High Dose Antipsychotic Treatment (HDAT) Guideline

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Governance or Assurance Committee	NHSL Mental & Learning Disabilities Clinical Governance
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1. Consultation and distribution

CONSULTATION AND DISTRIBUTION RECORD	
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Consultation Process / Stakeholders:	• Psychiatry • MHLD Nursing • Mental health Pharmacy • LMC • Primary Care Support Pharmacy
Distribution:	• Dissemination to all MH&LD, OAP & CAMHS Medical & Nursing & Pharmacy Staff, Wards and Community teams • First Port • Staff briefing • Medicine Matters and/or MH&LD D&T Newsletter • Prescribing News

2. Change Record

CHANGE RECORD			
Date	Author	Change	Version No.
Sept 21	L Dewar	Overall review (SLWG) with main points as follows;- • Reconfiguration and condensation of version 1 • Additional sections on Acute settings and Consent and legislation • HDAT Monitoring Form reconfigured and more detail added • Specialised responsibilities for community and inpatient setting merged but unchanged • General practice responsibilities unchanged	2.0

3. Introduction

This guidance has been developed to support the safe use of antipsychotics in both hospital and community settings across NHS Lanarkshire. High Dose Antipsychotic Treatment (HDAT) should be considered an exceptional clinical practice. The decision to prescribe, continue to prescribe or recommend the use of high dose antipsychotics should be undertaken with consideration to the Royal College of Psychiatry Consensus Statement (Nov 2014)[1]. https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/college-reports/college-report-cr190.

4. Definition of High Dose Antipsychotic Treatment

High Dose Antipsychotics can occur from two scenarios:

1. A single antipsychotic is prescribed at a dose which exceeds the maximum daily dose stated in the SmPC or BNF (with respect to the age of the patient and the indication being treated).
2. Two or more antipsychotics are prescribed at doses which, if converted to a percentage of the maximum daily dose stated in the SmPC or BNF, the cumulative percentage is more than 100% (with respect to the age of the patient and the indication being treated).

Tool 2 provides advice on how to check if patient is in high dose range.

5. General recommendations for prescribing or recommending the use of HDAT

- The use of HDAT should be an exceptional clinical practice and generally only employed when an adequate trial of standard treatments, including clozapine have failed.
- Documentation of target symptoms, response and side effects should be standard practice so there is on-going consideration of risk-benefit ratio.
- Failure of previous therapy due to non-compliance should be ruled out
- The decision to use HDAT should be made by a senior psychiatrist, involving the MDT, where possible with valid consent. Tool 5 (patient consent) should be completed in all cases.
- The decision to prescribe the ongoing clinical assessment and the decision to continue should be documented.
- Contraindications should be ruled out and other risks minimised where possible.

See the full statement from the Royal College of Psychiatrists.[1]

Additionally

- A common sense approach should be taken with the elderly or frail individuals who may be more sensitive to the side effects of antipsychotics and require monitoring equivalent to that of HDAT at lower doses.
- Prescribing for children and adolescents with antipsychotics should be undertaken cautiously and increased monitoring may be required at licensed doses.

- Prescribing antipsychotics off label for children and adolescents should always be considered HDAT.
- The use of more than two antipsychotics should prompt an urgent review in treatment.
- When an antipsychotic is prescribed at a dose higher than its licensed maximum, Form C PC or Form C (unlicensed use forms) should be completed as appropriate. Available via NHSL Medicines Approval Process.

6. Risks Associated with HDAT

6.1. General increase of side effects

Most side effects of antipsychotics are dose dependent and so the likelihood of a patient experiencing side effects to medication, increases with HDAT. The additive side effects of more than one antipsychotic may be particularly troublesome for some patients and so subjective side effects should be monitored using a patient self-rating scale such as GASS (see Tool 4) at every review or mental healthcare encounter.

6.2. Cognitive side effects of antipsychotics

Cognition should be regularly monitored for patients on HDAT. Cognitive function may be impaired with increasing dose and the cumulative effects of more than one antipsychotic. This may be particularly problematic where antimuscarinic side effects predominate, particularly where antimuscarinics are used for extrapyramidal side effects.

