NHS
South West London and St George's Mental Health NHS Trust

Mandatory Monitoring for Psychotropics on the Trust Formulary

The tablet below details the mandatory and recommended good practice monitoring for each formulary psychotropic medication as set out by the summary of product characteristics. Not carrying out mandatory requirements would result in the medication being used off-label. This information is to guide prescribers on decision making of risk/benefit during this period of reduced contact with patients. Good practice recommendations should be carried out at the earliest opportunity.

Antipsychotics	Mandatory (in SPC)	Good Practice Recommendations
Aripiprazole	None	• Fasting glucose • HbA1c • Lipid profile • Prolactin • FBC • LFTs • U&E • eGFR • weight and waist circumference • Pulse • BP • ECG • TFTs (with quetiapine only) As per physical health monitoring poster
Risperidone	Patients with a history of low WBC should have WBC monitoring during first few months	
Olanzapine	None	
Amisulpride	Baseline ECG recommended for all patients especially those with history of cardiac disease and the elderly. On-going monitoring based on individual patient.	
Quetiapine	None	
Flupentixol	None	
Haloperidol	Baseline ECG is recommended before treatment and the need for continued monitoring must be assessed on an individual patient basis. Baseline U&Es recommended as hypokalaemia and hypomagnesaemia increase risk of arrhythmias.	
Zuclopenthixol	None	
Chlorpromazine	Baseline ECG recommended	
Trifluoperazine	None	
Sulpiride	None	
Clozapine – in this current period it is not recommended to initiate patients on clozapine	The following must be carried out • WBC and platelets (valid to start clozapine within 10 days) • On-going WBC and platelet monitoring in line with the Summary of Product Characteristics - See additional Trust guidance issued	The following are not mandatory but should be done at baseline as we need to obtain a mandatory blood test • ECG • BP, temperature, pulse, respiratory rate • Weight, BMI and waist circumference • Fasting blood glucose • Fasting lipid profile • Troponin, CRP • LFTs, creatinine phosphokinase • U&Es  Summary table monitoring guidelines
Antidepressants		
Citalopram & escitalopram	ECG if signs of cardiac arrhythmia occur during treatment is mandatory.	• Baseline ECG for citalopram, escitalopram and TCAs • Optional ECG for other antidepressants • Monitor for hyponatraemia
Fluoxetine	None	
Sertraline	None	
Fluoxetine	None	
Paroxetine	None	
Mirtazapine	None	
Venlafaxine	Baseline and periodic review of Blood pressure	
Amitriptyline	ECG should be performed prior to initiating therapy to exclude prolonged QTc when prescribed for nocturnal enuresis	
Clomipramine	Baseline and on-going ECG in elderly and those	

	with cardiac disease	
Lofepramine	Baseline ECG in high risk patients Baseline Blood pressure advised	
Imipramine	Baseline blood pressure advised	
Nortriptyline	None	
Trazodone	None	
Phenelzine	Regular BP monitoring should occur	
Isocarboxazid	Regular LFTs should be carried out	
Tranylcypromine	None	
Moclobemide	None	
Vortioxetine	None	
Mood Stabilisers		
Lamotrigine	None	**<u>All Mood Stabilisers</u>** • TFTs, FBC, U&Es, LFTs • CAMHS – all above plus height, weight and prolactin monthly for first 6 months then 6-monthly. **<u>Additional requirements</u>** • Lithium – Calcium and ECG
Carbamazepine	Baseline and periodic FBC including platelets	
Sodium Valproate	LFTs should be measured before therapy and periodically in the first 6 months.	
Lithium	The following must be carried out at Baseline • U&Es and eGFR • Cardiac function (ECG) • TFTs **See additional information on next page for on-going monitoring**	
Hypnotics & anxiolytics		
Zopiclone	None	None
Benzodiazepines	None	
Promethazine	None	
Melatonin	None	
Pregabalin	None	
ADHD Medicines		
Atomoxetine	• Baseline cardiovascular status including BP and HR. • Status should be monitored regularly with BP and pulse after each dose change and then 6-monthly. • ECG should be considered if there is congenital, acquired or family history of prolonged QTc	**<u>Child & adolescents</u>** **Baseline:** height, weight, blood pressure, pulse and ECG if family history of arrhythmias or sudden death. **6 monthly:** Blood pressure & pulse, height & weight plotted on a growth chart. LFTs / FBC should be measured if signs of liver impairment (seen with atomoxetine). **<u>Adults</u>** **Baseline & every 6 months:** Pulse, BP and weight. ECG only if family history, PMH or physical examination indicates likelihood of car-diovascular disease. .
Dexamfetamine	• Baseline cardiovascular status including BP and HR. • Height and weight • Growth, psychiatric and CV status to be monitored during treatment	
Lisdexamfetamine	• Baseline cardiovascular status including BP and HR. • Growth, psychiatric and CV status to be monitored during treatment	
Methylphenidate	• Baseline cardiovascular status including BP and HR. • Growth, psychiatric and CV status to be monitored during treatment	
Guanfacine	• During dose titration, weekly monitoring for signs and symptoms of somnolence and sedation, hypotension and bradycardia should be performed.	
Dementia medicines		
Donepezil	None	**<u>Acetylcholinesterase inhibitors</u>** ECG if a cardiac contra-indication to cholinesterase inhibitor treatment (e.g. sick sinus syndrome or other supraventricular conduction abnormalities) is suspected.
Galantamine	None	
Rivastigmine	None	
Memantine	None	

