

**DERBYSHIRE JOINT AREA PRESCRIBING COMMITTEE**  
**SHARED CARE AGREEMENT**

**Azathioprine/ mercaptopurine for patients within adult services**

**1. REFERRAL CRITERIA**

- Shared Care is only appropriate if it provides the optimum solution for the patient.
- Prescribing responsibility will only be transferred when it is agreed by the consultant and the patient's GP and the patient's condition is stable or predictable.
- When transfer agreed the patient will be given a supply of azathioprine/ mercaptopurine sufficient for 4 weeks maintenance therapy.

**2. AREAS OF RESPONSIBILITY**

GP responsibilities	Consultant responsibilities
<ol style="list-style-type: none"> <li>1. If NOT participating in shared care reply to the request from the consultant/specialist as soon as practicable (see appendix 1)</li> <li>2. Ensure compatibility with other concomitant medication.</li> <li>3. Prescribe the dose and formulation recommended.</li> <li>4. Perform monitoring tests as specified in section vii.</li> <li>5. Adjust the dose as advised by the specialist.</li> <li>6. Stop treatment on the advice of the specialist or immediately if any urgent need to stop treatment arises e.g. if bone marrow suppression is suspected.</li> <li>7. Manage adverse effects and discuss with specialist team when required.</li> <li>8. Ensure the patient is offered an annual flu vaccination and a one off pneumococcal vaccination. Live vaccinations can be used with caution in patients taking azathioprine up to 3.0 mg/kg/day or 6-mercaptopurine up to 1.5mg/kg/day, as per green book chapter 6, see section 4 iv</li> <li>9. Contact the specialist team for advice if the patient becomes or plans to become pregnant.</li> <li>10. Report any adverse effects to the referring specialist and the MHRA yellow card scheme.</li> </ol>	<ol style="list-style-type: none"> <li>1. Assess the patient and provide diagnosis; ensure that this diagnosis is within scope of this shared care protocol. Assess for contraindications and cautions and interactions.</li> <li>2. Use a shared decision-making approach; discuss the benefits and risks of the treatment with the patient and provide the appropriate counselling. Provide an appropriate patient information leaflet.</li> <li>3. Perform baseline tests (as recommended in section vii) and provide results of these tests.</li> <li>4. Initiate, prescribe and monitor azathioprine/mercaptopurine for the first three months or until medication monitoring is stable.</li> <li>5. Contact patient's GP to request prescribing under shared care and send a link to or copy of the shared care protocol.</li> <li>6. Recommend dose of the drug and frequency of monitoring as per section 4vii.</li> <li>7. Annually review the patient and advise the GP promptly on when to adjust the dose, stop treatment or consult with the specialist.</li> <li>8. Communicate any dose increase to the GP and transfer monitoring to GP when the patient's condition is stable or predictable following 6 weeks period of titration.</li> <li>9. Ensure that clear backup arrangements exist for GPs to obtain advice and support. Give advice to primary care on continuing treatment if a woman becomes or wishes to become pregnant or breastfeed.</li> <li>10. Advise on the suitability for e.g. herpes zoster vaccination in accordance with national screening programme</li> <li>11. Report any adverse effects to the MHRA yellow card scheme and GP.</li> </ol>
<p style="text-align: center;"><b>Patient responsibilities</b></p> <ul style="list-style-type: none"> <li>• Report to the specialist or GP if there is not a clear understanding of the treatment and share any concerns in relation to treatment.</li> <li>• Take azathioprine or mercaptopurine as prescribed and do not stop taking it without speaking to their primary care prescriber or specialist.</li> <li>• Attend regularly for monitoring and review appointments with primary care and specialist. Be aware that medicines may be stopped if they do not attend appointments.</li> <li>• Inform specialist or GP of any other medication being taken including over-the-counter products.</li> <li>• Report any other adverse effects to the specialist or GP whilst taking azathioprine/ mercaptopurine.</li> </ul> <p>Seek immediate medical attention if they develop</p> <ul style="list-style-type: none"> <li>○ Signs or symptoms indicating haematological toxicity, e.g. sore throat, infection, unexplained bruising or bleeding.</li> <li>○ Signs or symptoms of pancreatitis, e.g. abdominal pain, nausea, or vomiting</li> <li>○ Signs of symptoms of hepatic toxicity, e.g. Jaundice (yellowing of the skin or whites of the eyes)</li> </ul> <ul style="list-style-type: none"> <li>• Inform the specialist or primary care prescriber as soon as possible if they become pregnant or wish to become pregnant.</li> </ul>	

### 3. COMMUNICATION AND SUPPORT

<p><b>i. Hospital contacts:</b></p> <p><b>Chesterfield Royal Hospital NHS Foundation Trust</b>  Contact the referring consultant/nurse via switchboard: 01246 277271  Nurse advice line: 01246 513097  Available Monday-Thursday 9am-4pm, Friday 9am-12pm</p> <p><b>University Hospital of Derby and Burton NHS Foundation Trust Derby Hospitals</b>  Rheumatology- Rheumatology helpline: 01332 787710  Gastroenterology- IBD helpline: 01332 785504  Consultant/specialist nurse via switchboard: 01332 340131  Renal- Specialist Pharmacist: 07500 976569  If unable to contact the specialist renal pharmacist, consultants secretaries can be contacted: 01332 789344  Dermatology- Consultant/specialist nurse via switchboard: 01332 265500  Respiratory- Consultant via switchboard: 01332 340131  Neurology- Consultant via neurology secretaries 01332 786478/783548 or email: <a href="mailto:dhft.neurologysecretaries@nhs.net">dhft.neurologysecretaries@nhs.net</a></p> <p><b>Queens Burton Hospital</b>  01283 511511/566333  Rheumatology  Dr R Laximinarayan ext. 3167; Dr S Das/ Dr D Ray ext. 3211/3247  Clinical Rheumatology Nurse Specialist ext. 4112  <a href="mailto:bhft.rheumatologynurses@nhs.net">bhft.rheumatologynurses@nhs.net</a>  Gastroenterology  Drs Palejwala/Guerra/Dor ext 3004; Dr Watmough/Ali ext 3002  IBD nurse helpline: ext 5854 <a href="mailto:dhft.ibdcns@nhs.net">dhft.ibdcns@nhs.net</a></p> <p><b>Sheffield Teaching Hospitals</b>  Hannah Jackson, Renal Administrator Sheffield Kidney Institute, Sheffield Teaching Hospitals  Telephone 0114 271 5327/ Work Mobile 07795801230  Mon-Fri 9am-3pm  For urgent issues please contact the Renal SpR via STH switchboard.  0114 2434343 Bleep 2775.</p>	<p><b>ii. Out of hours contacts and procedures:</b></p> <p><b>Chesterfield</b>  Contact the on-call Medic for the relevant speciality via switchboard: 01246 277271</p> <p><b>Derby</b>  Pharmacy, UHDB, ask for on-call pharmacist via switchboard: 01332 340131  Messages can be left on the Derby Rheumatology nurse advice line: 01332 787710  The aim is to address these next working day</p> <p><b>Burton</b>  01283 511511 / 566333 ask for on-call pharmacist via switchboard  Messages can be left on the nurse advice line out of hours. 01283 511511 ext 4112 (Rheum) / 5854 (Gastro)</p> <p>The team aim to respond at latest within two working days. The specialist nurses may also be bleeped via switchboard for urgent enquiries.</p>
<p><b>iii. Specialist support/resources available to GP including patient information:</b></p> <p><b>Rheumatology</b>  British Society of Rheumatology Specialist website: <a href="http://www.rheumatology.org.uk/">http://www.rheumatology.org.uk/</a>  General information: <a href="https://www.nhs.uk/medicines/azathioprine/">https://www.nhs.uk/medicines/azathioprine/</a> <a href="https://patient.info/medicine/azathioprine-azapress-imuran">https://patient.info/medicine/azathioprine-azapress-imuran</a>  Rheumatology: <a href="https://www.versusarthritis.org/about-arthritis/treatments/drugs/azathioprine/">https://www.versusarthritis.org/about-arthritis/treatments/drugs/azathioprine/</a>  Dermatology: <a href="https://www.bad.org.uk/for-the-public/patient-information-leaflets/azathioprine">https://www.bad.org.uk/for-the-public/patient-information-leaflets/azathioprine</a>  Patient information leaflets <a href="https://www.medicines.org.uk/emc/search?q=azathioprine">https://www.medicines.org.uk/emc/search?q=azathioprine</a>  Gastroenterology: <a href="https://www.crohnsandcolitis.org.uk/about-crohns-and-colitis/publications/azathioprine-mercaptopurine">https://www.crohnsandcolitis.org.uk/about-crohns-and-colitis/publications/azathioprine-mercaptopurine</a>  <a href="https://gutscharity.org.uk/advice-and-information/conditions/crohns-disease/">https://gutscharity.org.uk/advice-and-information/conditions/crohns-disease/</a>  <a href="https://gutscharity.org.uk/advice-and-information/conditions/ulcerative-colitis/">https://gutscharity.org.uk/advice-and-information/conditions/ulcerative-colitis/</a></p>	

### 4. CLINICAL INFORMATION

i. Prescribed Indications	Licensed	Unlicensed
	Rheumatoid Arthritis Inflammatory intestinal disease (Ulcerative colitis and Crohn's disease) Dermatomyositis Autoimmune hepatitis Systemic lupus erythematosus	Vasculitis Psoriatic arthritis Autoimmune bullous disorder Cutaneous lupus Asthma Severe eczema Pemphigus vulgaris Neuromuscular junction disorder (Myasthenia Gravis, Lambert-Eaton myasthenic syndrome) Chronic inflammatory demyelination polyneuropathy Neuromyelitis Optica Spectrum Disorder Sarcoidosis

