Guidance for Drug Treatment of Acute Behavioural Disturbance (Rapid Tranquillisation)

<table>
<thead>
<tr>
<th>Author:</th>
<th>Marjorie McGhie, Lesley Dewar</th>
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<tr>
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# CONSULTATION AND DISTRIBUTION RECORD

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|               | Consultant Psychiatrists & associated medical staff |

# CHANGE RECORD

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<td>L Dewar</td>
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1. **INTRODUCTION**

In a minority of cases behavioural disturbance, including agitation and aggression which occurs during the acute phase of psychosis, schizophrenia, patients with dementia and in individuals with learning disability, requires management by means of rapid tranquillisation. The NICE Clinical Guideline number 25 on Violence states that 'rapid tranquillisation, physical intervention or seclusion should only be considered once de-escalation and other strategies have failed to calm the service user'.

Rapid tranquillisation (RT) in the context of this guidance describes the use of medication to control severe mental and behavioural disturbance including aggression associated with schizophrenia, mania, learning disability and other psychiatric conditions. It usually involves the administration of medication over a limited time period of 30 – 60 minutes. This guidance should not be used for the management of alcohol withdrawal. Unless on specialist advice the guidance should not be used in acute confusional states.

2. **AIM, PURPOSE AND OUTCOMES**

The aim and purpose of this document is to provide guidelines, for medical and nursing staff, on the safe and appropriate use of medication to treat acute behavioural disturbance in in-patients.

3. **SCOPE**

This policy is intended to provide guidelines for medical and nursing staff involved in the treatment in the following patient groups:-

- General Adult Psychiatric In-Patients (18-65yrs)
- In-Patients with Learning Disability
- Old Age Psychiatry In-Patients (>65yrs)
- CAMHS Patients In-patients (12-17yrs)
4. PRINCIPLE CONTENT

4.1. Aim

The aim of RT is to achieve a state of calm in the severely agitated patient who is behaving in a disturbed or violent manner that cannot be modified by interventions already in the patient’s care plan. The purpose of RT is to reduce the risk of imminent and serious violence or harm to self or others, rather than to treat the underlying psychiatric condition. Staff must be trained in how to assess and manage potential and actual violence, using de-escalation techniques, restraint, change of environment and RT. Details of the clinical situation and all interventions must be recorded in the patient’s medical notes.

4.2. General Points

- Patient should only be treated with the following medication after an assessment of risk of harm to self and/or others and when it has been established that the risk of not treating is greater than the risk of acute pharmacological treatment.
- If patient is pregnant or is breastfeeding seek specialist advice and liaise with the patient’s pre-natal team regarding the treatment given.
- RT should only be considered if de-escalation and other non-drug strategies have been tried without success or felt to be inappropriate.
- If medical cover is available the doctor attending the patient must obtain as much history as possible from patient and other sources. (Always seek advice of senior colleague/consultant when unsure).
- Consider non-psychiatric causes of behavioural disturbance and manage accordingly e.g. hypoglycaemia, delirium, drug/alcohol intoxication or withdrawal. Physical causes of distress e.g. pain should be considered particularly in patients with Learning Disabilities or cognitive impairment.
- Note other medication previously prescribed or administered, drug allergies and use of combination doses of oral and IM.
- The patient should be informed of the proposed medication and the reason for giving it. At an appropriate time following the use of rapid tranquillisation, this should be repeated and the patient understands what has happened. This should be communicated in a way that is appropriate for the individual, taking into account any physical, intellectual or language communication difficulties. See Section 12 Links for advice and assistance.
- If an Advance Statement exists it should be given due consideration.
- Mental Health Act status should be checked. If patient is detained a T4 form will need to be completed unless rapid tranquillisation is already included in the treatment form.
- For Old Age Psychiatry wards and other wards without 24 hour medical cover see appendix 2 for advice on dealing with respiratory depression when there is no-one available to administer IV medication.
Refer to the current SPC or BNF for the most up to date advice on contra-indications or drug interactions with current medication.

