BSW Summary of

Shared Care Guidelines

And

Monitoring of Disease Modifying Drugs (DMARDs) in ADULTS

February 2021

Rheumatology/Dermatology/Gastroenterology/Neurology

(NB doesn't include GWH gastroenterology)

Based on the British Society for Rheumatology/BHPR Non-Biologic DMARD Guidance 2017

https://academic.oup.com/rheumatology/article/56/6/865/3053478

See also Summary of Product Characteristics or BNF for additional Information

General Information

Disease Modifying Anti-Rheumatic drugs (DMARDs) are added at increasingly early stages in the treatment of rheumatoid arthritis (RA) to suppress the processes responsible for the chronic inflammation of RA, they may be used either as mono-therapy or in combination. DMARDs are also used for the treatment of other rheumatology conditions (e.g. connective tissue disorders and vasculitis) and in other specialities, including dermatology, respiratory medicine and gastroenterology.

A number of these drugs are recommended for prescribing in unlicensed indications. All recommendations are based on the practice of a responsible body of peers of similar professional standing (e.g. The British Society for Rheumatology; see References for full details). Prescribers are advised to discuss with the patient if the medicine is used out of license and document this agreement in the patient's medical record.

These shared care guidelines outline suggested ways in which the responsibilities for managing the prescribing of DMARDs can be shared between the specialist and general practitioner in primary care.

DMARDs should be initiated by hospital specialists only and should not be initiated in the Primary Care setting. GPs are invited to prescribe DMARDs and participate in shared care in accordance to the written instructions given by the Acute Trust Specialists once the patient has reached a stable dose.

If the GP is not confident to undertake these roles, then the total clinical responsibility for the patient for the diagnosed condition remains with the specialist. If a specialist asks the GP to prescribe drugs for this treatment, the GP should only reply if he cannot take on the shared care arrangement. The intention to share care should be explained to the patient by the doctor initiating treatment. It is important that patients are consulted about treatment and are in agreement with it. The doctor who prescribes the medication legally assumes clinical responsibility for the drug and the consequences of its use.

Please consult the manufacturer's Summary of Product Characteristics (SPC) (www.medicines.org.uk) and the current BNF for full prescribing information on contra-indications, side-effects and interactions.

Pre-pregnancy and pregnancy advice
If the patient is pregnant or is thinking of becoming pregnant (in relation to both maternal and paternal patients) then advice should be sought from the originating prescriber.

Further medicines advice:

In the Salisbury (SFT) area, further information can also be obtained from Wessex Drug and Medicines Information Centre, based at Southampton General Hospital. The service may be accessed in the following ways:
By telephone: Available from 09h00-18h00 (Mon-Fri), call 023 8120 6908 or 9
By e-mail: medicinesadvice@uhs.nhs.uk

RUH: Medicines Information telephone: 01225 824633
Patient Information Helpline http://www.ruh.nhs.uk/patients/medicines_helpline/index.asp **01225 825361 Monday to Friday 9.00am - 11.00am, and 2.00pm - 4.30pm**
Outpatient pharmacy: 01225 825869
OUT OF HOURS EMERGENCY CONTACT (5pm until 9am Mon to Sat and all weekend) Contact the Medical Admissions Unit Consultant 07818 013823 OUT OF HOURS in the event of severe neutropaenia.

GWH: Patient information help-line: 01793 605369 with capacity for leaving messages. This is manned on weekday afternoons and is only regarding medication received from the hospital.

