Barnet, Enfield and Haringey NHS
Mental Health NHS Trust

A University Teaching Trust

FORMULARY AND PRESCRIBING GUIDELINES 2019

Document Control Summary

Issue	Date Amended	Section /page	Author/ Amended by	Summary of Change
1.	Sept 06	All	Jane Moriba	Removed Trust policy and guideline and NICE information was removed and replaced with hyperlinks.
2.	Jan 09	4.11	Sapna Prasad	Addition of Galantamine XL capsules to formulary.
3.	Jan 09	4.11	Sapna Prasad	Addition of Rivastigmine patches to formulary.
4.	Jan 09	4.12	Sapna Prasad	Addition of sildenafil tablets to the formulary.
5.	Jan 10	4.3	Jane Moriba	Removal of Dosulepin hydrochloride in line with NICE CG90.
6.	March 10	4.2.1.1	Jane Moriba	Quetiapine XL (Seroquel XL) added to formulary
7.	April 10	4.2.1.2	Jane Moriba	Statement regarding Risperidone oral as first line amended to reflect change in NICE guidance CG82
8.	April 10	All	Jane Moriba	Hyperlinks relating to NICE BNF removed
9.	April 10	4.3.1	Jane Moriba	Dosulepin removed inline with NICE guidance CG90
10.	January 12	4.2.1.2	Jane Moriba	Addition of Aripiprazole IM injection for use in Rapid Tranquillisation
10.	January 12	4.1.1	Jane Moriba	Zopiclone to be first line hypnotic for the Trust. Temazepam to be restricted to those admitted on it or with known side effects or allergy to Zopiclone.
10.	January 12	4.2.1.2	Jane Moriba	Quetiapine XL to be restricted
10.	January 12	4.3.1	Jane Moriba	Maprotyline removed
10.	January 12	4.3.3	Jane Moriba	Adjusted the maximum dose of Citalopram as per SPC.
11.	September 2012	4.11	J Moriba	Addition of Memantine for moderate to severe Alzheimer's Disease
		4.2.1.2		Removal of Olanzapine IM
12.	January 2013	4.2.2	J Moriba	Addition of Paliperidone Palmitate IM for schizophrenia
12.	May 2013	Foreword and Intro	J Moriba	Foreword and Introductory notes have been updated.
12.	July 2014		J Moriba	BNF maximum dose change to Haloperidol
12.	August 2014		J Moriba	Removal of Paliperidone LAI
13.	March 2015	4.4	J Moriba	Addition of 4.4 – drugs used in ADHD
13.	March 2015		J Moriba	Removal of Pipotiazine Palmitate following national withdrawal of the product.
14.	November 2015	All	J Moriba	Review of contents
15.	December 2015	Section 4.4	J Moriba	Addition of Vortioextine following NICE [TA367] Published in November 2015

16.	July 2016	3/ pg. 17	J Moriba	Restriction of Valproate in females of child bearing potential
17.	July 2017	2.1.3 p15	K Delargy/ G Kuforiji	Addition of Paliperidone 3-monthly LAI Addition of Aripiprazole LAI Removal of Quetiapine MR formulation
17.	July 2017	Pg. 4	G Kuforiji	Addition of "Formulary/Restricted Use" category.
17	July 2017	Pg. 12	G Kuforiji	Reconcile suggested maximum dose of Trifluoperazine with guidance table.
17.	July 2017	Pg. 16-18	G Kuforiji	Updated Tables • Depot Pharmacokinetics • Antipsychotic depot equivalent doses • Max. doses of antipsychotic depots • Rel. S/E of atypical Antipsychotic drugs
18	Sept 2017	Pg. 31	J Moriba	Added Dexamfetamine to list of drugs available for treatment of adult ADHD, in line with NICE CG72 and Trust Adult ADHD shared care guidelines.
19.	Oct 2017	Pg. 23	J Moriba	Trazodone liquid formulation removed from formulary.
20.	Nov 2017		J Moriba	Addition of hyperlink to the ADHD and Dementia shared care guidelines
21.	April 2018	Section 2	J Moriba	Addition of hyperlinks to the NCL Antipsychotic Monitoring Fact Sheet Removal of reference pericyazine, perfenazine, Risperidone LAI and Fluphenazine Decanoate from reference tables. Proposed removal of Fluphenazine Decanoate from formulary due to market withdrawal.
		Section 3	J Moriba	Proposed removal of Valproate medicines from formulary use, following a change in the licence that they must no longer be prescribed to women or girls of childbearing potential unless they are on the pregnancy prevention programme (PPP).
		Section 5	J Moriba	Addition of hyperlinks to NCL Adult ADHD
22	Sept 2018		J Moriba	Change to dose of Haloperidol for Rapid control of severe acute psychomotor agitation associated with psychotic disorder or manic episodes of bipolar I disorder [PO and IM] Removal of benperidol
24	March 2019		J Moriba	Addition of Espranor® brand (buprenorphine) as the first line option before using Subutex®

FOREWORD

The aims of the formulary are as follows:

- To aid clinicians in cost-effective and evidence based prescribing
- To reflect the views and practice of expert clinicians for the benefit of junior medical staff
- To educate junior staff in good practice in the selection and use of drugs
- To provide the user with prescribing information and guidelines
- To provide the user with a list of Mental Health drugs available from the pharmacies at Chase Farm Hospital, Barnet General Hospital, Edgware Community Hospital and St Anns Hospital.

INTRODUCTORY NOTES

The Barnet, Enfield and Haringey Mental Health Trust Medicines Formulary, includes information on Mental Health drugs stocked within the four hospitals.

New drugs or information may have been added since this document was printed. An updated version of the formulary will be available on the Trust intranet.

Medicines which have been approved for the use by the National Institute for Health and Care Excellence Technological Appraisals are automatically included in the Medicines Formulary once it has been discussed by the Drugs and Therapeutics Committee.

Treatment guidelines are included for some aspects of drug therapy however these should be tailored where necessary to individual patient needs. These guidelines do not replace the need for consultation with senior staff and/or referral for expert advice.

For other information regarding common or life threatening problems with prescribed drugs consult the BNF or manufacturers' Summary of Product Characteristics **(SPC)**.

All dosages in the Formulary are for general guidance and represent the BNF recommended doses that are generally regarded as being suitable for adults.

