HPFT

High Dose Antipsychotic Therapy (HDAT)

(In patients aged 18 years and over)

This policy provides guidance for the safe and appropriate use of HDAT within the Trust.

HPFT Policy

Version	1
Executive Lead	Executive Director of Quality and Medical Leadership
Lead Author	PICU Consultant Psychiatrist
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Target Audience	All staff involved in prescribing, dispensing, administration and monitoring of HDAT

Document on a Page			
Title of document	High Dose Antipsychotic Therapy (HDAT) (In patients aged 18 years and over)		
Document Type	Policy		
Ratifying Committee	Drugs and Therapeutics Committee		
Version	**Issue Date**	**Review Date**	**Lead Author**
1	10/07/2019	10/07/2022	PICU Consultant Psychiatrist
Staff need to know about this policy because (complete in 50 words)	Antipsychotics are sometimes prescribed alone or in combination, which can result in cumulative daily doses above recommended limits (HDAT). The use of HDAT has been linked with cardiovascular toxicity and sudden death, thus the aim of this policy is to reduce the risk of adverse events for individuals who require HDAT.		
Staff are encouraged to read the whole policy but I (the Author) have chosen three key messages from the document to share:	1. The use of HDAT should be exceptional clinical practice and only employed when an adequate trial of standard treatments, including clozapine, have failed and the responsibility to exceed the licensed dose of a single antipsychotic, or a combination of more than one, lies with the service user's Consultant Psychiatrist. 2. High dose antipsychotic treatment regime should be as a limited therapeutic trial with doses returned to standard dosage of the BNF or SPC after a period of 3 months, unless the clinical benefit outweighs the risks. 3. Documentation of target symptoms, response and side effects, ideally using validated rating scales, should be standard practice so that there is on-going consideration of the risk-benefit ratio for the patient. Close physical monitoring is essential.		

Summary of significant changes from previous version are:	1. Previously this policy was a guideline which was only for acute and forensic services, however now it is a trust wide policy applicable to all services where HDAT may be used (both in-patient and community). 2. The recommendation in this policy is for the need for HDAT to be reviewed at least 2-weekly on in-patient wards; the frequency of review may be reduced to 4-weekly in patients stabilised on HDAT if deemed clinically appropriate. The need for HDAT must be reviewed at least 3-monthly for service users being treated in the community. 3. Each time the High Dose Antipsychotic Therapy Monitoring Sheet is updated, a copy of this sheet should be scanned in to the relevant EPR. 4. Where HDAT is prescribed for an individual, both on-going prescribing and monitoring responsibility must remain with the relevant HPFT Consultant Psychiatrist. GPs will not be expected to accept prescribing and monitoring responsibility. The GP should be informed of HDAT status and be sent a copy of the HDAT Policy, and any test results.

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PART 1 – Preliminary Issues:

1. Introduction

- This policy is based on the Royal College of Psychiatrists consensus statement 2006. The use of high dose antipsychotics has been linked with cardiovascular toxicity and sudden death, thus the aim of this policy is to reduce the risk of adverse events for individuals who require high doses of antipsychotics.

- This policy is relevant to, and should be read by the following staff groups:
  - All Prescribers
  - All Pharmacy staff
  - All Nursing staff
  - All staff caring for patients on high dose antipsychotic treatment
  - Other staff groups working as care co-ordinators or lead professionals for service users

- Antipsychotic drugs are sometimes prescribed alone or in combination, which can result in cumulative daily doses above the recommended limits, particularly for individuals with treatment resistant conditions. Based on evidence currently available, high dose prescribing (either with a single agent or combined antipsychotics) should rarely be used and only then for a time-limited trial* in treatment-resistant schizophrenia, after all evidence-based approaches have been shown to be unsuccessful or inappropriate. (*Time-limited trial - this must be agreed when deciding to use a high dose, and alternatives which may be used at this point must be considered). Following the time-limited trial, the necessity for continuing high dose prescribing must be reviewed.

- The prescribing of high dose and combination antipsychotics was also an area identified by the national Prescribing Observatory for Mental Health (POMH-UK), who run audit-based quality improvement programmes (QIPs) that focus on prescribing practice. POMH-UK developed an audit on this topic for which there were three standards:

  - The total daily prescribed dose of antipsychotic drugs is within SPC/BNF limits. (Royal College of Psychiatrists, 2006)
  - Individuals are prescribed only one antipsychotic at a time. (NICE Psychosis and schizophrenia in adults: prevention and management CG178)
  - Where high dose antipsychotics are prescribed, there should be a clear plan for regular clinical review including safety monitoring.

