

# ANTIPSYCHOTIC GUIDELINES

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| <b>Author</b>                                    | Chief Pharmacist                                                                                               |
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## DOCUMENT TRACKING SHEET

### Antipsychotic Guidelines

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### REFERENCES

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### RELATED POLICIES/PROCEDURES/protocols/forms/leaflets

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### SUMMARY OF CHANGES

| Date | Author | Page | Changes (brief summary) |
|------|--------|------|-------------------------|
|      |        |      |                         |
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## 1 INTRODUCTION

- 1.1 This guideline provides detailed information on the safe use and monitoring of antipsychotic medications, which are used to manage a range of mental health conditions, including schizophrenia, bipolar disorder, and depression.
- 1.2 According to NICE guidelines on Psychosis and schizophrenia in adults: prevention and management, individuals experiencing a first episode of psychosis, acute exacerbations, or a recurrence of psychosis or schizophrenia should be offered oral antipsychotic medication alongside psychological interventions.
- 1.3 The primary goal of treatment is to reduce symptoms and enhance social and cognitive functioning. Many individuals require long-term treatment with antipsychotic medication to maintain these benefits.
- 1.4 While the overall efficacy of most antipsychotic medications in treating schizophrenia is comparable, clozapine has demonstrated superior effectiveness in treatment-resistant cases. However, individual responses to antipsychotics can vary significantly. Additionally, these medications differ in their side-effect profiles, and patients may vary in their tolerance or willingness to manage certain side effects.
- 1.5 Antipsychotics are most effective in alleviating the positive symptoms of schizophrenia but are less effective in addressing negative symptoms and cognitive impairments.

## 2 ANTIPSYCHOTIC INITIATION

- 2.1 There are two classes of antipsychotics: first-generation (typical) and second-generation (atypical).
- 2.2 First generation antipsychotics primarily work by blocking dopamine D2 receptors in the brain causing a range of adverse events associated with this class called extrapyramidal side effects (EPSEs).
- 2.3 Second generation antipsychotics act on a wider range of receptors and are generally associated with a lower risk of EPSEs but have other significant side effects such as weight gain.
- 2.4 There is no first line choice of antipsychotic with clozapine being the exception for the treatment resistant schizophrenia.
- 2.5 The choice of antipsychotic should be tailored to the patient, ensuring they and their next of kin are well informed whenever possible about the options available to them and taking into account any comorbidities. See KMPT [Formulary](#)
- 2.6 Oral antipsychotics should not be started in primary care unless in consultation with a specialist.
- 2.7 Depot (long-acting) antipsychotics should only be initiated by specialist secondary care mental health services.
- 2.8 For a number of first-generation depot antipsychotics, a small test dose is given initially and the patient observed for side-effects (mainly extrapyramidal side effects

(EPSEs) as well as to check their sensitivity to the base oil of the depot. See Trust's Safe Administration and Monitoring of Injections Policy for test dose requirements (appendix 1).

- 2.9 If a patient is initiated on an antipsychotic, this should be recorded on the Interventions tab on RiO.
- 2.10 If there have not been any problems 4-7 days following the test dose, the dose can be gradually titrated to the lowest effective maintenance dose.
- 2.11 In the case of the second-generation depot antipsychotics (e.g. aripiprazole, olanzapine, paliperidone and risperidone) there are no injectable test doses so patients are given a small dose of the oral antipsychotic to assess tolerability.
- 2.12 Prescribing of antipsychotics for off-label indications should not be transferred to primary care unless upheld within a nationally recognised formulary such as the BNF or national guidance such as NICE guidelines and The British Association for Psychopharmacology (BAP) guidelines. This should be discussed and agreed with primary care prior to the transfer of prescribing.

### **3 ADMINISTRATION OF DEPOT INJECTIONS**

- 3.1 Practitioners must have the necessary knowledge, skills and competency to safely administer depot antipsychotic injections by deep intramuscular injection using the "z-track technique".
- 3.2 These practices are detailed in the Trust's Safe Administration and Monitoring of Injections Policy (Appendix 1)

### **4 MONITORING REQUIREMENTS AND RESPONSIBILITIES**

- 4.1 During antipsychotic treatment, improvement in the patient's clinical condition may take several days to some weeks. Throughout this period, the patient should be closely monitored.
- 4.2 The occurrence of suicidal behaviour is inherent in psychotic illnesses and mood disorders, and in some cases has been reported early after initiation or switch of antipsychotic therapy. High risk patients should be closely supervised during treatment.
- 4.3 Secondary care should maintain responsibility for monitoring physical health for at least the first 12 months (see appendix 2). Physical health advice and guidance can be accessed by all the community Mental Health Together (MHT) prescribers using Consultant Connect by calling the National Consultant Network. The link for the service is at <https://consultantconnect.org.uk/service/directory/SCNlxBs1KhIk> using the unique dial in numbers for each MHT. Input from primary care can also be sought if concerns are identified with the patient's physical health not related to their treatment during this time.
- 4.4 The following are the responsibilities of the KMPT prescribers when prescribing antipsychotics:
  - 4.4.1 To make a diagnosis and decision to initiate treatment
  - 4.4.2 The first prescription must be issued by a KMPT specialist prescriber.

- 4.4.3 To arrange baseline physical health monitoring checks including blood tests
- 4.4.4 These checks should also include carrying out an ECG particularly if:
- the patient is at cardiovascular risk
  - the patient has a family history of cardiovascular disease
  - specified in the Summary of Product Characteristics (SPCs). This should be documented in the core assessments in RiO.
- 4.4.5 To initiate medication and titrate to a stable dose.
- 4.4.6 There should be confirmation that the benefit of the medication to the patient is clearly demonstrated without any unmanageable and/or significant adverse effects when discharging them back to primary care.
- 4.4.7 To provide the patient with written patient information about the medication and the indication for which it is prescribed.
- 4.4.8 To undertake physical health monitoring at 12 weeks and then at 12 months, with specific reference to cardiovascular and metabolic indicators of morbidity. Monitoring should be in line with:
- NICE guidance (CG178) for patients with schizophrenia/psychosis or,
  - NICE guidance (CG 185) in the case of bipolar disorder or
  - NICE guidance (NG11) for patients with challenging behaviour and learning difficulties
- 4.4.9 KMPT should be responsible for baseline physical health monitoring, including arranging blood tests and ECGs. These should be no longer than a month old. Clinical judgment will have to be exercised in the event where a patient is refusing to have monitoring done when initiating medication. It is important to seek having this done as soon as is feasible, ideally within a week of initiation.
- 4.4.10 ECG will be analysed by the psychiatrist for antipsychotic -induced QTc prolongation and prescribing reviewed accordingly. Life threatening abnormalities to be managed via emergency services. Urgent abnormalities will be referred to the cardiologist using Consultant Connect. Other reported non-urgent abnormalities unrelated to antipsychotic prescribing will be communicated to the GP for follow up by the Responsible Consultant/ Clinician.
- 4.4.11 Cardiology advice and guidance can be accessed by all the MHT prescribers using Consultant Connect to call the National Consultant Network. There is also a messaging service to take a picture of the ECG and send over to the cardiology team to review.
- 4.4.12 Stop medication or modify dosage as appropriate
- 4.4.13 Notify the GP promptly and in writing of any changes in medication regime
- 4.4.14 Provide sufficient information about the medication at discharge. The following MUST be included in the correspondence:
- Clear indication for the antipsychotic including the ICD 10 code

- Plan for review
- Likely duration of treatment
- Discontinuation plan and advice where applicable

4.4.15 Provide contact information should further assistance be needed.

4.4.16 Be available to discuss any problems with the primary care and other team members as well as review the patient if side effects emerge or there is deterioration in mental health. For medication advice and guidance for primary care, please refer to the email address and phone number provided at the end of the guidance (see appendix 3).

