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## Local Safety Standards for Invasive Procedures (LocSSIP)

### Thoracocentesis and Intercostal Drain Insertion

Affix Bar Coded Patient Label  
Here

Sign In	Time Out	Sign Out
To Be Completed Prior to Scrubbing <b>Start Time:</b> : <b>Date:</b> /    /	To be read out and completed by <b>assistant</b> prior to invasive part of procedure	To be read out and completed by <b>assistant</b> before anyone leaves procedure area.
<input type="checkbox"/> Confirm patient's identity	<input type="checkbox"/> Is the skin cleaned with Chloroprep or Iodine?	<input type="checkbox"/> Has the guidewire been removed?
<input type="checkbox"/> Thoracocentesis <input type="checkbox"/> Intercostal Drain	<input type="checkbox"/> Has the sterile drapes been applied appropriately?	<input type="checkbox"/> Witnessed by assistant?
Clinical Setting: <input type="checkbox"/> Elective/Planned <input type="checkbox"/> Emergency	<input type="checkbox"/> Is the marking still visible to operator AND assistant?	<b>IF GUIDEWIRE MISSING, URGENT CXR AND REVIEW</b>
<input type="checkbox"/> Written Consent If lacks capacity, best interest decision documentation <input type="checkbox"/>	Lidocaine: <input type="checkbox"/> 1% <input type="checkbox"/> 2%	Fluid description: <input type="checkbox"/> Serous <input type="checkbox"/> Haemoserous
Does patient have any allergies? <input type="checkbox"/> No <input type="checkbox"/> Yes, specify	<input type="checkbox"/> Expiry date checked	<input type="checkbox"/> Blood <input type="checkbox"/> Pus
Is supervision required? <input type="checkbox"/> Yes <input type="checkbox"/> No	Technique used:	Specimens obtained? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is the patient on any anticoagulant or antiplatelet? <input type="checkbox"/> No <input type="checkbox"/> Yes, number of days stopped: Drug: <input type="checkbox"/> Did not delay as recommended. Why? (see page 2)	<input type="checkbox"/> Diagnostic Tap only (Size: N/A)	Analysis:
<input type="checkbox"/> Blood Test within the last 7 days Platelet count:        PT:        APTT:	<input type="checkbox"/> Rocket Aspiration	<input type="checkbox"/> pH <input type="checkbox"/> Cytology
Indication of Procedure: <input type="checkbox"/> Pneumothorax <input type="checkbox"/> Haemothorax	<input type="checkbox"/> Seldinger Drain        Length Inserted:	<input type="checkbox"/> Biochemistry (Protein, LDH, Glucose)
<input type="checkbox"/> Effusion (diagnostic / therapeutic)	<input type="checkbox"/> Surgical Drain        Size:	<input type="checkbox"/> Microbiology (MC&S/AAFB).
USS Chest: <input type="checkbox"/> Not Required (Pneumothorax) <input type="checkbox"/> Left <input type="checkbox"/> Right (Effusions) <input type="checkbox"/> Did Not Perform	If patient is in distress, communicate and consider withholding or stopping procedure. Maximum of 1.5 litre to be drained at a time. Clamp for 2 hours every 500ml drained.	<input type="checkbox"/> Others:
<input type="checkbox"/> Second set of equipment on standby		Has there been complications? <input type="checkbox"/> No <input type="checkbox"/> Yes, please comment:
Name of Supervisor: Signature:	Name of Assistant: Signature:	Has a CXR been requested? <input type="checkbox"/> No (not needed) <input type="checkbox"/> Yes (please, comment in the notes)
		Nursing Handover for Chest Drain (please see page 2): <input type="checkbox"/> Yes <input type="checkbox"/> No, why?
		Name of Operator: Signature:
		<b>End Time:</b> :



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### Thoracocentesis and Intercostal Drain Insertion

National Safety Standard for Invasive Procedure (NatSSIP) recommended development of LocSSIP with the goal to prevent NEVER EVENTS and reduce procedural risks.

Following is a list of recommended actions:

1. Prevent NEVER EVENT of retained guidewire
  - a. Either end of guidewire must be visible at all times.
  - b. Either end of guidewire held by operator at all times.
  - c. Confirmation of removal of guidewire by assistant and recorded.
2. Prevent NEVER EVENT of wrong site
  - a. Confirmation of patient. Identify site of procedure in pre-existing imaging. Consent form for procedure also includes site of procedure.
  - b. Perform bedside ultrasound of thorax for locating optimal site (For pleural effusions only). Supervision if not yet independent in ultrasound.
3. Reduce risk of bleeding
  - a. Recommended delays if on anticoagulant or antiplatelet (Clopidogrel for 7 days. NOAC/DOAC for 2 days. Warfarin until INR <1.5, LMWH for 24 hours).
  - b. Check blood results prior to procedure and recorded. If abnormal, discuss with seniors to confirm appropriateness of procedure.
  - c. Consider intercostal drains to be inserted in the 'triangle of safety'. *Anteriorly: lateral border of pectoralis major. Posteriorly: anterior border of latissimus dorsi. Inferiorly: 5th rib.*
4. Reduce risk of infection
  - a. Maintain a sterile field. Hand washing. Use sterile gloves, gown and eye protection/face shield
  - b. Insertion site should be cleaned with two 2% Chloroprep (sticks) or iodine application. Apply sterile drapes after cleaning.
5. Reduce risk of pneumothorax (reaccumulating, tension or procedural complication).
  - a. Do not clamp drain unless advised from Respiratory SpR, Respiratory Consultant or Intensive Care Consultant.
6. Prevent Re-expansion Pulmonary Oedema (Nursing Handover).
  - a. Controlled pleural drainage:
    - i. Hold drainage if chest pain/discomfort during drainage.
    - ii. Hold drainage if persistent cough, worsening breathlessness or vagal symptoms during drainage.
    - iii. Hold drainage when 1500ml had been removed.
      1. Reopen tap after 2 hours, allowing no more than 500ml per hour after initial 1500ml.
      2. When less than 500ml per hour, leave on free drainage.
  - b. Observations: Every 15 minutes in the first hour (operator or assistant to stay with the patient to monitor for possible rapid drainage) → Every hour in the next 3 hours → 4-hourly until chest drain removed

Sources/Others:

1. Compliant with Welsh Government PSA012/April 2021

2. <https://www.brit-thoracic.org.uk/quality-improvement/clinical-resources/interventional-procedures/national-safety-standards-for-invasive-procedures-bronchoscopy-and-pleural-procedures/>

3. <https://arns.co.uk/national-patient-safety-alert-deterioration-due-to-rapid-offload-of-pleural-effusion-fluid-from-chest-drains/>