2. Objectives

To ensure staff are:

- provided with guidance regarding the prescribing and monitoring of high dose antipsychotic therapy (HDAT).
- aware of the risks associated with prescribing HDAT and consideration to specific patient groups.
- aware of the treatment approaches to follow before considering prescribing HDAT.
- aware that only Consultant Psychiatrists can commence regular HDAT and the importance of involving the multidisciplinary team and patient (and advocate/carer) in the decision, and also the required documentation.
- aware of the procedure to follow once the decision to use HDAT has been agreed.
- aware of the pre-treatment assessments and on-going monitoring requirements associated with HDAT prescribing.
- aware of individual staff group responsibilities for patients being considered for, or on HDAT.
- aware of the action to take when considering discharge from inpatient care, including clarity around who will be responsible for continuing prescribing after the patient has been discharged.

3. Scope

- This document outlines the policy for prescribing and monitoring of high dose antipsychotic therapy (HDAT) in all clinical areas across HPFT services and also identifies the roles and responsibilities of staff involved with HDAT.
- Staff have a responsibility to maintain their knowledge of the contents of this policy and comply with it at all times.

4. Definitions

- **High dose antipsychotic therapy (HDAT):** an antipsychotic drug prescribed at a daily dose above the maximum recommended limit in the BNF or Summary of Product Characteristics (SPC), with respect to the age of the patient and the indication being treated OR more than one antipsychotic prescribed concurrently where the sum of each antipsychotic 'percentage of BNF maximum' is greater than 100%.
- **ECG (electrocardiogram):** a test that records the electrical activity of the heart; it is used to help diagnose certain heart abnormalities.
- **SPC (summary of product characteristics):** a document produced by the manufacturer of a medicine, which describes the properties and conditions for use of that particular medicinal product.
- **Neuroleptic malignant syndrome (NMS):** a rare, but life-threatening, idiosyncratic reaction to neuroleptic medications that is characterised by fever, muscular rigidity, altered mental status, and autonomic dysfunction.

5. Duties and Responsibilities

- **Executive Director Quality & Medical Leadership and Executive Director of Quality and Safety (Chief Nurse)**
  The Executive Director Quality & Medical Leadership and Executive Director of Quality and Safety are responsible for the statutory duty of quality and safety and takes overall responsibility for this policy.

- **Strategic Business Unit Heads of Nursing**
  The Heads of Nursing are responsible for the effective implementation of this policy in their areas of responsibility.

- **Consultant Psychiatrist Responsibilities:**
  - Use of HDAT is the responsibility of the Consultant Psychiatrist
  - Ensure guidance for the use of HDAT is followed and that recommended monitoring is carried out
  - Only a senior psychiatrist should prescribe high dose antipsychotics
  - Discuss the need for HDAT in multidisciplinary team meeting and document reason(s) in the EPR
  - Inform service user and document consent (or not) in notes
  - Carry out recommended monitoring and complete a High Dose Antipsychotic Therapy Monitoring Sheet - keep with the prescription chart. Scan sheet in to EPR each time it is updated
  - Ensure the need for HDAT is reviewed at least 2-weekly on in-patient wards; the frequency of review may be reduced to 4-weekly in patients stabilised on HDAT if deemed clinically appropriate. The review date, together with the signature of the doctor carrying out the review must be indicated on the High Dose/Combination Antipsychotic(s) Alert Card. The need for HDAT must be reviewed at least 3-monthly for service users being treated in the community. The reason(s) for continued use of HDAT must be documented in the EPR
  - Ensure upon service user's discharge from in-patient care that the relevant community mental health personnel are informed of HDAT status and required checks/necessary monitoring requirements
  - For any individual receiving HDAT, both prescribing and monitoring responsibility must remain within HPFT. The GP should be informed of HDAT status and be sent a copy of the HDAT Policy, and any test results

