# DOCUMENT CONTROL PAGE

**Title**

**Rapid Tranquillisation: Pharmacological management guidance for acute behavioural disturbance in ADULT patients to minimise the potential for aggression, severe agitation and violent outbursts**
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**Supersedes**

Supersedes: 1.0
Changes: Responsibility of sedation lead.

| | TGH | ORC | WH |
|---|---|---|---|
| Document | Rapid Tranquillisation: Guidance for use of medication to manage disturbed behaviour in adult patients to minimise the potential for aggression, severe agitation and violent outbursts | | |
| Version | 1.0 | | |

**Minor Amendment**

Date

Notified To Date

Summary of amendments –
Addition of quick reference guide, minor title change and formatting changes, Correction of promethazine volume in table 6.12, Addition of summary table for quick reference dosing information in a high acuity situation, altered order of Appendices, removal of Calver Sedation Tool, addition of maximum daily doses for lorazepam, addition of 'acute' to guideline title, deletion of first page with dosing table, addition of manual restraint, ketamine dosing table split into IV and IM.

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**Ratification**

Ratified by: Medicines Management Committee

Date of Ratification: August 2022

**Application**

All Medical staff, Nursing staff and Pharmacists
(Adult patients)

| AH | MREH | ORC | RMCH | SMH | TGH | UDHM | WH | WCH | NMGH |
|---|---|---|---|---|---|---|---|---|---|
| ✓ | ✓ | ✓ | x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

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|---|---|
| 31/08/2022 | 2019-36 |

START:

# Rapid Tranquillisation in adults – Quick Reference Guide

1. **Calculate** Riker Sedation Agitation Scale **(SAS)** score - (see Table 1)

2. If **Very Agitated / Dangerous Agitation** (SAS 6-7)

**CALL FOR URGENT HELP**

local staff, 2222 - Fast bleep for anaesthetics/critical care senior doctor or an ED Resus senior doctor and security.

3. Administer **Lorazepam** (see Table 2)

4. For **Dangerous Agitation** (SAS 7) an **ED Resus/Anaesthetic/Critical Care consultant may consider Ketamine** (see Table 3)

5. **Monitor response** - respiratory rate, oxygen saturation, blood pressure, GCS and consider supplemental oxygen

6. If only **partial response** to **Lorazepam** consider **a further dose or IM administration** (see Table 2)

7. If **no response** to **Lorazepam** consider **Haloperidol** (monitor ECG) **and Promethazine** (see Table 2)

8. **Reassess** Riker Sedation Agitation Scale (SAS) – see Table 1)

9. **Agree frequency** of ongoing physical **observations**

**For full guidance please see Rapid Tranquillisation: Pharmacological management guidance for acute behavioural disturbance in ADULT patients to minimise the potential for aggression, severe agitation and violent outbursts**

# Table 1 – Riker Sedation-Agitation Scale (SAS)

| Riker Sedation-Agitation Scale (SAS) | | |
|---|---|---|
| **Score** | **Term** | **Descriptor/Example features** |
| **7** | **Dangerous agitation** | Pulling at ET Tube, trying to remove catheters, climbing over bedrail, striking at staff, thrashing side-to-side (equivalent to Richmond Agitation Sedation Scale (RASS) +4) **CALL FOR URGENT HELP*** |
| **6** | **Very agitated** | Requiring restraint and frequent verbal reminders of limits, biting ET tube (equivalent to RASS +3) **CALL FOR URGENT HELP*** |
| **5** | **Agitated** | Anxious or physically agitated calms following to verbal instructions (equivalent to RASS +2) **INFORM MEDICAL STAFF** |
| **4** | **Calm & Cooperative** | Follows commands and easily rousable (equivalent to RASS 0) |
| **3** | **Sedated** | Difficult to rouse, but wakes to verbal stimuli or gentle shaking, follows simple commands but drifts off again (equivalent to RASS -1 to -3) |
| **2** | **Very sedated** | Rouses to physical stimuli but does not communicate or follow commands, may move spontaneously (equivalent to RASS -4) **INFORM MEDICAL STAFF** |
| **1** | **Unrousable** | Minimal or no response to noxious stimuli, does not communicate or follow commands (equivalent to RASS -5) **CALL FOR URGENT HELP*** |

*Call for critical care/anaesthetics/ED resus support before administering drugs for Riker scores 6-7, communicating the urgency of the situation*

If non-pharmacological/verbal de-escalation techniques have failed, reversible causes of agitation have been excluded (where feasible/safe to do so) and pharmacological therapy is deemed necessary, the oral route should be considered as first line, with the parenteral route considered if the oral route is not feasible/safe, or there is deterioration in agitational state despite oral therapy. Non-pharmacological/verbal de-escalation techniques should continue where feasible/safe to do so alongside pharmacological therapy.

# Table 2 – Medication dosing

| | Dose stratification | | | |
|---|---|---|---|---|
| Medication options | Dosing for elderly, cognitively impaired, low body weight, physically frail | Typical initial dose | Dosing for patients likely to require higher dose therapy e.g., Riker score 6-7 | Dosing in exceptional circumstances e.g., Riker score 7 |
| Lorazepam (**oral**) | 500micrograms-1mg | 1-2mg | 2-4mg | |
| Haloperidol (**oral**) | 500micrograms | 1-2mg | 2-5mg | |
| Promethazine (**oral**) | 25mg | 25-50mg | 50mg | |
| Lorazepam (**IM**) | 500micrograms | 1mg | 2mg | 2-4mg |
| Haloperidol (**IM**) | 500micrograms | 1mg | 2.5mg | 5mg |
| Promethazine (**IM**) | 25mg | 25-50mg | 50mg | 50mg |
| Note for IM administration: Haloperidol and promethazine do not routinely require further dilution. Lorazepam 4mg/1ml vials should be diluted with 1ml sodium chloride 0.9% or water for injections giving a 4mg/2ml concentration. | | | | |
| - For agitation managed via the oral route, lorazepam would be a first line option, with promethazine as an alternative for those intolerant to benzodiazepines.<br>- For Rapid Tranquillisation, NICE guidance recommends use of either lorazepam IM alone, or haloperidol IM in addition to promethazine IM. (Antipsychotics should be considered where psychosis is thought to play a role in the reason for RT).<br>- For patients with CV disease, Parkinson's disease, prolonged QT/no available ECG, avoid haloperidol and use lorazepam as first line. Haloperidol is also cautioned in dementia (especially Lewy Body type), head injury, patients already on antipsychotics, alcohol withdrawal.<br>***Further information on contraindications/cautions is available under each drug monograph via https://www.medicines.org.uk/emc & complex cases should be discussed with the*** | | | | |

## Ketamine

A senior anaesthetist, critical care or ED consultant may consider ketamine as an option for rapid tranquillisation for patients who are a Riker score 7, pose a significant risk to themselves/staff/other patients, and due to the level of agitation or violence, physical assessment is not feasible/safe. There should be consideration of potential adverse effects and their subsequent management and staff should be prepared to proceed to intubation if this becomes necessary. Ketamine should not be used as a routine option for RT.