6.3 QT interval prolongation

Case control studies have suggested that the use of most antipsychotics are associated with an increase in the rate of sudden cardiac death. Specifically, some antipsychotics block potassium channels and this affects the duration of cardiac repolarisation.

Cardiac repolarisation is measured by the QT interval, i.e. time from onset of ventricular depolarisation to complete repolarisation. This is subject to a number of influences, including heart rate. Consequently QTc (QT interval corrected for heart rate) is considered the most appropriate measure to use when monitoring the effect of antipsychotics on ventricular repolarisation.

Prolonged QTc interval is considered a risk factor for arrhythmias, including Torsades de Pointes (Tdp), the life-threatening polymorphic ventricular arrhythmia. Evidence suggests the risk of arrhythmia is exponentially related to extent of prolongation beyond normal limits. Although this evidence is limited, there is strong evidence that a QTc of greater than 500msec is a major risk for arrhythmia.

Monitoring of QTc and for risks associated with prolongation, are more important with HDAT because this phenomena is dose dependant. Monitoring should be particularly vigilant for people with ongoing conditions associated with increased risk of QTc prolongation and other arrhythmias, in the presence of other risk factors and at any time when risks are increased.

6.3.1. Risk factors for QT prolongation with antipsychotics

Risk factor	Rationale for potential risk of QT prolongation
Cardiac history	▪ particularly myocardial infarction, arrhythmias, bradycardia, abnormal ECG, long QT syndrome, heart failure, previous episodes of TdP. ▪ consider family history
Electrolyte abnormalities,	▪ predisposes to QTc prolongation particularly hypokalaemia, hypocalcaemia & hypomagnesaemia ➢ K < 3.5mmol/l ➢ Mg < 0.7mmol/l ➢ Adjusted Ca < 2.1mmol/l ▪ consider co-administration of drugs which have the potential to cause abnormalities e.g. if diuretics started ▪ consider electrolyte disturbance during periods of diarrhoea/vomiting correct for low potassium, magnesium pre-treatment and throughout treatment
Renal impairment	▪ potentially decreases clearance of renally excreted antipsychotics ▪ may increase risk of electrolyte disturbance
Hepatic impairment	▪ potential impact on hepatic metabolism and clearance of antipsychotics ▪ QT prolongation is increased in alcoholic liver disease
Alcoholism	▪ increased risk of hepatic impairment
Smoking	▪ increased risk of ischaemic heart disease ▪ impact on hepatic metabolism of some antipsychotics
Substance misuse	▪ due to risk of QT prolongation with certain substances
Extremes of age	▪ elderly more susceptible to QT changes ▪ under 18 years
Extremes of weight	▪ impact of obesity on CV risk and hepatic function ▪ very low BMI increases risk of electrolyte abnormalities and dehydration
Female gender	▪ women have longer QT intervals
Extreme physical exertion	▪ e.g. individuals subject to restraint
Interacting drugs	▪ co–administration of other drugs which prolong QTc. NB some antipsychotics e.g. haloperidol are contra-indicated with other drugs causing QTc prolongation. See CredibleMeds website for medicines that prolong QTc interval. ▪ any drug which may increase plasma levels of an antipsychotic e.g. co-administration of drugs which inhibit metabolising enzyme. ▪ also consider patients who are slow metabolisers (if known). ▪ medicines known to cause electrolyte disturbance (as above)

Adapted from GG&C High Dose Antipsychotic Monitoring Policy with permission [2]

6.3.2. Management of QT prolongation

<440msec (men) and <470msec (women) Considered as normal QTc – no action required)
>440msec but <500msec (men) >470msec but <500msec (women) Consider reducing the dose or switching to a lower risk antipsychotic. Repeat ECG and consider cardiology advice/review.
A change from baseline Qtc of > 20ms is cause for concern Repeat ECG Assess in conjunction with the overall QTc interval
>500msec Stop causative drug(s) and switch to an alternative with a lower effect on QTC Seek immediate cardiology review.
Abnormal T-waves Consider reducing dose or switching to a lower risk antipsychotic Consider seeking cardiology advice.

