

BNSSG Shared Care Guidance

Section 1: Heading

Drug	Hydroxycarbamide
Amber <i>three months</i>	
Indication	Myeloproliferative neoplasms (MPN), acute leukaemia as a palliative care option, sickle cell disease to reduce frequency and severity of sickle crises. For the purpose of this shared care protocol the patient population involved are those with stable MPNs – either Polycythaemia Vera (PV), Essential Thrombocythaemia (ET) or Myelofibrosis (MF)
Speciality / Department	Haematology
Trust(s)	North Bristol NHS Trust
	University Hospitals Bristol

Section 2: Treatment Schedule

Usual dose and frequency of administration	Usual dose between 500mg and 2000mg daily (may be as low as 500mg three times per week). In some instances prescriptions may be requested as a quantity to be labelled 'take as directed according to your MPN dosing book' to allow for rapid dose changes if required
Route and formulation	Oral. Should be prescribed using 500mg capsules only (1g preparations are less cost effective and don't allow dosing flexibility)
Duration of treatment	Treatment is long term to maintain blood counts within defined range. Treatment may be interrupted or ceased in the case of toxicity or disease transformation.

Section 3: Monitoring

Please give details of any tests that are required before or during treatment, including frequency, responsibilities (please state whether they will be undertaken in primary or secondary care), cause for adjustment and when it is required to refer back to the specialist.

Baseline tests - where appropriate	
	<p>Treatment will be initiated by the consultant haematologist. Monitoring will be performed by either</p> <ol style="list-style-type: none"> a) Regular visits and/ or telephone consultation with either a clinical nurse specialist or specialist pharmacist led OPD or haematology OPD clinic in which case the frequency of visits and blood tests and dose of hydroxycarbamide will be determined by secondary care and communicated by letter to the patient and General Practitioner (GP)

BNSSG Shared Care Guidance

- b) Or occasionally by the patient's General Practitioner (GP) after agreement between GP and consultant haematologist. In this case the frequency of visits and hydroxycarbamide dose will be determined by the GP according to the patient specific treatment plan defined by the consultant haematologist

The frequency of visits will depend on the stability of blood counts and / or toxicities in the range of 1-16 weeks

Subsequent tests - where appropriate

- The usual target blood test ranges are
 Platelets: 150 - 400 x 10⁹/l
 Neutrophils: 1.8 - 8.0 x 10⁹/l
 Hb: Female 115-160 g/l; Male 130-170g/l
 HCT <0.45 (in PRV)

Should there be unexpected changes in blood counts or the development of significant side effects, prompt discussion with the haematology department is required to determine appropriate action.

Section 4: Side Effects

Please list the most common side effects and management. Please provide guidance on when the GP should refer back to the specialist.

Side effects and management	<p>Myelotoxicity with a fall in Hb, neutrophil and/or platelets. This is usually predictable and dose dependent.</p> <p>Nausea is an occasional problem but is usually resolved before patient is transferred to shared care management.</p> <p>Skin rashes and dry skin.</p> <p>Leg ulceration. The development of lower leg ulceration in a patient on hydroxycarbamide warrants discussion and review by the haematology department.</p> <p>Persistent, multiple and/or prolonged mouth ulceration, particularly in the presence of decreased WCC indicates requirement for haematology review.</p> <p>Mild alopecia, discolouration of nails.</p> <p>Infertility.</p> <p>Possible increased risk of leukaemia although the risk appears to be very small.</p>
Referral back to specialist	Click here to enter details

Section 5: Drug Interactions

Please list clinically significant drug interactions ([eMC link](#) please click here)

Significant Drug Interactions	<p>Potential increased myelotoxicity if prescribed with other myelotoxic drugs e.g. methotrexate</p> <p>Phenytoin – possible reduced absorption of phenytoin</p> <p>Clozapine – increased risk of agranulocytosis</p> <p>Digoxin – possibly reduced absorption of digoxin</p> <p>Didanosine and stavudine – increased risk of toxicity; may cause treatment failure and toxicities in HIV patients.</p>
Reminder to ask patient about specific problems	Click here to enter details

Section 6: Contra-indications, Cautions and Special Recommendations

BNSSG Shared Care Guidance

The dose will be titrated according to blood count response. However, impaired renal function may impair clearance of hydroxycarbamide and result in greater level of myelosuppression. In cases of decreasing blood counts (Hb, platelets and/or neutrophils) in the presence of deteriorating renal function, advice from haematology team should be sought.