- **Doctor/Pharmacist Responsibilities:**
  - Identify that a service user is on HDAT or has the potential to require a high dose e.g. maximum regular dose and prn prescribed
  - Attach a High Dose/Combination Antipsychotic(s) Alert Card to the service user's prescription chart
  - Inform other staff of 'high dose' status
  - The team pharmacist must endorse the prescription chart with: High dose antipsychotic treatment (HDAT), calculate percentage of maximum dose, e.g. 120% and write on the prescription, indicate necessary monitoring requirements, e.g. BP, pulse, temperature, ECG and state "Off-label use" (where appropriate)

- **Ward / Team Managers and persons in charge of wards / units Responsibilities:**
  - Managers are responsible for ensuring the requirements of this policy are implemented and adhered to
  - Specific responsibilities of individuals (Job titles)
  - Responsibilities of staff groups or committees

- **Nursing Staff Responsibilities:**
  - Blood pressure check
  - Pulse rate check
  - Temperature check
    (Blood pressure, pulse rate and temperature checks – frequency as per monitoring sheet, or more frequently if clinically indicated, or if a requirement for a specific medication)
  - Document 'high dose' status in nursing notes
  - Develop care plan to check that the High Dose Antipsychotic Therapy Monitoring Sheet is being completed and bring to medical staff attention if checks have not been carried out
  - Ensure that 'high dose' status is discussed in multidisciplinary team meeting

Part 2 – What needs to be done and who by

6. IDENTIFICATION OF PATIENTS ON HDAT

- **Definition of High Dose**

  - An antipsychotic drug prescribed at a daily dose above the maximum recommended limit in the BNF or Summary of Product Characteristics (SPC), with respect to the age of the patient and the indication being treated.
    OR
  - more than one antipsychotic prescribed concurrently where the sum of each antipsychotic 'percentage of BNF maximum' is greater than 100%.

- High dose antipsychotic prescribing may be achieved in TWO ways;
  - Single antipsychotic drug prescribed (regularly, PRN or combination of these) at a total daily dose that exceeds 100% of the BNF or SPC recommended maximum.
  - More than one antipsychotic prescribed concurrently (regular and/or PRN), where the combination (% BNF or SPC maximum daily dose for each) results in doses above 100% of the BNF or SPC recommended maximum.

- Discretionary PRN or "as required" antipsychotic medication prescribed must be included when calculating the overall percentage, regardless of whether it is being used by the individual, assuming that use of high dose treatment is possible (unless the prescriber clearly states not to use if maximum daily dose of antipsychotic treatment already received via administration of regularly prescribed medication).

- Antipsychotics should not be used as prn sedatives. Short courses of benzodiazepines or general sedatives e.g. promethazine are recommended.

- High dose is calculated by working out, for each antipsychotic, the dose as a percentage of the BNF or SPC maximum and summing this for each drug. For example, 20mg olanzapine co-prescribed with prn oral haloperidol 5mg max. 10mg in 24 hours: Sum of % BNF max is 100% + 50% = 150% i.e. high dose antipsychotic. (Please refer to Appendices – High Dose Antipsychotic Therapy Monitoring Sheet / Antipsychotic Dosage Ready Reckoner - version 8)

7. SAFE AND APPROPRIATE USE OF HDAT

- Reviews of the dose-response effects of a variety of antipsychotic medications has not found any evidence of greater efficacy for doses above accepted licensed ranges. There is increasing evidence that in some patients with schizophrenia, refractory symptoms do not seem to be driven through dysfunction of dopamine pathways and so increasing dopamine blockade in such patients is of uncertain value. High-dose antipsychotic treatment is clearly associated with a greater adverse-effect burden.

- The use of high dose antipsychotics should be exceptional clinical practice and only employed when an adequate trial of standard treatments, including clozapine, have failed.

7.1. Prescribing high dose antipsychotics

- The responsibility to exceed the licensed dose of a single antipsychotic, or a combination of more than one, lies with the service user's Consultant Psychiatrist. The decision should be discussed with the multidisciplinary team, the service user and/or carer and valid consent obtained. For those service users who are detained and lack capacity, the Mental Health Act 2007 and The Mental Health Capacity Act 2005 should be adhered to.
  Details of the decision making process should be recorded in the service user's electronic patient record (EPR) including the clinical indication for the use of HDAT and whether or not the service user has been informed. A reason must be specified if the service user has not been informed.
  A care plan must be developed to cover appropriate monitoring.

