 Frail older adults may have poor muscle perfusion which may produce erratic absorption of IM medicines into the blood stream and more body fat can result in a longer duration of action. Renal and hepatic function may be reduced.

8.4.3 Particular care should be given to co-existing medical states and prescribed medication, the risk of accumulation of sedatives and the possibility of delirium.

8.4.4 Both antipsychotics and benzodiazepines may affect mobility and increase the risk of falls. Patients should be monitored for signs of impaired mobility and unsteadiness.

8.4.5 The use of typical antipsychotics (e.g. haloperidol) should be avoided where possible due to the high incidence of extrapyramidal symptoms.

8.4.6 The use of the intramuscular route should be discussed with the consultant or SPR/ST4-6.

8.5 Dementia

8.5.1 Antipsychotics for rapid tranquillisation should only be prescribed to patients with dementia or a history of cerebrovascular events after careful consideration, where lorazepam alone is insufficient or inappropriate.

8.5.2 The decision to prescribe antipsychotics for rapid tranquillisation should be documented in the notes, with the rational for making the decision clearly recorded.

8.5.3 Of the different symptoms that constitute behavioural and psychological symptoms in dementia, only physical aggression has been shown to respond to medication.

8.5.4 NICE states that once certain conditions have been met, “People with Alzheimer’s disease, vascular dementia, mixed dementias or DLB with severe non-cognitive symptoms (psychosis and/or agitated behaviour causing significant distress) may be offered treatment with an antipsychotic medicine.”

8.6 Pregnancy

8.6.1 According to NICE guidelines a pregnant woman requiring rapid tranquillisation should be treated according to guidelines on the short-term management of disturbed behaviour, but:

- A pregnant woman should not be secluded following rapid tranquillisation.
- The restraint procedures should be adapted to avoid possible harm to the foetus.
- When choosing an agent for rapid tranquillisation, consider an antipsychotic or a benzodiazepine with a short half-life. If an antipsychotic is used, it should be at the minimum effective dose because of neonatal extrapyramidal symptoms. If a benzodiazepine is used, the risks of floppy baby syndrome should be taken into account if continued use. The acute use of short-acting benzodiazepines such as lorazepam is unlikely to be harmful. Haloperidol is used as an option in the treatment of psychosis. Promethazine is reported as unlikely to be harmful although supporting safety data is scare.
• The woman’s care during the perinatal period should be managed in close collaboration with a paediatrician and an anaesthetist.

8.7 Ethnic origin

8.7.1 NICE guidelines concluded; “There is insufficient evidence to assess whether African Caribbean service users are given rapid tranquillisation more often than service users from other ethnic backgrounds” and “it is not possible, (because evidence from studies is conflicting), to ascertain if different cultural groups exhibit higher or lower levels of disturbed /violent behaviour than other groups”.

8.7.2 Each person should be dealt with on an individual basis and their response to treatment. It remains the responsibility of all staff to ensure that if concerns emerge regarding the inappropriate use of medication, including rapid tranquillisation, to any patient, that these concerns are immediately passed on to Trust management for appropriate action.

8.8 Cardiovascular disease

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

8.8.2 Aripiprazole is considered to have no effect on the QTc. Therefore the combination of intramuscular lorazepam and aripiprazole could be considered if necessary.

9 Feedback and documentation

9.1.1 The reason for prescribing any medication for the acutely disturbed patient should be documented in the medical notes, as well as the working diagnosis.

9.1.2 Any medication administered, the circumstances and the patients’ response should be recorded.

9.1.3 Nursing and medical staff should always have a short feedback session following emergency restraint and sedation.

9.1.4 The administration of ‘as required’ medicines should be monitored in handover meetings and changes in use fed back to the ward doctor and at ward rounds.

9.1.5 After the treatment of an acute disturbance the patient should be debriefed. This should be documented in their notes, and they should be offered the opportunity to write an account in their notes.

10 Reporting RT incidents

10.1.1 All episodes of restraint and administration of medicines for Rapid Tranquillisation must be reported via the trust electronic incident reporting system (Datix).
11 Medico-legal considerations

11.1 Unlicensed use of medicines

11.1.1 The Medicines and Healthcare Products Regulatory Agency (MHRA) recommends the use of licensed medicines over unlicensed medicines whenever such alternatives are available. The prescriber’s responsibility and potential liability are increased when prescribing both licensed medication for unlicensed indications or beyond maximum licensed doses (“off-label”), as well as when prescribing unlicensed medicines¹.

11.1.2 The NICE guidance 2015 recommends some medicines for indications for which they do not have a UK marketing authorisation at the date of consultation, if there is good evidence to support that use. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The service user (or those with authority to give consent on their behalf) should provide informed consent, which should be documented. See the General Medical Council’s Prescribing guidance: prescribing unlicensed medicines for further information².
11.2 Tranquillisation and the Mental Health Act

11.2.1 When it is necessary to use restraint in order to administer medication to an unwilling patient, there must be a legal authority to treat the patient without consent and it should not be used unless there is such legal authority (whether under the Mental Health Act, the Mental Capacity Act 2005 (MCA) or otherwise).