Section 7: Advice to the patient

Advice for prescribing clinician to inform patient

1. No additional information will be required to be given to the patient by the GP

Section 8: Responsibilities for Secondary Care

Core responsibilities

1. Initiating treatment and prescribing for the first three months
2. Undertaking the clinical assessment and monitoring for the first three months.
3. Communicate details of the above in 1 and 2 to GP within the first month of treatment. This information should be transferred in a timely manner.
4. Refer patients to GP and provide information of further action where appropriate e.g. blood test is due.
5. To provide advice to primary care when appropriate.
6. Review concurrent medications for potential interaction prior to initiation of hydroxycarbamide.
7. Stopping treatment where appropriate or providing advice on when to stop.
8. Reporting adverse events to the MHRA.
9. Reminder to ask patients about particular problems see section 5.

Other specific to drug

1. If following A (section 3 above) the haematology department will arrange monitoring visits/telephone follow up, request blood tests (to be carried out in primary / secondary care depending on clinic arrangements) and recommend the dose of hydroxycarbamide. This information will be relayed to the patient and GP through written communications (letter / dosing booklet)

Section 9: Responsibilities for Primary Care

Core responsibilities

1. Responsible for taking over prescribing after the first month
2. Responsible for the clinical assessment and monitoring after the first three months
3. Review of any new concurrent medications for potential interactions.
4. Reporting adverse events to the MHRA.
5. Refer for advice to specialist where appropriate.
6. Reminder to ask patients about particular problems see section 5.

Other specific to drug

1. If following A (section 3 above) the GP will prescribe hydroxycarbamide according to the advice received from the haematology department. Should any unexpected problems develop, prompt liaison with haematology department is advised.
2. If following B (section 3 above) the GP will prescribe hydroxycarbamide, arrange blood count monitoring and decide on the frequency of visits according to the patient specific treatment plan detailed by the haematology team at the time of referral by haematology to primary care.

BNSSG Shared Care Guidance

Section 10: Contact Details

Name	Organisation	Telephone Number	E mail address
Dr Alastair Whiteway	North Bristol NHS Trust	0117 3238890/1	pathologysecretaries@nbt.nhs.uk
Dr Sophie Otton	North Bristol NHS Trust	0117 3238890/1	pathologysecretaries@nbt.nhs.uk
Ms Becky Bagnall (specialist haematology pharmacist)	North Bristol NHS Trust	0117 3238890/1	pathologysecretaries@nbt.nhs.uk
Dr Priyanka Mehta	UHBristol	0117 3422655	priyanka.mehta@uhbristol.nhs.uk
Teresa Veale, Macmillan Haematology Clinical Nurse Specialist	UHBristol	0117 3421529	Teresa.veale@uhbristol.nhs.uk

Section 11: Document Details

Date prepared	January 2015
Prepared by	Becky Bagnall. Haematology Pharmacist. North Bristol NHS Trust, based on a previous version written by R Evely (4.2.10)
Date approved by JFG	July 2015
Date of review	July 2017
Document Identification: Version	Hydroxycarbamide SCP UHBNBT V2.3

Section 12: Collaboration

Specialists in any one discipline are encouraged to collaborate across the health community in preparing shared care guidance. Please give details

1. Shared across UHB and NBT

Section 13: References

<ol style="list-style-type: none">1. Guideline on the investigation and management of adults and children presenting with thrombocytosis. British Committee for Standards in Haematology 2010. http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2141.2010.08122.x/full2. Amendment to the diagnosis, investigation and management of polycythaemia/erythrocytosis. British Committee for standards in Haematology 2007 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2141.2007.06741.x/abstract3. Guidelines for the diagnosis, investigation and management of polycythaemia / erythrocytosis. British Committee for standards in Haematology 2005 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2141.2005.05535.x/full
--