**When using physical restraint, maintain the patient in a supine position taking care to avoid obstruction to face, neck and airways. Administer supplemental oxygen and institute SpO2, BP, ECG monitoring at the earliest possible opportunity.**

## Table 3 – Ketamine dosing

| Medication | Typical dose | Onset (mins) | Duration (mins) |
|---|---|---|---|
| Ketamine (**IM**) | 2-4mg/kg | 3-5 | 60-90 |
| Ketamine (**IV**) | 1-2mg/kg | 1 | 20-30 |

**Staff must report any rapid tranquillisation event using the Trust Incident Reporting System, with arrangements made to convene an immediate HILA. This will enable staff to learn important lessons to apply in any future incident.**

## Contents



## 1.0 Introduction

1.1 Violence and aggression refer to a range of behaviours or actions that can result in harm, hurt or injury to another person, regardless of whether the violence or aggression is physically or verbally expressed, physical harm is sustained, or the intention is clear (NICE guideline, 2015). Whilst violence or aggression is not a medical condition, it can be a sign of one, whether it be an acute stress disorder, personality disorder, or an acute confusional state. This may be the presumed diagnosis in a situation where a rapid decision on sedation was required, but the clinical situation and risk thereof needs to be assessed on a case-by-case basis, to ensure this outweighs risk from the rapid tranquillisation medication and process itself.

1.2 Medication usage may be necessary in these situations if appropriate psychological and environmental de-escalation techniques have failed to resolve the situation. The guidance herein provides algorithms to aid prescribers' decision making around appropriate and effective medication options that are available.

1.3 The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Refer to the General Medical Council's advice on "Good Medical Practice" for further advice (Appendix 6). Further support and guidance is available from the Consultant Psychiatrist for the Mental Health Liaison Team (MHLT) in relation to prescribing outside of BNF guidance, with support from MHLT with ongoing care plan management/ review available as well. (Contact details in Appendix 1).

1.4 Rapid tranquillisation in this guideline refers to the use of medication by the parenteral route, usually intramuscular (IM) or, in exceptional circumstances intravenous (IV), where oral medication is not possible/appropriate and urgent sedation with medication is deemed essential.

1.5 Rapid tranquillisation requires careful clinical judgement and is not a first line therapy for managing violence and aggression. Non-pharmacological approaches should be considered in each case and rapid tranquillisation is likely to be appropriate only when several of them have been tried and failed to reduce disturbed behaviour. Consideration should be given to physical causes or concurrent illness together with possible interacting medication.

1.6 Even when rapid tranquillisation is used, non-pharmacological approaches may continue to be used for maximum effect. Rapid tranquillisation is a more restrictive intervention and must be

reduced/discontinued at the earliest opportunity. Person centred interventions must be re-commenced once the patient has received maximum benefit from sedation and achieved a sustained, relaxed presentation.

## 2.0 Purpose & Scope

2.1 This document covers the use of medication for short-term management of violence, aggression and severe agitation in adults (aged 18 and over). The guidance aims to equally safeguard both staff and patients by helping prevent violent situations and manage them safely when they do occur.

2.2 This document does not cover the non-pharmacological management of patients. Pharmacological therapy is not an alternative to, but must occur with, good psychological and environmental management. See Trust policy re: "Care of patients with disturbed behaviour due to underlying mental health conditions" for further information related to non-pharmacological first line interventions for staff.

2.3 The guidance is aimed at all Clinicians who prescribe medication for the control of disturbed behaviour, Nursing staff who administer it and Pharmacists who assess its clinical appropriateness. This document does not cover pharmacological interventions for managing challenging behaviour in dementia, nor does it cover management of delirium or sedation in critical care patients. Management of these separate clinical situations is outlined in corresponding Trust clinical guidelines and should be under the direction of an appropriate Consultant.

## 3.0 Roles and Responsibilities

The Medicines Optimisation Board is responsible for all aspects of medicines use within the Trust.

Departmental Managers have a responsibility to disseminate procedural documents and facilitate any further discussion or training required. It is also the responsibility of Departmental Managers to ensure up to date copies are available to staff.

All Trust staff have a responsibility to follow Trust procedural documents.

**This guideline MUST be read in conjunction with the Trust's "Care of patients with disturbed behaviour due to underlying mental health conditions"**

## 4.0 Detail of Procedural Document

4.1 Medicines used for rapid tranquillisation need to have a rapid onset of action to achieve a fast response and short duration to minimise accumulation. The routine prescribing of "when required" medicines to be used in this situation is not appropriate as the choice of medicine, dosage, frequency and route of administration should be tailored to the individual needs of the patient, regularly assessed and be discussed with the patient where possible.

4.2 An oral medicine should always be offered initially before parenteral routes are considered. The lowest effective dose should be used to achieve a Riker Score of 4 (see Appendix 2). It is worth noting that lower doses of the agents discussed below should be considered for antipsychotic naive patients, as well as patients who are elderly, cognitively impaired, have low body weight or are physically frail.

