Suggested Guidance on Drugs Monitoring in Primary Care during Covid-19

Approved at CORNWALL AREA PRESCRIBING COMMITTEE June 2020

NHS Kernow Clinical Commissioning Group

This is a guide and is not intended as a definitive treatment strategy. There will be exceptions to this guide and these should be communicated to the patient's surgery by the specialist team. It is recommended that drug monitoring during the COVID-19 pandemic is prioritised for patients that will gain most benefit e.g. those at risk of a serious adverse drug event that can be identified through monitoring; people taking a Narrow Therapeutic Index drug during a phase when intensive monitoring is still required (e.g. upon initiation); patients who have recently had an illness that may have impacted on how their drug works.

Drug	Indication	Blood test	Typical normal monitoring schedule	*Normal guidance reference*	During Covid19	*Covid guidance reference*	Caution
Sulfasalazine	Rheumatology	U+E, LFT, FBC, CRP	Fortnightly for 6weeks, monthly for 3 months, then 3 monthly until month 12 then discontinue. No further routine monitoring required unless patient is at high risk of toxicity in which case monitoring may be more frequent	NOT UKMI 2018	*If on treatment for more than twelve months, no monitoring required*. If recently-started, try to maintain schedule but maximum of four months between bloods.	Black italic text is SPS	
Azathioprine & Mercaptopurine	Rheumatology, Dermatology, Neurology,	U+E, LFT, FBC, CRP	Fortnightly for 6 weeks, monthly for 3months, then 3 monthly.		If stable then 3 monthly schedule extended to up to every 6 months maximum. If notified by specialist that patient is heterozygote for TPMT or has low TPMT (< 67 mU/L) continue monitoring FBC and LFTs monthly		Caution extending if co-prescribed - More than one immunosuppressant (especially sulfasalazine) - Clozapine (increased risk myelosuppression) - ACE inhibitor (increased risk anaemia) - Allopurinol (increased risk azathioprine toxicity)
Azathioprine & Mercaptopurine	Gastroenterology	FBC, LFT	Weekly for first 8 weeks and if stable 3-MONTHLY thereafter. U&E should be checked 6 monthly		Maintain normal schedule	local	

Methotrexate	Rheumatology, Dermatology,	U+E, LFT, FBC, CRP	Fortnightly for 6 weeks, monthly for 3 months, then 3 monthly		If stable then 3 monthly schedule extended to up to every 6 months.		Caution extending if co-prescribed - More than one immunosuppressant (especially ciclosporin or leflunomide) - Clozapine (increased risk myelosuppression) - Acitretin/ retinoids (increased risk of hepatitis) - Levetiracetam (increased risk of methotrexate toxicity) - Phenytoin (increased antifolate effect) - NSAIDs (increased risk nephrotoxicity)
Mycophenolate mofetil	Rheumatology, Dermatology,	U+E, LFT, FBC	Fortnightly for 6 weeks, monthly for 3 months, then 3 monthly		If stable then 3 monthly schedule extended to up to every 6 months.		Caution extending if co-prescribed - More than one immunosuppressant - Clozapine (increased risk myelosuppression) - Aciclovir/ valganciclovir/ valaciclovir/ (increased risk myelosuppression)
Leflunomide	Rheumatology	U+E, LFT, FBC, BP (HTN), weight loss	Fortnightly until stable dose for 6 weeks, then monthly for three months, then at least once every 12 weeks. BP (as hypertension is a possible side effect) and weight should be checked at these intervals.		If stable then 3 monthly schedule extended to up to every 6 months maximum. Blood pressure and weight to be checked at each monitoring visit		Caution extending if co-prescribed - More than one immunosuppressant (especially methotrexate) - Clozapine (increased risk myelosuppression)

Ciclosporin	Rheumatology, Dermatology	U+E, LFT, FBC	Fortnightly for 3 months then every 3 months	NOT UKMI	Maintain normal schedule	local	Caution extending if co-prescribed - More than one immunosuppressant (especially methotrexate) - Clozapine (increased risk myelosuppression) - NSAIDs (increased risk nephrotoxicity) - ACE inhibitor/ANG2 receptor antagonist/ aldosterone antagonists/ potassium sparing diuretics (increased risk hyperkalaemia) - Digoxin (increased risk of digoxin toxicity) - Amiodarone, dronedarone, calcium channel blockers, antivirals, allopurinol (increased risk ciclosporin toxicity)
d-Penicillamine	Rheumatology	U+E, LFT, FBC, Urinalysis (blood and protein)	Bloods AND urinalysis fortnightly for 6 weeks, monthly for 12 months, then 3 monthly (on an individual basis)	Not UKMI	Extend monitoring interval for bloods and urinalysis to 6 months (maximum)	SPS	Caution extending if co-prescribed - More than one immunosuppressant - Clozapine (increased risk myelosuppression) - NSAIDs (increased risk nephrotoxicity)
Hydroxychloroquine	Rheumatology, Dermatology	Eye test	Annually after year 5 (ideally including optical coherence tomography)	Royal Col Ophthal	Suspend eye assessment. Seek ophthalmologist advice for patients at highest risk of toxicity- i.e. renal impairment, on maximum dose (>5 mg/kg per day), concurrent tamoxifen	SPS	Caution extending if co-prescribed - More than one immunosuppressant - Clozapine (increased risk myelosuppression) - Tamoxifen (increased risk retinal toxicity)
Mesalazine	Gastroenterology	U+E, LFT	Every 3 months for first year then annually		Keep at annual once stable		

