Best care by the best people

NELFT NHS
NHS Foundation Trust

Psychotropic Drug Formulary

MHS

Lead Executive Director:	Dr Caroline Allum
Author and job title:	Lead Pharmacist Mental Health
Approved by:	Drugs & Therapeutics Group (MHS)
Edition:	September 2019
Review date:	September 2021

Disclaimer

Every attempt has been made to ensure that the information in this Formulary is correct at the time of publication. Where there is doubt, information should be verified against relevant specialist publications

DOCUMENT IS UNCONTROLLED WHEN PRINTED

Table of Contents

1.0 Introduction

1.1 The purpose of this "Formulary" is to detail psychotropic medicines that may be prescribed within the Trust, and includes medicines prescribed for related mental health problems

1.2 The drugs in the Formulary have been assessed by the Drug & Therapeutics Group (DTG) on the basis of their efficacy and safety to promote rational and economic prescribing. This includes prescribing for outpatients on Trust FP10 prescription forms.

1.3 Non-Formulary Drugs
It is recognised that the prescribing of non-formulary drugs may occasionally be unavoidable:

- When a patient already taking a non-formulary drug is admitted to hospital and it would be inappropriate to change therapy
- When a consultant wishes to use a non-formulary drug, where there is no suitable equivalent in the formulary this must be approved by the chair of the DTG before a prescription can be initiated.

Pharmacy should be contacted, and a small supply will be obtained for that specific patient. There may be a short but unavoidable delay in obtaining the drug from the supplier.

The formulary is intended for use in conjunction with the British National Formulary (BNF) and drugs are classified accordingly with the name, strengths and formulation of each drug being specified. Where local guidelines/guidance for drug usage are available, links are provided

1.4 This formulary includes:

- Psychotropic drugs approved for use in NELFT
- Medicines formulations available
- Guidance on physical health monitoring requirements for patients prescribed psychotropic medicines (refer to NICE guidance for full details)
- Guidance on prescribing in Children and Adolescents (CAMHS: Appendix 1)
- Guidance on prescribing drugs outside of the UK Marketing Authorisation (Appendix 2)
- Guidance on prescribing Clozaril (Clozapine) and registration with the Clozaril Patient Monitoring Service – CPMS
- Medicine safety information
- Reference and links to the NICE Clinical Guidelines, Technology Appraisals and other relevant NICE documents
- NICE Technology Appraisal Guidance Adherence check list

1.5 For details on prescribing information, refer to the latest editions/versions:

- British National Formulary (BNF) and BNF for Children (BNFC). Online access via Medicines Complete (using Athens login details): : http://www.medicinescomplete.com/mc/ or via NICE https://www.nice.org.uk/About/What-we-do/Evidence-Services/British-National-Formulary
- NICE BNF and BNFC App is available for Android and iPhone smartphones https://www.nice.org.uk/news/article/new-improved-bnf-and-bnfc-app-launched

- The Maudsley Prescribing Guidelines in Psychiatry. Online access via MedHand App. Please contact the Library services for access

- NICE guidance app available for Android and iPhone smartphones
https://www.nice.org.uk/about/what-we-do/nice-apps-for-smartphones-and-tablets

Other useful links:

- Downloadable medicines information and leaflets for staff, carers and patients: Choice and Medication website
- MHRA Yellow Card Scheme including the Yellow Card Scheme apps available for Android and iPhones this can be used to report adverse effects to medicines and devices including non-prescription and herbal medicines
- For individualised patient medication leaflet listing each of the patient's drugs followed by a simplified, easy to read description and side effects.
MaPPs: http://www.mimapps.org/live/index.php?t=83763
MaPPs user-guide: MaPPs user-guide

2.0 Principles

2.1 The overall responsibility for Formulary development will rest with the Drugs and Therapeutics Group (DTG), which reports to the Executive Management Team

2.2 Systems will be evidence-based and take account of the cost implications for both Primary and Secondary Care.

2.3 For non-psychotropic medication NELFT will use NICE and BNF guidance.

2.4 Treatment guidelines should reflect and incorporate the Formulary.

3.0 Formulary Management

Much of this work will be undertaken by Pharmacy on behalf of the DTG and NELFT.

3.1 Formulary Implementation

3.1.1 The Formulary applies to all prescribers and prescribing in the Trust whether on hospital, clinic or other premises.

3.1.2 The Trust Formulary is applicable to all patients.

3.1.3 Prescribing should be by generic drug name unless a particular preparation has to be prescribed by brand name due to differences in bioavailability. Drugs to be prescribed by brand name are identified in the BNF.

3.1.4 Patients admitted on non-Formulary medication may continue to be prescribed them if appropriate except where substitution policies have been agreed, e.g. iron and calcium supplements, laxatives.

3.1.5 Recommendations regarding medication made to other Trust staff and healthcare professionals external to the organisation, e.g. GPs, acute Trust prescribers, will be in accordance with this policy and with the Responsibility for Prescribing shared between Primary and Secondary Care Policies/procedures.

3.1.6 Pharmacy staff will query prescribing which is outside the Formulary and recommend alternatives from the Formulary. Prescribers are required to prescribe from the Formulary unless there is a good clinical reason for choosing non-Formulary medication. Rationale for prescribing non-Formulary items should be documented in the electronic patient records (RIO).

3.1.7 Implementation of the Trust formulary will be monitored by Pharmacy Pharmacy will monitor:

- Use of FP10 prescriptions
- Medication supply on FP10 not to exceed 14-days
- Prescribing of drugs from the North East London Medicines Management working group 'Red List' – drugs not to be prescribed by General Practitioners (GPs), for example, Paliperidone Palmitate long acting depot injection

3.2 Request for additions/changes to the Formulary

3.2.1 All requests for additions or changes to the Formulary must be made by a Consultant Psychiatrist to the Chair of the Drugs and Therapeutics Group (DTG) on the New Drug Request form (Appendix 12).

3.2.2 A consultant may prefer to evaluate a new product before requesting its inclusion in the formulary.

3.2.3 Pharmacy will undertake a formal evaluation of the available evidence associated with the requested medication. The evaluation will be based on information from clinical trials, peer reviewed journals and meta analyses where possible and include:

- Clinical efficacy and toxicity
- Relevant NICE or other expert opinions
- Cost implications for Secondary and Primary care
- Other considerations, for example, licence status, medico-legal issues, status in other Mental Health trusts.

3.2.4 The DTG will use the evaluation as the basis of its decision-making and consider both the clinical effectiveness of the medication and the financial implications for the Trust and Primary Care if appropriate. Where there are medico-legal or significant clinical risk issues the DTG may seek legal advice and/or refer the matter to the Executive Medical Director.

3.2.5 The DTG will not authorise addition to the Formulary until it is satisfied that both clinical and financial issues have been addressed. This could include:

- A prescribing protocol/guideline
- Primary/secondary care shared-care guidelines
- Identification of funding

3.2.6 Appeals

If a consultant wishes to appeal against a DTG decision with regard to a New Drug Request (s)he should follow the following process.

a) Write to the Chair of the DTG requesting that the DTG re-consider its decision and include reasons and additional evidence where available.

b) If the DTG confirms its original decision and the consultant still wants to use the medication (s)he will be invited to present the case.

c) Written grounds of any appeal and supporting information/evidence will be provided in advance of a Group meeting and should/will be limited to those relating to the original request.

d) The appeal panel will comprise the following:
   - Executive Medical Director
   - DTG Chair
   - Chief Pharmacist

3.3 Funding issues

3.3.1 It is necessary to have a system for dealing with the significant financial implications associated with the introduction of a new medication/formulation or new indication.

3.3.2 Consultants are encouraged to participate in the forward planning process as described in section 3.4, especially if they are planning changes to their service provision in their area of work.

3.3.3 Lack of funding may delay the introduction of a new drug until prescribing guidelines are developed and funding identified.

3.4 Forward planning

3.4.1 This is a process which takes place in one financial year and attempts to estimate the impact of new medicines and therapeutic developments in the following, and subsequent, financial years.

3.4.2 The process will be led annually by Pharmacy and will involve clinicians through the Clinical Directors.

3.4.3 Pharmacy will identify developments in medication and therapeutics, which will potentially impact on the Trust in the following financial year (and where possible the subsequent two years). This will be done using a variety of sources:

- Medicines Information Service Horizon Scanning documents
- NICE Work Programme
- NELFT business planning process
- Identified service developments
- Specialist (mental health) networks

3.4.4 This work will be shared with the directorates in order to determine likely take-up and impact in NELFT, i.e. potential patient numbers and cost implications and determine priorities.

3.4.5 During the process the Finance Directorate and DTG will be informed of progress.

3.4.6 It is, therefore, likely that the highest priority will be given to NICE and NSF associated medication and that other therapeutically important treatments and developments and generic cost pressures will not be funded through the forward planning process. It therefore follows that Directorates must identify medication related cost pressures when changing and developing services and in their business planning processes so that funding can potentially be secured in other ways.

3.4.7 For expensive therapies Pharmacy will, where possible, track expenditure through its computer record and present trends to the clinician on request and appropriate financial and governance staff.

3.4.8 High Cost Medicines

Medicines that are considered high cost will be identified in the formulary. High cost medicines are those that cost considerably more than alternative medicines in that class or compared to alternative therapeutic options. Information is based from costs listed in the British National Formulary and Drug Tariff. High cost is considered as medicines costing over £30 per month based on an average dose in adults.

3.5 Relevant policies and procedures

- **NELFT Benzodiazepine and Z-Hypnotics Prescribing Policy (2015)**
- **NELFT High Dose Antipsychotic Prescribing Policy (2015)**
- **NELFT Medicines Policy (2016)**
- **NELFT Medicines Standard Operating Procedure (main body of the procedure) (Expiry date Mar 2019)**
    - **Medicines Standard Operating Procedure (processes 1-45 listed as appendices)**
- **NELFT NICE Guidance Implementation Policy**
- **Community initiation of clozapine (Clozaril) Policy and guidance**
- **Inpatient initiation of clozapine**
- **Guidance on the administration to adults of oil based depot and other long acting antipsychotic injections**
- **Rapid Tranquilisation and use of Zuclopenthixol Acetate Policy**

Medicines

Central Nervous System

Hypnotics and Anxiolytics

Hypnotics

Drug Class	Drug Name	Formulations	Other information
Benzodiazepines	Temazepam (Schedule 3 Controlled Drug) CD	• Tablets 10mg, 20mg • Oral Solution 10mg/5mL **High Cost**	***Off-label use*** of Zopiclone and Zolpidem approved for use beyond the licensed 2-4 weeks duration, within BNF limits. ***Off-label use*** of promethazine injection approved for use in rapid tranquilisation only. Max 100mg in 24 hours ***Off-label use*** of melatonin approved for sleep disorder in ADHD for CAMHS use only within BNF limits ***Off-label use*** of cyproheptadine approved to treat akathisia within BNF limits NELFT Benzodiazepine and Z-Hypnotics Prescribing Policy Nice technology appraisal on the use of Z- drugs TA77 Shared Care guidelines for melatonin for sleep disorders / difficulties in children BHR CCGs and for WF CCGs See NICE evidence summary Sleep disorders in children and young people with attention deficit hyperactivity disorder: melatonin ESUOM2
Non–benzodiazepine: Z-Drug	Zopiclone (Schedule 4-1 Controlled Drug)	• Tablets 3.75mg, 7.5mg	
	Zolpidem Tartrate (Schedule 4-1 Controlled Drug)	• Tablets 5mg, 10mg	
Clomethiazole	Clomethiazole (older adults)	• Capsules 192mg **High Cost**	
Antihistamines	Promethazine Hydrochloride	• Tablets 10mg, 25mg • Elixir 5mg/5mL **High Cost** • Injection 25mg/mL	
	Cyproheptadine *For akathisia*	• Tablet 4mg	
Melatonin receptor agonists	Melatonin **FOR USE IN CAMHS ONLY**	• Modified release tablets 2mg • Oral Solution 1mg/ml ***UNLICENSED*** **High Cost**	

Prescribing points

No patient should be discharged on a hypnotic except those classified as established chronic users prior to admission, i.e. no *new* long-term users should be created as a result of hospital initiated treatment.

For information and guidance on prescribing controlled drugs please see the standard operating process for controlled drugs

Refer to NICE guidance on controlled drugs: Controlled drugs: safe use and management. and to the NELFT Benzodiazepine and Hypnotics Prescribing Policy

Anxiolytics

Drug Class	Drug Name	Formulations	Additional information
Benzodiazepines	Diazepam (Schedule 4-1 Controlled Drug)	• Tablets 2mg, 5mg, 10mg • Oral solution 2mg/5mL **High Cost**	***Off-label use*** of benzodiazepines including clonazepam approved for use in aggression, acute phase of mania and rapid tranquilisation. Total daily dose within BNF limits. ***Off-label use*** of propranolol approved to treat akathisia within BNF limits Refer to Benzodiazepine and Hypnotics Prescribing Policy NICE Guidelines Generalised anxiety disorder and panic disorder in adults: management. CG113 Social anxiety disorder: recognition, assessment and treatment CG159 Obsessive-compulsive disorder
	Chlordiazepoxide (Schedule 4-1 Controlled Drug)	Capsules 5mg, 10mg	
	Lorazepam (Schedule 4-1 Controlled Drug)	• Tablets 1mg • Injection 4mg/mL	
	Oxazepam (Schedule 4-1 Controlled Drug)	Tablets 10mg, 15mg **High Cost**	
Benzodiazepine antiepileptic	Clonazepam (Schedule 4-1 Controlled Drug)	Tablets 500microgram, 2mg **High Cost**	
Buspirone	Buspirone	Tablets 5mg, 10mg	
Antihistamine	Hydroxyzine	Tablets 10mg, 25mg	
Beta Blocker	Propranolol	Tablets 10mg 40mg	

Prescribing Points

MHRA Advice on Benzodiazepines

- The use of benzodiazepines to treat short-term 'mild' anxiety is inappropriate and unsuitable.
- Benzodiazepines are licensed for the short-term (2 – 4 weeks) relief of anxiety only when it is severe, disabling, or subjecting the individual to extreme distress
- Long-term use of benzodiazepines should be avoided
- No patient should be discharged on a benzodiazepine except those classified as established chronic users prior to admission, i.e. no *new* long-term users should be created as a result of hospital initiated treatment
- Patients on long-term benzodiazepines should *not* have their treatment discontinued abruptly.
- Withdrawal should be very gradual – follow BNF guidance on withdrawal of benzodiazepine

For guidance on approximate equivalent doses of benzodiazepines please see What are the equivalent doses of oral benzodiazepines?

