

# Medication Safety Series: MSS 3

## Disease-modifying anti-Rheumatic Drugs and Immunosuppressants

### On Admission:

- Identify any new admissions to the ward that are prescribed a disease-modifying anti-rheumatic drug (DMARD), cytokine modulator or immunosuppressant.
- \*See box for commonly prescribed medications within these classes (not exhaustive).\***
- Confirm & document on electronic patient record the dose, frequency, how long the current medication has been prescribed and the indication.
- Ensure it is prescribed correctly on the inpatient prescription chart.
- Access and print the relevant shared care guidelines and attach to the prescription chart as a reminder of required monitoring
  - ▲ For methotrexate - add a significant medication alert to the electronic patient record
  - ▲ Clarify where patient normally obtains medication & determine where further supplies can be obtained from; document as part of medicines reconciliation on the EPR and on the inpatient prescription chart. (Some DMARDs such as methotrexate injection and unlicensed products are obtained through specific suppliers, e.g. Homecare).
  - ▲ For methotrexate- endorse chart "cytotoxic, handle with care"

**Methotrexate is ALWAYS given once a week and NEVER given daily. Ensure this is prescribed correctly on the prescription chart and always report prescribing errors via Datix. Dosage errors can result in serious adverse reactions, including death.**

### During Admission:

- Ensure that any required monitoring tests (e.g. FBC, U+Es, LFTs) that are due are carried out.
- Medical staff** - review test results against relevant local guidance on DMARD / cytokine modulator / immunosuppressant therapy monitoring (see links below), any necessary actions should be taken and documented on the electronic patient record.
- Inform the GP / usual prescriber / clinic of results.
- Monitor for any adverse side effects or potential interactions with DMARD / cytokine modulators / immunosuppressant & review (medical staff) as necessary.
- Nursing staff** - ensure safe handling of methotrexate
- If patient develops an infection requiring antibiotics, contact specialist for advice on continuing or withholding the immunosuppressant

### On Discharge / prolonged leave (once a discharge date is agreed):

- Ensure that any handheld monitoring booklets have been updated to reflect any tests or actions undertaken during admission - or contact relevant monitoring clinic directly.
- Ensure that appointments have been made for future monitoring (where applicable).
- Ensure that monitoring booklet is returned to patient on discharge (where applicable).
- Ensure that GP is informed of any dose changes made during admission.



**NEVER prescribe or administer methotrexate daily – it should ALWAYS be a weekly dose.**

<b>Disease Modifying Anti-rheumatic Drugs (DMARDs)</b> Sodium Aurothiomalate (GOLD) Penicillamine, Hydroxychloroquine Chloroquine, Methotrexate, Leflunomide	<b>Cytokine Modulators ('MABS')</b> Adalimumab, Etanercept, Infliximab Rituximab, Tocilizumab	<b>Immunosuppressant's</b> <i>(NB some of these medications can be used as part of transplant anti-rejection regime or for disease suppression e.g. for psoriasis, Crohns or rheumatoid arthritis)</i> Azathioprine, Ciclosporin, Tacrolimus, Sirolimus, Mycophenolate
<b>Useful Links</b> County Durham and Darlington DMARD Guidelines NECS Medicines Optimisation – Durham and Darlington <a href="http://medicines.necsu.nhs.uk/guidelines/durham-darlington/">http://medicines.necsu.nhs.uk/guidelines/durham-darlington/</a>	<b>Teesside and North Yorkshire DMARD Guidelines</b> <a href="http://medicines.necsu.nhs.uk/guidelines/tees-guidelines">http://medicines.necsu.nhs.uk/guidelines/tees-guidelines</a>	<b>Newcastle Transplant Guidelines</b> <a href="http://www.northoftyneapc.nhs.uk/guidance/">http://www.northoftyneapc.nhs.uk/guidance/</a>

Drug	Potential Side Effects	Drug	Potential Side Effects
<b>Abatacept</b>	Depression, anxiety, sleep disorder including insomnia (Uncommon)	<b>Certolizumab</b>	Anxiety, mood disorders (Uncommon). Suicide attempt, delirium, mental impairment (rare).
<b>Adalimumab</b>	Sleep disturbances, anxiety, mood alterations including depression (common)	<b>Belimumab</b>	Depression, insomnia (common)
<b>Golimumab</b>	Insomnia, depression (Common)	<b>Infliximab</b>	Depression, insomnia (Common). Amnesia, agitation, confusion, somnolence, nervousness (uncommon). Apathy (rare).
<b>Rituximab</b>	Agitation, insomnia, anxiety (common). Depression, nervousness (uncommon).	<b>Ustekinumab</b>	Depression (uncommon)
<b>Corticosteroids</b>	Insomnia, affective disorders – irritable, euphoric, depression, labile mood, suicidal thoughts. Psychotic reactions – mania, delusions, hallucinations, aggravation of schizophrenia.	<b>Methotrexate</b>	Mood changes. Patients MUST be warned to report immediately the onset of any feature of blood disorders (e.g. sore throat, bruising, mouth ulcers), liver toxicity (e.g. nausea, vomiting, abdominal discomfort, dark urine) and respiratory effects (e.g. shortness of breath)
<b>Tacrolimus</b>	Insomnia (very common), anxiety symptoms, confusion, disorientation, depression, mood disorders, nightmares, hallucinations (common). Psychotic disorder (uncommon)	<b>Sulfasalazine</b>	Insomnia, depression, hallucinations
<b>Chloroquine</b>	Emotional disturbances, psychosis, hallucinations, anxiety, personality changes.	<b>Hydroxychloroquine</b>	Nervousness, emotional lability, psychosis
		<b>Leflunomide</b>	Anxiety (uncommon)

Title: MSS3: DMARDs and immunosuppressants v2

Approved by: Drug & Therapeutics Committee

Date of approval: 28<sup>th</sup> January 2021 (published Dec 2021)

Review date: 1<sup>st</sup> February 2024