Immunisation of Children Completing Chemotherapy

**SETTING**
Bristol Royal Hospital for Children

**FOR STAFF**
All Staff

**PATIENTS**
All children, teenagers and young adults, under the care of the Paediatric Haematology and Oncology team. Excludes Allogeneic Bone Marrow Transplantation patients.

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**GUIDANCE**

This document will outline the procedure for re-immunising children after they have completed standard chemotherapy including high dose chemotherapy and autologous stem cell rescue but excluding allogeneic bone marrow transplantation.

**INTRODUCTION**

Most children with cancer are either treated with standard dose chemotherapy or high dose chemotherapy followed by stem cell rescue or Hematopoietic Stem Cell Transplantation (HSCT). Recovery of immune system is variable depending on the type of treatment they receive. This alters the immunoglobulin levels and specific antibody against previous vaccinations. In view of the secondary immunodeficiency, it is essential to ensure patients are protected against vaccine-preventable disease by optimizing a vaccination strategy after completion of their treatment. The general principles of vaccination in children receiving chemotherapy are as follows:

- Children should not receive routine vaccinations whilst undergoing chemotherapy.
- Re-immunisation begins when children reach 6 months from the end of treatment or up to 12 months from the end of high dose chemotherapy requiring autologous stem cell rescue.
- For patients who have received antibody therapy or immunomodulatory therapy as part of their treatment strategy, timing of re-immunisation may vary and therefore this should be discussed on individual patient basis.

Live vaccines should generally be avoided in children receiving chemotherapy and for 6 months after the end of treatment. The table below gives further details:

<table>
<thead>
<tr>
<th>Patient group</th>
<th>Vaccinations to be avoided</th>
<th>Extra notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients undergoing chemotherapy or who have finished chemotherapy within the last 6 months</td>
<td>Avoid all live vaccines</td>
<td>Influenza vaccine must be given yearly but as the inactivated injection form.</td>
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<tr>
<td>Siblings / close family members of patients on chemotherapy</td>
<td>Avoid all live vaccines except MMR, Rotavirus and live attenuated nasal influenza vaccine</td>
<td>Polio is normally given as an inactivated injectable vaccine which is acceptable. If however oral live polio vaccine is given then avoid close contact for 4-6 weeks or if unavoidable use vigorous hygiene measures</td>
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</table>
AUTHORISED PERSONNEL/TRAINING REQUIRED:

Vaccinations should be prescribed and administered via the patient’s general practitioner, who can contact the patient’s consultant for further advice if necessary.

PROCEDURE:

Full details are given in the document “Vaccinations for Paediatric Patients Treated With Standard-Dose Chemotherapy and Haematopoietic Stem Cell Transplantation (HSCT) Recipients” authored by Dr Soonie Patel and Professors Paul Heath and Rod Skinner in September 2014.


A table of the relevant vaccinations is given on page 9. The protocol differs according to whether the child is above or below the age of 10 years.

REFERENCES:


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<table>
<thead>
<tr>
<th>Siblings / close family members of patients who have finished chemotherapy in the last 6 months</th>
<th>No restrictions</th>
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RELATED DOCUMENTS

- Vaccinations for Paediatric Patients Treated With Standard-Dose Chemotherapy and Haematopoietic Stem Cell Transplantation (HSCT) Recipients

QUERIES

For clinical concerns please contact any of the following for advice:

- Paediatric Haematology Registrar: bleep 3495
- Paediatric Oncology registrar: Bleep 2950
- Oncology day beds (8am-6pm): 28145
- Ward 34: 28334
- Ward 35: 28335
- Haematology or Oncology consultant (via switchboard)