Procedure for the Application of a Cast and its subsequent care

V1.3

May 2015
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1. **Introduction**

1.1. This policy has been developed to support all Trust staff in the appropriate application of a plaster cast or synthetic cast in adults and children.

1.2. This policy states the responsibilities of the Medical and Para-Medical team in the management of adults and children who require application of a cast in order to provide the most appropriate treatment dictated by the Medical Team in partnership with the patient or patient’s guardian/carers. It conforms to guidelines laid down in the following documents:

- RCHT Patient Identification Policy
- RCHT Consent to Treatment/Examination
- RCHT Standards of Record keeping
- RCHT Infection Control
- RCHT Anticoagulant Policy
- Paediatric Orthopaedic Self Directed Learning Pack
- Neurovascular Observations Chart

1.3. This version supercedes any previous versions of this document.

2. **Purpose of this Policy/Procedure**

2.1. The purpose of this document is to outline the Trust policy for the appropriate selection and application of a cast in all patients. It contains the responsibilities, procedures and documentation required to carry out the process. The policy becomes effective from the date of ratification.

2.2. To ensure that consideration is given to the appropriate selection and application of a cast in all patients, adults and young people, carers, children and their parents are entitled to expect to be fully involved in the planning of these procedures including an explanation of the process.

2.3. To ensure that any information collected from the patient follows a standardised format which is agreed by the multidisciplinary team.

3. **Scope**

3.1. This procedure applies to all staff working within the Royal Cornwall Hospital Trust. The purpose of the document is to ensure the safe and appropriate selection of casting material and equipment required for the safe and correct application of a cast as indicated by clinical treating teams and also includes the subsequent care of the cast up to its removal.

4. **Definitions / Glossary**

None

5. **Ownership and Responsibilities**

5.1. Staffs involved in the selection and application of a cast are required to follow the policy and be clear with regard to their individual roles and responsibilities within the process. A hard copy of this policy should be available
in all areas where casts may be applied or are cared for in order or staff to refer to it and sign to say that they have read and understood it. The policy will also be on the Document Library.

5.2. Role of the Managers

Line managers are responsible for:
- Ensuring staff have training to implement the policy
- Ensuring equipment is available.
- Ensuring sufficient resource to deal with any plaster problems that arise
- Sufficient plaster technician resource

5.3. Role of the Consultant Medical Staff and Medical Team (including plaster technicians)

The consultant staff and those to whom they delegate duties:

- Must discuss with the patient, child and guardian/ carer the reason for their cast, the treatment involved and likely outcome including discharge and expected length of stay and length of treatment and any interventions, including the chance of failure of conservative treatment requiring operative intervention where appropriate
- Have a responsibility to seek and record the views of all patients
- Ensure that the patient requiring a cast has appropriate review and the management plan is updated, if anything changes.
- Must see any patient urgently that is reporting a problem or arrange for their urgent/emergent review in a fracture clinic.
- Ensure that the patient requiring a cast has appropriate review and the management plan is updated, if anything changes.
- Must see any patient urgently that is reporting a problem or arrange for their urgent/emergent review in a fracture clinic.

5.4. Role of Nursing Staff

Nursing Staff involved in the care or application of a cast in adults and children should:

- Collect and clearly document accurate information and ensure plaster cast care plan is correctly filled in
- Liaise with medical staff and plaster technicians and follow instructions according to the individual needs of the patient
- Ensure that observations are carried out and documented in accordance with instructions from the medical team/ plaster technician
- Ensure that any high risk areas of skin/ other conditions are communicated to the individual applying the cast

Procedure for the application of a cast and its subsequent care
• Ensure that any cast/plaster problems are documented and communicated urgently to the appropriate individual

5.5. Role of Casting Advisory Group
5.6. This group will be made up of Consultant Orthopaedic surgeon, Tissue viability lead nurse, Trauma Co Ordinator, Orthopaedic Matron, Senior Staff Nurse in Fracture Clinic, ED Consultant, ED Matron, and Plaster Technician Representative.