Adapted from the British Heart Rhythm Society (BHRS) Clinical Practice Guidelines on the Management of Patients Developing QT Prolongation on Antipsychotic Medication[3], Maudsley Prescribing Guidelines in Psychiatry[4]

NB Drug Induced QTc Prolongation UKMi Q&A Jan 2020[5]: normal < 450msec (men) <460msec (women) ; these figures may be used in other literature.

7. Monitoring High Dose Antipsychotic Treatment

Additional monitoring should be carried out before and during High Dose Antipsychotic Treatment. These monitoring parameters are in addition to standard monitoring for antipsychotics or any additional monitoring required by the manufacturers of individual antipsychotics.

7.1 Parameters and Frequency of monitoring

HDAT Monitoring Frequency	Additional Situations	At each HDAT review the following parameters should be considered
Baseline Before increasing into high dose range	After dose increases After adding interaction medicine When there are any concerns	• Clinical progress and the reason for continuation of HDAT documented • Ensure consent/ T2/T3 still valid • Changes to risk factors • ECG for QTc and T-wave abnormality • LFTs and U&Es • Temperature & Blood Pressure • Side effects using GASS or an alternatives e.g. Easy-Read GASS or Alternative Health recordings (see Tool 4)
A 1 month		
At 3 months		
Every 3 months		
Then 3-6 monthly if stable and agreed with MDT		

7.2 Toot Kit

Tool 1 HDAT Monitoring Form

The monitoring form should be retained in the patient's notes and a copy transferred when patient moves between inpatient and outpatient settings. Where electronic monitoring forms are available these should be used in preference to paper copies.

Tool 2 HDAT Calculation tools

Tool 2 provides advice on how to check if a patient is in the high dose range.

NB if the dose of any antipsychotic exceeds the maximum dose for that drug, it is an off-label use and local unlicensed use protocols should be followed in addition to HDAT guidance. See NHSL Medicines Approval Process.

Tool 3 HDAT Guide to Interacting Medicines

Tool 3 is a guide to interacting medicines which may increase the risks associated with the use of high dose antipsychotics. It provides links to resources to check for such interactions.

Tool 4 HDAT Side Effects Rating Scales

Regular monitoring of side effects, using recognised rating scales, is strongly recommended. Tool 4 guides on the availability of these, with links to GASS, GASS for clozapine, easy read versions of these and tools to assess side effects in people with communication problems that are unable to use these.

Tool 5 HDAT Consent Form

The decision to prescribe High Dose Antipsychotics and the rationale behind this should be discussed and agreed with the Patient and/or carer. Informed and valid consent should be obtained before prescribing or recommending antipsychotics in the high dose range. A consent form for this purpose is available as Tool 5.

Discussion tools are available from the Choice and Medication website and may be useful in aiding discussions regarding high dose antipsychotic therapy. e.g. handy fact sheets on Unlicensed Use, QTc and HDAT. https://www.choiceandmedication.org/nhs24/

Tool 6 Primary Care HDAT Information Letter

Primary care should be notified of the patient's high dose status and the implications this has. Tool 6 can be used to inform the primary care of the reasons for HDAT and the need to be aware of additional changes to the patient's medicines in general, that may increase the risks associated with HDAT.

8. Acute settings

HDAT may sometimes be used in an emergency for acute symptoms. This can happen, particularly, with the use of as required antipsychotics. Prescribers should be aware when prescribing as required medications, of inadvertently causing the potential for HDAT. This should be discussed with the consultant psychiatrist before this happens.

Baseline parameters should be obtained if this is possible. If this is not possible because of the patient's acute symptoms, this should be clearly documented in the patient's notes. For patients subject to statutory treatment plans, the use of HDAT must be reflected in their T2 /T3/T4 certificate. Treatment should be reviewed very regularly and monitoring parameters, particularly ECG, obtained at the earliest opportunity.

