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Date: 17th July 2025
Our Ref: JA/NHSG/Guid/RaTr/MGPG1271
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Dear Colleagues

This guidance is currently under review by the author.

NHS Grampian Staff Guidance For Rapid Tranquillisation For Use In The Adult In-Patient Setting – Version 6

This document has been risk assessed by the author and deemed appropriate to be used during this review period. A copy of the risk assessment can be provided on request.

If you have any queries regarding this, please do not hesitate to contact the Medicines Guidelines and Policy Group (MGPG) email at gram.mgpg@nhs.scot

Yours sincerely

Jodie Allan
Professional Secretary of MGPG, NHSG

NHS Grampian

NHS Grampian Staff Guidance For Rapid Tranquillisation For Use In The Adult In-Patient Setting

Co-ordinators:	Consultation Group:	Approver:
Principal Pharmacist, Mental Health and Learning Disability Services, NHS Grampian, Chair, Mental Health Operational Medicines Management Group	See Page 11	Medicine Guidelines and Policies Group
Signature:		**Signature:**

Identifier:	Review Date:	Date Approved:
NHSG/Guid/RaTr/ MGPG1271	June 2025	June 2022

Uncontrolled when printed

Version 6

Executive Sign-Off

This document has been endorsed by the Director of Pharmacy and Medicines Management

Signature: _____

This guidance is also available in large print and other formats and languages, upon request. Please call NHS Grampian Corporate Communications on (01224) 551116 or (01224) 552245or email gram.communications@nhs.scot.

June 2022

Title:	NHS Grampian Staff Guidance For Rapid Tranquillisation For Use In The Adult In-Patient Setting
Unique Identifier:	NHSG/Guid/RaTr/MGPG1271
Replaces:	NHSG/Guid/RaTr/MGPG963 Version 5
Lead Author/Coordinator:	Mrs Angela MacManus, Principal Pharmacist, Mental Health and Learning Disability Services
Subject (as per document registration categories):	Prescribing and Prescription
Key word(s):	Rapid tranquillisation, psychiatric emergencies, psychiatric emergency, adults, emergency sedation, aggression, violence, tranquilization, tranquillising, tranquilizing
Policy, Protocol, Procedure or Process Document:	Procedure/guidance
Document application:	NHS Grampian – in-patient use only
Purpose/description:	This guidance has been developed to ensure that in psychiatric emergencies all adult in-patients requiring rapid tranquillisation, if acutely disturbed or aggressive, receive their medication safely and correctly and that the proper procedures have been followed.
Responsibility:	Responsibility for the effective management of this policy ultimately lies with the General Managers for the Acute and Mental Health/Learning Disabilities Sectors. Delegation for formulating, disseminating and controlling these documents falls to either a named individual or a working group.

Policy statement:	It is the responsibility of individual healthcare professionals and their line managers to ensure that they work with the terms laid down in this guidance and to ensure that staff are working to the most up to date guidance. By doing so, the quality of the services offered will be maintained, and the chances of staff making erroneous decisions which may affect patient, staff or visitor safety and comfort will be reduced. Supervisory staff at all levels must ensure that healthcare professionals using this guidance act within their own level of competence.

Responsibilities for ensuring registration of this document on the NHS Grampian Information/ Document Silo:

Lead Author/Coordinator:	Principal Pharmacist, Mental Health and Learning Disability Services
Physical location of the original of this document:	Principal Pharmacist, Mental Health and Learning Disability Services
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Responsibilities for disseminating document as per distribution list:

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Responsibilities for implementation: Mental Health and Learning Disabilities

Organisational:	Hosted Services and Moray IJB Management Teams
Hospital/Interface services:	Medical Director Mental Health and Learning Disability Services and Chief Nurse, Mental Health and Learning Disability Services for HSCPS
Operational Management Unit:	Clinical Directors, Mental Health and Learning Disability Services and Hosted and Moray Service Managers
Departmental:	Line Managers
Area:	Line Managers

Responsibilities for implementation: Acute Sector

Organisational:	Acute Sector Operational Management Team and Acute Sector General Manager
Hospital/Interface services:	Assistant General Managers and Group Clinical Directors
Operational Management Unit:	Unit Operational Managers
Departmental:	Clinical Leads
Area:	Line Managers

Review: This policy will be reviewed in three years or sooner if current treatment recommendations change.

Responsibilities for review of this document:
Lead Author/Coordinator: Principal Pharmacist, Mental Health and Learning Disability Services

Review date:

Revision History:

Revision Date	Previous Revision Date	Summary of Changes (Descriptive summary of the changes made)	Changes Marked* (Identify page numbers and section heading)
Mar 2022	Dec 2018	P2 1st paragraph & P9 3rd paragraph - senior doctor – (i.e. Approved Medical Practitioner) added.	P2 & P9
		P3 Bullet 5 – 'The review should also take into account the legal authority/framework that can be used by staff and the patient's preferences including any advance statement.' added.	P3 Bullet 5
		P4 Bullet 3 – 'It is not always necessary to detain an adult formally under the Mental Health (Care and Treatment) (Scotland) Act 2003 because they are unable to consent to treatment for mental disorder. If the adult resists treatment, this should be taken as an indication of the adult's wishes, which must be taken into account. Consideration should be given to whether it would be appropriate to formally detain the adult under the 2003 Act.' Added.	P4 Bullet 3
		P4 Bullet 4 – 'and to obtain their consent for the medical treatment, unless impracticable.' Added to last sentence.	P4 Bullet 4
		P4 6.1 'Common Law' changed to Doctrine of Necessity (Common Law).'	P4 6.1
		P5 6.1 – 'However, the Mental Health (Care and Treatment) (Scotland) Act	P5 6.1