4.3. Principles of Drug Treatment

- Use oral, then IM if necessary. (IM preferred over IV for safety)
- Vital signs must be monitored after parenteral treatment is administered. (see Appendices 1 & 3)
- Start with the lowest recommended dose because under-dosing is easier to remedy than over-dosing
- Always allow time for medication to work
- Always have facilities for resuscitation available
- Do not administer two drugs at the same time and NEVER mix drugs in the same syringe
- NEVER use the same administration site
- Polypharmacy within a class of medication (e.g. antipsychotics) should, where at all possible, be avoided
- Consider concurrent antipsychotics and the potential for inadvertent High Dose therapy
- If patient has previously responded well to a particular medication it should be used again
- Clopixol Acuphase should never be administered for RT because the onset of effect is too slow. See appendix 4 for guidance on the use of Clopixol Acuphase

4.4. Risks Associated with RT

- Excessive sedation
- Loss of consciousness
- Respiratory depression or arrest
- Cardiovascular complications
- Seizures
- Akathesia, dystonias and dyskinesias
- Neuroleptic malignant syndrome

4.5. Circumstances where Special Caution is Required

Separate treatment guidance has been developed for physically frail adults and those with dementia. Physically frail adults are defined as older adults, those with co-morbid conditions or those who are underweight. There is additional guidance for acutely disturbed patients over 12 years seen by the Child and Adolescent Mental Health Service (CAMHS).

In patients with Learning Disabilities, whose response to the drugs used in rapid tranquillisation is unknown, lower doses should be used initially or the algorithm for CAMHS or Old Age Psychiatry followed. Some people with learning disabilities can be very sensitive to the effects of medication, so until response is established proceed with caution. Lorazepam is usually the drug of choice in these patients particularly if there is a history of epilepsy or behavioural disturbance due to seizure activity cannot be ruled out.
4.6. Assessment Prior to Prescribing RT

Conduct a physical examination where possible with particular reference to:-
- Parkinson’s Disease, lewy body dementia, organic syndromes, acute confusional state
- General condition and weight
- Falls
- State of hydration
- Infection
- Evidence of pre-existing cardiac or pulmonary conditions
- Pregnancy
- Baseline pulse, blood pressure, temperature and respiratory rate
- Head injuries and seizures
- Intoxication with alcohol, benzodiazepines or illicit drugs
- Hypoglycaemia
- Baseline electrolytes and ECG where possible

If a physical examination or any aspect of a physical examination is not possible, the reasons for this should be documented in the patient’s case notes.

4.7. Rapid Tranquillisation Algorithms

The following pages provide algorithms for the drug treatment of acute behavioural disturbances in the stated patient groups. Each algorithm should be used in conjunction with the notes on it’s preceding page and the document in general. After treatment the patient must be monitored as detailed in section 4.8 and Appendix 1.

Adults 18-65 years – notes – pages 8 & 9
Adults 18-65 years – algorithm – page 10
Adults over 65 years – notes – page 11
Adults over 65 years – algorithm – page 12
Adolescents 12-17 years – notes– page 13
Adolescents 12-17 years– algorithm – page 14
4.7.1 Adults 18 - 65 yrs - Drug Treatment (including those with learning disabilities but see section 4.5)

1. Consider NON-DRUG measures:
   talking down, distraction, safe place or change of environment.

2. If medication is required consider previous exposure to antipsychotics and cardiac status.

   NOTE: avoid antipsychotics in patients with cardiac disease– use benzodiazepines alone. If antipsychotic medication is considered necessary seek specialist advice Baseline ECG is recommended prior to treatment with Haloperidol

3. ORAL therapy should be offered initially
   (lower doses may be necessary for patients with learning disabilities- see section 4.6)

   Consider orodispersible or liquid formulations where available

   The following options can be used:

   Lorazepam 1 - 2mg (max dose. 8mg in 24 hours). Repeat after 60 minutes if necessary.
   Sedation in 30-45 minutes, peak plasma concentrations in 2 hours.

   or

   Olanzapine 10mg (maximum dose 20mg in 24 hours) Repeat after 2 hours if necessary
   Peak plasma concentrations in 5-8 hours. (orodispersible tablets available)

   or

   Risperidone 2mg (maximum dose 6mg in 24 hours) Repeat after 2 hours if necessary.
   Peak plasma concentrations in 1-2 hours. (orodispersible tablets available)

   or

   Haloperidol 5mg + Lorazepam 2mg. Repeat after 60 minutes if necessary.
   (Haloperidol maximum oral dose 20mg in 24 hours; 15mg in Learning Disabilities)
   Haloperidol reaches peak plasma concentration in 2-6 hours

   NOTE: Antipsychotics should only be used on specialist advice to manage behaviour problems of dementia in patients regardless of age