Lithium		Lithium Levels	Once stable, serum lithium levels every 3 months for the first year then normally every 6 months thereafter; or continue every 3 months in at-risk patients (see Caution column):		If patients are not in the at-risk category then monitoring intervals can be extended by up to 3 months; however, patients must keep in good physical health and maintain good fluid intake and should resume normal monitoring intervals as soon as possible and safe to do so If patients are in the at-risk category then their normal monitoring interval should be continued and extension is in most circumstances inappropriate	SPS	Extending blood monitoring intervals is not suitable if the patient has: - Elderly (over 65 years); - On Lithium <12 months; - eGFR <60ml/min; - initiating/stopping interacting drugs with lithium since last lithium test; - established CKD; - impaired thyroid function at last test; - raised calcium level at last test; - poor symptom control/poor adherence; - lithium level ≥0.8mmol/L.
		BMI, U+E, FBC, Calcium, TSH	FBC, U&E including eGFR, TFT, 3 monthly for first year then FBC, U&E including eGFR, TFT, calcium every 6 months. Annually BMI, and health check				
Alfacalcidol	Renal, Endocrine	Calcium, PTH	3-6 monthly if stable		6-9 monthly if stable		
Amiodarone		LFT, TFT, U&E	6 monthly	NICE CKS	Extend to 9 months as long as recent tests have been normal	Leeds guidance	
		ECG	Annually		Extend to 15 months as long as recent tests have been normal	Leeds guidance	
Valproate		FBC + LFT + BMI	At Month 6 and then annually		Extend to 18 months	Leeds guidance	
Antipsychotics		FBC + LFT + U+E + HBA1c + Lipids	Annually		keep at every 12 months	local	
		TFT	Annually Quetiapine only		keep at every 12 months		

		Prolactin	Annually for amisulpiride, sulpiride, risperidone, paliperidone, chlorpromazine, flupenthixol, olanzapine at dose >20mg		keep at every 12 months		
		ECG	Annually for haloperidol, pimozide, sertindole, ziprasidone		keep at every 12 months		
Clozapine	https://www.sps.nhs.uk/articles/clozapine-drug-monitoring-in-primary-care-during-covid-19-for-stable-patients/						
Carbimazole	Monitoring for patients on carbimazole alone and carbimazole/levothyroxine combination is managed by Endocrine team						
Levothyroxine		TFT	Consider measuring TSH every 3 months until the level has stabilised (2 similar measurements within the reference range 3 months apart), and then once a year.	NICE thyroid CG 145	keep at every 12 months	local	
If on combination of antihypertensive & diuretics then utilising normal monitoring schedule may be more appropriate							
ACEI + Diuretic/HF		U+E	After 1-2 weeks, then monthly for 3 months, then at least every 6 months.	NICE CKS	Maintain normal schedule	local	
ACEI in HTN/MI/ etc		U+E	After 1–2 weeks, then annually	NICE CKS	Maintain normal schedule	local	
Spironolactone		U+E	Monthly for 3 months, then every 3 months for 1 year, then every 6 months thereafter	NICE CKS	Maintain normal schedule	local	
Eplerenone		U+E	Monthly for 3 months, then every 3 months for 1 year, then every 6 months thereafter		Maintain normal schedule	local	
Loop Diuretics		U+E	After 1–2 weeks, then 6 monthly	NICE CKS	Maintain normal schedule	local	

Thiazides		U+E	After 1 week and then "clinical judgement".	NICE CKS	Maintain normal schedule	local	
Statins/Fibrates		LFT	At Month 3 and 12. No need to repeat unless clinically indicated. Measure cholesterol at 3 months if on intensive statin	NICE lipid pathway & CG181	Maintain normal schedule	local	
Denosumab (Prolia)	Rheumatology	Calcium	Calcium levels prior to every injection 6 monthly, consider rechecking 10-14 days post injection if eGFR < 35ml/min	SPC	No change to current monitoring Important: next injection should not be delayed >4 weeks as benefit wears off quickly and risk of rebound fractures	local	
DOACs		U&E, LFT, FBC	12 monthly if stable, 6 monthly if CrCl < 50ml/min / elderly / frail and 3 monthly if 15-30ml/min		Maintain normal schedule	local	
Biologic s/c	Dermatology Rheumatology	LFT, FBC, U&E	Monthly for the first three months, then every three months. Please also check CRP at these intervals to assist with monitoring of disease activity.		Rheum indication extend to 6 months if stable	local	
Biologics s/c & DMARD	Dermatology Rheumatology	LFT, FBC, U&E	Monthly for the first three months, then every three months. Please also check CRP at these intervals to assist with monitoring of disease activity.		Rheum indication every 3 months if stable on combination	local	
Acitretinoin	Dermatology	LFT, FBC + Lipids	every 2 weeks for 2 months then every 3 months		at week 4, week 8 and then 3 monthly thereafter	local	
Isotretinoin	Dermatology	LFT, FBC + Lipids	at week 8		Maintain normal schedule	local	
Alitretinoin	Dermatology	LFT, FBC	at 3 months		Maintain normal	local	

		+ Lipids			schedule		
JAK inhibitors	Rheumatology	U&E, LFT, FBC, CRP, Lipids	Monthly for the first three months, then every three months. Please also check CRP at these intervals to assist with monitoring of disease activity. Lipids to be checked once at 8 weeks (tofacitinib) or 12 weeks (baricitinib)		Extend to 6 months if stable, maintain at three months if combined with DMARDs	local	
Apremilast	Rheumatology, Dermatology	U&Es, weight	Measure annually		Can be extended to 15 months	local	Depression is possible side-effect of apremilast, be aware of worsening mood
LHRA agonists e.g. goserelin, triptorelin	Urology	PSA	according to clinical risk, typically 3-6 monthly		Can be extended/delayed by 3-6 months	local	

This agreement is for COVID-19 only emergency situation, commencing June 2020. The agreement may be updated periodically with recommendations made by the Cornwall Area Prescribing Committee.