		2003 is the appropriate legislative authority for intramuscular (IM) medication (i.e. rapid tranquillisation). Should any informal patient require IM medication as an emergency and in crisis they will be reviewed by an approved medical practitioner within 24 hours of administration and a clear ongoing management plan agreed.' Added.	
		P5 6.2 – 'If IM medication is required, it is best practice to ensure that a medical review is undertaken as soon as possible to consider use of the Mental Health (Care and Treatment) (Scotland) Act 2003. The Mental Welfare Commission (MWC) advise using the 2003 Act if it is required to give treatment for mental disorder and the person resists or objects to that treatment.' added	P5 6.2
		P6 Bullet 4 6.3 – Change 'him/herself' to 'themselves'.	P6 Bullet 4, 6.3 Mental Health (Care and Treatment) (Scotland) Act 2003
		P6 second paragraph – RMO officer changed to RMO.	P6
		P6 fourth paragraph – 'A patient can withdraw their consent to a medication at any time. If they are not consenting when a medication is given, a T2B form that has previously been completed to authorise the treatment holds no authority.' added.	P6
		7 Principles of Drug Treatment, bullet point 2 – 'Oral medication' changed to 'Pre-rapid tranquillisation oral medication'. The following added: 'As required oral medication may also be prescribed to alleviate distress or symptoms of mental illness and is outside the scope of this guidance'. 7 Principles of Drug Treatment, bullet point 6 – 'kardex' replaced by	P6 Bullet 2, 7 Principles of Drug Treatment

		‘Prescribing and Administration Record (PAR)’.	P6 Bullet 6, 7 Principles of Drug Treatment
Mar 2022	Dec 2018	P7 – The following added: Code of practice for practitioners authorised to carry out medical treatment or research under part 5 of the Adults with Incapacity (Scotland) Act 2000 https://www.gov.scot/publications/adults-incapacity-scotland-act-2000-code-practice-third-edition-practitionersauthorised-carry-out-medical-treatment-research-under-part-5-act/ MWC’s Consent to Treatment: A guide for mental health practitioners https://www.mwcscot.org.uk/sites/default/files/2019-06/consent_to_treatment_2018.pdf MWC’s Treatment under section 47 of the Adults with Incapacity Act: overview and guidance https://www.mwcscot.org.uk/sites/default/files/2021-04/TreatmentUnderSection47oftheAdultsWithIncapacityAct April2021.pdf	P7
		P8 Bullet 4 - ‘An injectable anticholinergic’ – replaced with ‘Procyclidine Injection’.	P8 bullet 4
		8 Medicines for Rapid Tranquillisation – New bullet points added: • ‘Note: The Royal College of Emergency Medicine has specific guidelines for use only in Emergency Departments’. • ‘Ideally one medicine should be prescribed for rapid tranquillisation. In exceptional circumstances it may be necessary to prescribe more than one. If this is the case, there must be a clear plan documented in the Prescription and Administration Record (PAR) for	P8, 8 Medicines for Rapid Tranquilisation

		their use (e.g. first line; second line)'.	
		Aripiprazole 7.5mg/ml Short Acting Injection – New bullet added: • 'Can be administered with IM lorazepam if greater sedation required. Note: Drugs must not be mixed in same syringe'.	P9
		P10 Bullet 4 - *Note: Haloperidol IM Injection – Change '+/or' to 'and/or'	P10 Bullet 4 *Note: Haloperidol IM Injection
		P10 – Under Zuclopenthixol Acetate 'The decision to prescribe must be made by a senior doctor (i.e. an Approved Medical Practitioner (AMP).' added.	P10
		P11 Consultation – Mental Welfare Commission for Scotland added.	P11 Consultation
		Step 2 Oral Treatment: • 'Step 2 Oral Treatment' changed to 'Step 2 Pre-rapid Tranquillisation Oral Treatment <u>(If patient consents or legislative authority for treatment)</u>' • 'If already on an antipsychotic, optimise treatment' added. • 'See BNF for max doses in 24 hours' added.	P12 Algorithm
		Step 3 Rapid Tranquillisation (i.e. IM Medication) – The following added to boxes: • 'If already on an antipsychotic' • 'If not on an antipsychotic and antipsychotic required'	P12 Algorithm
		Table 1 Rapid Tranquillisation Monitoring – Updated in line with Maudsley Guidelines, 14th Edition 2021.	P13 Table 1 Rapid Tranquilisation Monitoring
		Table 3 List of medication used for rapid tranquillisation: pharmacokinetics – Under Haloperidol – change '10 to 36 hours' to '10 – 36 hours'	P15 Table 3 List of medication used for rapid tranquillisation: pharmacokinetics
		Table 5 Antipsychotics and their Effect on QTc – Aripiprazole moved to low	P16 Table 5 Antipsychotics and their Effect on QTc

		effect and Cariprazine added to no effect, in line with Maudsley 2021.	
		References updated.	P17 References

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This guidance has previously undergone extensive revision as a result of the EU harmonisation process for haloperidol. Due to the recommendation of a pre-treatment ECG and its contraindication with medicinal products known to prolong the QT interval of an ECG, haloperidol is no longer recommended first line for rapid tranquillisation. It is now reserved for specialist use in combination with either lorazepam or promethazine following a risk: benefit analysis by a senior doctor (i.e. an Approved Medical Practitioner).

