South London and Maudsley NHS
NHS Foundation Trust

COVID-19 and psychotropic medication

Clozapine blood tests

The duration of validity of FBC results depends on the length of time a patient has been treated with clozapine. The amount of clozapine dispensed reflects the validity of this blood test; usually this is 7 days for patients on weekly FBC monitoring, 14 days for patients on fortnightly monitoring, and 28 days for those on 4 weekly monitoring.

Ztas (the clozapine monitoring service for Zaponex) allow for extra supply beyond this blood test validity – an extra 7 days for those on weekly and fortnightly monitoring, and 14 days for those on 4 weekly monitoring. See table below.

Duration of treatment	**Monitoring frequency**	**Maximum Zaponex supply**
1-18 weeks	Weekly	14 days
19-52 weeks	Fortnightly	21 days
> 52 weeks	4-Weekly	42 days

Dispensing or administering clozapine outside these durations (i.e. without a valid FBC) is unlicensed. If blood tests cannot be performed within these time periods and this would result in gaps in treatment, please contact the pharmacy department as soon as possible.

Patients without symptoms of COVID-19
Patients who are self-isolating should not attend healthcare settings for phlebotomy. Blood tests should be performed at the patient's home, using personal protective equipment and techniques as recommended by the trust. Patients can be supplied with the maximum amount of clozapine (see table above) to cover the isolation period and prevent gaps in treatment. Please contact the pharmacy department to arrange supply. Medication will be posted to the patient where possible.

Patients with symptoms of COVID-19
Patients presenting with **flu-like symptoms**: continue clozapine, take an URGENT FBC (suspect neutropaenia. Act on red or amber results in the usual manner). All patients should also have a clozapine plasma level taken (see below).

Patients presenting with **flu-like symptoms, chest pain and shortness of breath**: WITHOLD clozapine (suspect myocarditis and investigate accordingly).

Note that if clozapine is withheld for >48h dose retitration is necessary

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Clozapine plasma levels

Fever and rises in CRP, indicative of systemic inflammation, can cause a reduction in the metabolism of clozapine via CYP1A2 liver enzymes. This results in a rise in clozapine plasma levels. It is possible that infection with COVID-19 will have this effect.

Patients with **severe respiratory infection:** WITHOLD clozapine until symptoms resolve

Patients with **mild respiratory infection:** continue clozapine, take a clozapine plasma level (trough level)

Be aware that patients who are unwell may reduce smoking frequency and/or intensity

Smoking

Smoking significantly reduces the plasma levels of some psychotropic medications. This is because tobacco smoke contains polyaromatic hydrocarbons which induce hepatic enzymes, particularly CYP1A2. Stopping smoking will normalise enzyme activity and cause plasma levels of some drugs to rise over a week or so. Dose reduction will be necessary to avoid drug toxicity.

Note that nicotine replacement therapy, including e-cigarettes, has no effect on hepatic enzymes – switching from tobacco smoking to other forms of nicotine has the same effect as stopping smoking.

Clinicians should assume that smoking will reduce to some extent in patients with respiratory infection and take action accordingly (see table below).

Further information can be found in The Maudsley Prescribing Guidelines.

Medicines Information can be contacted in hours on 0203 228 2317.

The **on-call pharmacist** can be contacted out of hours via switchboard.

Professor David Taylor
Chief Pharmacist
13.03.2020

Drug	Effect of stopping smoking	Action needed on stopping smoking
Benzodiazepines	Plasma levels increased by up to 50%	• Reduce dose by 25% over 1 week
Carbamazepine	Plasma levels increased by a small amount	• Monitor for adverse effects • Reduce dose if necessary
Clozapine	Plasma levels increased by up to 50%, or more in patients also taking valproate	• Take plasma level before stopping. • On stopping, reduce dose by 25% over a week • Repeat plasma level after 1 week • Reduce dose further if required
Duloxetine	Plasma levels increased by up to 50%	• Monitor for adverse effects • Reduce dose if necessary
Fluphenazine	Plasma levels increased by up to 50%	• Reduce dose by 25% • Monitor for adverse effects over 4 – 8 weeks • Reduce dose further if required.
Fluvoxamine	Plasma levels increased by about a third	• Monitor for adverse effects • Reduce dose if necessary
Haloperidol	Plasma levels increased by about 20%	• Reduce dose by 10% • Monitor for adverse effects and reduce dose further if necessary
Olanzapine	Plasma levels increased by 50%	• Take plasma level before stopping. • On stopping, reduce dose by 25% over a week • Repeat plasma level after 1 week • Reduce dose further if required
Tricyclic antidepressants	Plasma levels increased by 25 – 50%	• Monitor for adverse effects • Reduce dose by 10 – 25% if necessary