CLINICAL GUIDELINE FOR INVESTIGATION AND MANAGEMENT OF SEVERE TRANSFUSION REACTION

1. Aim/Purpose of this Guideline
   1.1. A flowchart instructing how to deal with transfusion reaction along with a form to complete aiding investigation by the Transfusion Laboratory.

2. The Guidance
   2.1. Copy of the form and flowchart on page 3-4.

3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Severity of reaction and appropriateness of response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Transfusion Management Group</td>
</tr>
<tr>
<td>Tool</td>
<td>Completeness of filled in form, patient’s notes and QPulse incident raised for each form</td>
</tr>
<tr>
<td>Frequency</td>
<td>Each suspected reaction To be shared only if reaction is deemed severe</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Reported through Transfusion Management Group to Hospital Transfusion Team and Hospital Transfusion Committee, level dependent on severity of reaction</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Transfusion Management Group to Hospital Transfusion Team and Hospital Transfusion Committee</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Transfusion Management Group to Hospital Transfusion Team and Hospital Transfusion Committee to decide how changes are shared. Commonly will be through transfusion education at mandatory training and reporting to national haemovigilance systems.</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.
Intentionally Blank
**Acute transfusion reactions (ATR)**

*Safe transfusion practice - Be careful, be vigilant*

**Management**

Stop transfusion immediately • ABC • Oxygen • Get medical help urgently

All patients who have a blood component transfusion are at risk of an ATR

- Patients receiving a transfusion must be in a clinical area monitored by trained staff competent to manage transfusion and ATR
- Check: ‘Right patient, right blood’. Confirm patient identity with patient, check patient ID band check component compatibility label
- Inspect: Examine component bag for abnormal appearance (clumps, particles or discolouration). Check IV cannula site for infection
- Monitor: Measure patient’s vital signs before transfusion, during transfusion and after transfusion
- Inform: Ask patient to report any new symptoms or signs during transfusion and within 24 hours of transfusion.

### Suspect

<table>
<thead>
<tr>
<th>Anaphylaxis</th>
<th>Severe allergy</th>
<th>ABO incompatibility or sepsis (infection)</th>
<th>TACO or TRALI</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

**What are the signs and symptoms?** *(please tick)*

- [ ] Wheeze
- [ ] Swelling
- [ ] Pain
- [ ] Hypotension
- [ ] Collapse
- [ ] Fever
- [ ] Rigors
- [ ] Tachycardia
- [ ] Hypotension
- [ ] Anxiety
- [ ] Pain
- [ ] Breathlessness
- [ ] Acute breathlessness
- [ ] Hypoxia

### Record symptoms

- [ ] Anaphylaxis pathway
  - Give intramuscular adrenaline
  - Consider:
    - Chlorpheniramine
    - Hydrocortisone
    - Salbutamol
- [ ] IV saline
  - Sepsis pathway (if sepsis)
- [ ] IV broad spectrum antibiotics (if sepsis)
- [ ] Furosemide (if TACO)

### Initial investigations

- [ ] FBC, U&E, LFT, coagulation screen
- [ ] First urine sample (haemoglobin)
- [ ] Repeat group screen and screen
- [ ] IgA level yellow biochemistry
- [ ] Blood cultures (if sepsis suspected)
- [ ] A CXR if breathlessness present may be required

### Treat

**Please report all moderate or severe reactions to laboratory**

- Return blood component to laboratory
- Complete report / incident form and return to lab
- DATIX it

Transfusion laboratory: Ext 2500
Bleep on-call Haematology Consultant through switchboard if severe or life threatening
Is my patient having an acute transfusion reaction? Features may include:
Fever, chills, rigors, tachycardia, hyper-/ hypo-tension, collapse, flushing, urticaria, pain (bone, muscle, chest, abdominal), respiratory distress, nausea, general malaise

STOP THE TRANSFUSION - Assess (rapid clinical assessment), Check (patient ID / blood compatibility label), Inspect (look for turbidity, clots, discoloration)

Evidence of life threatening problems? Airway / Breathing / Circulatory problems

Yes

Severe or life threatening
- Call for urgent medical help
- Initiate resuscitation - ABC
- Maintain venous access
- Monitor patient, eg. TPR, BP, urinary output, O2 saturations
- Fluid resuscitate (normal 0.9% saline) as appropriate guided by BP, pulse, urine output (catheterise if necessary)
- Perform appropriate investigations as per guidelines

- If likely anaphylaxis / severe allergy; follow anaphylaxis pathway
- If bacterial contamination likely follow sepsis pathway
- If haemorrhage likely to be causing hypotension fluid resuscitate / continue transfusion
- Consider if Transfusion Associated Circulatory Overload likely

- Save unit and giving set and return to transfusion for testing
- Tell Transfusion Practitioners Report urgently to transfusion laboratory for review at HTC and report to SHOT/MHRA as appropriate