4.4.17 To review antipsychotic medication where metabolic problems do occur, to ensure that a dose/drug change is considered where appropriate.

4.4.18 For patients with first episode of psychosis arrange a 12 month follow up review.

## **5 HIGH DOSE ANTIPSYCHOTIC TREATMENT (HDAT)**

5.1 High Dose Antipsychotic Treatment (HDAT) is the use of doses of antipsychotic medication that exceeds the recommended/BNF stated maximum dose. This can be either:

- A single antipsychotic prescribed at dose higher than the BNF recommended maximum; or,
- In combination where more than one antipsychotic is prescribed (including depots), if the combined dose expressed as a percentage is greater than 100%, then the total dose becomes a high dose.

5.2 For the detailed guidance around HDAT please see appendix 4.

## **6 TREATMENT RESISTANT SCHIZOPHRENIA**

6.1 Treatment resistance is defined as a lack of satisfactory clinical improvement despite the use of adequate doses of at least two different antipsychotic agents, including an atypical antipsychotic agent, prescribed for adequate duration.

6.2 An 'adequate duration' could be considered 4 – 6 weeks at a tolerated therapeutic dose.

6.3 Clozapine is the only licensed antipsychotic indicated in treatment resistant schizophrenia and should always be used first line unless contraindicated.

6.4 The Trust's Clozapine Policy can be found in appendix 5

## **7 MONITORING OF ANTIPSYCHOTIC BLOOD LEVELS**

7.1 Routine blood level monitoring is not recommended for antipsychotics (with the exception of clozapine in certain clinical circumstances). The availability of assays and reference values for other antipsychotics varies; results can take several days to report and reference values are of limited use where they exist.

- 7.2 A MHRA drug safety update (August 2020) states that blood level monitoring of antipsychotics for toxicity may be helpful in certain circumstances, where testing and reference values are available<sup>11</sup>.
- 7.3 If toxicity related to antipsychotic medication is suspected, immediate action should be taken in response to the symptoms displayed.

## **8 SWITCHING ANTIPSYCHOTICS**

- 8.1 Switching from one antipsychotic medication to another requires careful planning and should usually be done under specialist supervision.
- 8.2 Consider the need for more frequent reviews of antipsychotic dose, side effects and monitoring requirements.
- 8.3 For antipsychotic prescribing in the context of treating behavioural and psychological symptoms of dementia and learning disabilities and autism please see 12.2 and 12.4 respectively.

## **9 SPECIAL POPULATIONS**

### **9.1 PARKINSON DISEASE**

- 9.1.1 Prescribers should weigh the risks versus the benefits when prescribing antipsychotics to patients with Parkinson's Disease or Dementia with Lewy Bodies (DLB) since both groups may be at increased risk of Neuroleptic Malignant Syndrome as well as having an increased sensitivity to antipsychotics. Manifestation of this increased sensitivity can include confusion, obtundation, postural instability with frequent falls, in addition to extrapyramidal symptoms.
- 9.1.2 Clozapine is licensed to be prescribed for psychotic disorders occurring during the course of Parkinson's disease in cases where standard treatment has failed. The starting doses are lower than the standard clozapine titration regimen, up to a maximum of 50mg in a day. Please see the Trust's Clozapine Policy (appendix 5) for more information.

### **9.2 OLDER PEOPLE**

- 9.2.1 Due to changes in pharmacokinetics and pharmacodynamics, older people are more susceptible to adverse effects particularly anticholinergic effects, postural hypotension and to hyper- and hypothermia in hot or cold weather.
- 9.2.2 The anticholinergic properties of antipsychotics can lead to peripheral adverse effects such as dry, mouth, blurred vision, constipation and urinary retention and central adverse effects such as confusion, memory impairment, dizziness. In older adults, there are a number of other medicines used in older adults to treat conditions such as neuropathic pain, Parkinson's disease and unstable bladder that have anticholinergic properties. These drugs taken in



combination can lead to an increased risk in confusion, dizziness and falls which can lead to increased patient mortality. When prescribing an antipsychotic medication in older people, a medication with a low/no anticholinergic burden should be considered. The table in appendix 6 lists each antipsychotic's level of risk of causing anticholinergic side effects.

