The Rapid Tranquillisation Policy
(Including the use of oral PRN medication)
(Replaces Policy No. TP/CL/018 V.8)
(The Use of Medication in the Control of Acutely Disturbed or Violent Behaviour)

(This policy applies to Working Age Adult, Secure & Forensic, Specialist Women’s, Older People’s, Children & Young Peoples, and Learning Disability Services).

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Executive Summary:

- When to consider using Rapid Tranquillisation and the process to follow, including record keeping, monitoring and training.
- Consideration of advance decisions/statements.
- Specific risk issues.

If you require this document in another format such as large print, audio or other community language please contact the Corporate Governance Team on: 0300 304 1195 or email: policies@sussexpartnership.nhs.uk
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1. INTRODUCTION

1.1 Purpose of this Policy.

The purpose of this document is to provide staff working in Sussex Partnership NHS Foundation Trust wards with guidance about the use of Rapid Tranquillisation (RT). It sets out the main provisions of appropriate use of RT, use of associated medication and the roles and responsibilities of staff.

1.2 Scope of this Policy.

This document applies to all qualified medical and nursing staff (and non-medical prescribers) involved in the prescribing and/or administration of medication for RT. This includes staff employed by the Trust and also those healthcare staff who are either seconded or contracted to the Trust. The document covers the treatment of inpatients in working age adult services, secure and forensic services, specialist women’s services, older people’s services and children and young people’s services.

Currently this document does not cover patients with a primary diagnosis of substance misuse, behaviour difficulties in Alzheimer’s disease or delirium.

1.3 Definition.

Rapid Tranquillisation (RT) is the use of medication by the parenteral route (usually intramuscular or exceptionally, intravenous) if oral medication is not possible or appropriate and urgent sedation with medication is needed (NICE NG10) (BAP 2018).

1.4 Principles.

RT is to calm a patient who is exhibiting acutely disturbed or violent behaviour. It is intended to reduce the risk of harm to the patient and also to other patients and members of staff by reducing agitation and aggression. The optimal delivery of RT will allow further psychiatric evaluation to take place and will not compromise patient comprehension or their ability to respond to spoken messages or instruction.

RT should only be considered once de-escalation and other strategies have failed to calm the patient. (See section 3.4). The intervention (along with physical intervention and seclusion) should be considered a management strategy and not be regarded as a primary treatment technique. When determining which intervention to employ, clinical need, the safety of service users and others and, where possible, any Advance Decisions or Advance Statements should always be taken into account. The intervention selected must be a reasonable and proportionate response to the risk posed by the patient at that particular time.

The reasons for using RT (and any other intervention) must always be explained to the patient at the earliest opportunity and documented in the clinical record.
1.5 **Equality Impact Assessment.** *(Undertaken in March 2011).*

All patients covered by this policy, regardless of their race, gender, gender identity, sexuality, religion, spiritual beliefs or disability, will be treated equally within the principles of the policy and with equal dignity and respect.

1.6 **Training Expectations.**

1.6.1 A full understanding of the Rapid Tranquillisation Policy is essential for all qualified staff that may be called upon to prescribe and/or administer medication in response to situations described in the Violence and Aggression (PMVA) the Prevention and Management of Policy. These two documents should be read in conjunction. Staff must also be familiar with the Resuscitation and Anaphylaxis Policy and the Observation Policy.

It is deemed **essential** that all qualified medical and nursing staff working in inpatient units be trained in the use of RT (based on the treatment algorithm most suitable for their unit), as per trust training schedule. The responsibility to ensure adequate training is undertaken lies with ward managers and modern matrons (for nursing staff) and with consultants and local tutors (for medical staff) and should extend to include locum, agency and bank staff.

1.6.2 The training requirement for RT varies according to whether the member of staff is a doctor (or non-medical prescriber) or a nurse.

All new medical staff should successfully complete the specific Trust My Learning module training in RT as part of their induction training, whether working in community or hospital if they are expected to cover inpatient units as part of their on-call duties.

Nursing staff working on wards in substantive or ‘bank’ posts will undertake RT training as a specific My Learning module and receive a brief update as part of their Medicines Management Update day. Ward managers and matrons will ensure that each member of their nursing staff has undertaken and successfully completed the e-learning module. Newly qualified staff will also be expected to pass the RT competencies as outlined in the Trust Preceptorship Policy.

Wherever possible, RT training will be accessed within three months of commencing an inpatient role. Ward managers and modern matrons will be aware of their staff that have completed and passed this training and the Trust central training department must keep records of all staff completing the training.

Training will cover the properties of benzodiazepines, the benzodiazepine antagonist flumazenil, antipsychotics, antimuscarinics and antihistamines, their doses and how they are used in the RT process. It will also cover associated risks, including side effects such as cardio-respiratory effects in response to acute administration of the drugs, particularly when the patient is highly aroused and may have been misusing drugs, is dehydrated or is possibly physically ill.
All staff involved in RT also need to be adequately trained in the maintenance of patient’s airways, cardio-pulmonary resuscitation (CPR), the use of defibrillators and the use of pulse oximeters.

1.6.3 The RT e-learning module can be accessed via the Trust Intranet and contains all the necessary information in the use of RT. All staff involved in RT should undertake this e-learning module, as per Trust training schedule. [http://susie.sussexpartnership.nhs.uk/education-training/elearning](http://susie.sussexpartnership.nhs.uk/education-training/elearning)

1.6.4 In addition, the pharmacy team delivers an update and signposting to the e-learning module in their Medicines Management Essential Training Day for Qualified Nurses. This includes advising nurses of any recent significant changes to policy or practice that have occurred.

2. POLICY STATEMENT

The Trust recognises that, at times, patients in our care may respond to their feelings of aggression or extreme agitation. Therefore, it is important that Trust staff are appropriately trained and supported in order to ensure the safe administration of parenteral medication and the monitoring of its effects on the patient.

When a decision needs to be made on behalf of a patient, staff will make this decision in accordance with the principles of best interest and least restrictive option. (See also section 3.2 for Mental Health Act considerations).

3. POLICY AND PROCEDURAL PRACTICE

3.1 Key Priorities.

3.1.1 Resuscitation facilities must be available within 3 minutes in all healthcare settings where RT might be used. Equipment available must include an automatic external defibrillator, a bag valve mask, oxygen and suction equipment. All equipment must be properly maintained and checked on a weekly basis and a record maintained.

3.1.2 All prescribers and staff involved in RT must be familiar with and have access to the Trust Resuscitation and Anaphylaxis Policy.

3.1.3 All staff involved in an incident requiring the use of parenteral RT (or physical intervention) should be aware of the potential for damage to the patient / professional relationship and ensure that everything possible is done to avoid its impact.

3.1.4 Any incident requiring RT (or physical intervention or seclusion) must be contemporaneously recorded. All appropriate staff should be trained to ensure that they are aware of how to correctly record any incident using the appropriate on-line documentation [http://rx2as012.spdom.local/safeguard/index.aspx?sid=%20](http://rx2as012.spdom.local/safeguard/index.aspx?sid=%20)
3.1.5 Where possible a post-incident review should take place as soon as possible and within 72 hours of an incident ending. This review should be led by the Ward Manager (or nominated deputy) and address the following factors:

- What happened during the incident? What were the trigger factors?
- Each person’s role in the incident.
- Their feelings at the time of the incident, at the review and how they may feel in the near future.
- What can be done to address their concerns?

3.1.6 All staff involved in RT need to be aware of the legal framework that authorises this intervention. The intervention should be in line with the guidance contained within the current Mental Health Act Code of practice, (and the Mental Capacity Act), and any departure from that guidance should be clearly recorded and justified as being in the best interests of the patient. (See section 3.2)

3.1.7 **Specific to ChYPS.** All patients must be informed that medication is to be given and given the opportunity to accept oral medication voluntarily. In children/adolescents who are not Gillick competent, parent(s)/carer(s) should be informed of the situation and consent sought for treatment, in advance if at all possible. It is good practice to inform the child/adolescent and parent(s)/carer(s). Consent forms are available from the Trust website.

http://www.sussexpartnership.nhs.uk/charts-and-forms

3.1.8 **Specific to LDS.** All patients must be informed (in a way that best facilitates their understanding) that medication is to be given and given the opportunity to accept oral medication. Wherever possible the client and carers should be informed about different options and the carers opinions recorded on the forms available via the trust website.

http://www.sussexpartnership.nhs.uk/node/2632/attachment

3.2 **Mental Health Act Considerations**

3.2.1 Patients detained under the treatment sections of the Mental Health Act are subject to Consent to Treatment provisions of Part 4 of the Act. If a patient has been detained for more than 3 months, their consent or authorisation for treatment from a Second Opinion Appointed Doctor (SOAD) is required under Section 58(3), including the completion of statutory forms T2 or T3 before treatment can be given, unless the patient meets the criteria for treatment under Section 62 – urgent treatment. The on-call RC can access Care Notes remotely and make an entry authorising the use of section 62 MHA 1983 using the on-line form.

3.2.2 If the patient has been subject to the Act for less than 3 months, treatment can be given under the provision of Section 63.

3.2.3 All information relevant to MHA status must be fully documented in the clinical record.

3.2.4 The patient's legal status should be reviewed whenever parenteral medication is considered. The enforced administration of medication by injection to an informal
patient may necessitate use of the Mental Health Act. If treatment is to continue against the patient's wishes then a MHA assessment must be undertaken to ensure continued administration is lawful.

3.3 Rapid Tranquillisation and Seclusion

A combination of these two interventions is not absolutely contra-indicated providing that the following points are established:

- If the patient is secluded, potential complications in response to RT are particularly serious and must be given full consideration.

- The patient must be monitored by “within eyesight” observation by a trained member of staff. (See also the Observation Policy and the Seclusion and Long Term Segregation Policy).

- Undertake a risk assessment and consider ending the seclusion when RT has taken effect.
3.4 OVERVIEW OF THE SHORT-TERM MANAGEMENT OF DISTURBED / VIOLENT BEHAVIOUR²
(Refer to Trust Prevention of Violence & Aggression Policy).

PREDICTION
Risk assessment
Necessary & Lawful Searches
Mental Health Presentation
Behavioural Presentation
Other incidents (especially if escalating).