**Assessment prior to prescribing rapid tranquillisation:**

4.3 Conduct a physical examination where possible with particular reference to:

- Parkinson's disease
- Lewy Body dementia
- Organic syndromes
- Acute confusional state
- State of hydration
- Evidence/Assessment of pre-existing cardiac and pulmonary conditions
- Pregnancy
- Baseline observations (heart rate, blood pressure, temperature and respiratory rate)
- Intoxication with alcohol, benzodiazepines and/or illicit/psychoactive drugs
- Hypoglycaemia
- Head injuries/Seizures
- General health and weight
- Baseline electrolytes and ECG where possible (if a physical examination or any aspect of examination is not possible, the reason for this should be documented in the patient's case notes.

4.4 If pharmacological therapy is deemed necessary:

- Review medicines taken/administered in the last 24 hours
- Note if rapid tranquillisation medication has been administered in the past and its response, including adverse drug reactions, or if the patient is drug naïve
- Observe and note the physical state of the patient and previously recorded physical examination, medical history, investigations and ECG, consider if the patient may be pregnant
- Consider rapid illicit drugs screening if possible (urine drug screen) and take in to account possible intoxication
- Consider the service user's preferences and information contained within any relevant advanced directives via Psychiatry liaison
- Ensure availability of antidotes e.g., flumazenil and procyclidine
- Note that use of two or more antipsychotics increases the risk of QT prolongation, especially if the patient's physical state predisposes them to cardiac arrhythmias or they are taking any other medicines that affect the QT interval
- Consider potential drug interactions
- Consider the total daily dose of medicines prescribed and administered
- If there is insufficient information available to guide the choice of medicines for rapid tranquillisation, or the service user has not taken antipsychotic medicines before, use intramuscular lorazepam

4.5 For rapid tranquillisation, NICE guidance recommends use of either lorazepam IM alone, or haloperidol IM combined with proMETHazine IM. Caution, proMETHazine is often mistaken for promazine: please take care when prescribing to avoid medication prescribing errors.

4.6 There are several tools to support the decision making of prescribing clinicians. These are:

- **Riker Sedation-Agitation Scale** (evidence-based tool that can help the prescribing clinician to determine when sedation/ rapid tranquillisation needs to be considered). The Riker Scoring method is offered here to help guide clinical assessment of patients for whom rapid tranquillisation is being considered. The Riker Score is referred to in the dosing monographs, to aid (but not definitively direct) prescribers select appropriate medication doses for patients

requiring pharmacological therapy. It should not be used as a sole decision-making tool, but to support the clinical judgement of a senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor. (See Appendix 2).

- **Brøset Violence Checklist – BVC**: The Brøset Violence Checklist (BVC) is a 6-item checklist which assists in the prediction of imminent violent behaviour (24-hour perspective). The checklist provides concise guidance on how it is used within the document. This tool can be used to perform a baseline assessment of a patient's behaviour and support staff in monitoring for a decline in appropriate behavior which may highlight a risk of progression towards violence. (See Appendix 3).
  The Richmond Agitation-Sedation Scale (RASS) is a tool used in critical care settings (See Appendix 4).

4.7 Doctors who may be unfamiliar with prescribing medication for rapid tranquillisation in the following patient groups must consult with a senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor and/or a senior Pharmacist, familiar with the specialty, to consider:

- potential side effects for the patient, or in the case of a pregnant woman, the impact on the unborn child:
  - Elderly/frail patients
  - Pregnant mothers
  - Patients who may have used illicit drugs

**Legal Considerations:**

4.8 It is essential that a clinician is clear under what authority rapid tranquillisation is to be administered – a patient's Mental Health Act and Mental Capacity Act status should be considered and could provide legal authority in circumstances where the patient is not providing consent to rapid tranquillisation.

4.9 Patients able to consent to rapid tranquillisation and have, in fact, provided such consent may be administered rapid tranquillisation. Rapid tranquillisation must not be used when such a patient has withheld consent to it, however, in the absence of consent, legal authority may be provided.

4.9.1 If the patient is assessed as retaining capacity to refuse consent to rapid tranquillisation, consideration ought to be given to whether the criteria for detention under the Mental Health Act (MHA) are met. If the patient is detained under the Mental Health Act rapid tranquillisation would constitute treatment for mental disorder and can be authorised by an (MHA) approved clinician. Staff should familiarise themselves with the Royal College of Emergency Medicine Guidance, "Mental Capacity in the Emergency Department Practice". Page 8:
https://www.rcem.ac.uk/docs/RCEM%20Guidance/RCEM%20Mental%20Capacity%20Act%20in%20EM%20Practice%20-%20Feb%202017.pdf

4.9.2 If a patient is assessed as lacking capacity to provide/withhold consent to rapid tranquillisation, then this must be documented using a capacity assessment form (see MFT Intranet pages for further information). A decision must be taken as a best interest's decision. This decision must show that the option of considering rapid tranquillisation is a proportionate, less restrictive intervention, using a balance sheet approach of benefits and burdens of making this intervention. e.g., rapid tranquillisation vs excessive use of physical restraint, with risks/complications associated with this management.

4.9.3 Prior to reaching any best interest decision, consideration ought to be had to the proportionality of rapid tranquillisation to the challenging behaviour demonstrated and whether it is the least restrictive option available to manage this behaviour.

4.9.4 Provided there is no advance decision or LPA/Deputy in respect of the patient's health and welfare, the Trust may reach decisions in the patient's best interests including whether rapid tranquillisation ought to be administered.

4.9.5 For further advice contact the adult Safeguarding Team via switchboard. For complex decisions that may involve Lasting Power of Attorney (LPA), further advice may be required for continuation of rapid tranquillisation from the Trust's legal team.

4.10 For scenarios where treatment is required urgently to control severe behavioural disturbance that may escalate to cause harm to the patient or other people, the least restrictive use of rapid tranquillisation must be considered. Use of the Riker Sedation-Agitation tool (Appendix 2) must be documented in the clinical record to show that due diligence has been given to achieving light sedation and a calming in behavioural disturbance, using the least restrictive method possible.

4.11 Prescribers should be aware that use of medications in a rapid tranquillisation situation is often "off-label" i.e., used in a way that is different to that described in the license, and as such, sole responsibility for use of that medication rests with the prescriber.

**Manual restraint**

4.12 Health and social care provider organisations should ensure that manual restraint is undertaken by staff who work closely together as a team, understand each other's roles and have a clearly defined lead.