3. Consider INTRA-MUSCULAR INJECTION
   If patient has refused oral or if oral therapy unsuccessful.
   See table on following page and algorithm on page 10

4. If no response after repeat injections of any of the options described on the following pages seek further advice from Senior Medical Colleague

   Information on medication for intra-muscular injection included in the algorithm
<table>
<thead>
<tr>
<th>OPTION 1</th>
<th>Drug</th>
<th>Usual Adult Dose</th>
<th>Peak Plasma</th>
<th>Guideline maximum dose</th>
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<tbody>
<tr>
<td>OPTION 1a</td>
<td>Lorazepam IM</td>
<td>2mg Repeat after 30 – 60 minutes if required</td>
<td>1-1.5 hours</td>
<td>Maximum 8mg in 24 hours including any oral</td>
</tr>
<tr>
<td>Only if lorazepam IM is not available</td>
<td>Midazolam IM</td>
<td>7.5mg Repeat after 2 hours if required Note interaction with macrolide antibiotics and ‘azole’ antifungals Reduce dose of midazolam</td>
<td>30 minutes</td>
<td>Maximum 15mg/24 hours Ensure flumazenil I/V is available if respiratory depression occurs</td>
</tr>
<tr>
<td>OPTION 2</td>
<td>Promethazine IM Avoid IM benzodiazepine within one hour</td>
<td>50mg Slow onset of action Allow 2 hours to assess response</td>
<td>Not known</td>
<td>Maximum 100mg in 24 hours</td>
</tr>
<tr>
<td>OPTION 3</td>
<td>Olanzapine IM Do not give within one hour of an IM benzodiazepine</td>
<td>10mg use 5mg if &gt;60 years old or renal/hepatic impairment (Repeat either 5mg or 10mg dose after 2 hours if required)</td>
<td>15 – 45 minutes</td>
<td>Maximum 20mg in 24 hours including any oral Maximum of 3 injections in any 24 hours and treatment for not more than 3 days</td>
</tr>
<tr>
<td>OPTION 4</td>
<td>Aripiprazole IM</td>
<td>9.75mg Repeat after 2 hours if necessary</td>
<td>1 – 3 hours</td>
<td>Maximum 30mg in 24 hours including any oral Maximum 3 injections in 24 hours</td>
</tr>
<tr>
<td>OPTION 5</td>
<td>Haloperidol IM Not recommended for use unless a recent pre-treatment ECG is available and the patient has had a previous good response to haloperidol</td>
<td>5mg Repeat after 30 – 60 minutes if necessary</td>
<td>15 – 60 minutes</td>
<td>Maximum dose 12mg in 24 hours Procyclidine injection must be available</td>
</tr>
</tbody>
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Note:

a) Lorazepam IM can be given in addition to the antipsychotic BUT DO NOT ADMINISTER IM Olanzapine or IM Haloperidol within one hour of administering IM Lorazepam

b) Whenever possible, IM Lorazepam is preferred but best avoided in patients who have significant respiratory impairment because of the risk of respiratory depression. When IM Lorazepam is not available IM Midazolam should be used (note: also risk of respiratory depression)

c) When use of a benzodiazepine is not appropriate e.g. when patient is benzodiazepine tolerant consider using IM promethazine

General Adult (18-65 yrs) Psychiatric In-Patients
Algorithm for Drug Treatment of Acute Behavioural Disturbance

**Consider NON DRUG measures**
E.g. Talking down, time out, seclusion
Obtain as much drug history as possible from the patient and other sources

Always seek senior medical opinion if unsure

### Disturbed but accepting oral medication.
- Nurse in non stimulating area
- On-going verbal de-escalation
- Review current medication
- Decide whether additional oral/ dispersible medication is required

**Lorazepam (1-2mg)**
- Can be repeated after 1 hour (max. 8mg/24 hours)

**or**
- **Olanzapine (10mg)**
  - Can be repeated after 2 hours (max 20mg/24 hours)

**or**
- **Risperidone (2mg)**
  - Can be repeated after 2 hours (max 6mg /24 hours)

**or**
- **Haloperidol (5mg) + lorazepam(2mg)**
  - Can be repeated after 1 hour (max. 20mg haloperidol/24 hours; 15mg in learning Disabilities 8mg lorazepam/24hours)
  - NOTE: Antipsychotics should only be used on specialist advice to manage behaviour problems of dementia in patients regardless of age

### Disturbed (includes violence to self or others) but refusing oral medication
- Review all medication prescribed & administered within the last 24 hours. (BNF limits, side effects)
- Seek Senior Medical opinion if unsure
- If medication to be used:
  - **Option 1:** Lorazepam 1-2mg IM
    - Can be repeated after 30 – 60 minutes.
    - (max. 8mg/24 hours)
    - Sedation in 30-45minutes, peak 1-3 hours, lasts 4-6 hours.
  - **Option 1a:** (only when lorazepam IM is not available) **Midazolam 7.5mg IM**
    - Repeat after 2 hours if required (max. 15mg/24 hours)
    - Sedation in 18 minutes, peak 30 minutes, lasts 82 minutes
  - **Option 2:** Promethazine 50mg IM
    - Allow 2 hours to assess response (max 100mg/ 24hours)
  - **Option 3:** Olanzapine 5-10mg IM
    - Can be repeated after 2 hours (max .dose 20mg /24 hours in max. of 3 injections)
    - Peak plasma 15-45mins
  - **Option 4:** Aripiprazole 9.75mg IM
    - Repeat after 2 hours if necessary (max. 30mg/ 24hours)
    - Peak plasma 1 – 3 hours. Half life 75 – 146hours
  - **Option 5:** Haloperidol (5mg) IM
    - Can be repeated after 30- 60 minutes.
    - (maximum 12mg/24 hours)
    - Sedation in 10minutes, peak 15-60 minutes
    - Half-life 10-36 hours.

**IM Lorazepam (or midazolam) can be given in addition to the IM antipsychotic but**
**DO NOT use IM Lorazepam (or midazolam) and IM Olanzapine or IM Haloperidol within an hour or each other**

If no improvement after second injection consult Senior Colleague.
4.7.2. Adults over 65 years and frail adults – Drug Treatment

1. Consider NON-DRUG measures:
   - Talking down, distraction, safe place or change of environment

2. If medication is required, consider previous exposure to antipsychotics, presence of Lewy Body Dementia and cardiac status
   - Antipsychotics should not normally be used if Lewy Body Dementia has not been ruled out because of the risk of neuroleptic sensitivity. Seek specialist advice if antipsychotic medication is being considered

Note: Where possible avoid antipsychotics in patients with cardiac disease—use benzodiazepines alone. If antipsychotic medication is being considered seek specialist advice. Baseline ECG is recommended prior to treatment with haloperidol – if ECG is not available the reason why should be documented in the notes.

2. ORAL therapy should be offered initially
   Consider liquid or orodispersible formulations where available
   - **Where Dementia with Lewy Bodies is present or cannot be excluded:**
     Lorazepam 0.5 - 1mg (max dose 2mg in 24 hours.)
     Repeat after 60 minutes if necessary.
     Sedation in 30-45 minutes; peak plasma concentration in 2 hours
     or
     Trazodone 50mg (max dose 100mg in 24 hours)
     Peak plasma concentration in 2 hours

   - **Where Dementia with Lewy Bodies has been excluded:**
     Lorazepam 0.5mg - 1mg (max dose 2mg in 24 hours.)
     Repeat after 60 minutes if necessary.
     Sedation in 30-45 minutes; peak plasma concentration in 2 hours
     or
     Haloperidol 0.5mg – 1mg (maximum oral dose 3mg in 24 hours.)
     Repeat after 60 minutes if necessary.
     Haloperidol reaches peak plasma concentration in 2-6 hours.

*(NOTE: There is a clear increased risk of stroke and a small increased risk of death when antipsychotics (typical or atypical) are used in elderly people with dementia – MHRA guidance March 2009.)*
**IN CASES OF EXTREME EMERGENCY ONLY**

Consider intra-muscular injection

lорazepam 0.5mg – 2mg IM (or midazolam I/M 0.5 – 1mg if lorazepam IM not available)

Note: Midazolam should be given only if there are trained staff present who can administer I/V flumazenil

or

haloperidol 0.5mg – 1mg IM

(only use haloperidol if Dementia with Lewy Bodies has been ruled-out)
4.7.3. CAMHS patients (12-17 yrs) - Drug Treatment

1. Consider NON-DRUG measures:
   o talking down, distraction, safe place or change of environment.
   o Assess the nature of the disturbed mental state
   o Exclude causes due to physical illness
   o Obtain past and current medication history

2. If medication is required, consider previous exposure to antipsychotics. Adolescents have developing brains and are vulnerable to side effects e.g. disinhibition due to the use of benzodiazepines. Start with the lowest recommended dose unless the patient has had the medication before and is known to tolerate and require a higher dose. Use the lowest possible dose at all times. It is NEVER appropriate to use haloperidol in adolescents.

3. ORAL therapy should be offered initially. Consider liquid or orodispersible formulations where available. The following options can be used:

   Lorazepam 0.5 – 2mg (max dose 4mg in 24 hours) Repeat after 60 minutes if necessary. Sedation in 30 – 45 minutes, peak plasma concentrations in 2 hours
   Or
   Promethazine 10 – 25mg (max 50mg/ 24 hours) Repeat after 60 mins if necessary
   Or
   Olanzapine 2.5mg – 5mg (max 20mg/24 hours) Repeat after 60 mins if necessary. Peak plasma concentrations in 5 – 8 hours (orodispersible tablets available)
   Or
   Risperidone 0.5 – 2mg (Max 6mg/ 24 hours) Repeat after 60 mins if necessary. Peak plasma concentrations in 1 – 2 hours (orodispersible tablets available)

4. Consider Intra-Muscular Injection if patient has refused oral or if oral therapy is unsuccessful after 2 repeated doses 60 minutes apart.

   Lorazepam injection 0.5mg – 2 mg IM: onset of action 20 – 40 minutes (max 4mg/24 hours – inclusive of oral & IM doses) Repeat after 60 minutes if required
   Or
   Promethazine 10 – 25mg IM: slow onset of action (max dose 50mg/24 hours – inclusive of oral & IM doses) Repeat after 60 minutes if required

In patients with confirmed history of previous antipsychotic exposure:

   Olanzapine IM 2.5 – 10mg: onset of action 15 – 30minutes. (Max 20mg/ 24 hours – inclusive of oral & IM doses – max 3 injections). Wait 2 hours before repeating.
   Do not administer IM lorazepam and IM olanzapine within 1 hour of each other.
   Or
   Aripiprazole 5.25 – 15mg: Onset of action 15 – 20 minutes. Repeat after 2 hours if necessary (Maximum dose 30mg/ 24 hours).

Always consider the feasibility of administering an oral atypical antipsychotic as in step 2.
CAMHS patients (12-17 yrs)
Algorithm for Drug Treatment of Acute Behavioural Disturbance
(Rapid Tranquillisation)

**Consider NON DRUG measures**
Eg. Talking down, time out, seclusion
Obtain as much drug history as possible from the patient and other

Always seek senior medical opinion if unsure

If unsuccessful or inappropriate.

**Disturbed but accepting oral medication**
- Nurse in non stimulating area
- On-going verbal de-escalation
- Review current medication
- Decide whether additional oral/ dispersible medication is required

Lorazepam 0.5mg – 2mg
Can be repeated after 60 minutes (max. 4 mg/24 hours)

Or
Promethazine 10 – 25mg
Can be repeated after 60 minutes (max. 50mg/24 hours)

Or
Olanzapine 2.5 – 5mg
Can be repeated after 60 minutes (max 20mg/24 hours)

Or
Risperidone 0.5 – 2mg
Can be repeated after 60 minutes (max 6mg /24 hours)

Consider combination of lorazepam and antipsychotic if required

**Plan for next 24 hours:**
Continue to monitor status and review all ‘prn’ drugs

**Disturbed (includes violence to self or others) but refusing oral medication**
- Review all medication prescribed & administered within the last 24 hours. (BNF limits, side effects)
- Seek Senior Medical opinion if unsure
- If medication to be used:-

**Option 1: Lorazepam** 0.5mg – 2 mg IM
Can be repeated after 60 minutes. (max 4mg/24 hours – oral & IM doses)
Sedation in 30-45minutes, peak 1-3 hours, lasts 4-6 hours.

**Option 2: Promethazine** 10 – 25mg
Can be repeated after 60 minutes (max 50mg/24 hours –oral & IM)

In patients with confirmed history of previous antipsychotic exposure

**Option 3: Olanzapine 2.5 -10mg IM**
Can be repeated after 2 hours (max dose 20mg /24 hours in max. of 3 injections) Peak plasma 15-45mins

**Option 4: Aripiprazole 5.25 – 15mg IM**
Can be repeated after 2 hours (max 30mg/ 24hours)
Peak plasma: 1 – 3 hours. Half life 75 – 146 hours

IM Lorazepam can be given in addition to the IM antipsychotic but DO NOT use IM Lorazepam and IM Olanzapine within one hour of each other
4.8. Monitoring after treatment

- Visual observation of the patient should be maintained at all times.

- **Blood pressure, pulse, temperature, respiratory rate and level of consciousness should be monitored EVERY 5-10 minutes, after IM injections, for ONE hour. Results of vital signs to be recorded on the appropriate scale.**

- If it is impossible to monitor the above parameters this must be documented in the nursing and medical notes.

- After the first hour continue to monitor HALF hourly for 4 hours and continue 4-hourly thereafter or until the patient becomes ambulatory.

- If the patient is asleep or unconscious, the use of pulse oximetry to continuously measure oxygen saturation is recommended.

- ECG and biochemical 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.

Results of monitoring should be documented in patient's notes.

For remedial measures see Appendix 1.

5. **ROLES AND RESPONSIBILITIES**

NHS Lanarkshire Mental Health and Learning Disability Drugs and Therapeutics Committee and Clinical Governance Committee are responsible for ratifying this policy and overseeing the implementation of this policy.

The Chief Executive is legally accountable for the quality of care that service users receive and for securing service user safety.

All staff working on the inpatient units must be aware of the contents of this policy and have undertaken the required training to be able to implement this policy.

It is the responsibility of the lead nurse present at the time of use of rapid tranquilisation to ensure that a post tranquilisation review is conducted for both service users and staff.

6. **RESOURCE IMPLICATIONS**

There are no additional resource requirements from the previous rapid tranquillisation policy.
7. COMMUNICATION PLAN

Dissemination to Mental Health & Learning Disability medical and nursing staff and in-patient wards (General Adult, Old Age Psychiatry and Kylepark)
First Port (Pharmacy Mental Health site)
Link Mental Health Prescribing Guide.

8. QUALITY IMPROVEMENT

These guidelines will be reviewed by Mental Health Drug & Therapeutics Committee two years after implementation. Intermediate amendments, in response to relevant changes to the product licenses of the drugs listed in these guidelines, may be necessary and will be identified by the Mental Health Drug & Therapeutic Committee.

9. EQUALITY AND DIVERSITY IMPACT ASSESSMENT

This policy meets NHS Lanarkshire’s EDIA

10. Summary

In a minority of cases behavioural disturbance, in patients with mental health problems requires management by means of rapid tranquillisation. This guidance describes the use of medication to control severe mental and behavioural disturbance including aggression associated with schizophrenia, mania, learning disability and other psychiatric conditions. The guidance outlines appropriate strategies for managing disturbed patients and details the oral and intra-muscular medication considered suitable for administration to adults 18 years old and over, adults over 65 years old & frail adults and patients in the Child and Adolescent Mental Health Service ages 12-17 years. The guidance should not be used for the management of alcohol withdrawal or in acute confusional states. Medication characteristics and appropriate dosing regimens for the recommended medications are listed in this guidance and remedies for adverse reactions are included.
11. REFERENCES


12. LINKS

   This website provides patient information on medicine used for Mental Health Conditions and has information on Acute Psychiatric Emergency

   This is the link to NHSL Interpreting services

   This is the link to NHSL Equality and Diversity webpage

4. www.medicines.org.uk
   This is the link to the Electronic Medicines Compendium which provides the Summary of Product Characteristics for individual medicines.

   This is the link to access the BNF and the BNF for children.

   This is the link to this document. Please ensure you are using the most up to date version of this document.

Appendix 1 – Physical health monitoring and remedial measures
Rapid Tranquillization – monitoring
After any parenteral drug administration monitor the following:-

- Temperature
- Pulse
- Blood Pressure
- Respiratory Rate

Every 5 – 10 minutes for one hour then half hourly until patient is ambulatory. See monitoring sheet Appendix 3

If the patient is asleep or unconscious the use of pulse oximetry to continuously measure oxygen saturation is desirable. A nurse should remain with the patient until they are 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