5.7. This group will have responsibility for these guidelines, their review and updating in accordance with direction from the Medical Director and will be able to liaise with practitioners as required

6. Standards and Practice
6.1. A cast to support a limb or treat a fracture or other condition can be applied in a variety of ways using different materials. Casting can be used as a first aid measure, as a support after a surgical intervention to protect a limb and as treatment. Rarely they may be used to protect a limb from external damage.

6.2. Casts are not to be re-used once removed from the limb unless they have been specifically designed for that purpose. It is a consultant decision to re-use a cast and should be documented as such within the medical notes.

6.3. Prior to application of any cast a full and thorough assessment of the individual patient and their injury must be made. A thorough assessment of relevant physical or medical conditions that may be a risk factor for possible skin breakdown or other complication must be conducted and recorded. (It should be noted that a fracture itself or surgery can cause variable limb swelling and is automatically a risk factor for soft tissue problems.

6.4. In the presence of high risk or pre-existing skin compromise or damage, Tissue Viability and a Plaster technician should be informed at the earliest appropriate opportunity and where possible the cast application in this situation should be carried out/led by a plaster technician.

6.5. Explain the procedure to the patient and their carer/guardian where appropriate in order to give safety information and gain informed consent

6.6. Ensure the patient is comfortable by giving pain relief as prescribed in order to minimise discomfort during the procedure. (If applying a cast in the operating theatre for elective or trauma surgery, ensure the anaesthetic team is aware of the need for a cast)

6.7. Ensure that a plaster request form has been completed by the prescribing team. (This is not required in the operating theatre suite)

6.8. Prepare equipment by selecting the most appropriate casting material as indicated by the treating team/plaster request form. It is anticipated that in the majority of acute situations and in theatre, plaster of paris would be the most appropriate material. Synthetic casting material is only to be used by the plaster technicians or by the treating surgeon- this should be documented in the medical notes along with the reasoning.
6.9 If using a synthetic material or applying a cast in difficult circumstances, the help and advice of a plaster technician should be sought including requesting their help in the operating theatre.

6.10 Measure the limb/body region and cut stockinette, padding and plaster to the appropriate length to ensure that the correct size of cast is prepared to immobilise only the necessary number of unaffected joints. Cut stockinette to allow for digits as appropriate and add 5cm to allow for finishing the edges of the plaster cast.

6.11 Any wounds, including those requiring a vacuum dressing should be dressed by a registered practitioner and recorded in the medical notes to ensure continuity of care and compliance with RCHT standards for records and record keeping.

6.12 Use appropriate personal protective equipment (PPE) to minimise the risk of infection and to protect the patient. Drape the working surface - bed or trolley and the patient with protective sheeting to protect the patient, equipment and environment from the casting material which may stick to the skin, cause skin irritation or stain clothing.

6.13 Position the limb/body region correctly throughout the procedure to ensure the correct position of the plaster site to cast to maximise healing. (This may require assistance from members of the team including the play team for children).

6.14 Apply stockinette to limb/body region allowing trimming holes for digits (if appropriate) to prevent the plaster from sticking to the patients body hair and aiding comfort of the cast.

6.15 Apply padding smoothly to limb/body region with extra over bony prominences, ensuring there are no ridges or folds to aid comfort and to prevent damage to skin from pressure or rubbing from the cast.

6.16 Soak the casting material in the tepid water for the prescribed length of time according to manufacturer instructions to impregnate the material with water and to allow the required chemical reaction to take place to allow the cast material to harden.

6.17 Apply the casting material commencing distally, working proximally, smoothing during the process to ensure snug fitting to limb/body region accurately to ensure a smooth and tension free application which will minimise the risk of injury at pressure points and prevent venous congestion.

6.18 Fold Stockinette and padding over the ends of the casting material and secure with the last ‘round’ of the casting material to ensure tidy and smooth ends of cast to aid patient comfort and prevent rubbing of the cast and potential skin damage.

6.19 Elevate the limb/body region where appropriate to above heart level to assist reduction of swelling by aiding venous return.
6.20 It is the responsibility of the nursing/ward team to contact the treating team/on-call team urgently if there is a problem with any cast. In the post-operative situation, if the medical team/senior clinicians are unavoidably detained, the nurse in charge should consider emergent splitting of the back slab, using dressing scissors.

6.21 Record Patient identification details, type of material used, region applied to and any abnormalities/concerns within the patient’s notes. Ensure the treatment plan has been properly documented. If applied post-operatively, ensure there are adequate instructions with the post-operative note including need for neuro-vascular observations and length of time the patient needs to be observed prior to discharge if they are being discharged the same day.

6.22 Every Patient or their guardian/carer must be given RCHT plaster advice sheet (leaflet RCH 045) including the RCHT Advice on Driving where appropriate. The patient or their guardian/care must be given verbal information about their cast, its on-going care and what to do and who to contact if they have any concerns.

6.23 If a cast is applied prior to discharge ensure that an out-patient/fracture clinic appointment is in place prior to discharge and that this is recorded within the medical notes. ALL casts must be checked by one of the medical team prior to discharge.

7. **Ongoing Care of a Cast**

7.1 Prior to discharge the patient or their guardian/carer must have plaster care discussed with them and it should be checked to make sure that they have understood.

7.2 Patients, their Guardians or carers must be instructed to contact the plaster room/fracture clinic if they have any concerns during working hours.

7.3 Outside of normal working hours, any patient with concerns must be instructed to attend the Emergency Department

7.4 All cast problems must be discussed with and reviewed by the Orthopaedic Registrar on call or Consultant-on-call as soon as practicable.

7.5 Any cast problem must be taken seriously and addressed urgently and it is mandatory to remove the case where and when safe to do so and with the appropriate expertise in place. (It is recognised that rarely some patients present on multiple occasions requesting a change of cast for social reasons or perceived problems- any concern this situation must be addressed by an Orthopaedic Surgeon)

7.6 Any evidence of any tissue damage related to a cast or a change in degree of risk must be recorded within the medical notes and discussed with the Orthopaedic Consultant in charge of the patient’s care and the Tissue Viability team, regardless of patient location

7.7 Any soft tissue damage graded III or IV (EPUA Panel official grading) MUST be recorded as a clinical incident and investigated accordingly.
8. Dissemination and Implementation

8.1 This document will be published on the RCHT intranet site and will be available to all trust staff. Where appropriate additional paper copies will be made available to personnel without ready access to the intranet.

8.2 Once the document is finally approved, electronic copies will be held within the electronic documents library (DL2) and a link to the document provided within the daily bulletin all user e-mail.

8.3 This document supersedes previous documents related to the preparation, application and care of a cast.

8.4 Ongoing training and self-directed learning packs involving casting will make reference to the updated policy.

9. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Decision to cast and type of cast is recorded in the notes. Patients/Patients Carers are in receipt of plaster care documentation. Patients leaving the hospital have had their treatment explained to them and they have understood. Patients reporting plaster problems are dealt with promptly and seriously.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>The lead for monitoring and compliance will be the Governance lead for Orthopaedics, Rory Middleton.</td>
</tr>
<tr>
<td>Tool</td>
<td>Audit of medical notes and patient experience, to ensure compliance. Use of Datix</td>
</tr>
<tr>
<td>Frequency</td>
<td>This will be audited 3/12 after release of the document and then on an annual basis.</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Audits will be reported via the Divisional Audit and Guidelines meeting in the Directorate. Any serious concerns will be escalated to the senior nursing team and the Medical Director.</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Reports should be discussed at the appropriate Operational Board and any high risk areas highlighted and action plans developed to address any gaps identified.</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Lessons will be shared with all relevant stakeholders by presentation at departmental audit and to the MIU’s via the Emergency Department. Following liaison with relevant stakeholders, any required changes to practice will be discussed prior to being reflected in this policy and implementation clinically.</td>
</tr>
</tbody>
</table>
10. Updating and Review

10.1 The policy author is responsible for ensuring the policy is kept up to date, with reviews being carried out at least once every three years, reflecting changes in legislation where necessary.

10.2 Revisions can be made ahead of the review date when the procedural document requires updating. Where the revisions are significant and the overall policy is changed, the author should ensure the revised document is taken through the standard consultation, approval and dissemination processes.

10.3 Where the revisions are minor, e.g. amended job titles or changes in the organisational structure, approval can be sought from the Executive Director responsible for signatory approval, and can be re-published accordingly without having gone through the full consultation and ratification process.

10.4 Any revision activity is to be recorded in the Version Control Table as part of the document control process.

11 Equality and Diversity

11.1 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.

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

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Procedure for the Application of a Cast and its subsequent care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>14 05 15</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>14 05 15</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>14 05 18</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Mr M Butler, Consultant Orthopaedic Surgeon</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 253432</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>Guidance to staff managing the care of any patient requiring a cast.</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Plaster Cast, Cast Application, Plaster of Paris, Fibre Glass cast, Plaster Problem</td>
</tr>
<tr>
<td>Target Audience</td>
<td>RCHT PCH CFT KCCG</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>New Document</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>New Document</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Orthopaedic Directorate meeting, Divisional Governance meeting</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Duncan Bliss</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Not Required</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 Orthopaedics</td>
</tr>
<tr>
<td>Links to key external standards</td>
<td>None</td>
</tr>
</tbody>
</table>
Procedure for the application of a cast and its subsequent care

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>10 Jun 10</td>
<td>V1.1</td>
<td>Initial Issue</td>
<td>Michael Butler, consultant Orthopaedic Surgeon</td>
</tr>
<tr>
<td>22 04 15</td>
<td>V1.2</td>
<td>Multiple amendments from consultation . comments from Orthopaedic Consultant and Tissue Viability consultant Nurse</td>
<td>Michael Butler, consultant Orthopaedic Surgeon</td>
</tr>
<tr>
<td>14 05 15</td>
<td>V1.3</td>
<td>Amendments to Governance template. Formatting etc.</td>
<td>Kevin Wright, Divisional Nurse Surgery</td>
</tr>
</tbody>
</table>

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): |
| Procedure for the Application of a Cast and its subsequent care |

| Directorate and service area: Orthopaedic Department, ED and Minor Injuries Units | Is this a new or existing Policy? |
| New Policy |

| Name of individual completing assessment: M Butler | Telephone: 01872 253432 |

1. Policy Aim* | Safe Application of a Cast and its subsequent care |

2. Policy Objectives* | Safe Application of a Cast and its subsequent care |


4. *How will you measure the outcome? | Record keeping DATIX Audit tool |

5. Who is intended to benefit from the policy? | All patients requiring cast. |

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. | All consultant Surgeons, Registered Nurses and Plaster Technicians. Tissue Viability Nurse Consultant |

7. The Impact
Please complete the following table.

| Equality Strands: | Yes | No | Rationale for Assessment / Existing Evidence |
| Age |

| Sex (male, female, transgender / gender reassignment) | No | No |

Procedure for the application of a cast and its subsequent care
<table>
<thead>
<tr>
<th>Race / Ethnic communities / groups</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability - Learning disability, physical disability, sensory impairment and mental health problems</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Religion / other beliefs</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Marriage and civil partnership</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>No</td>
<td>No</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. No

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

Should be a positive improvement in all areas due to extra support and vigilance agreed in this policy

Signature of policy developer / lead manager / director
Michael Butler Consultant Orthopaedic Surgeon

Date of completion and submission
14 05 15

Names and signatures of members carrying out the Screening Assessment
1. Kevin Wright
2. Michael Butler

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 ____________________