4.13 When using manual restraint, avoid taking the service user to the floor, but if this becomes necessary:

- use the supine (face up) position if possible, **or**
- if the prone (face down) position is necessary, use it for as short a time as possible.

4.14 Do not use manual restraint in a way that interferes with the service user's airway, breathing or circulation, for example by applying pressure to the rib cage, neck or abdomen, or obstructing the mouth or nose.

4.15 Do not use manual restraint in a way that interferes with the service user's ability to communicate, for example by obstructing the eyes, ears or mouth.

4.16 Undertake manual restraint with extra care if the service user is physically unwell, disabled, pregnant or obese.

4.17 Aim to preserve the service user's dignity and safety as far as possible during manual restraint.

4.18 Do not routinely use manual restraint for more than 10 minutes.

4.19 Consider rapid tranquillisation or seclusion as alternatives to prolonged manual restraint (longer than 10 minutes).

4.20 Ensure that the level of force applied during manual restraint is justifiable, appropriate, reasonable, proportionate to the situation and applied for the shortest time possible.

4.21 One staff member should lead throughout the use of manual restraint. This person should ensure that other staff members are:

- able to protect and support the service user's head and neck, if needed
- able to check that the service user's airway and breathing are not compromised
- able to monitor vital signs
- supported throughout the process.

4.22 Monitor the service user's physical and psychological health for as long as clinically necessary after using manual restraint.

**Mechanical restraint**

4.23 Health and social care provider organisations should ensure that mechanical restraint in adults is used only in high-secure settings (except when transferring service users between medium- and high-secure settings as in recommendation and its use is reported to the trust board.

4.24 Use mechanical restraint only as a last resort and for the purpose of:

- managing extreme violence directed at other people **or**
- limiting self-injurious behaviour of extremely high frequency or intensity.

4.25 Consider mechanical restraint, such as handcuffs, when transferring service users who are at high risk of violence and aggression between medium- and high-secure settings. In this context, restraint should be clearly planned as part of overall risk management.

**Equality statement**

4.26 Effective communication is important during the management of acute behavioural disturbance, especially where there are specific language and sensory communication requirements. The information provided should meet the individual's communication needs, e.g., people with physical, sensory/hearing impairment, learning disabilities or people who do not speak or read English. Staff should follow Trust guidance on Accessible Information Standards and the procedure on accessing the interpreting service.

**Staff must report any rapid tranquillisation event using the Trust Incident Reporting System, with arrangements made to convene an immediate HILA. This will enable staff to learn important lessons to apply in any future incident.**

## 5 First dose (Oral therapy) – (doses as per Greater Manchester Mental Health Trust guidance)

### 5.1 1st line

| Dosing for elderly, cognitively impaired, low body weight or physically frail | Typical initial dose | Dosing for patients likely to require higher dose of benzodiazepine e.g., Riker Score 6-7 |
|---|---|---|
| **Lorazepam 500microgram–1mg orally** | **Lorazepam 1-2mg Orally** | **Lorazepam 2-4mg Orally** |
| **Dose increments should be made slowly and reduced in young, elderly, frail or benzodiazepine naïve patients.<br>Usual max dose 4mg /24hours adjusted according to weight, age and frailty.<br>Only senior doctors (senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade) can increase to a maximum dose of 12mg/24 hours if deemed necessary.<br>Check for drug interactions that might influence dose.** | | |

### 5.2 2nd line

If lorazepam inappropriate, e.g., benzodiazepine intolerant, consider **oral proMETHazine 25mg to 50mg orally.**

N.B Benzodiazepines are first line options as the effects of the drug are potentially reversible (refer to TOXBASE monographs for guidance around when this is indicated, dosing of the reversal agent flumazenil and monitoring requirements).

Haloperidol can be used in combination with proMETHazine to improve tolerability of haloperidol.

| Dosing for elderly, cognitively impaired, low body weight or physically frail | Typical initial dose | Dosing for patients likely to require higher dose of benzodiazepine e.g., Riker Score 6-7 |
|---|---|---|
| **Haloperidol* 500micrograms orally** | **Haloperidol* 1-2mg Orally** | **Haloperidol* 2-5mg orally** |
| **Increase Haloperidol in small increments of 2.5mg – 5mg orally if appropriate and monitor response.<br>If further treatment is required after 10mg of oral Haloperidol, then seek advice from senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor.** | | |

As Greater Manchester Mental Health Trust's guidance advises, and under the guidance of the Mental Health Liaison team, other oral antipsychotic options include:

- Olanzapine* 10mg or (consider dose range of 5mg-15mg depending on patient i.e., consideration of age, cognitive impairment, body weight, frailty).
- Quetiapine* 50mg – 100mg or (consider dose range of 12.5mg-50mg depending on patient i.e., consideration of age, cognitive impairment, body weight, frailty).
- Risperidone* 1mg – 2mg or (consider dose range of 250micrograms-1mg depending on patient i.e., consideration of age, cognitive impairment, body weight, frailty).

*There is a risk of hypotension in patients already prescribed regular antipsychotic medication, therefore consider increasing regular dose within BNF limits or a stat dose, or whether it is safe to add a second antipsychotic (as a stat dose) – check if baseline ECG has been performed as there is risk of QTc prolongation with antipsychotic use. (See section 5.4). Further information on drug kinetics is available in Appendix 5.

5.3 Use of antipsychotics should be considered particularly if psychosis is thought to play a role in the reason for which rapid tranquillisation is required.

5.4 If there is evidence a patient has cardiovascular disease, including a prolonged QT interval or if no ECG has been performed, avoid haloperidol combined with proMETHazine and use lorazepam instead. Use of antipsychotics is cautioned in dementia (especially Lewy Body type), head injury, in patients already taking an antipsychotic, in alcohol withdrawal and patients with Parkinson's disease as side effects include seizures and extrapyramidal side effects.

5.5 As Greater Manchester Mental Health Trust's guidance advises, initially oral medication should not be repeated at more than hourly intervals. Furthermore, the Mental Health Liaison team should be contacted at the earliest opportunity to ensure an individual management plan is put in place for each patient for whom rapid tranquillisation is considered or has been carried out upon.

