SHARED CARE PROTOCOL AND INFORMATION FOR GPs	NHS Lothian
Penicillamine	
Clinical indication: For the treatment of rheumatological inflammatory diseases	
Version 3.0: September 2009	Due for review: **September 2011**

Introduction
With the exception of sulfasalazine, DMARDs are usually started after assessment by a rheumatologist.
'Rheumatological Management and Shared Care Guidelines' available on website: *www.refhelp.scot.nhs.uk*

Shared Care
A shared care protocol is used to **facilitate the sharing of care and transfer of prescribing.** This would usually take place once the patient's condition is stable; the patient is demonstrably benefiting from the treatment and is free from any significant side effects. GPs should only take on the prescribing when they are confident in the use of the drug, in the context of the protocol. Contingency plans must be in place to enable the patient to receive the recommended treatment, should the GP decline to prescribe.

Indication for Therapy
Indications – active joint inflammation usually supported by indices of inflammation.
Duration – most drugs require up to 3 to 4 months trial to assess efficacy. Therapy is continued providing the drug is working and there are no side effects.
Relapse is common after withdrawal of therapy.

Preparations available
125mg and 250mg tablets.

Recommended Dosage and Administration
First month: 250mg daily then increased by 125-250mg at intervals not less than 4 weekly to maintenance 500–750mg daily (divided doses). Maximum dose is 1-1.5g/day (rarely used). If remission sustained for 6 months, reduction of daily dose by 125-250mg every 12 weeks may be attempted.
Should be taken half to one hour before food.

Cost
£16.96-£25.44 for 28 days (maintenance dose).

Adverse Effects and Drug Interactions
Common: skin reactions, GI upset (take at bedtime), fever, taste disturbance (initially – may settle spontaneously). Blood disorders (in particular thrombocytopaenia).

Rare: haematuria, haemolytic anaemia, nephritic syndrome, lupus-like syndrome, polymyositis, dermatomyositis, mouth ulcers, stomatitis, alopecia.

Absorption reduced by concomitant admin of antacids, iron or zinc (do not give within 2 hours of penicillamine).
Digoxin concentration possibly reduced.
Antipsychotics - may increase risk of agranulomatosis.

Precautions and Contra-Indications
Systemic lupus erythematosus, moderate to severe renal impairment; caution with concomitant nephrotoxic drugs.

Pregnancy and Lactation
Penicillamine should only be used in pregnancy if the benefit outweighs the risk. As penicillamine antagonises pyridoxine, vitamin B_6 should be supplemented during pregnancy.
Breast feeding should be avoided.

Contact Points
Rheumatology Clinical Nurse Specialists:
0131 537 1405
Rheumatology SpR (via switchboard):
0131 537 1000
Rheumatology Clinical Pharmacist:
0131 537 1000 (bleep 8461)
Rheumatic Diseases Unit (WGH):
0131 537 1798
Rheumatology Secretary (St John's Hospital):
01506 52 3824

Approved for use by the General Practice Prescribing Committee, LPCD and the Drug & Therapeutics Committee, LUHD.

Shared Care Responsibilities

Aspects of Care for which the Consultant is responsible

- Assessing the need for DMARD.
- Arranging for the patient to receive counselling in verbal and written form.
- Providing relevant baseline investigations.
- Following the patient's response to treatment at the out- patient clinic.
- Communicating advice to the patient's GP re monitoring requirements.
- At any stage of treatment, advising GP of concerns re monitoring or potential adverse effects of treatment.

Aspects of Care for which the General Practitioner is responsible

- Prescribing DMARD under the guidance of the consultant.
- Reporting any suspected adverse reactions to the patient's consultant and complete a yellow card if appropriate. Discuss any significant abnormalities with consultant.
- Liaising with the consultant regarding any complications of treatment.
- Monitoring the general health of the patient.
- Monitoring for specific side effects as detailed in "Monitoring" section.
- Provision of pneumococcal and annual influenza vaccination.

Monitoring

Test	Frequency	Abnormal result	Action if abnormal result
FBC	Fortnightly until dose stable for 3 months. Monthly thereafter.	WBC <3.5 x 10^9/l. neutrophils <2.0 x 10^9/l. platelets <150 x 10^9/l.	Withhold and discuss with specialist team.
urinalysis		2+ proteinuria or more.	Check MSSU: if infection present treat accordingly. If sterile and this level of proteinuria persists, withhold and discuss with specialist team.

- Abnormal trends should prompt extra vigilance.
- Temporarily withdraw if the patient reports sore throat, unexplained bleeding or bruising, mouth ulcers or other signs of blood dyscrasia or evidence of infection. Perform repeat blood monitoring.
- In the event of an unexplained acute widespread rash, withhold and seek urgent specialist (preferably dermatological) advice. Inform rheumatologist.
- Trends in ESR are useful in decision-making.

.