The monitoring form has provision to note the short term use of HDAT in an acute emergency situation. This section can also be used if cross titrating puts a patient into the HDAT range on a short term, temporary basis. Baseline parameters should be carried out prior to switching to assess risk factors with ECGs, blood pressure and temperature monitored during the switch.

9. Consent and Legislation

For patients receiving treatment under the Mental Health (Care & Treatment) (Scotland) Act 2003 or Adults with Incapacity (Scotland) Act 2000, ensure that the statutory treatment plan on a T2 or T3 certificate or section 47 includes the use of doses in excess of BNF guidelines or combinations of antipsychotics and reference the recommended monitoring within this policy prior to prescribing. If a patient refuses to consent to high dose antipsychotic monitoring, then this should be clearly documented within their clinical notes. Ongoing refusal to engage with monitoring must prompt review and consideration of cessation of high dose antipsychotic therapy.

10. High Dose Antipsychotic Medication Review

The key recommendation of the Royal College of Psychiatrists Consensus Statement is that any prescription of high-dose antipsychotic treatment should be seen as an explicit, time-limited individual trial with a distinct treatment target. Doses should be increased slowly and not more than once weekly. There should be a clear plan for regular clinical review including monitoring. The high-dose regimen should only be continued if the trial shows evidence of benefit that is not outweighed by tolerability or safety problems. For this reason, the aim of treatment and the outcome should be clearly documented in the patient's notes. It is recommended that if there is no improvement after 3 months doses should be reduced to standard doses.

11. Roles and Responsibilities

11.1 Consultant psychiatrist and Specialist Psychiatrist

- The consultant psychiatrist is responsible for the use and monitoring of HDAT in both hospital and community settings.
- The local unlicensed protocol should be followed if one or more of the antipsychotics is being used off-label. Available via NHSL Medicines Approval Process.
- Ensure the reason for initiating and continuing HDAT is documented in case notes.
- Ensure clinical progress is regularly monitored and documented in patient notes.
- Ensure local arrangements are put in place to maintain appropriate and regular monitoring of patients on HDAT according to these guidelines.
- Consider how monitoring is carried out to make best use of the resources within the patient's locality or community team with consideration to the needs of the patient.
- Ensure all physical monitoring is followed up. Blood results are available on via clinical portal.
- Ensure patient consent has been obtained (Tool 5).
- Ensure HDAT is included in T2/T3's as appropriate
- Be aware that HDAT monitoring is not the routine responsibility of primary care. However primary care prescribers should be aware and consider the risks of initiating interacting medicines in patients on HDAT, carrying out additional monitoring if this is deemed necessary.
- Discuss with primary or secondary care medics regarding interacting medicines when necessary.
- Liaise with primary care around the use of HDAT and any unlicensed use. Use the template Primary Care Information Letter (Tool 6) to inform the primary care team of high dose antipsychotic treatment. A copy of the patient consent form should be sent with this communication.
- Ensure Form C PC or Form C (unlicensed use forms) are completed if any antipsychotic exceeds it licensed maximum. Available via NHSL Medicines Approval Process.
- Ensure the HDAT Monitoring Form (Tool 1) is completed at review when parameters are monitored, when decisions are made, and when next review date set.
- Retain the HDAT Monitoring Form (Tool 1) within the patient's notes and ensure a copy is sent to the Mental Health ward/Community team on admission/discharge.
- Be aware that the use of PRN antipsychotics may tip the patient into the high dose antipsychotic treatment range. Base line monitoring should be done if this is a possibility.
- For patients with incapacity who are not complying with HDAT monitoring, ensure this is documented on HDAT Monitoring Form, in the case notes and that Alternative Heath Checks are carried out. firstport2/staff-support/pharmacy-mental-health/high-dose-antipsychotic-therapy/Tool HDAT /Alternative Health Recordings (AWI)
- Seek pharmacy advice if necessary.

