NHS
Kent and Medway
Clinical Commissioning Group

Shared care guidance - non-biologic disease-modifying anti-rheumatic drugs (DMARDs)

Principles of Shared Care Agreements

Introduction

Good organisation of care across the interface between primary and secondary/tertiary care is crucial in ensuring that patients receive safe and high quality care – and in making the best use of clinical time and NHS resources in all care. Good professional practice requires care for patients to be seamless; patients should never be placed in a position where they are unable to obtain the medicines they need, when they need them. Lack of communication between primary and secondary/tertiary care and misunderstandings around the responsibilities of the professionals involved are often cited as reasons for patients not being able to get their medicines in a timely manner, despite effective collaborative working and communication being an important part of patient-centred professionalism.

1. Criteria for Classifying Drugs as Suitable for Shared Care

a. It is in the best interests of the patient for a primary care prescriber to take over prescribing, however, specialist involvement is required for:

- initiation of treatment
- on-going specialist monitoring and/or
- assessment to enable effectiveness and /or
- reducing risk of toxicity.

and/or

b. Medicines that are specifically suggested as suitable for shared care by the DH or NICE.

2. Shared Care Agreements

a. Treatment should be initiated by a specialist (which could include consultant, suitably trained specialist non-medical prescriber or GP with specialist interest within a secondary, tertiary, or primary care clinic). Clinical and prescribing responsibility should be transferred to primary care only when the patient's clinical condition is stable or predictable. This does not mean that the patient is discharged from specialist care.
NHSE guidance states that patients can be discharged, but need a fast track referral route in certain circumstances e.g. Adult ADHD.
As the CCG is not responsible for agreeing tertiary care shared care, there may be a need to consider treatment on a case by case basis.
The GP should agree in writing for each individual case and the secondary/tertiary provider must continue to provide prescriptions until successful transfer of responsibilities. Specialist advice should be available to primary care prescribers i.e. not requiring referral back to specialist as such.

b. The legal responsibility for prescribing lies with the doctor or health professional who signs the prescription and it is the responsibility of the individual prescriber to prescribe within their own level of competence. This includes responsibilities with supplying or administering the prescribed medicine and instructions to others.

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c. Patients should be at the centre of the shared care agreement however where patients do not have the mental capacity to make healthcare decisions involvement of carers and/or attorneys (holding the Lasting Power of Attorney for health and welfare) should be considered prior to decisions around shared care.

d. Shared care must be in accordance to the Shared Care template (Appendix 1). Communication between the specialist and the primary care prescriber should include the letters of request and agreement/refusal (Appendix 2).

e. For medicines which are prescribed under a share care arrangement, primary care prescribers should have sufficient knowledge and experience to monitor, stop, or alter the dosage of the medicine **in appropriate circumstances and have access to specialist advice to support them** (details should be made available within Share Care Agreements i.e. not requiring referral back to specialist as such). The degree of control, which they have over this prescribing, and 'a route of return' to specialist care will form part of the shared care agreement.

f. Agreements for shared care must not be used nor declined for cost shifting purposes.

g. It is the responsibility of the Joint Prescribing Committee (JPC) to ensure that adequate support, education and information is made available to primary care prescribers who "share care" of patients with a specialist in order for treatment to be managed safely in primary care.

h. GP/Primary care prescribers must seek further support from the referring specialist or CCG rather than decline shared care on the basis of lack of competence as default.

i. Explicit criteria for review need for monitoring and discontinuation of the medicine should be included; this should also be communicated to the patient.

j. Patients should never be used as a conduit for informing the GP that prescribing is to be transferred nor to inform the specialist that shared care has been declined. They should never be placed in a position where they are unable to obtain the medicines they need because of lack of communication between primary and secondary/ tertiary care.

3. Circumstances where shared care is not appropriate

In some situations the use of shared care is not appropriate and in these cases the hospital/specialist should retain responsibility for prescribing. Whilst the situations may be broad and diverse the following would be examples:

a. Patients receiving the majority of ongoing care, including monitoring, from the specialist service.

b. Where the primary care prescriber does not feel competent in taking on clinical responsibility for the prescribing of the medicine despite taking steps (as stated in point 2e above) to seek further support from the specialist.

c. Where a drug requires specialist intervention, stabilisation and monitoring on an ongoing basis.

d. Where patients have declined the shared care option following informed discussions with the specialist prescriber.

