South London and Maudsley NHS
NHS Foundation Trust

NHS
Croydon Clinical Commissioning Group

Additional information to support GP prescribing of oral antipsychotics in Primary Care

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Appendix 1: Summary of licensed indications of antipsychotics for adults

The abbreviated information on licensed uses is indicative only. It is not comprehensive, consult the latest SPCs.

Drug	Schizophrenia	Paranoid psychosis & other psychoses	Bipolar disorders	Agitation & disturbed behaviour	Other indications	CPC Prescribing Recommendation
Atypical antipsychotics						
Amisulpride oral	√					Primary care
Aripiprazole oral	√		Severe manic episodes; prevention of manic episode			Primary care
Aripiprazole inj			Agitation & disturbed behavior bipolar disorder	Agitation & disturbed behaviour bipolar disorder		Hospital only
Aripiprazole long acting injection	√					Hospital only
Olanzapine oral	√		Moderate to severe manic episode; prevention of manic episode			Primary Care
Olanzapine inj	√			Rapid control of agitation & disturbed behaviour in schizophrenia/ manic episode		Hospital only
Olanzapine embonate – prolonged-release inj	√					Hospital only
Quetiapine oral	√		Manic episodes Major depressive episodes in bipolar disorder Prevention of bipolar disorder			Primary Care
Risperidone oral	√		Moderate to severe manic episodes	Short term treatment of persistent aggression in moderate to severe Alzheimer's dementia resistant to non-pharmacological approach		Primary Care
Risperidone prolonged-release inj	√					Hospital only
Asenapine			Moderate to severe manic episodes			Hospital only

Appendix 1 cont. Drug	Schizophrenia	Paranoid psychosis & other psychoses	Bipolar disorders	Agitation and disturbed behaviour	Other indications	CPC Prescribing Recommendation
Non-atypical antipsychotics						
Benperidol					Deviant antisocial sexual behaviour	Primary Care
Chlorpromazine oral/inj	√	√	Mania and hypomania	Anxiety, psychomotor agitation, excitement, violent or dangerously impulsive behaviour	Refractory nausea & vomiting in palliative care Intractable hiccup	Primary Care
Clozapine oral	√	Psychotic disorders in Parkinson's disease if other treatment inappropriate				Hospital only
Flupentixol oral	√	√				Primary Care
Flupentixol Decanoate - prolonged-release inj	√	√				Primary Care (await further guidance)
Fluphenazine decanoate - prolonged-release inj	√	√				Primary Care (await further guidance)
Haloperidol oral	√	√	Mania and hypomania	Psychomotor agitation, excitement, violent or dangerously impulsive behaviour Restlessness & agitation in elderly	Aggression, hyperactivity/ self-mutilation in patients with cognitive deficit or with brain damage Intractable hiccup Tourette syndrome Tics	Primary Care
Haloperidol - inj	√	√	Mania and hypomania	Psychomotor agitation, excitement, violent or dangerously impulsive behaviour	Aggression, hyperactivity/self-mutilation in patients with cognitive deficit or with brain damage Nausea & vomiting	
Haloperidol — prolonged-release inj	√	√		Mental or behavioural problems		
Levomepromazine oral	√				Pain & distress in palliative care	Primary Care
Levomepromazine - inj	√				Pain & distress in palliative care	Primary Care

Appendix 1 cont. Drug	Schizophrenia	Paranoid psychosis & other psychoses	Bipolar disorders	Agitation and disturbed behaviour	Other indications	CPC Prescribing Recommendation
Paliperidone oral	√			Psychotic/ manic symptoms of schizoaffective disorder		Primary Care
Paliperidone prolonged release inj	√					Hospital only
Pericyazine	√	√		Anxiety, psychomotor agitation, violent or dangerously impulsive		Primary Care
Perphenazine oral	√	√	Mania and hypomania	Anxiety, severe psychomotor agitation, excitement, violent or dangerously impulsive behaviour	Nausea & vomiting Intractable hiccup	Primary Care
Pimozide oral	√	√				Primary Care
Pipotiazine palmitate —prolonged-release inj	√	√				Primary Care (await further guidance)
Prochlorperazine oral	√		Acute mania		Vertigo Labyrinthitis Nausea & vomiting Anxiety	Primary Care
Prochlorperazine inj	√		Acute mania		Nausea & vomiting	Primary Care
Promazine oral				Adjunctive treatment of psychomotor agitation Elderly-Agitation/ restlessness		Primary Care
Sulpiride	√					Primary Care
Trifluoperazine oral	√	√		Psychomotor agitation & dangerously impulsive behaviour	Anxiety states, depressive symptoms secondary to anxiety, and agitation Nausea & vomiting	Primary Care
Zuclopenthixol oral	√	√				Primary Care
Zuclopenthixol acetate—inj for rapid onset	√ (initial treatment of acute psychosis/ exacerbation of chronic psychosis)	√ (initial treatment of acute psychosis/ exacerbation of chronic psychosis)	Initial treatment of mania			Primary Care (await further guidance)
Zuclopenthixol decanoate—prolonged-release inj	√	√				Primary Care (await further guidance)

Appendix 2: Recommended Monitoring for ORAL Antipsychotics

Parameter/test	Suggested frequency			Action to be taken if results outside reference range	Drugs with special precautions	Drugs for which monitoring is not required
	Baseline	Other	Annually			
Urea and electrolytes (including creatinine or estimated GFR)	√		√	Investigate all abnormalities detected	Amisulpride renally excreted – consider reducing dose if GFR reduced	None
Full blood count (FBC)	√		√	Stop suspect drug if neutrophils fall below 1.5 x 10^9/1. Refer to specialist medical care if neutrophils below 0.5 x 10^9/1. Note high frequency of benign ethnic neutropenia in certain ethnic groups		None
Blood lipids (cholesterol; triglycerides) Fasting sample, if possible (*QOF MH004 - total cholesterol:hdl ratio in over 40 yr olds)*	√	At 3 months	√	Offer lifestyle advice. Consider changing antipsychotic and/or statin therapy	Clozapine, olanzapine, quetiapine, phenothiazines – 3 monthly for first year, then yearly	Some not clearly associated with dyslipidaemia but prevalence is high in this patient group
Weight (include waist size and BMI *(QOF MH006)* if possible)	√	Frequently for 3 months	√	Offer lifestyle advice. Consider changing antipsychotic and/or dietary/pharmacological intervention	Clozapine, olanzapine – frequently for 3 months then 3 monthly for first year, then yearly	Aripiprazole not clearly associated with weight gain but monitoring recommended nonetheless – obesity prevalence high in this patient group
Plasma glucose (fasting sample, if possible) (*QOF MH005 - glucose or HbA1c in over 40 yr olds)*	√	at 4-6 months	√	Offer lifestyle advice. Obtain fasting sample and HbA_{1C}. Refer to GP or specialist	Clozapine, olanzapine – test at baseline, 1 month, then 4-6 monthly	Some not clearly associated with IFG but prevalence is high in this patient group
ECG (recommended for all in-patients as per NICE guidance)	√	where clinically indicated & after dose increases		Refer for further investigations if appropriate	haloperidol – ECG mandatory	
Blood pressure *(QOF MH003)*	√	frequently during dose titration		If severe hypotension or hypertension (clozapine) observed, slow rate of titration	Clozapine, chlorpromazine and quetiapine most likely to be associated with postural hypotension	Amisulpride, aripiprazole, trifluoperazine, sulpiride
Prolactin	√	then at 6 months	√	Switch drugs if hyperprolactinaemia confirmed and symptomatic		Aripiprazole, clozapine, quetiapine, olanzapine (<20 mg), but worth monitoring if symptoms arise
Liver function tests (LFTs)	√		√	Stop suspect drug if LFTs indicate hepatitis (transaminases x 3 normal) or functional damage (PT/albumin change)	Clozapine associated with hepatic failure	Amisulpride, sulpiride

Other tests: Patients on clozapine may benefit from an EEG as this may help determine the need for valproate. Those on quetiapine should have thyroid function tests yearly, although the risk of abnormality is very small
Key: BMI - body mass index; ECG - electrocardiograph; EEG - electroencephalogram; GFR - glomerular filtration rate; IFG - impaired fasting glucose

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Appendix 3. Antipsychotics relative adverse effects – a summary of more common side effects

Drug	Sedation	Weight gain	Diabetes	Extra-pyramidal	Anti-cholinergic	Hypotension	Prolactin elevation
Amisulpride	–	+	+	+	–	–	+++
Aripiprazole	–	+/–	–	+/–	–	–	–
Asenapine	+	+	+/–	+/–	–	–	+/–
Benperidol	+	+	+/–	+++	+	+	+++
Chlorpromazine	+++	++	++	++	++	+++	+++
Clozapine	+++	+++	+++	–	+++	+++	–
Flupentixol	+	++	+	++	++	+	+++
Fluphenazine	+	+	+	+++	++	+	+++
Haloperidol	+	+	+/–	+++	+	+	+++
Iloperidone	–	++	+	+	–	+	–
Loxapine	++	+	+	+++	+	++	+++
Olanzapine	++	+++	+++	+/–	+	+	+
Paliperidone	+	++	+	+	+	++	+++
Perphenazine	+	+	+/–	+++	+	+	+++
Pimozide	+	+	–	+	+	+	+++
Pipothiazine	++	++	+	++	++	++	+++
Promazine	+++	++	+	+	++	++	++
Quetiapine	++	++	++	–	+	++	–
Risperidone	+	++	+	+	+	++	+++
Sertindole	–	+	+/–	–	–	+++	+/–
Sulpiride	–	+	+	+	–	–	+++
Trifluoperazine	+	+	+/ –	+++	+/ –	+	+++
Ziprasidone	+	+/–	–	+/–	–	+	+/–
Zuclopenthixol	++	++	+	++	++	+	+++

Key: +++ High incidence/ severity ++ Moderate + Low – Very low

Note: The table above is made up of approximate estimates of relative incidence and/or severity, based on clinical experience, manufacturers' literature and published research. This is a rough guide. Be aware of neuroleptic malignant syndrome – a rare side effect but patient needs immediate referral to hospital for supportive therapy; symptoms include: labile bp, extrapyramidal side effects, high temperature, autonomic dysfunction, rigidity, confusion, raised creatine phosphokinase. Other sides effects not mentioned in this table do occur.

Ref: The Maudsley Prescribing Guidelines, 11th edition, published 2013

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