11.2. In patient Prescribers

- Be aware of the NHSL HDAT Guideline and its implications.
- Be aware that prescribing as required antipsychotics may have the potential of tipping the patient into the high dose range. In this situation there should be discussion with consultant psychiatrist prior to prescribing any as required antipsychotic.
- Ensure prescribing related to HDAT is included in the T2/T3 treatment plan where appropriate.
- Ensure HDAT has been highlighted on prescription chart (HEPMA note, HDAT sticker or HDAT stamp), including where the use of PRN medication may result in HDAT.

11.3 Community and Inpatient Nurses

- Be aware of the NHSL HDAT Guideline and its implications.
- Maintain a database of patients who are on HDAT.
- Be aware when a patient is on HDAT (see Tool 2 HDAT calculation).
- Document "high dose" status in the nursing care plan (in electronic records where available).
- Be aware of the additional monitoring necessary during HDAT.
- Assess for side effects using Antipsychotic Side Effect Rating Scales (Tool 4).
- Liaise with psychiatrist if there are any concerns regarding ongoing monitoring, patient's physical condition or mental health.
- Seek pharmacy advice if necessary.
- Ward nursing staff
  - Measure temperature, pulse & blood pressure at the appropriate intervals and document on Monitoring Form (Tool 1) and NEWS.
  - Check parameters are being entered in the HDAT Monitoring Form (tool 1).
  - Ensure that high-dose status is discussed at review.
  - As part of discharge planning, and in consultation with medical staff, to ensure a system is in place to facilitate continuation of HDAT 'monitoring & review' within the community setting.

  NB In some ward areas, ANPs may be able to carry out U&Es & LFTs, however medical staff retain the responsibility of checking and recording these results.
- Community Nursing staff
  - To carry out blood pressure, pulse and temperature monitoring when local arrangements indicate this is the best use of local resources.
  - Record when blood pressure, pulse and, temperature and side effect assessment have been carried out in patient's notes or MiDIS.
  - *Either* record blood pressure, pulse and temperature and that side effect assessment has been done on the HDAT Monitoring Form (Tool 1) *or* contact psychiatrist to notify them of the information for this to be recorded.

11.4. Pharmacist responsibilities

- Assist with the identification of patients on high dose antipsychotics
- Provide advice to medical and nursing staff where necessary, including discussion of treatment options/ alternatives to HDAT.
- Highlight risk factors including potential interacting medicines.
- Support patient information and education.

11.5. General Practitioner Responsibilities

- Be aware of the patient's high dose antipsychotic status when notified by psychiatrist and the implications on this on patient health.
- Consider the risks of initiating or stopping interacting medicines in patients who have a HDAT status. (Tool 3 HDAT Guide to Interacting Medicines)
- Carry out additional monitoring if this is deemed necessary when starting or stopping interacting medications
- Be aware that for patients already on antipsychotics, commencing another antipsychotic may result in a high dose antipsychotic status. This can occur even if drugs are within the licensed maximum dose. (Tool 2 HDAT calculation Tools).
- Ensure any antipsychotics prescribed are included in repeat prescription list to trigger drug interactions on the prescribing system (Vision, Emis).
- Use appropriate warning system on prescribing system to highlight to prescribers in primary care that patient is on HDAT.
- Liaise with psychiatrist or mental health team around the use of HDAT when necessary.

10. References

1. Royal College of Psychiatrists consensus Statement on High Dose Antipsychotic Treatment 2014 (CR190).https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/college-reports/college-report-cr190
2. Greater Glasgow and Clyde High Dose Antipsychotic Monitoring Policy
3. British Heart Rhythm Society Clinical Practice Guidelines on the Management of Patients Developing QT Prolongation on Antipsychotic Medication; Arrhythmia & Electrophysiology Review 2019; 8 (3): 161-5.
4. The Maudsley Prescribing Guidelines in Psychiatry 13th Edition.
5. Drug Induced QTc prolongation; UKMi Q&A Jan 2020.
6. Credible Medicines website. https://www.crediblemeds.org/
7. Stockley's Drug Interactions www.medicinescomplete.com/stockley drug interactions
8. NHS Lanarkshire Medicines approval resources. https://nhslguidelines.scot.nhs.uk/medicines-guidance/medicines-approval-process/