- 9.2.3 When carrying out a medication review, it is recommended calculating the Anticholinergic effect on Cognition using the AEC scale and including all medication that the patient is prescribed. This will help choosing medicines that should be reviewed or stopped to reduce the burden.
- 9.2.4 Antipsychotics may interfere with activities requiring mental alertness. Patients should be advised not to drive or operate machinery until their individual susceptibility is known.
- 9.2.5 Consider the need for more frequent reviews of antipsychotic dose, side effects and monitoring requirements.
- 9.2.6 Antipsychotics are not recommended for the management of behavioural disturbance in dementia.
- 9.2.7 If an antipsychotic is deemed necessary in the context of treating behavioural and psychological symptoms of dementia, refer to the KMPT guidelines on the Use of Medication for the Management of Behaviour that Challenges in Dementia (see appendix 7).
- 9.2.8 Risperidone and haloperidol are the only antipsychotic medicines licensed in this group for a maximum treatment period of 6 weeks. This recommendation is based on the known risk/benefit ratio of these medicines in the treatment of BPSD; the effect size is small and overall mortality is increased, mostly due to an increased risk of stroke. Before prescribing, ensure that there are no cardiovascular issues of concern.

### **9.3 CHILDREN AND YOUNG PEOPLE BETWEEN THE AGES OF 14 AND 18 YEARS OLD**

- 9.3.1 Antipsychotic medication must be prescribed by the Consultant Psychiatrists in the Children and Young Peoples Mental Health Services (CYPMHS) in the context of first episode psychosis, recurrence of psychosis or schizophrenia, psychotic depression, bipolar disorder and as augmentation therapy for obsessive compulsive disorder and body dysmorphic disorder.
- 9.3.2 The choice of antipsychotic medication should be made by the parents or carers of younger children, or jointly with the young person and their parents or carers and healthcare professionals.
- 9.3.3 At the start of treatment, give doses below the lower end of the licensed range for adults if the medication is not licensed for children and young people or at the lower end of the licensed range if the medication is licensed. The dose should be slowly titrated upwards within the dose range given in the BNF, the BNFC, or the Summary of Product Characteristics (SPC).
- 9.3.4 CYPMHS should maintain responsibility for monitoring physical health and the effects of antipsychotic medication.

9.3.5 The physical health monitoring requirements for this population are different from the schedule outlined in appendix 2 of this guidance. Please see [NICE Clinical Guideline 155](#) or contact the specialist team for more information.

## 9.4 LEARNING DISABILITIES AND AUTISM

9.4.1 A significant proportion of people with a learning disability display behaviour that may be seen as challenging. This behaviour may be a manifestation of their inability to effectively communicate their level of confusion, distress, or pain.

9.4.2 Antipsychotics are used across a broad range of behavioural disturbances and may be useful for management of aggression and irritability.

9.4.3 Amongst second generation antipsychotics (SGAs) the best evidence is for risperidone at low doses (0.5 - 2 mg) for aggression and mood instability. Risperidone is not licensed in adults over 18 for the short-term treatment of persistent aggression in conduct disorders. If prescribed, please monitor closely for adverse effects such as weight gain and somnolence.

9.4.4 Aripiprazole is not licensed for the treatment of behaviour that challenges however there is some evidence to suggest that it may be effective as a short-term intervention for some behavioural aspects of ASD in children

9.4.5 If antipsychotic medication is prescribed for a mental illness, there is the expectation that the treatment will follow the recommendations of the relevant NICE guidance.

