City and Hackney Clinical Commissioning Group

East London NHS Foundation Trust

Guidelines for antipsychotic drug treatment and monitoring between secondary and primary care

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1.0 Introduction

People with mental health problems have been shown to be at greater risk of physical morbidity and mortality for many reasons, including smoking, alcohol and substance misuse, lifestyle, and uptake and provision of physical health care. Antipsychotic medication needed for wellbeing can considerably add to these risks and support and monitoring is important. However delivery of monitoring is known to be suboptimal nationally.

NICE 178: The choice of antipsychotic medication should be made by the service user and healthcare professional together, taking into account the views of the carer if the service user agrees. Provide information and discuss the likely benefits and possible side effects of each drug, including:

- metabolic (including weight gain and diabetes)
- extrapyramidal (including akathisia, dyskinesia and dystonia)
- cardiovascular (including prolonging the QT interval)
- hormonal (including increasing plasma prolactin)
- other (including unpleasant subjective experiences). **[2009; amended 2014]**

Mental Health Specialist Services will initiate antipsychotic treatment in patients with mental health diagnoses usually after assessment in secondary care, with continuation of treatment in primary care by General Practitioners (GPs). Initiation of medication will generally be in secondary care and then continued prescribing in primary care. In some cases, where there is clear evidence symptoms and the GP has experience in treating and managing mental health conditions, antipsychotics may be initiated in primary care.

Antipsychotics have known adverse drug effects that can affect the physical health of patients, including weight gain, hyperlipidaemia, hyperglycaemia and diabetes. Monitoring of patients for these effects following initiation of treatment can help improve physical health outcomes.

2.0 Remit of these guidelines

This document sets out the agreement for antipsychotic prescribing and responsibility for monitoring between primary and secondary care.

This guide incorporates NICE and other relevant guidelines to ensure best practice and optimum physical and mental health care for patients requiring antipsychotic medication.

The antipsychotics that are covered are listed in Table 1.

Clozapine is excluded from these guidelines.

Table 1: List of antipsychotics and formulary status

Typical antipsychotics	Formulary Status	Atypical antipsychotics	Formulary Status
Benperidol*		Amisulpride	GREEN
Chlorpromazine	GREEN	Aripiprazole	oral GREEN, LAI AMBER
Flupentixol ± decanoate	GREEN	Olanzapine	oral GREEN, LAI AMBER
Haloperidol ±decanoate	GREEN	Paliperidone	oral and LAI AMBER
Levomepromazine*	GREEN	Quetiapine	GREEN (XL formulation RED)
Pericyazine*		Risperidone	GREEN
Perphenazine*			
Pimozide*	GREEN		
Prochlorperazine*			
Promazine*			
Sulpiride	GREEN		
Trifluperazine*	GREEN		
Zuclopenthixol ±decanoate	GREEN		
Fluphenazine decanoate	GREEN		
Pipotiazine decanoate	GREEN		

*Not routinely prescribed or used in secondary care for treatment of psychosis/schizophrenia

Information on licenced indication, dosage and formulations can be found at http://www.medicines.org.uk/emc/

3.0 Duties of Secondary care

3.1 To perform mental health assessment prior to starting prescription of antipsychotics and review other medication and drugs, prescribed or otherwise acquired, and to communicate this assessment to the GP

3.2 To perform baseline tests before starting an antipsychotic and to monitor until the patient's condition has stabilised. See evidence based monitoring guidance below.

3.3 To request GP to take over responsibility for drug monitoring when the patient is stable (usually no sooner than 3 months after initiation)

3.4 At reasonable intervals to send relevant information on mental state and physical health monitoring (including baseline tests) to primary care.

3.5 To monitor patient for side effects of antipsychotics e.g. over sedation, sexual dysfunction, and movement disorders and communicate with general practice. High dose medication (particularly if above the licensed dose) would normally require specialist prescription, or when stable, shared care.

3.6 When inpatients are discharged from hospital on antipsychotics, a discharge notification and/or summary will be provided.

3.7 For community patients, a written letter with relevant information will be sent to primary care when patient's condition has stabilised.