<table>
<thead>
<tr>
<th>Remedial measures in rapid tranquillization</th>
<th>Remedial measures</th>
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<tbody>
<tr>
<td><strong>Acute Dystonia</strong> <em>(including oculogyric crises)</em></td>
<td>Give procyclidine 5 – 10mg IM</td>
</tr>
<tr>
<td><strong>Reduced respiratory rate</strong> <em>(&lt;10/min)</em> or <strong>oxygen saturation</strong> <em>(&lt;90%)</em></td>
<td>Give oxygen; raise legs; ensure patient is not lying face down. Give flumazenil if benzodiazepine-induced respiratory depression suspected <em>(see appendix 2)</em>. If induced by any other sedative agent transfer to appropriate care to ventilate mechanically</td>
</tr>
<tr>
<td><strong>Irregular or slow pulse</strong> <em>(&lt;50/min)</em></td>
<td>Refer to specialist medical care immediately</td>
</tr>
<tr>
<td><strong>Fall in blood pressure</strong> <em>(&gt;30mmHg orthostatic drop or &lt;50mmHg diastolic)</em></td>
<td>Lie patient flat, tilt bed towards head. Monitor closely</td>
</tr>
<tr>
<td><strong>Increased temperature</strong></td>
<td>Withhold antipsychotics <em>(risk of NMS and perhaps arrhythmias)</em> Check creatinine kinase urgently Monitor closely. Obtain CPK levels. Cool patient Refer to ITU if continued or other signs of NMS: Sweating, Hypertension or fluctuating BP, Tachycardia, Incontinence/ Retention/ Obstruction, Muscular rigidity <em>(may be confined to head and neck)</em>, Confusion, Agitation/ Altered Consciousness.</td>
</tr>
</tbody>
</table>

Appendix 2 – Guidelines for the use of flumazenil
### Guidelines for the use of flumazenil

<table>
<thead>
<tr>
<th><strong>Indication for use</strong></th>
<th>If respiratory rate falls below 10/minute after the administration of lorazepam, midazolam or diazepam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contra-indications</strong></td>
<td>Patients with epilepsy who have been receiving long-term benzodiazepines</td>
</tr>
<tr>
<td><strong>Caution</strong></td>
<td>Dose should be carefully titrated in hepatic impairment</td>
</tr>
<tr>
<td><strong>Dose and route of administration</strong></td>
<td>Initial 200micrograms intravenously over 15 seconds – if required level of consciousness not achieved after 60 seconds then subsequent dose of 100 micrograms over 10 seconds</td>
</tr>
<tr>
<td><strong>Time before dose can be repeated</strong></td>
<td>60 seconds</td>
</tr>
<tr>
<td><strong>Maximum dose</strong></td>
<td>1mg in 24 hours (one initial dose and eight subsequent doses)</td>
</tr>
<tr>
<td><strong>Side effects</strong></td>
<td>Patients may become agitated, anxious or fearful on awakening. Seizures may occur in regular benzodiazepine users</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Side effects usually subside</td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
<td>Respiratory rate</td>
</tr>
<tr>
<td>o what to monitor</td>
<td>Continuously until respiratory rate returns to baseline level. Flumazenil has a short half life. Respiratory function may recover then deteriorate again</td>
</tr>
<tr>
<td>o how often?</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:-**

1) If respiratory rate does not return to normal or patient is not alert after initial doses assume sedation due to some other cause

2) Few of the mental health and learning disabilities wards have 24 hour medical cover or nursing staff trained to administer IVs. In the event that a patient experiences respiratory depression after administration of IM Lorazepam and no trained member of staff is available to administer flumazenil, a 999 call should be made and the patient transferred to A&E by ambulance. Each of the three A&E departments at the acute sites holds a stock of Flumazenil.

3) All wards should hold a stock of IV flumazenil for use in emergency.

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**Appendix 3**

**Monitoring Sheet**
Record of Observations after parenteral drug administration (every 5 – 10 minutes)

In normal circumstances this monitoring form should be completed and retained in the patient’s notes whenever RT is administered. If there are occasions when close monitoring is not possible or is considered inappropriate, this should be clearly documented in the patient’s notes.

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>CHI Number:</th>
<th>Ward</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Temp °C</td>
<td>Pulse</td>
<td>Blood Pressure</td>
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</tbody>
</table>

Appendix 4    Guidance for the Use of Zuclopenthixol Acetate
(Clopixol Acuphase) Injection

Introduction
Zuclopenthixol acetate injection (Acuphase) is a potentially hazardous and toxic preparation with very little published information to support its use. Acuphase should never be considered as a first-line drug for Rapid Tranquilisation because its action is not rapid. Sedative effects usually begin to be seen 2 hours after injection and peak after 12 hours. The effects may last for 72 hours. It should also be noted that the administration of an oil-based injection carries very high risk in a highly agitated patient.