Refer to the NELFT Benzodiazepine and Hypnotics Prescribing Policy

Drugs used in psychoses and related disorders

Antipsychotic drugs

First-generation antipsychotic drugs			
Drug Class	**Drug Name**	**Formulations**	**Additional Information**
Butyrophenone	Benperidol Only for *Control of deviant antisocial sexual behaviour*	• Tablet 250 microgram **High Cost**	***Off-label use*** of first generation antipsychotics approved for use in children in line with maximum doses indicated in the BNF for Children. ***Off-label use*** of haloperidol is approved in the absence of an ECG within maximum BNF doses and where clinically indicated ***Off-label use*** of high dose antipsychotics is approved in line with the High dose antipsychotic prescribing policy Calculating percentage BNF max for antipsychotics: oral and short-acting injections Calculating percentage BNF max for antipsychotics: long-acting injections Rapid Tranquillisation and use of Zuclopenthixol Acetate policy NICE guidance Psychosis and schizophrenia in children and young people: recognition and management CG55 Psychosis and schizophrenia in adults: prevention and management CG178 Bipolar disorder: assessment and management CG185
Phenothiazine Group 1	Chlorpromazine Hydrochloride	• Tablets 25mg, 50mg, 100mg • Oral solution 25mg/5mL, 100mg/5mL	
Phenothiazine Group 1	Promazine	• Tablets 25mg, 50mg **High Cost** • Oral solution 25mg/5mL **High Cost** • Oral solution 50mg/5mL **High Cost**	
Phenothiazine Group 3	Trifluoperazine	• Tablets 1mg, 5mg **High Cost – please contact pharmacy for information on availability** • Oral solution (SF) 5mg/5mL **High Cost**	
Butyrophenone	Haloperidol **Note the BNF maximum doses have changed – refer to the indication in the BNF for information** **ECG required pre-treatment- see below**	• Tablets 500 microgram, 1.5mg, 5mg, 10mg, 20mg • Oral liquid SF 10mg/5mL • Injection 5mg/1ml	
Thioxanthene	Flupentixol	Tablets 3mg	
Thioxanthene	Zuclopenthixol Dihydrochloride	Tablets 2mg, 10mg, 25mg	
Thioxanthene	Zuclopenthixol Acetate (Acuphase®)* Do not confuse with zuclopenthixol decanoate	Injection 50mg/mL (2mL ampoule)	
Substituted benzamides	Sulpiride	• Tablets 200mg, 400mg • Oral solution SF 200mg/5mL **High Cost**	

* Rationale for prescribing Clopixol Acuphase must be documented, citing one of the following reasons:

- ☐ It is clearly expected that the patient will be disturbed/violent over an extended period of time
- ☐ A patient has a past history of good and timely response to Zuclopenthixol Acetate injection
- ☐ A patient has a history of repeated parenteral administration
- ☐ An advance decision has been made indicating that this is a treatment of choice

Second-generation antipsychotic drugs			
Drug Class	**Drug Name**	**Formulations**	**Costing £**
Atypical antipsychotics	Amisulpride	• Tablets 50mg, 100mg, 200mg, 400mg • Solution 100mg/mL **High Cost**	***Off-label use*** of second generation antipsychotics approved for use in children. ***Off-label use*** of second-generation antipsychotics approved for psychotic illness other than schizophrenia ***Off-label use*** of risperidone approved for use in autism ***Off-label use*** of aripiprazole approved for hyperprolactinaemia. *All in line with maximum doses indicated in the BNF.* ***Off-label use*** of high dose antipsychotics is approved in line with the High dose antipsychotic prescribing policy Calculating percentage BNF max for antipsychotics: oral and short-acting injections Calculating percentage BNF max for antipsychotics: long-acting injections NICE guidance *Schizophrenia – aripiprazole (TA213) in people aged 15 to 17 years. *Bipolar I disorder – aripiprazole (TA292) in adolescents aged 13 years and older Psychosis and schizophrenia in children and young people: recognition and management CG55 Psychosis and schizophrenia in adults: prevention and management CG178 Bipolar disorder: assessment and management CG185 ****Switching patients from Quetiapine XL to IR – guidance and PIL. These documents can be accessed via the Pharmacy intranet site** http://nelftintranet/departments-and-services/medicines-management/Prescribing%20Guidance
	Aripiprazole*	• Tablets 5mg, 10mg, 15mg, 30mg • Orodispersible tablets 10mg, 15mg **High Cost** • Oral solution 1mg/mL **High Cost** • Injection 7.5mg/mL	
	Asenapine Licensed for bipolar disorder	• Sublingual tablets 5mg, 10mg **High Cost**	
	Clozapine (Clozaril®) (Consultant prescribing only)	• Tablets 25mg, 100mg • *Suspension 100mg/5mL* ***UNLICENSED*** **High Cost**	
	Olanzapine	• Tablets 2.5mg, 5mg, 7.5mg, 10mg, 15mg, 20mg • Orodispersible tablets 5mg, 10mg, 15mg, 20mg • Injection 5mg/mL ***UNLICENSED*** **High Cost**	
	Quetiapine**	• Tablets 25mg, 100mg, 150mg, 200mg, 300mg	
	Risperidone	• Tablets 500 micrograms, 1mg, 2mg, 3mg, 4mg, 6mg • Orodispersible tablets 0.5mg, 1mg, 2mg, 3mg, 4mg **High Cost** • Liquid 1mg/mL	
	Melperone ***UNLICENSED*** Approved for patients with treatment-refractory schizophrenia who have not responded to or cannot tolerate clozapine	Initiation by Consultant Psychiatrist Named patient prescribing only Start at 25mg at night Increase according to tolerability Non-refractory illness total daily doses of 100-300mg are effective Higher doses may be needed in refractory illness	

Drug Class	Drug Name	Formulations	Other Information
Omega-3 fatty acid compounds	Docosahexaenoic acid 380 mg, Eicosapentaenoic acid 460 mg	Capsules 1000mg	***Off-label use*** of Omega 3 fatty acid compunds approved for use in schizophrenia within BNF limits See NICE evidence summary Schizophrenia: omega-3 fatty acid medicines ESUOM19

Antipsychotic depot injections

Drug Class	Drug Name	Licensed Routes	Formulations	Other Information
First generation (Typical) Long acting Antipsychotic	Flupentixol Decanoate	Dorsogluteal or Lateral thigh	Injection 20mg/mL 100mg/mL 200mg/mL	***Off-label use*** of high dose antipsychotics is approved in line with the High dose antipsychotic prescribing policy Calculating percentage BNF max for antipsychotics: oral and short-acting injections Calculating percentage BNF max for antipsychotics: long-acting injections NICE guidance Psychosis and schizophrenia in children and young people: recognition and management CG55 Psychosis and schizophrenia in adults: prevention and management CG178 Bipolar disorder: assessment and management CG185
	Haloperidol Decanoate	Gluteal	• Injection 50mg/mL, 100mg/mL	
	Zuclopenthixol Decanoate Do not confuse with zuclopenthixol acetate	Dorsogluteal or Lateral thigh	Injection 200mg/mL 500mg/mL •	
Second generation (Atypical) Long acting Antipsychotic	Aripiprazole* Initiation form	Deltoid or Gluteal ** State site on prescription **	• 400mg Pre-filled disposable injection **High Cost** • 400mg vial **High Cost**	
	1-monthly Paliperidone palmitate** Initiation form	Initiation doses Day 1 and Day 8 = Deltoid Then Deltoid or Gluteal for monthly maintenance ** State site on prescription **	Injection 50mg, 75mg, 100mg, 150mg **High Cost**	
	Risperidone (LAI)	Deltoid or Gluteal ** State site on prescription **	Injection 25mg, 37.5mg, 50mg **High Cost**	

Prescribing Points

Haloperidol and ECG

- Baseline ECG is recommended prior to treatment in all patients, especially in the elderly and patients with a positive personal or family history of cardiac disease or abnormal findings on cardiac clinical examination
- Recent ECG [within last 3 months] must be available prior to haloperidol use
- If patient refuses, document refusal AND include a statement on risk-benefit of haloperidol administration
- During therapy, the need for ECG monitoring (e.g. at dose escalation) should be assessed on an individual basis
- Whilst on therapy, the dose should be reduced if QTc is prolonged, and haloperidol should be discontinued if the QTc exceeds 500 ms
- Periodic electrolyte monitoring is recommended, especially for patients taking diuretics, or during intercurrent illness
- Refer to the full SmPC for further informational, taking note that the maximum dose for the haloperidol injection in the SmPC differs from that in the BNF: https://www.medicines.org.uk/emc/medicine/23005

Summary Guidance – Antipsychotic Monitoring NICE Clinical Guideline 178 (March 2014)			
Parameter	**Frequency**		
	Baseline	**During 1st year**	**Annually**
Creatinine Clearance or estimated eGFR	Yes		Yes
Urea & Electrolytes (U & Es)	Yes		Yes
Liver Function Test, LFTs	Yes	Frequently with clozapine and chlorpromazine (associated with hepatic failure)	Yes
Full blood Count	Yes	Clozapine requires intensive monitoring see Community initiation of clozapine (Clozaril) Policy and guidance Inpatient initiation of clozapine	Yes
Blood lipids, including cholesterol, triglycerides	Yes	At 12 weeks, 6 months and 1 year	Yes
Weight (plotted on a chart) BMI Waist circumference	Yes	Weekly for 6 weeks, then at 12 weeks, 6 months and 1 year	Yes
Plasma glucose, glycosylated haemoglobin (HbA_{1c})	Yes	At 12 weeks, 6 months and 1 year	Yes
Assessment of nutritional status, diet and level of physical activity	Yes		
Prolactin	Yes	At 6 months	Yes
ECG	Yes**	**All inpatients and other patients identified as being at high risk including: - Presence of specific cardiovascular risk factor, for example, high blood pressure - Personal history of CV disease - After dose increase - On combination antipsychotics - High dose antipsychotics - On other medicines with risk of CV adverse effects - Drug regimen changed - SMPC requirement – **haloperidol,** pimozide[π], sertindole[π], zotepine[π] [[π]Non-formulary in NELFT]	Patients identified as being at high risk
Blood Pressure / Pulse	Yes	Frequently during dose titration	Yes
Smoking Status **Number/day**	Yes	Monitor if prescribed specific drugs where cigarette smoking affects metabolism, for example, clozapine	Yes
Creatinine Phosphokinase		If Neuroleptic Malignant Syndrome (NMS) suspected	
Side Effects – e.g. sexual adverse effects, movement disorders		Consider using a side effect rating scale such as LUNSERS or GASS (GASS-Clozapine)	Yes

Patients with schizophrenia should have physical health monitoring (including cardiovascular disease risk assessment) at least once per year

- GPs and other primary healthcare professionals should monitor the physical health of people with psychosis or schizophrenia when responsibility for monitoring is transferred from secondary care, and then at least annually
- The health check should be comprehensive, focusing on physical health problems that are common in people with psychosis and schizophrenia
- A copy of the results should be sent to the care coordinator and psychiatrist, and put in the secondary care notes

For further information see:
The Lester tool – positive cardiometabolic advice
The British Association of Psychopharmacology guidance on managing metabolic syndrome

Prescribing points

Treatment with antipsychotic medication should be considered an explicit individual therapeutic trial. Include the following:

- Discuss and record the side effects that the person is most willing to tolerate
- Record the indications and expected benefits and risks of oral antipsychotic medication, and the expected time for a change in symptoms and appearance of side effects
- At the start of treatment give a dose at the lower end of the licensed range and slowly titrate upwards within the dose range given in the British national formulary (BNF) or SMPC
- Justify and record reasons for dosages outside the range given in the BNF or SMPC
- Record the rationale for continuing, changing or stopping medication, and the effects of such changes
- Carry out a trial of the medication at optimum dosage for 4–6 weeks

Antipsychotics: initiative to reduce prescribing to older people with dementia

Due to the increased risk of stroke and adverse effects for patients with dementia who are prescribed antipsychotics all patients should be carefully reviewed and assessed before and during any treatment with antipsychotics with consideration given to the risks and benefits of prescribing.
https://www.gov.uk/drug-safety-update/antipsychotics-initiative-to-reduce-prescribing-to-older-people-with-dementia

Prescribing in at risk groups

Prescribing antipsychotics in patients who are at risk such as the elderly, those with renal and liver impairment, those with concurrent illnesses and taking other medication should be carried out cautiously.

•Antipsychotics should not be used in elderly patients to treat mild to moderate psychotic symptoms.

•Initial dose of antipsychotics in elderly or at risk patients should be reduced (to half the adult dose or less in the elderly), taking into account factors such as the patient's weight, co-morbidity, and concomitant medication.

•Titration of doses should be carried out more slowly to allow sufficient time for the medicine to reach steady state and for adverse effects to be evaluated

•Treatment should be reviewed regularly.

Antipsychotics: risk of venous thromboembolic events

A Europe-wide review of UK Yellow Card data and published studies carried out by the MHRA on antipsychotics and the risk of venous thromboembolism (VTE) concluded that an increase in risk of VTE cannot be excluded. https://www.gov.uk/drug-safety-update/antipsychotics-risk-of-venous-thromboembolic-events

Advice for healthcare professionals:

•Antipsychotic use may be associated with an increased risk of VTE

•At present there are insufficient data available to determine any difference in risk between atypical and conventional antipsychotics, or between individual drugs

•All possible risk factors for VTE should be identified before and during antipsychotic treatment and preventive measures undertaken

•Refer to the NELFT Venous Thromboembolism Policy for further information

Useful documents and links:

• A simple web calculator implementing a Qthrombosis algorithm (Validation study available here) is publicly available: http://www.qthrombosis.org/

• MHRA Public Assessment Report: The risk of venous thromboembolism:
http://www.mhra.gov.uk/home/groups/s-par/documents/websiteresources/con079334.pdf

Pharmacy VTE guidance for MHS: http://nelftintranet/departments-and- services/medicines-management/other-medicine-related-documents.htm

Combination antipsychotics

In the UK, The Royal College of Psychiatrists, NICE guidelines for the treatment of schizophrenia, The Maudsley Prescribing Guidelines in Psychiatry and the BNF all advise against the routine prescribing of more

than one antipsychotic. Combinations of antipsychotics which are not high dose should be considered in a similar way to high dose antipsychotics taking into account the risks to the patient and the additive side effect profile of the combination.

Calculating percentage BNF max for antipsychotics: oral and short-acting injections
Calculating percentage BNF max for antipsychotics: long-acting injections

Combinations are only justified in the following situations.

- Where patients are being switched from one antipsychotic to another – a short (6 weeks) crossover period is acceptable
- When giving a more sedating and/or injectable antipsychotic to someone who is very agitated and is already receiving another antipsychotic on a regular basis (part of Rapid Tranquilisation)
- In cases where the patient is receiving clozapine but has not achieved adequate symptom control; or not tolerated clozapine due to neutropenia or agranulocytosis
- Short-term/temporary measure with a depot medication during an acute exacerbation of the illness

Inappropriate use of combination antipsychotics would include**:**

- Failure to wait for an adequate period of time for the first antipsychotic to have an effect
- 6 months for clozapine
- 6 weeks for all other antipsychotics
- 8 weeks for depot medication
- Patient may be treatment resistant and clozapine has not been tried

Monitoring should be as per appendix 1 in the high dose antipsychotic policy

Withdrawal of antipsychotic drugs

Withdrawal of antipsychotic drugs after long-term therapy should be gradual and closely monitored to avoid the risk of acute discontinuation symptoms or rapid relapse

Prescribing Clozapine (Clozaril®)

Full advice on prescribing including pre-treatment requirements, titration and monitoring refer to

- Community initiation of clozapine (Clozaril) Policy and guidance
- Inpatient initiation of clozapine

Refer to the Clozaril information provided by https://www.clozaril.co.uk/ and the SmPC https://www.medicines.org.uk/emc/product/4411/smpc

Prophylactic anticonvulsant for high doses of clozapine

Due to the teratogenic effects of valproate it should not be prescribed in women of child bearing age unless considered essential and the woman is in a pregnancy prevention programme (see section on valproate below). Where prophylaxis against seizures is still required consider prophylactic topiramate, lamotrigine, gabapentin or valproate (The Maudsley Guidelines).

Clozapine associated gastrointestinal hypomotility / obstruction

Clozapine can cause life threatening constipation and paralytic ileus. Regularly review patients for any signs of constipation and provide dietary and lifestyle advice.

- Stool-softening laxatives and stimulants in combination in case of any early signs of constipation
- Combination of docusate and senna
- Lactulose and polyethylene glycol (PEG/macrogol) may be considered second line options or alternatives, but preferably in combination with an agent that increases gastrointestinal motility

Clozapine and norclozapine levels (incurs an additional cost)

This is not routinely carried but may be useful where toxicity, compliance or change in smoking habit is an issue. Measurements of plasma clozapine and norclozapine levels are carried out at Analytical Services International (ASI) – See Appendix 3 for details on how to order test kits

Contact Pharmacy for further information

Antimanic drugs and Anti-epileptics used in psychiatric disorders

Drug Class	Drug Name	Formulations	Additional Information
Lithium - **prescribe by brand name** Ensure all patients have a lithium record book and up to date levels	Lithium Carbonate MR **Priadel®**	Priadel® tablets MR 200mg, 400mg	***Off-label use*** of sodium valproate approved for use as a mood stabiliser within BNF limits (only Valproic Acid is licensed) ***Off-label use*** of lithium approved for use in clozapine induced neutropenia within BNF limits ***Off-label use*** of carbamazepine approved for use in bipolar disorder not restricted to patients unresponsive to lithium within BNF limits Due to the risks of teratogenic effects in babies sodium valproate or valproic acid should only be prescribed to women who are part of the pregnancy prevention programme. Please see below for further information and guidance. NICE guidance Bipolar disorder: assessment and management CG185 Vitamin D supplementation should be considered for at-risk patients who receive long-term treatment with primidone, phenytoin, carbamazepine, phenobarbital, or sodium valproate due to the risk of reduced bone mineral density with antiepileptics. MHRA Alert Switching from Epilim (sodium valproate) to Depakote (semisodium valproate): Approx equivalent doses: **Depakote 500mg** / **Epilim EC 577mg** / **Epilim Chrono 577mg** Carbamazepine levels are required every 6 months.
	Lithium Citrate **Priadel®**	Priadel® liquid 520mg/5mL	
Anti-epileptic Caution in women of child bearing potential – see below	Valproic Acid (semisodium valproate) Depakote®	Tablets e/c 250mg, 500mg	
	Sodium Valproate – used off label	• Crushable tablets 100mg • Tablet e/c 200mg, 500mg [gastro-resistant] • Modified release tablets 200mg, 300mg, 500mg • MR Granules 50mg, 100mg, 250mg, 500mg, 1000mg • MR Capsules 150mg, 300mg • Oral solution [SF] 200mg/5mL • Epilim® oral solution 200mg/5ml **[for epilepsy only]**	
	Carbamazepine	• Tablets 100mg, 200mg, 400mg • MR Tablets 200mg, 400mg	
	Lamotrigine	• Tablets 25mg, 50mg, 100mg, 200mg • Dispersible tablets 25mg, 100mg	
	Pregabalin [Generalised anxiety disorder]	• Capsules 150mg, 200mg, 225mg, 300mg	
	Clonazepam – used off-label	See Anxiolytics for further information	

Prescribing points and Guidance

Valproate : Drug safety update April 2018 Prescribing in women of childbearing potential

Valproate must not be prescribed unless the conditions of the Pregnancy Prevention Programme are met. See NELFT guidelines: guidance for prescribers when prescribing valproate for women of childbearing potential (up to 60 years old) and girls. Other materials are also available to support discussions of these risks.

- Booklet for Healthcare Professionals
- Guide to give to patients
- Card to give to patients

For further information/details refer to:

- Bipolar disorder: Assessment and management. NICE Clinical Guideline185 (September 2014).
- British National Formulary (electronic version)
- Sodium valproate SmPC http://www.medicines.org.uk/emc/medicine/22515/SmPC
- MHRA: Valproate medicines (Epilim▼, Depakote▼): contraindicated in women and girls of childbearing potential unless conditions of Pregnancy Prevention Programme are met

Prescribing Valproate -

When starting valproate, measure the person's weight or BMI and carry out a full blood count and liver function tests. Refer to the SmPC for sodium valproate or valproic acid further information

- Do not offer valproate to women of childbearing potential for long-term treatment or to treat an acute episode
- Advise people taking valproate, and their carers, how to recognise the signs and symptoms of blood and liver disorders and to seek immediate medical help if any of these develop
- Stop valproate immediately if abnormal liver function or blood dyscrasia is detected
- When prescribing valproate, be aware of its interactions with other anticonvulsants (particularly carbamazepine and lamotrigine) and with olanzapine and smoking

Monitoring patients prescribed valproate

- Do not routinely measure plasma valproate levels unless there is evidence of ineffectiveness, poor adherence or toxicity
- Measure the person's weight or BMI
- Carry out liver function tests and a full blood count before therapy then after 6 months of treatment with valproate and repeat annually
- Patients or their carers should be told how to recognise signs and symptoms of **blood or liver disorders** and advised to seek immediate medical attention if symptoms develop
- Patients or their carers should be told how to recognise signs and symptoms of **pancreatitis** and advised to seek immediate medical attention if symptoms such as abdominal pain, nausea, or vomiting develop; discontinue if pancreatitis is diagnosed
- Monitor sedation, tremor and gait disturbance carefully in older people

Prescribing Lithium

Lithium should be prescribed in line with the lithium shared care guidelines and standard operating procedures Safe Prescribing, Administration and Monitoring of Lithium: Community Teams or Safe Prescribing, Administration and Monitoring of Lithium: In-patient Units which covers pre-treatment assessments, dosing and monitoring and the Lithium SmPC

For patients non-compliant with tablets, Priadel® liquid 520mg/5mL is available which contains 5.4mmol lithium/5mL

- 5mL Priadel® liquid (520mg/5mL; Li+ 5.4 mmol) is equivalent to 200mg lithium
- carbonate MR tablet (Li+ 5.4 mmol) [Priadel®]
- Note that Priadel® liquid requires TWICE DAILY administration

The NPSA has developed a patient pack containing: patient information booklet, lithium alert card and record book for tracking blood tests ('Lithium Therapy. Important information for patients')

All patients prescribed lithium should be given the lithium information package

- Available on the wards (packs may be purchased from 3M)
- Contact pharmacy for further information

Prescribing Lamotrigine

When starting lamotrigine:

- Carry out a full blood count, urea and electrolytes and liver function tests
- Be aware of its interaction with valproate and the increased risk of rash
- Follow the instructions for initial dosage and dosage titration outlined in the SMPC* and BNF, taking into account the need for slow titration in people who have not taken lamotrigine before
- Advise people taking lamotrigine to contact their doctor immediately if they develop a rash while the dose of lamotrigine is being increased
  - Increased risk of rash with faster titration, higher starting doses in the first 8 weeks of treatment

Monitoring Lamotrigine

- Do not routinely measure plasma lamotrigine levels unless there is evidence of ineffectiveness, poor adherence or toxicity
- Carry out an annual physical health check
- Monitor patient closely for any skin reactions including Stevens-Johnson syndrome, toxic epidermal necrosis
- Patients and carers should be alert for signs and symptoms suggestive of bone-marrow failure – anaemia, bruising or infections. Aplastic anaemia, bone-marrow depression, and pancytopenia have been associated rarely with lamotrigine
- Avoid abrupt withdrawal (taper off over 2 weeks or longer) unless serious skin reaction occurs

Refer to the BNF or lamotrigine SmPC for further information.

Brand Prescribing of anti-epileptics (AEDs) in EPILEPSY only

The MHRA issued a drug safety alert regarding the prescribing on antiepileptics by brand:

*** Note that this advice relates only to AEDs used for the treatment of epilepsy; it does not apply in other indications, e.g. mood stabilisation, neuropathic pain ***

Antiepileptic drugs (AEDs): new advice on switching between different manufacturers' products for a particular drug

- Different antiepileptic drugs vary considerably in their characteristics, which influences the risk of whether switching between different manufacturers' products of a particular drug may cause adverse effects or loss of seizure control.
- AEDs have been divided into three risk-based categories to help healthcare professionals decide whether it is necessary to maintain continuity of supply of a specific manufacturers' product

Category 1 – phenytoin, carbamazepine, phenobarbital, primidone For these drugs, prescribers are advised to ensure that their patient is maintained on a specific manufacturer's product
Category 2 – valproate, lamotrigine, perampanel, retigabine, rufinamide, clobazam, clonazepam, oxcarbazepine, eslicarbazepine, zonisamide, topiramate For these drugs, the need for continued supply of a particular manufacturers' product should be based on clinical judgement and consultation with patient and/or carer, taking into account factors such as seizure frequency and treatment history
Category 3 – levetiracetam, laxosamide, tiagabine, gabapentin, pregabalin, ethosuximide, vigabatrin For these drugs, it is usually unnecessary to ensure that patients are maintained on a specific manufacturer's product unless there are specific reasons such as patient anxiety and risk of confusion or dosing errors

Antidepressant drugs

Tricyclic and related antidepressant drugs

Drug Class	Drug Name	Formulations	Additional information
Tricyclic antidepressants	Amitriptyline Hydrochloride	• Tablets 10mg, 25mg, 50mg • Oral solution 25mg/5mL, 50mg/5mL	NICE Guidelines Depression in adults: recognition and management CG90 Depression in children and young people: identification and management CG28 All tricyclics except Lofepramine are potentially fatal in overdose due to cardiotoxicityAnticholinergic side-effects are common with tricyclic antidepressants, e.g. dry mouth, blurred vision, constipation and urinary retention. Trazodone Has a lower incidence of anticholinergic side-effects and may also be associated with a lower risk of cardiotoxicity in overdose. Monitor for potential postural hypotension and arrhythmias with all tricyclic antidepressants ***Due to increased risk of fatal overdoses dosulepin use is restricted and should only be initiated by a specialist.** It is not recommended by NICE CG90. MHRA Dosulepin – measures to reduce risk of fatal overdose
	Clomipramine Hydrochloride	• Capsules 10mg, 25mg, 50mg	
	Imipramine Hydrochloride	• Tablets 10mg, 25mg • Oral solution 25mg/5mL **High Cost**	
	Lofepramine	• Tablets 70mg • Oral suspension 70mg/5mL **High Cost**	
	Dosulepin* *Restricted*	• Capsules 25mg • Tablets 75mg	
Tricyclic-related antidepressant (2nd generation)	Trazodone Hydrochloride	• Tablets 150mg • Capsules 50mg, 100mg • Liquid SF 50mg/5mL **High Cost**	

Monoamine oxidase inhibitors

Drug Class	Drug Name	Formulations	Additional information
Non-reversible monoamine oxidase inhibitor	Phenelzine (Initiation and prescribing by a Consultant only)	Tablets 15mg	NICE Guidelines Depression in adults: recognition and management CG90 Depression in children and young people: identification and management CG28 A washout period is required when switching to or from MAOIs (see BNF) Interaction with tyramine-rich* foods can result in a hypertensive crisis - patients should be encouraged to carry a warning card at all times Signs of a reaction– can occur within 1 – 2 hours: • Headache • Light headedness or dizziness • Flushing of the face and pounding of the heart • Numbness or tingling of the hands or feet • Pain or stiffness in the neck • Feeling sick and/or being sick The risks are lower with Moclobemide but patients should be advised to avoid consuming large amounts of tyramine rich foods*
Reversible inhibitor of monoamine oxidase-A (RIMA)	Moclobemide	Tablets 150mg, 300mg	

*Tyramine-rich foods include mature cheese, pickled herring, broad bean pods, fermented/smoked food, processed meat/fish, Bovril®, Oxo®, Marmite®/yeast extracts, soy/soy beans, offal, beer, red wine ***This list is not exhaustive***

Selective serotonin re- uptake inhibitors

Drug Class	Drug Name	Formulations	Costing £
SSRIs	Citalopram	• Tablets 10mg, 20mg, 40mg • Oral drops 40mg/mL (4 drops [8mg] are equivalent in therapeutic effect to 10mg tablet)	***Off-label use*** of sertraline approved for use in GAD* within BNF limits NICE Guidelines Depression in adults: recognition and management CG90 Depression in children and young people: identification and management CG28 SSRIs are generally considered to be less cardiotoxic and less toxic in overdose compared to the TCAs. They also cause less anticholinergic adverse effects Fluoxetine and Paroxetine are more likely to interact with other medicines as they more strongly inhibit cytochrome P450 enzyme. Discontinuation reactions are particularly prominent with paroxetine due to its shorter half-life.
	Escitalopram for GAD** only	• Tablets 5mg, 10mg, 20mg • Oral drops SF 20mg/mL	
	Fluoxetine	• Capsules 20mg • Capsules 60mg • Oral Solution [SF] 20mg/5mL	
	Paroxetine	• Tablets 10mg, 20mg, 30mg • *Oral suspension SF 10mg/5mL*	
	Sertraline (unlicensed for GAD*)	Tablets 50mg, 100mg	
Serotonin receptor modulator; serotonin transporter inhibitor	Vortioxetine (	Tablets 5mg, 10mg, 20mg	

*Generalised Anxiety Disorder

Other antidepressant drugs

Drug Class	Drug Name	Formulations	Additional Information
Serotonin and noradrenaline reuptake inhibitor (SNRI)	Duloxetine	Capsules 30mg, 60mg	NICE Guidelines Depression in adults: recognition and management CG90 Depression in children and young people: identification and management CG28 Venlafaxine and Duloxetine can increase BP and this should be monitored before and during treatment. Venlafaxine should be used cautiously in patients with cardiovascular disease. It is more toxic in overdose. At higher doses NRI becomes more prominent than SRI Mirtazapine is sedative particularly at 15mg doses
	Venlafaxine	• Tablets 37.5mg, 75mg • MR tablets 37.5mg, 75mg, 150mg, 225mg	
Thioxanthene	Flupentixol	Tablets 500 micrograms, 1mg	
α_2 adrenoceptor antagonist (Noradrenaline specific serotonin antidepressant: NASSA)	Mirtazapine	• Tablets 15mg, 30mg, 45mg • Orodispersible tablets 15mg, 30mg, 45mg • Oral solution 15mg/mL **High Cost**	

Prescribing Points

Hyponatraemia and Antidepressants

Information on recognizing and managing antidepressant induced hyponatremia can be found here: https://www.sps.nhs.uk/articles/if-antidepressant-induced-hyponatraemia-has-been-diagnosed-how-should-the-depression-be-treated-2/

QT prolongation with Citalopram and Escitalopram

MHRA issued an alert in 2012 regarding the risk of QT prolongation with citalopram and escitalopram https://www.gov.uk/drug-safety-update/citalopram-and-escitalopram-qt-interval-prolongation

Citalopram and escitalopram are associated with dose-dependent QT interval prolongation and should not be used in those with:

- Congenital long QT syndrome; known pre-existing QT interval prolongation; or in combination with other medicines that prolong the QT interval
- ECG measurements should be considered for patients with cardiac disease
- Electrolyte disturbances should be corrected before starting treatment

Further information on medication induced QT prolongation can be found here https://www.sps.nhs.uk/articles/what-issues-should-be-considered-regarding-drug-induced-qt-prolongation/

Serotonin Syndrome and Antidepressants

Medicines which increase levels of serotonin can put patients at risk of serotonin syndrome particularly when used together or in high doses. Most antidepressants including SSRIs, SNRIs, and TCAs can increase serotonin levels.
Further information on serotonin syndrome including causes, identification and management can be found here https://www.sps.nhs.uk/articles/what-is-serotonin-syndrome-and-which-medicines-cause-it-2/

Antidepressants and Discontinuation reactions

Antidepressants can cause discontinuation reactions particularly if stopped suddenly. Where possible antidepressants should be slowly withdrawn over a period of at least 4 weeks. All patients should be given information on discontinuation reactions prior to or at the point of discontinuation.

Risk of Bleeding with Antidepressants

Antidepressants which block serotonin reuptake (SSRIs and SNRIs in particular) can increase the risk of bleeding and this is not confined to gastrointestinal bleeding. Patients should be monitored for any signs of increased bleeding and the antidepressant changed to an alternative should bleeding occur. Patients who are at an increased risk of bleeding such as those on anticoagulants (LMWH, Warfarin, DOACs) or antiplatelets (clopidogrel, aspirin), those with bleeding disorders or those taking NSAIDs, should ideally be prescribed an alternative antidepressant. Where prescribing is essential the patient should be closely monitored and consideration given to providing the patient with gastroprotective cover.