3.8 To discuss therapeutic options with patient promoting informed choice and communicating clearly with GP to indicate if this is not possible. Advocacy /interpreters should be used where needed to provide verbal and written information to patient on prescribed medication.

3.9 Psychiatrist to inform GP of any change in proposed medication including cessation or clinical reason for recommendation.

3.10 To inform the GP if a patient is prescribed clozapine.

3.11 To provide accessible advice and support through primary care liaison teams who will also facilitate access to physical health care, and to promote attendance for mental and physical health checks and care in general practice, including that required by QOF and local long terms condition management frameworks.

4 Duties of Primary care

4.1 To continue to prescribe antipsychotic prescriptions when the patient's condition is stable, except Clozapine.

4.1 To continue monitoring the physical health of the patient at regular intervals, minimum every 12 months. See evidence based monitoring guidance below.

4.2 To inform specialist services of any major physical health problems at the earliest opportunity.

4.3 If patient suffers any adverse reaction, the GP should liaise with secondary care/specialist services.

4.4 To utilise the support from the primary care liaison teams when available. There will be regular opportunities to consult on complex cases, and to receive advice from primary care liaison psychiatrists and support workers.

4.5 To help facilitate the attendance of patients who are difficult to engage in physical health monitoring by requesting support from primary care liaison teams

5 Guidelines for the monitoring of antipsychotics

5.1 These guidelines are based on best practice, NICE recommended monitoring of antipsychotic drugs.

5.2 It is recognised that due to the nature of individual's illness and the levels of engagement, that it may not be possible or practical to complete all monitoring, but that attempts should be made in both primary and secondary care to complete.

Secondary care Baseline	Secondary Care weekly for first 6 weeks where possible	Secondary Care at 12 weeks or discharge	Primary Care at 12 months	Primary Care Annually	considerations
Weight, height (BMI) or waist measurement	Weight, height (BMI) or waist measurement	Weight, height (BMI) or waist measurement	Weight, height (BMI) or waist measurement	Weight, height (BMI) or waist measurement	Abnormal result BMI ≥25kg/m2(23 if Asian or Chinese) and/or weight gain >5kg over 3 month period Lifestyle advice. Consider referral to secondary care for medication review or seek advice. NICE guidelines for obesity www.nice.org.uk/CG43
BP pulse		BP pulse	BP pulse	BP Pulse	Abnormal result >140mmHg systolic and/or 90mmHg diastolic Lifestyle advice Medication review Follow NICE guidance for hypertension http://publications.nice.org.uk/hypertension-cg127 consider antihypertensive therapy diet: limit salt intake
HbA1c		HbA1c	HbA1c	HbA1c	HbA1c threshold: HbA1c≥42 mmol/mol (≥6%) Lifestyle advice Consider referral to secondary mental health care medication review or seek advice Endocrine review NICE guidelines for diabetes www.nice.org.uk/CG87
Lipid screen			Lipid screen	Lipid screen	Total cholesterol >6.0 mmol/l or High (>20%) risk of CVD Lifestyle advice. Consider referral to secondary care or advice on medication review NICE guidelines for lipid modification www.nice.org.uk/nicemedia/pdf/CG67NICE guideline.pdf and consider lipid modification for any patient with known diabetes or CVD
Prolactin			Prolactin* (Only repeat if symptomatic- see below)	Prolactin* (only repeat if symptomatic- see below)	Normal 25-629 mIU/L* Mild <1000 mIU/L Decreased Libido, Infertility Moderate 1000 – 1600 mIU/L Oligomenorrhoea