NAME CHANGES

Directive 92/27/EEC (European Law) requires the use of the recommended International Non-proprietary Name (rINN) for medicinal substances. In most cases the British Approved Name (BAN) and rINN are identical. Where the two differ, the BAN was modified to accord with the rINN.

The list below gives the name of some licensed drugs (used in mental health units) where a change of name was considered to pose the greatest potential risk to public health. For these drugs, the BP 2002 shows the new name as well as the former name at the head of the monographs; the document has adopted a similar style.

BAN		rINN
Adrenaline	→	Epinephrine
Benzhexol	→	Trihexyphenidyl
Chlorpheniramine	→	Chlorphenamine
Lignocaine	→	Lidocaine
Methotrimeprazine	→	Levomepromazine
Noradrenaline	→	Norepinephrine
Thyroxine sodium	→	Levothyroxine sodium
Trimeprazine	→	Alimemazine

For a more comprehensive list, consult the latest edition of the BNF.

WARNING

We have tried to ensure that the information provided in this formulary is accurate at the time of publication. However, there will be instances where, for example, guidelines may have been altered or new information has come to light (i.e. NICE guidance documents).

Where there is any doubt, consult the SPC or your medicines information department.

The formulary is intended as a quick reference and thus cannot contain all the information required for the prescribing, dispensing and administration of a particular drug. It should be supplemented by the other specialist reference literature or by the manufacturers SPC.

The formulary is intended to guide medical practitioners, pharmacists, nurses and others who have the necessary training and experience to interpret the information it provides.

Classification of Drugs in the Trust

Formulary/Unrestricted
Any doctor in the Trust may prescribe drugs in this group. The majority of drugs are in this category. Drugs with proven efficacy and supporting evidence will be included.

Formulary/Restricted Use
Drugs in this category can only be prescribed by a Consultant.

Non-Formulary Drugs
Drugs in this category are usually those that offer no advantages over existing similar drugs ("me-too" drugs). They are not stocked in pharmacy and should not routinely be prescribed. However, they may be made available in exceptional circumstances e.g. if a patient is admitted to hospital on that drug and it would be inappropriate to change their medication.
Click here for non-formulary form

Unlicensed Drugs
Unlicensed and off-label drug use request form and policy.
Click here for unlicensed drug use form

New Drugs
When new drugs are introduced, there is usually only limited clinical experience and data on efficacy and adverse effects. They also tend to be considerably more expensive than existing drugs.

Requests for new drugs should be made by Consultants and submitted to the Chief Pharmacist on the new drugs application form. Evidence supporting the effectiveness of the drug, rationale for its use and anticipated place in therapy, and likely cost implications should also be provided. Such products would be expected to be audited for an initial period, with a report back to the Drug and Therapeutics Committee to determine whether the drug should become more widely prescribable. Support and assistance is available from the clinical lead pharmacists in the development of submissions and audits.

For new drugs with a significant cost impact either on primary or secondary care, referral to the Area Prescribing Committee or its equivalent may be appropriate.
Click here for New Drug Formulary Application Guidance

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1. HYPNOTICS and ANXIOLTYICS

1.1 Hypnotic Drugs

Nitrazepam

Preparations	Tablet: 5mg Suspension: 2.5mg/ 5ml
Dose	5–10mg at night Elderly or debilitated 2.5–5mg (**cautious use**)

Zopiclone **(First Line)**

Preparations	Tablets: 3.75mg, 7.5mg
Dose	7.5mg at night Elderly 3.75mg initially

Promethazine hydrochloride

Preparations	Tablets: 10mg, 25mg, Elixir 5mg/5ml, Injection 25mg/ml (1ml, 2ml)
Dose	25mg at bedtime increasing to 50mg if necessary

Temazepam **(CD schedule 3)** **(Restricted to those admitted on it or with known side effects/ allergy to Zopiclone)**

Preparations	Tablet: 10mg Oral solution: 10mg in 5ml
Dose	10–20mg at night Elderly 10mg at night

1.2 Anxiolytic Drugs

Diazepam

Preparations	Tablets: 2mg, 5mg, 10mg Oral solution: 2mg in 5ml, 5mg in 5ml Injection 5mg in 1ml Rectal tubes: 2.5mg, 5mg, 10mg
Dose	Tablets and oral liquid 2mg three times a day increasing to 15-30mg daily in divided doses (Elderly half adult dose) Injection 10mg I/M or I/V infusion repeated after NOT LESS THAN 4 hours Rectal tubes 500mcg/kg body weight repeated after 12 hours as required

Chlordiazepoxide

Preparations	Tablets: 5mg, 10mg Capsules: 5mg, 10mg

Dose	10mg three times a day increased to 60–100mg daily in divided doses. Elderly half adult dose.
Lorazepam	(In the event of IM injection shortage please refer to the **Trust Guidelines for Lorazepam IM shortage**)
Preparations	Tablets: 1mg, 2.5mg Injection 4mg/ 1ml
Dose	Orally 1– 4mg daily in divided doses. Elderly half adult dose. Injection 25–30 micrograms/kg, repeated every 6 hours if necessary
Buspirone hydrochloride	
Preparations	Tablets: 5mg, 10mg
Dose	Initially 5mg two or three times daily increased as necessary every two to three days; usual range 15-30mg daily in divided doses; up to a maximum of 45mg daily in divided doses

1.3 REVERSAL OF SEDATIVE EFFECTS OF BENZODIAZEPINES

Flumazenil	
Preparation	Injection 100micrograms/ml
Dose	200micrograms over 15 seconds, then 100micrograms at 60 second intervals if required; usual dose range, 300-600micrograms; max. total dose 1mg; question aetiology if no response to repeated dose

***Associated documents:**

- **Benzodiazepines and Z- Hypnotics policy**
- **Medication Used in Rapid Tranquilisation policy**
- **Controlled Drug policy**