Alternative antidepressants as recommended by NICE CG91 include

- Trazodone
- Mirtazapine
- Moclobemide
- Mianserin
- Reboxetine (non-formulary in Trust)

Switching Antidepressants

For guidance on how to switch between antidepressants please see https://www.sps.nhs.uk/articles/how-do-you-switch-between-tricyclic-ssri-and-related-antidepressants/

CNS stimulants and other drugs used for attention deficit hyperactivity disorder [ADHD]

Drug Class	Drug Name	Formulations	Costing £
CNS stimulant	Dexamfetamine Sulphate (CD) (Schedule 2 Controlled Drug)	Tablets 5mg **High Cost**	***Off-label use*** of dexamfetamine, lisdexamfetamine, atomoxetine and methylphenidate approved for treatment of ADHD in adults within BNF limits ***Off-label use*** of clonidine approved for treatment of ADHD in children within BNF limits – note there is limited evidence for its use Attention deficit hyperactivity disorder: diagnosis and management NG87 Please see shared Care Guidelines on the treatment of ADHD in children and adolescents and in working age adults for guidance on pre-treatment screening, information on prescribing and monitoring. Stimulants and atomoxetine are associated with increased adverse cardiovascular effects therefore it is important that all screening and monitoring takes place as recommended. For information on Guanfacine see NICE evidence summary on guanfacine prolonged-release ESNM70 And for Clonidine see NICE evidence summary on clonidine ESUOM8
CNS stimulant (Pro-drug of	Lisdexamfetamine (CD) (Schedule 2 Controlled Drug)	Capsule 30mg, 50mg, 70mg **High Cost**	
CNS stimulant	Methylphenidate Hydrochloride (CD) (Schedule 2 Controlled Drug)	• Tablets 5mg, 10mg, 20mg (Medikinet®) • Equasym XL® Capsules10mg, 20mg, 30mg • Concerta XL® Tablets 18mg, 27mg, 36mg • Medikinet XL® Capsules 5mg, 10mg, 20mg, 30mg, 40mg	
Selective noradrenaline reuptake inhibitor	*Atomoxetine*	Capsules 10mg, 18mg, 25mg, 40mg, 60mg, 80mg, 100mg **High Cost** • Strattera® Sugar free solution 4mg/mL **High Cost**	
Selective alpha$_{2A}$-adrenergic receptor agonist	Guanfacine	• Tablets 1mg, 2mg, 3mg, 4mg **High Cost**	
Alpha$_{2A}$-adrenergic receptor agonist	Clonidine – *limited evidence*	• Tablets 25 microgram 100 microgram	

Differences in extended release methylphenidate for ADHD			
	Extended Release Brand		
	Concerta XL	Medikinet XL	Equasym XL
Percentage immediate/extended release	**22/78**	**50/50**	**30/70**
Duration of action	Up to 12 hours	At least 7 hours	Up to 8 hours
Administration	• Tablets must be swallowed whole with liquid, and must not be chewed, crushed or divided	Capsules may be swallowed whole, or opened and the contents sprinkled onto a small amount of apple sauce and given immediately Capsules should not be chewed or crushed	Capsules may be swallowed whole, or opened and the contents sprinkled onto a small amount of apple sauce and given immediately Capsules should not be chewed or crushed
Food requirements	Tablets can be taken with or without food	Tablets should be taken with or after breakfast	Tablets should be taken before breakfast

Methylphenidate: immediate- and modified-release dose equivalents (mg)			
	Extended Release Brand		
Immediate Release Methylphenidate	**Concerta XL**	**Medikinet XL**	**Equasym XL**
10 mg	-	10 mg	10 mg
15 mg	18 mg	-	-
20 mg	-	20 mg	20 mg
30 mg	36 mg	30 mg	30 mg
-	-	-	40 mg
45 mg	54 mg	-	-
60 mg	72 mg Licensed up to 54 mg	60 mg	-

NICE CG72; Summary of Product Characteristics (SmPC); SIGN 112 (October 2009)

Drugs used in parkinsonism and related disorders

Antimuscarinic drugs used in parkinsonism

Drug Class	Drug Name	Formulations	Costing £
Antimuscarinics	Orphenadrine	• Tablets 50mg ***UNLICENSED*** **High Cost** • Oral solution [SF] 50mg/5mL **High Cost**	***Off-label use*** of hyoscine hydrobromide to treat antipsychotic induced hypersalivation with BNF limits Regular antimuscarinics should not be withdrawn abruptly in patients on long term treatment They have potential for abuse due to mood elevating properties Avoid procyclidine late at night where possible due to its stimulating effects which may affect sleep
	Procyclidine	• Tablets 5mg • Oral solution [SF] 5mg/5mL **High Cost** • Injection 5mg/mL	
	Trihexyphenidyl (Benzhexol)	• Tablets 2mg, 5mg • Syrup 5mg/5mL	
	Hyoscine Hydrobromide	• Tablet 300micrograms	
	Pirenzepine ***UNLICENSED*** Approved for use as a third line option to treat clozapine induced hypersalivation	Initiation by Consultant Psychiatrist Named patient prescribing only • Tablets 50mg **High Cost**	

Drugs used in essential tremor, chorea, tics, and related disorders

Drug Class	Drug Name	Formulations	
Central monoamine depleting agent	Tetrabenazine	• Tablets 25mg **High Cost** • *Liquid: 12.5mg/5mL, 25mg/5mL* ***UNLICENSED*** **High Cost**	

Drugs used in substance use disorders

Alcohol dependence

Drug Class	Drug Name	Formulations	
GABA receptor-agonist and NMDA receptor-antagonist	Acamprosate calcium	Tablets 333mg	***Off-label use*** of Topiramate approved for management of alcohol dependence up to a total daily dose of 300mg - Refer to the DTG meeting of 01/04/14 for further information ***Off-label use*** of Baclofen approved for management of alcohol dependence up to a total daily dose of 100mg daily for 6 months. NELFT: Pharmacological Management of Alcohol and Drug Dependence in In-Patient Psychiatric Settings NICE Guidance - Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence CG 115. Alcohol-use disorders: diagnosis and management of physical complications CG100 Nalmefene for reducing alcohol consumption in people with alcohol dependence TA 325
Aldehyde dehydrogenase inhibitor	Disulfiram*	Tablets 200mg **High Cost**	
Opioid receptor antagonist	Naltrexone	Tablets 50mg	
	Nalmefene** Specialist consultant prescribing only	Tablets 18mg **High Cost**	
Actions include AMPA/ $GABA_A$ Inhibitory mechanisms	Topiramate*** Specialist consultant prescribing only	Tablets 100mg, 200mg	
Muscle relaxant, centrally acting	Baclofen Specialist consultant prescribing only	Tablets 10mg	

Prescribing Points

B Vitamins in Acute Alcohol Withdrawal to prevent or treat Wernicke's encephalopathy See NICE Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence CG115 NELFT: Pharmacological Management of Alcohol and Drug Dependence in In-Patient Psychiatric Settings

Offer thiamine to people at high risk of developing, or with suspected, Wernicke's encephalopathy. Thiamine should be given in doses toward the upper end of the 'British national formulary' range. It should be given orally or parenterally based on the following:

Offer prophylactic oral thiamine to harmful or dependent drinkers:
- if they are malnourished or at risk of malnourishment or
- if they have decompensated liver disease or
- if they are in acute withdrawal or
- before and during a planned medically assisted alcohol withdrawal

Offer prophylactic parenteral thiamine (Pabrinex®, intramuscular) followed by oral thiamine to harmful or dependent drinkers:
- if they are malnourished or at risk of malnourishment or
- if they have decompensated liver disease
- They attend an emergency department, or
- Are admitted to hospital with an acute illness or injury

Offer parenteral thiamine to people with suspected Wernicke's encephalopathy (WE). Maintain a high level of suspicion for the possibility of WE, particularly if the person is intoxicated. Parenteral treatment should be given for a minimum of 5 days, unless WE is excluded.

Oral thiamine treatment should follow parenteral therapy

Pre-treatment assessments

Before starting treatment with acamprosate, oral naltrexone, or disulfiram, conduct a comprehensive medical assessment (baseline urea and electrolytes and liver function tests including gamma glutamyl transferase [GGT]). In particular, consider any contraindications or cautions (refer to the SMPC for further details), and discuss these with the service user.

Acamprosate

- Initiated as soon as possible after abstinence has been achieved
- Continued for 1 year
- Monitor for efficacy
- Treatment maintained if patient has a temporary relapse
- Stop treatment if patient returns to regular or excessive drinking that persists 4 – 6 weeks after starting treatment

Disulfiram

- Should be considered in combination with a psychological intervention for service users who wish to achieve abstinence but for whom acamprosate or naltrexone are not suitable
- Treatment should be started at least 24 hours after the last drink and should be overseen by a family member or carer
- Medical monitoring should be continued at 6 monthly intervals after the first 6 months.
- Due to rapid and unpredictable onset of the rare complication of hepatotoxicity; advise service users that if they feel unwell or develop a fever or jaundice that they should stop taking disulfiram and seek urgent medical attention
- Disulfiram is only effective if taken daily
- Patients **must not consume alcohol** while taking disulfiram
- Disulfiram gives rise to an extremely unpleasant systemic reactions after ingestion of even a small amount of alcohol because it leads to accumulation of acetaldehyde in the body
  - Even toiletries and mouthwashes that contain alcohol should be avoided
  - Alcohol should be avoided for at least 1 week after stopping treatment
  - Symptoms can occur within 10 minutes (and last several hours) of ingesting alcohol and include
    - Flushing of the face
    - Throbbing headache
    - Palpitation
    - Tachycardia
    - Nausea
    - Vomiting
- Consuming large amounts of alcohol can result in arrhythmias, hypotension, collapse

Nalmefene – Initiation by substance misuse consultant only

- Licensed for the reduction of alcohol consumption in patients with alcohol dependence who have a high drinking risk level without physical withdrawal symptoms, and who do not require immediate detoxification
- It should only be prescribed in conjunction with continuous psychosocial support focused on treatment adherence and reducing alcohol consumption
- Before initiating treatment, prescribers should evaluate the patient's clinical status, alcohol dependence, and level of alcohol consumption
- Nalmefene should only be prescribed for patients who continue to have a high drinking risk level two weeks after the initial assessment.
- During treatment, patients should be monitored regularly and the need for continued treatment assessed. Caution is advised if treatment is continued for more than 1 year

***Topiramate - Initiation by substance misuse consultant only

- Off label use as adjunctive treatment of alcohol dependence – third line
- Prescribing responsibility to be retained within NELFT

Nicotine dependence

Drug Class	Drug Name	Formulations	Additional Information
Nicotinic acetylcholine receptor agonist (nicotine)	NiQuitin® Clear Patches, self-adhesive	• Nicotine '7mg' releasing 7mg/24hours • Nicotine '14mg' releasing 14mg/24hours • Nicotine '21mg' releasing 21mg/24hours	NICE Guidance Stop smoking interventions and services NG92 Smoking: harm reduction PH45 Smoking: acute, maternity and mental health services PH48 Smoking: preventing uptake in children and young people PH14 Smoking: stopping in pregnancy and after childbirth PH26 Varenicline for smoking cessation TA123
	Nicotinell® Mint Lozenge, sugar free	Lozenges 1mg, 2mg, 4mg	
	Nicorette® Inhalator	15mg/cartridge **High Cost**	
	Nicorette® Nasal Spray	500microgram/metered spray **High Cost**	
Nicotine receptor partial agonist	Varenicline	Tablets 500microgram, 1mg **High Cost**	

Prescribing Points

Dosing schedules are based on the total number of cigarettes smoked daily

Further information on Smoking Cessation is available on the Intranet: Prescribing Guidance

Advising and providing stop smoking pharmacotherapies – NICE Guidance

Advise people who smoke that licensed nicotine-containing products and other stop smoking pharmacotherapies help people to stop smoking and reduce cravings. Emphasise that nicotine is not the major cause of damage to people's health from smoking tobacco, and that any risks from using licensed nicotine -containing products or other stop smoking pharmacotherapies are much lower than those of smoking.

Recommend and offer:

- licensed nicotine-containing products (usually a combination of transdermal patches with a fast-acting product such as an inhalator, gum, lozenges or spray) to all people who smoke or
- varenicline or bupropion as sole therapy as appropriate.
- Do not offer varenicline* or bupropion to pregnant or breastfeeding women or people under the age of 18.
- Varenicline and bupropion can be used with caution in people with mental health problems

If stop smoking pharmacotherapy is accepted, ensure that it is provided immediately.

Encourage people who do not want (or do not feel able) to stop smoking completely (including pregnant or breastfeeding women) to use licensed nicotine -containing products to help reduce cravings to smoke during their stay or visit.

When people are discharged from hospital ensure they have sufficient stop smoking pharmacotherapy to last at least 1 week or until their next contact with a stop smoking service.

Encourage people who are already using an unlicensed nicotine-containing product (such as

unlicensed electronic cigarettes) to switch to a licensed product. Advise the person of local policies on indoor and outdoor use of unlicensed nicotine -containing products.

Nicotine Patch

Apply on waking to dry, non-hairy skin site, removing after 24 hours and site replacement patch on different area (avoid using same area for 7 days)

Individuals smoking less than 10 cigarettes daily,

- Initially 14-mg patch daily for 6 weeks, then,
- 7-mg patch daily for 2 weeks
- Review treatment if abstinence not achieved within 9 months

Individuals smoking 10 or more cigarettes daily,

- Initially 21-mg patch daily for 6 weeks, then,
- 14-mg patch daily for 2 weeks, then,
- 7-mg patch daily for 2 weeks

Patients using the 21-mg patch who experience excessive side effects which do not resolve within a few days, should switch to the 14-mg patch for the remainder of the initial 6 weeks before switching to the 7-mg patch for the final 2 weeks

Nicotine Lozenge

Individuals smoking less than 20 cigarettes daily,

- Initially suck one low strength lozenge (1mg or 2mg) every 1 – 2 hours when urge to smoke occurs

Individuals smoking 20 or more cigarettes daily and those who fail to stop smoking with the low-strength lozenges should use the higher-strength lozenges

- Initially suck one higher strength lozenge (4mg) every 1 – 2 hours when urge to smoke occurs

- Patients should not exceed 15 lozenges daily
- Lozenge should not be chewed or swallowed
- Patients should not eat or drink while a lozenge is in the mouth
- Treatment should continue for 6 – 12 weeks before attempting a reduction in dose

Nicotine Inhalation Cartridges

The cartridges can be used when the urge to smoke occurs or to prevent cravings
Patients should not exceed 6 cartridges of the 15 mg strength daily.

- Insert the cartridge into the device and draw in air through the mouthpiece; each session can last for approximately 5 minutes
- The amount of nicotine from 1 puff of the cartridge is less than that from a cigarette, therefore, it is necessary to inhale more often than when smoking a cigarette
- A single 15 mg cartridge lasts for approximately 40 minutes of intense use.

Nicotine Nasal Spray

- Initially 1 spray should be used in both nostrils , up to twice every hour for 16 hours daily, but when withdrawing from therapy, the dose can be gradually reduced to 1 spray in 1 nostril
- Maximum 64 sprays per day
- Treatment should continue for 8 weeks before reducing the dose

Opioid dependence

Drug Class	Drug Name	Formulations	Additional Information
Long-acting opioid agonist	Methadone liquid (tablets are not licensed for this indication)	Oral solution SF 1mg/mL	Opioid dependence managed by the Community Drug and Alcohol Team (CDAT) NICE Guidance: Methadone and buprenorphine for the management of opioid dependence TA114 Naltrexone for the management of opioid dependence TA115
Partial opioid agonist and opioid antagonist activity	Buprenorphine	Sublingual tablets 400 micrograms, 2mg, tablets 8mg **High Cost**	
Alpha$_2$-adrenergic agonist	Lofexidine	Tablets 200 Micrograms **High Cost**	
Opioid receptor antagonist	Naltrexone	Tablets 50mg	

Practice Points

Methadone and Buprenorphine

Methadone and buprenorphine (oral formulations), using flexible dosing regimens, are recommended as options for maintenance therapy in the management of opioid dependence

- Methadone and buprenorphine should be administered daily, under supervision, for at least the first 3 months
- Supervision should be relaxed only when the patient's compliance is assured
- Both drugs should be given as part of a program of supportive care
- Higher strengths of methadone should not be used due to risk of errors in administration

Naltrexone

- Recommended for the prevention of relapse in formerly opioid-dependent patients who are motivated to remain in a supportive care abstinence programme
- Naltrexone should be administered under supervision
- Effectiveness in preventing opioid misuse should be reviewed regularly

Missed doses

- Patient who miss 3 days or more of their regular prescribed dose of opioid maintenance therapy are at risk of overdose because of loss of tolerance
  - Consider reducing the dose in these patients
- Patients who miss 5 or more days of treatment, an assessment of illicit drug use is also recommended before restarting substitution therapy
- Particularly important for patients taking buprenorphine – due to risk of precipitated withdrawal

Drugs used in dementia (old age psychiatry only)

Drug Class	Drug Name	Formulations	Costing
Reversible acetylcholinesterase (AchE) inhibitor	Donepezil	• Tablets 5mg, 10mg • Orodispersible tablets 5mg, 10mg	***Off-label use*** of acetylcholinesterase inhibitor plus memantine within BNF limits. Note combination therapy is not recommended by NICE. Acetylcholinesterase inhibitors are only licensed for mild-moderate dementia and memantine for moderate dementia for patients intolerant to or with a contraindication to AchE inhibitors and in severe dementia. NICE Guidelines Dementia: assessment, management and support for people living with dementia and their carers NG97 Donepezil, galantamine, rivastigmine and memantine for the treatment of Alzheimer's disease TA217 Please see shared care guidelines for management of Alzheimer's disease for details on pretreatment assessment, prescribing and ongoing monitoring.
Reversible AchE inhibitor and nicotinic receptor agonist	Galantamine	• Tablets 8mg, 12mg **High Cost** • MR capsules 8mg,16mg, 24mg **High Cost** • Oral solution 4mg/mL **High Cost**	
Reversible non-competitive AchE inhibitor	Rivastigmine	• Capsules 1.5mg, 3mg, 4.5mg, 6mg **High Cost** • Patches 4.6mg/24 hours, 9.5mg/24 hours • Oral solution SF 2mg/mL **High Cost**	
Glutamate receptor antagonist	Memantine	• Tablets 10mg, 20mg • Oral solution 10mg/mL (5mg/actuation) **High Cost**	

Prescribing Points

Rivastigmine (Exelon) transdermal patch: risk of medication errors

https://webarchive.nationalarchives.gov.uk/20150110161657/http://www.mhra.gov.uk/home/groups/pl-p/documents/publication/con084657.pdf

There have been errors with transdermal patches where new patches have been administered and the old patch has not been removed.