6 **First dose (Parenteral therapy) -** (doses as per GMMH Trust guidance)

6.1 Consider the parenteral route if the patient refuses oral therapy, oral therapy is ineffective, or if the patient is placing themselves or others at risk.

6.2 **1st line**

| Dosing for elderly, cognitively impaired, low body weight or physically frail | Typical initial dose | Dosing for patients likely to require higher dose of benzodiazepine e.g., Riker Score 6-7 | Dosing in exceptional circumstances e.g., Riker Score 7 & delirium tremens - patient likely to require higher dose of benzodiazepine |
|---|---|---|---|
| **Lorazepam 500micrograms IM** | **Lorazepam 1mg IM** | **Lorazepam 2mg IM** | **Lorazepam 2-4mg IM** |
| **• 2mg- 4mg may be used in exceptional circumstances with advice from a senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor<br>Only senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor can increase to a maximum dose of 12mg/24 hours, if deemed necessary.<br>• Dose increments should be reduced in young, elderly, frail or benzo naïve patients.<br>• Have flumazenil to hand in case of benzodiazepine-induced respiratory depression.** | | | |

6.3 **2nd line**

If there is only a partial response to lorazepam IM (Riker score may be helpful in this assessment), consider a further dose of lorazepam IM. If there is no response to lorazepam IM (Riker score may be helpful in this assessment), consider haloperidol IM combined with promethazine IM.

| Dosing for elderly, cognitively impaired, low body weight or physically frail | Typical initial dose | Dosing for patients likely to require higher dose of benzodiazepine e.g., Riker Score 6-7 | Dosing in exceptional circumstances e.g., Riker Score 7 & delirium tremens - patient likely to require higher dose of benzodiazepine |
|---|---|---|---|
| **Haloperidol 500micrograms IM** | **Haloperidol 1mg IM** | **Haloperidol 2.5mg IM** | **Haloperidol 5mg IM** |
| **Increase Haloperidol in small increments of 500micrograms – 2mg IM if appropriate and monitor response.<br>Dose increments should be reduced in young, elderly or frail patients.<br>If further treatment is required after 5mg of IM Haloperidol, then seek advice from senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor.** | | | |

6.4 NICE guidance suggests haloperidol IM doses be used in combination with **proMETHazine IM 25-50mg**, as this may reduce incidence of side effects to haloperidol alone and improve its tolerability.

6.5 NICE guidance does also advise that if there is evidence of cardiovascular disease, including a prolonged QT interval, or no electrocardiogram has been carried out, avoid intramuscular haloperidol combined with intramuscular promethazine and use intramuscular lorazepam instead.

6.6 If there is only a partial response to haloperidol IM in combination with proMETHazine IM (Riker score may be helpful in this assessment), consider further dosing after 30 minutes (as per recommendations from Greater Manchester Mental Health Trust). Ensure that the Mental Health Liaison Team has been approached and senior medical advice has been sought.

6.7 If there is no response to haloperidol IM in combination with proMETHazine IM (Riker score may be helpful in this assessment), seek psychiatry advice.

6.8 Additional physical observations and if necessary, continuous monitoring will be required post–rapid tranquillisation episode. See section 8 for further guidance adapted from Royal College of Psychiatry best practice information. All patient's post-parenteral rapid tranquillisation, as well as patients who are unconscious (not rousable) or severely physically unwell, should receive continuous physical monitoring in an area where full resuscitation facilities are available. Psychiatric monitoring should be continuous (within arm's length) as per BAP guidelines.

6.9 After any dose of parenteral medicine for rapid tranquillisation, there should be consideration given to appropriateness of using oral medicine if subsequent doses are required, unless it is determined that further parenteral doses are essential.

**6.10 Preparation of medication for administration**:

<table>
<tr><td>Lorazepam IM</td><td>Dilute 1mL lorazepam 4mg in 1mL with 1mL of water for injections or sodium chloride 0.9% in the oversized lorazepam vial, swirl gently to mix. This provides a 4mg in 2ml concentration.
<table>
<tr><td>Dose of lorazepam required</td><td>Volume of lorazepam 4mg/2ml diluted solution</td></tr>
<tr><td>500micrograms</td><td>0.25ml</td></tr>
<tr><td>1mg</td><td>0.5ml</td></tr>
<tr><td>2mg</td><td>1ml</td></tr>
<tr><td>4mg</td><td>2ml</td></tr>
</table></td></tr>
<tr><td>Haloperidol IM</td><td>5mg in 1ml does not routinely require further dilution.
<table>
<tr><td>Dose of haloperidol required</td><td>Volume of 5mg/1ml solution</td></tr>
<tr><td>500micrograms</td><td>0.1ml</td></tr>
<tr><td>1mg</td><td>0.2ml</td></tr>
<tr><td>2.5mg</td><td>0.5ml</td></tr>
<tr><td>5mg</td><td>1ml</td></tr>
</table></td></tr>
<tr><td>ProMETHazine IM</td><td>25mg in 1ml does not routinely require further dilution.
<table>
<tr><td>Dose of proMETHazine required</td><td>Volume of 25mg/1ml solution</td></tr>
<tr><td>25mg</td><td>1ml</td></tr>
<tr><td>50mg</td><td>2ml</td></tr>
</table></td></tr>
</table>

## 7 Ketamine (for use in the Emergency Dept Resus/Critical Care/Anaesthetics only)

7.1 An ideal medication in an emergency situation would have these characteristics: rapid onset of action, adequate duration, a limited incidence of over sedation, swift preparation, and a large therapeutic window to ensure safety.

7.2 Due to limitations around use of antipsychotics and benzodiazepines (namely the delayed onset of action along with the potential for acute dystonia with antipsychotics and the potential for dose-limiting respiratory depression and over sedation with benzodiazepines), there is increasing interest in the use of ketamine for rapid tranquillisation.

7.3 Ketamine has many properties that make it a useful sedative agent in the management of acute behavioral disturbance. It has a very rapid onset of action when administered IV or IM and has a wide therapeutic window producing consistent effects at predictable doses. Ketamine protects airway reflexes and increasing doses lead to more prolonged duration of sedation whilst rarely affecting respiratory drive.

