GUIDELINES FOR THE USE OF HIGH DOSE ANTIPSYCHOTICS

1. Introduction

The Consensus Working Group (Royal College of Psychiatrists, 2014) defined high dose antipsychotic (HDAT) use as:

"a total daily dose of a single antipsychotic which exceeds the upper limit stated in the SmPC or BNF with respect to the age of the patient and the indication being treated, and a total daily dose of two or more antipsychotics which exceeds the SmPC or BNF maximum using the percentage method"

The key recommendation from the Royal College of Psychiatrists is that any prescription of high- dose antipsychotic medication should be seen as an explicit, time-limited individual trial with a distinct treatment target.

The aim of this document is to provide guidance on the use of high dose antipsychotics, and outlines key responsibilities of staff in the safe management of patients prescribed high dose antipsychotics.

2. **Staff responsibilities**

2.1 Consultant Psychiatrist

- Retains overall responsibility for prescribing high-dose antipsychotic
- Provides documentary evidence in the patient's clinical record for the rationale for prescribing HDAT, including target symptoms
- Checks for interacting medicines e.g. those that might increase the risk of QTc prolongation
- Ensures that there is a regular review and documentation regarding the continued need for HDAT use
- Ensures that the required monitoring is carried out

2.2 Ward/Team doctor

- Ensures that the required monitoring is carried out (ECG, FBC, LFT's, U&E)
- Ensures that any abnormalities in test results are followed up, including treatment review
- Checks for interacting medicines e .g. those that might increase the risk of QTc prolongation
- Ensures that the High Dose Antipsychotic Monitoring Form has been completed and **uploaded to the clinical record on RIO with the title "HDAT"**
- Documents the reasons for HDAT in the clinical record for the patient
- Ensures that the HDAT status is discussed and documented at ward review and MDT meetings
- On discharge ensures appropriate transfer of care so that monitoring and review can be carried out by either GP or CMHT

2.3 Pharmacist

- Identify those patients on HDAT
- Endorse the drug chart 'on high dose/combination antipsychotics' or place approved colour-coded sticker, where available, signed and dated
- Where eMeds is in use HDAT should be added as a patient attribute and notes recorded against the medication on the eMeds chart
- Calculate the percentage of BNF maximum dose for each prescribed antipsychotic and annotate the drug chart accordingly
- Check for interacting medicines, e.g. medicines that increase the risk of QTc prolongation
- Check that the HDAT monitoring form has been completed
- Ensure that the HDAT status is discussed and documented at ward review and MDT meetings

2.4 Nursing staff

- Carry out required monitoring, including temperature, BP, pulse in conjunction with the MEWS observation chart
- Ensure that the HDAT status is discussed and documented at ward reviews and MDT meetings and at handovers

3. Prescribing HDAT

3.1 The following must be considered:

- Sufficient time should be allowed for desired response from a single antipsychotic before prescribing HDAT
- The responsibility for exceeding the licensed dose of a single antipsychotic or combination of antipsychotics remains with the Consultant Psychiatrist
- The rationale for prescribing HDAT must be documented in the patient's clinical record, together with the target symptoms
- The decision to prescribe HDAT should be discussed with the MDT, patient and carer where possible, and consent obtained
- For patients detained under the MHA, compliance with the Act must be ensured, with this documented in the clinical record
- Increase the dose slowly, ideally with intervals between dose increase of at least a week
- Regularly review progress, target symptoms and side effects at least every 1-3 months or sooner if appropriate. Continued use of HDAT must be documented in the clinical record
- Consideration of a second opinion should be sought as appropriate
- If the patient is discharged on HDAT, ensure that there is a system in place to ensure required monitoring and review will be carried out following discharge, by either the GP or CMHT
- Consider any contra-indications or risk factors, such as cardiac history) particularly MI, arrhythmias and abnormal ECG), hepatic/renal function, epilepsy, diabetes, substance misuse (including alcohol), smoking, age, dehydration, weight.

- Consider any potential drug interactions, specifically concomitant treatment with diuretics, anti-arrhythmics, tricyclic antidepressants, anti-hypertensives and drugs which might prolong QTc interval, cause electrolyte disturbances or affect antipsychotic plasma levels.

3.2 First episode psychosis

- There is no evidence for the use of HDAT in first-episode psychosis and it should not be used
- Antipsychotic polypharmacy should be avoided. Top-up oral antipsychotic doses for patients on depot/long-acting antipsychotic injections should only be used as a short-term measure
- Where antipsychotic response is poor, switching medication should be the preferred course of action, rather than increasing above BNF limits

3.3 Acute psychotic episode

- For the majority of people with acute psychotic illness, the effective dose is likely to be below the licensed maximum

3.4 Relapse prevention

- There is no evidence for the use of HDAT for relapse prevention in schizophrenia
- There is no evidence that incremental dose increase during psychotic relapse, with subsequent continuation of the higher dose provides better relapse prevention in the long term

3.5 Prescribing 'as required' medication

- The indication for the use of any 'as required' antipsychotic should be clearly documented in the clinical record as well as on the drug chart / eMeds, and should be regularly reviewed

3.6 Psychosis failing to respond to standard antipsychotic regimens

- There is no evidence that antipsychotic dosage higher than the maximum licensed dose is more effective than standard treatment regimens for treatment resistant schizophrenia
- Before resorting to HDAT, evidence-based strategies for treatment-resistant illness should be used, including optimised use of clozapine
- If a consultant initiates HDAT, this should be as a limited therapeutic trial, with dosage returned to normal levels after 3 months, unless the clinical benefits clearly outweigh the risks.
- If the patient is still on HDAT past the 6 months monitoring form then the following parameters: ECG, U& E's, FBC, LFT's, temp, pulse, BP (sitting and standing), glucose, lipids and assessment of EPSE's should occur every 6 months thereafter and recorded In the patients RiO notes. If the patient is discharged there should be a clear plan and agreement made with the GP to ensure this monitoring is continued.