- Symptoms of rivastigmine overdose include nausea, vomiting, diarrhoea, hypertension, and hallucinations; bradycardia and/or syncope, associated with malaise or falls, may also occur
- In case of suspected overdose, all rivastigmine patches should be removed immediately and no further patch should be applied for the next 24 hours
- It is important to instruct patients and caregivers on the proper use of the transdermal patch, particularly that:
    - Only one patch should be applied per day to healthy skin on the upper or lower back, upper arm, or chest
    - The patch should be replaced by a new one after 24 hours, and the previous day's patch must be removed before application of a new patch to a different skin location
    - It is not recommended to apply the transdermal patch to the thigh or to the abdomen due to decreased bioavailability of rivastigmine observed when the transdermal patch is applied to these areas of the body*
    - Application to the same skin location within 14 days should be avoided to minimise skin irritation
    - The patch should not be cut into pieces

*Refer to the Rivastigmine patch SMPC for further information

Please use the transdermal patch application record for recording administration of transdermal patches PatchMate monthly tracker App is available for use by patients or their carers.

Appendix 1 Prescribing in Children and Adolescent Mental Health Services (CAMHS)

See Appendix 2 for guidance on unlicensed prescribing in NELFT

- Prescribing for children and adolescents often means medicines are used outside the terms of their Marketing Authorisation (off-label)
- Currently pharmaceutical companies do not usually test their medicines on children and as a consequence, cannot apply to license their medicines for use in the treatment of children
- The Medicines Act 1968 (Section 9) and the European legislation make provisions for doctors to prescribe medicines in an off-label or unlicensed capacity

Unlicensed medicines or licensed medicines for unlicensed applications: summary of the recommendations from the joint Royal College of Paediatrics and Child Health/Neonatal and Paediatric Pharmacists Group standing Group on medicines (Royal College of Paediatrics and Child Health, 2000)
http://www.rcpsych.ac.uk/files/pdfversion/cr142.pdf

- Those who prescribe for a child should choose the medicine which offers the best prospect of benefit for that child, with due regard to cost
- The informed use of some unlicensed medicines or licensed medicines for unlicensed applications is necessary in paediatric practice
- Health professionals should have ready access to sound information on any medicine they prescribe, dispense or administer
- In general, it is not necessary to take additional steps, beyond those taken when prescribing licensed medicines, to obtain the consent of parents, carers, and child patients to prescribe or administer unlicensed medicines or licensed medicines for unlicensed applications
- NHS trusts and health authorities should support therapeutic practices that are advocated by a respectable, responsible body of professional opinion

Reference sources and guidance for prescribing psychotropics and other drugs in children and adolescents

- British National Formulary for Children – use on line edition
- Children and adolescents. Chapter 5. The Maudsley Prescribing Guidelines in Psychiatry (Use most up to date edition)
- Royal College of Paediatrics and Child Health
- Use of licensed medicines for unlicensed applications in psychiatric practice 2nd edition (2017)
- NICE Clinical Guideline 28 (2005). Depression in children and young people: Identification and management
- NICE Clinical Guideline (2013). Psychosis and schizophrenia in children and young people: recognition and management
- NICE Clinical Guideline CG185 (2014). Bipolar disorder: assessment and management
- NICE Guideline NG69 (2017). Eating disorders: recognition and treatment
- NICE Clinical Guideline 87 (2018). Attention deficit hyperactivity disorder: Diagnosis and management
- NICE Clinical Guideline 158 (2013). Antisocial behaviour and conduct disorders in children and young people: recognition, intervention and management
- NICE Clinical Guideline CG170 (2013) Autism spectrum disorder in under 19s: support and management
- NICE Technology Appraisal 213 (2011). Aripiprazole for the treatment of schizophrenia in people aged 15 to 17 years
- NICE Technology Appraisal 292 (2013). Aripiprazole for treating moderate to severe manic episodes in adolescents with bipolar I disorder.
- British Association of Psychopharmacology position statement: off-label prescribing of psychtropic medication to children and adolescents
- Medicines for Children – Unlicensed Medicines: Information for parents and carers (leaflet) http://www.medicinesforchildren.org.uk/search-for-a-leaflet/unlicensed-medicines/
- Medicines for Children – leaflets on individual medicines to download http://www.medicinesforchildren.org.uk/search-for-a-leaflet/
- Headmeds – information on mental health medication for children and adolescents

Appendix 2a Drugs used outside of the UK Marketing Authorisation

Unlicensed Medicines

Please refer to Standard operating process – use of Unlicensed Medicinal Products for information on the use of unlicensed medicines in NELFT

Also see:

- MHRA: Off-label or unlicensed use of medicines: prescribers' responsibilities
- General Medical Council: Prescribing unlicensed medicines in "Good practice in prescribing and managing medicines and devices (2013)"
- Royal College of Psychiatry and British Association for Psychopharmacology: Use of licensed medicines for unlicensed applications in psychiatric practice 2nd edition

When prescribing a medicine for use outside the terms of its license you must

- Be satisfied that it would better serve the patient's needs than an appropriately licensed alternative
- Be satisfied that there is a sufficient evidence base and/or experience of using the medicine to demonstrate its safety and efficacy. The manufacturer's information may be of limited help in which case the necessary information must be sought from other sources
- Take responsibility for prescribing the unlicensed medicine and for overseeing the patient's care, including monitoring and any follow up treatment, or ensure that arrangements are made for another suitable doctor to do so
- Make a clear, accurate and legible record of all medicines prescribed and, where you are not following common practice, the reasons for prescribing an unlicensed medicine

Refer to the 'Hierarchy of Risk' guidance issued by the MHRA – see below:

The Hierarchy of Risk – based on product origin		
Preferred choice	• UK-licensed medicine • Off-label use of a UK-licensed medicine • An Imported product licensed in the country of origin • A UK manufactured special made in MHRA licensed facilities	**Lowest net risk**
Last choice	• An extemporaneously dispensed medicine • An imported product not licensed in the country of origin	**Highest net risk**

Requests for use of Unlicensed products in NELFT

Refer to the NELFT Medicines Policy for further information or contact Pharmacy. Before a new unlicensed medicine is introduced into use ensure

- There is no suitable licensed alternative
- There is no equivalent or better unlicensed alternative already available
- The prescriber is aware that a medicine he/she has requested is only available as an unlicensed product
- Patient or carer should be informed of the use of unlicensed medicine and consent sought
- Any new request must be approved by the chair of the Trust's Drug and Therapeutics Group (application form included in the process for "Use of unlicensed Medicinal Products")

Audits

- Audits may be carried out on prescribing to gain information on the extent of, and reasons for, prescribing for unlicensed applications in individual patients

Appendix 2b – Medicines available as a Special-order product ("Specials")

Unlicensed medicines prepared by a manufacturer with a Special Manufacturing Licence

Name	Strength	Pack size	Price £ £ * Exc VAT, P & P
Clonazepam Oral Suspension	2mg/5mL	100mL	**299.35**
Clonazepam Sugar-free Oral Suspension	2mg/5mL	100mL	**108.30**
Clozapine Oral Suspension	100mg/5mL	100mL	**44.53**
Dantrium IV Powder for Injection	20mg	12 vials	**612.00**
Flupenthixol Liquid	1mg/1mL	100mL	**246.12**
Fluspirilene Injection (Imap®)	2mg/mL	6mL vial	**54.49**
Melatonin Sugar-free Oral Liquid (Traces of Alcohol)**	1mg/1mL	200mL	**28.48**
Melperone Tablets	100mg	50	**56.76**
Melperone Tablets	50mg	50	**40.45**
Naloxone Injection	400 microgram/mL	10 Ampoules	**53.70**
Pirenzepine Tablets (Gastrozepin®)	50mg	100	**52.90**
Quetiapine suspension	50mg/5mL	140mL	**180.33**
Tetrabenazine liquid	12.5mg/5mL 25mg/5mL	100mL 140mL	**57.73** **70.41**
Zopiclone Oral Suspension	3.75mg/5mL	100mL	**105.33**

***Guide price for 2019**

**** Refer to the "Shared care guidelines on Melatonin for sleep disorders/difficulties in children (NELFT)". This can be accessed via the NELFT Pharmacy intranet site – Shared Care Guidelines**

Appendix 3 – Clozapine forms and Assays

The following forms may be downloaded from the CPMS website: [https://www.clozaril.co.uk/]

- Patient Registration/Re-registration Form
- Supervising/Specialist Registration Form
- Clozaril Website Access Form

Contact pharmacy for copies of the following forms if you do not have Clozaril Website access:

New Patient Enrolment Form

Change of Patient Details Form

Clozapine Assay Request Form link:
** Note that these tests are carried out by ASI labs**

You have access to eCPMS you can order online at www.clozaril.co.uk via the Homepage click on the Supplies tab.
If you have a User ID only you can order online at www.cool-cpms.com
If you do not have a User ID you can ring the Order Line on 0845 769 8269 (UK) 01 662 1141 (Ireland), select Option 4
If you would like to order on line and require access please email cpms@mylan.co.uk and request a Non-Drug Supplies Access Form

Results are available online via registration at: https://asilab.co.uk/

For assays involving other antipsychotics please contact pharmacy

Appendix 4 Psychotropic drugs and cytochrome P450 (CYP) Interactions

Substrates, inhibitors and inducers of major cytochrome isozymes for psychotropic drugs[1,2,3,4,5]

Enzyme	Substrate	Inhibitors	Inducers
CYP2D6	**Antipsychotics**: Fluphenazine, perphenazine, thioridazine, haloperidol, chlorpromazine, clozapine, risperidone, olanzapine, aripiprazole, iloperidone, zuclopenthixol **Antidepressants**: Citalopram, escitalopram, fluoxetine, paroxetine, fluvoxamine, amitriptyline, nortriptyline, clomipramine, desipramine, Imipramine, mirtazapine, venlafaxine, vortioxetine	Amitriptyline Bupropion Duloxetine Fluoxetine Paroxetine Sertraline	None known
CYP3A4	**Antipsychotics**: Haloperidol, pimozide, clozapine, risperidone, quetiapine, ziprasidone, aripiprazole, iloperidone, lurasidone **Antidepressants**: Citalopram, escitalopram, amitriptyline, clomipramine, imipramine, mirtazapine, nefazodone, sertraline, venlafaxine **Anxiolytics**: Alprazolam, clonazepam, diazepam, buspiron **Sedatives/hypnotics**: Zolpidem, zaleplon, flurazepam, triazolam	Erythromycin FLuoxetine Ketoconazole Nefazodone Paroxetine	Carbamazepine
CYP1A2	**Antipsychotics**: Haloperidol, chlorpromazine, perphenazine, thioridazine, clozapine, olanzapine, asenapine, pimozide, loxapine, thiothixene, trifluoperazine **Antidepressants**: Fluvoxamine, amitriptyline, clomipramine, imipramine, duloxetine, Mirtazapine	Fluvoxamine Moclobemide Perphenazine	Carbamazepine
CYP2C9	Lamotrigine, Valproic acid	Fluoxetine Fluvoxamine	Carbamazepine
CYP2C19	**Antipsychotics**: Clozapine **Antidepressants**: Citalopram, escitalopram, clomipramine,imipramine, amitriptyline	Fluvoxamine	Carbamazepine

Specific antipsychotic-CYP interactions*					
Antipsychotic	**CYP**	**Inhibitors**		**Inducers**	
		Psychotropics	**Other drugs**	**Psychotropics**	**Other drugs**
Aripiprazole	CYP2D6	Amitriptyline Bupropion Duloxetine Fluoxetine Paroxetine Sertraline	Amiodarone Cimetidine Quinidine Terbinafine	None know n	None know n
Clozapine	CYP1A2 (major pathway)	Fluvoxamine Moclobemide Perphenazine	Cimetidine Ciprofloxacin	Carbamazepine	Omeprazole Phenobarbital Phenytoin Rifampcin (PAH** - smoking)
	CYP3A4 (minor pathway)		Clarithromycin Erythromycin Fluconazole Itraconazole Ketoconazole Nefazodone Verapamil Diltiazem Antiretrovirals	Carbamazepine	Barbiturates Efavirenz Nevirapine Phenytoin Pioglitazone Rifampicin (St John's wort)

*List is not exhaustive
**PAH: Polyaromatic hydrocarbons

Appendix 5 Major cytochrome based drug and food interactions

Major cytochrome-based interactions*						
Anxiolytics						
Drug	**CYP isozymes**	**Substrate**	**Inducer**	**Inhibitor**	**Important interacting drugs**	**Interaction**
Alprazolam	CYP3A4	+	−	−	Propoxyphene and ketoconazole	Increased level of alprazolam
Diazepam	CYP3A4	+	−	−	Ketoconazole	Increased level of diazepam
	CYP2C19	+	−	−	Barbiturates and carbamazepine Fluoxamine	Decreased level of diazepam Increased level of diazepam
Clonazepam	CYP3A4	+	−	−	Ketoconazole and nefazodone	Increased level of clonazepam
Chlordiazepoxide	CYP3A4	+	−	−	Grapefruit juice	Increased level of chlordiazepoxide
Buspirone	CYP3A4	+	−	−	Grapefruit juice and nefazodone	Increased level of buspirone
Hypnotic sedatives						
Drug	**CYP isozymes**	**Substrate**	**Inducer**	**Inhibitor**	**Important interacting drugs**	**Interaction**
Flurazepam	CYP3A4	+	−	−	Cimetidine and erythromycin	Increased level of flurazepam
Triazolam	CYP3A4	+	−	−	Nefazodone and diltiazem	Increased level of flurazepam
Zolpidem	CYP3A4	+	−	−	Grapefruit juice and fluconazole	Increased level of zolpidem
Zaleplon	CYP3A4	+	−	−	Cimetidine	Increased level of zaleplon
Zopiclone	CYP3A4	+	−	−	Grapefruit juice and erythromycin	Increased
Mood stabilisers						
Drug	**CYP isozymes**	**Substrate**	**Inducer**	**Inhibitor**	**Important interacting drugs**	**Interaction**
Carbamazepine	CYP3A4	+	+	−	Aripiprazole, risperidone, quetiapine, and ziprasidone	Decreased levels of these antipsychotics
	CYP1A2	+	+	−	Clozapine and olanzapine	Decreased levels of these drugs
	CYP2C9	−	+	−	Sertraline	Decreased level of sertraline
	CYP2C19	−	+	+	Phenytoin	Increased level of phenytoin
	CYP2B6	−	+	−	Bupropion	Decreased level of bupropion
Valproate	CYP2C19 CYP2C9	+ +	− −	− +	Carbamazepine Phenytoin	Increased level of valproate metabolite Increased level of phenytoin
Topiramate	CYP3A4	−	+	−	Carbamazepine	Decreased level of carbamazepine
	CYP2C19	−	−	+	Phenytoin	Increased level of phenytoin
Oxcarbazepine	CYP2C19	−	−	+	Phenytoin	Increased level of phenytoin

