Chemotherapy Prescribing, Dispensing and Administration for Children and Young People Clinical Guideline V4.1

October 2018
1. **Aim/Purpose of this Guideline**

This guideline is relevant to all medical and nursing staff caring for children and young people receiving chemotherapy treatment.

2. **The Guidance**

2.1. **Treatment Protocols**

2.1.1 Paediatric oncology patients at RCHT are treated on a shared care basis with Bristol Royal Hospital for Children (BRHC). When a diagnosis of malignancy has been made, the child will be allocated an appropriate protocol by the Paediatric Haematology/Oncology Consultant at BRHC following an open discussion with the patient and their carers. The treatment options will have been discussed at a Multidisciplinary Team Meeting at BRHC. The decision to treat a patient must take into account what is in the best interest of that patient. The protocol will be made available to the paediatric oncology team at RCHT. Patients and their carers need to be fully informed regarding the treatment including risks and side effects. Written consent is required for treatment. A copy of the consent to treatment and consent for any investigational study must be kept at the front of the patient’s notes at RCHT.

2.1.2 Copies of the protocols in use by current patients will be available and are kept in the following locations:

- Oncology office, CLIC Unit
- Electronically on the shared Paediatric oncology drive

In addition copies of all or current sections of the protocol will be kept in the front of the patient’s notes. This will include essential serial investigations applicable to the protocol.

2.1.3 Protocol flow sheets will be kept in each patient’s notes. These will clearly show the name of the protocol, what treatment is due and when it has been administered.

2.1.4 The protocol gives details of investigations which are required before starting each course of chemotherapy and details of whether or not chemotherapy administration is dependent on blood counts.

2.1.5 Protocol deviations may only be made after discussion with the Consultant or senior doctor at RCHT and/or BRHC. This must be clearly documented in the notes and on the prescription.

2.2. **Chemotherapy treatment, prescribing and supportive care**

2.2.1 Chemotherapy (oral, intravenous, intramuscular, intrathecal, subcutaneous) can only be prescribed and administered by staff trained and assessed as competent on the chemotherapy prescribing register.

2.2.2 Chemotherapy is prescribed electronically using Chemocare, hosted by
BRHC, in line with the standard operating procedures for Chemocare use at RCHT.

2.2.3 **A copy of the RCHT Register of staff who may prescribe chemotherapy is kept in the following locations:-**
- Oncology office
- Clinical Trials Pharmacy
- Pharmacy Technical Services Unit (PTSU)

2.2.4 The list will be reviewed when staff changes occur.

2.2.5 Supportive treatment such as intravenous hydration infusions and MESNA will be prescribed on Chemocare. This will detail dilution volumes, diluents, duration and rate of infusions.

2.2.6 All children having chemotherapy with hydration infusions will have a fluid balance chart and input/output MUST be recorded accurately. These children will have their U&Es checked at least twice a day.

2.2.7 Anti-emetics will be prescribed on the RCHT electronic system. Anti-emetics will be prescribed in line with the RCHT Clinical Guideline for antiemetic use in Paediatric Oncology, which is available on the document library.

2.2.8 See separate DOH and RCHT guidelines concerning intrathecal chemotherapy.

2.2.9 Children are weighed on ward attendance, including before every course of chemotherapy, and at every outpatient visit. The child’s weight is clearly recorded in the current notes.

2.2.10 For children on UKALL 2011 there is clear guidance in the protocol about the frequency of checking children’s weight for the purpose of determining the surface area for dose calculation.

2.2.11 Height should be measured at regular intervals and recorded in the child’s medical notes.

2.2.12 Dose modifications due to toxicity or weight change will be documented as an annotation on Chemocare and in the patient’s notes/treatment record.

2.2.13 For children with ALL on maintenance medication: The dosage of oral medication is adjusted according to their blood count. Details of these dose adjustments are clearly laid down in the ALL protocol. After consultation with one of the oncology trained doctors, the CLIC Nurse Specialist will normally be responsible for telling the parents (or child if they are old enough to take responsibility for their own medication) the result of the blood test and the correct dose of oral medication to be given that week. The result of the blood count and the advice given to the parents will be recorded in the patient’s notes by the CLIC nurse specialist or oncology doctor. (See separate guideline for management of home blood counts). Children with acute lymphoblastic leukaemia on maintenance chemotherapy are regularly reviewed in clinic with a home count in
between clinic visits.

2.2.14 Children on ALL maintenance chemotherapy admitted to the hospital unwell must stop their maintenance oral chemotherapy awaiting review by the paediatric oncology medical team.

2.2.15 If the child is well but has been admitted to the hospital for another reason maintenance treatment should be continued and prescribed on EPMA providing there are no contraindications to treatment as per the child’s ALL treatment protocol. If in doubt it is safer to stop treatment until review by the oncology team.

2.2.16 Prescriptions are prescribed on Chemocare by the authorised clinicians and checked by the Paediatric Pharmacist the week prior to planned administration or new cycle. Once clinically checked (as indicated on the “chemolist” function on Chemocare) Pharmacy Technical Services (PTSU) will print a “preview” prescription which will form the pharmacy copy to allow dispensing of the medication. A patient list will be emailed to PTSU the week before planned chemotherapy, detailing which patients require treatment, including those awaiting critical tests.

2.3. Administration of chemotherapy

2.3.1 Inpatient/Day case chemotherapy for children and young people under the care of the Paediatric Oncology MDT will be administered on CLIC Unit, where it is an agreed part of the ward’s activities.

2.3.2 Out-patient chemotherapy for children and young people will be administered on the CLIC Unit or in the paediatric oncology out-patient clinic in the designated area of Gwithian Unit. While out-patient chemotherapy is being given, the designated area should only be used for this purpose and other aseptic treatments and procedures on paediatric/adolescent cancer patients.

2.3.3 Chemotherapy will only be administered by nursing staff named on the list of named nursing staff who have been assessed as competent to administer chemotherapy unsupervised, having met RCN standards.

2.3.4 Staff who are not authorised on the list as defined above may administer chemotherapy only as part of their training and assessment and in the presence of authorised staff.

2.3.5 Chemotherapy will only be administered by medical staff from the paediatric oncology core team who are competent to administer chemotherapy.

2.3.6 Under no circumstances will a course of chemotherapy be initiated outside times when the standard complement of trained staff is on duty i.e. 09:00 to 17:00 hrs.

2.3.7 Where administration of chemotherapy is dependent on blood count results, the prescription will be marked “confirmed” on Chemocare. Once blood results have been checked and are deemed satisfactory an authorized prescriber
will authorize the prescription and print the prescription for administration. It is good practice to ensure pharmacy technical services are informed of pending blood results. This may be done by both identifying pending chemotherapy on the planned chemotherapy sheet sent to them each week and also adding an annotation to the Chemocare system to highlight pending results. The chemotherapy will not be prepared in these cases until the oncology trained doctor or nurse telephones PTSU to confirm that the blood test results are satisfactory for the chemotherapy to proceed.

2.3.8 Before any patient receives chemotherapy they must be assessed as “fit for chemotherapy” by a competent doctor or senior nurse.

2.3.9 The chemotherapy verification procedure is carried out before chemotherapy is administered.
• Only the chemotherapy for one patient is checked at one time. Once the chemotherapy is checked it is immediately taken to the patient’s bedside where a “right person, right chemotherapy, right time for chemotherapy, right rate for infusions” check is made with the chemotherapy prescription.

• Once the chemotherapy has been given it is the responsibility of the person who has given the chemotherapy to file the chart in the patient’s notes together with the completed guidelines which they have used to check the chemotherapy. The chemotherapy must then be marked as “Given” on the Chemocare system.

2.3.10 Intrathecal Chemotherapy - See separate clinical guideline for prescribing, dispensing and administering intrathecal chemotherapy.

2.4. Paediatric Oncology diary

2.4.1 There is a Paediatric Oncology diary kept on the CLIC Unit in which a record is maintained of admissions, attendances and arrangements for home counts for all oncology patients, including a record of when chemotherapy is due. This is kept up-to-date by the medical and nursing staff.

2.4.2 The chemotherapy prescription entries in the diary will be marked with a tick when the treatment has been prescribed on the Chemocare system.
• At each change of nursing shift the diary is reviewed.

2.5. Transportation and storage of chemotherapy

2.5.1 Chemotherapy is transported from the Pharmacy Technical Services Unit (PTSU) and delivered to the ward by the chemotherapy pharmacy staff. The chemotherapy is transported in sturdy, leak-proof boxes.

2.5.2 Chemotherapy must be received on the ward and signed for by a trained staff member who is responsible for ensuring the chemotherapy is stored in the appropriate secured environment (chemotherapy fridge or chemotherapy cupboard at room temperature as indicated on the chemotherapy label) until required for use.
2.5.3 Cytotoxic agents prepared by the Pharmacy Technical Services Unit (PTSU) will have an expiry date. Any chemotherapy not administered will be disposed of in the appropriate manner by contacting PTSU for collection and destruction.

2.5.4 Intrathecal chemotherapy is transported separate to all other medication. Intrathecal chemotherapy is received and signed for by a member of staff who is on the Intrathecal register as being able to receive Intrathecal chemotherapy. It is stored in a dedicated fridge. See separate RCHT guidelines folder for prescribing, dispensing and administering intrathecal chemotherapy.

2.5.5 Refrigerators used to store chemotherapy are monitored to ensure the temperature is between 2-8 ° centigrade. The fridge temperature is monitored remotely by the pharmacy QA team and any deviations will be highlighted to the ward manager or their deputy.

2.6 Administration of Chemotherapy through a Peripheral Line

2.6.1 Most children who are having intravenous chemotherapy will have central venous access via a central venous line or a portacath.

2.6.2 There is a register of medical and nursing staffs that have been trained and are allowed to check and to administer chemotherapy. The drug will be checked by the person who will administer the drug and another doctor or nurse who is on the register.

2.6.3 A register of doctors and nurses who are allowed to administer and check chemotherapy is kept electronically in the Paediatric Oncology shared drive and in the Paediatric Chemotherapy Assessment folder in the Ward Manager’s Office.

2.6.4 The chemotherapy verification procedure is carried out before chemotherapy is administered.

2.6.5 Prior to drug administration, a spillage kit and an extravasation kit should be readily available. It is the responsibility of the doctor/nurse who is giving the drug to make sure that these kits are available.

2.6.6 It is the responsibility of the oncology lead nurse to check that both the extravasation and the spillage kits are in date. They should be checked at the beginning of each month and returned to pharmacy for renewal when appropriate. The oncology lead nurse will record in the ward diary that she has carried out these checks at the beginning of each month.

2.6.7 The person who is administering the chemotherapy drug will wear safety equipment, consisting of gloves, an apron and eye protection (goggles or glasses).

2.6.8 The butterfly or cannula should be inserted into a vein, preferably on the dorsum of the hand. Cannulas are inserted using Aseptic Non Touch
Technique (RCHT policy). An antecubital vein should not be used because if extravasation leading to scarring occurs at this site, a contracture could result.

2.6.9 Before injecting the drug it should be established that the butterfly or cannula is securely in the vein by withdrawing blood and flushing with saline. Where drugs are to be given as a slow bolus, e.g. vincristine, during the injection the line should be aspirated frequently to make sure that it is still securely in the vein.

2.6.10 If, during administration, there is any possibility that the butterfly or cannula has become dislodged i.e. if there is swelling at the injection site or, it is no longer possible to draw back blood or, the patient complains of pain at the injection site, then the administration of the drug should be stopped and extravasation procedures should be followed (see separate guideline Management of Extravasation of Cytotoxic Drugs in Children. RCHT Documents Library)

2.6.11 Following administration, the doctor will record the site of injection in the patient's notes. The doctor will sign the prescription chart which will be countersigned by the nurse who has checked the drug.

2.6.12 When it is necessary for an intravenous infusion of chemotherapy to be given through a peripheral line, a cannula should be inserted by or under the supervision of, one of the doctors on the register.

2.6.13 The infusion will be supervised by a nurse who is on the register and who is familiar with the extravasation policy.

2.6.14 The line site should be checked every fifteen minutes for signs of extravasation and immediately should the patient experience pain.

2.6.15 If, during administration of the infusion, extravasation is suspected, the infusion should be stopped immediately and a doctor summoned to check the security of the venous access.

2.6.16 If extravasation is confirmed then appropriate treatment should be carried out as outlined in the extravasation policy.
3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Compliance with guideline and checklist procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Audit lead&lt;br&gt;Paediatric oncology team&lt;br&gt;Dr.K.MacDonald</td>
</tr>
<tr>
<td>Tool</td>
<td>Documentation audit</td>
</tr>
<tr>
<td>Frequency</td>
<td>Annually or at point of review if change in process.</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Paediatric oncology team Paediatric consultants</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Paediatric oncology team Paediatric consultants&lt;br&gt;Child health audit and guidelines meeting Required actions will be identified and completed in 3-6 months.</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Required changes to practice will be identified and actioned within 3-6 months. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders</td>
</tr>
</tbody>
</table>

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ‘Equality, Diversity & Human Rights Policy’ or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
### Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Chemotherapy Prescribing, Dispensing and Administration for Children and Young People Clinical Guideline V4.1</th>
</tr>
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<tbody>
<tr>
<td><strong>Date Issued/Approved:</strong></td>
<td>05/06/2018</td>
</tr>
<tr>
<td><strong>Date Valid From:</strong></td>
<td>30/10/2018</td>
</tr>
<tr>
<td><strong>Date Valid To:</strong></td>
<td>30/10/2021</td>
</tr>
<tr>
<td><strong>Directorate / Department responsible (author/owner):</strong></td>
<td>Dr. K. Macdonald - associate specialist S. Tierney - pharmacist</td>
</tr>
<tr>
<td><strong>Contact details:</strong></td>
<td>01872 252891</td>
</tr>
<tr>
<td><strong>Brief summary of contents</strong></td>
<td>Clinical guideline for prescribing, dispensing and administration of chemotherapy to children and young people. Includes check list.</td>
</tr>
<tr>
<td><strong>Suggested Keywords:</strong></td>
<td>Paediatric Chemotherapy Children</td>
</tr>
<tr>
<td><strong>Target Audience</strong></td>
<td>RCHT</td>
</tr>
<tr>
<td><strong>Executive Director responsible for Policy:</strong></td>
<td>Medical Director</td>
</tr>
<tr>
<td><strong>Date revised:</strong></td>
<td>Dec 2017</td>
</tr>
<tr>
<td><strong>This document replaces (exact title of previous version):</strong></td>
<td>Prescribing, dispensing and administration of chemotherapy to children and young people- Clinical guideline V4.0</td>
</tr>
<tr>
<td><strong>Approval route (names of committees)/consultation:</strong></td>
<td>Paediatric consultants Child health audit and guidelines meeting Paediatric Oncology Team</td>
</tr>
<tr>
<td><strong>Divisional Manager confirming approval processes</strong></td>
<td>Tunde Adewopo</td>
</tr>
<tr>
<td><strong>Name and Post Title of additional signatories</strong></td>
<td>Not Required</td>
</tr>
<tr>
<td><strong>Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings</strong></td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td><strong>Name:</strong></td>
<td>Caroline Amukusana</td>
</tr>
</tbody>
</table>
## Signature of Executive Director giving approval

{Original Copy Signed}

## Publication Location (refer to Policy on Policies – Approvals and Ratification):

Internet & Intranet  ✔ Intranet Only

## Document Library Folder/Sub Folder

Clinical / Paediatrics

## Links to key external standards

none

## Related Documents:

- Paediatric oncology chemotherapy verification procedure.CHA3445

## Training Need Identified?

Yes – Relevant chemotherapy giver/checker training.

## Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
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<tr>
<td>Oct 2004</td>
<td>V1.0</td>
<td>Initial Issue</td>
<td>Dr.N.Gilbertson-paediatric consultant</td>
</tr>
<tr>
<td>Jan 2012</td>
<td>V2.0</td>
<td>Review</td>
<td>Dr.N.Gilbertson-paediatric consultant Dr.K.Macdonald-associate specialist</td>
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<tr>
<td>July 2014</td>
<td>V3.0</td>
<td>Review and re format</td>
<td>Dr.K.Macdonald-associate specialist S.Tierney-pharmacist Tabitha</td>
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<td>Nov 2017</td>
<td>V4.0</td>
<td>No Changes</td>
<td>Katrina Macdonald Associate Specialist</td>
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## All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

## Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.
Appendix 2. Initial Equality Impact Assessment Form

This assessment will need to be completed in stages to allow for adequate consultation with the relevant groups.

<table>
<thead>
<tr>
<th>Name of the strategy / policy / proposal / service function to be assessed</th>
<th>Directorate and service area</th>
<th>Is this a new or existing Policy?</th>
</tr>
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<tbody>
<tr>
<td>Chemotherapy Prescribing, Dispensing and Administration for Children and Young People Clinical Guideline V4.1</td>
<td>Child Health</td>
<td>existing</td>
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<table>
<thead>
<tr>
<th>Name of individual completing assessment</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>K MacDonald</td>
<td>01872252800</td>
</tr>
</tbody>
</table>

1. **Policy Aim***

Who is the strategy / policy / proposal / service function aimed at?

Clinical guideline for prescribing, dispensing and administration of chemotherapy to children and young people.

2. **Policy Objectives***

Clinical guideline for prescribing, dispensing and administration of chemotherapy to children and young people.

3. **Policy – intended Outcomes***

Evidence based and standardised best practice.

4. *How will you measure the outcome?*

Audit and annual review

5. Who is intended to benefit from the policy?

Children and families

6a Who did you consult with?

<table>
<thead>
<tr>
<th>Workforce</th>
<th>Patients</th>
<th>Local groups</th>
<th>External organisations</th>
<th>Other</th>
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<tr>
<td>X</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

b). Please identify the groups who have been consulted about this procedure.

- Paediatric Guidelines Group
- Directorate Board Meeting

What was the outcome of the consultation?

Guideline agreed
7. The Impact
Please complete the following table. **If you are unsure/don’t know if there is a negative impact you need to repeat the consultation step.**

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
<th>Rationale for Assessment / Existing Evidence</th>
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<tr>
<td>Age</td>
<td>X</td>
<td></td>
<td></td>
<td>No areas indicated</td>
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<tr>
<td>Sex (male, female, trans-gender / gender reassignment)</td>
<td>X</td>
<td>No areas indicated</td>
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<tr>
<td>Race / Ethnic communities /groups</td>
<td>X</td>
<td>No areas indicated</td>
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<tr>
<td>Disability - Learning disability, physical impairment, sensory impairment, mental health conditions and some long term health conditions.</td>
<td>X</td>
<td>No areas indicated</td>
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<td>Religion / other beliefs</td>
<td>X</td>
<td>No areas indicated</td>
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<tr>
<td>Marriage and Civil partnership</td>
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<td>No areas indicated</td>
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<td>Pregnancy and maternity</td>
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<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
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<td>No areas indicated</td>
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</table>

**You will need to continue to a full Equality Impact Assessment if the following have been highlighted:**

- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation - this excludes any policies which have been identified as not requiring consultation. or
- Major this relates to service redesign or development

8. Please indicate if a full equality analysis is recommended. **Yes** **No** **X**

9. If you are **not** recommending a Full Impact assessment please explain why.

No areas indicated
Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,
Truro, Cornwall, TR1 3HD

This EIA will not be uploaded to the Trust website without the signature of the Human
Rights, Equality & Inclusion Lead.

A summary of the results will be published on the Trust’s web site.

Signed Chris Warren

Date _____5/6/18_________