Figure 1: Benzodiazepine Comparative Data

	Benzodiazepines Hypnotics	Equivalent Dose	Duration of Action	Half – Life (Metabolite)	Comments
Hypnotics					
Long acting	Flurazepam	30mg	No information	35 hours	Quick onset but accumulates
	Loprazolam	500mcg – 1mg		6-12 hours	Shorter acting or minimally accumulating benzodiazepines
Short acting	Lormetazepam	500mcg – 1mg		10-12 hours	
Long acting	Nitrazepam	5mg	12-24 hours	15-38 hours	Accumulates especially in the elderly
Short acting	Temazepam	10mg	8 hours	8-15 hours	May delay, but not suppress REM sleep; Fewer drug interactions
Anxiolytics					
Short acting	Alprazolam	500mcg		6-12 hours	Severe withdrawal
Long acting	Chlordiazepoxide	15mg	2-4 days	5-30 (36-200 hours)	Used alcohol withdrawal. Slower onset vs. diazepam
	Diazepam	5mg	2-4 days	20 – 100 (36 – 200 hours)	Quicker onset and duration of action vs. lorazepam. IM causes pain; Diazemuls® IV better tolerated, used for benzodiazepine withdrawal
Short acting	Lorazepam	500mcg	8-12 hours	10-18 hours	Fewer drug interactions – slower onset, but longer duration vs. diazepam; IM well absorbed
	Oxazepam	15mg	8-12 hours	4-15 hours	Less affected by liver dysfunction; Fewer drug interactions
Anticonvulsants					
Long acting	Clonazepam	250mcg	1-2 days	24 – 48 hours	Only licensed for epilepsy

Ref: http://www.vhpharmsci.com/vhformulary/tools/benzodiazepines-comparison.htm

2. DRUGS USED IN PSYCHOSES AND RELATED DISORDERS

2.1 ANTIPSYCHOTICS

2.1.1 First Generation Antipsychotics

Chlorpromazine

Preparations	Tablets: 10mg, 25mg, 50mg, 100mg Syrup: 25mg/ 5ml Suspension: 100mg/5ml Injection 25mg in 1ml, 2ml ampoules
Dose	Oral: initially 25mg three times daily or as a single dose up to a maximum of 1000mg daily in divided doses maybe required in psychosis. Elderly third to half adult dose Injection (**IM**): 25–50mg every six to eight hours

Flupentixol

Preparations	Tablet: 3mg
Dose	3–9mg twice daily up to a maximum of 18mg daily. Elderly quarter to half adult dose.

Haloperidol

Preparations	Capsule: 500mcg Tablets: 1.5mg, 5mg, 10mg, 20mg, 500mcg Liquid: 2mg/ml (10mg in 5ml) Injection 5mg/ 1ml, in 1ml, 2 ml ampoules
Dose	Capsules, tablets and liquid in divided doses up to a maximum of 20mg daily. Elderly half adult dose. **Acute psychomotor agitation associated with psychotic disorder or manic episodes of bipolar I disorder** **(PO):** ADULT: 5–10 mg, repeated after 12 hours if necessary; maximum 20 mg per day. ELDERLY: Initially 2.5 mg, repeated after 12 hours if necessary up to maximum 5 mg daily. Doses above 5mg daily should only be used in patients who have tolerated higher doses and after reassessment of the risk-benefit. **(IM):** ADULT: 5 mg, repeated hourly if required—up to 15 mg daily is usually sufficient; Maximum 20 mg per day. ELDERLY: 2.5 mg, repeated hourly if required up to maximum 5 mg daily. Doses above 5 mg daily should only be considered in patients who have tolerated higher doses and after reassessment of the individual benefit-risk.

Promazine	**For psychomotor agitation**
Preparations	Tablets: 25mg, 50mg Oral Solution: 25mg/5ml, 50mg in 5ml.
Dose	100–200mg up to four times daily. Elderly 25- 50 four times a day

2.1.2 Second Generation Antipsychotics

Amisulpride

Sulpiride	
Preparations	Tablets: 200mg, 400mg Solution: 200mg/ 5ml
Dose	200–400mg twice daily up to a maximum of 2.4g daily. Elderly lower initial dose increase gradually.

Trifluoperazine	
Preparations	Tablets: 1mg, 5mg (may be difficult to obtain) Solution: 1mg/5ml (Stelazine®), 5mg / 5ml
Dose	Tablets 5mg twice daily increased by 5mg after 1 week, then at intervals of 3 days, according to the response. Elderly: reduce initial dose by at least half. No maximum dose given in the BNF, however generally taken to be 30mg

Zuclopenthixol Acetate	
Preparations	Injection 50mg/ 1ml, in 1ml and 2ml ampoules
Dose	50–150mg I.M, up to a maximum cumulative dose of 400mg per course (maximum 4 injections per course). Elderly 50 –100 mg. **Maximum length of course is 2 weeks** **Not for use in Rapid Tranquillisation**
Zuclopenthixol Dihydrochloride	
Preparations	Tablets: 2mg, 10mg, 25mg
Dose	Initially 20–30mg in daily divided doses up to a maximum of 150mg daily. To avoid any confusion always state the **salt** when prescribing zuclopenthixol

Preparations	Tablets: 50mg, 200mg Solution: 100mg/ 1ml
Dose	Negative symptoms: 50–300mg given twice daily Positive symptoms: 400mg–800mg given twice daily up to a maximum of 1.2g daily

Aripiprazole	
Preparations	Tablets: 5mg, 10mg, 15mg, 30mg *Oro-dispersible tablets: 10mg, 15mg, Oral solution: 1mg per 1 ml Injection 7.5mg/ ml (for rapid tranquilisation)
Dose	15mg daily, maximum 30mg daily IM initially 5.25 – 15mg (usual dose 9.75mg) as a single dose, followed by 5.25-15mg after 2 hours if necessary: maximum 3 injections daily. Maximum daily combined oral and parenteral does 30mg.
Clozapine (Clozaril®)	
Preparations	Tablets: 25mg, 100mg
Dose	12.5mg on day 1 titrating up to a therapeutic dose, which is usually 200–450mg in divided doses Maximum daily dose 900mg daily See Clozapine Guidelines dosing schedules Appendices **3 -5** NB: It is recommended that once the patient is (presumed to be) on a therapeutic dose that baseline plasma levels are taken to ensure that the patient has therapeutic and not toxic levels in the plasma. This is important especially if the patient is on other drugs (i.e. fluoxetine), which could increase plasma levels. Forms can be obtained either from your local Clozapine Clinic alternatively contact 'Guys Medical toxicology Unit' **See Clozapine Guidelines**
Olanzapine	
Preparations	Tablets: 2.5mg, 5mg, 7.5mg, 10mg, 15mg *****Oro-dispersible: tablets 5mg, 10mg
Dose	Oral: 10mg daily Maximum BNF dose by any route is 20mg daily Once daily dosage is recommended
Quetiapine	
Preparations	Immediate release(IR) Tablets: 25mg, 100mg, 150mg, 200mg, 300mg
Dose	IR tablets: Titrate dose from 25mg twice daily on day 1 to a therapeutic dose, usually 300–450mg daily (usually in 2 divided doses). Maximum of 750mg daily. Elderly initially 25mg as a single dose
Risperidone	
Preparations	Tablets: 500mcg, 1mg, 2mg, 3mg, 4mg, 6mg *Oro-dispersible: 1mg, 2mg