REFERENCES

CR 190. Consensus Statement on High-Dose Antipsychotic Medication. Royal college of Psychiatrists available @ http://www.rcpsych.ac.uk/files/pdfversion/CR190.pdf

Southern Health NHS Foundation Trust. Guidelines for the use of High Dose Antipsychotics (HDAT) Version 2 available @ http://www.southernhealth.nhs.uk/EasysiteWeb/getresource.axd?AssetID=72259&type=full&servicetype=Inline

Northumberland, Tyne and Wear NHS Foundation Trust. Guidelines for the Use of Combination and High Dose Antipsychotics - V02 available @ https://www.ntw.nhs.uk/fileUploads/1402494193PPT-PGN-10-Glines%20Use%20of%20CombAndHiDoseAntipsychotics-V02-Upd-Iss2-May14.pdf

Cheshire and Wirral Partnership NHS Foundation Trust. High Dose Antipsychotic Therapy guideline available @ https://platform-cwp-live.s3-eu-west-1.amazonaws.com/attachments/479/original/MP18%20High%20Dose%20Antipsychotic%20Therapy%20%28HDAT%29%20guideline%20Issue%202.pdf?AWSAccessKeyId=AKIAJ4LLNFEOH7WUFWDA&Expires=1453224134&Signature=8AZVyfltd%2Bzkxf9TZlc5vUyGG5I%3D

Northampton Healthcare NHS Foundation Trust. GUIDELINES FOR THE USE OF HIGH DOSE ANTIPSYCHOTIC MEDICATION available @ http://www.nht.nhs.uk/mediaFiles/downloads/2648295/MMG012%20GUIDELINES%20FOR%20THE%20USE%20OF%20HIGH%20DOSE%20ANTIPSYCHOTIC%20MEDICATION%20_Nov13%20-%20Nov15_.pdf

SUMMARY OF CHANGES

Date	Author	Changes (brief summary)
April 2020	Jag Bahia	Antipsychotic dosage ready reckoner updated with version 9
August 2020	Jag Bahia	Comments received back from the D & T committee members on the 4TH of August - HDAT form updated with clearer monitoring frequency
October 2020	Karen Bartlett	Updated 2.3- Where eMeds is in use HDAT should be added as a patient attribute and notes recorded against the medication on the eMeds chart
October 2020	Karen Bartlett	Updated 3.5- The indication for the use of any 'as required' antipsychotic should be clearly documented in the clinical record as well as on the drug chart / eMeds

HIGH DOSE ANTIPSYCHOTIC THERAPY (HDAT) MONITORING FORM

Attach to patients current prescription chart whilst in use. When form completed, no longer relevant or superseded **upload into RIO clinical documentation with the title "HDAT**

Version 5: Oct 2020

Patient Name:	**RIO No:**	**Ward:**
Date of Birth:	**NHS No:**	**Consultant:**

Please circle current risk factors:

Cardiac history, Hepatic impairment, Renal impairment, Elderly, Epilepsy, Diabetes, Substance misuse, Alcohol misuse, Smoker, Dehydration, Obesity

Details of HDAT

Date Prescribed	**ANTIPSYCHOTIC MEDICATION**	**DOSE**	**% BNF DOSE**		
			Regular	**PRN**	**Total**
Date and signature			**TOTAL % DOSE**		
Document changes to medication below and recalculate %					
Date and signature			**TOTAL % DOSE**		
Document changes to medication below and recalculate %					
Date and signature			**TOTAL % DOSE**		

INTERACTING MEDICATIONS Y / N **Please specify:**	

HDAT PHYSICAL HEALTH MONITORING

Please tick & enter data in RIO core physical health monitoring record

Frequency	**DATE & SIGNATURE**	**ECG**	**U&Es + FBC**	**LFTs**	**Temp ^{0}C**	**Pulse**	**BP (Sitting and standing)**	**Random Blood Glucose**	**Random Blood Lipid**	**EPSE's**
Baseline										
1 Week										
1 month										
3 months										
6 months										

ALL ABNORMAL RESULTS MUST BE DOCUMENTED IN PATIENT NOTES AND FOLLOWED UP

REVIEW OF PROGRESS OF HDAT Please tick and make appropriate entries in RIO

Frequency	**DATE & SIGNATURE**	**Capacity**	**Consent**	**Reason for HDAT**	**Clinical Global Impressions**	**S/E Monitoring**
Baseline						
6 Weeks						
3 Months						
6 Months						

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 9

February 2020 - *Always check you are using the latest version*

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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.

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 9

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Depot/long-acting injection and IM antipsychotics

Depot/LAI: 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%
Aripiprazole	Long-acting										50										100
Flupentixol	Depot	20	40	60		100					200					300					400
Haloperidol	Depot							25			37.5			50							75
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
Zuclopenthixol	Depot			100	100			200			300			400			500	500			600
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.

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