9.4.6 Monitor side effects in line with:

- NICE guidance (CG178) for patients with schizophrenia/psychosis or
- NICE guidance (CG 185) in the case of bipolar disorder or,
- NICE guidance (NG11) for patients with challenging behaviour and learning disabilities.

9.4.7 Refer to the KMPT Guidelines for the Pharmacological Management of Challenging Behaviour in Learning Disabilities and Autism for the general principles underlying the prescribing of medicines in this cohort of patients (see appendix 8 – will replace with final approved IMOC document).

## 9.5 PREGNANCY AND BREASTFEEDING

9.5.1 As a general principle, refer back to Perinatal Mental Health Community Services (PMHCS) or the Mother and Baby Unit (MBU) if appropriate and use only if potential benefit outweighs risk.

9.5.2 The UK Teratology Information Service can be contacted on Tel: 03448920909 for specific advice relating to medicines prescribed in pregnancy.

9.5.3 Infants exposed to antipsychotics during the third trimester of pregnancy may be at risk of adverse reactions including extrapyramidal and/or withdrawal symptoms that may vary in severity and duration following delivery. There have been reports of agitation, hypertonia, hypotonia, tremor, somnolence,

respiratory distress, or feeding disorder. Consequently, newborns should be monitored carefully.

9.5.4 Breast feeding – as a general principle, refer back to PMHCS or the MBU if appropriate for advice.

9.5.5 The [Choice and Medication's KMPT website](#) has information leaflets on a range of conditions that are treated with antipsychotics in pregnancy and breastfeeding as well as individual leaflets for a number of antipsychotics.

## **10 DISCONTINUATION OF TREATMENT**

10.1 It is recommended that antipsychotics are discontinued gradually, usually over many weeks or months. The risk of relapse on cessation of antipsychotics may be minimised by more gradual tapering.

10.2 Acute withdrawal symptoms have been occasionally described after abrupt discontinuation of oral antipsychotics e.g. sweating, insomnia, tremor, anxiety, nausea or vomiting.

10.3 Withdrawal symptoms are unlikely following the discontinuation of a depot antipsychotic as blood levels will fall slowly over some weeks after the last injection.

## **11 CONTRAINDICATIONS**

11.1 Refer to the manufacturer's Summary of Product Characteristics (SPC) found on the Electronic Medicines Compendium (eMC) for the individual product.

## **12 DRUG INTERACTIONS AND ADVERSE EFFECTS**

12.1 There are many theoretical interactions which may or may not be clinically relevant (see individual Summary of Product Characteristics).

12.2 Caution is advised when prescribing antipsychotics with centrally acting drugs e.g. alcohol due to additive depressant effects, and with drugs known to prolong the QT interval (please refer to appendix 9).

12.3 Antipsychotics may antagonise the effect of levodopa/ dopamine agonists in patients with Parkinson's disease.

12.4 Appendix 10 outlines the most common adverse effects associated with antipsychotics Refer to the manufacturer's Summary of Product Characteristics (SPC) and BNF for all specific adverse effects relevant to the individual antipsychotic.

12.5 Hyperprolactinaemia is an adverse effect that is associated with a large number of antipsychotics. The detailed protocol for its management can be found in appendix 11.

**APPENDIX 1  
POLICY**

**TRUST'S SAFE ADMINISTRATION AND MONITORING OF INJECTIONS**

**SAFE ADMINISTRATION OF INJECTIONS POLICY**

**APPENDIX 2            MONITORING OF PHYSICAL HEALTH AND ANTIPSYCHOTICS IN  
PATIENTS WITH PSYCHOSIS, SCHIZOPHRENIA, BIPOLAR DISORDER AND CHALLENGING  
BEHAVIOUR AND LEARNING DIFFICULTIES:**