Major cytochrome-based interactions*						
Herbal and food products						
Drug	**CYP isozymes**	**Substrate**	**Inducer**	**Inhibitor**	**Important interacting drugs**	**Interaction**
St. John's wort	CYP3A4	−	+	−	Buspirone and statins	Decreased levels of these drugs
	CYP1A2	−	+	−	Clozapine and olanzapine	Decreased levels of these drugs
	CYP2C9	−	+	−	Valproic acid	Decreased level of valproic acid
Ginkgo biloba	CYP2C9	−	−	+	S-warfarin	Increased level of s-warfarin
Grapefruit juice	CYP3A4	−	−	+	Aripiprazole and alprazolam	Increased levels of these drugs
Star fruit juice	CYP3A4	−	−	+	Atorvastatin and alprazolam	Increased levels of these drugs
Cranberry juice	CYP2C9	−	−	+	S-warfarin	Increased level of s-warfarin
	CYP3A4	−	−	+	Midazolam	Increased level of midazolam
Caffeine	CYP1A2	+	−	+	Clozapine, olanzapine, and fluvoxamine	Increased levels of these drugs
Over-the-counter drugs						
Drug	**CYP isozymes**	**Substrate**	**Inducer**	**Inhibitor**	**Important interacting drugs**	**Interaction**
Acetaminophen	CYP2E1	+	−	−	Isoniazid and ethanol	Decreased level of acetaminophen
Ibuprofen	CYP2C9	+	−	−	Fluvoxamine and fluconazole	Increased level of ibuprofen
Naproxen	CYP2C9	+	−	−	Fluoxetine and fluvoxamine	Increased level of naproxen
Dextromethorphan	CYP2D6	+	−	−	Bupropion and fluoxetine	Increased level of dextromethorphan
	CYP3A4	+	−	−	Carbamazepine and barbiturates	Decreased level of dextromethorphan
Smoking and alcohol						
Drug	**CYP isozymes**	**Substrate**	**Inducer**	**Inhibitor**	**Important interacting drugs**	**Interaction**
Smoking	CYP1A2	−	+	−	Clozapine, olanzapine, and fluvoxamine	Decreased levels of these psychotropic drugs
Alcohol	CYP2E1	+	+	−	Disulfiram	Increased level of alcohol

*List is not exhaustive

1 Madhusoodanan S, Velama U, Parmar J, Goia D, Brenner R. A current review of cytochrome P450 interactions of psychotropic drug s. *Annals of clinical psychiatry* 2014;26(2):120-138
2 http://bioinformatics.charite.de/supercyp/
3 http://w w w.pharmgkb.org/gene/PA128
4 http://medicine.iupui.edu/clinpharm/ddis/table.aspx
5 The Maudsley Prescribing Guidelines in Psychiatry, 14th Edition, 2018

Appendix 6 Smoking and psychotropic drugs

Smoking and psychotropic drugs*			
Drug	**Effect of smoking**	**Action to be taken on stopping smoking**	**Action to be taken on restarting smoking**
Benzodiazepines	Plasma levels reduced by 0-50% (depends on drug and smoking status)	Monitor closely. Consider reducing dose by up to 25% over one week	Monitor closely. Consider restarting 'normal' smoking dose
Carbamazepine	Unclear, but smoking may reduce carbamazepine plasma levels to a small extent	Monitor for changes in severity of adverse effects	Monitor plasma levels
Chlorpromazine	Plasma levels reduced. Varied Estimates of exact effect	Monitor closely, consider dose reduction	Monitor closely, consider restarting previous smoking dose
Clozapine	Reduces plasma levels by up to 50%. Plasma level reduction may be greater in those receiving valproate. Predicting change in plasma clozapine level: Non-smoking level = 45.3 + (1.474 x smoking level)*	Take plasma level before stopping. On stopping, reduce dose gradually (over a week) until around 75% of original dose reached (i.e. reduce by 25%). Repeat plasma level one week after stopping. Consider further dose reductions.	Take plasma level before restarting. Increase dose to previous smoking dose over one week. Repeat plasma level.
Duloxetine	Plasma levels may be reduced by up to 50%	Monitor closely. Dose may need to be reduced	Consider re-introducing previous smoking dose
Fluphenazine	Reduces plasma levels by up to 50%	On stopping, reduce dose by 25%. Monitor carefully over following 4-8 weeks. Consider further dose reductions	On restarting, increase dose to previous smoking dose.
Fluvoxamine	Plasma levels decreased by around a third	Monitor closely. Dose may need to be reduced	Dose may need to be increased to previous level
Haloperidol	Reduces plasma levels by around 25-50%	Reduce dose by around 25% Monitor carefully. Consider further dose reductions	On restarting, increase dose to previous smoking dose
Loxapine	Half-life reduced from 15.7h to 13.6h	Monitor	Monitor
Mirtazapine	Unclear, but effect probably minimal	Monitor	Monitor
Olanzapine	Reduces Plasma levels by up to 50%	Take plasma level before stopping. On stopping, reduce dose by 25%. After one week, repeat plasma level. Consider further dose reductions	Take plasma level before restarting. Increase dose to previous smoking dose over one week. Repeat plasma level.
Trazodone	Around 25% reduction	Monitor for increased sedation. Consider dose reduction	Monitor closely, consider increasing the dose
Tricyclic antidepressants	Plasma levels reduced by 25-50%	Monitor closely. Consider reducing dose by 10-25% over one week. Consider further dose reductions.	Monitor closely. Consider restarting previous smoking dose
Zolpidem	Clearance is increased in smokers. Half-life may be 30% shorter.	Sedation may increase.	Monitor
Zopiclone	Smoking has no clinically significant effect on the plasma concentration. Possibly less hypnotic effect due to CNS stimulation from nicotine	No known clinically significant effects	Monitor
Zuclopentixol	Unclear, but effect probably minimal	Monitor	Monitor

***Note vaping and the use of NRT does not affect levels of medicines**

- The Maudsley Prescribing Guidelines in Psychiatry, 14th Edition (2018)
- *Psychotropic Drug directory 2014 (Stephen Bazire)
- NICE NG 92 (2018): Stop smoking interventions and services
- UKMI What are the clinically significant drug interactions with cigarette smoking? (Nov 2017)

Appendix 7 Caffeine and psychotropic drugs

Caffeine and psychotropic drugs

Caffeine and psychotropic drug interactions		
Interacting drug	**Effect**	**Comment**
Benzodiazepines	Caffeine may bind to receptor, acting as an antagonist	Reduced benzodiazepine efficacy
Clozapine	Caffeine may increase plasma levels by up to 60%	Caffeine thought to be a competitive *CYP1A2* inhibitor
Disulfiram – *CYP1A2* inhibitor	Reduce caffeine clearance	• Effects of caffeine prolonged or increased • Adverse effects may be increased • May precipitate caffeine toxicity
Fluvoxamine – *CYP1A2* inhibitor	May decrease caffeine clearance by 80%	• Effects of caffeine prolonged or increased • Adverse effects may be increased • May precipitate caffeine toxicity
Lithium	High caffeine doses may reduce lithium levels	Caffeine withdrawal may cause increase in serum lithium level
MAOIs	Caffeine may enhance stimulant CNS effect	
SSRIs	Large caffeine doses may increase risk of serotonin syndrome	

The Maudsley Prescribing Guidelines in Psychiatry, 14th Edition (2018); Psychotropic Drug directory 2014 (Stephen Bazire)

Caffeine content of drinks (mg/cup or can)	
Black tea	45
Brewed coffee	100
Green tea	20 – 30
Instant coffee	60
Red Bull	80 (other energy drinks may contain substantially more)
Soft drinks	25 – 50

The Maudsley Prescribing Guidelines in Psychiatry, 14th Edition (2018)

Appendix 8 New Drug Request form

DRUG & THERAPEUTICS GROUP
New Drug Request

New drugs may be requested only by a consultant

Please note that any requests for new drugs will not be discussed without the attendance of the requesting Consultant

Name of drug: ……

Indication: ……

1) Is this: a) A new drug? YES ☐ NO ☐

b) A new clinical indication for an existing drug? YES ☐ NO ☐

c) An unlicensed use of an existing drug? YES ☐ NO ☐

2) Will this drug replace another on the formulary? YES ☐ NO ☐

State drug: ……

3) If YES, why do you consider this requested drug to be superior?

SAFETY ☐ FEWER SIDE EFFECTS ☐

MORE COST EFFECTIVE ☐ WILL IMPROVE PRACTICE ☐

Briefly state your reasons:

……

……

……

4) Estimated annual usage of this new drug ……(patients)

5) Are the cost implications significant? YES ☐ NO ☐

For the Trust (i.e. equal to/more than £5000) YES ☐ NO ☐

For primary care YES ☐ NO ☐

6) If yes, does your Clinical Director support this request? YES ☐ NO ☐

7) If significant, has funding been identified by the Directorate? YES ☐ NO ☐

If no, need to identify funding for drug when presenting case at the Drug and Therapeutics Group.

8) Implications for primary care:

Should this drug be limited to secondary care?	YES ☐	NO ☐
Could this drug be initiated in primary care?	YES ☐	NO ☐
Is it appropriate for a GP to take on clinical responsibility for the patient and for prescribing on-going treatment?	YES ☐	NO ☐
Are shared-care protocols necessary?	YES ☐	NO ☐
Is there specific information a GP should be aware of before prescribing this drug?	YES ☐	NO ☐

If yes, please state below: (eg special precautions / monitoring requirements / adverse effects)

……
……
……

9) Any other supporting information?

……
……
……
……
……

Signature of Consultant: …… Date: ……

Name of Consultant: ……

Where the cost implications of this new drug request are likely to be £5000 per annum or more, please obtain a supporting signature from your Clinical Director.

Signature of Clinical Director: …… Date: ……

Name of Clinical Director: ……

You will be invited to the next possible meeting of the Drug and Therapeutics Group to present your case.

Please return the completed form to: *TBC*

Appendix 9 1-monthly Paliperidone Palmitate Long Acting Injection (Xeplion®)

Initiation or switching from other depot preparations

Completed form (password protected) to be submitted to the Chair† of the DTG† TBC Or,
Pharmacy: TBC sushma.lau@nelft.nhs.uk Nicola.greenhalgh@nelft.nhs.uk

Patient Initials	
Gender	
Date of Birth	
NHS or RIO Number	

Diagnosis ……..

If schizophrenia, is it treatment-resistant: ☐ Yes ☐ No

Inpatient ward …… **Community team** ……

Please select all that apply:

Patient had **oral** risperidone in the past	☐ Yes	☐ No	☐ Not known
Patient is currently on maintenance treatment with oral risperidone	☐ Yes	☐ No	
Patient had a therapeutic response to oral risperidone	☐ Yes	☐ No	
Patient had Risperdal Consta (depot) in the past	☐ Yes	☐ No	☐ Not known
Patient is currently on Risperdal Consta (depot)	☐ Yes	☐ No	
Patient had a therapeutic response to Risperdal Consta	☐ Yes	☐ No	
Prolactin level	☐ Normal	☐ Raised	
Patient had renal function checked :	☐ Yes	☐ No*	

***If Renal function not checked/ not known, state reason (e.g. patient refusing blood test):** ……

State patient's creatinine clearance or eGFR: Creatinine Clearance _____ mL/min

eGFR _____ mL/min/1.73m^2

Link to calculate eGFR: http://egf rcalc.renal.org/

XEPLION is not recommended in patients with moderate or severe renal impairment (creatinine clearance < 50 mL/min)

Reason(s) for initiation or switching:

☐ Poor adherence to oral antipsychotic
☐ Poor adherence to current depot antipsychotic
☐ Poor response to other antipsychotics
☐ Less frequent injections
☐ Other – state reason: ……

Which antipsychotic are you planning to discontinue ……

Switching to Paliperidone Palmitate LAI from other depot preparations – Can be approved by Pharmacy
~~Paliperidone~~ LAI one-week initiation regimen is not necessary when switching from other depot preparations

Name of Doctor …….. **Telephone No./Ext** ……..

Signature ……. **Date** …….

Initiation of Paliperidone Palmitate LAI (loading dose then maintenance) - To be approv ed by the Chair of the DTG

Name of Consultant …… **Telephone No./Ext** ……..

Signature ……. **Date** …….

TO BE COMPLETED BY THE CHAIR OF THE DTG OR PHARMACY

☐ Approve switching to Paliperidone LAI
☐ Approve initiation of Paliperidone LAI
☐ Not approved

Comment(s) ……..

Approv ed by: Name ……..

Signature …….. **Date** …….

Completed & approv ed form faxed to Lloyds Pharmacy: ☐ **Yes** ☐ **No**
Fax number: 01708 335268 **Date faxed** ……

Appendix 10 Aripiprazole Palmitate Long Acting Injection (Abilify®)

Initiation or switching from oral or other depot antipsychotic preparations

Completed form (password protected) to be submitted to the Chair† of the DTG † TBC Or, Pharmacy: TBC sushma.lau@nelft.nhs.uk Nicola.greenhalgh@nelft.nhs.uk

Patient Initials	
Gender	
Date of Birth	
NHS or RIO Number	

Diagnosis ……..

If schizophrenia, is it treatment-resistant: ☐ Yes ☐ No

Inpatient ward …… **Community team** ……

Please select all that apply:

Patient has had **oral** aripiprazole in the past	☐ Yes	☐ No	☐ Not known
Patient is currently on maintenance treatment with oral aripiprazole	☐ Yes	☐ No	
Patient has had a therapeutic response to oral aripiprazole	☐ Yes	☐ No	
Potential for interactions (CYP2D6, CYP3A4) with concurrent drugs has been checked*	☐ Yes	☐ No	

Refer to the Aripiprazole LAI SMPC or pharmacy for guidance

- ☐ ALL service users MUST have been on oral aripiprazole for at least 2 to 4 weeks before the injecti establish tolerability and response
- ☐ Oral aripiprazole at 10mg-20mg per day must continue for two weeksafter the first injection to mai aripiprazole concentrations during initiation of therapy

Reason(s) for initiation or switching:

- ☐ Poor adherence to oral antipsychotic
- ☐ Poor adherence to current depot antipsychotic
- ☐ Poor response to other antipsychotics
- ☐ Less frequent injections
- ☐ Adverse effect(s) with other antipsychotics (e.g. cardiac side effects, hyperprolactinaemia, weight gain)
- ☐ Other – state reason: ……

Which antipsychotic are you planning to discontinue ……

- ➢ There iscurrently no manufacturer'sguidance on switching from typical or atypical depotsto Abilify Maintena®
- ➢ Switching first to oral aripiprazole for at least 14 days is recommended, and then if there isa suitable response, introduce the Abilify Maintena®.
- ➢ In general, no dosage adjustmentfor Abilify Maintena® isrequired based on hepatic function or renal function

Refer to the SmPC for further information or contact pharmacy

Initiation or Sw itching to Aripiprazole LAI from oral or other depot antipsychotic preparations

Name of Requesting Doctor …….. **Telephone No./Ext** ……..

Signature …… **Date** ……

TO BE COMPLETED BY THE CHAIR OF THE DTG OR PHARMACY

☐ Approve initiation or switching to Aripiprazole LAI

☐ Not approved

Comment(s) ……

Approv ed by: Name ……....

Signature …….. **Date** ……

Completed & approv ed form faxed to Lloyds Pharmacy: ☐ **Yes** ☐ **No**
Fax number: 01708 335268 **Date faxed** ……

Appendix 11: Olanzapine Embonate (ZypAdhera®)* Administration: cautions, guidelines and physical observation chart

Non-formulary in NELFT. Requires authorisation from the Chair of the DTG

OLANZAPINE LONG-ACTING INJECTION: ADMINISTRATION GUIDELINES FOR NURSES

- After each injection, patients should be observed in a healthcare facility by appropriately qualified personnel for at **least 3 hours** for signs and symptoms consistent with olanzapine overdose.
- Immediately prior to leaving the healthcare facility, it should be confirmed that the patient is alert, oriented, and absent of any signs and symptoms of overdose.
- If an overdose is suspected, close medical supervision and monitoring should continue until examination indicates that signs and symptoms have resolved .
- The 3-hour observation period should be extended as clinically appropriate for patients who exhibit any signs or symptoms consistent with olanzapine overdose.
- Very common symptoms in overdose (>10% incidence) include tachycardia, agitation/aggressiveness, dysarthria, various extrapyramidal symptoms, and reduced level of consciousness ranging from sedation to coma.
- During clinical trials, post-injection syndrome (consistent with symptoms of Olanzapine overdose) has been seen to occur in less than 1 in 1000 injections within the 3 hour period, and in less than 1 in 10,000 injections after 3 hours.

SYMPTOMS OF POST-INJECTION SYNDROME

- Sedation (ranging from mild to coma)
- Delirium (inc. Confusion / Disorientation / Agitation / Anxiety)
- Cognitive impairment
- Dizziness
- Aggression
- Weakness
- Acute extrapyramidal symptoms (Dyskinesias are movement disorders and can include any of a number of repetitive, involuntary, and purposeless body or facial movements. They can include: Tongue movements, such as “tongue thrusts” or “fly-catching” movements, Lip smacking, Finger movements, Eye blinking ‘Movements of the arms or legs. While dystonias are muscle tension disorders)
- Dysarthria (disorder of speech)
- Ataxia (affect balance, coordination, and speech)
- Hypertension
- Convulsions
- Respiratory depression,
- Aspiration
- Hypotension,
- Cardiac arrhythmias
- Cardiopulmonary arrest

CHECKS PRIOR TO ADMINISTRATION OF THE INJECTION	Select
Patient is aware, and agrees, to the 3 hour post-injection monitoring requirements and precautions before administration of EACH dose of the injection	Yes / No
Confirm that the patient has consented to the Olanzapine Long-Acting Injection and that the patient has been made clearly aware of the side effects, the reasons why they are being prescribed this medication and the alternatives to it	Yes / No
Confirm that the patient is not sedated and is orientated to time place and person (except where pervasive mental state due to psychotic illness is affecting orientation)	Yes / No
Complete standard observations of **TPR (Temp. Pulse Resp.) & BP** before administration of Olanzapine Long-Acting Injection, enter onto RIO and record on the recording form. **Include observation of mental state and level of alertness and orientation.**	Yes / No
Complete a baseline observation (continue **weekly monitoring of blood glucose, weight, girth measurement)**	Yes / No
Above points must be entered onto RIO as well as using the physical health monitoring/recording form included with this document	Yes / No

ADMINISTRATION OF OLANZAPINE LONG-ACTING INJECTION

Olanzapine Long-Acting Injection should only be administered via deep intramuscular gluteal injection by a healthcare professional trained in the appropriate injection technique.

CHECKS FOLLOWING ADMINISTRATION OF THE INJECTION
Patient must be observed by appropriately qualified personnel for at least 3 hours for signs and symptoms consistent with Olanzapine overdose
If an overdose is suspected, close medical supervision and monitoring should be initiated and continued until examination indicates that signs and symptoms have resolved. This may require immediate referral and transfer to the Accident & Emergency Department for management of the patient's symptoms. Information (e.g. SMPC) relating to Post Injection Syndrome and Olanzapine Long-Acting Injection should accompany the patient.
Complete standard observations of **TPR (Temp. Pulse Resp.) & BP at 1, 2, and 3 hours** and enter onto RIO and complete the recording form provided
For the remainder of the day following Olanzapine Long-Acting Injection dose administration, patients should be advised to be vigilant for signs and symptoms of Olanzapine overdose secondary to post injection adverse reactions, be able to obtain medical assistance if needed and not drive or operate machinery.

OLANZAPINE LONG-ACTING INJECTION PHYSICAL HEALTH OBSERVATION CHART

This form must be completed, uploaded on CareDoc, and filed in the case notes following any instance of Olanzapine long-acting injection administration.

Patient Name: _____ **NHS Number:** _____

Date of Birth: _____ **Consultant:** _____

Name of Healthcare Facility: _____

Administered by: _____ **Designation:** _____

Date of administration: _____ **Time of administration:** _____

Pre- and 3-hour Post-Injection Observations

****Observations should be made every hour****

Time	Pulse/min	Temp	B/P	Respiratory rate/min	Conscious level *	Orientation	Signature
Before injection							
1 hour							
2 hour							
3 hour							

* 1) Wide awake & active, 2) wide awake but calm, 3) Asleep but arousable , 4) Asleep but unrousable

	Date						
BP							
Pulse/min							
Temp.							
Respiratory rate/min							
Blood glucose							
Weight							
Girth measurement							

Practice points - Olanzapine Embonate (ZypAdhera®) Long Acting Injection [depot]

Monitoring for post-injection syndrome

- After each injection of ZypAdhera®, patients should be observed in a healthcare
- facility by appropriately qualified personnel for at least 3 hours for signs and symptoms consistent with olanzapine overdose
- Ensure NELFT guidelines for administration and monitoring are followed at all times (see Appendix 16)
- Ensure a physical observation chart is completed for each dose of ZypAdhera® administered (see Appendix 16)

Refer to the Summary of Product Characteristics (SMPC) for further information including a user manual
https://www.medicines.org.uk/emc/product/7468/smpc

Appendix 12 Non-formulary drugs

- Approval from the Chair of the DTG must be sought for each patient before initiation of the drugs listed below
- Request must be emailed to the Chairperson
- Approval will be on a named-patient basis

Drug Class	Drug Name	Formulations	Costing
Melatonin receptor agonist and selective serotonin-receptor antagonist	*Agomelatine* *(Valdoxan®)*	Tablets 25mg	30 – 60
Second generation (atypical) antipsychotic	Asenapine *(Sycrest®) for Schizophrenia * Licensed for Bipolar 1 disorder in Europe	Sublingual Tablets 5mg, 10mg	100
Selective Serotonin Reuptake Inhibitor	*Escitalopram* Licensed for GAD only (*Cipralex®)*	• Tablets 5mg, 10mg, 20mg • Oral drops SF 20mg/mL	1 – 3 20 – 40
Melatonin receptor (MT1, MT2) agonist	*Melatonin MR* *(Circadin®)* – insomnia (short-term use) in adults over 55 years	Tablets 2mg	15
Nicotine replacement therapy	*Nicotine* tablets (Nicorette Microtab®)	Sublingual tablets	100 – 180
Second generation (atypical) antipsychotic	*Lurasidone (Latuda®)*	Tablets	90-180
Second generation (atypical) antipsychotic	*Olanzapine Embonate* (ZypAdhera®) depot	Long acting injection	220 – 450
Second generation (atypical) antipsychotic	*Paliperidone MR* (Invega®)	Tablets	100 – 200
Second generation (atypical) antipsychotic	*Paliperidone 3 monthly injection* *(Trevicta®)*	Long acting injection	200-400
Second generation (atypical) antipsychotic	*Quetiapine XL* *(Seroquel® XL and branded generic versions of quetiapine XL)*	Tablets	100 – 250
Selective noradrenaline reuptake inhibitor (NARI)	*Reboxetine* *(Edronax®)*	Tablets 4mg	20 – 40

Appendix 13 NELFT NICE Technology Appraisal Guidance (TAG) Adherence Check List – Mental Health Services

NICE TAG Reference	TAG Title	Date of Issue	Approved for local use
TA367	Vortioxetine for treating major depressive episodes	25 November 2015	Yes
TA325	Nalmefene for reducing alcohol consumption in people with alcohol dependence	26 November 2014	Yes
TA292	Aripiprazole for treating moderate to severe manic episodes in adolescents with bipolar I disorder	24 July 2013	Yes
TA286	Loxapine inhalation for treating acute agitationand disturbed behaviours associated with schizophrenia and bipolar disorder	22 May 2013	Terminated appraisal
TA217	Donepezil, galantamine, rivastigmine and memantine for the treatment of Alzheimer's disease	23 March 2011	Yes
TA213	Aripiprazole for thetreatment of schizophrenia in people aged 15 to 17 years	January 2011	Yes
TA123	Varenicline for smoking cessation	July 2007	Yes
TA114	Methadone and buprenorphine for the management of opioid dependence	24 January 2007	Yes
TA115	Naltrexone for the management of opioid dependence	24 January 2007	Yes
TA98	Methylphenidate, atomoxetine and dexamfetamine for attention deficit hyperactivity disorder(ADHD) in children and adolescents	22 March 2006	Yes
TA97	Computerised cognitive behaviour therapy for depression and anxiety	22 February 2006	Yes
TA77	Guidance on the useof zaleplon, zolpidem and zopiclone for the short-term management of insomnia	28 April 2004	Yes
TA59	Guidance on the use of electroconvulsive therapy	2 May 2003	Yes

For further information on the NICE guidance implementation process in NELFT contact Dr Elizabeth Francis, Governance Lead Pharmacist, Head of Clinical Audit & NICE, POMH-UK Lead: Elizabeth.francis@nelft.nhs.uk

Link to the NELFT NICE *All Things NICE* intranet site: http://nelftintranet/departments-and-services/clinical-audit-improvement-and-NICE-department/all-things-nice.htm

Appendix 14 NELFT Approved Psychotropic Drugs

Drug		Drug
Acamprosate (Campral)		Nalmefene
Amisulpride		Naltrexone (Nalorex)
Amitriptyline		Nicorette Inhalator
Aripiprazole		Nicorette Nasal Spray
Aripiprazole Long acting injection (Abilify Maintena)		Nicotinell Lozenges
Asenapine		NiQuitin Clear Patches
Atomoxetine		Olanzapine
Benperidol		Orphenadrine
Buprenorphine sublingual tablets		Oxazepam
Buspirone		1-monthly Paliperidone Palmitate depot (Xeplion)
Carbamazepine		Paroxetine
Chlordiazepoxide		Phenelzine (Nardil)
Chlorpromazine		Pregabalin
Citalopram		Procyclidine
Clomethiazole		Promazine
Clomipramine		Promethazine
Clonazepam		Quetiapine
Clozapine (Clozaril)		Risperidone
Dexamfetamine		Risperidone Long Acting Injection (Risperdal Consta)
Diazepam		Rivastigmine
Disulfiram (Antabuse)		Sertraline
Donepezil		Sodium valproate
Duloxetine		Sulpiride
Escitalopram (for GAD only)		Temazepam
Fluoxetine		Tetrabenazine
Flupentixol		Trazodone
Flupentixol (Fluanxol)		Trifluoperazine
Flupentixol Decanoate depot (Depixol)		Trihexyphenidyl (Benzhexol)
Galantamine		Valproic Acid/Semisodium valproate (Depakote)
Guanfacine		Varenecline
Haloperidol		Venlafaxine
Haloperidol Decanoate depot (Haldol Decanoate)		Vortioxetine
Hydroxyzine		Zolpidem
Imipramine		Zopiclone
Lamotrigine		Zuclopenthixol Acetate (Clopixol Acuphase)
Lisdexamfetamine		Zuclopenthixol Decanoate depot (Clopixol)
Lithium Carbonate MR (Priadel)		Zuclopenthixol dihydrochloride
Lithium Citrate (Priadel)		
Lofepramine		**NELFT approved Non-Formulary drugs: Prescribed in special circumstances**
Lofexidine (BritLofex)		Baclofen
Lorazepam		Clonidine
Memantine		Cyproheptadine
Methadone liquid		Dosulepin
Methylphenidate		Hyoscine Hydrobromide
Mirtazapine		Melatonin
Moclobemide		Melperone
		Omega-3-fatty acid compounds
		Pirenzepine
		Propranolol
		Topiramate

Appendix 15 Abbreviations

AED(s)	Antiepileptic Drug(s)
Anab	Anabolic [steroids]
BEN	Benign Ethnic Neutropenia
Benz	Benzodiazepines
BNF	British National Formulary
CAMHS	Children and Adolescents Mental Health Services
CD 	Controlled Drug
CG	Clinical Guideline
CNS	Central Nervous System
CPMS	Clozaril Patient Monitoring Service
DTG	Drugs and Therapeutics Group
FBC	Full Blood Count
MAOI(s)	Monoamine Oxidase Inhibitor(s)
MHRA	Medicines and Healthcare Products Regulatory Agency
NELFT	North East London NHS Foundation Trust
NG	Nice Guideline
NICE	National Institute of Health and Clinical Excellence
NPSA	National Patient Safety Agency
PIL	Patient Information Leaflet
POM	Prescription Only Medicine
POMH	Prescribing Observatory for Mental Health
SF	Sugar-free
SmPC	Summary of Product Characteristics
TAG/TA	[NICE] Technology Appraisal Guidance

Appendix 16 Antipsychotic Dosage Ready Reckoner [Adults]

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 6.1

September 2017 - *Always check you are using the latest ver-*

Depot/long-acting injection and IM antipsychotics

POMH-UK PRESCRIBING OBSERVATORY FOR MENTAL HEALTH-UK CCQI

Depot: dose calculated as mg/week
IM/Inhaled: dose in mg/day

Percentage of BNF maximum adult dosage

		5	10	15	20	25	30	33	40	45	50%	55	60	67	70	75	80	85	90	95	100%
Flupentixol	Depot	20	40	60		100					200					300					400
Fluphenazine	Depot					12.5					25					37.5					50
Haloperidol	Depot							25			37.5			50							75
Pipotiazine	Depot					12.5					25					37.5					50
Zuclopenthixol	Depot			100				200			300			400			500				600
Aripiprazole	Long-acting										50										100
Olanzapine	Long-acting										75										150
Paliperidone *	Long-acting													25							37.5
Risperidone	Long-acting										12.5					18.75					25
Aripiprazole	IM							10			15			20							30
Haloperidol	IM					3					6						10				12
Chlorpromazine	IM		25			50					100					150					200
Levomepromazine	IM		25			50					100					150					200
Olanzapine	IM					5					10					15					20
Zuclopenthixol acetate **	IM													50							75
Loxapine	Inhaled										10										20

* Maintenance dose. ** A maximum of 150 mg in any 48-hour period and a maximum cumulative dose of 400 mg in any two week period.

To calculate a total daily prescribed antipsychotic dose as a percentage of the BNF maximum: determine the percentage of BNF maximum dosage for each antipsychotic that is prescribed, and then sum the percentages. For example, for a person prescribed clozapine 400mg a day and oral haloperidol 5mg PRN up to 3 times a day, the respective percentages would be 44% and 75%, giving a total antipsychotic prescribed dosage of 119% of the BNF maximum.

Contact pomh-uk@rcpsych.ac.uk to order copies of this Ready Reckoner www.rcpsych.ac.uk/pomh

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 6.1

September 2017 - *Always check you are using the latest ver-*

POMH-UK PRESCRIBING OBSERVATORY FOR MENTAL HEALTH-UK CCQI

Oral antipsychotics

Dose in mg/day

Percentage of BNF maximum adult daily dosage

		5	10	15	20	25	30	33	40	45	50%	55	60	67	70	75	80	85	90	95	100%
Amisulpride	Oral							400			600			800			1000				1200
Aripiprazole	Oral							10			15			20							30
Asenapine	Oral					5					10					15					20
Benperidol	Oral							0.5			0.75			1							1.5
Chlorpromazine	Oral		100	150			300				500		600			750					1000
Clozapine	Oral			150				300	400		450			600							900
Flupentixol	Oral			3				6			9			12				15			18
Haloperidol	Oral		2			5					10		12			15					20
Levomepromazine	Oral		100			250					500					750					1000
Lurasidone	Oral					37					74					111					148
Olanzapine	Oral					5		7.5			10					15					20
Paliperidone	Oral					3					6					9					12
Pericyazine	Oral					75		100			150			200							300
Perphenazine	Oral		4								12			16							24
Pimozide	Oral		2		4		6		8		10		12								20
Promazine	Oral			150				300			400					600					800
Quetiapine*	Oral		75	100	150				300		375		450				600				750
Risperidone	Oral		2			4		6			8					12					16
Sulpiride	Oral			400				800			1200			1600			2000				2400
Trifluoperazine**	Oral		5		10		15		20		25		30		35		40		45		50
Zuclopenthixol	Oral		20		30			50						100							150

* 750mg/day max for schizophrenia, 800mg/day max for mania or if XL preparation used; % given for schizophrenia.
** No max dose stated in BNF or SPC; 50mg used by convention.