In the Swindon area, further information can also be obtained from Wessex Drug and Medicines Information Centre, based at Southampton General Hospital. The service may be accessed in the following ways:

By telephone: Available from 09h00-18h00 (Mon-Fri), call 023 8120 6908 or 9

By e-mail: medicinesadvice@uhs.nhs.uk

Rheumatology

SFT Consultants/Nurse Specialists Contact via Secretaries		
Rheumatology Reception	01722 429217	8:30 to 16:30
Rheumatology Fax Number	01722 337912	8:30 to 16:30
Rheumatology Advice Line	01722 429137	mainly Tue/Thu/Fri 9 – 11/ad hoc hours
Consultant Secretary	01722 345556	diane.graham9@nhs.net
Nurses and OT Secretaries	01722 345556	As above
Nurse Specialists	01722 429217	
RUH Consultants/Nurse Specialists		
Rheumatology advice line for patients	01225 428823	
GP queries help line	Via consultant connect	
GWH Consultants/Nurse Specialists Contact via Secretaries		
Rheumatology advice line for patients	01793 604323	gwh.rheumatologyadvice@nhs.net
GP queries help line (Mon-Fri except Mon a.m. & Weds p.m.)	01793 6047496	
Dr Elizabeth Price's secretary	01793 604314	
Dr Carty's secretary	01793 604317	
Dr Collins' secretary		
Dr Ahmed's secretary	01793 604318	
Dr Waller's secretary		
Dr Williams secretary	01793 604314	
Dr Oke's secretary		

Gastroenterology

SFT Consultants/Nurse Specialists		E-mail addresses	Telephone numbers
Anne MacRae	Inflammatory Bowel Disease Specialist Nurse	Anne.macrae2@nhs.net	01722 336262 ext:2094
IBD Nurses		shc-tr.ibdnurses@nhs.net	01722 336262 ext:4893
Dr Aqeel Jamil	Consultant Gastroenterologist	Aqeel.Jamil@nhs.net	01722 336262 ext:2034
Louise Black	Hepatology Clinical Nurse Specialist	louise.black2@nhs.net	01722336262 Ext 2074
Dr Mohammed Islam	Locum Consultant Gastroenterologist	mohammed.islam27@nhs.net	01722 336262 Ext:2034
RUH Consultants/Nurse Specialists			
Inflammatory Bowel Disease Specialist Nurses		Ruh-tr.ibd@nhs.net	01225 825598
Dr Linehan	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 821856
Dr Colleypriest	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 824547
Dr Quinlan	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 824547
Dr Mehta	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 821856
Dr Walker	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 826403
Dr Saunders	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 821783
Dr Marden	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 825418
Dr Griffiths	Consultant gastroenterologist	Ruh-tr.gastroadvice@nhs.net	01225 825788
GWH Gastroenterology is not part of this DMARD shared care agreement.			

Dermatology

SFT		E-mail addresses	Telephone numbers
Dermatology		shc-tr.Dermatology@nhs.net	-
RUH			
Urgent dermatology advice			Use consultant connect
Professor Alex Anstey	Consultant dermatologist	From March 2021	01225 826225
Dr S Woodrow	Consultant dermatologist		01225 826374
Dr I Mauri-Sole	Associate specialist		01225 826225
Dr Caoimhe Fahy	Consultant dermatologist		01225 825326
Dr Sarah Rasool	Consultant dermatologist		01225 826374
Dr Naila Dinani	Consultant dermatologist		01225 826225
Emma Holt	Biologics administrator		01225 826226
GWH			
Lindsay Whittam	Consultant dermatologist		01793 604367/68
Mohamed Alrawi	Consultant dermatologist		
Mei Fong Chin	Consultant dermatologist		
Hartmut Hempel	Associate specialist		
Greg May	Associate specialist		
Nikki Cooper	Nurse specialist		
Sue Toft	Nurse specialist		
Ernest Sevilla	Nurse specialist		
Spa medical centre dermatology service			
Tom Millard	Consultant dermatologist	tom.millard@nhs.net	01225 898019
Catrinel Wright	Dermatology GPwER	catrinelwright@nhs.net	

Neurology

GWH Consultants/Nurse Specialists		E-mail addresses	Telephone numbers
Dr Hinze/ Dr Yiin	Consultant neurologists	gwh.neurologyrefs@nhs.net	01793 605099
Dr Lennox/Dr Paul/ Dr Thompson			01793 604767
Dr Zuromskis/ Dr Bajoriene			01793 605105
Dr Mazzucco/ Dr Morrish/ Dr Sarangmat			01793 605114