7.4 However, ketamine does inhibit the reuptake of catecholamines leading to the potential for sympathomimetic side effects such as an increase in heart rate, blood pressure, cardiac output and myocardial oxygen consumption. There is, therefore, the theoretical risk of worsening any cardiovascular instability present in acute behavioural disturbance. Ketamine may be associated with an unpleasant emergence phenomenon, although this is readily managed by the administration of benzodiazepines.

7.5 **At the discretion of a senior anaesthetist/critical care ED consultant,** ketamine may be considered as an option for rapid tranquillisation. There should be consideration of potential adverse effects and their subsequent management which include laryngospasm, hypersalivation, nausea and vomiting, and emergence reactions. Ketamine should not be used as a routine option for rapid tranquillisation and guidance in the earlier sections of this document should be followed as outlined. **Ketamine's place in therapy would be for patients who pose significant risk to staff, themselves and other patients with regard to their level of violence and/or aggression, upon whom for this reason, it is not possible to perform all the assessments outlined in section 4.3.**

7.6 When a decision is made to administer ketamine in the Emergency Department, this should be in the Resus area if possible. If this is not practical due to the clinical situation, provisions should be made to ensure the patient can be and is moved to the Resus area immediately after administration of ketamine. Ketamine should only be administered by doctors who are appropriately trained in its use and are competent in airway management.

7.7

| Ketamine: **Contraindications** | Ketamine: **Cautions** |
|---|---|
| Persons in whom an elevation of blood pressure would constitute a serious hazard | Chronic alcoholism and acute alcohol-intoxication |
| Eclampsia or Pre-eclampsia | Neurotic traits or psychiatric illness (e.g., schizophrenia and acute psychosis) |
| Severe coronary or myocardial disease | Seizures |
| Cerebrovascular accident | Acute intermittent porphyria |
| Cerebral trauma | Hyperthyroidism or patients receiving thyroid replacement (increased risk of hypertension and tachycardia) |
| | Intracranial mass lesions, a presence of head injury, or hydrocephalus |
| | Since an increase in cerebrospinal fluid (CSF) pressure has been reported during ketamine anaesthesia, ketamine should be used with special caution in patients with preanaesthetic elevated cerebrospinal fluid pressure |
| | Globe injuries and increased intra-ocular pressure (e.g., glaucoma) because the pressure may increase significantly after a single dose of ketamine |
| | Pulmonary or upper respiratory infection (ketamine sensitises the gag reflex, potentially causing laryngospasm) |
| | Ketamine is metabolised in the liver and hepatic clearance is required for termination of clinical effects. A prolonged duration of action may occur in patients with cirrhosis or other types of liver impairment. Dose reductions should be considered in these patients. Abnormal liver function tests associated with ketamine use have been reported, particularly with extended use (>3 days) or drug abuse |

7.8 The Royal College of Emergency Medicine offers guidance around dosing of ketamine for rapid tranquillisation and offers further information around likely onset of action and duration of action:

**1st line:** IV administration is the preferred route of administration if IV access is available.

| Medication | Route | Typical dose | Onset (mins) | Duration (mins) |
|---|---|---|---|---|
| Ketamine | intravenous | 1-2mg/kg | 1 | 20-30 |

**Note: The intravenous dose should be administered over a period of 60 seconds. More rapid administration may result in transient respiratory depression or apnoea and enhanced pressor response.**

**2nd line:** IM administration

| Medication | Route | Typical dose | Onset (mins) | Duration (mins) |
|---|---|---|---|---|
| Ketamine | intramuscular | 2-4mg/kg | 3-5 | 60-90 |

**Note: If Ketamine administered IM, IV access should be sought immediately.**

Steps should be taken to determine a patient's weight if possible due to the dosing of ketamine being weight-based. Whilst it may not be possible to physically weigh the patient at the point rapid tranquillisation is being considered, other sources of determining their weight should be attempted to be accessed e.g., Chameleon nutrition record/HIVE, recent clinic letters or discharge prescriptions, recent previous inpatient drug charts, care home medicines administration records, relatives, friends, carers (non-exhaustive list).

Should these options have been exhausted, weight is still unknown, and it is still the clinical opinion of the senior anaesthetist/critical care registrar/ED consultant that ketamine is the most appropriate medicine for the acute situation, dosing at the lowest end of the range would be advisable.

7.9 As with any general anaesthetic agent, resuscitative equipment should be available and ready for use. Respiratory depression may occur with overdose of ketamine, in which case airway management and supportive ventilation should be employed. Mechanical support of respiration is preferred to the administration of analeptic medication. The Critical Care or Anaesthetic team should be informed as appropriate, immediately.

## 8.0 Observations post–administration of medicines in a rapid tranquillisation scenario

Extracted from Royal College of Psychiatry website – 22/10/2018 and NICE guidance on Violence and Aggression 2015

Following rapid tranquillisation, the following parameters should be monitored, documented and scored using the MEWS tool:
- Temperature
- Heart rate
- Blood pressure
- Hydration
- Level of alertness
- Respiratory rate and oxygen saturation

The patient should be monitored at least every hour on the measures listed above until there are no further concerns around their physical health status

Hypokalaemia, stress and agitation place the patient at risk of cardiac arrhythmias. When possible, ECG and haematological monitoring is recommended following administration of parental antipsychotics. Note: an ECG is mandatory before haloperidol treatment.

Such monitoring should occur every 15 minutes if any of the following apply:

- BNF maximum dose has been exceeded
- The patient appears to be asleep or sedated
- The patient has taken illicit drugs or alcohol
- The patient has a pre-existing physical health problem
- The patient has experienced any harm as a result of any restrictive intervention (derived from NICE NG10, 1.4.45).

**Observations must be completed in line with this schedule and recorded in line with hospital systems. Concerns about deterioration in physical health condition post rapid tranquillisation must be reported to the senior medical and nursing team immediately.**

The frequency of monitoring of patients receiving parenteral rapid tranquillisation with a decreased level of consciousness is detailed in the following table:

| Parameter | Frequency | How Long |
|---|---|---|
| **Level of Consciousness** | Every 5-10mins after each administration | For at least one hour |
| **Temp, pulse, BP, SpO2, hydration** | Every 5-10mins after each administration | For at least one hour If 5-10min frequency. If not possible, document the reasons for this |
| | Every 5-10mins if patient is unconscious | Until patient is conscious |
| | Every 30mins when patient has regained consciousness | Until patient is ambulatory |
| **Level of alertness and behaviour** | Continue to monitor at regular intervals | Step up frequency of all observations if any concerns |
| | Increase frequency to 5-10 if there is deterioration in condition | Until stable and shows clear improvement in clinical condition |
| **Record all observations on MEWS chart** | | Escalate if MEWS>3 |

For advice on use of flumazenil please refer to the Toxbase monograph

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## Appendix 1 – Mental Health Liaison Team Contact Details

Mental Health Liaison at Rawnsley (Consultant Lead) – 0161 701 8865 (ext.18865)

Mental Health Liaison team in ED (Nurse Lead) – 0161 701 0314 / 0313 (ext. 10314 / 10313)

Time frames / necessity for referral will need to be determined on a case-by-case basis.

## Appendix 2 – Riker Sedation-Agitation Scale

### Riker Sedation-Agitation Scale (SAS)

| Score | Term | Descriptor |
|---|---|---|
| 7 | Dangerous Agitation | Pulling at ET tube, trying to remove catheters, climbing over bedrail, striking at staff, thrashing side-to-side |
| 6 | Very Agitated | Requiring restraint and frequent verbal reminding of limits, biting ETT |
| 5 | Agitated | Anxious or physically agitated, calms to verbal instructions |
| 4 | Calm and Cooperative | Calm, easily arousable, follows commands |
| 3 | Sedated | Difficult to arouse but awakens to verbal stimuli or gentle shaking, follows simple commands but drifts off again |
| 2 | Very Sedated | Arouses to physical stimuli but does not communicate or follow commands, may move spontaneously |
| 1 | Unarousable | Minimal or no response to noxious stimuli, does not communicate or follow commands |

The Riker Scoring method is offered here to help guide clinical assessment of patients for whom rapid tranquillisation is being considered. It should not be used as a sole decision-making tool, but to support the clinical judgement of a senior anaesthetist/critical care registrar or consultant/ED consultant/middle grade doctor .

## Appendix 3 – Brøset Violence Checklist

bvc

# The Brøset Violence Checklist

## Interpretation and Operationalisation

**Interpretation of scoring:**

| | |
|---|---|
| Score = 0 | The risk of violence is small |
| Score = 1-2 | The risk of violence is moderate. Preventive measures should be taken. |
| Score > 2 | The risk of violence is very high. Preventive measures should be taken In addition, a plans should be developed to manage the potential violence. |

**Operationalisation of behaviours/items:**

| | |
|---|---|
| Confused | Appears obviously confused and disorientated. May be unaware of time, place or person. |
| Irritable | Easily annoyed or angered. Unable to tolerate the presence of others. |
| Boisterous | Behaviour is overtly "loud" or noisy. For example slams doors, shouts out when talking etc. |
| Physically threatening | Where there is a definite intent to physically threaten another person. For example the taking of an aggressive stance; the grabbing of another persons clothing; the raising of an arm, leg, making of a fist or modelling of a head-butt directed at another. |
| Verbally threatening | A verbal outburst which is more than just a raised voice; and where there is a definite intent to intimidate or threaten another person. For example verbal attacks, abuse, name-calling, verbally neutral comments uttered in a snarling aggressive manner. |
| Attacking objects | An attack directed at an object and not an individual. For example the indiscriminate throwing of an object; banging or smashing windows; kicking, banging or head-butting an object; or the smashing of furniture. |

**NB:** For the behaviours/items physically threatening, verbally threatening and attacking objects the operationalisation was adapted from the Behavioural Status Index (Reed, Woods & Robinson, 2000) by one of the authors (Woods).

# •bvc

| **The Brøset Violence Checklist (BVC©)** - quick instructions: Score the patient at agreed time on every shift. Absence of behaviour gives a score of 0. Presence of behaviour gives a score of 1. Maximum score (SUM) is 6. If behaviour is normal for a well known client, only an increase in behaviour scores 1, e.g. if a well know client normally is confused (has been so for a long time) this will give a score of 0. If an **increase** in confusion is observed this gives a score of 1. | Patient/Client data |
|---|---|

| Monday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Atacking objects | | | |
| SUM | | | |

| Tuesday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Attacking objects | | | |
| SUM | | | |

| Wednesday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Atacking objects | | | |
| SUM | | | |

| Thursday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Attacking objects | | | |
| SUM | | | |

| Friday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Atacking objects | | | |
| SUM | | | |

| Saturday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Attacking objects | | | |
| SUM | | | |

| Sunday / / | | | |
|---|---|---|---|
| | **Day** | **Evening** | **Night** |
| Confused | | | |
| Irritable | | | |
| Boisterous | | | |
| Verbal threats | | | |
| Physical threats | | | |
| Atacking objects | | | |
| SUM | | | |

## Appendix 4 – Richmond Agitation-Sedation Scale (RASS)

| The Richmond Agitation–Sedation Scale | | |
|---|---|---|
| **Score** | **Term** | **Description** |
| **+4** | Combative | Overtly combative or violent; immediate danger to staff |
| **+3** | Very agitated | Pulls on or removes tube(s) or catheter(s) or has aggressive behaviour toward staff |
| **+2** | Agitated | Frequent non-purposeful movement or patient–ventilator dyssynchrony |
| **+1** | Restless | Anxious or apprehensive but movements not aggressive or vigorous |
| **0** | Alert and calm | Spontaneously pays attention to caregiver |
| **-1** | Drowsy | Not fully alert, but has sustained (more than 10 seconds) awakening, with eye contact, to voice |
| **-2** | Light sedation | Briefly (less than 10 seconds) awakens with eye contact to voice |
| **-3** | Moderate sedation | Any movement (but no eye contact) to voice |
| **-4** | Deep sedation | No response to voice, but any movement to physical stimulation |
| **-5** | Unarousable | No response to voice or physical stimulation |