Document Control Sheet

Date	Amendment Details	Amended / Updated By
January 2013	First Edition Approved: 18th November 2014 – MHS DTG	Authored by Dr Elizabeth Francis
January 2014	Reviewed	Dr Elizabeth Francis
August 2014	• **Haloperidol*** – new (lower) maximum dose for oral and intramuscular administration (see Appendix 8) (*Refer to the BNF/eBNF for children for dosing guidance in children and adolescents) • **Nalmefene** approved for initiation by substance misuse consultant • **Topiramate** approved for third line use in alcohol dependency, initiation by substance misuse consultant; prescribing responsibility retained within NELFT [Off-Label/unlicensed use] • **Quetiapine XL** status changed to "Non-formulary" • New legal status of: ○ **Zaleplon** – POM to Schedule 4 Part 1 Controlled Drug (CD Benz POM) ○ **Zopiclone** – POM to Schedule 4 Part 1 Controlled Drug (CD Benz POM) ○ **Tramadol** – POM to Schedule 3 Controlled Drug (CD No Register POM); but exempt from Safe Custody Regulations • **Aripiprazole IM Depot injection** (Abilify Maintena®) – Named-patient use only • Intranet links updated for new/updated NELFT Intranet website	Dr Elizabeth Francis
October 2014	**New NICE Clinical Guideline: Psychosis and Schizophrenia in adults: treatment and management (CG178 March 2014):** • Monitoring and cautions for all patients prescribed antipsychotic drugs, including cautions in hepatic and renal impairment	Dr Elizabeth Francis
October 2014	**New NICE Clinical Guideline: Bipolar disorder: the assessment and management of bipolar disorder in adults, children and young people in primary and secondary care (CG185 September 2014) & new BNF updates (electronic BNF October2014):** □ Lithium monitoring □ Valproate monitoring and cautions, including stopping valproate if there is abnormal liver function □ Lamotrigine monitoring and cautions	Dr Elizabeth Francis
November 2014	□ Summary table for antipsychotic physical health monitoring added □ Updated NICE Technology Appraisals and Clinical Guidelines integrated into relevant sections □ Discontinued drugs removed from document: ○ Clopixol Acuphase 100mg/2mL ○ Depixol Depot 100mg/mL, 0.5mL ampoule • Forms in appendices updated – New Chair of the DTG • Lisdexamfetamine (Elvanse®) included for ADHD [Schedule 2 CD POM]	Dr Elizabeth Francis

Document Control Sheet

Date	Amendment Details	Amended / Updated By
December 2014	☐ Aripiprazole depot approved for inclusion in the formulary • Paliperidone depot (Xeplion®) Initiation/Switching Form updated (Appendix 13) • Aripiprazole depot (Abilify Maintena®) Initiation/Switching Form added (Appendix 14)	Dr Elizabeth Francis
January 2015	☐ Updated guidance on the prescribing of high dose combination antipsychotics (Summary of The Royal College of Psychiatrists recommendations on the use of high dose antipsychotics, 2014) • Paliperidone palmitate (Xeplion®) – additional safety information included for the prescribing of paliperidone depot and risk of death • Citalopram and escitalopram: QT interval prolongation (p39) – new sections included: o Drug interactions o Guidance on monitoring o Link to full MHRA guidance ☐ Updated guidance reference added: Guidance on the Administration to Adults of Oil-based Depot and other Long-Acting Intramuscular Antipsychotic Injections (February 2014, 4th Edition) • Appendix 6 – Calculating total daily prescribed antipsychotic doses – updated with new Haloperidol maximum daily dose	Dr Elizabeth Francis
March 2015	• Forms in appendices updated – New Chair of the DTG ☐ Registration forms in the appendices updated • *Pipotiazine Palmitate* (Piportil Depot®) removed from formulary due to national unavailability	Dr Elizabeth Francis
August 2015	• Items added following DTG approval – Nicotine Replacement Therapy: o Nicorette® Inhalator* o Nicorette® Nasal Spray* ***There must be service user engagement with the NELFT smoking cessation nurse/team before prescribing the inhalator or nasal spray*** ☐ Forms in appendices updated ☐ Prices updated ☐ Hyperlinks to NICE clinical guidelines updated ☐ Hyperlinks to new CPMS documents added ☐ New NELFT logo added	Dr Elizabeth Francis
September 2015	☐ Links for the following medicines guidance and Patient Information Leaflets added: o Switching patients from Quetiapine XL to Quetiapine IR o Switching patients from Piportil (Pipotiazine Palmitate) depot to alternative oral or depot preparation ☐ Paliperidone LAI Initiation/Switching Form amended ☐ Link to the MHRA Yellow Card reporting scheme added ☐ Link to a publicly available web calculator implementing a Qthrombosis algorithm* added	Dr Elizabeth Francis 15/09/15: Presented to the MHS D & T Group for approval of amendments to date – APPROVED
December 2015	• Reference to BNF chapters amended to state "eBNF" to reflect changes in the new printed copy of the BNF (September 2015 – March 2016, BNF 70). The printed copy of the BNF no longer has numeric categories for the	Dr Elizabeth Francis

Document Control Sheet

Date	Amendment Details	Amended / Updated By
	chapters. The electronic BNF continues to indicate numeric categories • Shared care guidelines updated – references updated: ○ Treatment of Attention Deficit Hyperactivity Disorder (ADHD) in children and adolescents: Methylphenidate (Ritalin TM, Equasym TM, Equasym XL TM, Medikinet TM, Medikinet XL TM, Concerta XL TM), Dexamphetamine (Dexedrine TM) and Atomoxetine (Strattera TM). Shared Care Guideline by Dr Manas Sarkar. July 2015 version ○ Shared care guidelines on Melatonin for sleep disorders/ difficulties in children (NELFT). July 2015 version ○ Management of medications for Alzheimer's disease. May 2015 version □ Added reference to the new NICE Guideline 10 (Violence and aggression: short-term management in mental health, health and community settings, May 2015) □ Added reference to the Community Initiation of Clozapine (Clozaril) Policy □ Added updated NICE reference: Smoking: acute, maternity and mental health services • Appendix 15 – Application form for requesting use of an Unlicensed Medicinal Product updated. The updated form should be read in conjunction with the new process: "Use of an unlicensed medicinal product" (appended to the NELFT Medicines Policy)	
February 2016	□ New NELFT logo added □ Hyperlinks added where NELFT policies and medicines guidance cited □ Reviewed and updated the *Introduction* chapter □ Hyperlink added to section e4.10.2 for the NELFT Smoking Cessation Guidance □ Added additional information for Rivastigmine patch in section e4.11: EXELONPATCH - *Patch Tracker: A guide to when and where to place the patch* □ Appendix 2b updated (List of NELFT approved unlicensed medicines) • New Appendix 4b added: *Example clozapine dosing schedule for in-patients with Schizophrenia – The Maudsley Prescribing Guidelines in Psychiatry (12th Edition, 2015)* • Appendix 6 – Antipsychotic Depot preparation table updated (Piportil depot no longer available) □ Paliperidone LAI and Aripiprazole LAI Switching/Initiation forms updated (Appendices 13 and 14 respectively) • New Appendix 19 added: NELFT NICE Technology Appraisal Guidance (TAG) Adherence Check List – Mental Health Services • Added the update on **Aripiprazole depot injection** (section e4.2.2): The European Medicines Agency (EMA) approved the use of the deltoid muscle as a new injection site for Abilify Maintena. The product was previously approved for injection in gluteal muscle only. **Manufacturer's (OTSUKA) advice:** □ The Gluteal Only Pack should be **only** used in accordance with the Patient Information Leaflet enclosed in the pack □ The Gluteal Only Pack **does not contain needles suitable for deltoid injection** and should **not** be used for deltoid injection	Dr Elizabeth Francis

Document Control Sheet

Date	Amendment Details	Amended / Updated By
	➢ Health Care Professionals should **not** use needles from other sources for the purpose of either gluteal or deltoid injection • New Technology Appraisal Guidance (TAG) approved for use in NELFT by the MHS DTG (January 2016): TA367 (Vortioxetine for treating major depressive episodes) – added to the Formulary	
March 2016	• **Appendix 9update:** ○ *Psychotropic Drugs in Cardiovascular Disease (Relative risks, Interactions, Cautions and contraindications)** **removed, and,** ○ **Replaced with** *Psychotropic drugs and cytochrome P450 (CYP) interactions:* – 9a: Psychotropic drugs and cytochrome P450 (CYP) interactions – 9b: Major cytochrome based drug and food interactions *The Summary of Product Characteristics for individual drugs should be consulted for the most up to date information	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE March 2016: Presentation to the MHS Drugs & Therapeutics Group (DTG) for approval of amendments to date
June 2016	• **Guanfacine (Intuniv®)** been added to the Formulary following agreement by the MHS DTG. Guanfacine may be prescribed under the following conditions [under specialist supervision]: ○ 3rd line monotherapy option for prescribing in ADHD ○ To be prescribed on a named patient basis only ○ Requests for prescribing Guanfacine to be emailed to the Chair of the DTG for approval before initiation of therapy □ Reference to the new NICE guidance on controlled drugs added: ***Controlled drugs: safe use and management. NICE guideline 46; Published: 12 April 2016*** • NRT section updated – link to the new NELFT Smoking Cessation guidance added	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE
July – August 2016	□ Lurasidone (Latuda) Tablets [Latuda is indicated for the treatment of schizophrenia in adults aged 18 years and over] ○ Non-formulary ○ Named patient prescribing only • Reference to the following guidance updated following publication of the 2016 edition: "Guidance on the Administration to Adults of Oil-based Depot and other Long-Acting Intramuscular Antipsychotic Injections", 5th Edition (June 2016) □ Warning about clozapine and associated gastrointestinal hypomotility reinforced following two recent publications (Every-Palmer *et al*, February 2016; Shirazi *et al*; June 2016) • Appendix 9a updated – specific antipsychotic-CYP interactions added □ Form for the *Request to use an Unlicensed Medicinal Product* removed (to be added to the SOP) ○ Readers to refer to the NELFT Medicines Policy and Processes □ Section on valproate prescribing updated following the MHRA Drug Safety	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE

Document Control Sheet

Date	Amendment Details	Amended / Updated By
	Alert for *Prescribing valproate and risk of abnormal pregnancy outcomes* (February 2016). MHRA have provided updated guidance for healthcare professionals and service users: - Booklet for Healthcare Professionals - Consultation checklist - Guide to give to patients - Card to give to patients • Links added for new Apps for smartphones ○ Lithium	
October 2016	• Presentation of the *Trevicta®: 3-monthly Paliperidone Palmitate prolonged release suspension for injection* document to the DTG – to note following outcome: - Trevicta to remain non-formulary in the Trust - Initiation requires authorisation from the Chair of the DTG	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE

December 2016	• Melatonin for insomnia in patients over the age of 55
	  ○ Following discussion at the DTG meeting of December 2016, it was agreed that melatonin may be used for insomnia in >55 years under the following conditions:
	  ➢ Alternative therapies have been ineffective
	  ➢ Initiation is to be on a named-patient basis
	  ➢ Approval for initiation is to be sought from the Chair of the DTG
		Dr Elizabeth Francis
		Governance Lead Pharmacist, Head of Clinical Audit & NICE

February 2017	- Section headings adapted to align with the new BNF format - Update on indicated drug cost - Paliperidone LAI initiation/switching form updated to include the requirement for indicating serum prolactin status [Appendix 13]	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE

August 2017	- Asenapine sublingual tablets (*Sycrest*) added to antipsychotic section
	  - Licenced for use in bipolar disorder
	- Updated information on valproate following the Patient Safety Alert received from MHRA / NHS Improvement in April 2017:
	  - *Resources to support the safety of girls and women who are being treated with valproate, April 2017* https://improvement.nhs.uk/uploads/documents/Patient_Safety_Alert_-_Resources_to_support_safe_use_of_valproate.pdf
	
	  - https://www.gov.uk/government/publications/toolkit-on-the-risks-of-valproate-medicines-in-female-patients
	
	- Two appendices (Appendices 22a and 22b) added for the following intervention documents published by POMH relating to QIP 15: *Prescribing valproate for bipolar disorder*
	  - Potential intervention to support the implementation of the MHRA safety alert on the use of valproate in women of child-bearing age
	  - Required safety precautions when prescribing valproate for women of child-bearing age. Document contains links for the following resources:
		Dr Elizabeth Francis
		Governance Lead Pharmacist, Head of Clinical Audit & NICE

Document Control Sheet

Date	Amendment Details	Amended / Updated By
	• Booklet for healthcare professionals: http://www.medicines.org.uk/emc/RMM.420.pdf • Information for patients: http://www.medicines.org.uk/emc/RMM.421.pdf • A consent form incorporating a checklist: http://www.medicines.org.uk/emc/RMM.423.pdf • Cards to give to patients: the MHRA have made available 'Valproate alert cards' which pharmacy should routinely supply with outpatient prescriptions and TTOs for valproate for women age 50 years or younger: http://www.medicines.org.uk/emc/RMM.422.pdf	
8th September 2017	☐ Following launch of the **New BNF & BNFC App**, link to download the new App updated in this document o New App is a combined BNF and BNFC App o The App includes a robust interactions checker that makes identifying potentially serious issues between combinations of drugs quick and simple ☐ New Appendix [23] added o Appendix 23 Antipsychotic Dosage Ready Reckoner [Adults] ☐ Following narrative added to the Antipsychotic Drugs section of this document: Rationale for prescribing **Clopixol Acuphase** [Zuclopenthixol Acetate] must be documented, citing one of the following reasons: o It is clearly expected that the patient will be disturbed/violent over an extended period of time o A patient has a past history of good and timely response to Zuclopenthixol Acetate injection o A patient has a history of repeated parenteral administration o An advance decision has been made indicating that this is a treatment of choice ☐ Requirement for **ECG and use of haloperidol** reinforced with the following narrative: o Recent ECG [within last 3 months] must be available prior to haloperidol use o If patient refuses, document refusal AND include a statement on risk-benefit of haloperidol administration ☐ Statement added to the Antipsychotic Drugs section in this document, alerting clinicians that the **maximum dose for the haloperidol injection** in the SmPC differs from that in the BNF o BNF: Maximum dose of Haloperidol injection 12mg/24h o SmPC: Maximum dose of Haloperidol injection 18mg/24	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE September 2017: Presented to the MHS Drugs & Therapeutics Group (DTG) for approval of amendments to date – Approved 12/09/17
15th September 2017	• Appendix 23 updated with the new version [6.1] of the Antipsychotic Dosage Ready Reckoner	Dr Elizabeth Francis Governance Lead Pharmacist, Head of Clinical Audit & NICE

Document Control Sheet

Date	Amendment Details	Amended / Updated By
12th November 2018	☐ Haloperidol* - dosage recommendations have changed and vary according to the clinical indication (see Appendix 8) (Refer to the 'BNF/eBNF for Children' for dosing guidance in children and adolescents). - Appendix 6 (calculating total daily prescribed antipsychotic doses) – removed haloperidol from table to reflect the above. • Valproate – updated following MHRA Drug Safety Alert – April 2018. Included the link to the NELFT guidelines.	Sushma Lau Deputy Chief Pharmacist (MHS)
25/04/19	☐ Review format ☐ Remove out of date references – many MHRA references have now been archived ☐ Update NICE guideline references ☐ Fluphenazine long acting injection removed as no longer available in the UK ☐ Unlicensed / off label medicines moved into relevant sections ☐ All links checked and updated ☐ Clozapine assay details changed as changed to new laboratory ☐ Removed prices of individual medicines – highlighted high cost medicines ☐ Removed information available elsewhere – that contained in shared care documents or other policies and procedures ☐ Removed appendices available elsewhere ☐ Consolidated antiepileptics into mood stabilizer section to avoid duplication ☐ Added additional information to medications where possible and most relevant ☐ Removed tetrabenazine liquid, chlorpromazine injection and suppositories ☐ Guanfacine is now included in shared care for ADHD	Nicola Greenhalgh Lead Pharmacist – Mental Health