RUH Consultants/Nurse Specialists		E-mail addresses	Telephone numbers
Dr Nicola Giffin	Consultant neurologists		X 5456
Dr Paul Lyons			X 4433
Dr C Chohan			X 5378

SFT Consultants/Nurse Specialists		E-mail addresses	Telephone numbers
Dr Boyd Ghosh	Consultant neurologists	sft.admin.neurology@nhs.net	01722 429233
Dr Chinar Osman			
Dr Joanna Lovett			

Responsibilities of Speciality Team, GP Team, Pharmacy Team & Patient

Specialist responsibilities
1 Provide patient with information on disease and drug treatment options and explain where drugs are used outside of license. 2 Discuss the benefits and side effects of treatment with the patient and advise women of child bearing age to use reliable contraceptive methods where necessary. Also discuss the effects of the drug on pregnancy if applicable, when the patient may be considering having a family (paternal effects as well) in the future. Also the intention to share care. 3 To confirm the patient has no contra-indications to treatment and consider the relevance of any cautions. 4 Carry out pre-treatment assessment, including height, weight, blood pressure and necessary blood tests (FBC, Creatinine, ALT &/or AST and albumin). Evaluate patient for respiratory disease and screen for occult viral infection. 5 Confirm that the GP is willing to participate in shared care. 6 Ensure the patient knows to report any side-effects or problems to their GP or specialist. 7 The specialist should report any side-effects to the MHRA via the yellow card scheme. 8 Review pre-treatment assessment, including blood test results. 9 Initiate treatment with DMARD and give at least 28 days supply to the patient and give the patient a monitoring booklet/ patient info leaflet as appropriate. 10 Send GP details of baseline assessments and results, prescribed dose of DMARD, monitoring requirements and a summary of the information that has been given to the patient. 11 Advise GP that pneumococcus and influenza vaccinations are recommended in patients taking DMARDs. 12 At first review appointment check initial monitoring results and assess response to treatment. 13 Communicate promptly with the GP when treatment is changed or needs to be changed by the GP, and when any changes in monitoring are required. Ensure that arrangements are in place for GPs to obtain advice and support where needed. 14 Have a mechanism in place to receive rapid referral of a patient from the GP in the event of deteriorating clinical condition. 15 Ensure that clear backup arrangements exist for GPs to obtain advice and support.

General Practitioner responsibilities
1 Reply to the request for shared care as soon as practicable. 2 Prescribe the DMARD at the dose recommended.

3 Carry out monitoring according to the guideline recommendations.

4 Ensure the patient is aware of any treatment change and that where held, the monitoring booklet is up to date.

5 Report to and seek advice from the specialist on any aspect of patient care that is of concern and may affect treatment.

6 Refer patient to specialist if his or her condition deteriorates.

7 Stop treatment on the advice of the specialist or immediately if an urgent need to stop treatment arises.

8 Report adverse events to the specialist team and MHRA via the yellow card scheme.

Pharmacist responsibilities

1 Ensure appropriate dose prescribed with clear directions not 'as directed'.

2 Provide advice on adverse effects and any drug interactions with prescription and/or OTC medicines.

3 Issue patient information leaflets where appropriate.

4 Monitor frequency of prescription requests and contact GP if quantities in excess of the prescribed dose are ordered.

5. Advice patient to report any malaise, unexplained bruising or sore throats to Specialist / GP

Patient responsibilities

1. Report to the specialist or GP if he or she does not have a clear understanding or has any concerns in relation to treatment

2. Ensure safe storage and handling of medicine

3. Request repeat prescriptions from GP in good time.

4. Ensure the Pharmacist is aware of the DMARD they are taking prior to purchase of any OTC medicine.

5. Ensure the GP and specialist are aware of any over- the -counter medicines they may be taking.

6. Where patient-held monitoring booklets have been given ensure these are brought to each appointment with their GP or specialist

7. Report any adverse effects to the GP or specialist.

8. Attend blood monitoring appointments

Standard Monitoring Schedule requirements:

For use when starting or adding a new DMARD.