Licensed Use
Acuphase is licensed as ‘initial treatment of acute psychoses, including mania and exacerbation of chronic psychoses, particularly where a rapid onset of action and duration of 2-3 days is desirable’ However, as already noted, it is important to recognise that onset of action is not as rapid as may be believed or required, particularly where rapid tranquillization is needed.

Acuphase should never be used
- For patients who are antipsychotic naïve or have no available history of use of antipsychotics
- As first line sedation
- In situations requiring immediate sedation
- For patients who have a history of Neuroleptic Malignant Syndrome
- For patients who will accept oral antipsychotic medication
- For patients known to be sensitive to extrapyramidal side effects
- For unconscious patients
- For patients who are pregnant or are breast-feeding
- For patients with severe cardiovascular or respiratory disease
- For patients who are known to have convulsive disorders, risk factors for stroke, renal or hepatic disease
- Outside the inpatient setting because the patient will require close monitoring over a full 24-hours.

Acuphase should be used with extreme caution
- In an attempt to hasten the antipsychotic effect of other antipsychotic therapy
- At the same time as other parenteral antipsychotics or benzodiazepines – may lead to over-sedation which is difficult to reverse
- For a patient who is physically resistant – risk of intravasation and oil embolus
- When an illicit substance or alcohol has been used

Acuphase should only be used after an acutely psychotic patient has required repeated injections of sedative drugs such as lorazepam and/or short-acting antipsychotics such as haloperidol or olanzapine and these have not been effective. (Unless there is an advance statement for use of Acuphase).
Further to this, Acuphase should be given only when enough time has elapsed to fully assess the response to previously injected drugs, i.e. at least 15 minutes after IV injections and at least 60 minutes after those administered intramuscularly.

Dose
Acuphase is licensed at a dose of 50mg to 150mg (1-3ml) by deep intramuscular injection into the gluteal muscle or lateral thigh, repeated if necessary after 2 or 3 days. (Some patients may need an additional injection between 1 and 2 days after the first). The maximum dose per injection for an elderly patient is 100mg (2ml), and for all patients the accumulated dosage must not exceed 400mg (or 4 injections) within a 2-week period

Acuphase should not be viewed as a ‘course of treatment’ and the patient should be carefully reviewed before each dose is prescribed / administered. The maximum licensed duration is to ensure that a treatment plan is put in place for the patient. More frequent administration or a more prolonged treatment period is outwith the terms of the Product Licence and should only occur in very exceptional circumstances.

Injections should be spaced at least 24 hours apart.
Onset and Duration of Action
Sedative effects of Acuphase usually begin to appear within 2 hours of injection and peak after 12 hours. Significant effects may last for up to 72 hours although full elimination of the drug may not be complete for 7 days.

Monitoring
The patient must be carefully monitored after each injection and a specific recording sheet has been developed for this purpose. Completed records should be retained in the patient’s notes.
### Appendix 5  Clopixol Acuphase – Record of Post-Administration Observation

<table>
<thead>
<tr>
<th>Time since administration</th>
<th>Time (24-hr clock)</th>
<th>Blood Pressure</th>
<th>Temp. °C</th>
<th>Pulse Oximeter*</th>
<th>Respiration Rate</th>
<th>Comments (eg. level of sedation)</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 mins</td>
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</tbody>
</table>

*A pulse oximeter reading is needed only if the patient is asleep or unconscious*
### Appendix 6  
#### Audit Criteria

<table>
<thead>
<tr>
<th>Description of criterion</th>
<th>Standard</th>
<th>Exclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff trained in the short-term management of disturbed/ violent behaviour in line with item 4.1</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>Risk assessment of harm to self and/or others recorded in case notes</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>De-escalation and non-drug strategies have been tried without success</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>Medication given in line with requirements of patient’s current legal status under the Mental Health Act</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>Oral medication offered before IM is considered</td>
<td>100%</td>
<td>Patient too unwell or on covert medication care plan</td>
</tr>
<tr>
<td>Vital signs monitored on appropriate RT Monitoring Sheet</td>
<td>100%</td>
<td>Patient refuses/ unable to co-operate</td>
</tr>
<tr>
<td>Drug doses outwith those in the Guidance are recorded in patients’ notes</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>Advice sought from a consultant if no response to a second injection</td>
<td>100%</td>
<td>None</td>
</tr>
</tbody>
</table>