1. Definition Of Rapid Tranquillisation

Rapid Tranquillisation: The use of medication by the parenteral route (usually intramuscular or exceptionally, intravenous) if oral medication is not possible or appropriate and urgent sedation with medication is needed''.
*(*Reference: NICE Guideline 10 Violence and Aggression: Short-term Management in Mental Health, Health and Community Settings*).*

2. Scope

This guidance has been developed to:

- Provide staff with advice on the pharmacological management of patients who present with disturbed and/or aggressive behaviour in the context of an established or suspected psychiatric disorder including situations where such behaviour arises as a result of an organic brain disorder or physical condition leading to disordered brain functioning.

- Ensure that all patients requiring rapid tranquillisation, if acutely disturbed or aggressive, receive their medication safely and correctly and that the proper procedures have been followed.

3. General Principles Of Rapid Tranquillisation

- Rapid tranquillisation should only be used when appropriate psychological and behavioural approaches have failed to de-escalate acutely disturbed behaviour and the use of 'as required' oral medication is ineffective or not possible. It is essentially a treatment of last resort.
- The aim of rapid tranquillisation is to calm the person, and reduce the risk of violence and harm, rather than treat the underlying psychiatric condition. An optimal response would be a reduction in agitation or aggression without sedation, allowing the patient to participate in further assessment and treatment. Ideally the medicine should have a rapid onset of action and a low level of side effects.

- Patients should only be treated with medicines for rapid tranquillisation after an assessment has established that the risk of not doing so is greater than the risk of acute pharmacological treatment.
- Patients should be provided with adequate information about medication used for rapid tranquillisation, on admission, so informed decisions can be made about their care and treatment.
- To assist staff to communicate with non-English speaking patients and their families/carers, the “Language Line” telephone interpretation service is available. If the person and their family members and carers have a communication disability, appropriate communication support such as British Sign Language (BSL) interpretation can be provided. Information in other formats can also be made available.
- Care and risk management plans should be made in conjunction with the patient and/or carers wherever possible.
- Multidisciplinary Teams (MDT) should develop and document an individualised pharmacological strategy for using routine and ‘as required’ medication to calm, relax, tranquillise or sedate patients, who are at risk of violence and aggression as soon as possible after admission to an in-patient psychiatric unit. The MDT should review the strategy and the use of medication at least once a week or more frequently if events are escalating and restrictive interventions are being planned/used. The review should also take into account the legal authority/framework that can be used by staff and the patient’s preferences including any advance statement.
- A post incident review (involving the patient if possible) must take place as soon as possible after the incident and must be recorded on DATIX.

4. Before Contemplating Prescribing Rapid Tranquillisation:

- Assess the risk to the patient and others.
- Consider causes for disturbed behaviour, including an assessment of the patient’s physical state to determine any possible precipitants, make a diagnosis and treat accordingly.
- Consider patient’s medical and psychiatric history including previous response to rapid tranquillisation or other methods of managing imminent violence.
- Review currently prescribed medication including any ‘as required’ medication recently administered.
- The concomitant use of two or more antipsychotics should be avoided if possible on the basis of risk associated with QT prolongation. This is a particularly important consideration in rapid tranquillisation where the patient’s physical state predisposes them to cardiac arrhythmia.
- Assess patient for use of illegal drugs or alcohol.
- Consider whether the patient has/lacks capacity and is or can be treated under the provisions of either the Mental Health (Care and Treatment) (Scotland) Act 2003 or Adults with Incapacity (Scotland) Act 2000. It is not always necessary to detain a patient formally under the Mental Health (Care and Treatment) (Scotland) Act 2003 because they are unable to consent to treatment for mental disorder. If the patient resists treatment, this should be taken as an indication of the patient’s wishes, which must be taken into account. Consideration should be

given to whether it would be appropriate to formally detain the patient under the 2003 Act. See section 6.

- Consider any advance statement the patient may have made or current treatment plan if detained under the Mental Health (Care and Treatment) (Scotland) Act 2003 or Section 47 Certificate if subject to the Adults with Incapacity (Scotland) Act 2000. Efforts should be made to ascertain the existence of a Welfare Attorney or Welfare Guardian and to obtain their consent for the medical treatment, unless impracticable. See section 6.

5. Staff Involved In The Prescribing And Administration Of Rapid Tranquillisation Must Be Adequately Trained In:

- The recognition and management of violent/disturbed behaviour, including use of psychosocial interventions to avoid or minimise restrictive interventions and de-escalation techniques.
- Knowledge of medicines used, their side effects and risks.
- Cardiopulmonary resuscitation.
- Up to date knowledge of the legislation relating to the prescribing and administration of rapid tranquillisation.
- Skills to undertake a post-incident review.

Note: At all times a doctor should be available to quickly attend to an alert by staff members when rapid tranquillisation or other interventions are implemented.

6. Legislation Relating To Rapid Tranquillisation

6.1. Doctrine of Necessity (Common Law)

In medical and psychiatric emergencies in patients not detained under the Mental Health Act, the doctrine of necessity allows treatment to protect a patient's life and/or the wellbeing of others. No certification is needed beyond the documentation of an accurate description of the actions taken within the patient's notes. However, any patient who has the capacity to make or withhold consent cannot be given medical treatment without that consent. While the use of the doctrine of necessity is acceptable in certain emergency situations, judicious application of the Adults with Incapacity (Scotland) Act 2000 and the Mental Health (Care and Treatment) (Scotland) Act 2003 provide a framework for patients deemed incapable of consent to treatment because of a mental disorder. However, the Mental Health (Care and Treatment) (Scotland) Act 2003 is the appropriate legislative authority for intramuscular (IM) medication (i.e. rapid tranquillisation). Should any informal patient require IM medication as an emergency and in crisis they will be reviewed by an approved medical practitioner within 24 hours of administration and a clear ongoing management plan agreed.

6.2. Adults with Incapacity (Scotland) Act 2000

Under Section 47 of this Act, a patient who is incapable of making decisions about medical treatment can be given 'any procedure or treatment designed to safeguard or promote physical or mental health' without their consent, subject to the principles

of the Act. The medical practitioner primarily responsible for the medical treatment of the adult must issue a Section 47 Certificate of Incapacity. If IM medication is required, it is best practice to ensure that a medical review is undertaken as soon as possible to consider use of the Mental Health (Care and Treatment) (Scotland) Act 2003. The Mental Welfare Commission (MWC) advise using the 2003 Act if it is required to give treatment for mental disorder and the person resists or objects to that treatment.

The use of force under the Adults with Incapacity (Scotland) Act 2000.

The Act prohibits the use of force or detention, unless it is immediately necessary and only for so long as is necessary in the circumstances.

The interpretation of this will depend on the particular circumstances of each case, but the principles set out in section 1 of the Act must be applied. So, for example, the degree of force applied must be the minimum necessary. Where a patient shows continued resistance to treatment for mental disorder consideration should be given to making use of the options available under mental health legislation.

6.3. Mental Health (Care and Treatment) (Scotland) Act 2003

(Including the Criminal Procedure (Scotland) Act 1995 as amended by the Mental Health (Care and Treatment) (Scotland) Act 2003).

The Act contains provision for the administration of medication to treat **mental** disorder (including acutely disturbed behaviour secondary to delirium and dementia and treatment of overdose) with the patient's consent, if they are incapable of consenting, or if they are capable of consenting and do not consent. **It does not allow the treatment of an acute unrelated physical disorder without consent.**

In medical emergencies arising in a detained patient, Section 243 of the Mental Health (Care and Treatment) (Scotland) Act 2003 allows the administration of medical treatment without consent to:

- Save the patient's life
- Prevent serious deterioration in the patient's condition
- Alleviate serious suffering on the part of the patient
- Prevent the patient behaving violently and/or being a danger to themselves or others.

If the patient is on an Emergency Detention Certificate (this certificate does not authorise treatment under the Act) a T4 form (Record of notification following urgent medical treatment) should be completed and sent to the Responsible Medical Officer (RMO). This form is a notification of the circumstances where it was necessary as a matter of urgency for medical treatment to be given to a patient subject to detention. This form should be sent to the Mental Welfare Commission by the RMO within 7 days of the treatment being given.

If the patient is within the first 2 months of compulsory treatment under the Mental Health (Care and Treatment) (Scotland) Act 2003 then a T4 form for administration of 'as required' medication is not necessary.

If the patient is beyond the first 2 months then a T2B form (Certificate of Consent to Treatment) and/or a T3B form (Certificate of the Designated Medical Practitioner) should be in place. The Mental Welfare Commission recommends that 'as required' intramuscular medication is not recorded on a T2B form as some degree of restraint is likely during the administration of the medication. A patient can withdraw their consent to a medication at any time. If they are not consenting when a medication is given, a T2B form that has previously been completed to authorise the treatment holds no authority.

If the 'as required' medication is listed on the T3B form then a T4 form is not required. If the 'as required' medication is not listed on the T3B form then a T4 form should be completed and sent to the RMO who will send to the Mental Welfare Commission within 7 days of the treatment being given.

The administering doctor should ensure that the patient's RMO has been informed of the administration of the relevant medication.

Further guidance is available from the Mental Welfare Commission for Scotland.

Guidance on the administration of covert medication is available from the Mental Welfare Commission for Scotland and the NHS Grampian Staff Guidance On Covert Administration of Medication (Adult Policy)

Further information is available on the following websites for the Mental Health Act and the Adults with Incapacity Act respectively:

http://www.legislation.gov.uk/asp/2003/13/contents
http://www.legislation.gov.uk/asp/2000/4/contents

Code of practice for practitioners authorised to carry out medical treatment or research under part 5 of the Adults with Incapacity (Scotland) Act 2000
https://www.gov.scot/publications/adults-incapacity-scotland-act-2000-code-practice-third-edition-practitionersauthorised-carry-out-medical-treatment-research-under-part-5-act/

MWC's Consent to Treatment: A guide for mental health practitioners
https://www.mwcscot.org.uk/sites/default/files/2019-06/consent_to_treatment_2018.pdf