	Liquid: 1mg/ 1ml
Dose	Initiate dose slowly to prevent orthostatic hypotension, initially 2mg in 1 –2 doses on first day. Usual dose 4–6mg daily. Elderly initially 500mcg twice a day. Risk of EPSE's increases with dose Maximum licensed dose 16mg daily

*For in-patient and CRHT use only. Pharmacy will only supply on discharge or leave prescription if the prescription is clearly annotated with **"For compliance reasons"**, if not the ordinary tablets will be supplied.

Note: The Trust advocates that where all things are equal (e.g. there are no contra indications to use) the antipsychotic with the cheapest purchase price should be used.

2.1.3 Antipsychotic Depot and Long Acting Injections

Flupentixol decanoate	
Preparations	Injection 20mg in 1ml, 1ml and 2ml ampoules Injection 100mg in 1ml, 0.5ml and 1ml ampoules Injection 200mg in 1ml, 1ml ampoules
Dose	Test dose 20mg then after at least 7 days 20 -40mg repeated at intervals of 2-4 weeks adjusted according to response: max 400mg weekly; usual maintenance dose 50mg every 4 to 300mg every 2 weeks Elderly: Initially quarter to half adult dose
Haloperidol decanoate	
Preparations	Injection 50mg in 1ml, 1ml ampoule Injection 100mg in 1ml, 1ml ampoule
Dose	Initially 50mg every 4 weeks, if necessary increasing by 50mg increments to 300mg every 4 weeks
Zuclopenthixol decanoate	
Preparations	Injection 200mg in 1ml, 1ml ampoules Injection 500mg in 1ml, 1ml ampoules
Dose	**See figures 2, 3 and 4**

Restricted Use (Consultant Prescribing only) Long Acting Injections

Aripiprazole Preparations	Long Acting Injection 400mg
Dose	400mg every 1 month to be injected into gluteal muscle. 10-20mg daily of oral Aripiprazole to be

	continued for 14 consecutive days after 1st injection
Paliperidone Preparations	**Xeplion® monthly** Long Acting Injection; 50mg, 75mg, 100mg,150mg
Dose	Monthly Initially 150mg on day 1 then 100mg on day 8 to be injected into deltoid muscle then adjusted according to response, maintenance 50-150mg per month.
	Trevicta® 3-monthly injection: 175mg, 263mg, 350mg, 525mg
Dose	initially 175mg-525mg every 3 months adjusted according to response **For initiation please refer to the "Proposal for Paliperidone 3-Monthly Formulary Inclusion"**

Associated documents:

Prescribing Guidelines: Second Generation Antipsychotic Long Acting Injections
High Dose Antipsychotics Prescribing Policy
Trust Depot injection Switching Guidelines
NCL Antipsychotics Monitoring Fact Sheet

Figure 2: Depot Pharmacokinetics

Drug:	Duration of Action:	Peak:	Rate Limiting Half-Life:	Time to Steady State:
Aripiprazole	1 month	4-7 days	28 days	By the 4th dose monthly intervals
Flupentixol Decanoate	3-4 weeks	7-10 days	8 days (single dose) 17 days (multiple doses)	10 -12 weeks
Haloperidol Decanoate	4 weeks	3-9 days	18 - 21 days (single and chronic)	10 -12 weeks at monthly dosing
Paliperidone Palmitate monthly LAI - **Xeplion®**	1 month	13 days	25 - 49 days	-
Paliperidone 3-monthly LAI - **Trevicta®**	3 months	30-33 days	84-95 Deltoid 118-139 Gluteal	-
Risperidone (Risperdal Consta ®) non -formulary	-	4-6 weeks	3 - 6 days	After 4 injections at 2 week intervals-
Zuclopenthixol Decanoate	-	5 - 7 days	-	-

Source: Psychotropic Drug Directory 2018 or www.medicines.org.uk/emc

Figure 3: Antipsychotic depot equivalent doses

Drug	Equivalent Dose	Dose range mg per week	Interval	Test Dose
Flupentixol	40mg	12.5 - 400	2 weeks	20mg
Haloperidol	100mg	12.5 - 75	4 weeks	25mg
Risperidone	No equivalent dose information available			NA
Zuclopenthixol	200mg	100 - 600	2 weeks	100mg

BNF: These equivalences are **only** intended as an approximate guide, individual dosage instructions should **also** be checked; patients should be carefully monitored after any change in medication. **Give quarter or half stated doses in the elderly**

Figure 4: Maximum Doses of Antipsychotic Drugs (PO)

Drug(ORAL)	Adult Maximum daily dose	Older Age Adult Maximum daily dose	CAMHS Ref: BNF for Children July 2014 – July 2015)
Amisulpride	1200mg	Same as adult	Same (15-18 years)
Aripiprazole	30mg	Same as adult	Same (13-18years)
Clozapine	900mg	Same as adult	Same (12-18years)
Olanzapine	20mg	Same as adult	Same (12-18 years)
Paliperidone	12mg	Same as adult	Not listed
Quetiapine	750/*800mg (mania)	Same as adult	Same (12-18 years)
Risperidone	16mg	Same as adult	16mg (12-18 years)

Chlorpromazine	1000mg	Third – half adult dose	40mg (1-6 years) 75mg (6-12 years) 1000mg (12-18 years)
Flupentixol	18mg	Same as adult	Not recommended
Haloperidol	20mg	Same as adult	6mg (3-13 years) 10mg (13-18 years)
Levomepromazine	1000mg	Same as adult	Not recommended
Pimozide	20mg	Same as adult	Same (12-18years)
Sulpiride	2400mg	Same as adult	Same (14-18years)
Trifluoperazine*	None (30mg suggested)	Same as adult	None
Zuclopenthixol	150mg	Same as adult	Not recommended

Figure 5 Maximum Doses of Antipsychotic Depots

DEPOT INJECTIONS	MAXIMUM DOSE	
Aripiprazole LAI	400mg	1/12
Flupentixol Decanoate	400mg	1/52
Haloperidol Decanoate	300mg	4/52
Olanzapine Embonate (non-formulary)	300mg	2/52
Paliperidone LAI Monthly (**Xeplion®**)	150mg	1/12
Paliperidone LAI 3-Monthly (**Trevicta®**)	525mg	3/12
Risperidone LAI (non- formulary)	50mg	2/52
Zuclopenthixol Decanoate	600mg	1/52

KEY:
* - Maximum dose not stated in BNF

Figure 6: Relative Side Effects of Atypical Antipsychotic Drugs

Drug	Extra Pyramidal	Weight Gain	Prolactin Elevation	Cardiac Effects	Sedation	Hypotension	Anti-Cholinergic Effects
Amisulpride	+	+	+++	-	-	-	-
Clozapine	-	++/+++	-	+	+++	++	+++
Olanzapine	+/-	+++	+	-	+++	-	+
Quetiapine	-	++	-	-	+	+	+
Risperidone	+ (Dose-related)	+	++	-	+	+	-
Aripiprazole	-	-	-	-	-/+	-	-
Paliperidone	+	+	++	-	+	+	-

Key: - = little or nothing reported + = mild ++ = moderate +++ = marked

3. ANTIMANIC DRUGS

Lithium Carbonate	**Priadel®** (Li^+ 5.4mmol/200mg)
Preparations	Tablets: 200mg, 400mg
Dose	Start at 400mg once daily aiming for blood levels of 0.4mmol–1.0mmol/l (0.4 – 1.2g daily as a single dose or in 2 divided doses) NB: needs regular blood tests to check serum levels once stabilised – every 3/12
Lithium Carbonate	**Liskonium®** (Li^+ 12.2mmol/450mg)
Preparations	Tablet: 450mg
Dose	450-675mg twice daily
Lithium Carbonate	**Camcolit®** (Li^+ 6.8mmol/250mg)
Preparations	Tablets: 250mg and 400mg
Dose	Initially 1-1.5g daily; prophylaxis, initially 300-400mg daily
Lithium Citrate	**Priadel®** (Li^+ 5.4mmol/520mg)
Preparations	Sugar free liquid 520mg/ 5ml
Dose	1.04 - 3.12g in two divided doses daily
Carbamazepine	
Preparations	Tablets: 100mg, 200mg and 400mg. M/R tablets 200mg and 400mg.
Dose	Usually range 400 - 600mg daily in divided doses; maximum 1.6g a day.
Valproate Semi-Sodium	**Depakote®**
	*** Valproate MUST no longer be prescribed to women or girls of childbearing potential unless they are on the pregnancy prevention programme (PPP).**
Preparations	Licensed for the **acute** treatment of manic episode associated with bipolar disorder. Tablets: 250mg, 500mg
Dose	750mg daily in 2 or 3 doses and increased according to response up to 1–2g
Sodium Valproate◂	Unlicensed **(Green)** *** Valproate MUST no longer be prescribed to women or girls of childbearing potential unless they are on the pregnancy prevention programme (PPP).**
Preparations	Crushable tablets 100mg E/C tablets 200mg and 500mg M/R 200mg, 300mg and 500mg Liquid 200mg/ 5ml

Dose	Commence on 500mg MR daily or 250mg three times daily (Depakote® - semi sodium valproate) then increase until plasma levels reach 50-100mg/L (ref: Maudsley Guidelines 2015) **Valproate medicines are non-formulary for females of childbearing potential.**

3.1 Second Generation Antipsychotics

Olanzapine	
Preparations	Tablets: 2.5mg, 5mg, 7.5mg, 10mg, 15mg Oro-dispersible tablets 5mg, 10mg, 15mg
Dose	15mg single daily dose mono-therapy 10mg daily in combination therapy
Quetiapine	
Preparations	Tablets: 25mg, 100mg, 150mg, 200mg, 300mg
Dose	50mg twice daily on day 1; 100mg twice daily on day 2; 150mg twice daily on day 3; 200mg twice daily on day 4; then adjusted according to response in steps of up to 200mg daily to a maximum of 800mg daily.
Risperidone	
Preparations	Tablets: 500mcg, 1mg, 2mg, 3mg, 4mg, 6mg Oro-dispersible1mg, 2mg Liquid 1mg in 1ml
Dose	Initially 2mg once daily increased if necessary in steps of 1mg daily; usual dose range 1-6 mg daily.

3.2 Other Drugs

Clonazepam◄	**Unlicensed (Green)**
Preparations	Tablets: 500 micrograms, 2mg Oral solution 100 microgram/ ml
Dose	Not defined for mood stabilisation but dose range used in epilepsy commonly followed i.e. Usual maintenance dose of 4-8mg usually at night (may be given in 3-4 divided doses if necessary).
Lamotrigine◄	**Unlicensed (Green)**
Preparations	Tablets: 25mg, 100mg, 200mg Dispersible tablets 25mg, 100mg

Dose	Dose as a mood stabiliser uncertain, but likely to be similar to that used in epilepsy (50 – 200mg)

◂These drugs are currently unlicensed for use as mood stabilisers. It is important when prescribing these drugs that the patient's consent is obtained and that this consent is clearly documented in their notes.

***Drugs marked with asterisks do not have UK marketing authorisation for the use in question at the time of publication of this clinical guideline.**

4. ANTIDEPRESSANT DRUGS

4.1 Tricyclic & Tricyclic-related Antidepressants

Amitriptyline hydrochloride	
Preparations	Tablets: 10mg, 25mg, 50mg Oral solution 25mg in 5ml, 50mg in 5ml
Dose	Initially 75mg increasing (elderly 30-75mg) gradually to a maximum of 150–200mg (best given as a single night time dose although BNF states can be given in divided doses)
Clomipramine hydrochloride	
Preparations	Capsules: 10mg, 25mg, 50mg Tablet: M/R 75mg
Dose	Initially 10mg daily, increased gradually to 30–150mg daily as a single dose at bedtime or in divided doses up to a maximum of 250mg daily
Imipramine hydrochloride	
Preparations	Tablets: 10mg, 25mg
Dose	Initially up to 75mg daily in divided doses increasing up to a maximum of 150–200mg daily. Hospital may go to 300mg (Up to 150mg may be given as a single dose)
Lofepramine	
Preparations	Tablet: 70mg Oral suspension 70mg in 5ml
Dose	140mg–210mg daily in divided doses
Nortriptyline	
Preparations	Tablets: 10mg, 25mg
Dose	Low dose initially increasing to 75–100mg a day in divided doses or as a single dose May go to 150mg daily (Manufacturer recommend plasma level monitoring at doses above 100mg daily)
Trimipramine	
Preparations	Capsules 50mg Tablets: 10mg, 25mg

Dose	50-75mg in divided doses or as a single dose at bedtime, increasing to a maximum of 150mg–300mg daily
Trazodone hydrochloride	
Preparations	Capsules: 50mg, 100mg Tablet: 150mg
Dose	150mg daily in divided doses after food or as a single dose at bedtime (after food) [100mg in the elderly] increasing slowly to a maximum of 300mg. Hospital use up to 600mg daily

4.2 Monoamine Oxidase Inhibitors (MAOIs) and Reversible Monoamine-Oxidase Inhibitors (RIMAs)

Phenelzine	
Preparations	Tablet: 15mg
Dose	15mg three times daily, increased to four times daily after 2 weeks. **Hospital use**, maximum 30mg three times daily.
Moclobemide	
Preparations	Tablets: 150mg, 300mg
Dose	300mg in two divided doses up to a maximum of 600mg daily

4.3 Selective Serotonin Reuptake Inhibitors (SSRIS) Antidepressants

Citalopram	
Preparations	Tablets: 10mg, 20mg, Drops 40mg in 1ml
Dose	20mg once daily increasing to a maximum of 40mg daily if necessary. Elderly, maximum dose 20mg.
Fluoxetine	
Preparations	Capsules 20mg, 30mg Liquid 20mg in 5ml
Dose	Depressive illness 20mg once daily Bulimia nervosa 60mg once daily, maximum 80mg once daily OCD initially 20mg daily increasing to a maximum of 60mg

	once daily if necessary
Paroxetine	
Preparations	Tablets: 20mg, 30mg Liquid 10mg in 5ml
Dose	Depression, PTSD 20mg each morning increasing gradually to a maximum of 50mg daily OCD Initially 20mg each morning increasing gradually in weekly steps of 10mg to a maximum of 60mg daily if necessary
Sertraline	
Preparations	Tablets: 50mg, 100mg
Dose	50mg once daily increasing if necessary to a maximum of 200mg daily

4.4 Other Antidepressant Drugs

Flupentixol	
Preparations	Tablets: 500micrograms, 1mg
Dose	1mg daily increasing after one week to 2mg. Maximum dose 3mg. Doses above 2mg should be given in divided doses. Reduce dose in the elderly
Mirtazapine	
Preparations	Liquid 15mg/ml (Soluble) Tablets 15mg 30mg & 45mg
Dose	15mg at bedtime, increased to a maximum of 45mg (also at bedtime)
Reboxetine	
Preparations	Tablet: 4mg
Dose	4mg twice daily, increased slowly to 10mg in divided doses. Maximum dose 12mg daily NB: Not licensed for use in elderly
Venlafaxine	
Preparations	Capsules modified release 75mg, 150mg Tablets 37.5mg, 50mg, 75mg
Dose	75mg daily increasing to a maximum of 225mg (capsules) and 375mg (tablets) NB: Tablets are intended for twice daily dosage and

	capsules are intended for daily dosage. **Note:** MHRA - Venlafaxine (EFFEXOR®) Summary of basis for Regulatory Position.
Vortioxetine	
Preparations	Tablets: 5 mg, 10mg and 20mg
Dose	The starting and recommended dose is 10 mg daily in adults less than 65 years of age. The dose may be increased to a maximum of 20 mg daily or decreased to a minimum of 5 mg daily. Elderly patients: starting dose is 5 mg daily. Caution is advised when treating patient ≥ 65 years of age with doses higher than 10 mg daily for which data are limited.

Figure 7 SWITCHING BETWEEN ANTIDEPRESSANTS RECOMMENDED WASHOUT PERIODS

To → / From ↓		MAOIs		TCA	SSRIs				
		Hydrazines	Tranylcypromine	Tricyclics	Citalopram	Fluvoxamine	Fluoxetine	Sertraline	Paroxetine
MAOIS	Hydra-zines	14	14	7-14	14	14	14	14	14
	Tranyl Cypro-Mine	14		14	14	14	14	14	14
Tricyclics		7	7	CROSS TAPER	CROSS TAPER	CROSS TAPER	CROSS TAPER	CROSS TAPER	CROSS TAPER
Reboxetine									
Citalopram		7	7	CROSS TAPER		0	0	0	0
Fluoxetine		35	35	0	4-7	4-7		4-7	4-7
Sertraline		14	14	CROSS TAPER	0	0	0		0
Paroxetine		14	7	CROSS TAPER	0	0	0	0	
Trazodone Nefazodone		7	7	CROSS TAPER	0	0	0	0	0
Moclobemide		1	1	1	1	1	1	1	1
Venlafaxine		7	7	CROSS TAPER	CROSS TAPER WITH CARE	CROSS TAPER WITH CARE	CROSS TAPER WITH CARE	CROSS TAPER WITH CARE	CROSS TAPER WITH CARE
Mirtazapine		14	14	0	0	0	0	0	0

To → / From ↓		Trazodone Nefazodone	Tryptophan	Moclobemide	Venlafaxine	Mirtazapine	Reboxetine
MAOIS	Hydra-zines	14	14	1-14	14	14	14
	Tranyl Cypro-mine	14	1-14	7-14	14	14	14
Tricyclics		CROSS TAPER	CROSS TAPER	7	CROSS TAPER	0	CROSS TAPER WITH CARE
Reboxetine		CROSS TAPER	CROSS TAPER	CROSS TAPER	CROSS TAPER	CROSS TAPER	
Citalopram		0	CAUTION	7	0	0	CROSS TAPER
Fluoxetine		4-7	CAUTION	35	4-7	4-7	0
Sertraline		0	CAUTION	4-13	0	0	CROSS TAPER
Paroxetine		0	0	4-14	0	0	CROSS TAPER
Trazodone Nefazodone			0	0	CAUTION	0	0
Moclobemide		0	0		0	0	0
Venlafaxine		CAUTION	0	0		0	0
Mirtazapine		0	0	0	0		0

Notes:

1. Numbers indicate number of days to leave between last dose of first antidepressant and starting new drug. Zero indicates that one drug should be withdrawn completely before starting new drug, but that no wash out period is required. "Cross Taper" indicated that drugs can be swapped by cross tapering over a few weeks. "Caution" indicates that evidence is scarce or that problems have been reported.
2. Information for all combinations is not available - please refer to Pharmacy for latest recommendations.
3. Values may range depending on quantity and quality of evidence available.

