**DRUG:** HYDROXYCARBAMIDE for psoriasis (Adults)  
(Non Cancer Use)

**Introduction:**
Hydroxycarbamide (previously known as hydroxyurea) is used for the treatment of psoriasis. Due to its lower incidence of renal and hepatic toxicity it is a useful second line therapy in patients with severe psoriasis in whom these are a risk.

**Licensing Information:**
Unlicensed usage.

**Formulations:**
Hydroxycarbamide 500mg capsules.

**Dosage & administration for adults:**
Initial dose 500mg twice daily or daily in elderly patients or those with renal impairment. Increased by 500mg a month to a maximum of 2g daily split into twice daily dosing.

**Contraindications &Warnings:**
- Marked Leukopenia (WCC <2.5x 10^9/L).
- Thrombocytopenia (Platelets < 100x10^9/L).
- Severe anaemia.
- Previous hypersensitivity to Hydroxycarbamide.
- Pregnancy: may be mutagenic. Effective contraception is essential in both male and female patients.
- Breast feeding: patients should not breastfeed.
- Vaccines: live vaccines must be avoided.
- Hydroxycarbamide is not licensed for use in combination with antiretroviral agents for HIV disease and it may cause treatment failure and toxicities (in some cases fatal) in HIV patients.

**Interactions:**
- **Clozapine:** increased risk of agranulocytosis.
- **Antiretrovirals:** - concurrent use contra-indicated. Increased risk of toxicity when didanosine and stavudine are given concomitantly with hydroxycarbamide. Fatal and non-fatal pancreatitis has occurred in with hydroxycarbamide and didanosine, with or without stavudine. Hepatotoxicity, hepatic failure resulting in death and peripheral neuropathy has been reported in patients treated with hydroxycarbamide and various antiretroviral.

See BNF or SPC at [www.medicines.org.uk/EMC](http://www.medicines.org.uk/EMC) for details.

**Adverse Effects:**
- **Haematological:** leukopenia, anaemia, thrombocytopenia-Prescribers should be alert to any unexplained bruising bleeding or signs of infection. Raised MCV is almost universal and not normally of concern. It may persist for around a year after stopping therapy.
- **Gastrointestinal:** (rare) anorexia, nausea, vomiting, diarrhoea. Refer
to specialist if severe or persistent.

- **Hepatic:** raised bilirubin reported but no evidence of irreversible liver damage or fibrosis.
- **Renal:** Use in caution in patients with renal impairment.
- **Hyperuricaemia:** Gout may be precipitated. Maintain high fluid intake.
- **Flu like symptoms:** reported in the first 6 weeks in up to 10% patients.
- **Skin cancer:** has also been reported in patients receiving long-term hydroxycarbamide. Patients should be advised to protect skin from sun exposure, conduct self-inspection of the skin and be screened for secondary malignancies during routine follow-up visits. – as per SPC does this also apply in psoriasis

For full list see BNF or SPC at [www.medicines.org.uk/EMC](http://www.medicines.org.uk/EMC)

### General:

- To assess the suitability of the patient for treatment.
- To ensure that the patient/carer has received counselling and understands the therapy, its benefits, limitations, continued monitoring (where applicable), adverse effects, and is aware of actions to take if adverse effects are suspected.
- Inform the GP of the information provided to the patient.
- To review the patient as agreed intervals and copy all relevant results to the GP.
- Carry out disease and drug monitoring as listed below.
- Formally hand over to GP by letter and patient informed - send a copy (either electronically or paper copy) of the Shared Care Guideline to the GP and ask whether they are willing to participate in shared care.

### Prescribing:

- Prescribe hydroxycarbamide until maintenance regime established and GP agrees to shared care.

### Disease & drug monitoring:

- Monitor bloods according to schedule until GP takes over prescribing (on handover inform GP where patient has reached in monitoring schedule):

<table>
<thead>
<tr>
<th>Blood Test</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBC, B12, folate, ferritin, U+E, LFTs</td>
<td>Baseline before starting treatment</td>
</tr>
<tr>
<td>FBC</td>
<td>Baseline before starting treatment (as above)</td>
</tr>
<tr>
<td></td>
<td>Patients should be made aware they need to report any febrile illness</td>
</tr>
<tr>
<td>U+E, LFTs</td>
<td>Baseline before starting treatment (as above)</td>
</tr>
</tbody>
</table>
Every 2-3 months throughout treatment

| Uric acid | Uric acid is not routinely measured in practice; however the SPC documents a possibility of an increase in serum uric acid, resulting in the development of gout or, at worst, uric acid nephropathy. This is borne in mind in patients treated with hydroxycarbamide. |

- Support and advise GPs as required.
- Assess response to treatment and initiate any dose changes as clinically appropriate including discontinuation of treatment.

**General and Prescribing:**
- To reply to the request for shared care within 2 weeks of receipt of the Consultant letter.
- Monitor and prescribe as recommended by the specialist once the patient is on a stable dose. The GPs will be typically asked to take up the monitoring and prescribing of hydroxycarbamide approximately 3 months after initiation.
- Notify Consultant if treatment with hydroxycarbamide is discontinued.
- Ensure there are no drug interactions with any other medications initiated in primary care.

**Disease & drug monitoring:**
- Carry out drug monitoring as listed – and communicate abnormal results to the Specialist.
- Urgent drug discontinuation/ referral to specialist as clinically appropriate.
- To stop treatment on the advice of the specialist.
- To refer back to the Specialist if the patient’s condition deteriorates.
- To identify adverse effects if the patient presents with any signs and liaise with the hospital Specialist where necessary. To report adverse effects to the Specialist and where appropriate to the Commission on Human Medicines/MHRA (Yellow Card scheme).