MWC's Treatment under section 47 of the Adults with Incapacity Act: overview and guidance
https://www.mwcscot.org.uk/sites/default/files/2021-04/TreatmentUnderSection47oftheAdultsWithIncapacityAct April2021.pdf

7. Principles Of Drug Treatment

(Refer to accompanying Tables 1, 2, 3, 4, 5, 6 & 7 and Treatment Algorithm)

- A risk benefit analysis should be undertaken to determine the appropriate medicine choice and dose for the patient. This should include assessing the precautions to prescribing rapid tranquillisation on an individual patient basis (refer to sections 8 and 9 below for more detailed information).
- Pre-rapid tranquillisation oral medication should be offered, if practicable, before intramuscular (IM) medication. Note: As required oral medication may also be prescribed to alleviate distress or symptoms of mental illness and is outside the scope of this guidance.
- Write initial prescription as a single dose and do not repeat until the effect has been reviewed.
- The minimum effective dose should be used. Always give time for the medicine to work. (Refer to Table 3 for further information).
- When a behavioural disturbance occurs in a non-psychotic context it is preferable to use lorazepam alone, orally or intramuscular if necessary.
- Ensure it is clearly indicated on the Prescribing and Administration Record (PAR) if maximum daily dose includes regular medication and any oral/IM medication used 'as required'. Ensure the interval between 'as required' doses is specified. The maximum daily doses of all prescribed medicines should be carefully observed. If it is necessary to exceed these, the reasons for doing so should be recorded in the case notes. Where the total combined antipsychotic load exceeds 100% of the BNF maximum the NHS Grampian High Dose Antipsychotic Guidance should be followed.
- Vital signs must be monitored after intramuscular administration. (Refer to) Table 1: Rapid Tranquillisation Monitoring
- Mixing medicines in the same syringe is hazardous, constitutes an unlicensed product, and should never be done.
- Facilities for resuscitation must be available.
- Flumazenil must be available to reverse respiratory depression due to lorazepam.

  Note: Flumazenil is administered intravenously. (Refer to Table 2: Side effects of drugs used in rapid tranquillisation and their management). If required flumazenil must be prescribed and administered by a doctor who has knowledge of the prescribing and administration of flumazenil.

- Always have procyclidine injection available to reverse an acute dystonic reaction due to antipsychotic medication (Refer to Table 2).
- If rapid tranquillisation is being used, a senior doctor should review all medication at least once a day.

8. Medicines for Rapid Tranquillisation

Note: The Royal College of Emergency Medicine (RCEM) has specific guidelines for use **only in Emergency Departments**: Acute_Behavioural_Disturbance_Final.pdf (rcem.ac.uk)

In **all other settings** this local guidance should be followed.

The following factors should be taken into account when determining medicine choice for rapid tranquillisation:

- The patient's preferences or advance statements and decisions
- Pre-existing physical health problems or pregnancy
- Possible intoxication
- Previous response to medications; including adverse effects
- Potential for interactions with other medications
- The total daily dose of medications prescribed and administered.
- Ideally one medicine should be prescribed for rapid tranquillisation. In exceptional circumstances it may be necessary to prescribe more than one. If this is the case, there must be a clear plan documented in the Prescription and Administration Record (PAR) for their use (e.g. first line; second line).

Note: For anatomical sites for intramuscular administration see Table 7.

Lorazepam IM Injection

- 2mg (500micrograms – 2mg in frail/elderly); repeat after 30 – 60 minutes if required.
- Maximum 6 – 8 mg/24 hours.
- Dilute with an equal volume of water for injection or sodium chloride 0.9% injection.

Promethazine IM Injection

- 25 – 50mg (consider lower dose in frail/elderly); repeat after 1 – 2 hours if required.
- Maximum 100mg/24 hours (consider lower maximum in frail/elderly).
- Promethazine may be a useful option, instead of lorazepam, in benzodiazepine tolerant patients. This is an unlicensed use.

Aripiprazole 7.5mg/mL Short Acting IM Injection

- 9.75mg (1.3mL) (consider lower dose 5.25mg (0.7mL) in frail/elderly); repeat after 2 hours if required.
- Maximum 3 injections daily; maximum daily combined oral and parenteral dose 30mg/24 hours.
- Dosage adjustments needed if co-prescribed with potent inducers or inhibitors of CYP3A4 or CYP2D6 (see Table 4 and consult product literature).

- Licensed for rapid control of agitation and disturbed behaviour in schizophrenia or mania.
- Can be administered with IM lorazepam if greater sedation required. **Note:** Drugs must not be mixed in same syringe.

Olanzapine 10mg Short Acting IM Injection

- Olanzapine is an alternative short acting IM injection if there are contraindications/intolerance/non-responsiveness to aripiprazole.
- 5 - 10mg (2.5 - 5mg in frail/elderly); repeat after 2 hours.
- Maximum 3 injections daily for 3 days; maximum daily combined oral and parenteral dose 20mg/24 hours.
- When one or more factors present that might result in slower metabolism (e.g. female gender, elderly, non-smoker) consider lower starting dose and more gradual increase).
- Reconstitute with 2.1mL water for injection.
- Do not administer IM lorazepam at the same time as IM olanzapine. When treatment with both IM olanzapine and IM lorazepam is being considered olanzapine must be administered first. If the patient requires IM lorazepam after IM olanzapine, it must not be administered until at least ONE hour after the IM olanzapine and there must be careful monitoring for excessive sedation and cardiorespiratory depression. If the patient has received IM lorazepam, IM olanzapine administration should only be considered after careful evaluation of clinical status and on the advice of a consultant. The patient should be closely monitored.
- Licensed for rapid control of agitation and disturbed behaviour in schizophrenia or mania.