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e. Where insufficient information has been provided to proceed with shared care and/or no Shared Care Agreement or protocol exists.

f. Unlicensed medicines unsuitable for use in primary care or being used 'off-label' for an indication with no established evidence base.

g. Where drugs are being used as part of a hospital-initiated clinical trial.

h. Where the drug is new, only available through hospitals or has not been approved for addition to the current primary care formulary.

i. The indication for prescribing is contrary to NICE guidance and the use of the drug has not been approved on an 'exceptional basis'.

j. A medicine for which the JPC considers there to be poor evidence base or lack of cost effectiveness compared to alternative commissioned treatments.

k. Black Triangle Medicines (unless there is a large body of evidence supporting use e.g. BNF, NICE).

l. There is a NICE recommendation that the medicine should not be prescribed on the NHS for the condition specified.

m. Medicines subject to High-tech Hospital at Home guidance (EL (95)5).

n. All other treatments funded by NHS England unless specifically agreed to be provided through a shared care prescribing agreement, or other process as agreed by the JPC.

o. There is a clear NHSE/I Specialised Commissioning or JPC decision to not routinely fund usage of the medicine or NHSE considers the drug not suitable for shared care.

p. Shared care should not be approved with non-NHS funded providers as no guarantee patients will continue to fund themselves.

4. Funding Issues

a. Each shared care protocol submission must include an estimate of the number of patients affected.

b. Commissioners should take account of the operational and resource implications of shared care, and of the fact that this should also extend to the requirements and sustainability of hospitals in situations where shared care is not accepted.

c. If the treatment is likely to produce significant cost pressures (i.e. it cannot be managed within the existing prescribing budget), then agreement needs to be reached with JPC and if supported, appropriate funds identified.

d. All appropriate monitoring requirements (e.g. phlebotomy, ECG, height/weight checks) must be fulfilled. The person delivering that aspect of the shared care agreement should ensure that the resources to do this are in place in the clinical setting in which they are delivered (for example within a Primary Care Network (PCN)).

e. The requirement for the appropriate resource will need to be considered by commissioners, based on the likely workload implications of the transfer of care i.e. from secondary/tertiary to primary care.

5. Approval and Review of Shared Care protocols

a. Consultation with primary/secondary/tertiary care prescribers must be sought when developing or reviewing a shared care protocol or supporting prescribing guideline.

b. The JPC must recommend the approval of all shared care protocols before they can be distributed for use between primary and secondary care.

c. A shared care protocol or supporting prescribing guideline will usually be approved for two years after which time an up-dated version should be submitted by the author for re-approval. Any major changes in national guidance or any significant issue that arises should prompt a review of the shared care protocol or supporting prescribing guideline at an earlier date.

References

- Responsibility for Prescribing between Primary and Secondary/Tertiary Care. NHS England. Jan 2018.
- SPS - Shared Care Guidance - A Standard Approach - Regional Medicines Optimisation Committee (RMOC) October 2019 V2
- Good Practice in Prescribing and Managing Medicines and Medical Devices. General Medical Council Guidance. 2013.

Appendix 1

Shared Care Protocol

Non-biologic disease-modifying anti-rheumatic drugs (DMARDs) for use in Rheumatology, Dermatology, Gastroenterology, Ophthalmology, Respiratory and Neurology

AREAS OF RESPONSIBILITY FOR SHARED CARE

This shared care agreement outlines suggested ways in which the responsibilities for managing the prescribing of **DMARDs** can be shared between the specialist and general practitioner (primary care clinician). Primary care clinicians are invited to participate. If the primary care clinician is not confident to undertake these roles, then he or she is under no obligation to do so *(please refer to Principles of Shared Care Agreements in point 2h)*. In such an event, the total clinical responsibility for the patient for the diagnosed condition remains with the specialist. Refer to Principles of Shared Care document for full details, in summary:

- Transfer of monitoring and prescribing to Primary care is normally after the patient is on regular dose and with satisfactory investigation results for **at least 3 months.**
- The duration of treatment will be determined by the specialist based on clinical response and tolerability.
- All dose or formulation adjustments will be the responsibility of the initiating specialist unless directions have been discussed and agreed with the primary care clinician.
- Termination of treatment will be the responsibility of the specialist.

PRESCRIBING INFORMATION

1. Background

This shared care agreement outlines suggested ways in which the responsibilities for managing the prescribing of DMARDs can be shared between the specialist* and general practitioner (primary care clinician). Primary care clinicians are invited to participate. If the primary care clinician is not confident to undertake these roles, then he or she is under no obligation to do so. In such an event, the total clinical responsibility for the patient for the diagnosed condition remains with the specialist. If a specialist request to share care with a primary care clinician, the primary care clinician should reply to this request as soon as practicable – within 2 weeks of receiving the request. Sharing of care assumes communication between the specialist, primary care clinician and patient. The intention to share care is usually 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.
Biologics remain the responsibility of the specialist and non-biologic DMARDs therapy can be issued under the agreed shared care arrangement.