					Severe > 2120 mIU/L Hypogonadism, Galactorrhoea Amenorrhoea * Homerton university hospital reference range July 2011 Mild/moderate changes may not need action Consider referral to secondary care for dose reduction or switching of medication. Consider seeking endocrine advice.
TFTs			TFTs (If on Quetiapine)	TFTs (If on Quetiapine)	Consider effect of antipsychotic Manage finding appropriately clinically, communicate and/or refer if necessary to appropriate MH and/or other secondary care team
FBC			Hb	Hb	Consider effect of antipsychotic Manage finding appropriately clinically, communicate and/or refer if necessary to appropriate MH and/or other secondary care team
Renal function			eGFR	eGFR	Consider effect of antipsychotic Manage finding appropriately clinically, communicate and/or refer if necessary to appropriate MH and/or other secondary care team
LFTs			LFTs (ALT sufficient)	LFTs (ALT sufficient)	Consider effect of antipsychotic Manage finding appropriately clinically, communicate and/or refer if necessary to appropriate MH and/or other secondary care team
ECG* (Only if indicated- see below)			ECG* (only repeat if indicated- see below)	ECG* (only repeat if indicated- see below)	Abnormal result QTc interval >440 ms Men, >470ms women Refer to secondary care for medication review or seek urgent advice QTc interval >500ms Treatment should be withdrawn, contact secondary care for advice
Assessment of any movement disorders	Regularly throughout treatment Assessment of any movement disorders, or side effects of treatment				Communicate/.refer as appropriate to ELFT/physician
Assessment of nutritional status, diet and level of physical activity	Regularly throughout treatment Overall physical health				
Mental state	Regularly throughout treatment Response to treatment, including changes in symptoms and behaviour				

*ECG only if:

1. Specified in SPC (Haloperidol, Pipotiazine)

2. the service user has identified specific cardiovascular risk (such as diagnosis of high blood pressure)
3. the service user has a personal history of cardiovascular disease,
4. the service user is on other drugs that could also prolong QT interval,
5. the service user is being admitted as an inpatient.
6. the service user is on high dose antipsychotic therapy (> 100% BNF max) (this could be one or multiple antipsychotics)

- Repeat PROLACTIN only if:

Any signs or symptoms of hyperprolactinaemia (MEN:Gynaecomastia, Impaired Libido, Erectile Dysfunction, Diminished Ejaculate Volume, Oligospermia, WOMEN: Oligo- Or Amenorrhoea, Anovulation, Loss Of Libido, Galactorrhoea,)

6.0 Monitoring of antipsychotic side effects

Secondary care will assess patients at baseline for any signs of movement disorders. Movement disorders and other antipsychotic side effects will also be assessed regularly throughout treatment by discussion with the patient.

Commonly used scales that may aid discussion with patient include the Glasgow Antipsychotic Side Effect Rating Scale (GASS). See Appendix 3

7.0 Monitoring of high dose antipsychotics

A possible link has been postulated between antipsychotic drugs and ventricular tachycardia and sudden death but no consensus has been achieved on the frequency of these events, the contribution of high dosage, or even whether a true causal association exists. To reduce the risk of arrhythmia, all patients should be assessed (including ECG) for cardiovascular disease prior to the institution of antipsychotic drug therapy. Periodic monitoring of the electrocardiogram (ECG), and electrolytes during therapy is advocated when high-dose antipsychotic drug treatment is used.

High dose antipsychotics is assessed by adding together the doses of each drug expressed as a percentage of their respective BNF maximum dose and where this exceeds 100%, the patient is considered to be receiving a “high-dose”.

Eg Olanzapine 20mg daily,(20mg/20mg*100=75%) + haloperidol 5mg daily, (5mg/20mg*100=25%) = 125%

Monitoring should occur at baseline and at regular intervals including after dose changes (minimum every three months), which may be reduced to once per year if patient maintained on stable dose of antipsychotic.

Monitoring should include an ECG, renal function, LFTs, Blood pressure and pulse and temperature.

Appendix 1: Psychotropic-related QT prolongation

Many psychotropic drugs are associated with ECG changes and some are linked to serious ventricular arrhythmia and sudden cardiac death. The risk of death is likely to be dose related; although the absolute risk is low, it is substantially higher than the risk for fatal agranulocytosis with clozapine.

ECG monitoring is essential for all patients prescribed antipsychotics as recommended by NICE schizophrenia guideline and at a yearly check-up if previous abnormality or additional risk factors such as high dose antipsychotic prescribing defined as greater than 100% BNF maximum (single or combined therapy).

The cardiac QT interval is a useful but an imprecise indicator of risk of torsade de points and of increased cardiac mortality.