NHS Lanarkshire

Tool 1

HDAT Review Review and Monitoring Form At each HDAT review update Side A and complete review and monitoring parameters on side B

Patient name CHI (or affix patient label)	Consultant Psychiatrist Name of person giving consent or T2/T3	Is this a continuation from a previous HDAT Monitoring & Review form? Yes ☐ No☐ If yes, when was HDAT first initiated? Is HDAT for the acute short term use of as required medication or temporary to allow cross –titration? Yes☐ No ☐ T4 if appropriate ☐	Relevant allergies or ADRs

Risk Factors (see section 6.3.1)	Details
Cardiac History ☐ Abnormal electrolytes* ☐☐ Hepatic Impairment ☐ Renal Impairment ☐ Alcohol ☐ smoking ☐ Illicit drugs ☐ Obese ☐ Learning Disability ☐ Elderly ☐ Under 18y ☐ *correct low potassium and magnesium	

Details of acute as required antipsychotics or cross titration of antipsychotics which have the potential to cause temporary HDAT. Baseline parameters should be carried out before HDAT use (document reasons if this is not possible and do as soon as it is possible) Blood pressure, temperature, ECGs and GASS during temporary period of HDAT	Potential % cumulative maximum

Date Started	Antipsychotic	Daily Dose	% Maximum Dose	Cumulative % maximum of current antipsychotics	Date stopped	Interacting Medicines	Start Date or note if ' Pre HDAT'	Date stopped

Ensure this tool is double sided printed so monitoring record is on the reverse of this page

Side A

Patient name	CHI	Consultant psychiatrist

High Dose Antipsychotic Treatment Review and Monitoring Record

Details of abnormal results should be documented in patient notes along with a management plan

• Baseline (before increasing to HDAT) • At one month • At 3 months • 3 monthly (3-6 monthly if stable) • After dose increase • After change in interacting medicine MORE FREQUENTLY WHERE THERE ARE CONCERNS		**Rational** for initiation/ continuing justified & documented	**Consent/ T2/T3** still valid?	**Change to risk factors** Including dose change or new interacting medicine *(document details on page 1)*	**ECG**		**LFTs & U&Es, Mg, Ca**				Temp (⁰C)	Pulse and Blood Pressure	Date GASS completed	Date next review due
					Date ECG card given	Enter QTc Interval <u>normal</u> Male <440ms Female <470ms	Date bloods Taken	Review by Psychiatrist						
								U&E	Mg Ca	LFTs				
Current Cumulative % maximum	Date, tick and/or enter details where indicated													
%	Signature													
Concerns / Abnormal results/ Follow up														
Current Cumulative % maximum	Date, tick and/or enter details where indicated													
%	Signature													
Concerns / Abnormal results/ Follow up														
Current Cumulative % maximum	Date, tick and/or enter details where indicated													
%	Signature													
Concerns / Abnormal results/ Follow up														
Current Cumulative % maximum	Date, tick and/or enter details where indicated													
%	Signature													
Concerns / Abnormal results/ Follow up														

Tool 2
HDAT Calculation tools

High Dose Antipsychotics can occur from two scenarios (as defined by the Royal college of Psychiatrist Consensus statement 2014)

1. A single antipsychotic is prescribed at a dose which exceeds the maximum daily dose stated in the manufacturers SmPC for that drug (with respect to the age of the patient and the indication being treated).
2. Two or more antipsychotics are prescribed at doses which, if converted to a percentage of the maximum daily dose stated in the manufacturers SmPC (with respect to the age of the patient and the indication being treated), the cumulative percentage is more than 100%.

*The percentage method

Convert the dose of each drug into the percentage of the maximum licensed dose for the patient's age and clinical condition and add these together. A cumulative dose of more than 100% is HDAT.