	Autoimmune encephalitis										
<b>ii. Therapeutic summary</b>	Azathioprine is a pro-drug and is rapidly broken down to 6-mercaptopurine (6-MP) <i>in vivo</i> . It is an immunosuppressive drug which is effective in controlling several inflammatory and autoimmune diseases. Therapeutic effect may be evident only after weeks or months and can include a steroid sparing effect, thereby reducing the toxicity associated with high dosage and prolonged usage of corticosteroids.										
<b>iii. Dose &amp; Route of administration</b>	<p><b>Azathioprine</b> Initially up to 2.5 mg/kg daily in divided doses, adjusted according to response, rarely more than 3 mg/kg daily; maintenance 1–3 mg/kg daily, consider withdrawal if no improvement within 3 months.</p> <p><b>Mercaptopurine</b> 6-Mercaptopurine for azathioprine intolerance: <b>Crohn's/Ulcerative colitis</b> Adult 1–1.5 mg/kg daily, some patients may respond to lower doses. For other indication see BNF or as per specialist advice</p> <p>Doses outside the recommended range may be considered with prior agreement with the specialist team and GP involved.</p> <p>Lower doses should be considered for frail elderly and patients with renal impairment.</p> <p>The tablets should be swallowed whole and not split / crushed. Can be taken either with or without food, but patients should standardise which method is chosen. Tablets should be taken at least 1 hour before or 2 hours after milk or dairy products. Taking with or after food may relieve nausea, however the oral absorption of azathioprine or mercaptopurine may be reduced. Consideration should be given to monitoring therapeutic efficacy more closely if patient is taking azathioprine or mercaptopurine consistently with food.</p>										
<b>iv. Duration of treatment</b>	Indefinite but may be withdrawn after a prolonged period of disease remission in selected cases. It is also used as a rotational treatment in eczema. For rheumatoid diseases improvement may take 2 to 3 months to occur.										
<b>v. Immunisation</b>	<ul style="list-style-type: none"> <li>• <b>Live vaccinations</b> can be used with caution in azathioprine usage when less than 3.0 mg/kg/day or in mercaptopurine less than 1.5mg/kg/day as per Green book chapter 6.</li> <li>• Annual flu vaccination is recommended.</li> <li>• One off Pneumococcal vaccination recommended unless severely immunocompromised where a different schedule is needed. See JCVI for more information</li> <li>• COVID-19 vaccination is safe and recommended</li> </ul>										
<b>vi. Adverse effects</b>  See BNF/SPC for full list	<p>Common or very common: Bone marrow depression (dose-related); increased risk of infection; leucopenia; pancreatitis; thrombocytopenia Uncommon: Anaemia; hepatic disorders; hypersensitivity Rare or very rare: Agranulocytosis; alopecia; bone marrow disorders; diarrhoea; gastrointestinal disorders; neoplasms; photosensitivity reaction; pneumonitis; severe cutaneous adverse reactions (SCARs) Frequency not known: Nodular regenerative hyperplasia; sinusoidal obstruction syndrome</p> <table border="1"> <thead> <tr> <th>Adverse effects</th><th>Action for primary care</th></tr> </thead> <tbody> <tr> <td>Signs or symptoms of bone marrow suppression, e.g. unexplained bleeding or bruising with or without sore throat, purpura, mouth ulcers.</td><td>Check FBC immediately, withhold treatment while awaiting results, and discuss with the specialist team. See haematological monitoring below.</td></tr> <tr> <td>Infection requiring antibiotics</td><td>Temporarily withhold methotrexate until the patient has recovered. Consider additional investigations (e.g.FBC), if clinically appropriate.</td></tr> <tr> <td>Nausea</td><td>Review for reversible causes. Advise patient to take with food. If no improvement contact specialist team.  Nausea is common early in the course of treatment and usually resolves after a few weeks without an alteration in dose. Moderate nausea can be managed by using divided daily doses, taking doses after food, prescribing concurrent antiemetics or temporarily reducing the dose.</td></tr> <tr> <td>Suspected pancreatitis</td><td>Withhold and discuss with specialist team.</td></tr> </tbody> </table>	Adverse effects	Action for primary care	Signs or symptoms of bone marrow suppression, e.g. unexplained bleeding or bruising with or without sore throat, purpura, mouth ulcers.	Check FBC immediately, withhold treatment while awaiting results, and discuss with the specialist team. See haematological monitoring below.	Infection requiring antibiotics	Temporarily withhold methotrexate until the patient has recovered. Consider additional investigations (e.g.FBC), if clinically appropriate.	Nausea	Review for reversible causes. Advise patient to take with food. If no improvement contact specialist team.  Nausea is common early in the course of treatment and usually resolves after a few weeks without an alteration in dose. Moderate nausea can be managed by using divided daily doses, taking doses after food, prescribing concurrent antiemetics or temporarily reducing the dose.	Suspected pancreatitis	Withhold and discuss with specialist team.
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<b>vii. Monitoring Requirements</b>	<p><b>Before commencing immunosuppressant therapy</b></p> <ul style="list-style-type: none"> <li>• Record patient's blood pressure, weight and height if clinically indicated.</li> <li>• Screening for lung disease should be undertaken at clinician discretion on a case-by-case basis. The extent of screening should be influenced more by a patient's clinical features and risk factors for lung disease (e.g. underlying autoimmune disease or smoking history) rather than subsequent immunomodulating choice. Pre-existing lung disease should not be considered an absolute</li> </ul>										

	<p>contraindication to any immunomodulating medication.</p> <ul style="list-style-type: none"> <li>• Screen for viral hepatitis B&amp;C and HIV as per local policy</li> <li>• Investigate patient medical history including co-morbidities and previous immunomodulating medication use.</li> <li>• Confirm cervical screening is up to date</li> <li>• Check baseline thiopurine methyl transferase (TPMT) status</li> </ul>
	<p><b><i>Individuals with severely reduced TPMT activity (<u>homozygous</u>) should not be prescribed AZATHIOPRINE as serious and fatal toxicity may occur within 6 weeks of starting the drug. For mild/moderate (heterozygous) deficiency serious adverse events may occur anytime and as late as 6 months after treatment commences. Serious Adverse Events can be exacerbated by minor infections or drug interactions (See Drug Interactions &amp; contra-indications).</i></b></p> <p><i>Heterozygous individuals should be prescribed Azathioprine/6-Mercaptopurine with caution and reduced drug dosage.</i></p> <p><b>Consultant/specialist monitoring schedule</b> Baseline and 2 weekly until on a stable dose for at least 6 weeks</p> <ul style="list-style-type: none"> <li>• FBC</li> <li>• ALT and/or AST and albumin</li> <li>• U&amp;E including creatinine clearance</li> </ul> <p>Annually review the patient and advise the GP promptly on when to adjust the dose, stop treatment or consult with the specialist</p> <p>For patients with inflammatory arthritis CRP/ESR may be done every 3 months (this is not done for dermatology patients). These tests are part of the assessment of the underlying rheumatic disease rather than a requirement for monitoring of immunomodulation therapy. The monitoring CRP/ESR may be coordinated between secondary and primary care on an individual basis.</p> <p>-----</p> <p><b>GP responsibility monitoring schedule*</b> In patients following the 6 weeks of dose stability conduct monthly monitoring as above for three months followed by three monthly monitoring thereafter of:</p> <ul style="list-style-type: none"> <li>• FBC</li> <li>• ALT and/or AST and albumin</li> <li>• U&amp;E including creatinine clearance</li> </ul> <p><b>Dosage increase</b> For dose <b><u>increase</u></b>, monitor 2 weekly until stable for 6 weeks. Dose and monitoring to be agreed with consultant</p> <ul style="list-style-type: none"> <li>• FBC</li> <li>• ALT and/or AST and albumin</li> <li>• U&amp;E including creatinine/ calculated GFR</li> </ul> <p>Monitoring to then continue at 3 monthly intervals</p> <p><b>*The Neurology team may advise more frequent monitoring for patients heterozygote for TPMT (increased risk of toxicity).</b></p> <p>Restarting treatment after an abnormality has been detected: If felt to be appropriate to restart azathioprine after an abnormality has settled, consider a lower dose (with discussion with specialist) and monitor as follows: repeat bloods in 2 weeks and then monthly for 3 months. Following this resume monitoring frequency to what it was prior to the abnormality.</p> <p><b>Actions to be taken in Primary care</b></p>

	<ol style="list-style-type: none"> <li>In addition to responding to absolute values in laboratory tests, it is also relevant to <b>observe trends in results</b> (e.g gradual decreases in white blood cells (WBC) or albumin, or increasing liver enzymes) <b>NB – a rapidly increasing or decreasing trend in any value should prompt caution irrespective of actual value.</b></li> <li>Parameters below are to be used as a guide for clinicians rather than absolute values, where monitoring should be based on individualized basis. It is important to consider alternative explanations other than the immunomodulation agents, especially in patients who have been stable for prolonged periods</li> </ol> <table border="1" data-bbox="352 338 1549 1010"> <tr> <td data-bbox="352 338 863 618"> WBC &lt;3.5 x10<sup>9</sup>/L  Lymphocytes &lt; 0.5x10<sup>9</sup>/L  Neutrophils &lt;1.6 x 10<sup>9</sup>/L  Platelets &lt;140 x 10<sup>9</sup>/L  Eosinophilia &gt;0.5x10<sup>9</sup>/L </td><td data-bbox="863 338 1549 618"> Discuss <b>urgently</b> with specialist team and consider interruption.  Isolated low lymphocytes more likely to be due to disease or other factors- GP to consider non-drug related causes (contact specialist for advice if unsure).  The specialist may advise on individual cases if the abnormality is thought to be due to other factors and in this instance may set differential parameters which can be communicated to the GP. </td></tr> <tr> <td data-bbox="352 618 863 674"> Mean cell volume &gt;105 f/L </td><td data-bbox="863 618 1549 674"> Check <b>serum B12, folate &amp; TFT</b>. Discuss urgently with specialist team and consider interruption. </td></tr> <tr> <td data-bbox="352 707 863 898"> ALT or AST &gt;100 units/L, or any sudden increases (e.g. double of baseline), OR Unexplained fall in serum albumin &lt;30g/L  Jaundice </td><td data-bbox="863 707 1549 898"> Withhold and discuss with specialist team.  When used for hepatology indications, continue treatment and discuss with specialist urgently.  Check any other reason for risk of hepatic dysfunction such as alcohol history and drug interactions, including OTC or complementary medication. </td></tr> <tr> <td data-bbox="352 898 863 1010"> Creatinine increase for example &gt;30% over 12 months and/or CrCl &lt;60ml/min </td><td data-bbox="863 898 1549 1010"> Contact Specialist <b>urgently</b> and consider interruption </td></tr> </table>	WBC <3.5 x10 <sup>9</sup> /L Lymphocytes < 0.5x10 <sup>9</sup> /L Neutrophils <1.6 x 10 <sup>9</sup> /L Platelets <140 x 10 <sup>9</sup> /L Eosinophilia >0.5x10 <sup>9</sup> /L	Discuss <b>urgently</b> with specialist team and consider interruption. Isolated low lymphocytes more likely to be due to disease or other factors- GP to consider non-drug related causes (contact specialist for advice if unsure). The specialist may advise on individual cases if the abnormality is thought to be due to other factors and in this instance may set differential parameters which can be communicated to the GP.	Mean cell volume >105 f/L	Check <b>serum B12, folate &amp; TFT</b> . Discuss urgently with specialist team and consider interruption.	ALT or AST >100 units/L, or any sudden increases (e.g. double of baseline), OR Unexplained fall in serum albumin <30g/L Jaundice	Withhold and discuss with specialist team. When used for hepatology indications, continue treatment and discuss with specialist urgently. Check any other reason for risk of hepatic dysfunction such as alcohol history and drug interactions, including OTC or complementary medication.	Creatinine increase for example >30% over 12 months and/or CrCl <60ml/min	Contact Specialist <b>urgently</b> and consider interruption
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<b>viii. Contra-indications and cautions</b>	<p><b>Contraindications:</b></p> <ul style="list-style-type: none"> <li>Known hypersensitivity to the active substance or any excipients. Hypersensitivity to 6-mercaptopurine (6-MP) should alert the prescriber to probable hypersensitivity to azathioprine.</li> <li>Absent or very low thiopurine methyltransferase (TPMT) activity – risk of life-threatening pancytopenia.</li> </ul> <p><b>Cautions:</b></p> <ul style="list-style-type: none"> <li>Live vaccines (e.g. oral polio, oral typhoid, MMR, BCG, yellow fever): should be avoided in patients taking azathioprine at a dose greater than 3 mg/kg/day, or mercaptopurine greater than 1.5 mg/kg/day. Refer to the Green Book Chapter 6. Contact the specialist if required.</li> <li>Patients with active/history of pancreatitis.</li> <li>Concomitant prescribing of allopurinol: A 75% dose reduction of azathioprine/mercaptopurine is required, see interaction section.</li> <li>Patients receiving azathioprine or mercaptopurine are at an increased risk of developing lymphoproliferative disorders and other malignancies, notably skin cancers, sarcomas and uterine cervical cancer in situ. Exposure to sunlight and UV light should be limited and patients should wear protective clothing and use a sunscreen with a high protection factor to minimize the risk of skin cancer and photosensitivity</li> <li>Patients with low thiopurine methyltransferase (TPMT) activity are at increased risk of myelosuppression. Substantial dose reduction is generally required.</li> <li>Severe infection.</li> <li>Severely impaired hepatic or bone marrow function.</li> <li>Pregnancy and breastfeeding (see below)</li> <li>Treatment may need to be monitored more frequently in the following: <ul style="list-style-type: none"> <li>Elderly patients</li> <li>Impaired renal function</li> <li>Mild/moderately impaired hepatic function</li> <li>Mild/moderately impaired bone marrow function</li> </ul> </li> </ul>								
<b>ix. Clinically relevant drug interactions</b>  <b>For a full list of interactions please refer to the BNF</b>	<p><b>The following drugs must not be prescribed without consultation with the specialist:</b></p> <ul style="list-style-type: none"> <li><b>Allopurinol</b> has the potential to cause thiopurine toxicity and should be avoided, except with specialist input. Allopurinol may be recommended in combination with thiopurines by the specialist for IBD patients, particularly in those who are unable to tolerate to or do not respond to treatment with a thiopurine alone. The dose of azathioprine or mercaptopurine should be reduced by 75% if used concurrently with allopurinol. If considering prescribing allopurinol, discuss with the specialist for advice and a dose adjustment.</li> <li><b>Febuxostat</b> has the potential to cause thiopurine toxicity; avoid in combination with azathioprine or</li> </ul>								