PREVENTION
De-escalation techniques
Observation

INTERVENTIONS FOR CONTINUED MANAGEMENT
Consider, in addition to above, one or more of the following:

<table>
<thead>
<tr>
<th>Rapid Tranquillisation (RT)</th>
<th>Seclusion</th>
<th>Physical Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use to avoid prolonged physical intervention</td>
<td>Used to avoid prolonged physical intervention</td>
<td>Better if service user responds quickly</td>
</tr>
<tr>
<td>Medication is required to calm a psychotic or non-psychotic behaviourally disturbed service user</td>
<td></td>
<td>Can be used to facilitate administration of RT and/or to enable RT to take effect</td>
</tr>
</tbody>
</table>

CONTRA-INDICATED AS AN INTERVENTION

<table>
<thead>
<tr>
<th>When service user has taken previous medication</th>
<th>Should be terminated when rapid tranquillisation, if given, has taken effect</th>
<th>Prolonged physical intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>When other interventions not yet explored</td>
<td>When other interventions not yet explored</td>
<td></td>
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4. **MEDICATION**

4.1. **Treatment aims**

- To reduce suffering for the patient: psychological or physical (through self-harm or accidents).
- To reduce risk of harm to others by maintaining a safe environment.
- To do no harm (by prescribing safe regimes and monitoring physical health).

4.2 **Oral Medication for Acute & Severe Agitation**

4.2.1 Oral medication is not considered to be Rapid Tranquillisation within current national guidelines (NICE NG10) (BAP 2018). However it needs to be considered in the context of managing violent and aggressive behaviour.

4.2.2 Prescribing should be in accordance with the Trust’s Medicines Code standards.

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

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

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

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

4.2.7 Only when oral prn medication for acute & severe agitation oral medication continues to be required should it be prescribed beyond the initial 96 hours on the ‘as required’ section of the drug chart. Including indication, maximum dose, interval and maximum daily dose. This should be reviewed at least once weekly and if not used within the last 2 weeks, consider stopping it. Note that Trust pharmacists have the authority to cancel these prescriptions if they remain unused for 14 days.

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

4.2.9 If an advance decision or advance statement has been completed this should be considered in the first instance. If for clinical reasons an advance decision or statement is not followed, the doctor should fully record these reasons in the
patient’s clinical record. Patient preference for medication should also be considered at this stage.

4.2.10 It should be noted that PRN antipsychotics are not used for their antipsychotic action as onset of the antipsychotic effect can take several weeks.

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

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

4.2.13 When deciding which medication to use take into account any contra-indications, special warnings or precautions required \(^5\). Also consider:

- the service user’s preferences or advance statements and decisions
- pre-existing physical health problems or pregnancy
- possible intoxication (alcohol or psychoactive drugs)
- previous response to these medications, including adverse effects
- potential for interactions with other medications
- total daily dose of medications prescribed and administered.

4.2.14 Full details of contra-indications, special warnings and precautions for all medicines can be found on [http://www.medicines.org.uk/emc](http://www.medicines.org.uk/emc)

4.2.15 Post administration of oral prn medication for acute & severe agitation, monitor the patient hourly for at least ONE hour. Consider the following risk factors for extending the monitoring further, with consideration being given to the peak plasma level of medications and when these are reached (see appendix 6):

- Patient asleep or sedated
- Taken or suspected of taking illicit drugs or alcohol
- Patient has a pre-existing physical health problem
- Patient has experienced any harm as a result of restrictive intervention
- Patient is psychotropic drug naive or known or thought to be non-adherent to medication.

Further monitoring beyond 1 hour should be considered if deemed clinically appropriate (scoring 3 or above for single parameter or total 4 or above).

4.2.16 Document any PRN medications administered in the patient’s clinical record.
4.3 Rapid Tranquillisation Medication

4.3.1 Prescribing

4.3.1.1 Prescribing should be in accordance with the Trust’s Medicines Code standards

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

4.3.1.3 Do not prescribe RT medication routinely or automatically on admission on the drug chart. NICE guidance states that RT should initially only be a single dose.

4.3.1.4 When RT is deemed clinically appropriate, initial dose(s) must be prescribed as a stat dose within the “Rapid Tranquilisation” section of the drug chart, and the reason recorded in the patient clinical record.

4.3.1.5 After reviewing the effect of any initial stat dose, further doses can be re-prescribed if essential, as either further stat doses within the “Rapid Tranquilisation” section of the drug chart, or in the “Drugs Given As Required” section of the drug chart. RT should only be re-prescribed when deemed appropriate to continue. This should be reviewed at least once weekly and if not used within the last two weeks, consider stopping it.

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

4.3.1.7 When deciding which medication to use take into account any contra-indications, warning or precautions required:

- the service user's preferences or advance statements and decisions.
- pre-existing physical health problems or pregnancy.
- possible intoxication (alcohol or psychoactive drugs).
- previous response to these medications, including adverse effects.
- potential for interactions with other medications.
- the total daily dose of medications prescribed and administered.

4.3.1.8 Full details of contra-indications, special warnings and precautions for all medicines can be found on http://www.medicines.org.uk/emc

4.3.1.9 Remote prescribing should only be done in exceptional circumstances and via the on call consultant psychiatrist. RT prescribing carries a high risk, parenteral medication has a high incidence of adverse effects and
therefore patients need to be carefully monitored and fully assessed physically prior to prescribing. This needs to be balanced with the risk to the patient, other patients/visitors or staff if not treated swiftly. Refer to section 5 of Trust Medicines Code for further guidance on remote prescribing: https://www.sussexpartnership.nhs.uk/sites/default/files/documents/tpcl014 - medicines_code_v.4 - 2017 - 18_final_0.pdf

4.3.1.10 In this exceptional circumstance where remote prescribing of RT is the only option, then a history including any contra-indications, warning or precautions (see 4.3.1.7) and any NEWs results must be discussed prior to remote prescribing, for example if it has not been possible to obtain a physical examination and the benefits outweigh the known risks.

4.3.1.11 Choice of medication should follow the algorithm of the unknown or neuroleptic naïve patient and must only be prescribed as a single dose.

4.3.1.12 Details must be fully documented in care notes (see medicines code for more details). A full physical assessment and history should be carried out as soon as possible.

4.3.2 Choice of medication

4.3.2.1 Based on the review of rapid tranquillisation, the evidence suggested that two management strategies may have benefits that outweigh the risks of harm: an IM benzodiazepine (lorazepam) used alone and the combination of IM haloperidol plus an IM antihistamine (promethazine). When IM haloperidol is combined with IM promethazine there is some suggestion that risk of movement-related side effects may be reduced.

4.3.2.2 In contrast, the combination of an IM benzodiazepine plus IM haloperidol does not appear to be more effective than an IM benzodiazepine used alone. However the use of an IM benzodiazepine in combination with an IM antipsychotics is effective (BAP 2018)

4.3.2.3 While IM haloperidol used alone is more effective than placebo, it clearly carries greater risk of extrapyramidal and other side effects when compared with placebo or an IM benzodiazepine. Therefore IM haloperidol is not recommended as a monotherapy (BAP 2018).

4.3.2.4 NICE guideline NG10 does not include the use of olanzapine IM injection as there is no UK product available, having been withdrawn from the UK market. However BAP 2018 stated that IM olanzapine is effective and therefore is included in the algorithm. EU-licensed products are available. Promethazine intramuscular injection is not licensed for the acute management of disturbed/violent behaviour. However, there are combination studies (TREC trials) to support its use in this therapy area, and use is included within NICE guideline NG10 and BAP 2018. IM promethazine as a monotherapy may be effective with extrapolated data (BAP 2018).
4.3.2.5 Promethazine has anticholinergic side effects such as dry mouth, blurred vision, urinary retention and constipation. Cognition can also be impaired particularly in patients with a diagnosis of dementia. It should therefore be used with caution in this patient group. Particular care should also be taken in those patients with a Learning Disability.

4.3.2.6 RT refers to the use of medication by the parental route (usually intramuscular or, exceptionally intravenous). It should only be used if oral administration is not possible or appropriate, or if urgent sedation with medication is needed. (See algorithms 1-4).

4.3.2.7 If an advance decision or advance statement has been completed this should be considered in the first instance. If for clinical reasons an advance decision or statement is not followed, the doctor should fully record these reasons in the patient’s clinical record. Patient preference for medication should also be considered at this stage.

4.3.2.8 It should be noted that antipsychotics in RT are not used for their antipsychotic action as onset of the antipsychotic effect can take several weeks.

4.3.2.9 Medication Choice:

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

- Where there are no known contraindications to the use of antipsychotic medication use IM haloperidol combined with IM promethazine or with IM lorazepam.

- If there is evidence of cardiovascular disease, including a prolonged QT interval, avoid intramuscular haloperidol and use intramuscular lorazepam.

- Where no electrocardiogram has been carried out, avoid intramuscular haloperidol, use IM lorazepam or IM olanzapine if an antipsychotic is deemed necessary. If haloperidol is used when no ECG is available the prescriber should consider the risks and benefits of using this treatment and be able to justify their prescribing decision as this would be considered an ‘off-label use’.

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

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

- If there is a partial response to intramuscular olanzapine, consider a further dose (note: 2 hour dose interval).
• If there is no response to intramuscular lorazepam consider intramuscular haloperidol combined with intramuscular promethazine.

• If there is no response to intramuscular haloperidol combined with intramuscular promethazine, consider intramuscular lorazepam if this hasn’t been used already during this episode. IM olanzapine should also be considered as per section 4.3.3.4 above.

• If intramuscular lorazepam has already been used, seek an urgent second opinion.

• When prescribing medication for use in rapid tranquillisation, write the initial prescription as a single dose, and do not repeat it until the effect of the initial dose has been reviewed.

• If more than one medication is prescribed for the same indication, the care plan should include the preferred order of administration of medicines and time interval between the medicines. If two medications are intended to be given at the same time this should be clearly stated.

• It is important to note that medications within the CHYPS algorithm (see algorithm 3) include unlicensed use of medications:

  • Olanzapine (oral and IM) is unlicensed for use in patients aged less than 18 years.

  • Lorazepam (oral and IM) is unlicensed for use in patients aged less than 12 years.

4.4 High doses.

In certain circumstances, current British National Formulary (BNF) doses and limits, and the manufacturers Summary of Product Characteristics (SmPC), may be knowingly exceeded e.g. in the case of lorazepam. This decision should not be taken lightly or the risks underestimated, and a risk-benefit analysis should be recorded in the clinical record and a rationale in the care plan. Where the risk-benefit is unclear, consideration should be given to seeking advice from clinicians who are not directly involved in the care of the patient.
5 ADMINISTRATION OF MEDICATION

5.1 Any medication administered must be clearly and fully documented on the Drug Prescription and Administration Record Chart. The patient’s response to the medication must be clearly and fully documented in their clinical record with clear reference made to the use of medication for Rapid Tranquillisation purposes.

5.2 Medicines for injection must not be mixed in the same syringe.

5.3 Choosing an appropriate site.

Most of the short acting intramuscular (IM) injections used in RT state the injection can be given intramuscularly (lorazepam, olanzapine and haloperidol) or administer by deep intramuscular injection (promethazine). They do not state specific intramuscular sites hence any of the safe sites listed in section 5.3 can be used. See individuals SmPC for more information (www.medicines.org.uk).

Whilst it is recognised that intramuscular (IM) injections may need to be administered to a resisting / struggling patient, extreme care must be taken with the injection as in these cases there is a greater risk of hitting a vein and the drug being given intravenously (IV).

5.4 Safe sites of IM Injection:

- Dorsogluteal Muscle (buttocks)
- Deltoid Muscle (Upper arm muscle)
- Vastus Lateralis Muscle (Thigh).
- Ventrogluteal Muscle (Hip).

5.5 Recommended maximum volumes of fluid for each muscle group

- Dorsogluteal 4mL
- Deltoid 2mL
- Vastus Lateralis 5mL
- Ventrogluteal 4mL

5.6 Prone / Supine Position.

Restraint methods have advanced to allow intramuscular injections to be given in the supine position, thereby avoiding a prone position administration. Deltoid administration is rare as administration requires a stationary arm for correct injecting technique. It should only be used for the shortest possible time whilst maintaining the appropriate physical health monitoring checks.

5.7 See individual algorithms for drug specific details of administration.
5.8 Nursing and medical staff should always have a short feedback session following emergency restraint and RT.

5.9 Following RT, discussion should be held with the patient and their views sought on the episode. This should be documented in their clinical notes and they should be offered the opportunity to write their own account. Consideration must be given to providing appropriate assistance to those patients who do not use English as their first language and those who may have other communication difficulties due to age or disability.

6  MONITORING THE PATIENT AND RECORDING

6.1 Post administration of oral PRN medication should be hourly for at least ONE hour on standard Trust NEWS monitoring form.

6.2 Further monitoring beyond the 1 hour minimum should ALWAYS be considered. The level of observation required should also be reassessed and any change recorded throughout the episode. Give specific consideration to individual patient risk factors for extending the monitoring further, with consideration being given to the peak plasma level of medications and when these are reached including:

- Patient asleep or sedated
- Taken or suspected of taking illicit drugs or alcohol
- Patient has a pre-existing physical health problem
- Patient has experienced any harm as a result of restrictive intervention
- Patient is psychotropic drug naive or known or thought to be non-adherent to medication.

Further monitoring beyond 1 hour should be considered if deemed clinically appropriate (scoring 3 or above for single parameter or total 4 or above).

6.3 If possible, baseline measurements of the following should be recorded before any parenteral (IM or IV) drug administration:

- Temperature
- Pulse and respiration rate
- Blood pressure
- Level of hydration
- Level of consciousness

6.4 For all parenteral (IM or IV) drug administration of rapid tranquilisation and where possible (and where it is safe to do so), temperature, pulse, respiration rate and blood pressure, level of hydration and level of consciousness must be recorded at least every 15 minutes for a minimum of 1 hour. Monitoring should be recorded on the Trust RT monitoring form (see algorithms).
6.5 Further monitoring beyond the 1 hour minimum should always be considered, if clinically appropriate (scoring 3 or above for single parameter or total 4 or above).

6.6 The level of observation required should also be reassessed and any change recorded throughout the episode. Give specific consideration to individual patient risk factors, as stated above (6.1).

6.7 If all physical health observations cannot be carried out, or the patient refuses, non-contact observations must still be completed. Respiratory rate and level of consciousness using the “alert, voice, pain, unresponsive” (AVPU) system must be recorded.

6.8 All patients administered RT must be subject to either intermittent enhanced, within arm's length enhanced or within eyesight enhanced observation, according to assessed clinical need. Assessment must take into consideration the patients physical health status as well as their current psychiatric presentation and the assessment and rationale for the level of observation must be clearly recorded in the clinical notes.

6.9 In addition, staff should closely monitor for signs of extrapyramidal side effects (and in particular, laryngeal dystonia) in response to the administration of antipsychotic medication, by any route.

6.10 Where the patient is over-sedated, asleep, or significantly unwell, the same monitoring should take place so far as is possible, and pulse-oximetry should also be used, where it is practical to do so.

6.11 If the patient refuses / declines monitoring ‘R’ for refusal should be endorsed on the chart. As a minimum respiration rate and level of consciousness using the “alert, voice, pain, unresponsive” (AVPU) system must be recorded. This would include patients held in seclusion.

6.12 Where possible, and where facilities exist, ECG monitoring is strongly recommended whenever antipsychotics are administered and especially where high doses or parenteral route are be used. High stress levels, restraint, agitation, and hypokalaemia all place the patient at high risk of developing cardiac arrhythmias. ECG's need to be less than 3 months old to be considered appropriate for use assuming there have been no significant cardiac changes since the ECG was obtained.

6.13 The RT event must always be fully recorded in the clinical notes and an incident form report completed.
7 MEDICATION SPECIFIC RISKS

There are specific risks with different classes of medication and these risks may be compounded when medication is used in combination. Close monitoring of the patient is essential.

**Benzodiazepines**
Loss of consciousness, respiratory depression or arrest, cardiovascular collapse (particularly in patients already receiving clozapine), disinhibition⁴.

**Antipsychotics**
Loss of consciousness, cardiovascular / respiratory complications and collapse, seizures, akathisia, dystonia, dyskinesia, neuroleptic malignant syndrome, excessive sedation.

**Antihistamines**
Excessive sedation, painful injection and additional antimuscarinic effects. Promethazine can also cause EPSE. However, when given with haloperidol these effects were less than those seen with haloperidol alone.

8 DISCONTINUATION OF RAPID TRANQUILLISATION

RT should be discontinued at the point of response. Thereafter, the patient must continue to be closely monitored, and future medication (both regular and as required) should be reviewed.

9 ADVANCE DECISION AND ADVANCE STATEMENTS

Once a patient has received RT, consideration should be given to drawing up an advance decision or statement for future occasions. This should take into account the response to medication and the patient’s experience of the event. (See section 3.1.6).
Algorithm 1: **Rapid Tranquillisation - Working Age Adult (18-65 years)**

**Aims:**
- To reduce suffering for the patient: psychological or physical (through self-harm or accidents).
- To reduce risk of harm to others by maintaining a safe environment.
- To do no harm (by prescribing safe regimes and monitoring physical health).

**De-Escalation & Non-Drug Approaches:**
- Maintain adequate distance.
- Ensure environment is conducive to calmness.
- Move to a safe place or seclude.
- Use non-threatening, non-verbal communication.
- Converse and try to develop a therapeutic relationship with patient throughout.

**ADMINISTRATION OF RAPID TRANQUILLISATION**

**Before administering drugs for rapid tranquillisation:**
- Consult any advance decisions / statements.
- Agree suitable therapeutic goal (e.g. level of sedation or control).
- Note previous medicines/response and total medicines in the last 24 hours (including regular).
- If the total dose is above BNF limits you must contact the consultant psychiatrist.
- Consider individual risk factors (e.g. physically ill patients may require lower doses than healthy adults).
- Always offer oral medication first.

**Unknown or Neuroleptic Naive Patient:**
Consider physical health, drug use & presentation

**Oral Medication:**
- lorazepam
- Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:

**IM Medication:**
- lorazepam Wait 30 minutes for response. Repeat if partial response.
- If no response:
  - olanzapine (Only after >1 hour post lorazepam IM).
  - OR haloperidol with either promethazine OR lorazepam (only in patient with no cardiac disease – confirmed by ECG).

**Known and Confirmed History of Antipsychotic use:**

**Oral Medication:**
- lorazepam OR olanzapine
- OR haloperidol AND promethazine
- Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:

**IM Medication:**
- No cardiac disease (confirmed by ECG)
  - Haloperidol with either promethazine OR lorazepam
  - Wait 30 minutes for response. Repeat if partial response.
  - If no response:
    - Lorazepam (if not already used) OR Olanzapine

- Unknown or confirmed cardiac disease
  - lorazepam
  - Wait 30 minutes for response. OR olanzapine
  - Repeat if partial response.
  - If no response:
    - lorazepam OR olanzapine (Leave >1 hour between lorazepam IM and olanzapine IM).

**Oral Medication Dosing:**
- Lorazepam 1-2mg (Max 4mg/24 hours)
- Haloperidol 5-10mg (Max 20mg/24 hours)
- Promethazine 25-50mg (Max 100mg/24 hrs)
- Olanzapine 5-10mg (Max 20mg/24 hours)

**IM Medication Dosing:**
- Lorazepam 1-2mg (Max 4mg/24 hours)
- Haloperidol 2.5-5mg (Max 12mg/24 hours)*
- Promethazine 25-50mg (Max 100mg/24 hrs)
- Olanzapine 5-10mg (Max 20mg/24 hours)

**Monitor:** Ensure baseline & ongoing monitoring is recorded appropriately (where possible) on relevant monitoring form:
- Oral PRN monitor hourly for minimum one hour on NEWS form. Further monitoring as clinically appropriate.
- IM monitor every 15 minutes for minimum 1 hour on RT monitoring form. Further monitoring as deemed clinically appropriate.