| Monitoring requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | at baseline                  | at 12 weeks | at 12 months                                                  | and annually thereafter                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------|---------------------------------------------------------------|---------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Secondary Care</b>        |             |                                                               | <b>Primary Care</b>                                           |
| <b>Pulse and BP</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | √                            | √           | √                                                             | √                                                             |
| <b>Weight (including BMI)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √ (weekly for first 6 weeks) | √           | √                                                             | √                                                             |
| <b>Waist circumference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | √                            |             | √                                                             | √                                                             |
| <b>Blood tests</b> <ul style="list-style-type: none"> <li>Fasting blood glucose and HbA1c</li> <li>Lipids (fasting if possible)</li> <li>U &amp; E's including eGFR</li> <li>LFT's</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √<br>√<br>√<br>√             | √<br>√      | √<br>√<br>√<br>√                                              | √<br>√<br>√<br>√                                              |
| <b>Prolactin levels</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | √                            |             | √<br>(only if patient is symptomatic for hyperprolactinaemia) | √<br>(only if patient is symptomatic for hyperprolactinaemia) |
| <b>Extrapyramidal side effects</b><br>(Glasgow side effect Scale recommended)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √                            | √           | √                                                             | √                                                             |
| <b>Smoking status and offer of intervention to stop smoking</b> (in keeping with NICE guidance)<br>Cigarette smoking has a significant impact on the increased metabolism of antipsychotics, most notably Olanzapine and Clozapine                                                                                                                                                                                                                                                                                                                                                                                                                | √                            | √           | √                                                             | √                                                             |
| <b>Healthy eating/physical activity programme offered</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | √                            | √           | √                                                             | √                                                             |
| <b>ECG</b> is required base line and yearly if: <ul style="list-style-type: none"> <li>Physical examination has identified specific cardiovascular risk (such as diagnosis of high blood pressure) or</li> <li>There is a personal or family history of cardiovascular disease, a history of sudden collapse, or other cardiovascular risk factors such as cardiac arrhythmia or</li> <li>The patient is being admitted as an inpatient or</li> <li>If specified in the summary of product characteristics (SPC).</li> <li>Patient is on High Dose Antipsychotics i.e. one or more antipsychotics above the recommended 100% BNF dose.</li> </ul> | √                            |             | √                                                             | √                                                             |

## APPENDIX 3 DETAILS

## MENTAL HEALTH TOGETHER ADVICE AND SUPPORT CONTACT



GP Comms - Mental  
Health Advice Line.d

## APPENDIX 4

## HIGH DOSE ANTIPSYCHOTIC TREATMENT GUIDELINES



High-Dose-Antipsyc  
hotic-Therapy-HDAT

## APPENDIX 5

## CLOZAPINE POLICY



ClozapinePolicyKMP  
T.CliG.132.10.pdf

## APPENDIX 6

## ANTIPSYCHOTIC ANTICHOLINERGIC RISK AND AEC SCORE

| <b>MEDICATION<br/>(IN ALPHABETICAL ORDER)</b> | <b>Risk of anticholinergic side<br/>effects</b>                                                                   | <b>Anticholinergic effect on<br/>Cognition (AEC score)</b> |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Amisulpride                                   | Minimal risk                                                                                                      | 0                                                          |
| Aripiprazole                                  | Low risk                                                                                                          | 1                                                          |
| Asenapine                                     | Low risk                                                                                                          | 1                                                          |
| Chlorpromazine                                | High risk                                                                                                         | 3                                                          |
| Clozapine                                     | High risk                                                                                                         | 3                                                          |
| Flupentixol                                   | Low risk                                                                                                          | 1                                                          |
| Haloperidol                                   | Minimal risk (note there are<br>increased cardiovascular<br>side-effects particularly in<br>the older population) | 0                                                          |
| Lurasidone                                    | Minimal risk                                                                                                      | 0                                                          |
| Olanzapine                                    | Moderate risk                                                                                                     | 2                                                          |
| Paliperidone                                  | Low risk (note only depot<br>approved on the formulary)                                                           | 1                                                          |
| Quetiapine                                    | Moderate risk                                                                                                     | 2                                                          |
| Risperidone                                   | Minimal risk                                                                                                      | 0                                                          |
| Trifluoperazine                               | Moderate risk                                                                                                     | 2                                                          |
| Zuclopenthixol                                | Low risk                                                                                                          | 1                                                          |

## APPENDIX 7

## GUIDELINES ON THE USE OF MEDICATION FOR THE MANAGEMENT OF BEHAVIOUR THAT CHALLENGES IN DEMENTIA



MedicationGuidelin  
esDementiaKMPT.Cli

## APPENDIX 8 PHARMACOLOGICAL MANAGEMENT OF CHALLENGING BEHAVIOUR IN LEARNING DISABILITIES AND AUTISM



Prescribing  
Guideline - Behavior

## APPENDIX 9 ECG MONITORING ADVICE

Annual ECG monitoring should take place if risk factors are present or if there has been a previous abnormality. More regular ECG monitoring may be indicated.

| Management of QTc prolongation in patients prescribed antipsychotics |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| QTc                                                                  | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <440ms (men) or <470ms (women)*                                      | <ul style="list-style-type: none"> <li>No action required unless other ECG abnormalities i.e. abnormal T-wave morphology</li> </ul>                                                                                                                                                                                                                                                                                                                                                              |
| >440ms (men) or >470ms (women) but <500ms                            | <ul style="list-style-type: none"> <li>Repeat ECG (consider checking the QTc calculation manually in case of machine error)</li> <li>Check for other prescribed medication which can lengthen the QTc interval</li> <li>Check electrolytes – potassium, magnesium and calcium</li> <li>Discuss with the specialist mental health team – may consider dose reduction or switching to an antipsychotic with less effect on QTc (see below)</li> <li>Discuss with cardiology if in doubt</li> </ul> |
| >500ms                                                               | <ul style="list-style-type: none"> <li><b>Red flag - immediate action required</b></li> <li>Repeat ECG (consider checking the QTc calculation manually in case of machine error)</li> <li>Check for other prescribed medication which can lengthen the QTc interval</li> <li>Stop the suspected causative drug(s)</li> <li>Check electrolytes – potassium, magnesium and calcium</li> <li>Discuss with the specialist mental health team</li> <li>Discuss with cardiology</li> </ul>             |

\*Widely recognised QTc limits can't be applied in patients with atrial fibrillation, bundle branch block, paced rhythm, excessive tachycardia or bradycardia.

| Effects of antipsychotics on QTc |                                                                                                    |                                                                               |                                                                           |                                  |
|----------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------|
| No effect                        | Low effect                                                                                         | Moderate effect                                                               | High effect                                                               | Unknown effect                   |
| Lurasidone                       | Aripiprazole<br>Clozapine<br>Flupentixol<br>Olanzapine<br>Paliperidone<br>Risperidone<br>Sulpiride | Amisulpride<br>Chlorpromazine<br>Haloperidol<br>Levomepromazine<br>Quetiapine | Pimozide<br><br>All antipsychotic doses exceeding the recommended maximum | Trifluoperazine<br>Zuclopentixol |

## APPENDIX 10 COMMONLY ASSOCIATED ANTIPSYCHOTIC ADVERSE EFFECTS

Refer to the manufacturer's Summary of Product Characteristics (SPC) and BNF for all adverse effects relevant to the individual antipsychotic.

| Adverse Effects                                                                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Common (≥1% and <10%) or very common (≥10%)                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 |
| Extrapyrimal symptoms <ul style="list-style-type: none"> <li>Parkinsonism (including joint stiffness and tremor)</li> <li>Dystonia (abnormal face and body muscle contractions)</li> <li>Akathisia (restlessness)</li> <li>Tardive dyskinesia (rhythmic, involuntary movements of tongue, face and jaw)</li> </ul> | Parkinsonism: may remit if the dose is reduced or the drug withdrawn. An antimuscarinic (e.g. procyclidine) may be helpful.<br><br>Dystonia: Dose reduction or an antimuscarinic (e.g. procyclidine) may be helpful.<br><br>Akathisia: refer to the mental health team. A reduction in dose, discontinuation or change to an alternative atypical antipsychotic maybe required. |