The following IM combination treatments are reserved for specialist use following senior review when other treatment options have failed:

Haloperidol* IM Injection PLUS Lorazepam IM Injection

Note: Drugs must not be mixed in same syringe.

Haloperidol* IM Injection PLUS Promethazine IM Injection

Note: Drugs must not be mixed in same syringe. This combination is supported by NICE NG10 and the British Association of Psychopharmacology. However following the EU harmonisation process for haloperidol, promethazine is a contraindicated treatment due to the risk of QT prolongation. **The decision to use this combination represents an unlicensed use of haloperidol and a risk: benefit analysis must be undertaken by a senior doctor (i.e. an Approved Medical Practitioner) before prescribing and documenting in the clinical notes.**

***Note: Haloperidol IM Injection**

- Only recommended to be used with either lorazepam IM injection or promethazine IM injection (unlicensed use – see above).
- 5mg (500micrograms – 2mg in frail/elderly); repeat after 30 – 60 minutes if required.
- Maximum 20mg/24 hours (frail/elderly maximum 5mg/24 hours).

- The Summary of Product Characteristics (SmPC) indicates that QT prolongation and/or ventricular arrhythmias in addition to sudden death have been reported. The risk increases with dose, in predisposed patients or with parenteral use and the following is highlighted:
  - **Pre-treatment ECG recommended.**
  - **Contraindicated with medicinal products known to prolong QT interval** (see Table 5 and Table 6).
    - If haloperidol is to be used without a pre-treatment ECG or with medicinal products known to prolong the QT interval, this constitutes an unlicensed use and poses a risk to the patient. A risk: benefit analysis must be undertaken by a senior doctor before prescribing and documenting in the clinical notes.

Note: **Zuclopenthixol Acetate (Clopixol Acuphase) IM Injection** is **not** suitable or recommended for rapid tranquillisation due to its delayed onset of action and extended duration of effect. However it may be considered as an option in patients who have required repeated parenteral administration of a short-acting antipsychotic to manage disturbed behaviour. The decision to prescribe must be made by a senior doctor (i.e. an Approved Medical Practitioner (AMP). Consult product literature.

9. Precautions to Rapid Tranquillisation

- **Patients never previously prescribed antipsychotic medication**
  - Use lower doses.
  - Avoid haloperidol.

- **Patients with no evidence of psychotic symptoms**
  - Use lorazepam.

- **Frail/Elderly**
  - Use lower doses.
  - Caution with promethazine due to anticholinergic side-effects.

- **Organic Disease**
  - Use lower doses.
  - In patients with suspected or confirmed Lewy Body Dementia avoid the use of antipsychotics.
  - Avoid haloperidol in Parkinson's disease.
  - Caution with aripiprazole in Parkinson's disease.
  - Avoid antipsychotics in cerebrovascular disease, including vascular dementia.

- **Cardiovascular Disease including Prolonged QT Interval or No ECG**
  - Use lorazepam.
  - Avoid haloperidol.
  - Caution with aripiprazole.
  - Caution with promethazine due to hypotension.
  - Consider any concomitant medication, which may prolong QTc interval.

  Note: Haloperidol is contraindicated in clinically significant cardiac disorders (bradycardia, QT interval prolongation). A clinical risk assessment must be carried out before prescribing haloperidol.

- **Compromised respiratory function**
  - Avoid benzodiazepines.
  - Caution with promethazine as may thicken or dry lung secretions and impair expectoration.

- **Alcohol Withdrawal/Risk of Seizures**
  - Caution when using antipsychotics – lowering of seizure threshold.
  - Caution with promethazine - lowers seizure threshold.

- **Hepatic or renal impairment**
  - Lower doses may be needed due to reduced clearance. See medicine specific prescribing information.

- **Pregnancy**
  - Specialist advice must be sought on the management of pregnant women requiring emergency sedation. The risks and benefits of treatment should be considered on a case by case basis.

- **Co-morbid Substance Misuse**
  - In patients who are benzodiazepine-tolerant consider use of IM promethazine.
  - Care should be exercised if methadone prescribed due to increased potential for QTc prolongation.

10. Consultation

Mental Health Operational Medicines Management Group
Psychiatric Medical Advisory Committee
Senior Nurse Group Mental Health and Learning Disabilities
Senior Staff Group, Moray Mental Health Service
Dr Craig Brown, Consultant in Emergency Medicine
Mental Welfare Commission for Scotland

Treatment Algorithm for Rapid Tranquillisation for Use in the Adult In-patient Setting
The following is for guidance only and may not be appropriate in all circumstances.
Discussion with a senior colleague is recommended at any stage.
(This algorithm must only be used in conjunction with accompanying guideline)

NHS Grampian

Step 1 De-escalation
Assess situation using all information available. Reach working diagnosis taking into account current medication, mental state, drug misuse. Use non-drug measures: talking down, distraction, etc.

