Guideline for perineal repair

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Equality Impact Assessment	N/A if clinical guideline or procedure	Date:
Version	Number 3	
Status	Approved	
Publication date	22 December 2022	
Review date	21 December 2025	
Approval recommended by	Women's Business and Governance Meeting	Date: 18/11/2022
Approved by	CBU 3 Overarching Governance Meeting	Date: 21/12/2022
Distribution	Barnsley Hospital NHS Foundation Trust – intranet Please note that the intranet version of this document is the only version that is maintained. Any printed copies must therefore be viewed as "uncontrolled" and as such, may not necessarily contain the latest updates and amendments	

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1.0 Introduction

According to the RCOG 90% of women who have a vaginal birth will sustain some degree of perineal trauma. The reported rate of obstetric anal sphincter injuries or OASI (in singleton, term, cephalic, vaginal first births) is 5.9% (Richmond 2014).

2.0 Objective

To ensure that perineal trauma is assessed and repaired by an appropriately trained and competent individual and that after care and follow up is appropriate to the severity of the trauma sustained.

3.0 Scope

This guideline applies to all medical and midwifery staff working on the maternity unit.

4.0 Main body of the document

4.1 Classification of perineal tears

1st Degree: Injury to perineal skin and/or vaginal mucosa.

2nd Degree: Injury to perineal muscles but not involving the anal sphincter.

3rd Degree: Injury to the perineum and anal sphincter complex:

- 3a - less than 50% of external anal sphincter (EAS) or external sphincter thickness torn
- 3b - more than 50% external sphincter thickness torn
- 3c - external and internal anal sphincter (IAS) torn

4th Degree: Injury to the perineum and anal sphincter complex (external and Internal) and anal epithelium.

4.2 Episiotomy

Routine use of an episiotomy in spontaneous vaginal birth should not be carried out (NICE, 2017).

In the delivery of mature breech babies or in the use of forceps the use of episiotomy is recommended.

Where an episiotomy is performed it is recommenced a right mediolateral episiotomy using episcissors should be performed. Informed consent must be obtained. Where the operator is left handed or unable to use episcissors, Mayo scissors may be used.

<u>Protection of Perineum (see Appendix 2)</u>

Warm compression during the second stage of labour reduces the risk of OASI. RCOG (2015)

Manual perineal support using the operator's hand at crowning can be protective and reduce the incidence of OASI. RCOG (2015). See Appendix 1

4.3 Assessment of Genital Trauma

Initial examination can be done in the period immediately after birth, if genital trauma is identified further systematic assessment should be made, this should not interfere with mother - infant bonding unless there is PV bleeding which requires urgent attention.

A systematic assessment of the trauma should include:

- An initial explanation to the woman of what the assessment entails and confirmation of informed consent.
- Offer inhalation analgesia if needed.
- Ensure the woman is positioned so that the genital structures can be clearly identified – this may be lithotomy (consideration should be given to the woman's comfort and dignity and only maintain the position for as long as is necessary to facilitate the inspection and repair)
- Visual assessment of the perineum and lower vagina to include the apex, to assess the extent of any perineal trauma and any bleeding.
- Rectal examination to assess any damage to the external or internal sphincter (NICE, 2017).
- Following birth at home if there is perineal trauma that requires a medical review transfer to hospital in accordance with the Homebirth Guideline is required.

4.4 Perineal Repair

Perineal repair should be completed as soon as possible but within one hour of delivery, ideally within 30 minutes in order to reduce the risk of infection and blood loss. Good lighting is essential and an aseptic technique must be used.

The swab and needle count pre and post procedure should be completed as per the SOP: https://portal.bdgh-tr.trent.nhs.uk/SiteDirectory/TrustApprovedDocuments/TADDocs/Swab%20needle%20and%20instrument%20count%20for%20procedures%20undertaken%20following%20birth.pdf

Full documentation of the repair should be recorded in the perineal repair section of the patient records including documentation of needle and swab count pre and post procedure.

The woman should be informed of the extent of the trauma, method of repair and materials used. Following repair advice will be given concerning pain relief, hygiene, diet and pelvic floor exercises. This will be documented within the patient records.

4.4.1 Repair of 1st and 2nd Degree Perineal Tears and Episiotomies

- In cases of 1st degree trauma women should be informed that the wound should be sutured unless the skin edges are well opposed.
- In cases of 2nd Degree trauma they should be informed that the muscle layer should be repaired to improve healing.
- Discussion and consent will be documented on the perineal repair page of the patient records.

- In cases where women decline perineal repair accurate information about possible long- and short-term problems should be given, to enable them to make an informed choice. All information given must be documented within the patient record.
- Episiotomies, 1st and 2nd degree perineal tears can be sutured by any midwife or doctor who has been trained and assessed as competent in perineal repair and/or any midwife or doctor who is undergoing training and is being supervised by a competent midwife or doctor. They should seek assistance from the Senior Midwife or obstetrician if further support is needed.
- Referral to a more experienced health care professional should always be made if there is uncertainty regarding the nature or extent of the trauma sustained.

<u>Methods and materials to be used:</u>

- Inspect and infiltrate the perineum with 10 - 20mls of lidocaine 1% or equivalent (NICE 2017).
- For women with an allergy to lidocaine, consider using Bupivacaine – 0.5% or 0.25%. See Appendix 2 for the management of Local Anaesthetic Toxicity.
- If there is an epidural is in situ a top up may be given in accordance with Guidelines for epidural anaesthesia in labour.
- Braided 2.0 Polyglactin (Glicofil-lac) is the suture material of choice for 1st and 2nd degree tears/episiotomies.
- A continuous non-locking suture should be used for suturing of the vaginal wall and muscle layer (NICE 2017). Every effort should be made to avoid excessive tension. Subcuticular perineal skin closure is associated with less postoperative pain. (NICE 2017)
- The skin should be sutured with a continuous subcuticular technique. However, if the skin is opposed well following suturing of the muscle layer after repair of 2nd degree trauma, suturing it is at the discretion of the operator. (NICE 2017).
- Good anatomical alignment should be obtained and consideration given to the cosmetic results (NICE, 2017).
- Following repair, the operator must perform both rectal and vaginal examinations to confirm an intact anal sphincter, rectal mucosa and that sutures have not passed through the rectal mucosa. Ensure that all swabs have been removed from the vagina, counted and documented onto within the patient records.
- Non-steroidal anti-inflammatory drugs should be offered routinely following repair of 1st and 2nd degree tears unless contraindicated.
- If there is any suspicion of sphincter involvement it must be escalated for review by a senior obstetrician. All skin tears that extend to the anal margin are deemed 3rd degree tears until proven otherwise by the senior obstetrician.
- Only the secured tailed tampon should be used as a vaginal pack to facilitate appropriate visual access during suturing.
    - In cases where the woman is transferred to theatre with a vaginal tampon in situ, its presence must be drawn to the attention of the theatre staff verbally and documented on the Theatre Checklist and intrapartum notes.
    - **It is the responsibility of the healthcare professional who inserted the tampon to ensure removal of the tampon and to document its removal in the intrapartum notes.**
    - Theatre staff will dispose of the tampon and remove from theatres; this will be documented on the theatre care plan.

- If care of the woman is handed to another healthcare professional during the procedure this should be done using the SBAR handover tool and be clearly document within the patient records.

4.5 Repair of 3rd and 4th Degree Perineal Tears

- Only a clinician with sufficient formal training and experience should carry out the repairs (RCOG 2015). Doctors in training must have been assessed as competent to undertake the procedure.
- Discussion and consent will be documented on a consent form and the perineal repair page of the patient records.
- All 3rd and 4th degree repairs must be carried out in an operating theatre, under regional or general anaesthesia (RCOG, 2015).
- Full documentation of the repair should be recorded in the perineal repair section of the patient records.

<u>Methods and materials to be used</u>

- 3.0 polyglactin should be used to repair the anorectal mucosa as it may cause less irritation and discomfort than polydioxanone (PDS) sutures.
- When repair of the EAS and/or IAS muscle is being performed, either monofilament sutures such as 3-0 PDS or modern braided sutures such as 2-0 polyglactin can be used with equivalent outcomes.
- When obstetric anal sphincter repairs are being performed, the burying of surgical knots beneath the superficial perineal muscles is recommended to minimise the risk of knot and suture migration to the skin. (RCOG 2015)
- The torn anorectal mucosa will be repaired with sutures using either the continuous or interrupted technique.
- Where the torn internal anal sphincter (IAS) can be identified, it is advisable to repair this separately with interrupted or mattress sutures without any attempt to overlap the IAS.
- For repair of a full thickness external anal sphincter (EAS) tear, either an overlapping or an end-to-end (approximation) method can be used with equivalent outcomes. For partial thickness (all 3a and some 3b) tears, an end-to-end technique should be used. (RCOG 2015)
- Intra-operative broad-spectrum antibiotics should be given intravenously (IV) and continue orally for 7 days in the postoperative period (see below).
- All women should be prescribed stool softeners (i.e. Lactulose). Bulking agents should NOT be prescribed (RCOG 2015). Postnatal care should include monitoring of bowel movements.
- All women who have had repair of the anal sphincter will be offered:
    - Physiotherapy and pelvic floor exercises for 6-12 weeks. This is to be documented within the patient records.
    - An appointment in the Consultant clinic 6 - 12 weeks following the birth.
    - Referral to the Urogynaecology Clinic 3 months after delivery for a specialist review which will include an endoanal USS and anal manometry.
    - 6 and 12 months follow up by a Gynaecologist (if required),

4.6 Antibiotics

IV antibiotics must be given intra-operatively and continue orally for one week to reduce the incidence of post-operative infections and wound dehiscence.
The following intra-operative antibiotics are recommended in the Barnsley and Rotherham NHS Trust Antimicrobial policy for adults (2022)

First line treatment:
Intravenous Cefuroxime 1.5g single dose and Metronidazole 500mg single dose

Women with allergies to penicillin:
Non-life-threatening allergy – Intravenous Cefuroxime 1.5g single dose and Metronidazole 500mg single dose
Life threatening allergy – Intravenous Gentamicin 120mg single dose and Clindamycin 600mg single dose

Women with a history of MRSA:
Intravenous Teicoplanin 600mg single dose, **plus** Gentamicin 2mg/kg single dose **plus** Metronidazole 500mg single dose

Oral Antibiotics

First Line treatment
Co-Amoxiclav 625mg TDS

Women with allergies to penicillin
Clindamycin 300mg QDS

4.7 Management of birth after previous 3rd and 4th degree tears

- All pregnant women who sustained a previous 3rd/4th degree tear should be referred to a Consultant for antenatal assessment and counselling for mode of delivery.
- Investigations undertaken in the Urogynaecology clinic should be reviewed and counselling must depend upon the results, findings and recommendations from this clinic.
- Consideration should be given to size of the baby, its position and presentation.
- Discussion should include re-repair of the perineum and the woman's emotional state
- The role of prophylactic episiotomy in subsequent pregnancies is not known and therefore, an episiotomy should only be performed if clinically indicated.
- In general, continent women can have a have a normal vaginal birth. Women with faecal incontinence need to be assessed and considered for caesarean section.
- Where women have sustained an obstetric sphincter injury and are symptomatic or have had an abnormal endoanal ultrasound and or manometry, they should be given the option of an elective caesarean section (RCOG, 2015).

4.8 Locating a retained Swab/ Instrument

A retained swab or instrument is classified as a Never Event.
Never Events are serious patient safety incidents that can cause severe harm, disability or death.

Please refer to the Standard Operating Procedure (SOP) for swab/needle & instrument count for procedures undertaken following birth. https://portal.bdgh-tr.trent.nhs.uk/SiteDirectory/TrustApprovedDocuments/TADDocs/Swab%20needle%20and%20instrument%20count%20for%20procedures%20undertaken%20following%20birth.pdf

5.0 Roles and responsibilities

5.1 Midwives

To provide care for women in accordance with this guideline.

5.2 Obstetricians

To provide care for women in accordance with this guideline.

6.0 Associated documents and references

Standard Operating Procedure (SOP) for swab/needle & instrument count for procedures undertaken following birth. https://portal.bdgh-tr.trent.nhs.uk/SiteDirectory/TrustApprovedDocuments/TADDocs/Swab%20needle%20and%20instrument%20count%20for%20procedures%20undertaken%20following%20birth.pdf

Perineal tears and episiotomies in childbirth | RCOG

7.0 Training and resources

Training will be delivered as outlined in the Maternity Training Needs Analysis. This is updated on an annual basis.