Check FBC, creatinine/calculated GFR, ALT and/or AST and albumin every:

- Two weeks until on stable dose for 6 weeks then
- Once on stable dose, monthly FBC, creatinine/calculated GFR, ALT and/or AST and albumin for 3 months.
- Thereafter FBC, creatinine/calculated GFR, ALT, and/or AST and albumin at least every 12 weeks*

*More frequent monitoring is appropriate in patients at higher risk of toxicity (e.g. prior history of adverse drug reactions, patients at extremes of weight, very elderly, impaired renal function and those with co prescriptions of medications that may interact with DMARDS).

Dose increases should be monitored by FBC, creatinine/calculated GFR, ALT and/or AST and albumin every 2 weeks until on stable dose for 6 weeks then revert back to previous schedule.

Please note: The medicines in this shared care agreement may only be used as part of this agreement for the conditions mentioned in the following tables. Use of the medicines listed for haematology/oncology or for immunosuppression following transplant are considered to have a RED traffic light status (specialist use only).

Prescribing Information & Monitoring Requirements

In addition to absolute values for haematological indices a rapid fall or rise and a consistent upward or downward trend in any value should prompt caution and extra vigilance. U/E and creatinine, CRP and/ or ESR should be checked every 6 months. This will enable monitoring of renal disease & disease activity**.**

DRUG (Oral)	Indication & dose	Pre-treatment assessment	FBC	U&E, Creatinine (eGFR)	LFT	URINE DipStick Protein	Additional information
Azathioprine **Amber for all indications**	**RA, CTD:** 1mg/kg per day increase at 4-6 weekly intervals to max 3mg/kg per day. **Acute/chronic auto immune hepatitis**: 1-2 or 3mg /kg per day *-see additional info in BSG guidelines in additional information column.* **Gastroenterology** Inflammatory bowel disease (unlicensed): 2-2.5mg/kg per day (see additional info) **Dermatology** Severe refractory eczema, psoriasis, psoriatric arthritis, bullous dermatoses including pemphigoid (unlicensed) : 1-3mg/kg per day **Neurology** Usual maintenance dose 2-3mg/kg per day. SLE (licensed) *All the following are off label, but considered routine treatment:* Neurosarcoidosis, CNS vasculitis or vasculitis neuropathy, neuromyelitis optica, idiopathic CNS inflammation (inc. idiopathic optic neuritis,	Height, weight, FBC, U&E, LFT, Creatinine (gastro request) (unless done within 6 months). Consider screening for Hepatitis B & C & HIV Consider VZ serology Respiratory history and examination; consider lung function tests and imaging (CXR +/- HRCT) if any concerns **TPMT assay** -gives additional information on risks of treatment **but does not replace** routine monitoring. *Homozygous deficiency* -serious and fatal toxicity- can occur within 6 weeks of starting. *Heterozygous deficiency* - linked to serious adverse events, symptoms may not be evident until 6 months after starting treatment. If patient is found to have heterozygous deficiency, monitoring of blood should take place at monthly intervals.	**As per standard monitoring schedule on page 6**			-	Reduce azathioprine dose to 25% (i.e ¼) of the original when given with allopurinol BSG guidelines for the management of autoimmune hepatitis EFNS guidelines on diagnosis and management of neuromyelitis optica (2010) A randomized double-blind trial of prednisolone alone or with azathioprine in myasthenia gravis 1998 Myasthenia gravis: Association of British Neurologists' management guidelines 2015