**Review:**
- Seek advice from senior experienced doctor or MDT.
- Review all “as required” medicines
- Document as incident reports: include drugs given, dose and response.
- Document on individual patient clinical record
- Undertake post RT review, within 72 hours, and document.
Algorithm 1: **Rapid Tranquillisation - Working Age Adult (18-65 years)**

a. Evidence
   i. The best evidence for benefit over risk of harm is for IM lorazepam used alone and the combination of IM haloperidol plus an IM promethazine.
   ii. When IM haloperidol is combined with IM promethazine there is some suggestion that risk of movement-related side effects may be reduced.
   iii. In contrast, the combination of an IM benzodiazepine plus IM haloperidol does not appear to be more effective than an IM benzodiazepine used alone.
   iv. While IM haloperidol used alone is more effective than placebo, it clearly carries greater risk of extrapyramidal and other side effects when compared with placebo or an IM benzodiazepine.

b. Choice depends on current treatment.
   i. If patient is established on antipsychotics, lorazepam may be used alone.
   ii. If the patient uses ‘street drugs’ or already receives regular benzodiazepines, an antipsychotic may be used alone.

c. Ensure procyclidine injection is available. Antipsychotics may cause acute dystonic reaction.

d. Ensure flumazenil injection is available to reverse effects of lorazepam injection.

e. The maximum dose of olanzapine is 20mg/24 hours by any (combined) route(s) – this should not be exceeded without obtaining specialist advice – and not more than 3 I/M doses may be given in any 24-hour period. **Wait 2 hours between doses.**

f. Intramuscular olanzapine, intramuscular lorazepam or intramuscular promethazine must not be administered within 1 hour of each other.

g. Olanzapine IM needs to be diluted before administration in 2.1ml water for injection. It is stable for up to 1 hour after reconstitution. The following table provides injection volumes for delivering various doses of olanzapine:

<table>
<thead>
<tr>
<th>Dose (mg)</th>
<th>Volume of Injection (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>1.0</td>
</tr>
<tr>
<td>7.5</td>
<td>1.5</td>
</tr>
<tr>
<td>10</td>
<td>2.0</td>
</tr>
</tbody>
</table>

h. Lorazepam should be mixed 1:1 with water for injection before injecting. The following table provides injection volumes for delivering various doses of lorazepam **once diluted.**

<table>
<thead>
<tr>
<th>Dose of lorazepam Required</th>
<th>Volume of undiluted lorazepam (4mg/mL)</th>
<th>Volume of WFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.125mL</td>
<td>0.125mL</td>
</tr>
<tr>
<td>1.0</td>
<td>0.25mL</td>
<td>0.25mL</td>
</tr>
<tr>
<td>2.0</td>
<td>0.5mL</td>
<td>0.5mL</td>
</tr>
</tbody>
</table>

i. The maximum daily dose of haloperidol is either 20mg orally or 12mg by intramuscular injection. Maximum doses will need to be adjusted if a combination of both routes is used. The bioavailable equivalence of haloperidol being approximately 10mg oral: 6mg intramuscular.

j. The recommended dose of promethazine is 25mg to 50mg (including adolescents aged 16 years and over). The lower dose should normally be used initially and titrated upwards according to response if necessary. Repeat doses should not be considered within an hour of a previous dose and a maximum dose of 100mg in 24 hours should not be exceeded. Doses of up to 150mg have been used but this would be unlicensed use.
Algorithm 2: Rapid Tranquillisation – Older Persons (>65 years) exc. dementia

Aims:
- To reduce suffering for the patient: psychological or physical (through self-harm or accidents).
- To reduce risk of harm to others by maintaining a safe environment.
- To do no harm (by prescribing safe regimes and monitoring physical health).

De-EScalation & Non-Drug Approaches:
- Maintain adequate distance.
- Ensure environment is conducive to calmness.
- Move to a safe place or seclude.

Use non-threatening, non-verbal communication
Converse and try to develop a therapeutic relationship with patient throughout

ADMINISTRATION OF RAPID TRANQUILLISATION

Before administering drugs for rapid tranquillisation:
- Consult any advance decisions / statements.
- Agree suitable therapeutic goal (e.g. level of sedation or control).
- Note previous medicines/response and total medicines in the last 24 hours (including regular).
- If the total dose is above BNF limits you must contact the consultant psychiatrist.
- Consider individual risk factors (e.g. physically ill patients may require lower doses than healthy adults).
- Always offer oral medication first.

Unknown or Neuroleptic Naïve Patient: Consider physical health, drug use & presentation

**Oral Medication:** lorazepam

Allow at least 1 hour for response to oral. If unsuccessful or patient refuses:

**IM Medication:** lorazepam

Wait 30 minutes for response. Repeat if partial response.

If no response: olanzapine (Only after >1 hour post lorazepam IM). OR haloperidol with either promethazine OR lorazepam.

**Known and Confirmed History of Antipsychotic use:**

**Oral Medication:** lorazepam OR olanzapine OR haloperidol AND promethazine

Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:

**IM Medication:**

No cardiac disease (confirmed by ECG)

Haloperidol with either promethazine OR lorazepam

Wait 30 minutes for response. Repeat if partial response.

If no response: Lorazepam (if not already used) OR Olanzapine

Unknown or confirmed cardiac disease

Lorazepam

Wait 30 minutes for response. OR Olanzapine

Repeat if partial response.

If no response: lorazepam OR olanzapine (Leave >1 hour between lorazepam IM and olanzapine IM).

**Oral Medication Dosing:**

Lorazepam 0.5-1mg (Max 2mg/24 hours)
Haloperidol 0.5-2.5mg (Max 5mg/24 hours)
Promethazine 10-25mg (Max 50mg/24 hrs)
Olanzapine 2.5-5mg (Max 20mg/24 hours)

**IM Medication Dosing:**

Lorazepam 0.5-1mg (Max 2mg/24 hours)
Haloperidol 1.0-2.5mg (Max 5mg/24 hours)
Promethazine 12.5-25mg (Max 50mg/24 hrs)
Olanzapine 2.5-5mg (Max 20mg/24 hours)

**Monitor:** Ensure baseline & ongoing monitoring is recorded appropriately (where possible) on relevant monitoring form:
- Oral PRN monitor hourly for minimum one hour on NEWS form. Further monitoring as clinically appropriate.
- IM monitor every 15 minutes for minimum 1 hour on RT monitoring form. Further monitoring as deemed clinically appropriate.

**Review:**
- Seek advice from senior experienced doctor or MDT.
- Review all “as required” medicines
- Document as incident reports: include drugs given, dose and response.
- Document on individual patient clinical record
- Undertake post RT review, within 72 hours, and document.
Algorithm 2: Rapid Tranquilisation – Older Persons (>65 years) exc. dementia

a. Evidence
   i. The best evidence for benefit over risk of harm is for IM lorazepam used alone and the combination of IM haloperidol plus an IM promethazine.
   ii. When IM haloperidol is combined with IM promethazine there is some suggestion that risk of movement-related side effects may be reduced.
   iii. In contrast, the combination of an IM benzodiazepine plus IM haloperidol does not appear to be more effective than an IM benzodiazepine used alone.
   iv. While IM haloperidol used alone is more effective than placebo, it clearly carries greater risk of extrapyramidal and other side effects when compared with placebo or an IM benzodiazepine.

b. Choice depends on current treatment.
   i. If patient is established on antipsychotics, lorazepam may be used alone.
   ii. If the patient uses ‘street drugs’ or already receives regular benzodiazepines, an antipsychotic may be used alone.

c. Ensure procyclidine injection is available. Antipsychotics may cause acute dystonic reaction.

d. Ensure flumazenil injection is available to reverse effects of lorazepam injection.

e. The maximum dose of olanzapine is 20mg/24 hours by any (combined) route(s) – this should not be exceeded without obtaining specialist advice – and not more than 3 I/M doses may be given in any 24-hour period. **Wait 2 hours between doses.**

f. Intramuscular olanzapine and intramuscular lorazepam must not be administered within 1 hour of each other.

g. Olanzapine IM needs to be diluted before administration in 2.1ml water for injection. It is stable for up to 1 hour after reconstitution. The following table provides injection volumes for delivering various doses of olanzapine:

<table>
<thead>
<tr>
<th>Dose (mg)</th>
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<td>1.5</td>
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<tr>
<td>10</td>
<td>2.0</td>
</tr>
</tbody>
</table>

h. Lorazepam should be mixed 1:1 with water for injection before injecting. The following table provides injection volumes for delivering various doses of lorazepam once diluted.

<table>
<thead>
<tr>
<th>Dose of Lorazepam Required</th>
<th>Volume of undiluted lorazepam (4mg/mL)</th>
<th>Volume of WFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.125mL</td>
<td>0.125mL</td>
</tr>
<tr>
<td>1.0</td>
<td>0.25mL</td>
<td>0.25mL</td>
</tr>
<tr>
<td>2.0</td>
<td>0.5mL</td>
<td>0.5mL</td>
</tr>
</tbody>
</table>

i. The maximum daily dose of haloperidol is either 5mg orally or 5mg by intramuscular injection. Maximum doses will need to be adjusted if a combination of both routes is used. The bioavailable equivalence of haloperidol being approximately 10mg oral: 6mg intramuscular.

j. For promethazine, in the elderly, (and in physically debilitated patients and those with impaired renal, hepatic, cardiac or respiratory function), there are no specific dose recommendations but lower doses should be considered and particular caution should be exercised in patients with a diagnosis of dementia.
Algorithm 3: Rapid Tranquillisation – Dementia Services

**Aims:**
- To reduce suffering for the patient: psychological or physical (through self-harm or accidents).
- To reduce risk of harm to others by maintaining a safe environment.
- To do no harm (by prescribing safe regimes and monitoring physical health).

**De-Escalation & Non-Drug Approaches:**
- Maintain adequate distance.
- Ensure environment is conducive to calmness.
- Move to a safe place or seclude
- Use non-threatening, non-verbal communication
- Converse and try to develop a therapeutic relationship with patient throughout

**ADMINISTRATION OF RAPID TRANQUILLISATION**

**Before administering drugs for rapid tranquillisation:**
- Consult any advance decisions / statements.
- Agree suitable therapeutic goal (e.g. level of sedation or control).
- Note previous medicines/response and total medicines in the last 24 hours (including regular).
- If the total dose is above BNF limits you must contact the consultant psychiatrist.
- Consider individual risk factors (e.g. physically ill patients may require lower doses than healthy adults).
- Always offer oral medication first.

**Unknown or Neuroleptic Naïve Patient:**
Consider physical health & presentation

<table>
<thead>
<tr>
<th>Oral Medication:</th>
<th>Known and Confirmed History of Antipsychotic use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam OR Promethazine</td>
<td>Lorazepam OR Haloperidol AND Promethazine</td>
</tr>
<tr>
<td><strong>Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM Medication:</th>
<th>No cardiac disease (confirmed by ECG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam</td>
<td>Haloperidol AND Promethazine</td>
</tr>
<tr>
<td>Wait 30 minutes for response.</td>
<td>Wait 30 minutes for response.</td>
</tr>
<tr>
<td>Repeat if partial response.</td>
<td>Repeat if partial response.</td>
</tr>
<tr>
<td>If no response: Lorazepam</td>
<td>If no response: Lorazepam</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oral Medication Dosing:</th>
<th>IM Medication Dosing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam 0.5-1mg (Max 2mg/24 hours)</td>
<td>Lorazepam 0.5-1mg (Max 2mg/24 hours)</td>
</tr>
<tr>
<td>Haloperidol 0.5-2.5mg (Max 5mg/24 hours)</td>
<td>Haloperidol 1.0-2.5mg (Max 5mg/24 hours)</td>
</tr>
<tr>
<td>Promethazine 10-25mg (Max 50mg/24 hrs)</td>
<td>Promethazine 12.5-25mg (Max 50mg/24 hrs)</td>
</tr>
</tbody>
</table>

**Monitor:** Ensure baseline & ongoing monitoring is recorded appropriately (where possible) on relevant monitoring form:
- Oral PRN monitor hourly for minimum one hour on NEWS form. Further monitoring as clinically appropriate.
- IM monitor every 15 minutes for minimum 1 hour on RT monitoring form. Further monitoring as deemed clinically appropriate.