Monitoring and Management of Lithium During Covid-19

Lithium is a medicine with a narrow therapeutic range which requires regular plasma levels to ensure that patients are on a therapeutic dose. The majority of patients who are on lithium are monitored in primary care, this should be continued wherever possible. In light of recent events it may become more difficult to obtain blood tests and as such guidance below sets out when it would be appropriate to test and those instances where blood testing could be delayed based on a risk vs benefits analysis by the prescriber.

Routine Monitoring

Once patients are on a stable dose of lithium, monitoring of lithium levels is carried out at least every three months for the first year. NICE suggests that after the first year, lithium levels can be monitored every 6 months, or every 3 months for people in any of the following groups:

- older people
- people taking medicines that interact with lithium
- people who are at risk of impaired renal or thyroid function, raised calcium levels or other complications
- people who have poor symptom control
- people with poor adherence
- people whose last plasma lithium level was 0.8 mmol per litre or higher

SWLStG advocate 3 monthly lithium level monitoring for all patients as being on lithium increases the risk of developing impaired renal function. Extended monitoring of lithium levels over 3 months is off-label.

Any decision to delay routine blood tests resulting in off-label use should be made on a case by case basis considering the risks and benefits of monitoring. It should only be done following discussion with the patient, assessment of their capacity, a risk/benefit discussion documented and patient consent to the plan. This should be clearly recorded in RIO. Patients and/or carers must be informed of the signs of lithium toxicity and the need to seek urgent advice from their healthcare professional if these arise:

- Severe hand shake ('tremor')
- Stomach ache along with feeling sick and having diarrhoea
- Muscle weakness
- Being unsteady on your feet
- Muscle twitches
- Slurring of words – so that it is difficult for others to understand what you are saying
- Blurred vision
- Confusion
- Feeling unusually sleepy

Please note some symptoms of lithium toxicity may also occur with COVID-19 e.g. diarrhoea, muscle weakness and unusual sleepiness. Patients should be advised to always seek advice from their health professional.

Patients who have had recent dose changes or have been newly started on lithium should continue to have blood tests as per usual guidance until a stable dose and level is achieved.

Lithium and COVID-19

Lithium has not been shown to increase the risk of developing infections. However infections and physical illness can affect lithium levels and can lead to an increased risk of lithium toxicity due to the following:

- Dehydration due to fever or gastrointestinal disturbances.
- Changes to diet due to self-isolation/changes in availability.

Reports from Wuhan suggest that the "prevalence of kidney disease on admission to hospital and the development of Acute Kidney Injury (AKI) in patients with COVID-19 is high and is associated with in-hospital mortality. Hence, clinicians should increase their awareness of kidney disease in patients with severe COVID-19.

Those on lithium should be reminded that non-steroidal anti-inflammatory drugs (NSAIDs) should not be used for pain relief and that paracetamol should be used to manage any pain or fever.

Those with confirmed or suspected COVID-19

Inpatient Setting

- Patients should have renal function and lithium level (12 hours post dose) monitoring to ensure kidney function is not compromised.
- Patients should be encouraged to drink adequate fluids and a fluid chart can be used to measure and monitor this.
- Nursing staff to be vigilant for signs of lithium toxicity.

Community Setting

- Where patients are stable on lithium and are displaying mild symptoms, lithium should be continued as normal and patients to monitor for lithium toxicity.
- Those who develop moderate or severe symptoms and develop signs of lithium toxicity should have an urgent lithium level and kidney function monitored as soon as possible, this should be arranged through the care co-ordinator/community team and for patients under the care of SWLStG this could be carried out by the MH emergency service.
- Anyone experiencing symptoms of toxicity should withhold their lithium and contact their care co-ordinator/community team to arrange an urgent lithium level.
- Patients under primary care without urgent serious physical healthcare needs who would otherwise have had to go to A&E, can be referred to Orchid Mental Health Emergency Service (MHES) via the Mental Health Support line: **0800 028 8000**. However, if there's significant toxicity and the patient might need haemodialysis, then the patient will still need to go to A&E

References

- Individual Summary of Product Characteristics (SPCs) of all psychotropic medicines listed, accessed via www.medicines.org.uk
- Monitoring Lithium during Covid 19 (draft) written by North East London NHS Foundation Trust (March 2020)
- Covid-19 and lithium (final) written by South London and Maudsley NHS Foundation trust (March 2020)