	<p>mercaptopurine.</p> <ul style="list-style-type: none"> <li>• <b>Live vaccines</b> (e.g. oral polio, oral typhoid, MMR, BCG, yellow fever) can be given to patients on stable long term low dose corticosteroid therapy (defined as <math>\leq 20\text{mg}</math> prednisolone per day for <math>&gt;14</math> days) alone or in combination with low dose non-biological oral immune modulating drugs (e.g. azathioprine up to <math>3\text{mg/kg/day}</math> or mercaptopurine up to <math>1.5\text{mg/kg/day}</math>). Clinician discretion is advised. Please refer to the Green Book Chapter 6 for current advice, and advice for patients taking higher doses.</li> <li>• <b>Warfarin</b> – thiopurines may reduce anticoagulant effects of warfarin.</li> <li>• <b>Co-trimoxazole / trimethoprim</b> – possible increased risk of haematological toxicity, however evidence is conflicting and this combination is often used in practice.</li> <li>• <b>Clozapine</b> - avoid due to increased risk of agranulocytosis.</li> <li>• <b>Ribavirin</b> - increased risk of haematological toxicity when azathioprine given concurrently and this combination should be avoided.</li> <li>• <b>Aminosalicylates</b> (sulfasalazine, mesalazine or olsalazine) - increased risk of haematological toxicity with concomitant thiopurine due to TPMT inhibition. Dose adjustment of azathioprine or mercaptopurine and additional monitoring of FBC may be required.</li> </ul> <p>The following drugs may be prescribed with caution:</p> <ul style="list-style-type: none"> <li>• <b>ACE inhibitors</b> - increase the risk of anaemia and or leukopenia.</li> <li>• <b>Cimetidine and indomethacin</b> - concomitant administration of thiopurines may increase the risk of myelosuppression.</li> </ul>
x. <b>Pregnancy, paternal exposure and breastfeeding</b>	<p><b>All patients should be informed of the risks and benefits of taking this medicine during pregnancy and breastfeeding. The specialist team should be contacted if a patient becomes pregnant or is planning to become pregnant or breastfeed.</b></p> <p><b>Pregnancy:</b>  The <a href="#">BSR and BHPR guideline on prescribing DMARDs in pregnancy and breastfeeding</a> advises that azathioprine is compatible throughout pregnancy at doses <math>\leq 2\text{mg/kg/day}</math>. Current available data do not suggest that mercaptopurine exposure during pregnancy increases the risk of miscarriage, congenital malformation, intrauterine death, fetal growth restriction, or preterm delivery but the data are limited for some outcomes. A careful assessment of risk versus benefit should be made before mercaptopurine is prescribed to patients who are pregnant.  The <a href="#">British Society of Gastroenterology consensus guidelines on the management of inflammatory bowel disease</a> advises that both maintenance and flares can be treated as normal with thiopurines (azathioprine and mercaptopurine) during pregnancy.</p> <p>Information for healthcare professionals:  <a href="https://www.medicinesinpregnancy.org/bumps/monographs/USE-OF-AZATHIOPRINE-OR-MERCAPTOPURINE-IN-PREGNANCY/">https://www.medicinesinpregnancy.org/bumps/monographs/USE-OF-AZATHIOPRINE-OR-MERCAPTOPURINE-IN-PREGNANCY/</a>  Information for patients and carers: <a href="https://www.medicinesinpregnancy.org/Medicine--pregnancy/Azathioprinemercaptopurine/">https://www.medicinesinpregnancy.org/Medicine--pregnancy/Azathioprinemercaptopurine/</a></p> <p><b>Breastfeeding:</b>  Azathioprine is compatible with breastfeeding, although the active metabolite mercaptopurine is present in breast milk. A risk versus benefit assessment is advised. If used during breastfeeding, monitor for signs of infection or immunosuppression. If high doses of azathioprine are used, monitor infant blood counts. If mercaptopurine is used, monitor infant's blood count and liver function.</p> <p>Information for healthcare professionals:</p> <ul style="list-style-type: none"> <li>• <a href="https://www.sps.nhs.uk/medicines/azathioprine/">https://www.sps.nhs.uk/medicines/azathioprine/</a></li> <li>• <a href="https://www.sps.nhs.uk/medicines/mercaptopurine/">https://www.sps.nhs.uk/medicines/mercaptopurine/</a></li> </ul> <p><b>Paternal exposure:</b>  Azathioprine and mercaptopurine are compatible with paternal exposure. There is currently no evidence of adverse fetal effects relating to paternal use.</p> <p>Information for healthcare professionals:  <a href="https://www.medicinesinpregnancy.org/bumps/monographs/PATERNAL-USE-OF-AZATHIOPRINE-OR-MERCAPTOPURINE/">https://www.medicinesinpregnancy.org/bumps/monographs/PATERNAL-USE-OF-AZATHIOPRINE-OR-MERCAPTOPURINE/</a></p>
xi. <b>Additional information</b>	<p>Where patient care is transferred from one specialist service or GP practice to another, a new shared care agreement must be completed</p> <p><b>To be read in conjunction with the following documents</b></p> <ul style="list-style-type: none"> <li>• <a href="#">RMO Shared Care Guidance</a></li> <li>• <a href="#">NHSE policy- Responsibility for prescribing between Primary &amp; Secondary/Tertiary Care</a></li> </ul>
<b>Prepared by</b>	The Shared Care Guidelines Group, University Hospitals of Derby and Burton, Chesterfield Royal Hospital

<b>In consultation with</b>	Dr Austin, Consultant Hepatologist Dr Bleiker, Consultant Dermatologist Dr Badcock, Consultant Rheumatologist Dr Ferguson, Consultant Dermatologist Dr Goddard, Consultant Gastroenterologist and Hepatologist Dr O'Reilly, Consultant Rheumatologist Dr Raj, Consultant Rheumatologist Dr Shum, Consultant Dermatologist Dr Vaithianathar, Consultant Neurologist
<b>Reviewed by (2020)</b>	Dr L Badcock, Dr R Laxminaryan in conjunction with fellow consultant rheumatologists UHDB Dr. Kid wan Shum Consultant Dermatologist UHDB Dr. K Fairburn, Consultant rheumatologist CRH Angela Lawrence, Rheumatology Lead Clinical Nurse Specialist CRH
<b>Reviewed (2023)</b>	In line with In line with NHSE/ RMOG Shared Care Protocols- azathioprine/mercaptopurine for patients within adult services (non-transplant indications), July 2022. <a href="https://www.england.nhs.uk/publication/shared-care-protocols/">https://www.england.nhs.uk/publication/shared-care-protocols/</a> The Derbyshire Medicines Management Shared Care and Guidelines Group

**This does not replace the SPC, which should be read in conjunction with it**

**Date Prepared:** October 2011    **Reviewed:** September 2023    **Review Date:** August 2026

## References

1. NHSE/ RMOG Shared Care Protocols- Azathioprine/mercaptopurine for patients in adult services, July 2022. <https://www.england.nhs.uk/publication/shared-care-protocols/>
2. EMC Summary of Product Characteristics for Azathioprine and Mercaptopurine accessed online 08/03/2017, 1/8/2019
3. British National Formulary accessed online 1/8/2019; August 2023
4. BSR and BHPR guideline for the prescription and monitoring of non-biologic disease-modifying anti-rheumatic drugs, The British Society for Rheumatology, February 2017
5. The Green book, Immunisation against infection disease, September 2014, accessed online 1/8/2019; August 2023
6. BSR and BHPR guideline on prescribing drugs in pregnancy and breastfeeding. Rheumatology Vol 55(9) 1693-1697 September 2016. Accessed online August 2019



## Sample Transfer Letter

Hospital No: «HOSPITAL\_NUMBER»

NHS No: «NHS\_NUMBER»

{Insert date}

### **PRIVATE & CONFIDENTIAL**

«GP\_TITLE» «GP\_INITIALS» «GP\_SURNAME»

«GP\_ADDRESS\_1»

«GP\_ADDRESS\_2»

«GP\_POSTCODE»

### **DERBYSHIRE JAPC SHARED CARE AGREEMENT LETTER**

Dear «GP\_TITLE» «GP\_SURNAME»

«FORENAME\_1» «SURNAME» «DATE\_OF\_BIRTH»

«CURRENT\_ADDRESS\_1» «CURRENT\_ADDRESS\_2» «CURRENT\_POSTCODE»

Your patient was seen on *{Insert date}* with a diagnosis of *{Insert diagnosis}*. I have initiated the following medication *{Insert drug name}* and am writing to ask you to participate in the shared care for this patient.

This medication has been accepted as suitable for shared care by the Derbyshire Joint Area Prescribing Committee (JAPC). I agree to the secondary care responsibilities set out in the shared care agreement for this medication (available from [www.derbyshiremedicinesmanagement.nhs.uk/clinical\\_guidelines/shared\\_care\\_guidelines](http://www.derbyshiremedicinesmanagement.nhs.uk/clinical_guidelines/shared_care_guidelines)). I am therefore requesting your agreement to share the care of this patient. Where preliminary tests are set out in the agreement I have carried these out and results are below.

Dose Regimen	Date <i>{Insert medicine name}</i> started	Date for GP to start prescribing <i>{Insert medicine name}</i> from
The baseline test results are (if applicable): <b>See overleaf for initiation criteria.</b>		

I can confirm that the following has happened with regard to this treatment:

	Specialist to complete
<i>The patient has been initiated on this therapy and has been on an optimised dose for the following period of time:</i>	
<i>Baseline investigation and monitoring as set out in the shared care documents have been completed and were satisfactory</i>	Yes / No
<i>The condition being treated has a predictable course of progression and the patient can be suitably maintained by primary care</i>	Yes / No
<i>The risks and benefits of treatment have been explained to the patient</i>	Yes / No
<i>The roles of the specialist/specialist team/ Primary Care Prescriber / Patient and pharmacist have been explained and agreed</i>	Yes / No
<i>The patient has agreed to this shared care arrangement, understands the need for ongoing monitoring, and has agreed to attend all necessary appointments</i>	Yes / No
<i>I have enclosed a copy of the shared care protocol which covers this treatment/the SCP can be found here (insert electronic/ web link)</i>	Yes / No
<i>I have included with the letter copies of the information the patient has received</i>	Yes / No
<i>I have provided the patient with sufficient medication to last until</i>	
<i>I have arranged a follow up with this patient in the following timescale</i>	

If you do **NOT** wish to participate in shared care for this patient, usually under clinical grounds, please complete the attached form.

Yours sincerely

**{Consultant name}**



**GP RESPONSE TO SHARED CARE** (only complete & send if **NOT** participating in shared care\*)

\* For completeness please record medication on GP clinical system as per guidance- '[Recording medicines prescribed and issued by other Healthcare Providers](#)'

Shared care is produced by GPs and specialists knowledgeable in the field of that drug usage. The shared care has been approved by the JAPC. This allows a more convenient service to the patient and cost effective use of NHS resources.

Patient:	NHS No:
Consultant:	Medicine requested for shared care:

I will **NOT** be undertaking the GP responsibilities as described in the agreed shared care guideline. My clinical reasons for declining shared care for this patient are listed in the box below:

		Tick which apply
1.	<p><b>The prescriber does not feel clinically confident in managing this individual patient's condition, and there is a sound clinical basis for refusing to accept shared care</b></p> <p>As the patients primary care prescriber I do not feel clinically confident to manage this patient's condition because <i>[insert reason]</i>. I have consulted with other primary care prescribers in my practice who support my decision. This is not an issue which would be resolved through adequate and appropriate training of prescribers within my practice.</p> <p><b>I have discussed my decision with the patient and request that prescribing for this individual remain with you as the specialist, due to the sound clinical basis given above.</b></p>	
2.	<p><b>The medicine or condition does not fall within the criteria defining suitability for inclusion in a shared care arrangement</b></p> <p>As the medicine requested to be prescribed is not included on the national list of shared care drugs as identified by RMOC or is not a locally agreed shared care medicine I am unable to accept clinical responsibility for prescribing this medication at this time.</p> <p><b>Until this medicine is identified either nationally or locally as requiring shared care the responsibility for providing this patient with their medication remains with you</b></p>	
3.	<p><b>A minimum duration of supply by the initiating clinician</b></p> <p>As the patient has not had the minimum supply of medication to be provided by the initiating specialist I am unable to take clinical responsibility for prescribing this medication at this time. Therefore can you please contact the patient as soon as possible in order to provide them with the medication that you have recommended.</p> <p><b>Until the patient has had the appropriate length of supply the responsibility for providing the patient with their medication remains with you.</b></p>	
4.	<p><b>Initiation and optimisation by the initiating specialist</b></p> <p>As the patient has not been optimised on this medication I am unable to take clinical responsibility for prescribing this medication at this time. Therefore can you please contact the patient as soon as possible in order to provide them with the medication that you have recommended.</p> <p><b>Until the patient is optimised on this medication the responsibility for providing the patient with their medication remains with you.</b></p>	
5.	<p><b>Shared Care Protocol not received</b></p> <p>As legal responsibility for clinical care lies with the clinician who signs the prescription, I need to ensure that I am in possession of sufficient clinical information for me to be confident to prescribe this treatment for my patient and it is clear where each of our responsibilities lie to ensure the patient is safely managed.</p> <p>For this reason I am unable to take clinical responsibility for prescribing this medication at this time, therefore would you please contact the patient as soon as possible in order to provide them with the medication that you have recommended.</p> <p><b>Until I receive the appropriate SCP, responsibility for providing the patient with their medication remains with you.</b></p>	

6.	Other (Primary Care Prescriber to complete if there are other reasons why shared care cannot be accepted)	
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Please do not hesitate to contact me if you wish to discuss any aspect of my letter in more detail and I hope to receive more information regarding this shared care agreement as soon as possible

Yours sincerely

{GP name}  
{Surgery}

**Please send a copy of this response to the specialist/consultant requesting shared care**