**Unless otherwise stated by the secondary care Specialist, apply the following monitoring frequencies following handover from secondary care:**

| FBC | After the first month  
| Monthly for 3 months then  
| Every 2-3 months throughout treatment  
| Patients should be made aware they need to report any febrile illness, a severe sore throat, mouth ulcers, unexplained bruising or bleeding   
| Unless dose changed or abnormal blood results |

| U+E, LFTs | Monthly for 3 months then  
| Every 2-3 months throughout treatment  
| Unless dose changed or abnormal blood results |

| Uric Acid | Uric acid is not routinely measured in practice. Monitor if symptomatic. The SPC documents a possibility of an increase in serum uric acid, resulting in the development of gout or, at worst, uric acid nephropathy. |
Withhold hydroxycarbamide and contact specialist if:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin</td>
<td>reduced by 3g/L or more</td>
</tr>
<tr>
<td>Total WCC</td>
<td>&lt; 3 x 10^9/L</td>
</tr>
<tr>
<td>Platelets</td>
<td>&lt; 100 x 10^9/L</td>
</tr>
<tr>
<td>Oral ulceration / sore throat / abnormal bruising</td>
<td></td>
</tr>
</tbody>
</table>

**Responsibilities of the Patient / Carer:**

**General:**
- Report any possible side effects to their GP/Specialist. **Stop the hydroxycarbamide and contact their doctor immediately if they develop any of the following:** An infection, a severe sore throat, fever or mouth ulcers, unexplained bruising or bleeding.
- Ensure they have adequate supply of medication.
- Attend appointments.
- Males and females must take effective contraception whilst taking hydroxycarbamide (and in males for at least 3 months after stopping therapy).
- Female patients must not breast feed.
- Protect skin from sun exposure, conduct self-inspection of the skin and report any skin lesions to the GP/Specialist.

**Disease & drug monitoring:**
As above – contact GP or initiating team if side effects develop (see adverse effects) and attend appointments including those for routine blood tests/investigations.

**Communication:**

**Specialist to GP:**
- The specialist will inform the GP when they have initiated hydroxycarbamide and when there are any subsequent changes in treatment – standard clinic letter.
- When the patient is near completing a satisfactory initiation period, the specialist will write to the GP to request they take over prescribing and where possible give an indication as to the expected length of treatment. To include sending a copy (either electronically or paper copy) of the Shared Care Guideline to the GP.
- Inform the GP of the information provided to the patient.

**GP to Specialist:**
- To reply to the request for shared care within 2 weeks of receipt of the Consultant letter.
- Irrespective of whether you accept prescribing responsibility or not, you should inform the consultant of relevant medical information regarding the patient and changes to the patient’s medication regime irrespective of indication.
- Notify Consultant if treatment with hydroxycarbamide is discontinued.
If you have any concerns regarding individual patients, see consultant letter for medical contact details or contact one of the following:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Location</th>
<th>Telephone / Bleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr G Taylor</td>
<td>Consultant Dermatologist</td>
<td>01904 725842</td>
</tr>
<tr>
<td>Dr Calum Lyon</td>
<td>Consultant Dermatologist</td>
<td>01904 726622</td>
</tr>
<tr>
<td>Dr Julia Stainforth</td>
<td>Consultant Dermatologist</td>
<td>01904 725842</td>
</tr>
<tr>
<td>Dr Caroline Love</td>
<td>Senior Clinical Fellow</td>
<td>01904 726622</td>
</tr>
<tr>
<td>Dr Kathryn Thomson</td>
<td>Consultant Dermatologist</td>
<td>01904 725814</td>
</tr>
<tr>
<td>Dr Jasmina Mikeljevic</td>
<td>Consultant Dermatologist</td>
<td>01904 725603</td>
</tr>
<tr>
<td>Dr Christin Williams</td>
<td>Consultant Dermatologist</td>
<td>01904 725842</td>
</tr>
<tr>
<td>Pauline Stopford-Taylor</td>
<td>Dermatology Nurse Specialist</td>
<td>01904 726048</td>
</tr>
<tr>
<td>Scarborough</td>
<td>Dr A Hight / Dr C Williams</td>
<td>01723 342155</td>
</tr>
</tbody>
</table>

**Costs:**

<table>
<thead>
<tr>
<th>Drug Tariff Nov 2012</th>
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<tbody>
<tr>
<td>500mg capsules x 100 = £10.46</td>
</tr>
</tbody>
</table>

**References:**

1. Summary of Product Characteristics, Hydrea. Date of last update 01.06.12. [www.medicines.org.uk/emc](http://www.medicines.org.uk/emc)

This information is not inclusive of all prescribing information and potential adverse effects. Please refer to the SPC (data sheet) or BNF for further prescribing information.

The original Microsoft Word file of this document is located on:

York Teaching Hospital NHS Foundation Trust Pharmacy Department X:/MEDICINES INFORMATION/Shared Care Guidelines/Approved Shared Care Guidelines/HYDROXYCARBAMIDE for psoriasis Shared Care Guideline V1.1

Shared Care Guidelines are also available electronically via [http://www.yorkandscarboroughformulary.nhs.uk/](http://www.yorkandscarboroughformulary.nhs.uk/)

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Diane Tomlinson (Pharmacist NY and Humber Commissioning Support Unit)

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