11.2.2 Restraint may not be used to treat an informal patient who has the capacity to refuse treatment and who has done so.

11.2.3 The use of restraint to administer treatment in non-emergency circumstances should be avoided wherever possible, but may sometimes be necessary, especially if not administering the treatment would increase the likelihood of an emergency situation occurring.

11.2.4 The decision to use restraint should first be discussed with the clinical team and must be recorded in the patient’s electronic records (EPR), along with the justification for it. An incident form must also be completed.

11.3 Restraint as an indicator of the need for detention under the Act

11.3.1 The use of restrictive interventions must take place only under appropriate legal authority. Use of restraint implies that the person is not consenting to treatment.

11.3.2 Informal patients should not be restrained. If a patient is not detained, but restraint in any form has been deemed necessary (whether as an emergency or as part of the patient’s treatment plan), immediate consideration should be given to whether formal detention under the Act is appropriate (subject to the criteria being met).

11.3.3 Where a patient is deprived of liberty in a hospital for mental health treatment under the deprivation of liberty safeguards in the MCA, the use of restraint may well indicate that the patient objects to treatment or to being in hospital. The patient is therefore no longer eligible to be held under those safeguards. If so, consideration will need to be given to whether the patient can and should be detained under the Mental Health Act instead.

12 Dissemination and implementation arrangements

This document will be circulated to all managers who will be required to cascade the information to members of their teams. It will be available to all staff via the Trust intranet.

13 Training requirements

For training requirements please refer to the mandatory training policy or contact the Learning and Development Department.
14 Monitoring and audit arrangements

<table>
<thead>
<tr>
<th>Elements to be monitored</th>
<th>Lead</th>
<th>How trust will monitor compliance</th>
<th>Frequency</th>
<th>Reporting arrangements</th>
<th>Acting on recommendations and Lead(s)</th>
<th>Change in practice and lessons to be shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescribing</td>
<td>Chief Pharmacist</td>
<td>Audit</td>
<td>Annual</td>
<td>DTC</td>
<td>Required actions will be identified and completed in a specified timeframe</td>
<td>Required changes to practice will be identified and actioned within a specific timeframe. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.</td>
</tr>
<tr>
<td>Post RT monitoring</td>
<td>Chief Pharmacist</td>
<td>Audit</td>
<td>Annual</td>
<td>DTC</td>
<td>Required actions will be identified and completed in a specified timeframe</td>
<td>Required changes to practice will be identified and actioned within a specific timeframe. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.</td>
</tr>
<tr>
<td>Administration of RT</td>
<td>Chief Pharmacist</td>
<td>Datix incident reports</td>
<td>Bi monthly</td>
<td>DTC</td>
<td>Required actions will be identified and completed in a specified timeframe</td>
<td>Required changes to practice will be identified and actioned within a specific timeframe. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.</td>
</tr>
</tbody>
</table>

15 Review of the policy

The implementation of this policy will be subject to audit on the inpatient wards. This document will be reviewed in 3 years.

16 References


17. Huf G et al. Rapid tranquillisation in psychiatric emergency settings in Brazil: pragmatic randomised controlled trial of intramuscular haloperidol


26. Devonshire Partnership NHS Trust. Protocol for prescribing and administration of injectable drugs for rapid tranquillisation (RT), physical health assessment and monitoring, including prescribing guidelines on the drugs to be used for RT. May 2012.


29. Shah N. (Nisha.shah@candi.nhs.uk). Rapid tranquillisation policy. Personal communication. E-mail to A.Coker (audrey.coker@candi.nhs.uk). 21 January 2013.
31. Code of Practice; Mental Capacity Act 2005, Section 5.
33. https://www.medicines.org.uk/emc/medicine/23005

17 Associated documents
- Guidance for the use of zuclopenthixol acetate (clopixol acuphase) in adults policy.
- Trust Prevention and management of violence and aggression policy.
- Trust Seclusion policy.
- Trust Observation policy.
## Appendix 1: Individual Group and Responsibilities

