Cheshire and Wirral Partnership
NHS Foundation Trust

Document level: Trustwide (TW)
Code: MP10
Issue number: 11.11

Violence and aggression: Pharmacological short term management (incorporating Rapid Tranquillisation)

Lead executive	Medical Director - Compliance, Quality and Assurance
Authors details	Jennifer Southern – Senior Clinical Pharmacist Hazel Sharp – Deputy Chief Pharmacist Fiona Couper – Chief Pharmacist

Type of document	Policy
Target audience	All clinical staff
Document purpose	The policy advises on the pharmacological management of acute agitation or aggression within inpatient units of CWP. It covers assessment, documentation, treatment, monitoring, and follow up in relation to these pharmacological approaches. The policy includes three algorithms of treatment: one for CAMHS, one for patients aged 18-65 years, and one for patients over 65 years of age.

Approving meeting	Medicines Management Group	Date Nov 20
Implementation date	February 2021	

CWP documents to be read in conjunction with	
CP6	The management of challenging behaviour, violence and aggression
GR1	Incident reporting and management policy
CP25	Therapeutic observation policy for inpatients
CP38	Seclusion and segregation policy
CP10	Safeguarding adults policy
CP40	Safeguarding children policy
MH	All mental health act policies
CP35	Physical health pathway and policy
CP24	CPR policyHigh Dose Antipsychotic Therapy (HDAT) guideline
MP18	Advance Statements
CP19	Policy for the initiation and maintenance of prescribing medicines for off-label indications
MP9	Physical observations assessment and the management of altered levels of consciousness (including NEWS, PEWS, Pregnancy EWS, AVPU, GCS, Care and Management of the intoxicated Service User and ECG Recording
TW	
SOP3	

Document change history	
What is different?	• Changes to definition of RT related to IM injections given as part of a careplan. Addition of Physical Health RT monitoring form • Line added to information on lorazepam injection : *Please check lorazepam injection brand as in times of shortage alternative preparations may not require dilution
Appendices / electronic forms	• Previous ”Appendix 5 - Observation sheets for monitoring after rapid tranquillisation” removed to align with trust policy on physical observations. • Previous “Appendix 3 - Rapid Tranquillisation policy audit tool” removed as this tool is currently under review and being updated.

What is the impact of change?	Low

Training requirements	Training requirements for this guideline are in accordance with the CWP Training Needs Analysis (TNA) with Education CWP.

Document consultation	
Clinical Services	Dr Miles Jefferson– MMG Chair & Consultant Psychiatrist, Dr Julia Payne, Consultant Psychiatrist; Hayley McGowan, Associate Director of Nursing and Therapies
Corporate services	
External agencies	N/A

Financial resource implications	None

External references

1. NICE guideline NG10 - Violence and aggression: short-term management in mental health, health and community settings, published online May 2015
   https://www.nice.org.uk/guidance/ng10

2. Summary of Product Characteristics Haloperidol 5mg/ml Injection.Advanz Pharma, published online 18/03/2019
   https://www.medicines.org.uk/emc/medicine/23005/SPC

3. Summary of Product Characteristics Haloperidol Oral Solution BP 10 mg/5 ml . Pinewood Healthcare, published online 13/03/2018
   https://www.medicines.org.uk/emc/product/4521/smpc

4. Patel, MX, Sethi, FN, et al. (2018) Joint BAP NAPICU evidence-based consensus guidelines for the clinical management of acute disturbance: de-escalation and rapid tranquillisation. *Journal of Psychiatric Intensive Care,* published online 8 June 2018.

5. Online BNF accessed Sept 2018
   https://bnf.nice.org.uk/

6. Prescribing Guidelines in Psychiatry 13th Edition The Maudsley 2018

Equality Impact Assessment (EIA) - Initial assessment	**Yes/No**	**Comments**
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?		
Select		
Is the impact of the document likely to be negative?	No	

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
- If so can the impact be avoided? - What alternatives are there to achieving the document without the impact? - Can we reduce the impact by taking different action?	N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted. If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	N/A	
What is the level of impact?	N/A	