**Review:**
- Seek advice from senior experienced doctor or MDT.
- Review all “as required” medicines
- Document as incident reports: include drugs given, dose and response.
- Document on individual patient clinical record
- Undertake post RT review, within 72 hours, and document.
Algorithm 3: Rapid Tranquillisation – Dementia Services

a. Evidence
   i. The best evidence for benefit over risk of harm is for IM lorazepam used alone and the combination of IM haloperidol plus an IM promethazine.
   ii. When IM haloperidol is combined with IM promethazine there is some suggestion that risk of movement-related side effects may be reduced.
   iii. In contrast, the combination of an IM benzodiazepine plus IM haloperidol does not appear to be more effective than an IM benzodiazepine used alone.
   iv. While IM haloperidol used alone is more effective than placebo, it clearly carries greater risk of extrapyramidal and other side effects when compared with placebo or an IM benzodiazepine.

b. Choice depends on current treatment.

c. Ensure procyclidine injection is available. Antipsychotics may cause acute dystonic reaction.

d. Avoid antipsychotics in patients with Lewy Body Dementia

e. Ensure flumazenil injection is available to reverse effects of lorazepam injection.

f. Lorazepam should be mixed 1:1 with water for injection before injecting. The following table provides injection volumes for delivering various doses of lorazepam once diluted.

<table>
<thead>
<tr>
<th>Dose of lorazepam Required</th>
<th>Volume of undiluted lorazepam (4mg/mL)</th>
<th>Volume of WFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.125mL</td>
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<td>1.0</td>
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</tr>
<tr>
<td>2.0</td>
<td>0.5mL</td>
<td>0.5mL</td>
</tr>
</tbody>
</table>

g. The maximum daily dose of haloperidol is either 5mg orally or 5mg by intramuscular injection. Maximum doses will need to be adjusted if a combination of both routes is used. The bioavailable equivalence of haloperidol being approximately 10mg oral: 6mg intramuscular.

h. For promethazine, in the elderly, (and in physically debilitated patients and those with impaired renal, hepatic, cardiac or respiratory function), there are no specific dose recommendations but lower doses should be considered and particular caution should be exercised in patients with a diagnosis of dementia.
Algorithm 4: Rapid Tranquilisation – Child & Adolescent (12-17 years)

Aims:
- To reduce suffering for the patient: psychological or physical (through self-harm or accidents).
- To reduce risk of harm to others by maintaining a safe environment.
- To do no harm (by prescribing safe regimes and monitoring physical health).

De-Escalation & Non-Drug Approaches:
- Maintain adequate distance.
- Ensure environment is conducive to calmness.
- Move to a safe place or seclude
- Use non-threatening, non-verbal communication
- Converse and try to develop a therapeutic relationship with patient throughout

ADMINISTRATION OF RAPID TRANQUILLISATION

Before administering drugs for rapid tranquillisation:
- Consult any advance decisions and consent given.
- Agree suitable therapeutic goal (e.g. level of sedation or control).
- Note previous medicines/response and total medicines in the last 24 hours (including regular).
- If the total dose is above BNF limits you must contact the consultant psychiatrist.
- Consider individual risk factors (e.g. physically ill patients may require lower doses than healthy adults).
- Always offer oral medication first.

Non-Psychotic illness or Neuroleptic Naive Patient:
Consider physical health, drug use & presentation

Oral Medication:
lorazepam OR promethazine

Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:

IM Medication:
lorazepam
Wait 30 minutes for response. Repeat if partial response.
If no response, allow further 30 minutes, if still no response: promethazine

Psychotic illness or Known and Confirmed History of Antipsychotic use:

Oral Medication:
olanzapine WITH/WITHOUT lorazepam OR promethazine

Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:

IM Medication:
lorazepam
Wait 30 minutes for response. Repeat if partial response.
If no response, allow further 30 minutes, if still no response: olanzapine OR promethazine
(Leave >1 hour between lorazepam IM and olanzapine IM).

Oral Medication Dosing:
Lorazepam 1-2mg (Max 4mg/24 hours)
Promethazine 10-25mg (Max 50mg/24 hrs)
Olanzapine 5mg (Max 20mg/24 hours)

IM Medication Dosing:
Lorazepam 1-2mg (Max 4mg/24 hours)
Promethazine 10-25mg (Max 50mg/24 hrs)
Olanzapine 5-10mg (Max 20mg/24 hours)

Monitor: Ensure baseline & ongoing monitoring is recorded appropriately (where possible) on relevant monitoring form:
- Oral PRN monitor hourly for minimum one hour on NEWS form. Further monitoring as clinically appropriate.
- IM monitor every 15 minutes for minimum 1 hour on RT monitoring form. Further monitoring as deemed clinically appropriate.

Review:
- Seek advice from senior experienced doctor or MDT.
- Document on individual patient clinical record
- Undertake post RT review, within 72 hours, and document.
Algorithm 4: **Rapid Tranquilisation – Child & Adolescent (12-17 years)**

a. **Evidence**
   i. Evidence in young people is limited & extrapolated from adult population.
   ii. Haloperidol should be avoided due to the high potential for EPSE and treatment naivety within the population.

b. **Choice depends on current treatment.**
   i. If patient is presenting with psychotic illness, lorazepam or olanzapine may be used alone.
   ii. For treatment naïve and non-psychotic illness lorazepam should be consider first line.

c. Ensure procyclidine injection is available. Antipsychotics may cause acute dystonic reaction, although less likely for 2nd generation antipsychotics.

d. Ensure flumazenil injection is available to reverse effects of lorazepam injection.

e. The maximum dose of olanzapine is 20mg/24 hours by any (combined) route(s) – this should not be exceeded without obtaining specialist advice – and not more than 3 I/M doses may be given in any 24-hour period. **Wait 2 hours between doses.**

f. Intramuscular olanzapine and intramuscular lorazepam must not be administered within 1 hour of each other.

g. Olanzapine IM needs to be diluted before administration in 2.1ml water for injection. It is stable for up to 1 hour after reconstitution. The following table provides injection volumes for delivering various doses of olanzapine:

<table>
<thead>
<tr>
<th>Dose (mg)</th>
<th>Volume of Injection (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>1.0</td>
</tr>
<tr>
<td>7.5</td>
<td>1.5</td>
</tr>
<tr>
<td>10</td>
<td>2.0</td>
</tr>
</tbody>
</table>

h. Lorazepam should be mixed 1:1 with water for injection before injecting. The following table provides injection volumes for delivering various doses of lorazepam **once diluted.**

<table>
<thead>
<tr>
<th>Dose of lorazepam Required</th>
<th>Volume of undiluted lorazepam (4mg/mL)</th>
<th>Volume of WFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>0.125mL</td>
<td>0.125mL</td>
</tr>
<tr>
<td>1.0</td>
<td>0.25mL</td>
<td>0.25mL</td>
</tr>
<tr>
<td>2.0</td>
<td>0.5mL</td>
<td>0.5mL</td>
</tr>
</tbody>
</table>

i. In children and adolescents, younger than 12 years of age the recommended dose of promethazine is 5-10mg (max 25mg/day). In those older than 12 years of age the recommended dose is 10-25mg (max 50mg/day). The product must not be used in children under 2 years of age.
Algorithm 5: Rapid Tranquilisation – Learning Disabilities

**Aims:**
- To reduce suffering for the patient: psychological or physical (through self-harm or accidents).
- To reduce risk of harm to others by maintaining a safe environment.
- To do no harm (by prescribing safe regimes and monitoring physical health).

**De-escalation & Non-Drug Approaches:**
- Maintain adequate distance.
- Ensure environment is conductive to calmness.
- Move to a safe place or seclude
- Use non-threatening, non-verbal communication
- Converse and try to develop a therapeutic relationship with patient throughout

**Before administering drugs for rapid tranquilisation:**
- Consult any advance decisions / statements.
- Agree suitable therapeutic goal (e.g. level of sedation or control).
- Note previous medicines/response and total medicines in the last 24 hours (including regular).
- If the total dose is above BNF limits you must contact the consultant psychiatrist.
- Consider individual risk factors (e.g. physically ill patients may require lower doses than healthy adults).
- Always offer oral medication first.

**Unknown or Neuroleptic Naïve Patient:** Consider physical health, drug use & presentation

**Oral Medication:**
- Lorazepam OR Promethazine
  - Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:
  - IM Medication:
    - Lorazepam
      - Wait 30 minutes for response. Repeat if partial response.
      - If no response: Olanzapine (Only after >1 hour post lorazepam IM).
      - OR Haloperidol AND promethazine (in patient with no cardiac disease – confirmed by ECG).

**Known and Confirmed History of Antipsychotic use:**

**Oral Medication:**
- Lorazepam AND/OR haloperidol
  - OR olanzapine
  - Allow at least 1 hour for response to oral. Continue non-drug approaches. If unsuccessful or patient refuses:
  - IM Medication:
    - No cardiac disease
      - (confirmed by ECG)
    - Unknown or confirmed cardiac disease
      - Haloperidol
        - AND
        - promethazine
        - Wait 30 minutes for response. Repeat if partial response.
        - If no response:
          - Lorazepam OR Olanzapine
          - (Leave >1 hour between lorazepam IM and olanzapine IM).

**Oral Medication Dosing:**
- Lorazepam 0.5-2mg (Max 4mg/24 hours)
- Haloperidol 2.5-5mg (Max 20mg /24 hours)
- Promethazine 10-25mg (Max 50mg/24 hrs)
- Olanzapine 5-10mg (Max 20mg/24 hours)

**IM Medication Dosing:**
- Lorazepam 0.5-2mg (Max 4mg/24 hours)
- Haloperidol 2.5-5mg (Max 12mg/24 hours)
- Promethazine 10-25mg (Max 100mg/24 hrs)
- Olanzapine 5-10mg (Max 20mg/24 hours)

**Monitor:** Ensure baseline & ongoing monitoring is recorded appropriately (where possible) on relevant monitoring form:
- Oral PRN monitor hourly for minimum one hour on NEWS form. Further monitoring as clinically appropriate.
- IM monitor every 15 minutes for **minimum** 1 hour on RT monitoring form. Further monitoring as deemed clinically appropriate.

