Brighton and Sussex University Hospitals NHS Trust

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Policy for the flushing of Seldinger small bore chest drains by Nurses on the Respiratory Wards

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Name of responsible committee/individual:	Clinical Policies Steering Group
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Contents

1 Introduction

1.1 The aim of this policy is to guide appropriately trained registered nurses in the safe practice of administering a 0.9% Sodium Chloride flush into **small bore chest drains.** This procedure is necessary to prevent the chest drainage system becoming blocked rendering it ineffective (British Thoracic Society (BTS) 2010). The small bore chest drain should be flushed every six hours.

1.2 The flushing of chest drains should only be performed by nurses on Respiratory wards (Pyecombe/ Catherine James/ Egremont) who have undertaken training and assessed competent. The Respiratory Consultant / Specialist Registrar (SpR) will assess the senior nurse / clinical educator in each area in their practice who will then be responsible for the assessment of other registered nurses in the ward team.

2 Purpose

The purpose of this policy and procedure is to ensure a safe process for the flushing of small bore chest drains.
This policy does not apply to large bore inserted chest drains (Argyle drains).

3 Definitions

The types of small bore chest drains used on the respiratory ward will be radiologically inserted pigtail drains or small bore drains inserted using the Seldinger technique (often referred to as Seldinger drains – using dedicated drainage systems such as Rocket or Portex).

4 Responsibilities, Accountabilities and Duties

4.1 Chief Executive and Trust Management Board have overall responsibility for ensuring that the trust has the necessary management systems in place to enable the effective implementation of this policy

4.2 Directorate management team

They are responsible for ensuring that all clinical staff working within their departments are made aware of the policy; that any training and competency programme is completed by all clinical staff who are responsible for the flushing of Seldinger chest drains and that they adhere to the principles of the Mental Capacity Act Policy; that incidents are reported using Datix and results of the investigation are drawn to the attention of the Directorate Leads; that audits required to check compliance are completed and the findings fed back to the directorate Governance Committees for action if required.

4.3 Ward Managers, Department Managers and Consultant Managers

4.3.1 To ensure that relevant registered clinical staff receive training and complete competence in the flushing of chest drains (Appendix 1)
4.3.2 To ensure that they keep a record of all staff who have received training
4.3.3 To ensure all staff maintain their competence This should be reviewed at annual appraisal.
4.3.4 It is the responsibility of the Respiratory Consultant/SpR to perform the initial assessment of senior ward nurse/ clinical educator. The senior nurse and

clinical educator will then assess other trained ward nurses in performing the procedure

4.4 Responsibilities of trained staff

4.4.1 To follow relevant infection prevention policies and guidelines, especially universal precautions and aseptic non touch technique.

4.4.2 It is the responsibility of the registered nurse/ doctor undertaking the procedure to ensure the patient's safety and well being, in accordance with this policy and procedure This also includes meeting any additional communication or language needs the patient may have.

5.0 Policy

This section outlines the procedure to flush a Seldinger Chest Drain.

5.1 Equipment Required

Sterile gloves
Blue Dressing tray
Sterile 0.9% Sodium Chloride 20mls
20 ml syringes luer lock
2% Chlorhexidine wipes
Sterile red bung to cap 3 way tap

5.2 Procedure

Action	Rationale
Check patient prescription sheet is completed regarding chest drain flush (ie frequency and volume of flush) by medical team and that type of chest drain is clearly identified (Appendix 2)	To ensure procedure appropriately prescribed.
Check patient's identity band	To ensure correct patient
Explain the procedure to the patient. The patient will agree /consent to the procedure.	The patient will be able to cooperate and consent to the procedure.
Create privacy	This will also help the patient to relax. To maintain privacy and dignity
Take the patient's baseline observations (including pain score)	To form a baseline to assess changes in pulse rate/blood pressure during the procedure
Wash hands and put on disposable gloves and apron.	To minimise cross infection
Clean and prepare procedure tray	To create a sterile field for equipment and flush