	clippers, myelitis), myasthenia gravis and Lambert Eaton Myasthenic Syndrome, chronic inflammatory demyelinating polyradiculoneuropathy, sensory neuronopathy (also known as dorsal root ganglionopathy), idiopathic inflammatory neuropathy, stiff person syndrome, autoimmune encephalitis, paraneoplastic neurological disorders.						
DRUG (Oral)	**Indication & dose**	**Pre-treatment assessment**	**FBC**	**U&E, Creatinine (eGFR)**	**LFT**	**URINE DipStick Protein**	**Additional information**
Mercaptopurine **Amber**	**Gastroenterology** Inflammatory bowel disease, autoimmune chronic and active hepatitis (unlicensed): 0.75-1.5mg/kg per day	See azathioprine (azathioprine is a prodrug which is converted to mercaptopurine *in vivo* & *m*onitoring requirements are the same) *Note: should NOT be prescribed as 6-mercaptopurine OR 6-MP* Reduce azathioprine dose to 25% (i.e ¼) of the original when given with allopurinol					

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DRUG	Indication & dose	Pre-treatment assessment	FBC	U&E, Creatinine (eGFR)	LFT	URINE DipStick Protein	Additional information
Ciclosporin **Red for ALL indications** *Note: monitoring info included in SCA as some GPs might be asked to do the on-going monitoring but not the prescribing.* *Prescribe generically for all except transplant pts* *Monitor when switching between caps & oral solution: differences in bioequivalence.* *Contact Meds Info for advice*	**RA**: 2.5mg/kg per day in 2 divided doses, increasing after 6 weeks by 25mg increments to a maximum of 4mg/kg per day (licensed) **Gastroenterology**: ulcerative colitis (unlicensed) 5 – 6.5mg/kg per day in 2 divided doses for short courses **Dermatology** Severe atopic dermatitis, severe psoriasis: 2.5-5 mg/kg per day in 2 divided doses titrated to skin response (licensed)	FBC, U&E, LFT, Creatinine Creatinine clearance or equivalent Lipid profile VZV serology BP: ≤ 140/90 on 2 occasions at 2/52 apart. Consider screening for Hepatitis B & C & HIV Consider VZ serology Respiratory history and examination; CXR	Fortnightly until dose stable for 6 weeks, then monthly			-	Check **blood pressure** at each attendance. Maintain BP ≤140/90 Vigilance when **NSAID** added, particularly diclofenac. Avoid where possible. Check **fasting lipids** every 6 months
Dapsone **Amber for licensed indications**	Dermatitis herpetiformis (licensed) & other inflammatory dermatoses neutrophilic vasculitis: start 50mg daily gradually increased to 300mg then reduced to lowest dose that achieves symptom control.	FBC, reticulocytes, LFTs, G6PD	Fortnightly for 2 months then at least every 3 months.		Monthly until dose stable then 3 monthly		

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DRUG	Indication & dose	Pre-treatment assessment	FBC	U&E, Creatinine (eGFR)	LFT	URINE DipStick Protein	Additional information
Hydroxy-chloroquine Amber	**RA, CTD** systemic & discoid lupus erythematosus, photosensitive dermatological conditions 200 – 400 mg daily. Max 6.5mg/kg/day (based on ideal body weight)	FBC, U&E, LFT. Patients should have a baseline formal ophthalmic examination ideally including objective retinal assessment (e.g. OCT) within 1 year of commencing.	No routine blood monitoring			-	Patients should be monitored as per RCOphth guidance 2020. Advise patients to report changes in vision.
Leflunomide Amber	**RA & psoriatic arthritis:** 10mg – 20 mg daily. Maximum 20mg daily when given as monotherapy. Use 10mg daily in combination with other hepatotoxic drugs such as methotrexate (Not used in dermatology)	FBC, U&E, LFT, Creatinine. Blood Pressure on 2 occasions 2 weeks apart. If > 140/90 treat before starting Rx Body weight Consider screening for Hepatitis B & C & HIV Respiratory history and examination; consider lung function tests and imaging (CXR +/- HRCT) if any concerns	**As per standard monitoring schedule on page 6** If co-prescribed with another immunosuppressant or potential hepatotoxic agent then blood checks should be continued long-term**, at least once a month** Patients who have been stable for 12 months can be considered for reduced frequency monitoring on an individual basis upon discussion with the specialist.				**BP at each visit**. If BP >140/90 treat in line with NICE guidance. If BP remains uncontrolled, stop & consider washout **Weigh at each visit**. If > 10% weight loss with no other cause identified, reduce dose or stop and consider washout. Simple dose reduction is unlikely to produce a rapid decrease of adverse effects (half-life is approx. 2 weeks). If a rapid response is required, consider washout and seek specialist advice.