8. Monitoring and audit

Any adverse incidents relating to the guideline for perineal repair will be monitored via the incident reporting system. Any problems will be actioned via the case review and root cause analysis action plans. The action plans are monitored by the risk midwife to ensure that improvements in care are made. The trends and any root cause analysis are discussed at the monthly risk meetings to ensure that appropriate action has been taken to maintain safety.

The guideline for perineal repair will be audited in line with the annual audit programme, as agreed by the CBU. The audit action plan will be reviewed at the monthly risk management meetings on a quarterly basis and monitored by the risk midwife to ensure that improvements in care are made.

9.0 Equality and Diversity

This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust is committed to an environment that promotes equality and embraces diversity in its performance as an employer and service provider. It will adhere to legal and performance requirements and will mainstream equality, diversity and inclusion principles through its policies, procedures and processes. This guideline should be implemented with due regard to this commitment.

To ensure that the implementation of this guideline does not have an adverse impact in response to the requirements of the Equality Act 2010 this policy has been screened for relevance during the policy development process and a full equality impact assessment is conducted where necessary prior to consultation. The Trust will take remedial action when necessary to address any unexpected or unwarranted disparities and monitor practice to ensure that this policy is fairly implemented.

This guideline can be made available in alternative formats on request including large print, Braille, moon, audio, and different languages. To arrange this please refer to the Trust translation and interpretation policy in the first instance.

The Trust will endeavor to make reasonable adjustments to accommodate any employee/patient with particular equality, diversity and inclusion requirements in implementing this guideline. This may include accessibility of meeting/appointment venues, providing translation, arranging an interpreter to attend appointments/meetings, extending policy timeframes to enable translation to be undertaken, or assistance with formulating any written statements.

9.1 Recording and Monitoring of Equality & Diversity

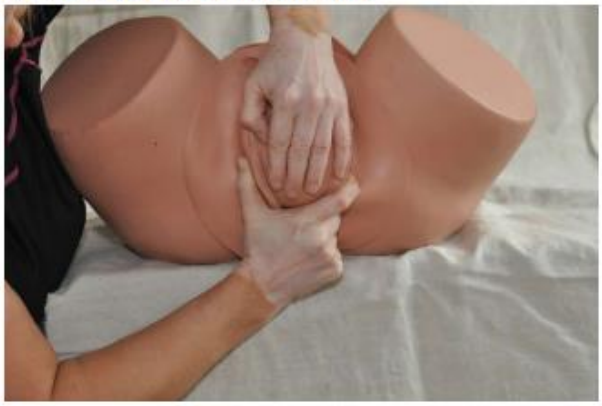
This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust understands the business case for equality, diversity and inclusion and will make sure that this is translated into practice. Accordingly, all guidelines will be monitored to ensure their effectiveness.

Monitoring information will be collated, analysed and published on an annual basis as part of Equality Delivery System. The monitoring will cover the nine protected characteristics and will meet statutory employment duties under the Equality Act 2010. Where adverse impact is identified through the monitoring process the Trust will investigate and take corrective action to mitigate and prevent any negative impact.

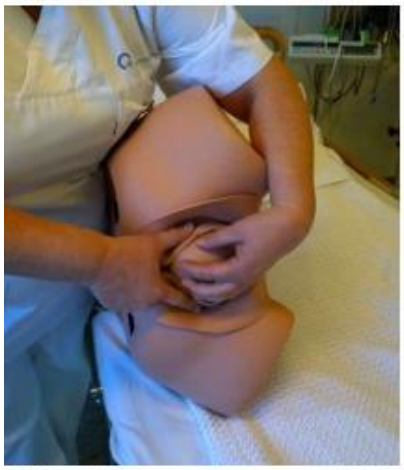
Appendix 1 – Images of manual perineal protection (MPP) in various birthing positions. RCOG (2018)

Recumbent/semi-recumbent



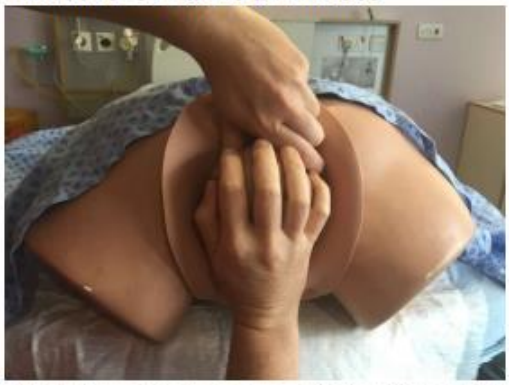
1 MPP in the recumbent or semi-recumbent position / Image courtesy of Dr. Katariina Laine, University of Oslo, Norway.