- Before using high doses, ensure that:

  - sufficient time has been allowed for response.
  - at least two different antipsychotics have been tried sequentially (one FGA, and if possible, olanzapine) for an adequate period of time (i.e. 6 weeks).
  - clozapine has failed (tried for 3 months), or not been tolerated due to agranulocytosis or other serious adverse effect. Most other side-effects can be managed. A very small proportion of patients may also refuse clozapine outright.
  - concordance is not in doubt (use of blood tests, liquids/dispersible tablets, depot preparations etc.).
  - adjunctive medications such as antidepressants or mood stabilisers are not indicated.
  - psychological approaches, have failed, or are not appropriate.

- Process:

  - rule out contraindications (ECG abnormalities, hepatic impairment etc.).
  - document the decision to prescribe high doses in the EPR, along with the description of target symptoms. The use of an appropriate rating scale is advised.
  - adequate time for response should be allowed after each dosage increment before a further increase is made.

- High dose antipsychotic treatment regime should be as a limited therapeutic trial with doses returned to standard dosage of the BNF or SPC after a 3 month period, unless the clinical benefit outweighs the risks.

- HDAT may be prescribed in an emergency for acute symptoms. Ideally this should be discussed with the Consultant Psychiatrist before it is prescribed. If this is not possible, the reason should be documented and the treatment

reviewed at the earliest opportunity by the Consultant Psychiatrist or the nominated deputy.

7.2. Risks of high dose antipsychotics

- The majority of antipsychotic adverse effects are dose-related. High dose treatment increases the incidence and severity of such adverse effects: extra-pyramidal side effects (EPSE), tachycardia, postural hypotension, sedation, hyperprolactinaemia and risk of seizures.

- The risk of QTc prolongation and associated arrhythmias is also significantly increased with high dose antipsychotics. Case reports of arrhythmias and sudden death highlight the risk of high dose prescribing and rapid dose escalation. The difficulties in obtaining a pre-treatment ECG are not underestimated; however an ECG should be performed at the earliest opportunity. Adequate cardiac and ECG monitoring is advised during initiation and continuation of high dose treatment. Additional biochemical/ECG monitoring is advised if drugs that are known to cause electrolyte disturbances or QTc prolongation are subsequently co-prescribed and/or cardiac symptoms are present e.g. chest pain, irregular pulse etc.

- High dose antipsychotics can worsen cognitive function.

- Although neuroleptic malignant syndrome (NMS) is not clearly dose-dependent, the use of high dose antipsychotics may be a risk factor. If symptoms of NMS are suspected, creatinine phosphokinase should be measured.

- The speed of drug delivery should also follow normal dosing recommendations as rapid titration can often increase the risk of adverse effects.

7.3. Prescribing high doses in specific patient groups

- Attention should be given to gender related variations in the response and effects of high dose antipsychotics. Female patients generally require lower doses of antipsychotics due to pharmacokinetic differences related to body build, weight and body mass index. These principles would apply to high dose prescribing where the threshold for a ‘high dose’ in women may be lower than their male counterparts. High dose prescribing in pregnancy and women of child bearing potential requires careful assessment, as dose related side effects may be of greater consequence in this patient group.

- Other patient groups that may need more detailed assessment if high dose prescribing is considered include: older adults (aged 65 years or over), under 18 years, those known or suspected to use recreational substances and patients with significant co-morbidities. It is advisable to seek specialist advice before prescribing high dose antipsychotics in these patient groups.

- If a high dose is prescribed where plasma levels are low when there is an established relationship between plasma levels and response, (for example smoking and caffeine consumption), it is important to warn the patient that changes in these modifiable factors, such as stopping smoking, might result in very high plasma levels.

7.4. Procedure to follow once the decision to use HDAT has been agreed

A. Documentation of target symptoms, response and side effects, ideally using validated rating scales, should be standard practice so that there is on-going consideration of the risk-benefit ratio for the patient. Close physical monitoring is essential.

B. Obtain baseline ECG, U&Es, LFTs, FBC, prolactin, plasma glucose/HbA1c, plasma lipids, creatinine kinase, weight, waist circumference, temperature, blood pressure and pulse rate. For the frequency of repeat monitoring refer to the appendices - High Dose Antipsychotic Therapy Monitoring Sheet / Antipsychotic Dosage Ready Reckoner - version 8). If any monitored parameters are outside the normal range, the service user must be reviewed.

   ECG monitoring: If the QTc is 450msec or above, repeat the ECG within 2 weeks and consider referral to a cardiologist. Treatment must be urgently reviewed if the QTc exceeds 500msec or if there is an increase in QTc of 50msec or more, or if a progressive increase in the QTc is observed.