<table>
<thead>
<tr>
<th>Individual group</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>All clinical staff potentially involved in the rapid</td>
<td>Should familiarise themselves with this policy, and should be suitably trained and competent to carry out their professional duties.</td>
</tr>
<tr>
<td>tranquillisation:</td>
<td>• Should be suitably trained and competent to assess and manage potential and actual violence using de-escalation techniques, restraint, seclusion and rapid tranquillisation, as appropriate.</td>
</tr>
<tr>
<td></td>
<td>• Staff involved in physically restraining patients should be proficient in “Control &amp; Restraint” techniques and should have adequate immunisation against hepatitis B.</td>
</tr>
<tr>
<td></td>
<td>• Staff must also be trained to use and maintain the techniques and equipment required to undertake cardiopulmonary resuscitation.</td>
</tr>
<tr>
<td></td>
<td>• Ensure that following an emergency restraint and medication a short feedback session is held, and that the patient is debriefed.</td>
</tr>
<tr>
<td>Modern Matrons</td>
<td>Modern matrons are responsible for:</td>
</tr>
<tr>
<td></td>
<td>• implementing the guidance across their areas of responsibility.</td>
</tr>
<tr>
<td></td>
<td>• checking with ward managers that staff have attended appropriate training.</td>
</tr>
<tr>
<td></td>
<td>• assessing the competencies of nursing staff to implement the procedures and protocols referred to in the policy.</td>
</tr>
<tr>
<td>Ward Managers</td>
<td>Ward managers are responsible for:</td>
</tr>
<tr>
<td></td>
<td>• the implementation of the policy in the teams they manage, and for the recognition and management of the potential risks of service users</td>
</tr>
<tr>
<td></td>
<td>• ensuring that staff attend training on rapid tranquillisation every 3 years.</td>
</tr>
<tr>
<td>Unregistered Nursing Staff:</td>
<td>Should be suitably trained and competent to assess and manage potential and actual violence using de-escalation techniques, restraint, and seclusion (where appropriate).</td>
</tr>
<tr>
<td></td>
<td>• Should ask nursing colleagues and doctors for advice when necessary.</td>
</tr>
<tr>
<td></td>
<td>• Should be trained and competent to use and maintain the techniques and equipment required to undertake cardiopulmonary resuscitation.</td>
</tr>
</tbody>
</table>
**Qualified Nurses:** Should be suitably trained and competent to assess and manage potential and actual violence using de-escalation techniques, restraint, seclusion (where appropriate) and rapid tranquillisation.
- Should be familiar with the risks associated with individual medicines used in rapid tranquillisation and the monitoring required.
- Should be familiar with the practical use and location on the ward of medicines used in rapid tranquillisation, remedial pharmacological agents (e.g. flumazenil, oxygen) and monitoring equipment (e.g. pulse oximeters).
- Should be able to identify patients’ side effects (including EPS) from medicines used in rapid tranquillisation, and to take appropriate actions to manage.
- Should select from the prescribed “prn” medicines appropriate doses of suitable medicines for administration for rapid tranquillisation for individual patients.
- Assess and document in the notes the patients’ response to rapid tranquillisation. Should be competent to use the equipment required for monitoring vital signs (e.g. BP machine/sphygmometer, pulse oximeter, thermometer).
- Should be trained and competent to use and maintain the techniques and equipment required to undertake cardiopulmonary resuscitation.
- Should ensure that appropriate emergency equipment (e.g. crash bag) is available and accessible on the ward, and regularly checked.
- Should ask nursing colleagues and doctors for advice when necessary.
- Should attend recommended training.

**Doctors**
- Should be suitably trained and competent to assess and manage potential and actual violence using de-escalation techniques and rapid tranquillisation.
- Should be familiar with the risks associated with individual medicines prescribed for rapid tranquillisation, and the monitoring required.
- Should prescribe medicines for rapid tranquillisation suitable for the individual patient, and document this and the diagnosis in the patients’ notes.
- When requested by other staff to see and review a patient requiring rapid tranquillisation, to attend as soon as possible.
- Should be suitably trained and competent to use the techniques and equipment required to undertake cardiopulmonary resuscitation.
- Should ask senior colleagues (i.e. the consultant) for advice when necessary.

**Consultants**
- Should be suitably trained and competent to assess and manage potential and actual violence using de-escalation techniques and rapid tranquillisation.
- Should be available for advice for junior staff regarding rapid tranquillisation.
- Ensure the prescribers in their service adhere to the prescribing requirements in this policy.
- Ensure appropriate actions are taken in the event of an adverse incident or suspected medicine reaction.
| Pharmacy Staff | Ensure there are supplies of suitable medicines for rapid tranquillisation stocked and available for the population of each in-patient ward.  
• To provide advice regarding the use and administration of pharmacological agents in rapid tranquillisation.  
• To clinically screen medication charts to ensure prescribing and administration of rapid tranquillisation is in accordance with this policy. |
Appendix 2: High dose antipsychotic therapy form

(Complete this form in the electronic patient records under the ‘Medication’ tab).

<table>
<thead>
<tr>
<th>Consultant:</th>
<th>Date high dose therapy began:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name of Doctor:</th>
<th>Grade: JUNIOR DOCTOR SPR Consultant Other</th>
<th>Date:</th>
</tr>
</thead>
</table>

Antipsychotic Medication (regular) 2,3 Medicine Dose %BNF Max

Please, specify reason(s) for High Dose Antipsychotic Therapy (HDAT)4,5

<table>
<thead>
<tr>
<th>Other Medication:</th>
<th>CAUTION INCREASED RISK IN FOLLOWING CATEGORIES OF PATIENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Old Age:</td>
</tr>
</tbody>
</table>

| Medicine interactions (inc. medicines with additive ECG effects) | | Other |
|---------------------------------------------------------------|------|

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Month 1</th>
<th>Month 3</th>
<th>Month 6</th>
<th>Month 9</th>
<th>Month 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QT interval</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QTc Interval</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LFTs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alk Phos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Bilirubin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U &amp; Es</td>
<td></td>
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<tr>
<td>Na</td>
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<td>K</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Urea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creatinine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BP, Pulse Temp</td>
<td>Please, record daily for one week - on initiation of HDAT, and after each increase in dose of antipsychotic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review Date(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Has patient/carers been informed of the high dose nature of therapy</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is high dose therapy covered on the consent form (where applicable)</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

The HDAT form is located under the ‘Medication’ tab in electronic patient records.

Royal College of Psychiatrists. College Report CR190. Consensus statement on high dose antipsychotic medication. November 2014 should be consulted for further advice. The report may be obtained via the Royal College of Psychiatrists website.
1. The consensus working group agreed to take the following as a definition of a high dose: ‘A total daily dose of a single antipsychotic which exceeds the upper limit stated in the summary of product characteristics or BNF and a total daily dose of two or more antipsychotics which exceeds the SPC or BNF maximum using the percentage method’.

2. To evaluate if a patient is on high dose antipsychotic therapy: express the dose of each antipsychotic as a percentage of its BNF maximum and add (including crosstapering regimens or as result of additional prn medication). If the total exceeds 100% - then patient is on “high dose antipsychotic therapy” (HDAT). For example: a patient on olanzapine 20 mg nocte and clopixol 400 mg i.m each week is on 100% of maximum Olanzapine dose and 66% of maximum clopixol dose: a total of 166% - thus, this Rx does constitute “high dose”. Such therapy CAN be given but it must be documented as such in the patient’s notes. The Royal College of Psychiatric Guidelines (RCPsych) must then be followed. Any further increases in dose/dosages of antipsychotic(s). Should be done slowly – waiting at least two weeks, before each subsequent dose increase. (Please note: both Consensus Statement on “The use of high dose Antipsychotic Medication” and Council Report CR57 “The Association between antipsychotic drugs and sudden death” do not recommend use of more than one antipsychotic at a time. Additionally, NICE guidance on use of atypicals does not recommend combining the latter with typical antipsychotics.

3. If the use of prn antipsychotic medication (whether p.o or i.m) pushes patient’s therapy into HDAT, please record use of such medication in notes. If this occurs for one day or more then: review therapy, and the rapid tranquillisation monitoring guidance must be implemented for both the oral or intramuscular routes.

4. Before high dose therapy is commenced – the possibilities of substance misuse, personality disorder, inadequate time to respond, poor adherence, misdiagnosis of psychosis, akathisia and “response to Clozapine” should be eliminated.

5. Other management techniques should be considered e.g. de-escalation or psychological techniques.

6. Decision to initiate high dose therapy should ONLY be made by a consultant, or registrar with MRCPsych following an individual risk benefit assessment on consultation with the clinical team. Obtaining a second medical opinion should be considered. The decision, risks & benefits, aims and how the outcomes will be assessed must be documented in the case notes/Care Notes.

7. RCPsych guidelines emphasise the importance of CAUTION to high dose antipsychotic therapy. These include:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Medicine Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Age</td>
<td>History of myocardial infarction</td>
</tr>
<tr>
<td>Hepatic/Renal impairment</td>
<td>History of arrhythmia</td>
</tr>
<tr>
<td>Obesity</td>
<td>History of ischaemic heart disease</td>
</tr>
<tr>
<td></td>
<td>Medicines with additive ECG effects</td>
</tr>
<tr>
<td></td>
<td>Heavy users of tobacco/alcohol</td>
</tr>
</tbody>
</table>

These patients need to be monitored more closely as some patients may be contraindicated to HDAT. Patients should be assessed for cardiovascular disease prior to antipsychotic treatment regardless of dose. Modifiable risk factors for ischaemic heart disease inc. smoking, hypertension, hyperlipidaemia, sedentary lifestyle and obesity should be identified and managed appropriately. Under the circumstances of rapid tranquillisation where an assessment is difficult and ECGs impossible, it is prudent to avoid high doses.

8. For patients prescribed regular high dose antipsychotic therapy, the monitoring guidance in the antipsychotic prescribing guidelines must be followed.

9. For patients prescribed a crosstapering antipsychotic regimen, see the monitoring guidance in the antipsychotic prescribing guidance must be followed.

10. For patients prescribed antipsychotic therapy within BNF limits and is also given additional PRN medication resulting in an above BNF dosage, the monitoring guidance in the antipsychotic prescribing guidance or the rapid tranquillisation guidance must be followed.