Table 3: showing Effects of psychotropic drugs on QTc

No Effect	Low effect	Moderate Effect	High effect	Unknown Effect
Aripiprazole	Asenapine	Amisulpiride	Any intravenous antipsychotic	Loxapine
paliperidone	Clozapine	Chlorpromazine	Haloperidol	Pipothiazine
SSRIs (except citalopram)	Flupenthixol	Iloperidone	Pimozide	Trifluperazine
Reboxetine	Fluphenazine	Melperone	Sertindole	Zuclopenthixol
Mirtazapine	Perphenazine	Quetiapine	Any drug combination of drugs in doses exceeding recommended maximum	Anticholinergic drugs Procyclidine,
MAOIs	Prochlorperazine	Ziprasidone		
Carbamazepine	Olanzapine	Citalopram		
Lamotrigine	Risperidone	TCAs		
Valproate	Sulpiride			
benzodiazepines	buproprion			
	Moclobemide			
	Venlafaxine			
	Trazadone			
	Lithium			

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Appendix 2: Antipsychotic side effect table

Relative adverse effects of antipsychotic drugs

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

+++high incidence/severity; ++moderate; +low; -very low

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Appendix 3: Glasgow Antipsychotic Side-effect Scale (GASS)

Name: **Age:** **Sex: M / F**

List current medication and total daily doses below:

This questionnaire is about how you have been recently. It is being used to determine if you are suffering from excessive side effects from your antipsychotic medication.

Please place a tick in the column which best indicates the degree to which you have experienced the following side effects.

Also tick the **end or last** box if you found that the side effect was distressing for you.

Over the past week:	*Never*	*Once*	*A few times*	*Everyday*	*Tick this box if distressing*
1. I felt sleepy during the day					
2. I felt drugged or like a zombie					
3. I felt dizzy when I stood up and/or have fainted					
4. I have felt my heart beating irregularly or unusually fast					
5. My muscles have been tense or jerky					
6. My hands or arms have been shaky					
7. My legs have felt restless and/or I couldn't sit still					
8. I have been drooling					
9. My movements or walking have been slower than usual					
10. I have had uncontrollable movements of my face or body					
11. My vision has been blurry					
12. My mouth has been dry					

13. I have had difficulty passing urine					
14. I have felt like I am going to be sick or have vomited					
15. I have wet the bed					
16. I have been very thirsty and/or passing urine frequently					
17. The areas around my nipples have been sore and swollen					
18. I have noticed fluid coming from my nipples					
19. I have had problems enjoying sex					
20. **Men only:** I have had problems getting an erection					

Tick yes or no *for the* ***last three months***	*No*	*Yes*	*Tick this box if distressing*
21. **Women only**: I have noticed a change in my periods			
22. **Men and women**: I have been gaining weight			

Staff Information

1. Allow the patient to fill in the questionnaire themselves. All questions relate to the previous week.

2. Scoring
   For questions 1-20 award

   1 point for the answer “once”,

   2 points for the answer “a few times”

   3 points for the answer “everyday”.

   Please note zero points are awarded for an answer of “never”.

   For questions 21 and 22 award 3 points for a “yes” answer and 0 points for a “no”.

   Total for all questions=

3. For male and female patients with a score of:
   0-21 absent/mild side effects
   22-42 moderate side effects
   43-63 severe side effects

4. Side effects covered include:
   1-2 sedation and CNS side effects
   3-4 cardiovascular side effects
   5-10 extra pyramidal side effects
   11-13 anticholinergic side effects
   14 gastro-intestinal side effects
   15 genitourinary side effects
   16 screening question for diabetes mellitus
   17-21 prolactinaemic side effect
   22 weight gain

The column relating to the distress experienced with a particular side effect is not scored, but is intended to inform the clinician of the service user's views and condition.

Appendix 4

Neuroleptic Malignant Syndrome .

This is a rare side effect but the patient needs to be referred to A & E immediately for supportive therapy.

Symptoms include

- Labile blood pressure
- Extrapyramidal side effects
- High temperature
- Autonomic dysfunction
- Severe rigidity
- Confusion
- Raised CK

Monitor and record the following during treatment:

- Response to treatment, including changes to symptoms and behaviour
- Side effects of treatment
- Emergence of movement disorders
- Adherence
- Changes in physical health