C. Consider the following:
   ***Risk factors*:**
   Cardiac history (particularly MI, arrhythmias & abnormal ECG), hepatic /renal impairment, alcoholism/smoking, old age and obesity

   ***Potential drug interactions –specifically aiming to avoid concomitant treatment with*:**
   Diuretics, anti-arrhythmics, certain antihistamines (e.g. astemizole & terfenadine), antihypertensives, tricyclic antidepressants & drugs that may prolong QT interval, or increase plasma antipsychotics levels

D. Attach a High Dose/Combination Antipsychotic(s) Alert Card to the service user's prescription chart. This will be carried out either by a pharmacist or doctor – must be agreed locally.

E. Complete a High Dose Antipsychotic Therapy Monitoring Sheet for the service user (Appendix 1). This form must be kept with the prescription chart to ensure that it is readily available to prescribers and nursing staff administering medication. A copy of this sheet should be scanned in to the EPR each time it is updated.

F. Monitor for clinical signs of dehydration for one week after dose changes.

G. Where possible increase the dose slowly, ideally at intervals of at least one week.

H. Review clinical improvement at least once every 3 months reducing the dose to within the licensed range if inadequate clinical improvement is observed and consider alternatives e.g. adjuvant therapy and newer or atypical antipsychotics such as clozapine. More frequent review may be appropriate for some individuals and this must be agreed at the MDT. Continued use of HDAT where there is an insignificant antipsychotic response should be justified in the EPR. Consultants should consider seeking a second opinion from a colleague.

I. The Royal College of psychiatrists Consensus Statement recommends monitoring of psychotic symptoms. Improvement in target psychotic symptoms could be measured using for example BPRS (Brief Psychiatric Rating Scale); side effects could be monitored using for example LUNSERS (Liverpool University Neuroleptic Side Effect Rating Scale).These should be performed at weeks 0, 6 and 12, then at each 3-monthly review.

7.5. Discharge from Inpatient Care

- Where HDAT is prescribed for an individual, both on-going prescribing and monitoring responsibility must remain with the relevant HPFT Consultant Psychiatrist. GPs will not be expected to accept prescribing and monitoring responsibility.

- On discharge, ensure all tests results, including those that are within range and other relevant information are attached to any correspondence with the Community Mental Health Team and GP (for information only).

8. Training and awareness

- A copy of the policy will be circulated to all Senior managers to ensure staff familiarise themselves with this policy.
- A copy will be available on the Trust's intranet.
- All staff involved in prescribing, dispensing, administration and monitoring of HDAT must ensure that their knowledge is up-to-date in relation to HDAT.
- Results of any HDAT audits will be fed back to the relevant SBU Quality and Risk meetings and also locally to the teams which have participated.

9. Process for monitoring compliance with this document

Key process for which compliance or effectiveness is being monitored	Monitoring method (i.e. audit, report, on-going committee review, survey etc.)	Job title and department of person responsible for leading the monitoring	Frequency of the monitoring activity	Monitoring Committee responsible for receiving the monitoring report/audit results etc.	Committee responsible for ensuring that action plans are completed
Audit - Prescribing high dose and combined antipsychotics	POMH-UK Audit	Pharmacy Department – Chief Pharmacist	In line with POMH – UK audit work plan cycle	Drugs and therapeutics committee	Drugs and therapeutics committee

10. Embedding a culture of equality and respect

Service user, carer and/or staff access needs (including disability)	The implementation of this policy will not discriminate against any service users, carer and/or staff access needs
Involvement	The implementation of this policy will not discriminate against any involvement of service users, carer and/or staff.
Relationships & Sexual Orientation	The implementation of this policy will not discriminate against any relationships to sexual orientation
Culture & Ethnicity	The implementation of this policy will not discriminate against any culture and ethnicity.
Spirituality	The implementation of this policy will not discriminate against any spirituality
Age	The implementation of this policy will not discriminate against any age
Gender & Gender Reassignment	The implementation of this policy will not discriminate against any gender or gender reassignment
Advancing equality of opportunity	The implementation of this policy will ensure that all service users, carer and staff are treated equally and will be given equal opportunities.