References

1. Bethlem & Maudsley NHS Trust Prescribing Guidelines 12th Edition (2015), Martin Dunitz Publishing
2. Psychotropic Drug Directory 2018, Bazire S, Mark Allen Publishing Ltd

Figure 8 ANTIDEPRESSANTS - SUMMARY OF CLINICAL INFORMATION

Drug	Max. Licensed Dose (Adult) mg/day	Half-Life (Hours)	Relative Side-Effects at Average Doses					
			Anti-Cholinergic	Cardiac	Nausea	Sedation	Toxicity in Overdose	Procon-vulsant Effect
Tricyclics								
Amitriptyline	150	8-24	+++	+++	++	+++	+++	++
Clomipramine	150+	17-28	+++	++	++	++	++	++
Imipramine	300	4-18	++	++	++	++	+++	++
Lofepramine	210	1.6	++	+	+	+	0	+
Nortriptyline	150	18-96	++	+	++	+	++	+
TCA-Related								
Trazodone	600	3-7	+	+	+++	++	+	+
MAOIs								
Phenelzine	90	1.5	+	+	++	+	++	0
Tranylcypromine	30+	2.5	+	+	++	0	+++	0
RIMA								
Moclobemide	600	1-2	+	0	+	0	0	NK
SSRIs								
Fluvoxamine	300mg	13-22	+	0	+++	+	0	0
Fluoxetine	60	24-140	0	0	++	0	0	+
Paroxetine	50	24	0	0	++	0	0	+
Sertraline	200	25-26	0	0	++	0	0	+
Citalopram	40	33	0	0	++	0	0	+
SNRIs								
Venlafaxine	375 (tabs) 225 (m/r caps)	1-2	0	+	++	+	+	+
Other								
Flupentixol	2	35	0	0	0	+	+	NK
Mirtazapine	45	20-40	0	0	0	++	0	+
Reboxetine	12	13	+	+	+	0	0	+

Key:

+++ Significant effect
++ Moderate effect
+ Mild effect
0 little or no effect
NK not known

Reference: Psychotropic Drug Directory 2003/04", Bazire, Mark Allan Publishing Ltd

Notes:

1, Maximum doses quoted are those determined by the Product Licenses. Higher doses may be appropriate in certain circumstances but would constitute unlicensed use.

2. The different maximum licensed doses for different formulations of venlafaxine are due only to the fact that different doses were used in the trials undertaken for licensing purpose

Figure 9: Licensed Indications for Antidepressant Drugs

	DEPRESSION	DEPRESSION + ANXIETY	OCD	PANIC DISORDER	SOCIAL ANXIETY	SOCIAL PHOBIA	POST-TRAUMATIC STRESS DISORDER	GENERALISED ANXIETY DISORDER	BULIMIA NERVOSA
AMITRIPTYLINE	✓								
CITALOPRAM	✓			✓					
CLOMIPRAMINE	✓		✓			✓			
FLUOXETINE	✓	✓	✓						✓
FLUPENTHIXOL	✓	✓							
IMIPRAMINE	✓								
LOFEPRAMINE	✓								
MIRTAZAPINE	✓								
MOCLOBEMIDE	✓					✓			
NORTRIPTYLINE	✓								
PAROXETINE	✓	✓	✓	✓	✓	✓	✓	✓	
REBOXETINE	✓								
SERTRALINE	✓	✓	✓ *						
TRAZODONE	✓	✓							
VENLAFAXINE	✓							✓**	

Notes:
Indications correct as of September 2018 – check latest SPC for changes.
Many effects of antidepressants are class effects – clinical judgement should be used to determine whether the technical "off label" use of a drug is clinically better than the use of a particular drug just because it holds an appropriate indication.
* - Sertraline is licensed for paediatric use in OCD (under specialist supervision)
** - only the XL formulation of venlafaxine is licensed for GAD

5. DRUGS USED IN ADULT ADHD

Atomoxetine	
Preparations	Capsules: 10mg, 18mg, 25mg, 40mg, 60mg, 100mg
Dose	Initial 40mg daily for 7 days Increased to maintenance for 80-100mg Max dose 120mg
***Dexamfetamine Sulfate**	**(CD schedule 2)**
Preparations	Tablet: 5mg Oral solution: 1mg/ml
Dose	Initially 5mg twice daily, dose is increased at weekly intervals according to response. Maintenance dose to be given in 2-4 divided doses; maximum 60mg daily.
Lisdexamfetamine	**(CD schedule 2)**
Preparations	Capsules: 30mg, 50mg, 70mg
Dose	Unlicensed in adult use. Initially 30mg once daily (in the morning), increased in steps of 20mg every week if required. Maximum 70mg per day.
***Methylphenidate Hydrochloride**	**Generic, Ritalin® (CD schedule 2)**
Preparations	Tablets: 5mg,10mg,20mg
Dose	Initial 5mg 2-3 times daily, increased weekly if needed. Max dose 100mg daily in 2-3 divided doses.
***Methylphenidate Hydrochloride**	**Concerta® XL (CD schedule 2)**
Preparations	Tablets: 18mg, 27mg, 36mg
Dose	Initial 18mg once daily in the morning, increased weekly. Max dose 108mg
***Methylphenidate Hydrochloride**	**Equasym XL®, Medikinet XL® (CD schedule 2)**
Preparations	Capsules: 10mg, 20mg, 30mg
Dose	Initial 10mg daily in the morning, increased weekly. Max dose 100mg

***Not licensed for use in adults; however in Formulary based on NICE Guidelines CG72 (Feb 2016)**

Refer to:
NCL Shared Care Guideline: Methylphenidate (immediate release and long acting), Atomoxetine, Dexamfetamine and Lisdexamfetamine for treatment of Adult Attention Deficit Hyperactivity Disorder (ADHD)

6. DRUGS USED IN PARKINSONISM AND RELATED DISORDERS

6.1 Antimuscarinic Drugs Used in Parkinsonism

Trihexphenidyl	(Benzhexol)
Preparations	Tablets: 2mg, 5mg. Syrup: 5mg in 5ml.
Dose	Initial 1mg daily increased gradually. Maintenance 5-15mg daily in 3-4 divided doses. Max 20mg daily. Elderly Lower end of range.
Orphenadrine	
Preparations	Tablet: 50mg. Syrup: 50mg in 5ml.
Dose	Initial 150mg daily in divided doses. Increase gradually. Max 400mg daily. Elderly Lower end of range
Procyclidine	
Preparations	Tablet: 5mg. Injection 5mg/5ml Syrup 5mg in 5ml, 2.5mg/5ml
Dose	Initial 2.5mg three times daily. Increase gradually if necessary. Max 30mg daily. Elderly Lower end of range.

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

Tetrabenazine	
Preparations	Tablet: 25mg.
Dose	Moderate to severe tardive dyskinesia, initially 12.5mg daily, gradually increased according to response

7. DRUGS USED IN SUBSTANCE DEPENDENCE

7.1 Alcohol Dependence

***Acamprosate Calcium**	
Preparations	Tablet: 333mg
Dose	60kg and over, 666mg three times daily; less than 60kg.
***Disulfiram**	
Preparations	Tablet: 200mg.
Dose	800mg as a single dose on first day, reducing over 5 days to 100 –200mg daily; should not be continued for longer than 6 months without review

7.2 Cigarette smoking

Nicotine	
Preparations	Nicorette® Microtab (sublingual): 2mg Chewing gum: 2mg, 4mg. Patches: 5mg, 10mg, 15mg Nasal spray: 500micrograms/ metered spray Inhalator: 10mg/ cartridge Nicotinell® TTS Patches: '10' patch (releasing approx. 7mg/24 hours); '20' patch (releasing approx. 14mg/ 24 hours); '30' patch (releasing approx. 21mg/ 24hours)
Dose	See BNF or Summary of Product Characteristics

7.3 Opioid Dependence

Buprenorphine	
Preparations	**First choice:** **Espranor®** (**oral lyophilisates sugar free**): 2mg, 8mg **Second choice:** **Subutex® -**Tablets (**sublingual**): 400micrograms, 2mg; 8mg
Dosage	Espranor**® (oral)** initially 2mg daily, followed by 2-4mg if required on day one, adjusted in steps of 2-6mg daily if needed, for adjustment of dosing interval following stabilisation. Maximum daily dose 18mg per day. **[Espranor® is not interchangeable with other buprenorphine products – MUST prescribe by brand].**

[The route of administration for Espranor® is on the tongue, NOTunder it]

Subutex (**sublingual**) Initially, 0.8 –4mg as a single daily dose, adjusted according to response; max. 32mg daily; withdraw gradually

Lofexidine Hydrochloride	
Preparations	Tablet: 200micrograms
Dose	Initially, 200micrograms twice daily, increased as necessary in steps of 200 –400micrograms daily to max.2.4mg daily; recommended duration of treatment 7-10days if no opioid use (but longer may be required); withdraw gradually over 2-4 days or longer.
Methadone Hydrochloride	
Preparations	Oral solution 1mg/ml
Dose	Initially 10-40mg daily, increased by up to 10mg daily (max. weekly increase 30mg) until no signs of withdrawal or intoxication; usual dose range 60-120mg daily.
Naltrexone Hydrochloride	
Preparation	Tablet: 50mg
Dose	***(Initiate in specialist clinics)*** 25mg initially then 50mg daily; the total weekly dose may be divided and given on 3 days of the week for improved compliance.

7.4 Reversal of opioid induced respiratory depression and over-dosage with opioids

Naloxone Hydrochloride	
Preparation	Injection 400micrograms/ml
Dose	100-200 micrograms (1.5-3micrograms/kg); if response inadequate, increments of 100micrograms every 2 minutes; further doses by intramuscular injection after 1-2 hours if required

8. DRUGS FOR DEMENTIA

Donepezil	
Preparations	Tablets: 5mg, 10mg.
Dosage	Initially 5mg daily at bedtime, increased if necessary after one month to 10mg daily. Max.10mg daily
Galantamine	
Preparations	Tablets: 4mg, 8mg, 12mg XL Capsules 8mg, 16mg, 24mg
Dosage	Tablets: initially 4mg twice daily for four weeks increased to 8mg twice daily for four weeks. Maintenance 8-12mg twice daily XL capsules: initially 8mg daily for 4 weeks Maintenance 16mg daily for 4 weeks, increasing to 24mg daily depending on clinical benefit and tolerability
Rivastigmine	
Preparations	Capsules 1.5mg, 3mg, 4.5mg, 6mg Oral solution 2mg/ml Transdermal patch 4.6mg/24 hours, 9.5mg/ 24hours
Dosage	Oral: Initially 1.5mg twice daily, increased in steps of 1.5mg twice daily at intervals of at least two weeks according response and tolerance. Maintenance 3–6mg twice daily. Max.6mg twice daily. Patches: initially 4.6mg/24 hours. Increase after a minimum of 4 weeks to 9.5mg/24 hours if well tolerated. Maintenance 9.5mg/24 hours If treatment is interrupted for several days re–introduce with initial dose and increase gradually.
Memantine	
Preparations	Tablets: 5mg, 10mg Oral solution 5mg/ actuation (10mg/ ml)
Dosage	Initially 5mg once daily, increased in steps of 5mg at weekly intervals to max. 20mg.

9. DRUGS USED IN ERECTILE DYSFUNCTION

Sildenafil	
Preparations	Tablets: 25mg, 50mg, 100mg
Dosage	Initially, 50mg approx. 1 hour before sexual activity, subsequent doses adjusted according to response to 25-100mg as a single dose as needed; max 1 dose in 24 hours (max single dose 100mg)Onset of effect may be delayed if taken with food Consider prescribing 25mg to men with hepatic or severe renal dysfunction (may be increased if appropriate); those on certain medication and in those who have failed to tolerate higher doses. Endorse FP10 (HP) prescriptions with SLS **Refer to the Trust Guidelines on the Management of Erectile Dysfunction**