**Review:**
- Seek advice from senior experienced doctor or MDT.
- Review all “as required” medicines
- Document as incident reports: include drugs given, dose and response.
- Undertake post RT review, within 72 hours, and document.
Algorithm 5: **Rapid Tranquillisation – Learning Disabilities**

a. **Evidence**
   i. The evidence for use in patients with learning disability is limited and extrapolated from adult population.
   ii. The best evidence for benefit over risk of harm for general adult population is for IM lorazepam used alone and the combination of IM haloperidol plus an IM promethazine.
   iii. When IM haloperidol is combined with IM promethazine there is some suggestion that risk of movement-related side effects may be reduced.
   iv. In contrast, the combination of an IM benzodiazepine plus IM haloperidol does not appear to be more effective than an IM benzodiazepine used alone.
   v. While IM haloperidol used alone is more effective than placebo, it clearly carries greater risk of extrapyramidal and other side effects when compared with placebo or an IM benzodiazepine.

b. **Choice depends on current treatment.**
   i. Particular consideration needs to be given to the higher susceptibility of patients with learning disability to side effect and the potential for paradoxical reactions to benzodiazepines.
   ii. If patient is established on antipsychotics, lorazepam may be used alone.
   iii. If the patient uses ‘street drugs’ or already receives regular benzodiazepines, an antipsychotic may be used alone.

c. Ensure procyclidine injection is available. Antipsychotics may cause acute dystonic reaction.

d. Ensure flumazenil injection is available to reverse effects of lorazepam injection.

e. The maximum dose of olanzapine is 20mg/24 hours by any (combined) route(s) – this should not be exceeded without obtaining specialist advice – and not more than 3 I/M doses may be given in any 24-hour period. **Wait 2 hours between doses.**

f. **Intramuscular olanzapine, intramuscular lorazepam or intramuscular promethazine must not be administered within 1 hour of each other.**

g. Olanzapine IM needs to be diluted before administration in 2.1ml water for injection. It is stable for up to 1 hour after reconstitution. The following table provides injection volumes for delivering various doses of olanzapine

<table>
<thead>
<tr>
<th>Dose (mg)</th>
<th>Volume of Injection (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>1.0</td>
</tr>
<tr>
<td>7.5</td>
<td>1.5</td>
</tr>
<tr>
<td>10</td>
<td>2.0</td>
</tr>
</tbody>
</table>

h. Lorazepam should be mixed 1:1 with water for injection before injecting. The following table provides injection volumes for delivering various doses of lorazepam **once diluted.**

<table>
<thead>
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<th>Dose of lorazepam Required</th>
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<td>0.25mL</td>
</tr>
<tr>
<td>2.0</td>
<td>0.5mL</td>
<td>0.5mL</td>
</tr>
</tbody>
</table>

i. The maximum daily dose of haloperidol is either 20mg orally or 12mg by intramuscular injection. Maximum doses will need to be adjusted if a combination of both routes is used. The bioavailable equivalence of haloperidol being approximately 10mg oral: 6mg intramuscular.

j. For promethazine, in LDS, (and in physically debilitated patients and those with impaired renal, hepatic, cardiac or respiratory function), there are no specific dose recommendations but lower doses should be considered.
10 SPECIALIST ADVICE FOR WORKING OUTSIDE THE APPROPRIATE ALGORITHM

(NB. Recommended adult doses are quoted. Doses will usually be lower in the elderly, those with a learning disability and in children and young people).

10.1 Advice must be sought from the consultant or appropriate specialist, at any stage of RT, if any doubt exists regarding how best to proceed or if the treatment algorithms have been followed and there is no improvement.

10.2 Physical illness should be re-investigated.

10.3 They may only be prescribed by a consultant psychiatrist or appropriate specialist who has previous experience of their use. Any decision to use these treatments must only be taken when more conventional treatments have failed and the reason for use must be fully documented in the patient’s notes. The advice below relates to use in adults.

10.3.1 Levomepromazine 12.5-50mg IM is highly sedative. Avoid in adults over 50 years due to significant hypotensive effects. Avoid in children and adolescents. This is not recommended as an RT treatment (NICE and BAP).

10.3.2 Aripiprazole 9.75mg IM can be considered however NICE did not recommend its use due to lack of evidence of efficacy in rapid tranquillisation compared to the recommended agents. BAP 2018 stated that aripiprazole IM is effective.

Aripiprazole is less hypotensive and sedative than olanzapine, and may be considered on these grounds.

10.3.3 Both oral-inhaled loxapine and buccal midazolam were considered effective by BAP. However prior to inhaled loxapine a brief respiratory assessment is required and is contraindicated in patient with asthma or chronic obstructive pulmonary disease and salbutamol should be available.

10.3.4 Normally, Clopixol Acuphase® (zuclopenthixol acetate) should never be considered as a first-line drug for Rapid Tranquillisation as its onset of action will often not be rapid enough in these circumstances. In addition, the administration of an oil-based injection carries very high risk in a highly agitated patient. It should not be used antipsychotic naïve patients. It should only be used in situations where patients refuse oral medication and require frequent IM injections.

Clopixol Acuphase® (zuclopenthixol acetate) could be considered as an option when it is recognised that the patient will be disturbed/violent over an extended time period and has a past history of a good / timely response. Some patients may want “Acuphase” included in advance directions or statements.

http://www.sussexpartnership.nhs.uk/node/1465/attachment

10.3.5 IM midazolam can no longer be considered due to the relatively high risk of respiratory depression with this product. Further to this, and in response to the Department of Health’s Never Events List 2012/13 (published January 2012), the Trust Drugs & Therapeutics Group took the decision in January 2013 that this product would no longer be made available to Trust units.
10.4 If prescribing more than one antipsychotic or prescribing in excess of maximum doses, (see Appendix 7), an ECG should be carried out to exclude arrhythmias.

10.5 Emergency ECT may also be considered but only by a specialist when other strategies have failed. (BAP 2018)

11 INTRAVENOUS THERAPY

11.1 The intravenous administration of benzodiazepines or haloperidol should not normally be used other than in very exceptional circumstances, which should be specified and recorded. This decision should only be taken by a consultant or appropriate specialist who has previous experience of using intravenous interventions. Administration may only be undertaken by a practitioner who is fully trained in IV administration, can manage medical emergencies and where resuscitation equipment is available.

11.2 If intravenous medication is used, the patient must be subject to within eyesight observation. Intravenous administration must not take place without full access to support and resuscitation services. (See Trust Resuscitation and Anaphylaxis Policy).

12 RESPONSIBILITIES

12.1 Healthcare organisations have an obligation to ensure treatments are safe and effective and that the NICE guidelines have been taken into account. They should ensure their staff receive appropriate training. This section aims to help staff understand their responsibilities and accountabilities, it is not exhaustive and professionals must also consider their own Codes of Practice.

12.2 The Trust:

12.2.1 Will ensure that Governance arrangements are in place and will include audit procedures that relate to training needs and provision, and the review of untoward incidents.

12.2.2 Will ensure that that the policy is reviewed and updated to support Governance arrangements.

12.2.3 Will ensure that the policy is current and based on national guidance.

12.2.4 Will learn and react appropriately to any untoward incidents and events related to RT.

12.2.5 Will respond or react to any resource implications related to RT.

12.3 Medical and Nursing Professional Leads:

12.3.1 Will provide or facilitate the provision of training required to support the clinical principles of this policy.

12.3.2 Ensure monitoring is undertaken in-line with Trust policy.

12.4 Trust Pharmacy Team:
12.4.1 Will provide a brief update on RT as part of the Medicines Management essential training day for qualified nursing staff which will include signposting to the e-learning module and any recent updates.

12.4.2 Will offer advice with regard to the content of more comprehensive training and with regard to any changes of policy or guidance that may be needed due to amended national guidance on the use of RT medication.

12.4.3 Will support the maintenance of updating the e-learning module with regard to any changes made in the RT Policy.

12.5 **Ward Managers and Modern Matrons:**

12.5.1 Will understand the policy requirements as it relates to their areas of service and be responsible for the implementation of the policy within their scope of management.

12.5.2 Will identify and support the RT training needs of their nursing staff through preceptorship and supervision programs, staff appraisal and the PDP process, and will reflect these in service training plans.

12.5.3 Will identify and manage service needs in relation to training, skill mix and staff availability to ensure safe procedures for RT at all times.

12.5.4 Will ensure that all registered nurses working in inpatient units and PICUs receive RT training or updates according to Trust mandatory training policy.

12.5.5 Will ensure that RT medication and other associated medication is available and regularly checked to ensure nothing is missing and nothing is due to expire.

12.5.6 Will ensure supportive measures are available to all staff following an RT incident and will ensure that time is made available for reflection and exploration of learning points.

12.6 **Consultants:**

12.6.1 Will understand the policy requirements as it relates to their areas of service and be responsible for the implementation of the policy within their scope of management.

12.6.2 Will liaise with local tutors to identify and support the RT training needs of their junior grade doctors through training programs, supervision, appraisal and the PDP process, and will reflect these in staff training plans.

12.7 **Individual Clinical Staff:**

12.7.1 Will read and understand the policy and guidance. Will complete and pass e-learning module.

12.7.2 Staff administering RT will comply with the requirements of the policy. It is the responsibility of individual nurses administering RT to ensure post-RT monitoring is undertaken and recorded.

12.7.3 Will identify their own training needs in relation to RT through the appraisal process, with reference to the Trust essential training policy.
12.7.4 Will only carry out RT procedures that they have been trained and assessed as competent to do.

13 MONITORING COMPLIANCE WITH THE POLICY

13.1.1 The Drugs and Therapeutics Group will ensure that audits are carried out against the standards set by this policy and guidance.

13.1.2 In conjunction with the audit feedback, this policy will be reviewed at least bi-annually to embed any identified improvements, changes in legislation or best practice. The review will be undertaken by the Chief Pharmacist (Governance & Professional Practice) and will be supported by the Executive Sponsor.

13.1.3 The assistance of the Clinical Audit department will be sought for specific audits.

13.1.4 This policy will be updated on a regular basis to ensure that it continues to reflect national guidance and the NHSLA Risk Management Standards.

14 DEVELOPMENT, CONSULTATION AND RATIFICATION

14.1 This Trustwide policy was most recently reviewed in June 2018 to include standardise monitoring requirements in relation to oral PRN and RT administration and current NICE and BAP guidelines. Ratified by Trust Drugs & Therapeutics Group July 2018.

15 DISSEMINATION AND IMPLEMENTATION OF POLICY

15.1 Following ratification of this policy the Executive Sponsor will ensure the document is forwarded to the Health & Social Care Governance Support Team who will allocate an official document number and log the document on the Trust central database The HSCG Support Team will inform the sponsor and document authors of the official document number allocated.

15.2 The Chief Pharmacists will ensure that the policy is posted on the Trust website and that further staff notification occurs via the D&T Newsletter.

15.3 Further dissemination will be agreed between the authors and the Executive Sponsor and compliance against specified training will be monitored through the audit process.