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Step 2 Pre-rapid Tranquillisation Oral Treatment (If patient consents or legislative authority for treatment)
If already on an antipsychotic: optimise treatment and give Lorazepam 1 - 2mg (500micrograms - 2mg in frail/elderly) **or** Promethazine 25 – 50mg (consider lower dose in frail/elderly) if benzodiazepine tolerant. Repeat after 45 – 60 minutes. See BNF for max doses in 24hours.

If not on an antipsychotic an oral antipsychotic is an option: Aripiprazole 10mg (lower dose in frail/elderly) **or** Quetiapine 50 – 100mg (lower dose in frail/elderly) **or** Olanzapine 10mg (2.5 – 5mg in frail/elderly) **or** Risperidone 1 - 2mg (500micrograms in frail/elderly). Repeat after 45 - 60 minutes. See BNF for max doses in 24 hours.

↓

Step 3 Rapid Tranquillisation (i.e. IM Medication)
Depending on patient's preferences/advance statements and decisions; pre-existing physical health problems or pregnancy; possible intoxication; previous response to medications, including adverse effects; potential interactions with other medications; and the total daily dose of medications prescribed and administered:

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If already on an antipsychotic

LORAZEPAM 2mg IM
(500micrograms - 2mg in frail/elderly)
Maximum IM daily dose usual range 6 – 8mg
Dilute with equal volume of water for injection or 0.9% injection sodium chloride.
OR
^PROMETHAZINE 25 – 50mg IM
(consider lower dose in frail/elderly)
Maximum 100mg/24hours
(consider lower maximum in frail/elderly)

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If no response after 30 – 60 minutes (1 - 2 hours for promethazine) repeat above.

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If no response after further 30 - 60 minutes (1 - 2 hours for promethazine) seek advice from senior medical staff. Consider need for alternative (refer to guidance p7-9).

If not on an antipsychotic and antipsychotic required

***ARIPIPRAZOLE 9.75mg (1.3mL) IM**
(consider lower dose 5.25mg (0.7mL) in frail/elderly)
Maximum 3 injections daily
Maximum 30mg/24hours (oral and IM combined)

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If no response after 2 hours repeat above.

↓

If no response after further 2 hours seek advice from senior medical staff. Consider need for alternative (refer to guidance p7-9).

IMPORTANT NOTES

- Use minimum effective dose.
- In non-psychotic context use lorazepam.
- Lorazepam injection must be diluted with an equal volume of water for injection or sodium chloride 0.9% for injection
- Avoid lorazepam in patients with compromised respiratory function. Caution with promethazine.
- **^Promethazine** is a useful option, instead of lorazepam, in benzodiazepine tolerant patients. **Note**: unlicensed use.
- ***Aripiprazole** Short Acting Injection is licensed for rapid control of agitation and disturbed behaviour in schizophrenia and mania. Dosage adjustments needed if co-prescribed with potent inducers or inhibitors of CYP3A4 or CYP2D6 (see Table 4 on p12).
- Include both oral and IM doses when calculating total amount of a drug given. Take regular medication doses into account where relevant.
- In certain circumstances current licensed maximum doses may be knowingly exceeded. The rationale for this should be recorded in the case notes.
- Cardiopulmonary resuscitation equipment must be available.
- Vital signs must be monitored after intramuscular administration (refer to Table1).
- If respiratory rate falls below 10 per minute due to administration of lorazepam give flumazenil (200micrograms over 15 seconds IV, then if required level of consciousness not achieved after 60 seconds, 100micrograms over 10 seconds, repeated until required level of consciousness achieved to maximum of 1mg). Flumazenil must be prescribed and administered by a doctor who has knowledge of the prescribing and administration of flumazenil.
- Procyclidine 5 - 10mg IM/IV can be given for acute dystonia repeated if necessary after 20 minutes (maximum 20mg daily).

Table 1: Rapid Tranquillisation Monitoring

After intramuscular rapid tranquillisation monitor the following every 15 minutes for one hour and then hourly until ambulatory:

- Pulse
- Blood Pressure
- Respiratory rate
- Temperature

Patients who refuse to have vital signs monitored, or who remain too behaviourally disturbed, should be observed for signs/symptoms of pyrexia, hypoxia, hypotension, over-sedation and general physical well-being

Note:

- If the patient is asleep or unconscious a pulse oximeter should be used to continuously measure oxygen saturation. A nurse should remain with the patient until they are ambulatory again.
- ECG and haematological monitoring are also strongly recommended, especially when higher doses are used. Hypokalaemia, stress, and agitation put the patient at risk of cardiac arrhythmias.
- If olanzapine IM administered pulse and respiratory rate must be monitored for at least 4 hours after administration.
- If BNF maximum doses are exceeded monitor every 15 minutes.