Where possible – discuss the decision to commence high dose antipsychotic therapy with the patient and/or patient’s carers.
Appendix 3: Pharmacokinetics of medicines used in rapid tranquillisation

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Route</th>
<th>Pharmacokinetics</th>
<th>Major Side Effects</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Lorazepam    | Oral or IM | Onset: 10-30 mins IM Peak: 60-90 mins Half-life: 12-16 hrs PO Peak: 2hrs | Respiratory Depression Disinhibition | IM absorption is as slow as oral absorption, but is rapid in an active patient.  
• The injection should be diluted 50:50 with water for injections pre-injection.  
• No accumulation of lorazepam with repeated doses or in impaired liver function – this makes it advantageous over diazepam.  
• A wide therapeutic index.  
• Respiratory depression is readily reversed with the specific antagonist flumazenil.  
• Disinhibition is more likely to occur in those with organic brain disease, including learning disabilities, >65 years, & perhaps those with impulse control problems.  
• Requires refrigeration (2-8 C) |
| Promethazine | IM    | Onset 1-2 hours t½ 7-15 hours | Prolonged sedation, seizures, cardiorespiratory depression | Limited evidence for efficacy but may be of use in patients who are benzodiazepine tolerant, benzodiazepines are contra-indicated or lorazepam injection is not available. |
• Hypotension  
• NMS | Can be advisable to administer an antimuscarinic agent with the 1st dose of haloperidol to avoid |

1: Pharmacokinetics of medicines used in rapid tranquillisation
<table>
<thead>
<tr>
<th>Drug</th>
<th>Route</th>
<th>Onset</th>
<th>Peak</th>
<th>Half-life</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloperidol</td>
<td>IM</td>
<td>20 mins</td>
<td>1 hr</td>
<td>21 hrs</td>
<td>Increased QTc or arrhythmias • Seizures • Sudden death • Increased risk of acute dystonia and ensure that an appropriate antimuscarinic is to hand. • Not recommended for i.v. use because of the risk of arrhythmias. The summary of product characteristics for haloperidol recommends a baseline electrocardiogram (ECG). If an ECG is not available the prescriber should consider the risks and benefits of using this treatment and be able to justify their prescribing decision, because it may be considered an off-label use. An ECG should be offered when the patient is calm. During treatment the need for an ECG should be assessed on an individual basis. The dose should be reduced if the QT is prolonged and it should be discontinued if the QTc exceeds 500ms. Periodic electrolytes monitoring is recommended.</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>Oral</td>
<td>5-8 hrs</td>
<td>5-8 hrs</td>
<td>32-50 hrs</td>
<td>Hypotension • Bradycardia • Syncope • Not licensed for use in dementia-related psychosis/behavioural disturbances. • Less likely to cause EPS than haloperidol.</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>Oral</td>
<td>3-5 hrs.</td>
<td>75 hrs</td>
<td>75 hrs in extensive CYP2D6 metabolisers, 146 hrs in poor metabolisers.</td>
<td>Akathisia, tachycardia, fatigue, restless ness, insomnia, tremor, blurred vision, anxiety, increased diastolic blood pressure, nausea</td>
</tr>
</tbody>
</table>
| IM | Onset: 45-60 mins  
    Peak: 1-3 hrs  
    Half-life: 75 hrs in extensive CYP2D6 metabolisers, 146 hrs in poor metabolisers. | Akathisia, tachycardia, orthostatic hypotension, increased diastolic blood pressure, nausea, Headache | Not sedating  
• May be given concurrently with parenteral (IM) benzodiazepines  
• Less likely to cause EPS than haloperidol.  
• Not licensed for use in dementia-related psychosis/behavioural disturbances. |
Appendix 4: Practice guidance for the use of lorazepam injection

Place in Therapy:
- Lorazepam IM is the preferred first line option in most circumstances.
- It may be used alone or in combination with an IM antipsychotic (not in the same syringe).
- It is a short acting benzodiazepine therefore carries the least risk of accumulation on repeated dosing.
- Attention should be paid to the patients’ total daily dose of benzodiazepine.
- In overdose the effect of benzodiazepines can be reversed by flumazenil.

Situations where administration is not recommended:
- Avoid in patients who are tolerant to benzodiazepines.
- Solutions of lorazepam should not be used if they are discoloured or contain a precipitate, or have been outside of refrigeration ((2°C to 8°C) for >30minutes.

Dosing in adults:
- Initial dose is 1-2mg as a single intramuscular (IM) injection.
- Second IM injection of 1-2mg may be given after an interval of at least 30 minutes.
- The maximum BNF is 4mg/day, at times doses higher than this may be required.

Dosing in older adults:
Initial dose is 250micrograms -1mg as a single intramuscular (IM) injection.
Second IM injection of 250micrograms -1mg may be given after an interval of at least 60 minutes.
- The maximum BNF is 2mg/day, at times doses higher than this may be required.

Site of administration:
The site of administration is at the discretion of the clinician.

Side effects of the injection formulation:
- Hypersensitivity reactions, anaphylactic/oid reactions, angioedema are rare.
- Rarely, pain and redness have been reported after lorazepam injection.
- Respiratory depression may occasionally occur.
- The extent of respiratory depression is dose dependent.
- Hypotension may occasionally occur.

Formulation and Administration:
- Lorazepam injection must be stored in a refrigerator (2°C to 8°C). After removing from the refrigerator, the injection should be used within 30 minutes.
- Solutions of lorazepam should not be used if they are discolored or contain a precipitate.
- Lorazepam is a clear concentrated solution of 4mg/1ml in a 2mL ampoule.
- It must be diluted 1:1 with WFI or 0.9% NACL before IM injection as the excipients can cause pain if administered undiluted.
- Administer by deep intramuscular injection, routinely water for injections or 0.9%NACL should be used.
- After dilution, gently mix the contents thoroughly. To avoid air bubbles, do not shake vigorously.
- Administer immediately after reconstitution.
- NEVER mix medicines in the same syringe.
- Lorazepam solution for injection is slightly viscid when cool.
- Any unused solution should be disposed of as clinical waste.