16 DOCUMENT CONTROL INCLUDING ARCHIVE ARRANGEMENTS

16.1 The Health & Social Care Governance Support Team will maintain an archive of previous versions of the policy and will update the central database and website. Archived documents will be listed on the database, with details of the date they were archived and removed from the website and a link to the superseding document if appropriate.
16.2 Requests from staff to access archived procedural documents can be made to the Health & Social Care Governance Support Team (for all documents dated April 2006 onwards). Requests from other organisations or individuals outside of the Trust must be made in accordance with the Freedom of Information Act.
17 REFERENCES

9. Citrome L. Lurasidone for schizophrenia : a review of the efficacy and safety profile for this newly approved second-generation antipsychotic Int.Journal of Clinical Practice (2011) 65 (2) 189-210

17 OTHER TRUST POLICIES TO BE CROSS-REFERENCED

This protocol should be read and used in conjunction with the following Trust policies and documents.

- Resuscitation & Basic Life Support with Defibrillation Essential Training Schedule (accessed via 'My Learning')
- Rapid Tranquillisation e-learning module (accessed via 'My Learning')
- Medicines Management Update for Qualified Nurses - Training Schedule (accessed via 'My Learning')
- Seclusion and Long Term Segregation Policy

- Advance Decisions and Advance Statements Policy


- Guidelines for the administration of Long Acting Injections in Adults
  [http://www.sussexpartnership.nhs.uk/node/1493/attachment](http://www.sussexpartnership.nhs.uk/node/1493/attachment)
Appendix 1 Physical health monitoring and remedial measures

Rapid Tranquillisation – monitoring

If possible, after any parenteral drug administration, monitor the following:

- Temperature
- Pulse
- Blood Pressure
- Hydration
- Level of Consciousness
- Respiratory Rate

Every 15 minutes, for at least one hour.
If the patient is over-sedated, asleep or significantly unwell, the use of pulse oximetry to continuously measure oxygen saturation must be used. The patient must remain under within eyesight observation at least until they are fully ambulatory again.

ECG and haematological monitoring are also strongly recommended when parenteral antipsychotics are given, especially when higher doses are used. Hypokalaemia, stress, and agitation place the patient at risk of cardiac arrhythmias.

Remedial measures in rapid tranquillisation

Get urgent medical assistance if not already present:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Remedial measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute dystonia (including oculogyric crises)</td>
<td>Give procyclidine 5 – 10mg IM</td>
</tr>
<tr>
<td>Reduced respiratory rate (&lt;10/min) or oxygen saturation (&lt;90%)</td>
<td>Give oxygen; raise legs; ensure patient is not lying face down. Give flumazenil if benzodiazepine-induced respiratory depression suspected. If induced by any other sedative agent, ventilate mechanically.</td>
</tr>
<tr>
<td>Irregular or slow (&lt;50/min) pulse</td>
<td>Refer to specialist medical care immediately.</td>
</tr>
<tr>
<td>Fall in blood pressure (&gt;30mmHg orthostatic drop or &lt;50mmHg diastolic)</td>
<td>Lie patient flat, tilt bed towards head. Monitor closely.</td>
</tr>
<tr>
<td>Increased temperature</td>
<td>Withhold antipsychotics (risk of NMS and perhaps arrhythmias). Check creatinine kinase urgently.</td>
</tr>
</tbody>
</table>
Appendix 2  NEWS RT PROTOCOL - PHYSICAL HEALTH OBSERVATIONS

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Surname</th>
<th>Ward</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>CIS Number:</th>
<th>Date of birth</th>
<th>Consultant</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

Frequency: **EVERY 15 MINUTES, FOR AT LEAST ONE HOUR.** Further monitoring beyond 1 hour should be considered if deemed clinically appropriate (scoring 3 or above for single parameter or total 4 or above).

If you are unable to carry out Physical Health observations, or the patient refuses you must complete **Non-Contact Observations of respiratory rate and level of consciousness using AVPU and record these on this chart.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

**AIRWAY AND BREATHING**

<table>
<thead>
<tr>
<th>RESPIRATORY RATE</th>
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<tbody>
<tr>
<td></td>
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<td></td>
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<table>
<thead>
<tr>
<th>SpO₂</th>
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</table>

<table>
<thead>
<tr>
<th>HEART RATE</th>
</tr>
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<tr>
<td></td>
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<td></td>
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</tbody>
</table>

**CIRCULATION**

<table>
<thead>
<tr>
<th>BLOOD PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEMP</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**DISABILITY**

<table>
<thead>
<tr>
<th>LEVEL OF CONSCIOUSNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL NEWScore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Sugar</td>
</tr>
<tr>
<td>Water Balance Chart Y/N</td>
</tr>
<tr>
<td>Initials/Sig.</td>
</tr>
</tbody>
</table>
Please record patient specific variants in column below and note: This protocol should NOT prevent a practitioner making an appropriate response based upon their clinical judgement.

<table>
<thead>
<tr>
<th>NEWS</th>
<th>Frequency of Monitoring</th>
<th>Clinical Response</th>
<th>Variants - Patient Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Routine monitoring of physical observations</td>
<td>• Continue routine NEWS monitoring with every set of physical health observations</td>
<td>Please specify frequency of monitoring physical observations:</td>
</tr>
<tr>
<td>Total score 1 - 4 (if 3 in one parameter, see below)</td>
<td>Twice daily physical observations &amp; discuss with Medical Team</td>
<td>• Inform Registered Nurse who must assess the patient; • Registered Nurse to decide if increased frequency of monitoring and / or escalation of clinical care is required; • Discuss with Medical Team / Out Of Hours (guidance required)</td>
<td></td>
</tr>
<tr>
<td>SICK! Total NEWS 5-6 or 3 in one parameter Consider sepsis red flag signs</td>
<td>Increase frequency of physical observations to a minimum of 1 hourly &amp; discuss urgently with the Medical Team.</td>
<td>• Registered Nurse to urgently inform the Medical Team caring for the patient. • Urgent assessment by Medical Team (give handover using the *SBARD tool) • Assess if transfer of the patient is required • Consider 999 call for ambulance assistance if doctor is unable to assess within 20 minutes / or if concerns remain over the patient’s Physical Wellbeing. • CONSIDER SEPSIS SCREENING TOOL</td>
<td></td>
</tr>
<tr>
<td>ACT NOW! Total NEWS 7 or more</td>
<td>Continuous monitoring of patient’s Physical Observations &amp; Initiate an emergency call</td>
<td>• Registered Nurse to immediately inform the Medical Team caring for the patient – again out of hours; • 999 call for emergency ambulance assistance to transfer patient to the nearest District General Hospital • Contact patient’s Consultant / nominated Deputy • CONSIDER SEPSIS SCREENING TOOL</td>
<td></td>
</tr>
</tbody>
</table>

**Escalation Protocol SBARD**

<table>
<thead>
<tr>
<th>S</th>
<th>Situation</th>
<th>Your name / designation / ward The patient’s name is … I am concerned because … The NEWS score trigger is.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Background</td>
<td>Brief history Admission Date MHA Status Medication / therapy</td>
</tr>
<tr>
<td>A</td>
<td>Assessment</td>
<td>Treatment Date</td>
</tr>
<tr>
<td>Airway</td>
<td>Is the patient talking? Any airway noises; e.g. gurgling/stridor</td>
<td></td>
</tr>
<tr>
<td>Breathing</td>
<td>Respiratory Rate (RR)? Any respiratory noises e.g. wheeze? Is breathing laboured? Oxygen saturation levels (SpO2)?</td>
<td></td>
</tr>
<tr>
<td>Circulation</td>
<td>Heart Rate (HR)? Capillary Refill Time (CRT)? Blood Pressure (BP)? Temperature?</td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td>Level of consciousness (AVPU)? Blood sugar levels? Pupil reactions?</td>
<td></td>
</tr>
<tr>
<td>Exposure</td>
<td>Exposure &amp; environment Bleeding / rashes, etc.? Any other abnormal signs?</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Recommend</td>
<td>I would like you to do /What would you like me to do?</td>
</tr>
<tr>
<td>D</td>
<td>Decision</td>
<td>Record what has been agreed on the patient’s notes.</td>
</tr>
</tbody>
</table>

*Use SBARD Tool (above) to notify Medical Team*
Appendix 3  **Guidelines for Medical Administration of Intravenous Flumazenil in the Emergency Treatment of Respiratory Depression caused by Administration of a Benzodiazepine.**

<table>
<thead>
<tr>
<th>Guidelines for the use of intravenous flumazenil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indication for use</strong></td>
</tr>
<tr>
<td><strong>Contra-indications</strong></td>
</tr>
<tr>
<td><strong>Caution</strong></td>
</tr>
<tr>
<td><strong>Dose and route</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Administration</strong></td>
</tr>
<tr>
<td><strong>Time before 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</strong></td>
</tr>
</tbody>
</table>

**Monitoring**

- **What to monitor?** Respiratory rate
- **How often?** Continuously until respiratory rate returns to baseline level. Flumazenil has a short half life. Respiratory function may recover then deteriorate again.

*Note: If respiratory rate does not return to normal or patient is not alert after initial doses assume sedation due to some other cause.*
**Appendix 4  Broset Violence Checklist (BVC)**

**Client Name:**

**Quick Instructions:**
Score the patient at the agreed time on every shift. Absence of behaviour gives a score of 0. Presence of behaviour gives a score of 1.

If behaviour is normal for a well-known client, only an increase in behaviour scores 1 e.g. if a well-known client is normally confused (has been for a long time) this will give a score if 0. If an increase in confusion is observed this gives a score of 1.

Score = 0 Risk of violence is small.  
Score = 1-2 Risk of violence is moderate. Preventative measures should be taken.  
Score = 2 or more. Risk of violence is very high. Preventative measures should be taken, and management plan should be formulated.

