

1. Introduction and who Guideline applies to

1.1 This Guideline describes the patient pathway and associated processes for patients who are to be treated using an ambulatory service delivery model, as opposed to the customary inpatient model. This is to be used in conjunction with the Overarching Policy for Ambulatory Care Pathways and the Standard Operating Policies referenced in the Policy.

1.2 Cytarabine is a cytotoxic drug used to treat varying forms of Leukaemia and Lymphoma. Cytarabine is an antimetabolite; these are cell-cycle specific and attack cells at very specific phases in the cycle, stopping cells from dividing.

Indication – planned treatment in AML following a response to initial treatment.

Cycles – 1-2 depending on response. Each cycle covers 6 days with a planned rest in between to allow for count recovery.

2. Recommendations, Standards and Procedural Statements

2.1 Referral mechanisms

Suitable patients will be identified either through the Leukaemia MDT held each Monday afternoon or at the Transplant Planning meeting held on Tuesday afternoons. The Leukaemia CNS has a role in informing other members of the nursing team of patients selected at the MDT and either the nurse co-ordinator or Chemotherapy specialist nurse has a similar role in communicating decisions from the Transplant Planning meeting.

2.2 Patient Screening

2.2.1 Patient selection criteria:

- a) ECOG performance status 0-1
- b) 24 hour carer support including availability to drive patient to hospital in the event of an emergency (In the event of no carer being available but the patient is still considered suitable and wishes to follow the ambulatory model, a risk assessment will be undertaken and considered by the Multi- Disciplinary Team)
- c) Patient must not be on IV antimicrobial therapy
- d) Living within 30 minutes' drive of the hospital (unless alternative circumstances such as further distance are deemed applicable by the consultant haematologist and MDT).
- e) Satisfactory completion of the Patient education tutorial (see appendix 1)
- f) Ability to monitor own temperature and wellbeing
- g) Motivated to participate in the pathway

2.2.2 If the patient lives greater than 30 minutes from the hospital but it is agreed as appropriate by the consultant haematologist and MDT the patient can still use the ambulatory pathway- risk assessment is in place). An acute hospital (with an A&E and a Haematology department) within 30 minutes of the patient's home address will be identified and notified of the patient receiving Ambulatory treatment.

2.2.3 The following will be performed within 1 week prior to commencement of chemotherapy:

- a) FBC, U&E, Extended LFT, Magnesium, Calcium, CRP.
- b) Insertion of appropriate venous access or checking of current Hickman/PICC.
- c) Consent for Systemic Anti-Cancer Treatment (SACT)

2.3 Education

2.3.1 Patient and their carer must undertake an education programme delivered by an ambulatory care specialist nurse or senior nurse in Hambleton suite prior to the treatment regime commencing.

2.3.2 An agreement to confirm the patient and their carer understand their responsibility regarding risks and actions will be signed at the time of the education programme. See appendix 1

2.4 Criteria for admission and Emergency Processes

2.4.1 Absolute criteria:

- a) Mucositis of sufficient severity to justify escalation of analgesia
- b) Hypotension unresponsive to fluid challenge
- c) Haemodynamic instability
- d) Marked tachycardia
- e) Hypoxia less than 93% on room air or raised respiratory rate
- f) Coagulopathy with associated bleeding
- g) Temperature $\leq 36.0^{\circ}\text{C}$ or $\geq 37.5^{\circ}\text{C}$ or rigors.
- h) Uncontrolled nausea and/or vomiting
- i) Patient failure to thrive
- j) Rising CRP
- k) Clinicians request

2.4.2 Ambulatory patients in whom sepsis/infection is suspected or in whom a temperature of $\leq 36.0^{\circ}\text{C}$ or $\geq 37.5^{\circ}\text{C}$ is recorded must be reviewed by the Haematology team within 1 hour on Hambleton Suite or OAU.

2.4.3 Exceptions to this can be made if it is deemed clinically appropriate for the patient to remain at home. **This must be a triumvirate decision** agreed between the Consultant, Senior Nurse and the patient.

2.5 Timetable of Care

The following sequence of events will form the ambulatory service model:

Day and where to report	Interventions
Day 1: Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • PICC line inserted (if not already in place) • Nurse led review* and routine bloods • Attachment of CADD pump – High Dose AraC set to be delivered 8pm • Temperature am and pm • Regular medication as prescribed • Ensure patient has prednisolone eye drops 0.5%. To be administered into both eyes TDS for 10 days. • Supply spillage kit and cytotoxic waste bin to patient
Day 2: Home Rest Day	<ul style="list-style-type: none"> • High Dose AraC delivered at 8am via CADD pump at home. Followed by 36hr break in treatment. • Regular medication as prescribed • Temperature am and pm
Day 3: Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Nurse led review* and routine bloods • Change of CADD pump- High Dose AraC set to be delivered at 8pm • Temperature am and pm • Regular medication as prescribed • PICC line care
Day 4: Home Rest Day	<ul style="list-style-type: none"> • High Dose AraC delivered at 8am via CADD pump at home. Followed by 36hr break in treatment. • Regular medication as prescribed • Temperature am and pm
Day 5: Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Nurse led review* and routine bloods • Change of CADD pump- High Dose AraC set to be delivered at 8pm • Temperature am and pm • Regular medication as prescribed • PICC line care
Day 6:	<ul style="list-style-type: none"> • High Dose AraC 8am via CADD pump at home.

Attend Osborne Day Care	<ul style="list-style-type: none"> • CADD pump removed on Osborne Day Ward. <p>Please ensure patient continues Prednisolone 0.5% eye drops for another 5 days following final day of Cytarabine</p>
Day 7: Home Rest Day	To start PO Levofloxacin 500mg OD Last dose of Allopurinol 300mg OD
Day 8: Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Nurse led review* and routine bloods • Temperature am and pm • Regular medication as prescribed • PICC line care • Last dose of Ondansetron 8mg • Plan of care to be made for post treatment phase- will require regular clinical review on Hambleton suite.

*Nurse led review- escalated to a medical review if deemed clinically appropriate

2.6 High dose Cytarabine specifics

- Alert card to be carried by patient
- Purple 'Chemotherapy Infusing' sticker will be applied to the lumen
- Patient must use prednisolone 0.5% eye drops TDS for 10 days to reduce risk of ocular toxicity.
- Treatment to start on a Monday for ambulatory High Dose Cytarabine.

2.7 CADD Pump Specifics

- Successful drug delivery should be routinely checked at each patient visit
- If pump has problems at any time – the patient will be advised to telephone the Haematology Helpline. Ambulatory Care nurses or Hambleton Suite staff will be available to manage issues Mon-Fri 9-5. Out of these hours BMTU staff will be available to assist with queries.
- Contact Consultant on call if pump has to be stopped for any reason
- Patient has pump troubleshooting guide at home to deal with minor problems
- Each clinical area has a CADD folder which contains a CADD troubleshooting guide for clinical staff.
- Spillage kit and cytotoxic waste bin to be supplied to patient.

3. Education and Training

3.1 All nursing staff working in connection with patients being treated on an ambulatory care pathway will require assessment and training to care for these patients. This will also include use of the CADD Solis pump.

3.2 All chemotherapy trained staff on Ward 41, Ward 40, Ward 39, BMTU, Hambleton Suite, Osborne Day Care and Osborne Assessment Unit will be trained in the use of CADD pumps.

Awareness education will be also be given to non-chemotherapy trained staff so they have an understanding of the pump.

4. Monitoring and Audit Criteria

Key Performance Indicator	Method of Assessment	Frequency	Lead

5. Legal Liability Guideline Statement

The Trust will generally assume vicarious liability for the acts of its staff, including those on honorary contract. However, it is incumbent on staff to ensure that they:

- Have undergone any suitable training identified as necessary under the terms of this policy or otherwise.
- Have been fully authorised by their line manager and their CMG to undertake the activity.
- Fully comply with the terms of any relevant Trust policies and/or procedures at all times.
- Only depart from any relevant Trust guidelines providing always that such departure is confined to the specific needs of individual circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible clinician it is fully appropriate and justifiable - such decision to be fully recorded in the patient's notes.

6. Key Words

Ambulatory care

HDARAC

High Dose

Cytarabine

Pathway

Day care

CADD Solis pump

CONTACT AND REVIEW DETAILS	
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Details of Changes made during review:	

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Appendix 1- Patient Education

University Hospitals of Leicester 
NHS Trust

Caring at its best

Name:
Date of Birth:
Hospital No:
NHS No:
Consultant:

Education programme for patient and carer involved in Ambulatory care pathway for Haematological conditions

In order for you to be accepted onto the Ambulatory care pathway you and your carer will need to attend an educational session. At the end of the educational session both you and your carer will need to confirm your attendance so a record can be made in your notes.

Topics to be discussed at the educational session:

1. Patient diary
2. Alert card for Haematology patients
3. Mouth care with an emphasis on Mucositis
4. Skin-tunnelled catheter care
5. How to take a temperature and record the results
6. Signs to watch out for:
 - Persistent nausea and vomiting
 - Poor fluid and food intake
 - Diarrhoea and constipation
 - Shivering
 - Shortness of breath
 - Swollen arm, ankles and legs
8. Problems associated with low platelets and haemoglobin
9. Taking medication and recording
10. What to do if you (the patient) are feeling unwell or need advice
11. Neutropenic diet
12. How to avoid infection
13. Personal care and managing the pump
14. Sex
15. Regime Specific Side Effects- eye irritation, high temperatures,
16. Emergency Phone Information

Please sign below to say you have attended this educational session and that you are willing to take part in the ambulatory care programme.

Patient's name:

Patient signature: Date:

Carer's name:

Carer's signature:Date:

Witness name:
(the person who conducted the educational session)

Witness's signature: Date: