

PLEURAL IRRIGATION

Department / Service:	Respiratory Medicine
Originator:	Heather Lloyd
Accountable Director:	Heather Lloyd
Approved by:	Respiratory Directorate Meeting
Date of Approval:	4 th April 2023
Review Date:	4 th April 2026
This is the most current document and should be used until a revised version is in place	
Target Organisation(s)	Worcestershire Acute Hospitals NHS Trust
Target Departments	Respiratory Wards
Target staff categories	Respiratory medical and nursing staff

Plan Overview:

Brief overview of document

Pleural infection carries a high mortality rate. Standard medical management involves chest tube drainage and antibiotics. Intra-pleural irrigation with normal saline has been shown to improve pleural fluid drainage and reduce referrals for surgery in pleural infection (Hooper et al 2015).

The instillation of intra-pleural saline irrigation should be limited to qualified nursing and medical staff who have undergone relevant training and a period of assessment to certify competence, and should be working on a respiratory ward where adult patients with chest drains are a regular occurrence. The competency will require at least 3 saline irrigations supervised by either the ward Registrars, pleural nurses or a nurse who possesses a qualification in assessment/mentoring.

Key amendments to this Document:

Date	Amendment	By:
April 2023	New document approved	Respiratory Directorate

PLEURAL IRRIGATION

Introduction

Chest drains may require intra-pleural irrigation with normal saline to improve pleural fluid drainage in some patients with pleural infection. The decision is made by the responsible respiratory physician, prescribed on the prescription chart and documented in the medical notes. Irrigation is usually prescribed three times per day for a total of nine irrigations. It is usually considered for treatment of pleural infection when tPA-DNase or surgery is not suitable.

Ensuring safe practice

Nursing elements of the procedure are to be carried out by a Registered Nurse (RN) Adult, who is a band 5 or above and has worked in a respiratory area for a minimum of 6 months. The RN will have undertaken a period of assessment to certify competence and must be working in an area where adult patients with chest drains are a regular occurrence (ie; at least 5 drains per month).

The competency will require at least 3 intra-pleural irrigations supervised by either the ward registrars, pleural nurses or a nurse who possesses this competency and has the relevant qualification in teaching/assessing.

Patient group covered

Adults with a chest drain who have a medical/surgical prescription for intra-pleural irrigation.

PRESCRIPTION

250mls 0.9% sodium chloride to be given intrapleurally (by free drainage) 3 times a day for 3 days. After one hour disconnect and return chest drain to free drainage or suction if prescribed.

PROCEDURE

Equipment required:

Dressing trolley

Sterile field

Sterile gloves

Apron

Chloroprep swab

250ml bag 0.9% normal saline

1x infusion giving set

Thoracic suction

Drip stand

PROCEDURE	RATIONALE	WHO
Assess indication for procedure (clinical evidence of pleural infection) and ensure prescribed on prescription chart.	As per Trust medicines policy	RN
Clean the trolley as per Trust policy, place equipment on bottom of trolley.	To prevent cross contamination	RN
Identify patient; check name, date of birth and hospital number match those on the prescription chart and wristband.	To ensure correct patient identified	RN
Explain procedure to patient and provide reassurance.	To gain patients consent	RN
Put on apron and decontaminate hands as per Trust policy.	To prevent cross infection/contamination	RN
Examine the chest drain and its dressing	To ensure the drain is not dislodged	RN
Wash hands and assemble equipment as required on top of trolley.	As per Trust policy	RN
If not already present attach a 3-way tap to the chest drain using sterile gloves	To enable delivery of irrigation	RN
Cleanse the 3-way tap port using chloroprep swab.	To prevent cross contamination	RN
Attach giving set to bag of normal saline, run through line and suspend from a drip stand. (Check saline and expiry date with second nurse)	To enable safe delivery of irrigation.	RN
Ensure 3-way tap turned off to patient and attach giving set to the free port. Close the tap to the chest drain bottle (open to saline) and administer the saline into the pleural space by gravity	To facilitate delivery of irrigation	RN
After one hour, close the 3-way tap to the patient and disconnect the giving set using aseptic technique. Turn the 3-way tap open to the drainage bottle to allow free drainage.	To enable pleural and irrigation fluid drainage	RN
Apply thoracic suction following the irrigation if prescribed (up to 2kPa)	To encourage drainage	RN
Ensure patient is left in a comfortable position with drain placed below chest level and on the same side as insertion.	To aid drainage and patient comfort	RN
Dispose of all equipment post procedure as per Trust policy	To prevent cross contamination	RN
Document the procedure as per Trust policy by signing the prescription chart and documenting on the chest drain observation chart. Inform doctor if any complications and continue to monitor fluid drainage as per chest drain observation chart specifications.	For accurate record keeping	RN

References:

Hooper CE, Edey AJ, Wallis A et al (2015) Pleural Irrigation Trial (PIT): a randomised controlled trial of pleural irrigation with normal saline versus standard care in patients with pleural infection *European respiratory journal* 46: 456-463

WAHT-CG-580 Medicines Policy (Policy on the purchasing, prescribing, supply, storage, administration and control of medicines).