Lateral



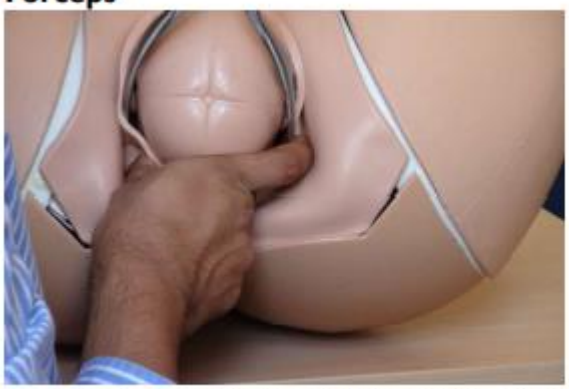
2 MPP in the lateral position / Image courtesy of Dr. Katariina Laine, University of Oslo, Norway.

'All fours' or hands and knees



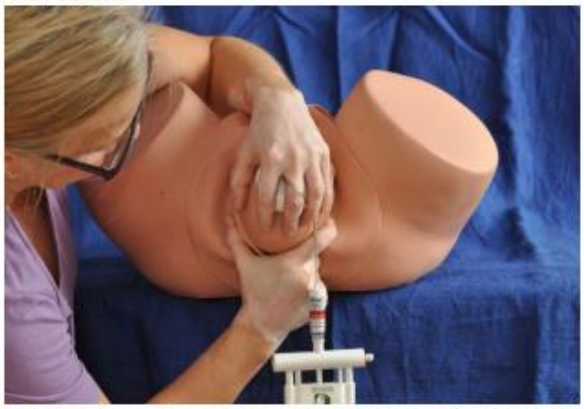
3 MPP in all fours position / Image courtesy of Guy's and St Thomas' NHS Foundation Trust

Forceps



4 MPP while using forceps / Image courtesy of Croydon University Hospitals NHS Trust.

Ventouse



5 MPP while using a ventouse / Image courtesy of Dr. Katariina Laine, University of Oslo, Norway.

Appendix 2 – AAGBI Safety Guideline Management of Severe Local Anaesthetic Toxicity:

AAGBI Safety Guideline

Management of Severe Local Anaesthetic Toxicity

1 Recognition

Signs of severe toxicity:

- Sudden alteration in mental status, severe agitation or loss of consciousness, with or without tonic-clonic convulsions
- Cardiovascular collapse: sinus bradycardia, conduction blocks, asystole and ventricular tachyarrhythmias may all occur
- Local anaesthetic (LA) toxicity may occur some time after an initial injection

2 Immediate management

- Stop injecting the LA
- Call for help
- Maintain the airway and, if necessary, secure it with a tracheal tube
- Give 100% oxygen and ensure adequate lung ventilation (hyperventilation may help by increasing plasma pH in the presence of metabolic acidosis)
- Confirm or establish intravenous access
- Control seizures: give a benzodiazepine, thiopental or propofol in small incremental doses
- Assess cardiovascular status throughout
- Consider drawing blood for analysis, but do not delay definitive treatment to do this

3 Treatment

IN CIRCULATORY ARREST

- Start cardiopulmonary resuscitation (CPR) using standard protocols
- Manage arrhythmias using the same protocols, recognising that arrhythmias may be very refractory to treatment
- Consider the use of cardiopulmonary bypass if available

GIVE INTRAVENOUS LIPID EMULSION
(following the regimen overleaf)

- Continue CPR throughout treatment with lipid emulsion
- Recovery from LA-induced cardiac arrest may take >1 h
- Propofol is not a suitable substitute for lipid emulsion
- Lidocaine should not be used as an anti-arrhythmic therapy

WITHOUT CIRCULATORY ARREST
Use conventional therapies to treat:

- hypotension,
- bradycardia,
- tachyarrhythmia

CONSIDER INTRAVENOUS LIPID EMULSION
(following the regimen overleaf)

- Propofol is not a suitable substitute for lipid emulsion
- Lidocaine should not be used as an anti-arrhythmic therapy

4 Follow-up

- Arrange safe transfer to a clinical area with appropriate equipment and suitable staff until sustained recovery is achieved
- Exclude pancreatitis by regular clinical review, including daily amylase or lipase assays for two days
- Report cases as follows:
  in the United Kingdom to the National Patient Safety Agency (via **www.npsa.nhs.uk**)
  in the Republic of Ireland to the Irish Medicines Board (via **www.imb.ie**)

If Lipid has been given, please also report its use to the international registry at **www.lipidregistry.org**. Details may also be posted at **www.lipidrescue.org**

Your nearest bag of Lipid Emulsion is kept .....

