DMARD Bundle Rationale

Approximately 6% of hospital admissions are due to adverse drug reactions (ADRs), and 3.7% are drug related and preventable (Howard 2007). Half of these admissions are caused by three groups of drugs which are among the most commonly prescribed – warfarin and other anticoagulants, non steroidal anti-inflammatory drugs (NSAIDs) and anti-platelets, and diuretics and other renal toxic drugs (Howard, 2007).

Since they are much less commonly prescribed, cytotoxic drugs like methotrexate, leflunomide and azathioprine do not cause emergency hospital admission on the same scale, but their inherent toxicity means that they are relatively common causes of severe harm including death, and have been the subject of regular National Patient Safety Agency alerts as a consequence (NPSA 2004).

1) *Appropriate tests are carried out in correct time scale. Has there been a full blood count in the past 12 weeks (AZA) 8 weeks (MTX) as per local guidance?*

2) *Appropriate action taken for any abnormal results in previous 12 weeks. If any abnormal results in previous 12 weeks (WBC < 4, neutrophils <2, platelets <150, ALT >x2 normal upper limit (>60).) has action been recorded in the consultation record?*

3) *Blood tests reviewed prior to prescription. Is there a documented review of blood tests prior to issue of last prescription?*

4) *Appropriate immunisation. Has the patient ever had or declined a pneumococcal vaccine?*

5) *Patient asked about any side effects following last time blood was taken.*

6) *Have all measures been met?*

	Measure	Rationale	Source
M1	Appropriate tests are carried out in correct time scale. Has there been a full blood count in the past 12 weeks (AZA) 8 weeks (MTX) as per local guidance?	As with other DMARDs, General Practitioners provide a DMARD monitoring service for patients receiving these drugs. Current recommendations are weekly or fortnightly blood tests whilst dose escalation is in progress and for 6 weeks after the last dose alteration, thereafter blood tests monthly. Tests required are the same as those for oral methotrexate i.e. FBC and LFT's each visit and U&E's 6 monthly A letter from Secondary Care should document where monitoring is longer than a six week period e.g. the patient is stable.	Rheumatology Local Policy BSR/BHPR guideline for disease-modifying anti-rheumatic drug (DMARD) therapy in consultation with the British Association of Dermatologists Due to the difference in monitoring identified in the local Rheumatology Guideline and Dermatology Guideline a local decision (including discussions with general practices at the first learning set) was made to set monitoring for the bundle at 6 weeks.
M2	Appropriate action taken for any abnormal results in previous 12 weeks. If any	Action to be taken if: • WBC <4.0x10 /l	Rheumatology Local Policy BSR/BHPR guideline for disease-

	abnormal results in previous 12 weeks (WBC < 4, neutrophils <2, platelets <150, ALT >x2 normal upper limit (>60).) has action been recorded in the consultation record?	• Neutrophils<2.0x10 /l • Platelets<150x10 /l • ALT> x2 upper limit of normal • Unexplained fall in albumin • Rash or oral ulceration • New or increasing dyspnoea or cough • MCV>105fl check B & folate and treat appropriately • Significant deterioration in renal function reduce dose or discuss with rheumatologist • Abnormal bruising or sore throat withhold until FBC available	modifying anti-rheumatic drug (DMARD) therapy in consultation with the British Association of Dermatologists Differences were noted in the abnormal results ranges in the Tayside Rheumatology guideline and the British Society guidelines for WBC. It was decided to follow the Tayside guideline with abnormal results WBC<4.
M3	Blood tests reviewed prior to prescription. Is there a documented review of blood tests prior to issue of last prescription?	No patient should receive a repeat prescription if the monitoring has been inadequate.	Good Practice
M4	Appropriate immunisation. Has the patient ever had or declined a pneumococcal vaccine?	Methotrexate is an immunosuppressant and increases the risk infections, even with a normal blood count. Therefore it is recommended **pneumococcal (pneumovax) and annual flu vaccines should be given whilst on this treatment**. Patients commencing parenteral methotrexate normally will have been taking oral methotrexate so vaccinations should be up to date, however vaccination status should always be confirmed prior to therapy commencing by the physician initiating this therapy. Due to the immunosuppressive action of methotrexate, **"Live" vaccines should be avoided.**	Rheumatology Local Policy

M5	Patient asked about any side effects following last time blood was taken.	Importance of Patient Involvement in the programme as documented in the application for funding	Quality strategy SIPCS application – The Health Foundation – Closing the Gap