WAHT-INF-048 Policy for Aseptic Non Touch Technique

Worcestershire Acute Hospitals NHS Trust ASSESSMENT OF COMPETENCY FOR PERFORMING INTRA-PLEURAL IRRIGATION

ASSESSMENT SPECIFICATION: The candidate should be able to demonstrate competence in the administration of intra-pleural irrigation using the following knowledge evidence and performance criteria

KNOWLEDGE EVIDENCE: The candidate should be able to:
a) Name the anatomy of the chest and describe the reasons for performing pleural irrigation.
b) List potential problems associated with performing pleural irrigation
c) Demonstrate the correct practice in performing pleural irrigation.
d) Discuss the principles of safe practice with regards to chest drain management
e) Discuss the role, responsibility and accountability with reference to the Code of Professional Conduct

You need a mentor who has been deemed competent in performing pleural irrigation; either a specialist ANP or band 6 or above nurse who possesses this competency.

If the candidate still feels they lack competence after supervised practice of at least 3 pleural irrigations, they should seek further training or supervised practice.

Clinical Supervisor (please print): Signature: Date:

Candidate (please print): Signature: Date:

Ward/Department: Directorate/ PCT: Location:

Comments by Supervisor

Comments by Candidate:

When you have completed your competencies a copy should be retained as evidence of your competency for your professional portfolio and a PHOTOCOPY of this form sent to your manager for your personal folder and to Training & Development, Charles Hastings Education Centre, WRH.

Worcestershire Acute Hospitals NHS Trust

ASSESSMENT OF COMPETENCY FOR PERFORMING INTRA-PLEURAL IRRIGATION

PERFORMANCE CRITERIA	COMPETENT- Mentor Initial & Date									
	1	2	3	4	5	6	7	8	9	10
1 Patient Preparation										
Correct patient identified and prescription checked										
Explanation of procedure										
2 Preparation of equipment										
Correct equipment assembled										
3 Procedure										
Ensure patient in comfortable position										
Ensure patent chest drain with 3-way tap present (may require flush)										
Put on apron and wash hands										
Open equipment on top of dressing trolley										
Cleanse 3-way tap with chloroprep swab										
Attach giving set to 250ml bag of normal saline, run through line and suspend from drip stand										
Attach giving set to free port of 3 way tap										
Administer saline into pleural space by gravity										
After 1 hour close 3-way tap to patient and disconnect giving set										
Apply cap to port										
Apply thoracic suction if prescribed										
4 Correct Disposal of all equipment/sharps										
5 Patient reassured and left comfortable										
6 Document procedure in chest drain observation chart and ensure prescription signed										

Procedure

Monitoring Tool

This should include realistic goals, timeframes and measurable outcomes.

How will monitoring be carried out?

Who will monitor compliance with the guideline?

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: <i>(Responsible for also ensuring actions are developed to address any areas of non-compliance)</i>	Frequency of reporting:
	WHAT?	HOW?	WHEN?	WHO?	WHERE?	WHEN?
	Ensure correct patient and documentation of procedure	Spot checks of chest drain observation and prescription charts	4 times a year	Pleural nurses/ward sisters	Respiratory physicians	4 times a year

Contribution List

This key document has been circulated to the following individuals for consultation;

Designation	
Dr C Hooper	Dr S Tan
Dr A James	B Gondalia (Resp pharmacist Alex)
Dr A Crawford	F Barrington (Resp pharmacist WRH)
Dr J Johnstone	Mini Isac (ward manager ARU WRH)
Dr B Barker	Clare Alexander (Matron WRH)
Dr K Cusworth	Marion Freeman (Matron Alex)
Dr A Lal	Lisa Walker (ward manager Alex)

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Respiratory Directorate Meeting

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and included as an appendix to key document when submitted to the appropriate committee for consideration and approval.