NB if the dose of any antipsychotic exceeds the maximum dose for that drug, it is an off-label use and local unlicensed use protocols should be followed.

Situations where a single antipsychotic is being used for children or adolescents, outwith the licensed indication, should be treated as HDAT. The combined use of two antipsychotics which are contraindicated with each other is also off-label prescribing. Local unlicensed use protocols should be followed in these scenarios.

NHSL HDAT calculator

For convenience the NHSL online High Dose Antipsychotic Calculator can be found via the following link.

firstport2/staff-support/pharmacy-mental-health/High Dose Antipsychotic Treatment (HDAT)

SPC & BNF

The maximum licensed dose of an antipsychotic can be found in the current BNF or SPC.

BNF link https://www.medicinescomplete.com/mc/bnf/current/

SPC link http://www.medicines.org.uk/emc/

POMH-UK

At the time of writing NHSL does not have access to the POMH-UK Ready Reckoner. If copies of these are used, the user must ensure they are accessing the most up to date version.

Tool 3
HDAT Guide to Interacting Medicines

This tool is intended to provide a guide to concomitant medicines which may increase the risks associated with HDAT and are therefore contraindicated, should be used with caution or require additional or more frequent monitoring.

These medicines fall into 4 main categories

1. Concomitant drugs which prolong QTc interval

   e.g. methadone, tricyclic antidepressants, citalopram, domperidone, erythromycin, ketoconazole, clarithromycin

2. Drugs which increase plasma levels of antipsychotics by inhibition of CYP enzymes

   e.g. fluoxetine, fluvoxamine, paroxetine, valproate

3. Drugs which increase risk factors predisposing to QTc prolongation
   - drugs causing bradycardia
   - drugs effecting electrolyte balance particularly K, Mg & Ca (check & correct low levels)
4. Stopping drugs which induce CYP enzymes (subsequent increase in plasma levels)

   e.g. stopping smoking (increases clozapine, olanzapine), stopping/reducing carbamazepine/phenytoin

The following resources are available to check interactions for individual medication regimens. Consideration should be given to the risks associated with interacting medicines with regards frequency and timing of monitoring.

Drug interaction resource links

Stockley's Drug Interactions

knowledge network/medicinescomplete.com/stockey's drug interactions

BNF

knowledge network/medicinescomplete/bnf/current/interactions

Summary of Product Characteristics

www.medicines.org.uk/emc/

Credible meds website for QTc prolongation risks

www.crediblemeds.org/

HDAT Tool 4
Side Effect rating Scales

Patient subjective side effect rating scales should be used to monitor for additional side effects and the effect these have on the patient's quality of life. Monitoring side effects and addressing intolerances to medication can not only improve the patient's physical health but can also help facilitate adherence to the medication.

The preferred rating scale is the Glasgow Antipsychotic Side Effect Rating Scale (GASS). GASS for Clozapine provides a clozapine specific version of GASS.

There is also an easy read version of GASS and GASS for Clozapine which may be more suitable for some patients including those with learning disabilities, learning difficulties, and those whose first language is not English.

GASS and GASS for clozapine are available at the following links

firstport2/staff-support/pharmacy-mental-health/mental-health-prescribing-information/GASS

firstport2/staff-support/pharmacy-mental-health/clozapine/GASS for Clozapine

If there is difficulty for an Adult with Incapacity, being treated with HDAT, in complying with monitoring, this should be documented in the patient's notes each time. Alternative health recordings should be made as far as possible such as detailed in tool below

firstport2/staff-support/pharmacy-mental-health/high-dose-antipsychotic-therapy/Tool 8 HDAT Alternative Health recordings (AWI)

HDAT Tool 5
Patient Consent to High Dose Antipsychotic Treatment

CHI no .....
First name ..... DOB ...../...../.....
Last name ..... Sex: ☐ M ☐ F
Address .....
.....
.....
or attach addressograph label here

I am aware that Dr_____ has recommended High Dose Antipsychotic Treatment with

Name and Dose of Medicine(s)

It has been explained that

- ☐ This medicine is prescribed above the licensed maximum dose.
- ☐ The medicines prescribed are a licensed dose, but the combination of doses is high dose.
- ☐ I understand the reasons why my doctor thinks this is the best treatment.
- ☐ I agree to this/these medicines and doses being prescribed. I understand I can withdraw consent at any time but it is in my best interests to talk to the doctor or nurse about this.
- ☐ I am the patient.
- ☐ I am the parent / guardian of the patient named below who is under 16.
- ☐ I am the welfare power of attorney/guardian of the patient named below who is an AWI.