Table 2: Side effects of drugs used in rapid tranquillisation & their management

Side Effect	Management
Acute dystonia (Including oculogyric crisis).	Give procyclidine 5 – 10mg (2.5 - 5mg in frail/elderly) IM or IV repeated if necessary after 20 minutes (maximum 20mg/day; consider lower maximum in frail/elderly).
Reduced respiratory rate (<10/min) or oxygen saturation (<90%) due to administration of lorazepam.	Give oxygen; raise legs; ensure patient is not lying face down. Give flumazenil (a benzodiazepine antagonist) if benzodiazepine-induced respiratory depression suspected. If required flumazenil must be prescribed and administered by a doctor who has knowledge of the prescribing and administration of flumazenil. • Initially 200micrograms IV over 15 seconds, then if required level of consciousness not achieved after 60 seconds, 100micrograms over 10 seconds, repeated until required level of consciousness obtained. • Maximum dose: 1mg (1000micrograms) in 24 hours. • Flumazenil has a shorter half-life than benzodiazepines and respiratory rate may recover then deteriorate again. Monitor patient closely as doses may need to be repeated. **Note: If respiratory depression is induced by any other sedative agent ventilate mechanically and refer immediately to specialist medical care.**
Irregular or slow (<50/min) pulse.	Refer to specialist medical care immediately.
Fall in blood pressure (>30mm Hg orthostatic drop or < 50mm Hg diastolic).	Lie patient flat, raise legs if possible. Monitor closely.
Increased temperature and/or marked rigidity. (Risk of Neuroleptic Malignant Syndrome (NMS) and perhaps arrhythmias).	Withhold antipsychotics. Check creatinine kinase urgently. Monitor closely for any other signs of Neuroleptic Malignant Syndrome (NMS) such as sweating, hypertension, fluctuating blood pressure, tachycardia, urinary incontinence, retention or obstruction, muscle rigidity, confusion, agitation or altered consciousness. If NMS suspected refer to specialist medical care immediately.

Table 3: List of medication used for rapid tranquillisation: pharmacokinetics

Medication	Time to maximum plasma concentration	Approximate plasma half-life
Aripiprazole intramuscular injection	1 - 3 hours	75 - 146 hours*
Haloperidol intramuscular injection	20 - 60 minutes	10 - 36 hours
Lorazepam intramuscular injection	60 - 90 minutes	12 - 16 hours
Olanzapine intramuscular Injection	15 - 45 minutes	32 - 50 hours
Promethazine intramuscular injection	1 - 2 hours	7 - 15 hours

* 75 hours in extensive metabolisers of CYP2D6 and 146 hours in poor metabolisers of CYP2D6.

Table 4: Strong inhibitors and inducers of CYP2D6 and CYP3A4

(Note: This list is not exhaustive – consult BNF or product literature)

Strong inhibitors of CYP2D6	Strong Inhibitors of CYP3A4	Aripiprazole dose adjustment
Fluoxetine	Ketoconazole	Half dose
Paroxetine	Itraconazole	
Quinidine	HIV Protease inhibitors	
Strong inducers of CYP3A4		Double dose
Carbamazepine	St John's Wort	
Rifampicin	Rifabutin	
Phenytoin	Phenobarbital	
Primidone	Efavirenz	
Nevirapine		

Table 5: Antipsychotics and their effect on QTc

No Effect	Low Effect	Moderate Effect	High Effect	Unknown
Cariprazine	Aripiprazole	Amisulpride	Pimozide	Trifluoperazine
Lurasidone	Clozapine	Chlorpromazine		Zuclopenthixol
	Flupentixol	Haloperidol	**Any intravenous antipsychotic**	
	Olanzapine	Levomepromazine		
	Paliperidone	Quetiapine		
	Risperidone		**Any drug or drug combination at more than recommended maximum**	
	Sulpiride			

Table 6: Other medicines that increase QTc

(**Note:** This list is not exhaustive – consult BNF or product literature)

Antidepressants	citalopram, escitalopram, venlafaxine, trazodone, tricyclics
Mood Stabilisers	lithium
Antibiotics	ampicillin, azithromycin, erythromycin, clarithromycin, co-trimoxazole, ciprofloxacin, levofloxacin, moxifloxacin, pentamidine
Antimalarials	chloroquine, mefloquine, quinine
Antiarrhythmics	disopyramide, procainamide, sotalol, amiodarone, bretylium, quinidine, dronedarone
Others	methadone (at doses >100mg/day), amantadine, cyclosporin, diphenydramine, hydroxyzine, nicardipine, tamoxifen, fluconazole, promethazine

Table 7: Anatomical sites for intramuscular administration

	Anatomical Site		
Short Acting Intramuscular Injection	**Deltoid** (max volume= 2mL)	**Lateral Thigh**	**Gluteal**
Aripiprazole Injection	YES	YES	YES
Haloperidol Injection	YES	YES	YES
Lorazepam Injection	YES	YES	YES
Olanzapine Injection	YES	YES	YES
Promethazine Injection	YES	YES	YES
Zuclopenthixol Acetate Injection (**NB:** Not recommended for rapid tranquillisation)	NO	YES	YES

11. References

1. British National Formulary via Medicines Complete https://www.medicinescomplete.com/mc/bnf/current/

2. Electronic Medicines Compendium. Summary of Product Characteristics. via Electronic Medicines Compendium (eMC).

3. Maudsley Prescribing Guidelines 14th Edition, 2021, Wiley Blackwell

4. NICE Guideline NG 10, May 2015: Violence and aggression: short-term management in mental health, health and community settings.

5. Royal College of Psychiatrists 2014. Consensus statement on high-dose antipsychotic medication.

6. Bazire S, Psychotropic Drug Directory 2021, Lloyd Reinhold Publications

7. Joint BAP NAPICU evidence-based consensus guidelines for the clinical management of acute disturbance: De-escalation and rapid tranquillisation 2018

8. Medicines Information Department, Aberdeen Royal Infirmary

9. Medicines Information Department, Otsuka Pharmaceuticals UK Ltd