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Contents

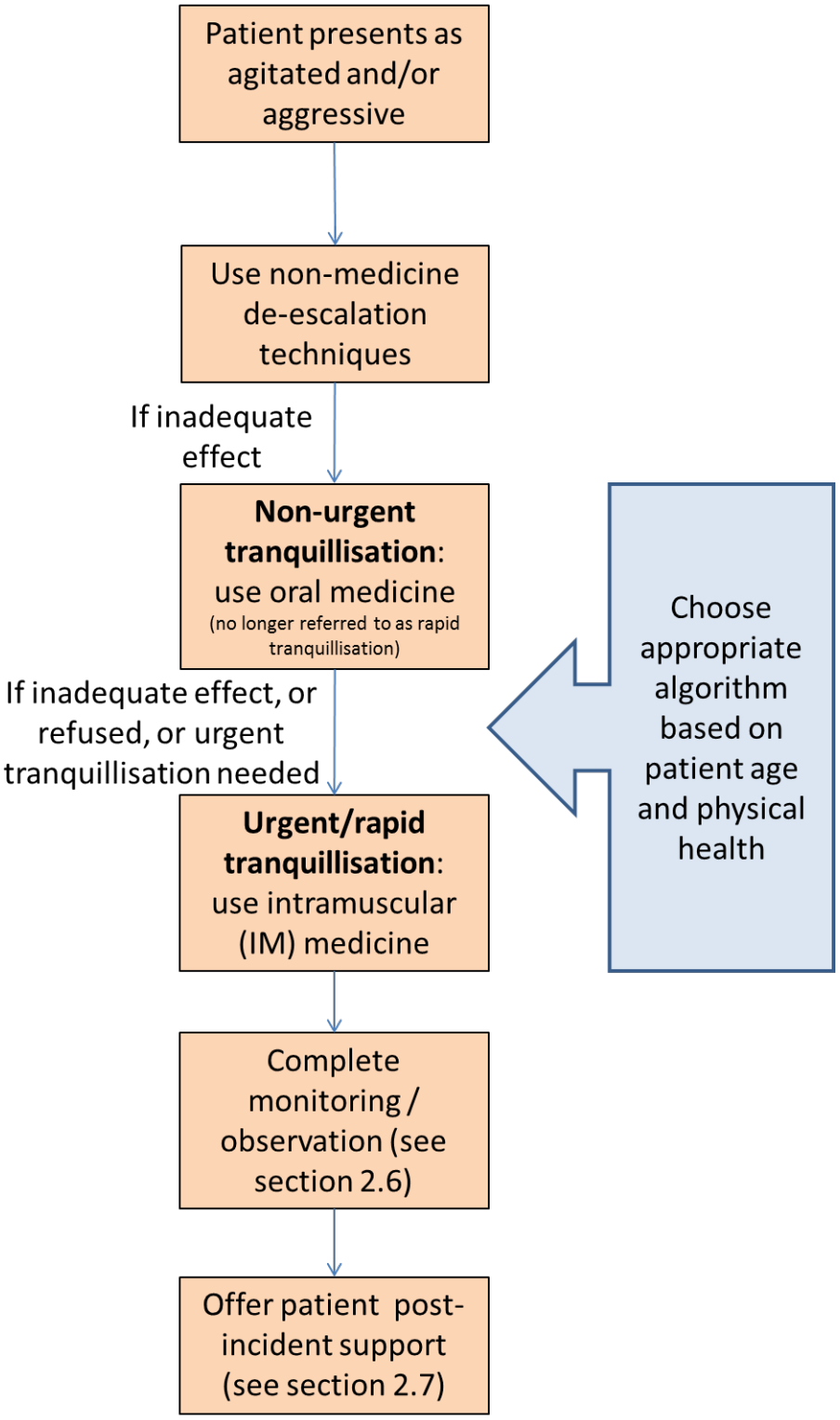
Quick reference flowchart 5

1. Introduction 6
1.1. Purpose 6
2. General advice and definitions 6
2.1. Tranquillisation (pharmacological management of acute agitation or aggression) 6
2.2. Route of administration 7
2.3. Assessment and documentation 7
2.4. Medicines for tranquillisation 8
2.4.1. Overarching recommendations 8
2.4.2. Use of medication to reduce the risk of violence and aggression 9
2.4.3. Prescribing guidelines for rapid tranquillisation 9
2.4.4. Choice of medication 10
2.4.5. Zuclopenthixol acetate (Clopixol Acuphase®) 10
2.4.6. Table 1: Medicines used for management of acute agitation or aggression – their properties, cautions and advice notes 11
2.4.7. Table 2: Haloperidol administration - oral and intramuscular doses 13
2.4.8. Risks and complications associated with rapid tranquillisation 14
2.4.9. Managing the complications and adverse effects of medication 15
2.5. Patient group and medication algorithms 16
2.5.1. Selection of algorithms 16
2.5.2. Use of medicines for tranquillisation in older people 16
2.5.3. Use of medicines for tranquillisation in younger people 17
2.5.4. Use of medicines for tranquillisation in people with a learning disability 18
2.5.5. Use of medicines for tranquillisation in women who are pregnant 18
2.5.6. Algorithms for Tranquillisation 18
2.6. Recording physical health observations post administration of rapid tranquillisation. 22
2.6.1. Table 3: Monitoring of patient after rapid tranquillisation 23
2.7. Post - incident support 24

Appendix 1 - The Neuroleptic Malignant Syndrome (NMS) 25
Appendix 2 - Patient post - rapid tranquillisation feedback 26
Appendix 3 - Paradoxical reactions to benzodiazepines 27

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Quick reference flowchart



Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

1. Introduction

This document is intended to advise rather than dictate. It will not always be practical to adhere rigidly to the policy, particularly with a difficult to manage patient and at the stage when the algorithm has been followed and resolution is still not achieved. The policy should not supersede clinical judgement.

1.1. Purpose

The aims of the policy are to:

- Reduce psychological suffering and self-harm for patients;
- Maintain a safe environment;
- Prevent harm.

Guidance is provided for inpatients in Cheshire & Wirral Partnership NHS Foundation Trust (CWP) units or wards:

- Younger people (under 18 years old);
- Working age adults (18 – 65 years old);
- Older adults (over 65 years old);
- People with learning disability.

The pharmacological management of agitation and aggression for younger people may involve the off-label use of medicines and requires competence and careful consideration in relation to capacity to consent (see section 2.5.3)

2. General advice and definitions

De-escalation: The use of skills and techniques, verbal or non-verbal, which aim to defuse anger and aggression.

Tranquillisation: The administration of medicine(s), orally or parenterally (IM), with the aim of calming or lightly sedating a patient in order to reduce the risk to the patient or others from agitated or aggressive behaviour. The aim is to achieve an optimal reduction in agitation and aggression, thereby allowing a thorough psychiatric evaluation to take place whilst allowing comprehension and response to spoken messages throughout. Tranquillisation should only be used if non-medicine de-escalation has had inadequate effect.

Non-urgent tranquillisation: Tranquillisation using orally administered medicine(s). This should be used in preference to rapid/urgent tranquillisation whenever possible (see below).

Rapid / urgent tranquillisation: Tranquillisation using parenterally(IM) administered medicine(s). This should only be used if non-urgent tranquillisation is not possible (e.g. due to patient refusal), not appropriate (i.e. urgent need), or has inadequate effect. Please note that, in line with NICE NG10, ***the term rapid tranquillisation no longer incorporates the use of oral medicine(s)*** for the management of agitation or aggression.

PRN (pro re nata) medication: Medicines that are used when required. PRN medication can be used as part of de-escalation but medication used alone is not de-escalation.

Restrictive interventions: Interventions that may infringe a person's human rights and freedom of movement. This includes rapid/urgent tranquillisation, physical restraint, and seclusion.

2.1. Tranquillisation (pharmacological management of acute agitation or aggression)

It is sometimes necessary to use medicines as part of the management of acute agitation, excitement, or aggression. The aim of this is to calm or lightly sedate the patient; deep sedation and sleep are not desirable outcomes. Rapid (or urgent) tranquillisation refers to the use of parenteral medication for this purpose. However, the oral route of medicine administration is preferred where possible.

This policy covers the acute use of medication to control severe mental and behavioural disturbance, including:

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

- Aggression associated with the mental illness of schizophrenia, mania and other psychiatric conditions;
- Organic disorders, including dementia and delirium from a variety of causes, including acute renal or systemic infections;
- Childhood and developmental disorders, including conduct disorder, hyper-kinetic disorder, autism and learning disabilities.

The use of medication for acute management of aggression (i.e. tranquillisation) provides a short term strategy for managing a high risk of imminent violence. Medium and longer term measures should be considered at an early stage with the aim of avoiding repeated use of tranquillisation medication. The diagnosis and its relationship to violence should be considered. Regular treatment should be reviewed.

There may be two types of patient requiring rapid tranquillisation:

- Those who require repeated injections due to persistent refusal of oral medication and resulting aggressive behaviour;
- Those who require only one or two injections early on in their treatment.

For the former group, the following may be appropriate options to consider as part of the overall management plan:

- Zuclopenthixol acetate (Clopixol Acuphase®) injection; or
- A depot antipsychotic injection

Such strategies are likely to be less appropriate for the latter group.

2.2. Route of administration

It is generally accepted that in situations of developing violence and aggression, oral formulations should be offered as part of de-escalation. If they are refused or are inappropriate, then medication may be administered parenterally via intramuscular (IM) injection . Use a site for IM administration which maintains patient dignity and reduces risk – lorazepam, haloperidol and promethazine may be administered into the deltoid, gluteal or lateral thigh muscle. Olanzapine IM should only be administered into the gluteal muscle.

The decision to employ rapid tranquillisation should be made by the multidisciplinary team (MDT).

2.3. Assessment and documentation

To be completed whenever possible prior to the administration of medication to calm or lightly sedate the patient:

a) All clinical staff should be familiar with the procedures involved.

b) Relevant history inclusive of the following should be taken into account prior to administration:
   - Medication taken within the last 48 hours, in order to avoid overdose;
   - Beneficial and adverse effects of previous medication;
   - Neuroleptic naïve;
   - Influence of illicit substances and alcohol.
   - History of NMS

c) Mental state examination with particular emphasis on features mentioned above.

d) Physical health information with particular reference to:
   - Parkinson's disease, Lewy Body Dementia, organic syndromes, acute confusional states;
   - General condition and weight;
   - Falls;
   - State of hydration;
   - High blood pressure;

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

- Infection;
- Evidence of pre-existing cardiac or pulmonary conditions;
- Pregnancy;
- Completion of the physical observation chart;
- Head injury and seizures.

e) Baseline electrolytes and ECG where time allows and the patient consents. Obtaining an ECG is especially important if the risk of QTc interval prolongation is increased by:
   - The administration of more than one antipsychotic medication;
   - The concomitant administration of other medicines that can prolong the QT interval;
   - The concomitant administration of medicines that can cause hypokalaemia (e.g. diuretics)
   - Personal or family history of cardiac disease
   - Abnormal findings at cardiac clinical examination

f) If a patient does not consent to an ECG, the risks (e.g. cardiovascular disease or prolonged QTc interval) and benefits should carefully be considered before administration of medication. In the absence of an ECG, administration of IM haloperidol and/or IM promethazine should be avoided and IM lorazepam should be used instead.

g) Establish a provisional diagnosis prior to administration of medication.

h) Consider the legal status of the patient. Zuclopenthixol acetate (Clopixol Acuphase®) should not be administered if it cannot be assured that the patient will remain on the ward for observation. This is because potentially serious adverse effects such as extrapyramidal side effects (EPSE) or hypotension may not peak until 24 hours after administration of the injection.

i) Consideration should be given to Advance Statements, Mental Health Status, and the risks and benefits of giving tranquillisation medication. Check whether patients have made decisions or advance statements about the use of restrictive interventions, and whether a decision-maker has been appointed for them, as soon as possible. If a patient has not made any advance decisions or statements about the use of restrictive interventions, encourage them to do so as soon as possible. Ensure that patients understand the main side-effect profiles of the medications recommended so that they can make an informed choice.

j) Conduct multi-disciplinary discussion as to the safety and desirability of tranquillisation medication: this should include the doctors, nurses and pharmacists involved in the care of the patient.

k) The patient's carer or advocate should be made aware of the possible use of tranquillisation medication during the admission. When tranquillisation medication is used, this should be detailed to the carer or advocate, explaining why it was necessary.

l) Adequately record the incident on the electronic patient record including: precipitants, severity of any injury to staff, patients or others, outcome, physical monitoring and effect of medication administered. Consideration should be given to the patient's observation level. If MVA techniques are used then an incident report should be completed on the DATIX system.

m) Review management plan and conduct a one-to-one discussion with the patient when possible, after the incident.

2.4. Medicines for tranquillisation

2.4.1. Overarching recommendations

Medication is used when other techniques for calming a patient have failed. Other approaches for managing a high risk of imminent violence include: de-escalation, physical restraint and seclusion. These are covered by the relevant Trust policies. Non-pharmacological approaches should be considered in each case and rapid tranquillisation is likely to be appropriate only when some of these

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

have been tried and have failed. Please refer to the CWP policies to be read in conjunction with this policy(see list on cover page). Please also refer to the Mental Health Act Code of Practice: (https://www.gov.uk/Code_of_Practice)

2.4.2. Use of medication to reduce the risk of violence and aggression

The advice in this section is based on the recommendations in *NICE NG10 Violence and aggression: short-term management in mental health, health and community settings*. (https://www.nice.org.uk/guidance/NG10)(1)

PRN medication (both oral and IM) for the acute management of agitation or aggression **should not be prescribed routinely or automatically** on admission. Instead, for patients with a risk of violence or aggression, an individualised pharmacological strategy should be devised by the MDT, which should include a psychiatrist and a specialist pharmacist. This should be carried out as soon as possible after admission. Regular and PRN medication used to calm, relax, tranquilise, or sedate the patient should be considered within this strategy.

In many patients the risk of violence and aggression can be identified during clinical risk assessment. A detailed plan should therefore be drawn up by the MDT and advice be sought from one of the mental health pharmacists when practicably possible. This plan should be clearly documented on the electronic patient record.

The pharmacological strategy and use of medication should be reviewed at least once a week by the MDT or with greater frequency if events are escalating and restrictive interventions are being planned or used. If rapid tranquillisation is being used, then a senior doctor should review all medication at least once a day.

The review must be documented and should include:

- clarification of target symptoms
- the likely timescale for response to medication
- the total daily dose of medication, prescribed and administered, including PRN medication
- the number of and reason for any missed doses
- therapeutic response
- the emergence of unwanted effects
- consideration of stopping PRN medication if it has not been used since the last review

PRN medication used for tranquillisation should be tailored to the need of the individual patient, including discussion with the patient where possible. There must be clarity in relation to the rationale and circumstances in which the PRN medication may be used and these should be included in the care plan. Aim to use the lowest dose that will adequately control the behaviour. The maximum daily dose and the minimum interval between doses must be specified on the prescription chart for PRN medication.

Care must be taken not to inadvertently exceed the maximum daily dose stated in the BNF when the patient's PRN medication is combined with the patient's regular medication. **The BNF maximum daily dose should only be exceeded on a planned basis.** For antipsychotic medications, the guidance on high dose antipsychotic therapy (HDAT) from the Royal College of Psychiatrists and set out in the Trust's MP18 policy must be followed. This should be agreed to achieve a therapeutic goal, documented on the electronic patient record, and carried out on the direction of a senior doctor.

2.4.3. Prescribing guidelines for rapid tranquillisation

Where appropriate the patient should be offered oral medication (non-urgent tranquillisation) in the first instance. However, if the patient refuses oral medication, or the risks are escalating such that, for safety reasons, the intramuscular (IM) route is deemed necessary, then this route should be used.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Care must be taken when giving IM injections to patients who are highly aroused or distressed and pose serious concerns to the safety of others or themselves. Adequately trained staff should always be on standby even when patients agree to IM treatment because there are the inadvertent risks of intra-arterial injection, bolus dosing, nerve damage, bruising, needle breakage, and a higher than expected absorption rate (due to the increased blood flow to the muscles in a highly aroused individual).

Benzodiazepines are recommended as first-line therapy, especially in antipsychotic-naïve patients (see algorithms). Atypical antipsychotics may also produce effective calming and may be tolerated better than older antipsychotics.

2.4.4. Choice of medication

Few fully randomised controlled trials of medication used in rapid tranquillisation have been conducted; those available show that lorazepam IM, haloperidol IM, promethazine IM, and olanzapine IM are effective, but lorazepam has fewer adverse effects.

The following medicines can be used for the management of acute agitation or aggression. Their properties, the pharmacokinetics of each medicine and any cautions are detailed in tables 1 and 2:

- Lorazepam oral and IM;
- Haloperidol oral and IM;
- Olanzapine IM;
- Promethazine IM.

The use of two medicines of the same class for the purpose of rapid tranquillisation should not occur.

2.4.5. Zuclopenthixol acetate (Clopixol Acuphase®)

Zuclopenthixol acetate (Clopixol Acuphase®) injection is not recommended for rapid tranquillisation due to its long onset and duration of action. Please see table 1 below for further information.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

2.4.6. Table 1: Medicines used for management of acute agitation or aggression – their properties, cautions and advice notes

Medicine	Route	Pharmacokinetics	Major Adverse effects	Notes
Lorazepam	Oral or IM	Onset 10 to 30 mins Peak 60 to 90 mins Half-life 12 to 16 hrs	- Respiratory Depression - Disinhibition	- IM absorption is as slow as oral absorption, but is rapid in an active patient. - The Ativan brand of lorazepam injection should be diluted 50:50 with water for injections pre-injection. *Please check lorazepam injection brand before administration, as in times of shortage, alternative preparations may not require dilution* - There is no accumulation of lorazepam with repeated doses or in impaired liver function - Respiratory depression is readily reversed with the specific antagonist flumazenil. - Paradoxical reactions are more likely to occur in those with organic brain disease, including learning disabilities, the under 18s and the over 65s, and perhaps those with impulse control problems. - Do not give IM lorazepam and IM olanzapine within one hour of each other because there is a risk of excessive sedation, cardiorespiratory depression, and death.
Haloperidol	Oral	Onset 1 to 2 hrs Peak 4 (2-6) hrs Half-life 24 (15-37)hrs	- EPSE - Hypotension - NMS - Increased QTc or arrhythmias - Seizures - Sudden death	- The bioavailability of both formulations is different and this must be taken into account when considering the total dose per 24 hr period. See table 2 for advice on this. - Note risk of acute dystonias and ensure that an appropriate antimuscarinic is available. - The Summary of Product Characteristics (SPC) for haloperidol specifies that a baseline ECG must be carried out prior to treatment. - Before prescribing haloperidol, there must be documentation on the electronic patient record of either the QT interval from a recent ECG, or the decision to prescribe haloperidol despite absence of an ECG.
	IM	Onset 20 mins Peak 20-40 min Half-life 21(13-36)hrs		
Olanzapine	Oral	Onset 5 to 8 hrs Peak 5 to 8 hrs Half-life 32 to 50 hrs	- Hypotension - Bradycardia - Syncope	- Less likely to cause EPSE than haloperidol. - IM administration results in initial maximum plasma concentration 5 times higher than same dose given orally.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Medicine	Route	Pharmacokinetics	Major Adverse effects	Notes
	IM	Onset 15 to 45 mins Peak 15 to 45 mins Half-life 30 hrs		- IM lorazepam should not be administered until at least 1 hour after IM olanzapine administration. - No more than 3 injections of IM olanzapine should be given in 24 hours and a minimum of two hours should elapse between each injection. - Olanzapine IM is intended for short term use, for a maximum of 3 consecutive days.
Promethazine	IM	Onset 20 mins Peak 2 to 8 hrs Half-life 7 to14 hrs	- Prolonged sedation - Seizures - Cardio-respiratory depression - NMS	- ECG recommended (potential for QT interval prolongation) - Use of IM promethazine for rapid tranquillisation is off-label. - It has a slow onset of action, but is an effective sedative. - Dilution is not required before IM injection. - Smaller doses will be required in severe renal impairment, - Use with caution in hepatic impairment, respiratory disease and congestive heart failure. - As promethazine is **NOT** a benzodiazepine, flumazenil is not an antidote to reverse its effects.
Zuclopenthixol Acetate (Clopixol Acuphase®)	IM	**Not rapid tranquillisation** Onset 2 to 8 hrs Peak 24 to 36 hrs Half-life 60 hrs	- Sudden death - Cardiac arrest - Arrhythmias - EPSE	- **This is not an appropriate medicine for rapid tranquillisation** - Given by deep IM injection into the gluteal muscle, taking care not to give into a vein, as this can be fatal. - It should not be used in those who are neuroleptic naive, who are struggling, who are sensitive to EPSE, those with cardiac disease, hepatic or renal impairment, or in pregnancy. - Please refer to the latest version of the BNF, SPC, and Maudsley Prescribing Guidelines in Psychiatry when prescribing or administering zuclopenthixol acetate.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

2.4.7. Table 2: Haloperidol administration - oral and intramuscular doses

The current (at the date of publication of this policy) online BNF recommendations for haloperidol dosing have changed recently as reflected below:

For acute psychomotor agitation associated with psychotic disorder or manic episodes of bipolar I disorder

By mouth

For Adult : 5–10 mg, dose may be repeated after 12 hours if necessary; continued use should be evaluated early in treatment; maximum 20 mg per day.

For Elderly :Initially 2.5 mg, dose may be repeated after 12 hours if necessary up to maximum 5 mg daily, doses above 5 mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk; continued use should be evaluated early in treatment.

For rapid control of severe acute psychomotor agitation associated with psychotic disorder or manic episodes of bipolar I disorder [when oral therapy is not appropriate]

By intramuscular injection

For Adult : 5 mg, dose may be repeated hourly if required—up to 15 mg daily is usually sufficient; continued use should be evaluated early in treatment; maximum 20 mg per day.

For Elderly : 2.5 mg, dose may be repeated hourly if required up to maximum 5 mg daily, doses above 5 mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk; continued use should be evaluated early in treatment.

However, the current Joint British Association for Psychopharmacology and the National Association of Psychiatric Intensive Care and Low Secure Unitsguidelines for the clinical management of acute disturbance(4) state that the IM dose of haloperidol required to give the same plasma concentration as any given oral dose is approximately 30% lower and this is due to the difference in the magnitude of first pass liver metabolism.

Following MMG approval this policy will recommend haloperidol doses in accordance with the current BAP/NAPICU guidelines as below. This is to minimise serious side effects that can be experienced with higher doses of haloperidol.

Maximum doses in working age adults in 24 hours: **Haloperidol 20mg oral** **Haloperidol 12mg IM**	**Maximum doses in older adults in 24 hours:** **Haloperidol 5 mg oral** **Haloperidol 3 mg IM**

A consultant's clinical judgment may recommend exceeding the BAP/NAPICUrecommended maximum daily doses in line with the current BNF maximum for haloperidol based on the patient's presentation and response to treatment. This must be clearly documented in the clinical notes with a rationale.

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

	APPROXIMATE EQUIVALENT DOSES (mg)										
Oral Haloperidol	0.5	1	1.5	2.5	4.2	5	7.5	8.3	10	12.5	16.7
IM Haloperidol	0.3	0.6	0.9	1.5	2.5	3	4.5	5	6	7.5	10

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

For example:
Patient has been given 1 x 4mg haloperidol **IM**, followed 30 minutes later by 5mg **orally**, then 30 minutes later by another 5mg **orally**.

Convert to all **oral** doses, i.e. 6.6mg + 5mg + 5mg = 16.6mg **oral** equivalent or
Convert to all **IM** doses, i.e. 4mg + 3mg + 3mg = 10mg **IM** equivalent

Therefore the patient may receive a further 3mg **oral** equivalent or 2mg **IM** equivalent haloperidol within the 24 hour period.

N.B. Use SEPARATE LINES on the prescription sheet for each route of administration
It is recommended that equivalent doses are prescribed, with same frequency and equivalent maximums ie:
• haloperidol orally 5mg up to four times day with a maximum of 20mg per 24 hours
• haloperidol IM 3mg up to four times day with a maximum of 12mg per 24 hours

N.B. Above notes are for guidance only. Doses above the recommended maximum should be monitored according to High Dose Antipsychotic Therapy Guideline (MP18).

2.4.8. Risks and complications associated with rapid tranquillisation

There are specific risks associated with the different classes of medicines that are used in rapid tranquillisation. The specific properties of the individual medicines should be taken into consideration. When combinations are used, risks may be compounded.

For benzodiazepines:

- Loss of consciousness;
- Respiratory depression or arrest;
- Cardiovascular collapse (in patients receiving both clozapine and benzodiazepines).

For antipsychotics:

- Loss of consciousness;
- Cardiovascular and respiratory complications and collapse;
- Seizures;
- Subjective experience of restlessness (akathisia);
- Acute muscular rigidity (dystonia);
- Involuntary movements (dyskinesia);
- Neuroleptic malignant syndrome (NMS);
- Excessive sedation.

Circumstances for special care
Extra care should be taken when implementing rapid tranquillisation in the following circumstances:

- The presence of congenital prolonged QTc syndromes;
- The concurrent prescription or use of other medication that lengthens QTc intervals both directly and indirectly;
- The presence of certain disorders affecting metabolism, such as hypothermia and hyperthermia, stress and extreme emotions, and extreme physical exertion.
- Younger people (under 18 years of age) and older adults (over 65 years of age)
- Pregnancy (see section 2.5.5)
- Patients who are prescribed anticoagulant therapy or who have a bleeding disorder

Individuals with a bleeding disorder or who are receiving anticoagulant therapy have an increased risk of bleeding and deep muscle haematoma when intramuscular (IM) injections are given. It is difficult to quantify the exact risk of developing a haematoma. Other options should be considered before any IM injection is prescribed. The risks and benefits of giving the IM injection should be discussed and documented; and wherever possible the patient or family should be advised about the risk of haematoma formation following the injection. If the patient has a bleeding disorder,

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

consider seeking advice from the clinician who manages their condition before deciding to prescribe medication as an IM injection.

If the patient has a bleeding disorder, or is taking an anticoagulant, but the decision has been taken to administer an IM injection then the following steps can be taken to reduce the risk of haematoma formation:

- Apply firm pressure to the injection site for at least 2 minutes after injecting; to aid coagulation
- Do not rub or massage the injection site

If nursing staff feel that the steps described would be impractical to implement for a particular patient, this must be discussed with the prescriber and a risk assessment documented before administering the injection.

The above information in relation to haematoma risk has been adapted from the Derbyshire Healthcare NHS Foundation Trust Guidelines for the Use of Medication in the Management of Violence and Aggression.

2.4.9. Managing the complications and adverse effects of medication

Common or serious adverse effects and management.

Complication	Symptoms / signs	Management
Acute Dystonia	Severe painful muscular stiffness	Procyclidine 5 to 10mg IM
Hypotension	Fall in blood pressure (orthostatic or <50mmHg diastolic)	Lie patient flat and raise legs - tilt bed head down. Complete physical observation chart every 15 minutes and complete actions
Neuroleptic malignant syndrome (see appendix 1)	Increasing temperature, fluctuating blood pressure, muscular rigidity, confusion/ altered consciousness	Withhold antipsychotics. Complete physical observation chart every 15 minutes and complete actions. Consider blood test for creatinine kinase level. Liaise with general medical team and consider transfer to acute medical care
Arrhythmias	Slow (<50/minute) or irregular pulse	Monitor closely and liaise with general medical team immediately
Respiratory Depression	Reducing respiratory rate, reducing consciousness	Complete physical observation chart every 15 minutes and complete actions. If respiratory rate drops below 10/minute in a patient who has received benzodiazepines, then flumazenil should be administered by a doctor: 1) 200 micrograms IV over 15 seconds. 2) If consciousness not resumed within 60 seconds give 100 micrograms over 10 seconds. 3) Repeat at 60 second intervals. Maximum dose 1mg/24 hours. 4) Contact emergency medical services Continue to monitor after respiratory rate returns to normal. Flumazenil has a short duration of action so further doses may be required. Patients may become agitated or anxious on wakening.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

2.5. Patient group and medication algorithms

2.5.1. Selection of algorithms

For the use of medication in the management of acute agitation or aggression (tranquillisation), three algorithms have been developed (see section 2.5.6.):

- Medicines for Tranquillisation in younger people (under 18 years old)
- Medicines for Tranquillisation in working age adults (18–65 year old)
- Medicines for Tranquillisation in older adults (>65 year olds)

For people with learning disability; the most appropriate algorithm from the above should be selected based on the client's age and clinical conditions.

The algorithms should be adhered to as the Trust protocols for using medication as part of rapid tranquillisation.

The following should be borne in mind when selecting which algorithm to use:

- When using IM olanzapine in patients over 60 years of age, refer to the over 65s chart;
- If there are physically ill or frail patients, or those on other medication then this must be taken into consideration when selecting which algorithm to follow.

2.5.2. Use of medicines for tranquillisation in older people

In people over the age of 65 years, other health problems are more common compared to adults of working age. Older people may:

- Be more frail;
- Have more general medical illnesses;
- Be taking non-psychiatric medication;
- Often be more likely to develop EPSEs;
- Have dementia and thus be more likely to develop increased cognitive impairment with high doses of medication;
- Be naïve to antipsychotics and / or benzodiazepines.

In addition to the advice for adults, the following precautions must be taken:

- Check for treatable causes of the crisis, and initiate treatment as soon as possible;
- Haloperidol can be particularly dangerous in Lewy Body Dementia, and should also be avoided if the patient is suffering from Parkinson's disease;
- Lorazepam is usually the most appropriate initial medication, but it may not be the medicine of choice if there is known or suspected respiratory disease, and if used it must be monitored more closely. For patients with dementing illness lorazepam should be used as monotherapy where possible. **Use of antipsychotics should be discussed with the patient's consultant before initiating in this patient group;**
- Haloperidol and procyclidine can cause increased cognitive impairment in patients with dementia;
- The balance of risks and benefit should be considered before prescribing antipsychotic medicines for older adults. **In older adults with dementia, antipsychotic medicines are associated with an increased risk of mortality and an increased risk of stroke or transient ischaemic attack**. Furthermore, older adults are particularly susceptible to postural hypotension and to hyperthermia and hypothermia in hot or cold weather.
  It is recommended that:
  - Antipsychotic medicines should not be used in older adults to treat mild to moderate psychotic symptoms.
  - Initial doses of antipsychotic medicines in older adults patients should be reduced (to half the adult dose or less), taking into account factors such as the patient's weight, co-morbidity, and concomitant medication.
  - Treatment should be reviewed regularly.

It is particularly important to elicit as much information as possible about the patient's current illnesses, and the GP should be consulted if possible concerning physical illnesses.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Rapid tranquillisation of older patients is less often required but in view of the risks it is advisable to contact the patient's Consultant or the duty Consultant if there is any uncertainty.

2.5.3. Use of medicines for tranquillisation in younger people

The algorithm for patients under the age of 18 advises that CAMHS consultants should be consulted. If the young person is in another setting e.g. PICU, LD or general adult ward, then the responsible consultant for that patient should be contacted instead.

Tranquillisation in patients under the age of 18 may involve the use of medication outside the terms of the UK product license; that is, "off-label" use. The prescriber's responsibility and potential liability are increased when prescribing both licensed medication for unlicensed indications ("off-label") as well as when prescribing unlicensed medicines. Wherever possible, agreement must be obtained from the younger person's parent or primary caregiver or advocate and this must be documented. Medication should be administered only after the agreement of the MDT involved.

Younger people are more likely to be antipsychotic naïve and sensitive to EPSEs. There is an increased risk of acute dystonic reactions and laryngeal spasm in younger people; additionally, a single dose of antipsychotic may lead to neuroleptic malignant syndrome (see appendix 1). Therefore, typical antipsychotics should be avoided for this patient group. If haloperidol is used, then consider also giving prophylactic procyclidineIf. The behavioural disturbance is not psychotic in nature, in the absence of a care plan stating otherwise, lorazepam and promethazine are preferred to antipsychotics for tranquillisation in patients under the age of 18 years. However, note that there is a higher incidence of disinhibition or paradoxical reactions with benzodiazepines in younger people compared to adults (see appendix 3). Avoid using benzodiazepines in younger people (under 18 years of age) who are physically unwell, delirious or have significant respiratory impairments or young people with epilepsy with history of respiratory impairment with use of benzodiazepine;

In younger children the formulation of the medicine may be pertinent and influence the choice. Several medicines are available as liquids or oro-dispersible tablets.

Allowance should be made for younger person's difficulty in communicating adverse effects:

- Younger people with disabilities may be on other medications;
- Naivety to antipsychotic;
- Benzodiazepines may have disinhibitory effects in younger people, particularly because of different receptor and neurotransmitter profile.

Medicines described in the algorithm are used in younger people but because they are used off-label, medication doses can be problematic. Referral to the algorithm and to the "BNF for children[6]" dosing scheme will assist clinicians.

Sometimes it may be necessary to follow the adult algorithm (18-65 years) particularly in those adolescents that are older, heavier in body mass and who are more tolerant to the effects of medication or who have been treated with antipsychotics previously without adverse effects. Care should be taken when using the adult doses in these circumstances, with particular attention to monitoring the effects of the medication on the individual's health. The adult doses used should be determined per case based on an individual's age, weight, mobility and response to treatment.
Because of the different adverse effect and medicine response profiles in younger people a one to one observation is necessary throughout the period of tranquillisation. If there is any doubt check with the duty pharmacist and consultant;

In younger people who are not Gillick competent, parents / carers should be informed of the situation and consent sought for such treatment. It is good practice to inform both the younger person and their parents / carers.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

After the treatment of an acute disturbance the staff should also discuss the management and treatment given to the younger person with the parents / carers. This discussion should be documented in the younger person's medical notes.

2.5.4. Use of medicines for tranquillisation in people with a learning disability

The policy will apply to learning disability using the appropriate algorithm to the age of the patient. Special consideration will need to be given to those with cerebral palsy as they may be at risk of postural deformities and hip dislocation. Additionally, there is a higher rate of undetected visual and hearing problems in the learning disability population and findings suggest that a high proportion of people with learning disabilities have an altered pain threshold. Many also carry an increased risk of certain health complications such as cardiac and respiratory disorders, which contribute to potential hazards associated with restraint. The choice between using physical intervention and rapid tranquillisation as a method of managing violent behaviour in those with a learning disability should be part of an overall care plan.

2.5.5. Use of medicines for tranquillisation in women who are pregnant

According to NICE guidelines, a pregnant woman requiring rapid tranquillisation should be treated according to the same principles as non-pregnant women, but:

- A pregnant woman should not be secluded following rapid tranquillisation;
- The restraint procedures should be adapted to avoid possible harm to the foetus;
- When choosing an agent for rapid tranquillisation, consider an antipsychotic or a benzodiazepine with a short half-life;
- The woman's care during the perinatal period should be managed in close collaboration with a paediatrician and an anaesthetist.

2.5.6. Algorithms for Tranquillisation

On the following pages in this section, the following can be found:

- Algorithms for Tranquillisation: Important Notes (to be used in conjunction with each algorithm)
- Three algorithms:
    - Medicines for Tranquillisation in younger people (under 18 years of age)
    - Medicines for Tranquillisation in working age adults (18–65 years of age)
    - Medicines for Tranquillisation in older adults (>65 years of age)

Although the algorithms include dose ranges, it is recommended that a specific dose rather than a dose range is selected and prescribed for the individual patient.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Algorithms for Tranquillisation: Important Notes

Introduction

These algorithms should be used in conjunction with the Rapid Tranquillisation policy (MP10) and are not stand-alone algorithms. There are three algorithms:

- Medicines for Tranquillisation in children and adolescents
- Medicines for Tranquillisation in 18–65 year olds
- Medicines for Tranquillisation in >65 year olds

Cautions for lorazepam

- There is a small risk of paradoxical reactions
- Have available, and staff who can administer, **flumazenil IV, mask and oxygen** for benzodiazepine-induced respiratory depression. This can be given by medical staff if present; otherwise, call emergency service.

Cautions for haloperidol

- Prescribe and have available PRN PO/IM procyclidine in case of acute dystonic reactions
- Avoid if:
    - Antipsychotic-naïve
    - Previous dystonic reaction to antipsychotics
    - Bipolar disorder (increased risk of EPSEs)
    - No ECG is available
    - QTc prolongation risk factors present
    - History of CVD
    - Diagnosis of dementia
- Do not use if diagnosis of Parkinson's Disease or DLB

Cautions for olanzapine

- If given orally, peak plasma level occurs 5-8 hours post dose.
- Olanzapine IM and lorazepam IM must not be given within one hour of each other.
- Do not use olanzapine IM for a patient for more than three consecutive days.
- Not more than three injections should be given in any 24-hour period.
- Avoid if:
    - Pregnant
    - History of CVA or CVD
    - Liver impairment
    - Narrow angle glaucoma
    - Seizures/epilepsy
    - Organic disorder / diagnosis of dementia.
- Do not use if diagnosis of Parkinson's Disease or DLB

Cautions for promethazine

- Avoid in respiratory disease, severe coronary artery disease, congestive heart failure, narrow angle glaucoma, epilepsy, or hepatic and renal insufficiency.
- Avoid if no ECG available.

General principles

- Plans for individual patients should be made in advance and kept up-to-date.
- Always **consider the patient's previous responses to medication** (effectiveness and side effects).
- For unknown patients, frail patients, or patients under the influence of alcohol or illicit substances, use the lower end of the dose range.
- Check whether the patient has pre-existing physical health problems or is pregnant.
- Check for drug-drug interactions with the patient's other prescribed medication.
- Check the total dose of antipsychotic medications prescribed for the patient, taking care to avoid unintentional high dose antipsychotic therapy (HDAT; see MP18).
- Avoid the use of antipsychotics if the patient has been exposed to CS gas.
- **If the behavioural disturbance is thought to be due to non-psychotic processes, then benzodiazepines or promethazine would be preferable** as the benefits of antipsychotic treatment are unestablished.
- If in doubt, seek further advice from the consultant, higher psychiatric trainee doctor, or the duty pharmacist.
- For child and adolescent patients, it is recommended that, if possible, the CAMHS consultant is contacted before prescribing tranquillisation medicines.
- For patients with dementia, consider non-antipsychotics in preference to antipsychotics. **Avoid antipsychotics for patients with Parkinson's Disease or Dementia with Lewy Bodies (DLB).**
- Consider legal / Mental Health Act status.
- Do not give IM olanzapine and IM lorazepam within one hour of each other.
- Do not mix any drugs in same syringe.
- Consider the patient's preferences and any advance statements and decisions made by the patient.

After using medicines for tranquillisation

- Monitor patient using physical health observation chart including AVPU every 15 minutes for the first hour, and then every hour until the patient is full conscious and/or ambulant
- Monitor for risk of falls and deterioration of mobility
- Supervise patient closely
- Have a team on hand for C&R

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Medicines for Tranquillisation in younger people (under 18 years of age)

Non-urgent tranquillisation: **Oral** medicine

First Line

- Lorazepam 500micrograms to 2mg (max 2mg/day)
  - Consider further dose if partial response (minimum one hour interval)
  - *Use 500micrograms to 1mg if < 12 years*
  - Preferred if antipsychotic-naïve. NB: risk of paradoxical reactions.

Second Line

- Promethazine 5 to 25mg, max 50mg/day (5 to 10mg, max 25mg/day if < 12 years)
- Olanzapine5mg, max 20mg/day (2.5mg to 5mg, max 10mg/day if < 12 years)
- Haloperidol 500micrograms to 1.5mg, max 10mg/day (500micrograms to 1mg, max 6mg/day if < 12 years)
- Prescribe PRN Procyclidine (PO and IM routes)
- Avoid if antipsychotic-naïve, no ECG available, risk factors for prolonged QTc interval, or cardiovascular disease

Urgent/rapid tranquillisation: **IM** medicine

CAMHS consultant or Higher Psychiatric Trainee doctor must be consulted before prescribing IM.

First Line

- Lorazepam 500micrograms to 2mg (dilute 50:50 water for injections*; max 2mg/day)
  - Consider further dose if partial response (minimum one hour interval)
  - *Use 500micrograms to 1mg if < 12 years*
  - Preferred if antipsychotic-naïve. NB: risk of paradoxical reactions.

Second Line

- Promethazine 12.5 to 25mg, max 50mg/day (6.25mg to 12.5mg, max 25mg/day if < 12 years)
- Olanzapine2.5mg to 10mg, max 20mg/day (not suitable if < 12 years)
- Haloperidol 1.5mg to 3mg, max 6mg/day (500micrograms to 1mg, max 3.5mg/day if < 12 years)
- Prescribe PRN Procyclidine (PO and IM routes)
- Avoid if antipsychotic-naïve, no ECG available, risk factors for prolonged QTc interval, or cardiovascular disease

**Please check lorazepam injection brand as in times of shortage, alternative preparations may not require dilution*

- Adjust doses accordingly to age and weight.
- If rapid tranquillisation is required, then seek parental consent where possible but do not delay urgent treatment.
- Medical review should occur after administration of IM medicine.
- At the discretion of the CAMHS consultant or higher psychiatric trainee doctor, further IM doses can be given after one hour, or two hours in the case of olanzapine.
- No more than 3 injections of IM olanzapine should be given in 24 hours and a minimum of two hours should lapse between each one.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Medicines for Tranquillisation in working age adults (18-65 years of age)

Non-urgent tranquillisation: **Oral** medicine

Options (use one option at a time)

- **First Line:** Lorazepam 1mg to 2mg (preferred if antipsychotic-naïve)
- **Second Line:** Haloperidol 5mg or
- **Second Line:** Olanzapine10mg

Urgent/rapid tranquillisation: **IM** medicine

Options (use one option at a time)

- Lorazepam 1mg to 2mg (diluted 50:50 with water for injections*)
  - Preferred if antipsychotic-naïve
  - Consider if no response to IM haloperidol & promethazine
- Haloperidol IM 3mg to 5mg
  - Note that NICE NG10 recommends combining this with IM promethazine (25mg to 50mg)
  - Consider if no response to IM lorazepam

Notes

- Consider further doses if partial response to the first dose, but allow at least one hour between oral doses and at least 30 minutes between IM doses.
- If above options are unsuccessful, then review treatment plan with the consultant, higher psychiatric trainee doctor, and/or the duty pharmacist. Consider IM olanzapine 10mg.

**Please check lorazepam injection brand as in times of shortage, alternative preparations may not require dilution*

Maximum doses in 24 hours

- Lorazepam: 4mg
- Olanzapine: 20mg
- Promethazine: 100mg
- Haloperidol: oral 20mg; IM 12mg – ***NB 3mg of IM haloperidol is equivalent to 5mg of PO haloperidol***

Medicines for Tranquillisation in older adults (>65 years of age)

Non-urgent tranquillisation: **Oral** medicine Options (use one option at a time)

- **First Line:** Lorazepam 0.5mg to 2mg (preferred if antipsychotic-naïve)
- **Second Line:** Haloperidol 0.5mg to 1.5mg or
- **Second Line:** Olanzapine 2.5mg to 5mg

Urgent/rapid tranquillisation: **IM** medicine

Options (use one option at a time)

- Lorazepam 0.5mg to 1mg (diluted 50:50 with water for injections*)
  - Preferred if antipsychotic-naïve
  - Consider if no response to IM haloperidol & promethazine
- Haloperidol IM 1.5mg to 2mg
  - Note that NICE NG10 recommends combining this with IM promethazine (12.5mg to 25mg)
  - Consider if no response to IM lorazepam

Notes

- Consider further doses if partial response to the first dose, but allow at least one hour between oral doses and at least 30 minutes between IM doses.
- If above options are unsuccessful, then review treatment plan with the consultant, higher psychiatric trainee doctor, and/or the duty pharmacist. Consider IM olanzapine 2.5mg to 5mg.

**Please check lorazepam injection brand as in times of shortage, alternative preparations may not require dilution*

Maximum doses in 24 hours

- Lorazepam: 2mg
- Olanzapine: 15mg
- Promethazine: 50mg
- Haloperidol: oral 5mg; IM 3mg – ***NB 3mg of IM haloperidol is equivalent to 5mg of PO haloperidol***

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

2.6. Recording physical health observations post administration of rapid tranquillisation.

The risks of sedative medication may be compounded in patients who have recently abused illicit drugs or alcohol. Such patients and those who are heavily sedated should be monitored intensively.

Regardless of the indication, physical health monitoring **must** be carried out after IM administration of all the injections covered in this policy (haloperidol, lorazepam, olanzapine, promethazine and zuclopenthixol acetate). Where an IM injection is given as an alternative to oral medication for the purpose of treatment with an antipsychotic **and** this is clearly stated in the care plan (e.g.: when oral antipsychotic medication is continually refused), it is **essential** that physical health monitoring is undertaken. This is not classed as rapid tranquillisation as the injection has not been administered for the management of acute agitation, excitement, or aggression and does not require an entry on DATIX as it is not a restrictive practice. Any physical holds that are utilised to support the administration of any IM injections must be reported on DATIX as a restrictive intervention.

As per policy, after an IM injection is administered, the following should be monitored:

- Pulse
- Blood pressure
- Temperature
- Oxygen saturation
- AVPU (conscious levels)
- Respiratory rate

These should be monitored and recorded throughout the procedure on the Rapid Tranquillsation physical observation chart (even if the injection is not given for the purposes of rapid tranquillisation)

CWP NEWS2 – Rapid Tranquilisation

NICE NG10 also recommends the monitoring of hydration status. This should be recorded on the fluid balance chart.

Review level of psychiatric observations which are detailed in Trust therapeutic observation policy for inpatients, which should be read in conjunction with this policy. In discussion with the doctor consider placing the patient on level 3 observation for up to 24 hours if physical restraint and rapid tranquillisation has occurred.

NICE NG10 stipulates that resuscitation equipment must be immediately available if restrictive interventions, including rapid tranquillisation, might be used. This must include an automatic external defibrillator, a bag valve mask, oxygen, cannulas, intravenous fluids, suction, and first-line resuscitation medications. The equipment must be maintained and checked every week.

NICE NG10 also stipulates that staff trained in immediate life support and a doctor trained to use resuscitation equipment should be immediately available to attend an emergency if restrictive interventions, including rapid tranquillisation, might be used.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

When rapid tranquillisation, physical intervention and / or seclusion are implemented, the on-call doctor must be alerted and will be required to attend to review the patient as soon as practically possible.

In all circumstances of rapid tranquillisation, the prescriber and medication administrator should pay attention to:

- The total dose of medication given;
- Arrangements for review;
- Issues of consent;
- BNF and Summary of Product Characteristics (SPC) requirements;
- Physical and mental status of the patient.

Currently all incidents of physical intervention / restraint are recorded onto CWP reporting systems (i.e. Datix and electronic patient record). Where intra-muscular rapid tranquillisation has been used as part of the management of the restraint incident this must also be recorded through the same reporting processes as a restrictive intervention incident.

2.6.1. Table 3: Monitoring of patient after rapid tranquillisation

<table>
<tr><th colspan="2">What to monitor</th></tr>
<tr><td colspan="2">

Physical observations:

Temperature
Pulse
Blood pressure
Respiratory rate
Hydration

Level of Consciousness
Observe for adverse effects
Observe efficacy of treatment to avoid escalation of further disturbed behaviour

Team to document the findings on the relevant physical observation chart for the patient group
</td></tr>
<tr><th colspan="2">How often to carry out the monitoring</th></tr>
<tr><td>Standard monitoring:
Use if the patient does not meet the criteria for enhanced monitoring.

1st hour Every 15 minutes
2nd hour Once per hour
3rd hour Once per hour
4th hour Once per hour

After 4 hours cease monitoring if observations are normal; otherwise seek medical opinion.</td><td>Enhanced monitoring:
Use this monitoring if the patient:
• Is unconscious, over sedated, or not ambulant;
• Has sustained a head injury;
• Had had medicine doses exceeding the BNF maximum;
• Has taken illicit substances or alcohol;
• Has a pre-existing physical health condition;
• Has experienced any other harm or if there is any other cause for concern

1st hour Every 15 minutes
2nd hour Every 15 minutes
3rd hour Once per hour, or every 15 minutes if concerns
4th hour Once per hour, or every 15 minutes if concerns

After 4 hours cease monitoring if observations are normal; otherwise seek medical opinion. If indicated, then continue observations every 2 hours.</td></tr>
</table>

Additional notes for table 3:

- Monitoring for clopixol acuphase (zuclopenthixol acetate): As stated above but must be monitored and recorded on the physical observation chart every 4 hours for 72 hours.
- If person is unconscious and not rousable, call a doctor to review physical state.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

- A sedated / unconscious person must have a nurse with him/her at all times until they are alert and responsive.
- Continuous pulse oximetry is recommended until consciousness is regained, and the administration of oxygen may be considered.
- If oversedation occurred, then the dose of the medication prescribed should be reviewed.
- It is advisable to obtain a baseline ECG and repeat ECG following use of high dose, parenteral antipsychotics.
- The mental and behavioural state of the patient should be monitored at the same time as the physical observations including whether they are behaviourally disturbed/agitated, asleep or awake or have impaired consciousness.
- If observations are declined, or if the patient's level of agitation would make carrying out the observations unsafe, then delay the observations; this should be documented. Observations should be re-offered or re-attempted as the situation dictates.

2.7. Post - incident support

Patients should be offered the opportunity to discuss their experiences after the use of rapid tranquillisation or IM injection administered as an alternative to oral medication, to reduce the incidence and severity of trauma.

The patient **SHOULD** be provided with a clear explanation of the decision to use rapid tranquillisation or IM injection administered as an alternative to oral medication , **which should be documented in the notes** (see appendix 2).

Plans should be made for an advance statement to be written, with the patient, when he/she is stabilised. This may be made with the community team or named nurse. A copy should be given to the patient, and a copy kept in the notes.

Similarly, staff and other patients should have the opportunity to discuss the incident.

This section should be read in conjunction with the Trust post incident reporting and management policy.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Appendix 1 - The Neuroleptic Malignant Syndrome (NMS)

Neuroleptic Malignant Syndrome (NMS)

- Incidence - 0.5% - 1% patients;
- Mortality - (untreated) 20%;
- Onset may be acute or insidious;
- Course may fluctuate;
- May occur out of hospital.

Signs and symptoms

- Fever / Hyperthermia;
- Hypertension / autonomic instability (Fluctuating B.P);
- Tachycardia;
- Sweating;
- Incontinence / retention / obstruction;
- Muscular rigidity (may be confined to head and neck);
- Confusion / agitation;
- Varying degree of unconsciousness;
- Raised white blood cell count;
- Raised creatinine phosphokinase (CK).

Risk factors

- Organic brain disease, dementia, alcoholism;
- Hyperthyroidism;
- Parkinson's' disease;
- Dehydration;
- High dose of antipsychotic medication / recent dose increase;
- History of catatonia.

Treatment

- Withdraw the precipitating medicines immediately- antipsychotics, antidepressants, lithium, promethazine;
- Treat as a medical emergency – arrange emergency transfer to acute medical trust
- Correct dehydration and hyperpyrexia- rehydrate, use ice packs;
- Control agitation with short-acting benzodiazepines;
- Dopamine antagonists: bromocriptine / dantrolene (can only be administered at acute trust);
- Antimuscarinic agents;
- Propranolol;
- General supportive intervention on a medical ward.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Appendix 2 - Patient post - rapid tranquillisation feedback

Dear

_____

On (date) ____ / ____ / ____ at (time) _____ it was necessary for you to be given parenteral (injectable) rapid tranquillisation medication, which may have been against your will. We are happy to discuss this with you, and would like to offer you the opportunity to make written comment on this experience, which can then be stored in your case folder. If you wish to do so, please use the space below, and continue overleaf if necessary.

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version

Appendix 3 - Paradoxical reactions to benzodiazepines

The administration of benzodiazepines carries a risk of paradoxical reactions, which are unexpected increases in aggressive or impulsive behaviour.

The symptoms of a paradoxical reaction may include:

- Acute excitement
- Hyperactivity
- Increased anxiety
- Vivid dreams
- Sexual disinhibition
- Hostility
- Rage

The following patient groups are at increased risk of paradoxical reactions to benzodiazepines:

- Patients with learning disability
- Patients with a neurological disorder
- Younger patients (under 18 years of age)
- Older patients (over 65 years of age)
- Patients with a history of aggression
- Patients with a history of poor impulse control

If a paradoxical reaction to a benzodiazepine occurs, then:

- In extreme cases, use flumazenil to reverse the reaction
- Document the reaction clearly in the notes
- Use non-benzodiazepines for management of future acute behavioural disturbance

Reference: Maudsley Prescribing Guidelines in Psychiatry 13th Edition 2018

Do not retain a paper version of this document, always view from the website www.cwp.nhs.uk to ensure it is the correct version