No

Moderate
- Temperature ≥ 39°C or rise > 2°C and/or
- Other symptoms (not pruritis / rash only)

- Review patient’s underlying condition and transfusion history
- Monitor patient more frequently, eg. TPR, BP, O2 saturations, urinary output

Mild
- Isolated temp 38-39°C or rise 1-2°C
- Pruritis / rash only

- Consider symptomatic treatment
- Monitor patient more frequently as for moderate reactions
- If symptoms worsen, manage as for moderate / severe reaction

Not consistent with condition or history
Consider bacterial contamination and undertake appropriate investigations

Consistent with condition or history
Consider continuation of transfusion at slower rate and appropriate symptomatic treatment

Continue transfusion slower

Document in notes. Report only if recurrent

Discontinue transfusion

Inform medical staff

If transfusion is discontinued, DO NOT discard unit but return with administration set to transfusion lab
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Investigation and Management of Severe Transfusion Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>March 2015</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>March 2015</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>March 2018</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Stephen Bassey, Transfusion Manager</td>
</tr>
<tr>
<td>Contact details:</td>
<td>018720252500</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>A flowchart instructing how to deal with transfusion reaction along with a form to complete aiding investigation by the Transfusion laboratory</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Blood Transfusion, transfusion reaction, blood reaction</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>March 2018</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>Investigation and Management of Severe Transfusion Reaction V4</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Hospital Transfusion Team (17.02.15) CSSC Governance DMB</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Sally Rowe, Divisional Director CSSC</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Janet Gardner, Governance Lead CSSC</td>
</tr>
<tr>
<td>Signature of Executive Director giving approval</td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td>Publication Location (refer to Policy on Policies – Approvals and Ratification):</td>
<td>Internet &amp; Intranet ✓ Intranet Only</td>
</tr>
<tr>
<td>Document Library Folder/Sub Folder</td>
<td>Clinical / Haematology</td>
</tr>
<tr>
<td>Links to key external standards</td>
<td>BSQR, MHRA</td>
</tr>
<tr>
<td>Related Documents:</td>
<td>Blood Transfusion Policy</td>
</tr>
<tr>
<td>Training Need Identified?</td>
<td>No</td>
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</tbody>
</table>
### 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>
</tr>
</thead>
<tbody>
<tr>
<td>07/03/11</td>
<td>V2</td>
<td>Reviewed, no changes</td>
<td>Deb Thomas Lead Transfusion Practitioner</td>
</tr>
<tr>
<td>23/1/12</td>
<td>V4</td>
<td>Reformat of investigation form (v3 issued in lab prior to release on doc library)</td>
<td>Deb Thomas Lead Transfusion Practitioner</td>
</tr>
<tr>
<td>23/1/12</td>
<td>V5</td>
<td>Updated investigation form and flowchart</td>
<td>Nicki Jannaway Lead Transfusion Practitioner</td>
</tr>
</tbody>
</table>

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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

| Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as policy) (Provide brief description): |  |
| Director and service area: Pathology (Haematology) – applies Trust-wide | Is this a new or existing Policy? |
| Name of individual completing assessment: Nicki Jannaway / Deb Thomas | Telephone: 018720253093 |

1. **Policy Aim**
   - Who is the strategy / policy / proposal / service function aimed at?
   - To give staff at a glance information of how to deal with transfusion reactions.

2. **Policy Objectives**
   - To ensure a structured approach to dealing with transfusion reactions across the Trust

3. **Policy – intended Outcomes**
   - To ensure all transfusion reactions are reported and dealt with in the correct manner at the appropriate time

4. **How will you measure the outcome?**
   - Reactions are reviewed by senior transfusion staff and reported nationally through SHOT

5. **Who is intended to benefit from the policy?**
   - Frontline clinical staff

6a) **Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?**
   - Yes

   b) **If yes, have these groups been consulted?**
   - Yes

   c) **Please list any groups who have been consulted about this procedure.**
   - Transfusion Management Group

### 7. The Impact

Please complete the following table.

Are there concerns that the policy **could** have differential impact on:

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td><img src="" alt=" " /></td>
</tr>
<tr>
<td>Category</td>
<td></td>
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</tr>
<tr>
<td>----------------------------------------------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sex (male, female, transgender / gender reassignment)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race / Ethnic communities / groups</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability - learning disability, physical disability, sensory impairment and mental health problems</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion / other beliefs</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage and civil partnership</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</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 service redesign or development

8. Please indicate if a full equality analysis is recommended. [Yes] [No]

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

With regard to the stated procedure, all patients will be treated equally with regard to age, disability, beliefs, sex, race or sexuality

<table>
<thead>
<tr>
<th>Signature of policy developer / lead manager / director</th>
<th>Date of completion and submission</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Names and signatures of members carrying out the Screening Assessment | 1. Nicki Jannaway  
2. Deb Thomas |
|---------------------------------------------------------------------|-----------------------------------|

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

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

Signed _____________________

Date _____________________