Please complete assessment form on next page;



Herefordshire & Worcestershire STP - Equality Impact Assessment (EIA) Form
Please read EIA guidelines when completing this form

Section 1 - Name of Organisation (please tick)

Herefordshire & Worcestershire STP		Herefordshire Council		Herefordshire CCG	
Worcestershire Acute Hospitals NHS Trust	X	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust		Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	Heather Lloyd
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Details of individuals completing this assessment	Name	Job title	e-mail contact
	Heather Lloyd	Pleural Lead Nurse	Heather.lloyd5@nhs.net
Date assessment completed	20/05/2022		

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	Title: Procedure for performing pleural irrigation			
What is the aim, purpose and/or intended outcomes of this Activity?	Guideline of the procedure of administering intra-pleural irrigation.			
Who will be affected by the development & implementation of this activity?	<input type="checkbox"/> Service User	<input type="checkbox"/> Staff		
	<input checked="" type="checkbox"/> Patient	<input type="checkbox"/> Communities		
	<input type="checkbox"/> Carers	<input type="checkbox"/> Other _____		
	<input type="checkbox"/> Visitors	<input type="checkbox"/>		
Is this:	<input type="checkbox"/> Review of an existing activity <input checked="" type="checkbox"/> New activity <input type="checkbox"/> Planning to withdraw or reduce a service, activity or presence?			

What information and evidence have you reviewed to help inform this assessment? (Please name sources, eg demographic information for patients / services / staff groups affected, complaints etc.)	PIT (2015) Peer consensus Literature review Pending Pleural procedure statement (BTS)
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	Circulated to wider group for comments.
Summary of relevant findings	Received comments actioned

Section 3

Please consider the potential impact of this activity (during development & implementation) on each of the equality groups outlined below. **Please tick one or more impact box below for each Equality Group and explain your rationale.** Please note it is possible for the potential impact to be both positive and negative within the same equality group and this should be recorded. Remember to consider the impact on e.g. staff, public, patients, carers etc. in these equality groups.

Equality Group	Potential <u>positive</u> impact	Potential <u>neutral</u> impact	Potential <u>negative</u> impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Age		X		The guideline takes age into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline
Disability		X		The guideline takes disability into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Gender Reassignment		X		The guideline takes gender reassignment into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Marriage & Civil Partnerships		X		The guideline takes marriage and civil partnership into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Pregnancy & Maternity		X		The guideline takes pregnancy and maternity into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.

Equality Group	Potential <u>positive</u> impact	Potential <u>neutral</u> impact	Potential <u>negative</u> impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Race including Traveling Communities		X		The guideline takes race including travelling communities into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Religion & Belief		X		The guideline takes religion and belief into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Sex		X		The guideline takes sex into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Sexual Orientation		X		The guideline takes sexual orientation into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling communities etc.)		X		The guideline takes other vulnerable and disadvantaged groups into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)		X		The guideline takes health inequalities into account. It is for all nurses who have been trained appropriately to administer intra-pleural irrigation to patients with pleural infection as identified in the guideline.

Section 4

What actions will you take to mitigate any potential negative impacts?	Risk identified	Actions required to reduce / eliminate negative impact	Who will lead on the action?	Timeframe
	None			

How will you monitor these actions?	No potential negative impacts identified
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly throughout the design & implementation)	N/A Review of guideline

Section 5 - Please read and agree to the following Equality Statement

1. Equality Statement

1.1. All public bodies have a statutory duty under the Equality Act 2010 to set out arrangements to assess and consult on how their policies and functions impact on the 9 protected characteristics: Age; Disability; Gender Reassignment; Marriage & Civil Partnership; Pregnancy & Maternity; Race; Religion & Belief; Sex; Sexual Orientation

1.2. Our Organisations will challenge discrimination, promote equality, respect human rights, and aims to design and implement services, policies and measures that meet the diverse needs of our service, and population, ensuring that none are placed at a disadvantage over others.

1.3. All staff are expected to deliver services and provide services and care in a manner which respects the individuality of service users, patients, carer's etc, and as such treat them and members of the workforce respectfully, paying due regard to the 9 protected characteristics.

Signature of person completing EIA	Heather Lloyd
Date signed	20/05/2022
Comments:	
Signature of person the Leader Person for this activity	Heather Lloyd
Date signed	20/05/2022
Comments:	



Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	NO
2.	Does the implementation of this document require additional revenue	NO
3.	Does the implementation of this document require additional manpower	NO
4.	Does the implementation of this document release any manpower costs through a change in practice	NO
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	NO
	Other comments:	

If the response to any of the above is yes, please complete a business case which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval