Name: Attach Banda Label here Address: Date of Birth: NHS number:

Coventry & Warwickshire
Area Prescribing Committee

SHARED CARE AGREEMENT
Penicillamine

SCA: *Active Rheumatoid arthritis*

AREAS OF RESPONSIBILITY FOR THE SHARING OF CARE

This shared care agreement outlines suggested ways in which the responsibilities for managing the prescribing of Penicillamine for rheumatoid arthritis can be shared between the specialist and general practitioner (GP). **GPs are invited to participate.** If the GP 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 asks the GP to prescribe this drug, the GP should reply to this request as soon as practicable.

Sharing of care assumes communication between the specialist, GP and patient. The intention to share care is usually explained to the patient by the specialist 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

Specialist responsibilities
1. Discuss the benefits, side effects and expected outcomes of treatment with the patient. 2. Supply the departmental drug information leaflet, counsel the patient and obtain informed consent. 3. Ensure that the patient understands the dosing. 4. Obtain patient consent to shared care arrangement and agreement to hold personal and treatment details on rheumatology 5. computerised blood monitoring database. 6. Undertake appropriate baseline blood tests. FBC, U&E, creatinine and urinalysis. 7. Provide results of baseline tests and recommend frequency of monitoring to the GP and future regular blood tests required. 8. Initiate initial prescription outlining dose and timing of any concomitant medications. 9. Provide a written request to GP to participate in shared care. 10. To monitor FBC, U&E's, creatinine and urinalysis at recommended frequencies, and take action if abnormal (as detailed in monitoring section). 11. Advise the GP on when to adjust the dose, stop treatment, or consult with specialist. 12. Ensure that clear backup arrangements exist for GPs to obtain advice and support. Report adverse events to the MHRA on a Yellow Card www.mhra.gov.uk/yellowcard, and to the GP and appropriate Medicines Optimisation team.

General Practitioner responsibilities
1. To reply to the request for shared care as soon as practicable (in writing) 2. To prescribe penicillamine at the dose recommended 3. Agree to use blood forms advised by specialist to monitor and take appropriate action in the case of abnormal bloods 4. Patients living 'out of area' will have their blood results faxed by their GP surgery to the specialist team. 5. To ensure compatibility with other concomitant medication. 6. To adjust the dose as advised by the specialist. 7. To stop treatment on the advice of the specialist, or immediately if an urgent need to stop treatment arises. (as detailed below in monitoring section). Report adverse events to the MHRA on a Yellow Card (www.mhra.gov.uk/yellowcard), and to the specialist, and appropriate Medicines Optimisation team.

Patient/carer's role
1. To attend all appointments with GP and specialist. 2. To report to the specialist or GP if he or she does not have a clear understanding of the treatment. 3. To share any concerns in relation to treatment with penicillamine. 4. To inform specialist or GP of any other medication being taken, including over-the-counter products/ alternative therapies. 5. Report any adverse effects or warning symptoms to the specialist or GP eg. Mouth ulcers, sore throat, fever, epistaxis, rash, unexpected bruising or bleeding, and any unexplained illness or infection (as detailed in monitoring section) Report any adverse effects or warning symptoms to the specialist or GP. The patient may also choose to report any adverse drug reaction direct to the MHRA on a Yellow Card , available at pharmacies, GP surgeries or from the Yellow Card hotline (freephone 0808 100 3352 during business hours). The form can also be downloaded from www.mhra.gov.uk/yellowcard

Back-up Advice and Support: See patient letter and/or other supporting information for contact details of clinician(s) initiating and stabilising patient prior to request for shared care.

SUPPORTING INFORMATION *(see SPC for complete details/specific guidance http://emc.medicines.org.uk)*

Licensed indications: Severe active rheumatoid arthritis, including juvenile forms

Dosage and administration: 125 mg and 250 mg tablets

Starting dose and titration:- Adults - 125 mg to 250 mg daily for the first month. Increase by the same amount every four to twelve weeks until remission occurs. The usual maintenance dose is 500 mg to 750 mg daily. A few patients may require up to 1500 mg daily to obtain benefit. The minimum maintenance dose to achieve suppression of symptoms should be used and treatment should be discontinued if no benefit is obtained within 12 months. Improvement may not occur for some months.

Elderly - Initially up to 125 mg daily before food for one month increased by similar amounts at intervals of not less than 4 weeks. Maximum dose is 1000 mg daily in divided doses.

Child: The usual maintenance dose is 15 mg to 20 mg/kg body weight/day before food. The initial dose should be lower (2.5 mg to 5 mg/kg body weight/day) and increased every four weeks over a period of three to six months. The smallest available tablet of 125 mg may not be suitable for children under 26kg in weight (~ 8 years old).

Renal Insufficiency: Penicillamine therapy should be initiated at a low dose with intervals between dose increases of at least 12 weeks. Fortnightly monitoring for toxicity is mandatory throughout treatment for rheumatoid arthritis. Tablets should be taken at least half an hour before meals. Indigestion remedies or products containing iron or zinc should not be taken within 2 hours of the penicillamine dose.

Monitoring: Monotherapy
Pre-treatment assessment: FBC, U&Es, Creatinine, Urinalysis
During treatment: FBC, U&Es, Creatinine and urinalysis every 2 weeks until dose and monitoring stable for first 3 months and then ever 4 weeks. If dose increase, repeat **bloods one week after dose increase, i**f stable revert to usual monitoring regime.

Ask patient about rash or oral ulceration at each visit.

Action to be taken: WBC <3.5 x 10^9/l - Withhold until discussed with specialist team
Neutrophil <2.0 x 10^9/l - Withhold until discussed with specialist team
Platelets <150 x 10^9/l - Withhold until discussed with specialist team
MCV >105 fl - Check B12, folate and TSH. If abnormal treat underlying abnormality. If normal discuss with specialist team.

Nausea/dizziness/headache: If possible continue, may have to reduce dose or stop if symptoms severe – discuss with specialist team.
Abnormal bruising or sore throat: Withhold until FBC result available and discuss with specialist team if necessary
Unexplained acute widespread rash - Withhold and seek urgent specialist (preferably dermatological) advice
Oral ulceration Withhold until discussed with specialist team. If suspicion of blood dyscrasia then stop treatment immediately and perform blood count.

Cautions:

- Renal impairment (see also contraindications)
- Previous reaction to gold therapy
- Elderly – careful monitoring is essential, increased toxicity has been observed regardless of renal function
- Patients with hypersensitivity to penicillin very rarely exhibit hypersensitivity to penicillamine
- *Pregnancy:* men and women of child-bearing age must use a reliable method of contraception. When planning a pregnancy it is important that both men and women on this drug discuss medication with the Rheumatology team (at least six months before conception) since all drugs can potentially affect the unborn child
- *Lactation:* see SPC for further information

Contra-indications:

- Hypersensitivity to penicillamine
- Agranulocytosis or severe thrombocytopenia
- Moderate or severe renal impairment
- Lupus erythematosus
- Pregnancy – penicillamine should not be administered to patients who are pregnant, and it should be stopped when pregnancy is confirmed/suspected, unless considered to be absolutely essential by the rheumatologist.
- Breast-feeding is not recommended.

Side effects: Common/uncommon - Nausea, anorexia, fever and rash may occur early in therapy, especially when full doses are given from the start.
Rash occurs in up to 35% of patients. Taking medicine before bed may reduce nausea.
Taste loss or metallic taste; may be transient for a few weeks.
Thrombocytopenia - sore throat, mouth ulcers or abnormal bruising
Proteinuria occurs in up to 30% of patients and is partially dose-related.
Bone marrow suppression, which may occur at any stage during treatment (this is sometimes triggered by infection).

Penicillamine does not have black triangle (▼) status. All serious suspected adverse reactions (even well recognised or causal link uncertain) should be reported to the MHRA.

Drug interactions (see also above under cautions):

- Analgesics: possible increased risk of nephrotoxicity with NSAIDs
- Antacids: absorption reduced by antacids (should not be given within 2 hours of penicillamine)
- Antipsychotics: avoid concomitant use with clozapine (increased risk of agranulocytosis)
- Cardiac glycosides: penicillamine possibly reduces plasma concentration of digoxin(Digoxin should not be given within 2 hours of penicillamine)
- Gold: avoid concomitant use (increased risk of toxicity)
- Iron: absorption of penicillamine reduced by oral iron (should not be given within 2 hours of penicillamine)
- Zinc: penicillamine reduces absorption of zinc, also absorption of penicillamine reduced by zinc
- Concomitant use of NSAIDs and other nephrotoxic drugs may increase the risk of renal damage

Cost: (Drug Tariff April 2013) Cost per 28 days treatment for 500 mg is £20.35 (Available as 125 mg or 250 mg tablets)

References:

1. BNF British National Formulary September 2012
2. SPC. (Penicillamine 125 mg and 250 mg tablets).Last updated 6/3/13 www.emc.medicines.org.uk (Accessed
3. Quick reference guideline for monitoring of disease modifying anti-rheumatic drug (DMARD) therapy. Prepared by the BSR/ BHPR DMARD guideline group, May 2007 updated November 2009 http://www.rheumatology.org.uk/includes/documents/cm_docs/2009/d/dmard_grid_november_2009.pdf