Other Medicines:
- Simultaneous injection of IM benzodiazepines is not recommended with IM olanzapine.
Summary:
• The product does not have a good stability profile and begins to degrade quickly at room temperature, with the risk of precipitation.
Appendix 5: Practice guidance for the use of promethazine IM injection\textsuperscript{1,2,5}.

Promethazine is not licensed for acute management of disturbed/violent behaviour. However it is supported by NICE for rapid tranquillisation in combination with haloperidol.

**Indication:**
IM promethazine should be used for patients:

- in combination with haloperidol (NICE).
- if lorazepam injection is not available.
- who are tolerant to benzodiazepines.
- for whom benzodiazepines are contraindicated.

Promethazine has a slow onset of action. Therefore there should at least one to two hours to assess the effect before repeating the dose.

**Contraindications:**
Hypersensitivity to promethazine or to any of the excipients.

**Risks and side-effects of promethazine:**
Promethazine is contraindicated in people with central nervous system depression and those who have taken monoamine oxidase inhibitors within the past fourteen days. Cautions include respiratory conditions, coronary artery disease, epilepsy, hepatic and renal insufficiency. Drowsiness, dizziness, restlessness, headaches, nightmare, disorientation, hypotension, dry mouth, blurred vision, urinary retention may occur. Due to this effect, procyclidine is not normally necessary when promethazine is administered with haloperidol. Anticholinergic action may affect cognitive function in older patients. The injection may be painful. The combination with haloperidol may involve additional risks e.g. haloperidol may cause extrapyramidal and cardiovascular adverse effects.

**Dosage and administration: For deep intramuscular use only**

1. **Adults:**
   Dose: 50mg. Maximum daily dose: 100mg.

2. **Elderly:**
   Dose: 12.5-25mg.
   Maximum daily dose: 50mg.
   Dilution is not required before IM injection.

**Site of administration:**

The site of administration is at the discretion of the clinician.

**Physical monitoring**

Please follow the Trust rapid tranquillisation guidelines. See Section 14 of the Trust rapid tranquillisation guidelines. Due to time of onset of action (one to two hours), this monitoring should follow for the first FOUR HOURS following injection, and close observation should be continued after this period if clinically indicated.
Supplies

Ampoules of IM promethazine injection may be obtained from the emergency medicine cupboard.
Appendix 6: Practice guidance for the use of aripiprazole IM injection.

Place in therapy:
- Aripiprazole IM can be used as an alternative to IM haloperidol where an IM antipsychotic is required and the risk of EPSEs is a significant concern.
- Simultaneous injection of a parenteral (IM) benzodiazepine (e.g. lorazepam) is permitted, but not another injectable atypical antipsychotic (olanzapine), which cannot.
- Exercise great caution if using in the severely disturbed patients, until there is greater clinical experience.

Dosing:
- Initial IM dose for adults is 9.75mg (1.3mls).
- Second IM injection of 5.25 – 9.75mg may be given 2 hours later.
- In trials the 15mg dose is not recommended, as this did not convey any greater efficacy than the 9.75mg dose.
- Older adults (>65 years) or in individual cases: recommended dose is 5.25mg (0.7mls).
- Maximum three injections in 24 hours.
- Maximum cumulative dose of 30mg/day (including oral).
- Attention should be paid to the patients’ total daily dose of antipsychotic administered via any route, refer to the “High dose antipsychotic guidelines”.
- Severe hepatic impairment: dose cautiously.
- Aripiprazole IM is not approved for the management of dementia related psychosis or behavioural disturbances.

Table 9: Sites of administration of intramuscular medication.

<table>
<thead>
<tr>
<th></th>
<th>Deltoid</th>
<th>Vastus lateralis</th>
<th>Dorsogluteal</th>
<th>Ventrogluteal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Onset of effect:
Peak concentration occurs at about 45 minutes.

Side Effects of the Injection Formulation:
Common: (≥1/100 and < 1/10): somnolence, dizziness, headache, akathisia, nausea, vomiting.
Uncommon (≥1/1,000 and < 1/100): tachycardia, dry mouth, orthostatic hypotension, increased diastolic blood pressure, fatigue.

Formulation and Administration:
- Aripiprazole IM injection is supplied as a single use vial containing 1.3mls of a 7.5mg/ml solution for injection.
- The standard 9.75mg dose = 1.3mls of solution.
- The lower dose of 5.25mg = 0.7mls of solution.
- Withdraw the volume required for injection. Any unused solution should be disposed of as clinical waste. NEVER mix medicines in the same syringe.