Print name	*Signature*	*Date*

MEDICAL STAFF USE ONLY

☐ This patient is being treated under the Mental Health (Care and Treatment)(Scotland) Act 2003.

Name of RMO	*Name of second opinion*

☐ This patient is being treated under section 47 of the Adults with Incapacity Act and has no legal representative to consent on their behalf. A section 47 certificate of incapacity has been completed.

Name of RMO	*Name and job title of Doctor Signing*

Signature	*Date*

HDAT Tool 6
Primary Care Information Letter

Dear

Regarding your patient CHI

I recommend that the following antipsychotic treatment be prescribed for this patient.

Name of antipsychotic	Daily dose	% of maximum dose	Cumulative % max

The above dose(s) fall into the High Dose Antipsychotic Treatment (HDAT) range either because the maximum licence dose has been exceeded or cumulative % of the maximum licence dose of 2 or more antipsychotics is greater than 100%. Please refer to the NHSL High Dose Antipsychotic Treatment Guidance (HDAT), on the NHSL Clinical Guidelines website, for more information.

I have obtained consent from the patient or his/her legal representative and the patient is being monitored according to the NHSL HDAT guidance. A copy of the consent form is attached.

HDAT increases the risks of side effects including QTc prolongation. Consideration has been given to the current medicines that I am aware the patient is taking. Please be aware that additional changes to the patient's general medicines may have an impact on the risks associated with HDAT. Tool 3 in the NHSL HDAT Guidance Toolbox provides information and links to help identify this. Consideration should be given to U&E and/or ECG monitoring soon after initiating an interacting medicine to minimise risk to patient's physical health. Please liaise with the mental health team to communicate the results of any additional monitoring.

Prescribing Support suggest that Primary Care use a warning box in the patient's e-notes on their prescribing system, e.g. the yellow free text pop up box on vision, to highlight the patient's high dose antipsychotic status.

Additional information if relevant

Thank you
Yours faithfully

Name of consultant or specialist psychiatrist

Signature of consultant or specialist psychiatrist

Date

Good Practice Flow Chart for Antipsychotic Monitoring

Standard Monitoring

If patient is stable on or under the licensed maximum dose of a single UK licensed antipsychotic

- ➔ Carry out standard antipsychotic monitoring
- ➔ Obtain baseline before new drug initiated (switching or adjunct therapy).
- ➔ Increase frequency of monitoring after dose increases or if clinically indicated.

Additional action required

If patient is on 2 or more antipsychotics
Check the cumulative % maximum dose using NHSL High Dose Calculator
firstport2/staff-support/pharmacy-mental-health/High Dose Antipsychotic Treatment (HDAT)

- ➔ If the cumulative % max is less than 100% continue with monitoring guidelines above.
- ➔ Document the reason for 2 or more antipsychotics and anticipated clinical outcome.
- ➔ Monitor and document the clinical progress regularly.
- ➔ Continue monitoring for side effects as discussed above.
- ➔ Recheck the potential cumulative % maximum dose before any dose increase and obtain baseline before going into the High Dose range.
- ➔ If cumulative % maximum is more than 100% initiate High Dose Antipsychotic Monitoring.

High Dose Monitoring Documentation

1. Patient is on more than the licensed maximum dose of an antipsychotic (unlicensed use) or

2. Patient is on more than 100% cumulative maximum of two or more antipsychotics

- ➔ Initiate High Dose Antipsychotic Monitoring according to NHSL High Dose Antipsychotic Treatment Guidelines