Part 3 – Document Control & Standards Information

11. Version Control

Version control for the Procedural Document Management System

Version	Date of Issue	Author	Status	Comment
V1	**10/07/2019**	**PICU Consultant Psychiatrist**	**Current**	

12. Relevant Standards

- Consensus Statement on High Dose Antipsychotic Medication. Council Report CR138.2006. Royal College of Psychiatrists, London.
- NICE Psychosis and schizophrenia in adults: prevention and management CG178 Feb 2014 (updated March 2014)

13. Associated Documents

- HPFT Rapid Tranquillisation (RT) Policy
- HPFT Medicines Policy

14. Supporting References

- The Maudsley Prescribing Guidelines 13th edition; Taylor. D, Paton.C, 2018
- High Dose Antipsychotic Policy (in patients aged 18 and older) February 2018; Central and North West London NHS Foundation Trust

15. Consultation

Job Title of person consulted
Pharmacy and Medicines Optimisation Team
Consultant Psychiatrists (Acute Services, Rehabilitation Services, Forensic services, CATT, RAID)
Practice Development and Patient Safety Lead

Part 4 - Appendices

Appendix 1

HIGH DOSE ANTIPSYCHOTIC THERAPY (HDAT) MONITORING SHEET

Patient's Name	NHS No.
Ward/Team	Consultant
D.O.B	

Risk factors (please circle)			
Cardiac history Y/N	Hepatic Impairment Y/N	Heavy Smoker Y/N	Obesity Y/N
Diabetic Y/N	Renal impairment Y/N	Heavy alcohol or illicit drug use Y/N	Others e.g age, male/female (please specify)

Antipsychotic name	Route	Dose	Regular (✓)	PRN (✓)	Specify % BNF max. daily dose
				Total% BNF max. daily dose(Include PRN)	

Please refer to the 'Ready Reckoner' on the back of this form to calculate % BNF max. daily dose

High Dose Antipsychotic Monitoring	Baseline	After 1 month	6 monthly				
Date							
(✓if ok, state result below if abnormal)							
U&Es							
LFTs							
FBC							
Prolactin		xxxxxx					
Plasma glucose and/or HbA1c		xxxxxx					
Plasma lipids		xxxxxx					
Creatinine phosphokinase		xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
*Interacting Medicines Y/N (Please specify)							
**ECG (state QTc interval)							
Weight(kg)/waist circumference (cm)							
Temperature (°c)							
Blood Pressure (mm Hg)							
Pulse rate (bpm)							
Reason for 'high dose' documented in case notes Y/N							
Doctor's signature							

*Interacting Medicines – those known to prolong QTc interval and/or cause electrolyte disturbance

** Repeat ECGs should be performed during periods of dose escalation and/or after steady state is reached during the initiation phase. Once stabilised on high-dose treatment, perform ECG every 12 months or sooner if clinically indicated

Date	Abnormal result(s)/comments	Action	Staff signature

PLEASE KEEP THIS MONITORING SHEET WITH THE PRESCRIPTION CHART

A copy of this form should be attached to any correspondence with the Community Mental Health Team & GP Discharge Notification Form

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 8

February 2019 - *Always check you are using the latest version*

POMH-UK PRESCRIBING OBSERVATORY FOR MENTAL HEALTH-UK

Depot/long-acting injection and IM antipsychotics

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
Haloperidol	Depot							25			37.5			50							75
Zuclopenthixol	Depot			100				200			300			400			500				600
Aripiprazole	Long-acting										50										100
Olanzapine	Long-acting										75										150
Paliperidone [+]	Long-acting													25							37.5
Paliperidone Trevicta[++]	Long-acting																				43.75
Risperidone	Long-acting										12.5					18.75					25
Aripiprazole	IM							10			15			20							30
Chlorpromazine	IM		25			50					100					150					200
Haloperidol	IM					5					10					15					20
Levomepromazine	IM		25			50					100					150					200
Olanzapine	IM					5					10					15					20
Zuclopenthixol acetate[+++]	IM													50							75
Loxapine	Inhaled										9.1										18.2

[+] Maintenance dose licensed to be given monthly. [++] Formulation licensed to be given every 3 months. [+++] 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 8

February 2019 - *Always check you are using the latest version*

POMH-UK PRESCRIBING OBSERVATORY FOR MENTAL HEALTH-UK

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
Cariprazine	Oral					1.5					3					4.5					6
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
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.

Our Values

Welcoming Kind Positive Respectful Professional