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DRUG	Indication & dose	Pre-treatment assessment	FBC	U&E, Creatinine (eGFR)	LFT	URINE DipStick Protein	Additional information
Methotrexate **Amber** *Also see separate sc MTX shared care agreements:* **GWH** (For pts with **Wiltshire** GPs only): https://prescribing.bswccg.nhs.uk/?wpdmdl=6721 **RUH:** https://prescribing.bswccg.nhs.uk/?wpdmdl=6762 **SFT:** https://prescribing.bswccg.nhs.uk/?wpdmdl=7989	**RA, Psoriasis** **Psoriatic arthritis, Crohn's disease, connective tissue disease (SLE, myositis, vasculitis), Felty's Syndrome, inflammatory bowel disease (unlicensed):** 7.5 – 25mg ONCE a week. Increase every 2-6 weeks to a maximum dose of 25mg ONCE weekly. (Rarely) max 30mg ONCE week. ONLY prescribe as 2.5mg strength tablets (do not use 10mg tablets) **Rheumatology /Dermatology** s/c route may be given for patients unable to tolerate oral methotrexate. Monitoring as per this document. **Neurology** Starting dose 7.5 mg weekly, increased as necessary by 2.5 mg increments to a maximum of 15mg weekly. In exceptional circumstances, up to 25 mg weekly. *All the following are off label, but considered routine treatment:* Neurosarcoidosis, CNS vasculitis or vasculitis neuropathy, SLE, neuromyelitis optica, idiopathic	FBC, U&E (eGFR), LFT Respiratory history and examination; consider lung function tests and imaging (CXR +/- HRCT) if any concerns Consider Screening for Hepatitis B & C & HIV. Consider VZ serology P3NP (procollagen peptide assay) in dermatology patients	**As per standard monitoring schedule on page 6** **Dose increase or unstable bloods:** Repeat every **2 weeks until dose of methotrexate and monitoring stable for 6 weeks,** then return to standard monitoring schedule on page 6				New or increasing dyspnoea or dry cough – withhold and discuss urgently with the specialist team. Avoid prescribing trimethoprim or cotrimoxazole to patients receiving Methotrexate – greatly increases risk of marrow aplasia. Specialists may recommend co-prescribing of methotrexate and NSAIDs/ aspirin clinically significant interactions are rare **Folic acid** given to minimise side effects is usually given 5mg-10mg once weekly, not on the same days as methotrexate; however doses can vary Ensure patient has a info leaflet/monitoring booklet: http://www.nrls.npsa.nhs.uk/resources/?entryid45=59800 EFNS guidelines on diagnosis and management of

	CNS inflammation (inc. idiopathic optic neuritis, clippers, myelitis), myasthenia gravis and Lambert Eaton Myasthenic Syndrome, chronic inflammatory demyelinating polyradiculoneuropathy, sensory neuronopathy (also known as dorsal root ganglionopathy), idiopathic inflammatory neuropathy						neuromyelitis optica (2010) Myasthenia gravis: Association of British Neurologists' management guidelines 2015
DRUG	**Indication & dose**	**Pre-treatment assessment**	**FBC**	**U&E, Creatinine (eGFR)**	**LFT**	**URINE DipStick Protein**	**Additional information**
Mycophenolate (off-label use) **Amber for Autoimmune Conditions** **RED in dermatology for severe inflammatory disease & pemphigus (unlicensed)**	**RA, connective tissue disorders, SLE, lupus nephritis, dermatomyositis, polymyositis, systemic sclerosis, vasculitis, psoriasis, atopic dermatitis**: Start 500mg daily increase weekly by 500mg to optimal or max. tolerated dose. Max – 3g/day. **Autoimmune hepatitis (used in in pts intolerant of AZA):** 2g/day of MMF in divided doses; *-see additional info in BSG guidelines in additional information column.* **Neurology** Start 500mg once daily, increasing after one week to 500mg twice daily. Thereafter, if there are no adverse effects up to	FBC, U&E, LFT & CXR (within the last 6 months) Respiratory history and examination; consider lung function tests and imaging (CXR +/- HRCT) if any concerns Consider Screening for Hepatitis B & C & HIV.	**As per standard monitoring schedule on page 6**			-	Advise patients to report any signs or symptoms of bone marrow suppression- inexplicable bruising or bleeding See MHRA Drug Safety Update 14 Dec 2015: https://www.gov.uk/drug-safety-update/mycophenolate-mofetil-mycophenolic-acid-new-pregnancy-prevention-advice-for-women-and-men BSG guidelines for the management of autoimmune hepatitis