Summary:
- Aripiprazole IM has demonstrated similar efficacy to IM haloperidol, but with less treatment emergent EPS’s (although still some). Therefore it may be used as an alternative.
- It does not cause significant sedation, which in this clinical scenario may be a disadvantage.
- Aripiprazole IM may be used with concurrent parenteral (IM) benzodiazepines (i.e. lorazepam).
Appendix 7: Practice guidance for the use of flumazenil injection

<table>
<thead>
<tr>
<th>Practice guidance for the use of flumazenil injection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indication</strong></td>
</tr>
<tr>
<td><strong>Contraindications</strong></td>
</tr>
<tr>
<td><strong>Dose and route of administration</strong></td>
</tr>
<tr>
<td><strong>Time before the dose can be repeated.</strong></td>
</tr>
<tr>
<td><strong>Maximum dose</strong></td>
</tr>
<tr>
<td><strong>Side effects</strong></td>
</tr>
<tr>
<td><strong>Management of side effects</strong></td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
</tr>
</tbody>
</table>

ALWAYS READ IN CONJUNCTION WITH THE CURRENT BNF DOsing GUIDANCE
Appendix 8: Management of violence & aggression algorithm

- Patient presents as acutely or INCREASINGLY DISTURBED.
  - Review current management plan
    - Increase in staff resource
    - Increase in observation level
    - Current prescription/Use of prn
    - Increase in regular medication
    - Review of Mental Health Act status
    - Use of seclusion or low stimulus environment.
  - Does the patient require rapid tranquillisation?
    - NO:
      - Review of management plan was successful.
    - YES:
      - Is the unit equipped to implement the rapid tranquillisation policy?
        - NO:
          - Contact, refer and transfer to identified rapid tranquillisation resourced units:
            - Describe patient’s presentation, risks and current management. (Send risk assessment if possible).
        - YES:
          - Implement Trust’s rapid tranquillisation guidelines.

Rapid Tranquillisation Guidelines_PHA03_January 2019
## Appendix 9: Rapid Tranquillisation Medication Algorithms

### General principles:
Where it is documented in the patient’s care plan that there is a preferred treatment option in the event of an acute illness, this should be adhered to if clinically appropriate.

All prescriptions for RT should be tailored to the individual patient and reviewed at least weekly.

Consider the interaction between RT and co-existing medical illnesses, other prescribed medicines, and concurrent substance misuse.

Consider benzodiazepines initially for patients with an unknown or uncertain medical/medication history, who are antipsychotic naïve, prescribed a high dose antipsychotic already or have cardiac disease.

In older patients, there is a risk of accumulation of sedatives or delirium. Consider the physical fitness of the individual considered.

### Medical team:
Inform the medical team if more than one dose of IM RT is required. The doctor should review the patient and prescription.

### Nursing observation:
Constant visual observation. BP, pulse, temperature, respiratory rate, pO2, level of consciousness. If the patient refuses the patient’s respiratory rate and level of consciousness must be monitored and documented.

### Ensure availability of:
- Resuscitation equipment.
- Flumazenil IV.
- Procyclidine injection.

### Cautions:
The use of haloperidol in an unknown or antipsychotic naïve patient. Consider the total dose of medicines given

### Do not:
- Mix medicines in the same syringe.
- Prescribe IM diazepam.
- Prescribe IM/IV chlorpromazine.
- Give antipsychotics to patients with Dementia with Lewy Body or Parkinson’s Disease.
Appendix 9a: Flow chart for adults (18 – 65 years)

Patients who are already taking and tolerating antipsychotic medication in usual therapeutic doses or recently exposed to such medication, one the following can be considered. No preference is implied in the order:-

- Offer oral lorazepam 1-2mg +/- haloperidol 5-10mg.
  or
- Oral lorazepam 1-2mg +/- olanzapine 10mg.
  or
- Oral lorazepam 1-2mg +/- risperidone 1-2mg.
  or
- Oral promethazine 25-50mg

Consider repeating the dose of the chosen option after 45 – 60minutes if unsuccessful (minimum of sixty minutes for promethazine).

If unsuccessful or refused, consider parenteral (IM) treatment (one of the following). Lorazepam is the first line option:-

- IM lorazepam 2mg monotherapy (first-line)
  (Consider repeating the dose after 45 – 60minutes if unsuccessful).
  or
- IM promethazine 25-50mg +/- haloperidol 5mg (alternative option).
  (Consider repeating the dose after 60minutes if unsuccessful).
  or
- IM lorazepam 2mg +/- haloperidol 5mg. Consider administering procyclidine (alternative option).
  (Consider repeating the dose after 45 – 60minutes if unsuccessful).
  or
- IM lorazepam 2mg +/- aripiprazole 9.75mg (alternative option).
  (Consider repeating the dose after 2 hours if unsuccessful).
  or
- IM promethazine 25-50mg +/- aripiprazole 9.75mg (alternative option)
  (Consider repeating the dose after 2hours if necessary).

Maximum daily doses:-
Haloperidol (po): 20mg per day or Haloperidol (IM): 20mg per day.
Aripiprazole (po or IM): 30mg cumulative daily dose including all formulations.
Lorazepam (po or IM): 4mg per day.
Promethazine (IM): 100mg per day.
Appendix 9b: Flow chart for older adults (> 65 years): Patients who do not have a history of CVD, TIA, CVA, stroke, glaucoma or dementia.

- Offer oral lorazepam 250 micrograms -1mg (first line option).
  (Maximum daily dose: 2mg/24hrs. Maximum daily doses greater than 2mg/24 hours require consultant approval).
  - Oral lorazepam 250 micrograms – 1mg +/- olanzapine 2.5mg-5mg (alternative option).
  - Oral lorazepam 250 micrograms – 1mg +/- risperidone 250 micrograms -1mg (alternative option).
  - Oral lorazepam 250 micrograms – 1mg +/- haloperidol 500 micrograms (alternative option).
  - Oral promethazine 25-50mg.

Consider repeating the dose of the chosen option after 60 minutes if unsuccessful (60 minutes for promethazine).

If unsuccessful or refused, consider parenteral (IM) treatment (one of the following):

- Offer IM lorazepam 250 micrograms -1mg (first line option).
  (Consider repeating the dose after 60 minutes if unsuccessful. Maximum daily dose: 2mg/24hrs. Maximum daily doses greater than 2mg/24 hours require consultant approval).
  - IM promethazine 12.5-25mg +/- haloperidol 2.5mg (alternative option).
    (Consider repeating the dose after 60 minutes if unsuccessful).
  - IM lorazepam 250 micrograms -1mg +/- haloperidol 2.5mg (alternative option).
    (Consider repeating the dose after 45 – 60 minutes if unsuccessful).
  - IM lorazepam 250 micrograms – 1mg +/- aripiprazole 5.25mg (alternative option).
    (Consider repeating the dose after 2 hours if necessary).

(The intramuscular route should be discussed with a consultant or SPR/ST4-6. The doses are a guide only and will be influenced by physical health and organic impairment).

Flow chart for older adults (> 65 years): Patients who have a history of CVD, TIA, CVA, stroke, glaucoma or dementia.
First line:
- Offer oral lorazepam 250 micrograms -1mg.
  (Maximum daily dose: 2mg/24hrs. Maximum daily doses greater than 2mg/24 hours require consultant approval) or
- If unsuccessful or refused, consider parenteral treatment,
- Offer IM lorazepam 250 micrograms -1mg.
  (For one of the above, consider repeating the dose after 60 minutes if unsuccessful. Maximum daily dose: 2mg/24hrs. Maximum daily doses greater than 2mg/24 hours require consultant approval).
### Maximum daily doses:
- **Haloperidol (po):** 15mg per day or Haloperidol (IM): 5mg per day. Doses above 5mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk; continued use should be evaluated early in treatment.
- **Aripiprazole (po or IM):** 16mg cumulative daily dose including all formulations.
- **Lorazepam (po or IM):** 2mg per day.
- **Promethazine (IM):** 50mg per day.
APPENDIX 10: Haloperidol – Oral and Intramuscular Equivalent Doses¹,².

Oral and parenteral (IM) haloperidol are not bioequivalent. The parenteral (IM) dose of haloperidol has a greater bioavailability than the oral dose, therefore the maximum recommended daily dose for each route of administration is different.

Maximum doses of haloperidol in 24 hours is:
20mg oral or 20mg IM (adults)

Please use the conversion chart below, if a patient has received both haloperidol IM and oral (tablets/liquid) in the last 24 hours, to calculate how much the patient has received in total:

<table>
<thead>
<tr>
<th>Approximate Equivalent Doses (mg):</th>
<th>Oral Haloperidol</th>
<th>IM Haloperidol</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>1</td>
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<td>5</td>
</tr>
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<td>7.5</td>
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<td>17</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For example:
Patient has been given 1 x 5mg haloperidol IM, followed 30 minutes later by 5mg orally, then 30 minutes later by another 5mg orally.

Convert to all oral doses, i.e. 8mg + 5mg + 5mg = 18mg oral equivalent.
OR

Convert to all IM doses, i.e. 5mg + 3mg + 3mg = 11mg IM equivalent.

Therefore the patient may receive a further 2mg oral equivalent or 1mg IM equivalent haloperidol within the 24 hour period.

Reference - SPC Haldol http://emc.medicines.org.uk
## Appendix 11: Equality impact assessment tool

<table>
<thead>
<tr>
<th></th>
<th>Yes/No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the policy/guidance affect one group less or more favourably than another on the basis of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Ethnic origins (including gypsies and travellers)</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Nationality</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Religion or belief</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
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<td></td>
</tr>
<tr>
<td>Age</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Disability - learning disabilities, physical disability, sensory impairment and mental health problems</td>
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</tr>
<tr>
<td>2. Is there any evidence that some groups are affected differently?</td>
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</tr>
<tr>
<td>3. If you have identified potential discrimination, N/A are any exceptions valid, legal and/or justifiable?</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>4. Is the impact of the policy/guidance likely to be negative?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>5. If so can the impact be avoided?</td>
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<td></td>
</tr>
<tr>
<td>6. What alternatives are there to achieving the policy/guidance without the impact?</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>7. Can we reduce the impact by taking different N/A action?</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>