<table>
<thead>
<tr>
<th>Monday</th>
<th>/</th>
<th>Early 10am</th>
<th>Late 4pm</th>
<th>Night 11pm</th>
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</thead>
<tbody>
<tr>
<td>Confused</td>
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<td>Irritable</td>
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<td>Boisterous</td>
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<td>Verbal threats</td>
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<td>Physical Threats</td>
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<td>Attacking objects</td>
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**Score**
Action taken
Time actions implemented

<table>
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<tr>
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<th>Early 10am</th>
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**Score**
Action taken
Time actions implemented

<table>
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<td>Attacking objects</td>
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**Score**
Action taken
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<th>Physical Threats</th>
<th>Attacking objects</th>
<th>Score</th>
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<th>Time actions implemented</th>
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<tr>
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</tr>
</tbody>
</table>
Appendix 5  

**Specialist Advice Medicines:**

### Specialist advice adults & elderly (exc. Dementia)

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Route</th>
<th>Dose</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>PO/IM/inh</td>
<td>15-30mg</td>
<td>Available in IM injection, tablets, oral dispersible tablets and solution. Enhanced efficacy at oral daily doses higher than a 15mg has not been demonstrated.</td>
</tr>
<tr>
<td>Diazepam</td>
<td>IV</td>
<td>10mg</td>
<td>IM should never be used as very erratic and slow absorption. Diazemuls must be used IV. Give as slow IV injection (5mg / minute). Produces very rapid response. Flumazenil must be available</td>
</tr>
<tr>
<td>Loxapine</td>
<td>Inh</td>
<td>9.1mg</td>
<td>18.2mg</td>
</tr>
</tbody>
</table>

### Specialist advice (Child & Adolescent)

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Route</th>
<th>Dose</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloperidol</td>
<td>PO</td>
<td>&lt;12 years: 0.5-1mg &gt;12 years: 1-2mg</td>
<td>&lt;12 years: 3mg &gt;12 years: 5mg +/- procyclidine.</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>IM</td>
<td>&lt;12 years: 0.5-1mg &gt;12 years: 1-5mg</td>
<td>&lt;12 years: 3mg &gt;12 years: 5mg Bioavailability from the oral route is about 60% of that from the IM route, and readjustment of dose may be required.</td>
</tr>
<tr>
<td>Risperidone</td>
<td>PO</td>
<td>0.5-2mg</td>
<td>&lt;12 years: 2mg &gt;12 years: 4mg The oral dispersible tablet should be placed on the tongue with plenty of water.</td>
</tr>
</tbody>
</table>
### Appendix 6  Pharmacokinetics

<table>
<thead>
<tr>
<th>Drug</th>
<th>Route</th>
<th>Onset of Action*</th>
<th>Peak Concentration</th>
<th>Duration</th>
<th>Half Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>PO</td>
<td>NR</td>
<td>3-5 hrs</td>
<td>NR</td>
<td>75-146 hrs</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>IM</td>
<td>NR</td>
<td>1-3 hrs</td>
<td>NR</td>
<td>75-146 hrs</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>PO</td>
<td>20-60mins</td>
<td>1-4 hrs</td>
<td>12 hours</td>
<td>20-60 hours</td>
</tr>
<tr>
<td>Lorazepam**</td>
<td>PO</td>
<td>20-30mins</td>
<td>2 hrs</td>
<td>6-8 hrs</td>
<td>12 hrs</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>IM</td>
<td>15-30mins</td>
<td>60-90 mins</td>
<td>6-8 hrs</td>
<td>12-16 hrs</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>PO</td>
<td>&gt;1 hr</td>
<td>2-6 hrs</td>
<td>NR</td>
<td>13-40 hrs</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>IM</td>
<td>20mins</td>
<td>20-40mins</td>
<td>NR</td>
<td>13-36 hrs</td>
</tr>
<tr>
<td>Olanzapine***</td>
<td>PO</td>
<td>1 hour</td>
<td>5-8 hrs</td>
<td>NR</td>
<td>31-52 hrs</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>IM</td>
<td>15-30mins</td>
<td>15-45mins</td>
<td>NR</td>
<td>31-52 hrs</td>
</tr>
<tr>
<td>Diazepam</td>
<td>PO</td>
<td>NR</td>
<td>30-90 mins</td>
<td>NR</td>
<td>1-5 days (biphasic)</td>
</tr>
<tr>
<td>Diazepam</td>
<td>IM</td>
<td>NR</td>
<td>Unknown erratic</td>
<td>Unknown erratic</td>
<td>24-48 hrs</td>
</tr>
<tr>
<td>Diazepam (Diazemuls)</td>
<td>IV</td>
<td>5-10 secs</td>
<td>&lt; 15 mins</td>
<td>NR</td>
<td>24-48 hrs</td>
</tr>
<tr>
<td>Promethazine</td>
<td>PO</td>
<td>20 mins</td>
<td>2-3 hrs</td>
<td>2-8 hrs</td>
<td>5-14 hrs</td>
</tr>
<tr>
<td>Promethazine</td>
<td>IM</td>
<td>20 mins</td>
<td>2-3 hrs</td>
<td>2-8 hrs</td>
<td>5-14 hrs</td>
</tr>
<tr>
<td>Zuclopenthixol acetate (Acuphase®)</td>
<td>IM</td>
<td>1-8 hrs</td>
<td>36 hrs</td>
<td>48-72 hrs</td>
<td>20 hrs (after absorption)</td>
</tr>
</tbody>
</table>

NB: The above data correlates to use in adults. Evidence available suggests pharmacokinetics of the above are similar in child and adolescent population.

NR = Not reported  
* Onset of sedation  
** In some cases sublingual lorazepam may result in a faster onset of action than orally administered lorazepam. Sublingual administration of lorazepam also compares favorably in time to onset with intramuscular injection.  
*** Velotabs and Quicklets have no buccal absorption; therefore their onset of action is the same as the non-dispersible tablet.
Appendix 7

Drugs known to prolong QT Interval \(^{(6,7,8)}\)

Some antipsychotics, particularly parental haloperidol and droperidol, are known to increase the QTc on the ECG, even at therapeutic doses. A QTc of greater than 500 ms is associated with an increased risk of torsades de pointes. (BAP 2018) and sudden cardiac death.

CredibleMeds® has reviewed the available evidence for the drugs and place them in one of three designated categories: Known Risk of TdP (KR), Possible Risk of TdP (PR) or have a Conditional Risk of TdP (CR). The full description of these categories can be found on the CredibleMeds.org website (https://www.crediblemeds.org/).

As well as the medication known to cause QT prolongation it is important to consider the patient or conditional risk factors.

Conditional Risk factors include:

- Parenteral medication (IM or IV)
- Excessive doses
- Cardiac disease especially congenital long QT,
- Electrolyte disturbances esp. hypokalaemia, hypomagnesium and hypocalcaemia.
- Extreme physical exertion, stress or shock
- Extremes of age
- Concomitant administration of enzyme-inducing or enzyme-inhibiting drugs (e.g., anti-retrovirals, macrolide antibiotics),

Table of RT medicines risk category for TdP

<table>
<thead>
<tr>
<th>Known risk</th>
<th>Possible risk</th>
<th>Conditional risk</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Prolong the QT interval AND is clearly associated with a known risk of TdP, even when taken as recommended)</td>
<td>(Can cause QT prolongation BUT lack evidence of TdP when taken as recommended)</td>
<td>(Associated with a risk of TdP only under certain conditions of their use – please see risk factors above)</td>
<td>(Not enough evidence to be placed into the risk categories. It is not indicative that the medicine is risk free)</td>
</tr>
<tr>
<td>Droperidol* Haloperidol* Levomepromazine</td>
<td>Aripiprazole Promethazine Risperidone</td>
<td>Olanzapine Quetiapine</td>
<td>Diazepam Lorazepam Zuclopenthixol acetate</td>
</tr>
</tbody>
</table>

* Haloperidol and droperidol license states baseline ECG is available before administering parenterally

Please Note: this list is NOT exhaustive and further advice should be sought from a member of the pharmacy team.
Appendix 8  

Glossary of Terms

Advance decisions and Advance statements (See separate Trust guidance)
These are written instructions agreed between a patient and health professional before treatment begins, in which the patient specifies his or her preferred treatments and identifies the treatments he or she does not wish to receive. They guide health professionals in the event that the patient becomes unable to make decisions for him or herself.

Akathisia (restlessness)
A subjectively unpleasant state of inner restlessness where there is a strong desire or compulsion to move. Foot stamping when seated, constantly crossing/uncrossing legs and/or constantly pacing up and down. Akathisia may be mistaken for psychotic agitation, leading to a cycle of increasing doses. It has also been linked with suicide and aggression towards others.

Disinhibition with benzodiazepines
Disinhibition with benzodiazepines is an uncommon paradoxical reaction characterised by acute excitement and an altered mental state: increased anxiety, vivid dreams, hyperactivity, sexual disinhibition, hostility and rage. A history of aggression or impulsivity, neurological disorders, learning disability, age under 18 or over 65 are significant risk factors. Ingestion of alcohol can increase the severity of this reaction. The reaction is dose dependent with higher doses associated with a higher risk, particularly IV doses. Failure to recognise the reaction may result in the administration of higher doses of benzodiazepines thereby exacerbating the reaction. Antipsychotics drugs should be used to treat behavioural disturbances if disinhibition with benzodiazepines is suspected.

Dyskinesia
A group of involuntary movements that appear to be a fragmentation of the normal smoothly controlled limb and facial movements.

Dystonia
Muscle spasm in any part of the body e.g. eyes rolling upwards (oculogyric crisis) or head and neck twisted to the side (torticollis). The patient may be unable to swallow or speak clearly. In extreme cases the back may arch or the jaw dislocate.

Extrapyramidal side effects (EPSE)
Drug induced side effects especially caused by antipsychotics. These include dystonia, akathisia, pseudo-parkinsonism or dyskinesia. They can be acute or delayed.

Gillick Competence
Term used in medical law to decide whether a child (aged 16 years or younger) is able to consent to his or her own medical treatment, without the need for parental permission or knowledge.
Neuroleptic Malignant Syndrome (NMS)
NMS is a rare but potentially fatal dose-dependent adverse effect of all antipsychotics. The incidence is reported as being 0.07% to 0.15%, but the death rates have been reported at 14% and 38% for oral and depot medication respectively. The signs and symptoms are fever and severe muscle rigidity, sweating, incontinence, altered consciousness, confusion, tachycardia, altered blood pressure, altered LFTs, leucocytosis and raised creatinine kinase.

Pseudo-parkinsonism
Tremor and or/rigidity, bradykinesia (decreased facial expression, flat monotone voice, slow body movements), bradyphrenia (slowed thinking) and salivation. Pseudoparkinsonism can be mistaken for depression or the negative symptoms of schizophrenia.

QTc prolongation
QTc is a measurement obtained from an ECG. If this is above normal limits (440ms for men and 470ms for women) it may predict a risk factor for the ventricular arrhythmia Torsade de Pointes, which is occasionally fatal (sudden cardiac death). Psychotropic agents have been associated with QTc prolongation, although there is controversy over the extent to which QTc prolongation is a risk factor. Above 500ms there is strong evidence for increased risk of arrhythmias. QTc prolongation may occur more frequently with high doses, intravenous administration and in predisposed patients. Check Maudsley guidelines \(^2\) for risk of QTc prolongation.

Reduced respiratory rate
Rate of below 10 breaths per minute, can be caused by benzodiazepines.