	the usual maintenance dose of 1g twice daily (maximum dose 1.5g twice daily). *All the following are off label, but considered routine treatment:* Neurosarcoidosis, CNS vasculitis or vasculitis neuropathy, SLE, neuromyelitis optica, idiopathic CNS inflammation (inc. idiopathic optic neuritis, clippers, myelitis), myasthenia gravis and Lambert Eaton Myasthenic Syndrome, chronic inflammatory demyelinating polyradiculoneuropathy, sensory neuronopathy (also known as dorsal root ganglionopathy), idiopathic inflammatory neuropathy, stiff person syndrome, autoimmune encephalitis, paraneoplastic neurological disorders.						EFNS guidelines on diagnosis and management of neuromyelitis optica (2010) Myasthenia gravis: Association of British Neurologists' management guidelines 2015
DRUG	**Indication & dose**	**Pre-treatment assessment**	**FBC**	**U&E, Creatinine (eGFR)**	**LFT**	**URINE DipStick Protein**	**Additional information**
D-Penicillamine **Amber**	**RA, Wilson's disease:** Start 125–250mg/day increase by 125mg, 4 weekly initially to 500mg. Max dose 750mg/day in divided doses	FBC, U&E, Creatinine & Urinary Protein	**Every 2 weeks** until stable for 3 months**. Monthly** thereafter.	**-**	-	**Every 2 weeks** until stable for 3 months. Then monthly	Ask about skin rash or oral ulceration at every visit. Alteration of taste usually settles spontaneously.

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DRUG	Indication & dose	Pre-treatment assessment	FBC	U&E, Creatinine (eGFR)	LFT	URINE DipStick Protein	Additional information
Sulfasalazine **TLS amber**	**Ulcerative colitis, Crohn's disease:** 1g twice daily increasing to 4g daily in divided doses. Use plain sulfasalazine **RA:** Start at 500mg/day increasing by 500mg weekly to maximum of 2-3 grams/daily (Licensed) Sero-negative spondyloarthropathy, psoriasis (unlicensed): Dose as in RA above Use Enteric-Coated (EC) sulfasalazine	FBC, U&E, LFT, Creatinine Consider Screening for Hepatitis B & C & HIV.	**As per standard monitoring schedule on page 6** Repeat **one month** after dose increase. If stable after **1 year** then no routine monitoring needed **Dose increase or unstable bloods**: Repeat every **2 weeks (until dose / bloods stable for 6 weeks)** and then return to **monthly**				Ask about skin rash, oral ulceration at each visit.

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Monitoring - Action to be taken if any of the following applies:

WBC <3.5 x 10^9/l	Withhold until discussed with specialist team
Neutrophils <1.6 x 10^9/l	Withhold until discussed with specialist team
Eosinophils > 0.5x 10^9/l	Withhold until discussed with specialist team
Platelets <140 x 10^9/l	Withhold until discussed with specialist team
Haemoglobin reduction of > 3g/dl	Withhold until discussed with specialist team
AST or ALT >100U/l rise (All drugs) (from upper limit of reference range)	Withhold until discussed with specialist team ***Leflunomide****- special rules: ALT/AST 2-3x upper limit normal – reduce dose to 10mg,* ***recheck weekly****. If normalized – continue 10mg; if remains elevated withdraw drug and discuss with specialist team. If ALT/AST >3x normal, stop drug,* ***recheck within 72 hours****. If still >3x, withdraw drug and consider washout*. Check other reason e.g alcohol or other medicines or drug interactions
Albumin –unexplained fall (<30g/l)	Withhold until discussed with specialist team
MCV >105 fl	Investigate (and check if B12 or folate or TSH low start supplementation)
1. Creatinine increase >30% over 12 months and/or calculated GFR <60ml/min 2. For use of ciclosporin in dermatology, if creatinine rises to >30% of baseline (on 2 consecutive occasions)	1. Withhold until discussed with specialist team 2. Dose reduction will be required, discuss with specialist for advice.
Potassium rise to above normal range	Withhold until discussed with specialist team and recheck it remains raised
Urinary protein on dipstick is 2+ (**D-Penicillamine)**	Send a MSU requesting protein + C&S. If >++ withhold drug. If MSU confirms infection, treat appropriately. If sterile proteinuria – seek advice from specialist team.
Blood pressure >140/90mm Hg (Leflunomide and ciclosporin)	Manage hypertension according to NICE hypertension guidance (Ciclosporin – discuss with specialist team)
Fasting lipids –significant rise (Ciclosporin)	Withhold until discussed with specialist team
Any unexplained illness e.g. nausea/dizziness/headache	If symptoms severe withhold until discussed with specialist team & consider review
Abnormal bruising or sore throat	Withhold until FBC result available
Unexplained acute widespread rash/ hair loss	Withhold – seek urgent specialist (preferably dermatological) advice
New Oral ulceration	Withhold until discussed with specialist
New increasing dyspnoea or cough (methotrexate /leflunomide)	Withhold & discuss urgently with specialist team
As well as responding to absolute values in laboratory tests, it is also relevant to observe trends in results (e.g. gradual decrease in WBC or albumin or climbing liver enzymes).	

November 2011

BSR Statement on Vaccination in Adult Patients with Rheumatic Diseases

http://www.rheumatology.org.uk/includes/documents/cm_docs/2011/b/bsr_vaccination_statement_nov_2011.pdf

- Individuals with immunosuppression should be given inactivated vaccines in accordance with national recommendations.
- It is recommended that patients with autoimmune inflammatory rheumatic diseases should be offered pneumococcal and influenza vaccination.
- Vaccination should ideally be administered at least 2 weeks prior to immunosuppression.

In individual cases it may be necessary to discuss vaccination with an appropriate local specialist in infectious disease and the patient's General Practitioner. Further advice is available through Public Health Englands "Green Book" on Immunisation against Infectious Disease. https://www.gov.uk/government/collections/immunisation-against-infectiousdisease-the-green-book

The vast majority of these vaccinations are given in Primary Care and it is advised that robust local arrangements are instituted to raise awareness both to patients and their General Practitioners of the need for appropriate vaccinations.

For other details related to immunisation see

- PHE Green Book https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-greenbook Chapter 28a
- For specific details relating to Zostavax and patients on DMARDS / Steroids see PHE Advice to Health Care Professionals Vaccination against shingles: 2015/16 Last updated 24 February 2016 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/503099/PHE_Shingles_advice_for_health_professionals_2015-16__February2016_V4.pdf
- See NHSE PGDs https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2017/05/phe-pgd-shingles-v06.pdf

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- http://www.rheumatology.org.uk/includes/documents/cm_docs/2011/b/bsr_vaccination_statement_nov_2011.pdf

Version control:

Version	Author	Purpose/change	Date
1.1	Rachel Hobson	• Added neurology for MTX/AZA/Mycophenolate • Added contact details for the Spa Dermatology Service (to use oral MTX)	1/3/21