Observe drain site	Observe for drain placement and signs of infection / inflammation
Draw up 20mls sterile 0.9% Sodium Chloride	For use in flushing the chest drain
Turn 3 way tap to closed position to outside air	To stop air from penetrating into the chest drain from tap
Remove red cap and clean entry port on 3 way tap with antiseptic wipe (2% Chlorhexideine)	To reduce risks of infection to the chest drain
Attach sterile syringe to open port and turn to open position (it should also be closed off to drainage bottle)	To open port and facilitate flushing of chest drain
Slowly administer 0.9% Sodium Chloride	Drain should flush with gentle pressure
Observe that 0.9% Sodium Chloride enters chest drain	To observe for leakage around drain site
If drain is unable to flush, consult respiratory team	To minimise discomfort to patient if unable to flush
Turn tap back to drainage position to bottle, remove syringe and reapply new red cap	To allow normal drainage of chest drain and ensure connections are secure and airtight
Ask patient to cough or take deep breath	To check if drain functioning. The water in drain should swing/bubble
Dispose of equipment appropriately	To minimise cross infection
Document in the patient's prescription sheet with outcomes, date, time and person who performed procedure (Appendix 2)	To ensure that procedure complete and required outcome achieved
Recheck patient comfort, observations and pain score	To ensure patient comfort and assess for any change from baseline
Document ongoing care / fluid drainage on the underwater seal chest drain chart (Appendix 3)	To facilitate monitoring and assessment of patient and ongoing need for the chest drain

6 Training Implications

6.1 All staff working in respiratory ward should be trained in the management of chest drains, study sessions will be held regularly in the clinical area to facilitate this training. The frequency will depend on staff turnover, training needs identified by the ward manager / practice educator

6.2 Any staff undertaking the procedure to flush a chest drain must be trained and assessed competent prior to undertaking the procedure (Appendix 1)

6.3 Staff must maintain their competence and must be discussed within annual appraisal process.

6.4 The ward manager should keep records of competencies achieved by staff.

7 Monitoring Arrangements

Measurable Policy Objective	**Monitoring/ Audit method**	**Frequency**	**Responsibility for performing the monitoring**	**Where is monitoring reported and which groups/ committees will be responsible for progressing and reviewing action plans**
• Number of chest drains(including types) on respiratory ward • No of pts requiring flushing • No of datix of incidents relating to chest drains on respiratory ward • Number staff competent in flushing chest drains • Annual review of prescriptions	Ward clerk to keep database from senior nursing staff Investigated by ward manager	Ongoing – monthly review of numbers Monthly Annual	Ward manager and lead respiratory consultant	Report to lead respiratory consultant Speciality medicine Medical / respiratory Safety and Quality meeting

8 Due regard assessment screening

As an NHS organisation, BSUH is under a statutory duty to set out arrangements to assess and consult on whether this policy and function impacts on race equality and human rights.

This policy does not discriminate against any groups on the basis of age, disability (including carers), gender, gender identity, marriage and civil partnership, pregnancy and maternity status, religion or belief, race / ethnicity, sexual orientation or social inclusion / health inequalities (See Appendix 6).

9 Links to other Trust policies

Infection Control Policies: Hand Hygiene: Standard Precautions Policy; Aseptic Non-Touch Technique (ANTT) including Wound Care; Waste Management Policy and Procedure

Policy for the Insertion and Management of Chest Drains in Adults

Patient Observation policy

Supporting Staff and Patients Language and Communication Needs Policy

Consent policy

10 References

Havelock, T. et al, Pleural procedures and thoracic ultrasound: British Thoracic Society pleural disease guideline 2010 *Thorax* 2010; **65** (suppl2):ii61-ii76 Available online at: http://www.brit-thoracic.org.uk/Portals/0/Guidelines/PleuralDiseaseGuidelines/Pleural%20Guideline%202010/Pleural%20disease%202010%20pleural%20procedures.pdf

Marsden manual 9th Edition (2015) Chapter 9, Respiratory care, Chest Drains http://www.rmmonline.co.uk/manual/c09-sec-0145#c09-fea-0056

Appendix :1 Flushing of Seldinger drain competency tool

Name of Nurse: **Ward:**

Name of Assessor :

	Criteria for achievement	Date of self assessment and level of competence identified	Competence achieved Nurse and assessor signature and date
1	Can describe normal anatomy and physiology of the lungs and discuss how this is affected by the presence of a chest drain		
2	Can discuss the indication and principles for flushing seldinger drain		
3	Able to discuss contraindications for flushing a chest drain		
4	Can discuss the complications of flushing chest drains		
5	Can discuss the reason for chest drain insertion and rationale for flushing the chest drain in this patient		
6	Demonstrates the preparation for the chest flushing procedure : • Checks prescription • Gains consent for procedure • Performs baseline observations • Prepares equipment and environment		
7	Demonstrates the flushing of the chest drain in accordance with BSUH policy including documentation		
8	Is able to discuss the procedure performed and potential complications. Can discuss how these can be identified and managed. Can discuss action to be taken if resistance is felt when flushing chest drain Can discuss what action should be taken if there is no “swinging” of fluid in the tubing after flushing.		
9	Can discuss how the patient should be monitored post procedure including frequency of observations and drainage of chest fluid		

Appendix 2 : Prescription

(Attach patient sticker)
Name:
Trust ID
DOB

Prescription for flushing of seldinger chest drains

This should be attached to the patient drug prescription chart

Date……
Time…….
Name of prescribing doctor…….
Signature…….. Contact Number:

Type of chest drain……..
Date inserted ……
Confirm three way tap or flushing port attached Yes / No
Flush to be used : 20 mls 0.9 % Sodium Chloride
Prescription to be reviewed on daily ward round

Date													
06													
08													
12													
14													
18													
22													
24													

COMMENTS

- **Only nurses who have completed the flushing of chest drain competency may undertake flushing of chest drains.**
- **Chart to be initialled on completion of flush**
- **Ensure drains are checked every two hours.**

Appendix 3

Brighton and Sussex University Hospitals NHS Trust

UNDERWATER SEAL CHEST DRAIN CHART

Position of drain:	Patient Name: *Or attach PAS label*
Date of insertion: Date drainage bottle ☐	Trust ID: Date of Birth:

CHANGE UNDERWATER SEAL BOTTLE
If ¾ full *or* every 7 days in accordance with manufacturers instructions

Date	Time	Colour	Amount drained (mls)	Cumulative Total	Bubbling (B) Swinging (Sw) Static (St) Swing on cough (C)	Suction (per cm of water) if applicable	Underwater Seal Bottle changed (time/date)	Staff signature

Date	Time	Colour	Amount drained (mls)	Cumulative Total	Bubbling (B) Swinging (Sw) Static (St) Swing on cough (C)	Suction (per cm of water) if applicable	Underwater Seal Bottle changed (time/date)	Staff signature

Appendix 4 Due regard assessment screening

		Yes/No	Comments
1.	**Does the document/guidance affect one group less or more favourably than another on the basis of:**		
	• Age	No	
	• Disability	No	Where there ian overseas language or additional communication need, staff will meet them in line with the relevant policy listed in section 9.
	• Gender	No	
	• Gender identity	No	
	• Marriage and civil partnership	No	
	• Pregnancy and maternity	No	
	• Race	No	Where there is an overseas language or additional communication need, staff will meet them in line with the relevant policy listed in section 9.
	• Religion	No	
	• Religion or belief	No	
	• Sexual orientation, including lesbian, gay and bisexual people	No	
2.	**Is there any evidence that some groups are affected differently and what is/are the evidence source(s)?**	No	
3.	**If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?**	N/A	
4.	**Is the impact of the document/guidance likely to be negative?**	No	
5.	**If so, can the impact be avoided?**	N/A	
6.	**What alternative is there to achieving the document/guidance without the impact?**	N/A	
7.	**Can we reduce the impact by taking different action and, if not, what, if any, are the reasons why the policy should continue in its current form?**	N/A	
8.	**Has the policy / guidance been assessed in terms of Human Rights to ensure service users, carers and staff are treated in line with the FREDA principles (fairness,**	Yes	

	respect, equality, dignity and autonomy)		

For advice in respect of answering the above questions, please contact *Denise Hinge, Nurse Consultant Critical Care*.