Shared Care Guideline:
Mycophenolate mofetil *and*
Mycophenolic acid (as mycophenolate sodium)

County Durham and Darlington NHS
NHS Foundation Trust

NHS
County Durham and Darlington
Area Prescribing Committee

Overview	Mycophenolate mofetil and mycophenolic acid (as mycophenolate sodium) are immunosuppressant drugs
Indication	Unlicensed • Rheumatoid arthritis • Connective tissue disorders e.g. systemic lupus erythematosus, dermatomyositis • Bullous disease**s** • Eczema • Immune disorders of nervous system
Dose	**<u>Note that mycophenolate mofetil should be considered as first line</u>** **Initial regimen:** **Mycophenolate mofetil** • 500mg ONCE daily for the FIRST WEEK, increasing by 500mg each WEEK until optimal dose is achieved. • Typical dose is 1 to 2 grams per DAY • Maximum dose 3 grams per DAY **Mycophenolic acid (as mycophenolate sodium)** • 360mg ONCE daily for the FIRST WEEK, increasing by 360mg each WEEK until optimal dose is achieved. • Typical dose is 720mg to 1440mg per DAY • Maximum dose 2160mg per DAY This dosing is based on the BNF statement that mycophenolic acid 720mg is approximately equivalent to 1g of mycophenolate mofetil. Advice is to advise unnecessary switching between the two.

Specialist's Responsibilities	**Initial investigations:** • Full Blood Count (FBC), calculated Creatinine clearance (CrCl) /estimated Glomerular Filtration Rate (eGFR), Liver Function Tests (LFTs), Erythrocyte Sedimentation Rate (ESR) /C-Reactive Protein (CRP), weight, height and Blood Pressure (BP) • Chest x-ray • Check Varicella Zoster status if there is an uncertain history and recent exposure to the virus. It is the responsibility of the specialist to arrange vaccination should the patient be found to not have immunity • Ensure pregnancy can be excluded before treatment **Initial prescribing until stable:** • **For immune disorders of nervous system:** o Prescribing responsibility and monitoring to stay with the specialist until patient has been on a stable dose for at least 6 months at which point shared care is requested. • **For all other indications listed within this shared care agreement**: o Prescribing responsibility and monitoring to stay with the specialist until patient has been on a stable dose for at least 6 weeks at which point shared care is requested. Specialist to issue a prescription for enough medication to last until shared care is accepted by GP. This will usually be a minimum of 28 days. **Communication and documentation to GP:** • Obtaining agreement of GP to participate in shared-care arrangement for mycophenolate mofetil or mycophenolic acid (as mycophenolate sodium) therapy. This will be by sending a completed copy of the shared care request letter (appendix 1) to the GP. • The specialist must ensure that the GP is aware when the next blood monitoring is required. • The GP must be made aware of any additional monitoring requirements specific to the patient e.g. weight, height, BP, CrCl/GFR • Prompt communication with the GP regarding the patient's progress, any reassessment and changes in treatment. • Provide additional information and advice to the GP on actions he/she may need to take e.g. on dosage adjustment, other changes in therapy and management of adverse effects, as required.
GP's Responsibilities	**Maintenance prescription:** Prescribe mycophenolate mofetil or mycophenolic acid (as mycophenolate sodium) in accordance with the specialist's recommendations as outlined in the shared care request letter **Clinical monitoring:** Continue to clinically monitor patient in line with this shared care agreement and referral letter from specialist (as described in clinical monitoring section below) **Criteria requiring specialist contact:** • Failure to attend for review or undertake blood tests • Intolerance of drugs • Communication failure • **Documentation to specialist:** • Accepting or rejecting request for shared care within 28 days. If rejecting please state concerns and reasons • Blood results to specialist via use of patient-held record

	• Communication failure

Clinical monitoring:	FBC, calculated CrCl/eGFR, LFTs and ESR/CRP **Frequency:** Fortnightly until on stable dose for SIX weeks then monthly for THREE months After THREE months reduce frequency of monitoring to THREE monthly NOTE – this guideline sets out the standard monitoring requirements, however it is essential that each patient is considered on an individual basis and monitoring frequency should reflect this. The GP should be made aware of any deviations.

Safety Monitoring:	Please refer to Summary of Product Characteristics (SPC) or BNF /eBNF for full details of adverse effects, contraindications, cautions and drug interactions.
	• Monitoring for response and adverse drug reactions (ADRs)
	• Ask about the following at each visit
	  ○ sore throat
	  ○ bruising or bleeding

Adverse Events	

Adverse event	**Action to be taken**
White blood cells (WBC) less than 3.5 x 10^9/L	Withhold and discuss with specialist team
Neutrophils less than 1.5 x 10^9/L	
Platelets less than 120 x 10^9/L	
More than a TWO fold rise in Alanine transaminase (ALT) / Aspartate aminotransferase (AST) from upper limit of normal	
Abnormal bruising or sore throat	Withhold, check FBC and discuss with specialist team

Please note: any rapid fall or consistent downward trend for blood counts or rapid rise or consistent upward trend for liver enzymes should prompt caution. Action may be required even if values are within normal range. If in doubt please contact specialist team.

There are numerous adverse effects but common ones include

- Nausea, vomiting, diarrhoea, abdominal pain
- Infections (viral, bacterial and fungal)
- Blood disorders including; leucopenia, thrombocytopenia, anaemia
- Rash
- Alopecia
- Acne
- Agitation
- Dizziness
- Headache
- Arthralgia
- Hepatitis, jaundice, pancreatitis
- Disturbances of electrolytes and blood lipids.

All suspected serious reactions should be reported to the specialist and the MHRA.

Contra-indications	• Known hypersensitivity to mycophenolate mofetil or mycophenolic acid (as mycophenolate sodium) • Pregnancy • Breast feeding • Current serious infection

Cautions	• Very frail and elderly
	• Patients with suspected lymphoproliferative disorder or unexplained anaemia, leucopenia and thrombocytopenia
	• Stage 4 and 5 Chronic Kidney Disease - maximum dose of;
	  o Mycophenolate mofetil 1 gram TWICE daily
	  o Mycophenolic acid (as mycophenolate sodium) 720mg TWICE daily

Drug Interactions	• Antacids containing aluminium or magnesium hydroxide decrease absorption of mycophenolate mofetil and mycophenolic acid (as mycophenolate sodium) by 33% and bioavailability by 17%. • Cholestyramine may decrease absorption and bioavailability of mycophenolate mofetil and mycophenolic acid (as mycophenolate sodium) by 40%. • Probenecid increases plasma concentration of mycophenolate mofetil and mycophenolic acid (as mycophenolate sodium) • Aciclovir causes significant increase in plasma concentration of mycophenolate mofetil and mycophenolic acid (as mycophenolate sodium) in patients who have renal impairment.

Other Information	**Vaccinations**
	• "Live" vaccines (including Oral Polio, Oral Typhoid, measles, mumps and rubella (MMR), bacillus Calmette-Guérin (BCG) and yellow fever) are not recommended whist on treatment.
	• Seasonal influenza vaccination is recommended annually.
	• Pneumococcal vaccination is recommended in line with current guidance.
	
	Contraception, Fertility, Pregnancy and Breast Feeding
	• Mycophenolate mofetil and mycophenolic acid (as mycophenolate sodium) are contraindicated in pregnancy and breastfeeding.
	• Female patients - it is recommended that TWO forms of effective contraception should be used whilst taking mycophenolate mofetil or mycophenolic acid (as mycophenolate sodium) and for SIX weeks after treatment is discontinued.
	• Guidance from the British Association of Dermatologists (BAD) also recommends that the following advice for patients prescribed mycophenolate mofetil or mycophenolic acid (as mycophenolate sodium)
	  o male patients should use condoms during treatment and for 90 days after stopping
	  o female partners of male patients use effective contraception during their partners treatment and for 90 days after they stopping
	
	More information on use of mycophenolate motefil and mycophenolic acid (as mycophenolate sodium) in pregnancy and breastfeeding can be found on the BSR and BAD websites
	https://www.guidelines.co.uk/BSR/RA-in-pregnancy-and-breastfeeding/252703.article
	http://www.bad.org.uk

Contact Details	Thank you for sharing the care of this patient. If you have any concerns or queries, please contact the consultant, secretary or call the appropriate helpline below. UHND Rheumatology Helpline: 0191 3332763 DMH Rheumatology Helpline: 01325 743881 Note : there is no dedicated Dermatology or Neurology Helpline

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Department of …….
County Durham and Darlington Foundation Trust

GP name
GP address

Dear Dr …… **Date:**

Request for Shared Care of MYCOPHENOLATE or MYCOPHENOLIC ACID (please specify below)

Re: Patient's name DOB:
Address Hospital Number:

This patient has been prescribed **……** for the management of

□ Rheumatoid arthritis
□ Immune disorders of nervous system (unlicensed)
□ Connective tissue disorders (unlicensed)
□ Bullous Diseases (unlicensed)
□ Eczema (unlicensed)

The patients' current dose is ……per day

The patient was commenced on this drug on ……..and has been stable on the current dose since ……

I would now like to ask you to take over the responsibility for prescribing this medication for this patient, as agreed by your CCGs and the Area Prescribing Committee.

The shared care document lists the monitoring requirements for this medication. Can I ask that any problems are reported back into secondary care.

The next blood monitoring is due on …… and should be continued in line with the shared care guideline.

In addition, the following patient specific monitoring is required for this patient

……
This is part of the shared care guideline approved by the Area Prescribing Committee, available at http://medicines.necsu.nhs.uk/guidelines/durham-darlington/.

The patient will remain under regular clinical review by his or her usual consultant/ specialist nurse as described in the shared care agreement.

Please send back the second part of this letter, with 28 days, so we know that we have your agreement to this arrangement. If you are not happy to accept this patient or have any concerns, then please contact my secretary as soon as practically possible

Yours sincerely

Consultant name
Contact details

GP Agreement

Patient's Name:
DOB:
Hospital No:

I agree to take over the prescribing and monitoring of Mycophenolate in line with the approved shared care document as found at http://medicines.necsu.nhs.uk/guidelines/durham-darlington/

Dose to be prescribed ……..

Dated ……/……/

Signed: …….

GP's Name:

GP contact details

Please return to Consultant's secretary. You may wish to keep a copy for your records.