**Appendix 5 – Drug kinetics** (adapted from "Absorption of medication for rapid tranquillisation" – guideline produced by Greater Manchester Mental Health NHS Foundation Trust)

| Medication<br>Info from SPC | Time to max plasma conc<br>& half life | Licensed indications<br>August 2018<br>(see current summary of product characteristics SmPC) | Notes |
|---|---|---|---|
| **Haloperidol injection** | Time to max plasma<br>20 - 40 min<br>Half life<br>13 -36 hours<br>(average 21 hours) | • Schizophrenia: treatment of symptoms and prevention of relapse.<br>• Other psychoses; especially paranoid.<br>• Mania and hypomania.<br>• Mental or behavioural problems, such as aggression, hyperactivity and self-mutilation in the mentally retarded and in patients with organic brain damage.<br>• As an adjunct to short-term management of moderate to severe psychomotor agitation, excitement, violent or dangerously impulsive behaviour.<br>• Nausea and vomiting.<br>• Chorea in Huntington's disease.<br>• Acute treatment of delirium. | |
| **Haloperidol tablets** | Time to max plasma<br>2-6 hours<br>Half life<br>15 - 37 hours<br>(average 24 hours) | • Schizophrenia and other psychoses.<br>• Short-term adjunctive management of psychomotor agitation, excitement, violent or dangerously impulsive behaviour, mental or behavioural disorders, especially when associated with hyperactivity and aggression.<br>• Short-term adjunctive management of severe anxiety, restlessness and agitation in the elderly, intractable hiccup, nausea and vomiting, Gilles de la Tourette syndrome and severe tics.<br>• Acute treatment of delirium.<br>• Treatment of persistent aggression and psychotic symptoms in patients with moderate to severe Alzheimer's dementia and vascular dementia. | |
| **Lorazepam injection** | Time to max plasma<br>60-90 min<br>Half life<br>12-16 hours | • Pre-operative medication or premedication for uncomfortable or prolonged investigations.<br>• The treatment of acute anxiety states, acute excitement or acute mania.<br>• The control of status epilepticus. | |
| **Lorazepam tablets** | Time to max plasma<br>2 hours<br>Half life<br>12 hours | • Short-term treatment of moderate and severe anxiety.<br>• Short-term treatment of anxiety in psychosomatic, organic and psychotic illness.<br>• Short-term treatment of insomnia associated with anxiety.<br>• Pre-medication before operative dentistry and general surgery. | |
| **Olanzapine tablets and orodispersible tablets** | Time to max plasma<br>5-8 hours<br>Half life<br>Varies based on age and gender:<br>Healthy elderly (65 and over) – approx. 52 hours | • Treatment of schizophrenia.<br>• Maintaining the clinical improvement during continuation therapy in patients who have shown an initial treatment response.<br>• Treatment of moderate to severe manic episode.<br>• In patients whose manic episode has responded to olanzapine treatment, olanzapine is indicated for the prevention of recurrence in patients with bipolar disorder. | Not approved for the treatment of dementia-related psychosis and/or behavioural disturbances. |

| | | | |
|---|---|---|---|
| | Non-elderly patients – approx. 34 hours<br><br>Female (mean) 37 hours<br><br>Male (mean) 32 hours | | |
| **Risperidone tablets, orodispersible tablets and liquid** | Time to max plasma<br><br>1-2 hours<br><br>Half life<br><br>24 hours | • The treatment of acute and chronic schizophrenia psychoses, other psychotic conditions, in which positive or negative symptoms are prominent.<br>• Maintaining the clinical improvement during continuation therapy in patients who have shown an initial treatment response.<br>• Treatment of mania in bipolar disorder.<br>• Short-term treatment (up to 6 weeks) of persistent aggression in patients with moderate to severe Alzheimer's dementia | Not licensed for the treatment of behavioural symptoms of dementia |
| **Quetiapine tablets** | Time to max plasma<br><br>1 –2 hours<br><br>Half life<br><br>7 – 12 hours | • Treatment of schizophrenia.<br>• Treatment of manic episodes and major depressive episodes in bipolar disorder<br>• Prevention of recurrence of manic or depressed episodes in patients with bipolar disorder, who previously responded to quetiapine treatment. | |
| **ProMETHazine hydrochloride Injection** | Time to max plasma<br><br>3 hours<br><br>Half life<br><br>7-14 hours | • Symptomatic treatment for allergic conditions of the upper respiratory tract and skin.<br>• Sedation and treatment of insomnia in adults.<br>• Adjunct in preoperative sedation in surgery and obstetrics. | Included in NICE guidance for rapid tranquillisation to be used with haloperidol only |
| **ProMETHazine hydrochloride tablets** | Time to max plasma<br><br>2 - 3 hours<br><br>Half life<br><br>5-14 hours | • Symptomatic treatment for allergic conditions of the upper respiratory tract and skin.<br>• Sedation and treatment of insomnia in adults.<br>• Adjunct in preoperative sedation in surgery and obstetrics. | Not included in NICE guidance for rapid tranquillisation |

## Appendix 6 – Good practice in prescribing and managing medicines and devices (GMC)

You can find the latest version of this guidance on our website at **www.gmc-uk.org/guidance.**

General Medical Council

**References to *Good medical practice* updated in March 2013**

# Good practice in prescribing and managing medicines and devices

**1** In *Good medical practice (2013)*[1] we say:

- 12 You must keep up to date with, and follow, the law, our guidance and other regulations relevant to your work.
- 14 You must recognise and work within the limits of your competence.
- 16 In providing clinical care you must:
  - a prescribe drugs or treatment, including repeat prescriptions, only when you have adequate knowledge of the patient's health, and are satisfied that the drugs or treatment serve the patient's needs.
  - b provide effective treatments based on the best available evidence
  - f check that the care or treatment you provide for each patient is compatible with any other treatments the patient is receiving, including (where possible) self-prescribed over-the-counter medications
- 18 You must make good use of the resources available to you.
- 19 Documents you make (including clinical records) to formally record your work must be clear, accurate and legible. You should make records at the same time as the events you are recording or as soon as possible afterwards.
- 21 Clinical records should include:
  - a relevant clinical findings
  - b the decisions made and actions agreed, and who is making the decisions and agreeing the actions
  - c the information given to patients
  - d any drugs prescribed or other investigation or treatment
  - e who is making the record and when.

1 General Medical Council (2013) *Good medical practice* London, GMC.