|                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                     | Tardive Dyskinesia: refer to the mental health team. A reduction in dose, discontinuation or change to an alternative atypical antipsychotic maybe required. Review use of antimuscarinics as these can often worsen Tardive Dyskinesia. Please note that these symptoms can temporarily deteriorate or can even arise after discontinuation of treatment. |
| Insomnia                                                                                                                                            | Consider dose reduction                                                                                                                                                                                                                                                                                                                                    |
| Drowsiness                                                                                                                                          | Give as a single night-time dose. Consider temporary dose reduction. Advise patients not to drive/operate machinery if affected/                                                                                                                                                                                                                           |
| Constipation                                                                                                                                        | High fibre diet, good fluid intake, exercise, laxative.                                                                                                                                                                                                                                                                                                    |
| Dizziness                                                                                                                                           | Give as a single night-time dose. Consider temporary dose reduction. Advise patients to take time to stand up and not to drive/operate machinery if affected.                                                                                                                                                                                              |
| Raised prolactin (hyperprolactinaemia)                                                                                                              | Can be asymptomatic or symptomatic (galactorrhoea, gynaecomastia, disturbances of menstrual cycle/amenorrhoea and sexual dysfunction).<br><br>Dose-related. Consider dose-reduction or switching to an alternative antipsychotic. Refer to the mental health team.                                                                                         |
| Hypotension (dose related)                                                                                                                          | Initiate slowly. Consider dose reduction or dividing the dose.                                                                                                                                                                                                                                                                                             |
| Weight gain/increased appetite                                                                                                                      | Encourage a healthy balanced diet and regular exercise. Monitor and refer to a dietician and/or consultant if appropriate.                                                                                                                                                                                                                                 |
| QTc interval prolongation                                                                                                                           | See information in ECG monitoring section below. Monitor and refer to the mental health team as appropriate.                                                                                                                                                                                                                                               |
| Vomiting                                                                                                                                            | Generally self-limiting. Consider taking after food and/or dividing doses.                                                                                                                                                                                                                                                                                 |
| Dry mouth                                                                                                                                           | Recommend chewing sugar-free gum. Consider taking after food and/or dividing doses. If severe and persistent consider prescribing artificial saliva.                                                                                                                                                                                                       |
| Arrhythmias and tachycardia                                                                                                                         | Check pulse, blood pressure and ECG. Refer to the mental health team.                                                                                                                                                                                                                                                                                      |
| <b>Uncommon (<math>\geq 0.1\%</math> and <math>&lt;1\%</math>)</b>                                                                                  |                                                                                                                                                                                                                                                                                                                                                            |
| Hyperglycaemia (mostly associated with olanzapine, risperidone, quetiapine and clozapine)                                                           | Manage according to local diabetes guidelines. Refer to the mental health team if appropriate.                                                                                                                                                                                                                                                             |
| Blood dyscrasias                                                                                                                                    | Perform blood counts if unexplained infection or fever develops<br>Refer to the mental health team.                                                                                                                                                                                                                                                        |
| Embolism and thrombosis                                                                                                                             | All possible risk factors for Venous Thromboembolism should be identified before and during antipsychotic treatment and preventative measures undertaken.                                                                                                                                                                                                  |
| Neuroleptic Malignant Syndrome (NMS) - hyperthermia, muscle rigidity, autonomic instability, altered consciousness, elevated Creatine Kinase levels | Very rare.<br>Discontinue ALL antipsychotic(s). If suspected immediate referral to an acute hospital is required.                                                                                                                                                                                                                                          |

## APPENDIX 11

## HYPERPROLACTINAEMIA MANAGEMENT



Hyperprolactinemia  
-treatment-V2-Oct-2