IMMEDIATELY

Give an initial intravenous bolus injection of 20% lipid emulsion **1.5 ml.kg^{-1}** over 1 min

AND

Start an intravenous infusion of 20% lipid emulsion at **15 ml.kg^{-1}.h^{-1}**

AFTER 5 MIN

Give **a maximum of two** repeat boluses (same dose) if:

- cardiovascular stability has not been restored **or**
- an adequate circulation deteriorates

Leave **5 min** between boluses

A maximum of **three** boluses can be given (including the initial bolus)

AND

Continue infusion at same rate, but:

Double the rate to **30 ml.kg^{-1}.h^{-1}** at any time after 5 min, if:

- cardiovascular stability has not been restored or
- an adequate circulation deteriorates

Continue infusion until stable and adequate circulation restored or maximum dose of lipid emulsion given

Do not exceed a maximum cumulative dose of 12 ml.kg^{-1}

An approximate dose regimen for a 70-kg patient would be as follows:

IMMEDIATELY

Give an initial intravenous bolus injection of 20% lipid emulsion 100 ml over 1 min

AND

Start an intravenous infusion of 20% lipid emulsion at 1000 ml.h^{-1}

AFTER 5 MIN

Give a **maximum of two** repeat boluses of 100 ml

AND

Continue infusion at same rate but **double** rate to 2000 ml.h^{-1} if indicated at any time

Do not exceed a maximum cumulative dose of 840 ml

This AAGBI Safety Guideline was produced by a Working Party that comprised:
Grant Cave, Will Harrop-Griffiths (Chair), Martyn Harvey, Tim Meek, John Picard, Tim Short and Guy Weinberg.

This Safety Guideline is endorsed by the Australian and New Zealand College of Anaesthetists (ANZCA).

Appendix 3
Glossary of terms
OASI – Obstetric anal sphincter injuries
EAS – External anal sphincter
IAS – Internal anal sphincter
IV – intravenous
TDS- three times a day
QDS – four times a day

Appendix 4 (must always be the last appendix)
Maintain a record of the document history, reviews and key changes made (including versions and dates)

Version	Date	Comments	Author

Review Process Prior to Ratification:

Name of Group/Department/Committee	Date
Reviewed by Maternity Guideline Group	
Reviewed at Women's Business and Governance meeting	
Approved by CBU 3 Overarching Governance Meeting	
Approved at Trust Clinical Guidelines Group	
Approved at Medicines Management Committee (if document relates to medicines)	N/A

Trust Approved Documents (policies, clinical guidelines and procedures)

Approval Form

Please complete the following information and attach to your document when submitting a policy, clinical guideline or procedure for approval.

Document type (policy, clinical guideline or procedure)	Guideline
Document title	Guideline for perineal repair
Document author (Job title and team)	Practice Educator Midwife Consultant Obstetrician
New or reviewed document	Reviewed
List staff groups/departments consulted with during document development	
Approval recommended by (meeting and dates):	WB&G 18/11/22 CBU3 B&G 21/12/22
Date of next review (maximum 3 years)	21/12/25
Key words for search criteria on intranet (max 10 words)	Tear, 3rd degree, 4th degree, episiotomy, suturing
Key messages for staff (consider changes from previous versions and any impact on patient safety)	
I confirm that this is the <u>FINAL</u> version of this document	**Name: Molly Claydon** **Designation: Governance Support Co-ordinator**

FOR COMPLETION BY THE CLINICAL GOVERNANCE TEAM

Approved by (group/committee): **CBU3 Business and Governance**

Date approved: 21/12/22

Date Clinical Governance Administrator informed of approval: 22/12/22

Date uploaded to Trust Approved Documents page: 22/12/22