*Specialist – either community service provider or secondary care acute trusts.

This guideline provides evidenced based recommendations for prescribing synthetic, non-biological DMARDs. These include: Azathioprine, Ciclosporin, Hydroxychloroquine, Leflunomide, Methotrexate (Oral and Subcutaneous), Mycophenolate mofetil, Sulfasalazine Tacrolimus, Dapsone, Mercaptopurine, and D-penicillamine.

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This guidance incorporates shared care arrangements, highlighting the responsibilities of each party (patient, specialist setting, primary care) that are convenient and safe for the patient.
These guidelines are not intended to be a comprehensive review of DMARD therapy. Clinicians should consider nationally published guidelines such as those produced by the British Society for Rheumatology in their practice.
The document sets out an agreed approach to implement these standards locally. Please consult the manufacturer's Summary of Product Characteristics (SPC) and the current BNF for full prescribing information on contra-indications, side-effects and interactions.
The DMARDs covered by this guideline have been deemed to be appropriate for shared care by the Kent and Medway Joint Prescribing Committee. It is anticipated that primary care clinicians will prescribe DMARDs and participate in shared care in accordance to the written instructions given by the Specialists once the patient is stable and requires 3 monthly monitoring or less frequent monitoring.
The monitoring schedule in this guidance have been agreed and approved by all local specialists and are in line with the British Society for Rheumatology guidance which may differ to the British national formulary guidance.

2. Indications (*Please state whether licensed or unlicensed)*

Disease-modifying drugs (DMARDs) are used in rheumatic disease to suppress inflammation and the disease process. They may be used as monotherapy or more commonly in combination. DMARDs are also used for the treatment of other rheumatology conditions (e.g. connective tissue disease and vasculitis) and in other specialties, including dermatology, respiratory medicine, neurology, ophthalmology and gastroenterology.
All recommendations are based on the practice of a responsible body of peers of similar professional standing (e.g. British Society for Rheumatology (BSR). Prescribers are advised to discuss with the patient if the medicine is used out of license and document patient's agreement to treatment in their medical record.

3. Pharmaceutical aspects

Refer to the current BNF and SPC: www.medicines.org.uk/emc

4. Exclusions or contraindications

Please note this does not replace the Summary of Product Characteristics (SPC) and should be read in conjunction with it.

- Patients seen within a private clinic and not through an NHS pathway
- Patients under the age of 18
- Patients whose treatment is not stable – frequent monitoring required, dose changes and medication changes.
- Any patient that need more frequent monitoring than 3 monthly
- Any medication that is not listed in 1. Background
- Patients not registered with a GP in the Kent and Medway CCG area
- Patients unwilling or likely to be unable to be compliant with the service

Refer to the current BNF and SPC for contraindications: www.medicines.org.uk/emc

5. Initiation and ongoing dose regime (by specialist)

Note -

- *Transfer of monitoring and prescribing to Primary care is normally **after the patient is stable on a regular dose** and with satisfactory investigation results for period of time as agreed by the specialist.*
- *The duration of treatment will be determined by the specialist based on clinical response and tolerability.*
- *Specialist to specify the length of treatment supplied to the patient in order to indicate to primary care when new supply will be required for forward planning.*
- *All dose or formulation adjustments will be the responsibility of the initiating specialist unless directions have been discussed and agreed with the primary care clinician*
- *Termination of treatment will be the responsibility of the specialist.*

6. Specialist responsibilities for monitoring (including frequency)

At initiation:

- Only request shared care once the patient is stable with **3 monthly monitoring**. If a patient requires more frequent monitoring then they must remain under the care of the initiating specialist until such a time as 3 monthly monitoring is appropriate. Only at this time a request for shared care can be made.
- Provide patient with information on disease, drug treatment options; explain where drugs are used outside of license in order to promote self-management.
- Discuss the benefits and side effects of treatment with the patient/carer.
- Make the decision to initiate DMARDs in agreement with the patient/carer.
- Provide written drug information leaflets to the patient (where appropriate).
- Discuss and explain the intention to shared care for drug monitoring and prescribing of medication to patient.
- Using the appropriate template letter and agreement form, primary care clinician should be asked in writing if they are prepared to undertake shared care arrangements.
- Total clinical responsibility for prescribing and monitoring the DMARDs remains with the initiating specialist until the primary care clinician has responded and agreed to shared care.
- Carry out pre-treatment assessment, including necessary blood tests and review the results.
- Initiate treatment with the DMARD and prescribe at least the first 12 weeks' medication or until treatment dose is stabilised.
- Methotrexate should be prescribed using the 2.5mg tablet strength and not the 10mg tablets.
- Ensure prescription supplied is sufficient to cover period of transfer of prescribing and monitoring to primary care clinician.
- Arrange tests and review the results for at least the first 12 weeks of monitoring.
- Upon initiation of therapy, provide patient with information and advice on DMARD including drug interactions, monitoring arrangements, advice on alcohol, vaccination, and impact on pregnancy, fertility and breastfeeding, plus any other relevant details.
- Provide patient with relevant contact details for advice.
- Provide the primary care clinician and patient with prompt information (6 to 8 weeks following initiation) including baseline assessments and results, prescribed dose of DMARD, monitoring requirements and shared care agreement form in order to enable the primary care clinician continue maintenance prescribing and monitoring after 12 weeks.

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At review:

- At first routine specialist clinic appointment, review monitoring results and assess response to treatment.
- Communicate promptly with the primary care clinician if monitoring requirements or dose changes need to be made. If monitoring requirements or dose changes are needed then the specialist continues to monitor and prescribe for the patient until they are deemed stable (3 monthly monitoring).
- At each specialist review appointment, confirm the individual patients monitoring schedule and at least annually.
- **Have a mechanism to receive rapid referral of a patient/request for advice and support from the primary care clinician in the event of any concerns or deteriorating clinical condition.**
- To accept back care of the patient where the primary care clinician no longer feels confident to undertake this role e.g. where the patient becomes unstable.

7. GP (primary care clinician) responsibility

- Primary care clinician to respond to the initiating clinician within 14 days of receipt of the shared care request.
- Ensure the initiating specialist is notified if the primary care clinician agrees to prescribe DMARDs in line with the shared care guideline once patient is stable and a stable dosing regimen has been determined by specialist care.
- Ensure the initiating specialist is notified if primary care clinician is unwilling to undertake prescribing and monitoring when requested.
- Prescribe the DMARD at the stable dose recommended after the first 12 weeks of treatment.
- Ensure the patient is aware of any treatment change and where provided, the monitoring booklet is up to date.
- Refer new patients moving into the area already established on a DMARD into specialist care to enable a review by the specialist. Currently referrals should be made to secondary care acute providers in all areas except East Kent. East Kent GPs should refer into their community service provider.

Monitoring (including frequency):

- Carry out monitoring according to the guideline/specialist recommendations. This should be 3 monthly or less frequent monitoring.
- Prior to issuing a prescription, check that monitoring has taken place.
- Act on abnormal result/outside the set parameters as outlined in the guidance or treatment plan.
- Withhold and contact specialist via advice and guidance route see appendix 6, if there are any concerns about the result, report result to the specialist for advice / further management as appropriate. It is the responsibility of the requesting clinician to action any out of range blood results or monitoring. Action required by primary care clinicians includes

communicating to patient, alerting specialist to abnormal results and referral back into specialist should it be needed.
- Report to and seek advice from the specialist on any aspect of patient care which is of concern and may affect treatment.
- Refer patient to specialist if his or her condition deteriorates.
- Discontinue treatment on the advice of the initiating specialist or immediately if an urgent need to discontinue treatment arises. Decisions regarding discontinuation of medicines should be taken in discussion with the relevant specialist as soon as practicable.
- Report adverse events to the MHRA on a Yellow Card www.mhra.gov.uk/yellowcard and to the specialist team.

Review/follow up:
- Ensure no drug interactions with concomitant medicines that are added at a later time.
- Refer patient to specialist if his or her condition deteriorates.
- Monitor frequency of prescription requests. Ensure quantities are within the agreed prescribed dose. Methotrexate tablets should only be prescribed using the 2.5mg tablet strength. 10mg tablets should not be prescribed.
- If a patient will not co-operate with DMARD monitoring arrangements, primary care clinicians should be involved in the subsequent decision about how care will be managed. Patients MUST be advised that it is unsafe to continue DMARDs without appropriate monitoring and those prescriptions may be discontinued. If a patient fails to meet the monitoring requirements then a referral back to the initiating specialist should be made.
- Contact initiating specialist for advice and guidance if primary care clinician and patient want to consider discontinuing treatment.
- Refer the care of patient back to the initiating specialist where the primary care clinician no longer feels confident to undertake this role. E.g. where the patient becomes unstable.

8. Dose Management (by primary care)

In all cases refer to the specialists for advice and guidance.

9. Significant medicine interactions – *prescriber must consider interactions with any and all repeat medication the patient is taking at the time of initiation*

Refer to the current BNF and SPC: www.medicines.org.uk/emc

10. Adverse effect management

Specialist to detail action to be taken upon occurrence of a particular adverse event as appropriate. Most serious toxicity is seen with long-term use and may therefore present first to GPs.

Refer to the initiating specialist for advice and guidance.
Refer to the current BNF and SPC: www.medicines.org.uk/emc

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11. Advice to patients and carers

The specialist will counsel the patient with regard to the benefits and risks of treatment and will provide the patient with any relevant information and advice

- Report to initiating specialist or primary care clinician if he/ she does not have a clear understanding or has any concerns in relation to treatment.
- Take the medication as agreed with the initiating specialist and the primary care clinician
- Ensure safe storage and handling of medicine
- Request repeat prescriptions from primary care clinician at least one week in advance of medication running out.
- Book and attend for blood tests at the timings set out as per advice from a clinician.
- Report any adverse effects to the primary care clinician or initiating specialist.
- Where patient-held monitoring booklets have been given ensure these are brought to each appointment with their primary care clinician or initiating specialist and that they are kept up to date.
- Ensure blood pressure is checked and monitored at every monitoring appointment if taking Leflunomide, Ciclosporin and Tacrolimus.
- Before shared care is put in place the patient must be fully informed of the plan and must be in agreement with it. Should a patient refuse to the shared care agreement then the initiating specialist will have to continue to monitor and prescribe.
- The patient should report to the initiating specialist or primary care clinician if he or she does not have a clear understanding of the treatment or has any concerns relating to treatment.
- Attend appropriate initiating specialist, primary care clinician and other follow up appointments and co-operate with assessments and blood tests.
- Inform the initiating specialist or the primary care clinician of any other medication being taken, including herbal or over the counter products.
- Ensure the primary care clinician and specialists are aware of any other medication being taken, including herbal or over the counter products.
- Seek help urgently if side effects are suspected, or are otherwise unwell.

12. Pregnancy and breast feeding

It is the responsibility of the specialist to provide advice on the need for contraception to male and female patients on initiation and at each review but the ongoing responsibility for providing this advice rests with both the GP and the specialist.

Refer to the current BNF and SPC: www.medicines.org.uk/emc

13. Specialist contact information

This section has been redacted to maintain confidentiality.
Please contact your local medicines optimisation team for the full version.

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14. Additional information

Community pharmacist responsibilities

- Ensure appropriate dose prescribed with clear directions not 'as directed'.
- Ensure oral methotrexate is only dispensed in the 2.5mg tablet strength. 10mg tablets should not be prescribed or dispensed.
- Provide advice on adverse effects and any drug interactions with prescription and/or over-the-counter (OTC) medicines.
- Issue patient information leaflets.
- Monitor frequency of prescription requests and contact GP if quantities in excess of the prescribed dose are ordered.
- Report adverse events to the MHRA on a Yellow Card www.mhra.gov.uk/yellowcard and to the GP.
- Contact GP if any concerns.

Vaccinations and DMARDs

- Vaccinations against pneumococcus (one off) and influenza (annually) are recommended and should be offered in primary care. Ideally these should be commenced before treatment, but can be given at any time.
- Shingles vaccine (Zostavax) is not routinely give to all individuals on DMARDs but where indicated may be used in individuals on standard doses of DMARD medications (Discuss with initiating specialist).
- Other live vaccines are NOT recommended.

Inter-current infection and DMARDs

- During a serious infection requiring antimicrobial therapy or hospital admission, the following DMARDs should be discontinued temporarily until the patient has recovered from the infection: Methotrexate, Leflunomide, Sulphasalazine, Azathioprine, Mycophenolate, Ciclosporin and Tacrolimus.

Malignancy and DMARDs

- Prior malignancy is not considered a contra-indication to DMARD therapy.
- Refer back to initiating specialist should a new malignancy arise.

15. References

- BSR & BHPR guideline for the prescription and monitoring of non-biologic disease-modifying antirheumatic drugs 2017.
- https://academic.oup.com/rheumatology/article/56/6/865/3053478#97289271
- Summary of product characteristics www.medicines.org.uk/emc
- British National Formulary
- Specialist Pharmacy Service https://www.sps.nhs.uk/articles/suggestions-for-therapeutic-drug-monitoring-in-adults-in-primary-care/
- BSR/BHPR Guideline for disease modifying anti-rheumatic drug therapy (DMARD) in consultation with the British Association of Dermatologists (2008). (Penicillamine was not addressed in the BSR 2017 update – therefore the recommendations cited here are taken from the 2008 version.

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Appendix 2

Generic recommendations before commencing any DMARDs

- Baseline assessment should include height, weight, blood pressure and laboratory evaluation [full blood count (FBC), urea and electrolytes, calculated glomerular filtration rate (GFR), alanine aminotransferase (ALT) and/or aspartate aminotransferase (AST), albumin]
- Vaccinations against pneumococcus and influenza should be recommended.
- Patients should be assessed for co-morbidities including respiratory disease that would influence DMARD choice.
- When appropriate, patients should be advised about the impact of DMARD therapy upon fertility, pregnancy and breastfeeding.

  This list is not exhaustive and other relevant assessments should be undertaken as necessary.

Appendix 3: Reference guideline for primary care monitoring of DMARD therapy

Drug	Tests required	Primary care clinician responsibility	Initiating specialist responsibility *suggested monitoring. To be amended on a patient by patient basis as required.
Azathioprine (Same monitoring regimen as **Mercaptopurine** as azathioprine is a prodrug which is converted to mercaptopurine in vivo). (Standard monitoring)	• FBC • U&E's • Creatinine • Calculated eGFR • LFT's	• Monitoring required every 3 months	• Every 2 weeks until on stable dose for 6 weeks then, monthly for 3 months • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose, monthly for 3 months and thereafter at least every 12 weeks • More frequent monitoring is appropriate in patients at higher risk of toxicity
Ciclosporin (Extended monthly monitoring)	• FBC • U&E's • Creatinine • Calculated eGFR • LFT's • BP • Blood glucose • Fasting lipids - Periodically	• Monitoring required every 3 months • Blood pressure monitoring each attendance. BP > 140/90 on 2 consecutive readings 2/52 apart – treat hypertension before stopping ciclosporin (Note possible drug interactions). If BP cannot be controlled, stop ciclosporin and obtain BP control before restarting ciclosporin. Seek initiating specialist advice. • Vigilance when NSAID added particularly diclofenac- reduce diclofenac dose by 50% • Occasional monitoring of ciclosporin blood levels is recommended, e.g. when ciclosporin is co-administered with substances that may interfere with the pharmacokinetics or in the event of unusual clinical response (e.g. lack of efficacy or increased drug intolerance such as renal dysfunction). • Check fasting lipids periodically	• FBC and LFT creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then, monthly • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose, monthly • Extended monitoring required - Patients who have been stable for 12 months can be considered for reduced frequency of monitoring on an individual patient basis. • More frequent monitoring is appropriate in patients at higher risk of toxicity

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Drug	Tests required	Primary care clinician responsibility	Initiating specialist responsibility *suggested monitoring. To be amended on a patient by patient basis if required.
Hydroxychloroquine (No routine monitoring)	• No routine monitoring	• Current Kent and Medway advice is to follow the NICE guidance on hydroxychloroquine. Pathway currently under review. If a patient has ophthalmology concerns/complaints please refer urgently to ophthalmology and include all relevant PMH and DMARD prescribing. • Patients should be advised to report any visual disturbance.	• Patient should have an annual eye assessment (ideally including optical coherence tomography) if treatment continued for >5 years. (To be requested by Specialist) • Current Kent and Medway advice is to follow the NICE guidance on hydroxychloroquine. Pathway currently under review. If a patient has ophthalmology concerns/complaints please refer urgently to ophthalmology and include all relevant PMH and DMARD prescribing. • Patients should be advised to report any visual disturbance.
Leflunomide (Standard monitoring)	• FBC • U&E's • Creatinine • Calculated eGFR • LFT's • BP • Weight	• Monitoring required every 3 months • ALT/AST 2-3x upper limit normal – reduce dose to 10mg, recheck weekly. If normalised – continue 10mg; if remains elevated withdraw drug and discuss with initiating specialist. • If ALT/AST >3x normal, stop drug, recheck within 72 hours. If still > 3x, withdraw drug and consider washout. Discuss with initiating specialist. • BP each visit. If BP >140/90 treat in line with NICE guidance. If BP remains uncontrolled, stop leflunomide and consider washout. Discuss with initiating specialist. • Weigh at each monitoring visit. If >10% weight loss with no other cause identified, reduce dose or stop and consider washout. Discuss with initiating specialist.	• FBC and LFT creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then, monthly for 3 months. • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose, monthly for 3 months. • More frequent monitoring is appropriate in patients at higher risk of toxicity • If co-prescribed with another immunosuppressant or potential hepatotoxic agent then blood checks should be continued long-term, at least once a month.

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Methotrexate (Oral and Subcutaneous) (Standard monitoring)	• FBC • U&E's • Creatine • Calculated eGFR • LFT's	• Monitoring required every 3 months • Albumin – unexplained fall (in absence of active disease) – withhold and discuss with initiating specialist. • New or increasing dyspnoea or dry cough – withhold and discuss urgently with the specialist team. • Avoid prescribing trimethoprim or co-trimoxazole to patients receiving methotrexate – greatly increases risk of marrow aplasia.	• FBC and LFT creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then, monthly for 3 months. • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose, monthly for 3 months. • More frequent monitoring is appropriate in patients at higher risk of toxicity
Mycophenolate Mofetil (Standard monitoring)	• FBC • U&E's • Creatinine • Calculated eGFR • LFT's	• Monitoring required every 3 months	• FBC and LFT creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then, monthly for 3 months. • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose, monthly for 3 months. • More frequent monitoring is appropriate in patients at higher risk of toxicity
D-Penicillamine (Extended monthly monitoring)	• FBC • U&E's • Creatinine • Calculated eGFR • Urinalysis (Dipstick protein)	• Monitoring required every 3 months • Ask about skin rash or oral ulceration at every visit.	• FBC, LFT, Creatinine/calculated GFR and urinalysis every 2 weeks until on stable dose for 6 weeks then monthly thereafter. • Once stable for 12 months patient can be considered for reduced monitoring (every 3 months) on an individual patient basis. • More frequent monitoring is appropriate in patients at higher risk of toxicity

Sulfasalazine (Standard monitoring)	• FBC • U&E's • Creatinine • Calculated eGFR • LFT's	• Monitoring required every 3 months • Discontinue blood monitoring after 12 months. • Ask about skin rash or oral ulceration.	• FBC and LFT creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then, monthly for 3 months. • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose, monthly for 3 months. • More frequent monitoring is appropriate in patients at higher risk of toxicity.
Dapsone (Standard monitoring)	• FBC including reticulocyte count • LFT's • Creatinine • Calculated eGFR	• Monitoring required every 3 months • An elevated reticulocyte count of 10-15% above normal is acceptable provided that it is stable along with the haemoglobin and bilirubin levels. Contact specialist for advice and guidance. • Serum methaemoglobin levels should be measured in patients complaining of light-headedness, headache, fatigue or shortness of breath.	• FBC, Reticulocyte count, LFT and Creatinine/calculated GFR every week for 4 weeks, monthly for 3 months then 3 monthly • After dose increase - FBC, Reticulocyte count, LFT and Creatinine/calculated GFR every week for 4 weeks, monthly for 3 months then 3 monthly • Patients who have been stable for 12 months can be considered for reduced frequency of monitoring on an individual patient basis. • More frequent monitoring is appropriate in patients at higher risk of toxicity.

Tacrolimus (Extended monthly monitoring)	• FBC • LFT's • Creatinine • Calculated eGFR • BP • Blood glucose	• Monitoring required every 3 months	• FBC and LFT creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then monthly • After dose increase - repeat FBC and LFTs creatinine/calculated GFR every 2 weeks until on stable dose for 6 weeks then once on stable dose then monthly • Extended monitoring required - Patients who have been stable for 12 months can be considered for reduced frequency of monitoring on an individual patient basis • More frequent monitoring is appropriate in patients at higher risk of toxicity.

Appendix 4 – DMARD initiation and dose increase

All DMARDs that require monitoring initiated by specialist

↓

Fortnightly for 6 weeks in specialist care: FBC, LFTs, Creatinine and eGFR

↓

Monthly for 3 months by specialist: FBC, LFTs, Creatinine and eGFR.
3 Monthly monitoring to be completed by primary care clinician

↓

Extended monitoring schedule

It is recognised that patients may need more frequent monitoring. If this is required, patients remain the responsibility of the initiating specialist.

⇔

Standard monitoring schedule

FBC, LFTs, Creatinine and eGFR

Quarterly (3 monthly) in primary care

For patients at low risk of toxicity e.g., normal range blood test parameters, no co-morbidities such as renal impairment/fatty liver.

As specified in specialist care treatment plan. Communicate to primary care clinician using the shared care agreement form (appendix 6)

Dose increase of DMARD

Fortnightly for 6 weeks by initiating specialist

↓

Resume usual patient monitoring schedule in primary care
(e.g. quarterly – 3 monthly)
FBC, LFTs, Creatinine and eGFR

↓

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Appendix 5 – Monitoring – actions for abnormal monitoring parameters

The prescriber has responsibility for ensuring patients are adhering to monitoring guidance and respond to abnormalities of the results included in the monitoring schedule.
As well as responding to absolute values in laboratory tests, it is also relevant to observe trends in results (e.g. gradual decreases in white blood cells or albumin, or increasing liver enzymes). A rapid fall or rise and a consistent upward or downward trend in any value should prompt caution and extra vigilance.
The parameters below are suitable for the majority of patients; however Individual patient needs may vary. For some patients individual parameters may be set by the specialist and communicated to Primary Care where results outside these set limits are medically acceptable (for example a persistently raised stable MCV due to drug therapy where no alternative cause has been identified).
As a general guide action should be taken by withholding treatment and discussing with the relevant specialist department if:

Abnormality Detected	Recommended Action to include
WBC <3.5 $x10^9$/L	Withhold and discuss urgently with specialist team
Neutrophils <1.6 $x10^9$/L	Withhold and discuss urgently with specialist team
Unexplained Eosinophilia >0.5 x 10^9/L	Withhold and discuss urgently with specialist team
Platelet count <140 $x10^9$/L	Withhold and discuss urgently with specialist team
ALT and/or AST > than twice the upper limits	Withhold and discuss urgently with specialist team
Unexplained reduction in albumin <30 g/L	Withhold and discuss urgently with specialist team
Mean Cell Volume (MCV) >105 f/L	Withhold and discuss urgently with specialist team
Creatinine increase >30% over 12 months and/or calculated GFR <60 ml/min/	Withhold and discuss urgently with specialist team
Blood pressure >140/90mm Hg	Manage hypertension according to NICE hypertension guidance (If on Ciclosporin, Tacrolimus or Leflunomide – withhold and discuss with specialist team)
Unexplained new increasing dyspnoea or cough ** *(Cases of pneumonitis have been reported)*	Withhold and discuss urgently with specialist team
Dapsone	Contact specialist and consider withholding if haemoglobin decreases by 2g/dL from baseline or reticulocyte count increases >6%

*** AZATHIOPRINE, CICLOSPORIN, LEFLUNOMIDE, METHOTREXATE, MINOCYCLINE, SULPHASALAZINE, TACROLIMUS have pneumonitis listed on SPC. Cases reports of MYCOPHENOLATE pneumonitis exist.*

For up to date information on possible abnormalities and recommended actions required please click link Suggestions for drug monitoring in Adults in primary care ***Specialist pharmacy service September 2020***.

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Appendix 6

REQUEST TO SHARE CARE AND AGREEMENT FORM

Non-biologic disease-modifying anti-rheumatic drugs (DMARDs) for use in Rheumatology, Dermatology, Gastroenterology, Ophthalmology, Respiratory and Neurology

The expectation is that this information, along with the full shared care protocol, provides sufficient information to enable GP* to be confident to take on clinical and legal responsibility for prescribing and monitoring. GP* to review and must respond to provider trust request to share care within 2 weeks, using form provided.

**This may be any primary care prescribing clinician.*

For completion by specialist (with shared care agreement form)			
Patient name			
DOB			
NHS Number			
Patient weight (kg)			
Drug (s) Dose, frequency, and route at handover			
Diagnosis (please indicate if unlicensed or "off-label"			
Date of first prescription by specialist			
Date of the next blood monitoring review date			
Estimated date for prescribing responsibility to be with GP* (at least 12 weeks after first prescribing)			
Special prescribing advice for this patient, to include any other medication patient is taking for same condition			
KEY PRIMARY CARE INFORMATION (refer to full shared care guideline for full details)			
GP* Responsibilities			
MONITORING (as per Shared Care document unless stated below)			
Frequency of GP* monitoring			
Frequency of specialist review			
TEST	NORMAL RANGE	Pre-Treatment Baseline Result (specialist responsibility)	Initiation of treatment Result (specialist responsibility)

ACTION TO BE TAKEN IF ABNORMAL RESULT		
TEST	RESULT	ACTION

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Appendix 7

SHARED CARE AGREEMENT FORM

This form is used to agree shared care between specialist, patient and GP*.

Specialist and patient agreement

By signing below we accept:

- The Kent and Medway CCG shared care principles
- The requirements and responsibility defined in this drug specific shared care protocol
- To provide medication for the transition period (at least 28 days)

Specialist name:	Patient name:
Designation:	DOB:
Provider Trust:	NHS number:
Direct telephone number:	
Email:	
Specialist signature:	Patient signature:
Date:	Date:

GP* response to shared care request

Please return to specialist within **2 weeks** of receipt of request to share.
This form is to be completed by the GP* who is requested to share care.

I agree to accept shared care as set out in this shared care protocol and KMCCG shared care principles. ☐

I have not received adequate support to take over prescribing therefore I do not accept shared care for this patient. ☐

My reasons for not accepting are:

Please note that GP agreement is voluntary, with the right to decline to share care if for any reason you do not feel confident in accepting clinical responsibility.

GP* name	
Designation	
Direct telephone number	
Email	
Practice address	
GP* signature	
Date	

Specialist to retain a copy in the patients' hospital notes
Copy to be given to patient
GP* to retain a copy in primary care notes

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