



## Guidance document for PMJAY package

### Intercostal drainage management

**Procedures covered: 2**

**Specialty: General Surgery, Pediatric Surgery, CTVS**

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Intercostal drainage Only	Intercostal drainage Only	S100208	SG077A	4,800
Isolated Intercostal Drainage and Management of ICD, Intercostal Block, Antibiotics & Physiotherapy	Isolated Intercostal Drainage and Management of ICD, Intercostal Block, Antibiotics & Physiotherapy	S1300066	SV028A	10,000

**ALOS: 5 days**

**Minimum qualification of the treating doctor:**

**Essential:** MS/DNB/Equivalent in General Surgery; MD/DNB/Equivalent in Emergency medicine, M.Ch./DNB/Equivalent (in Pediatric Surgery, Cardiothoracic Surgery, Thoracic Surgery)

**Special empanelment criteria/linkage to empanelment module:** None

**Disclaimer:**

For monitoring and administering the claim management process of **Intercostal drainage Only / Isolated Intercostal Drainage and Management of ICD, Intercostal Block, Antibiotics & Physiotherapy**, NHA shall be following these guidelines. This document has been prepared for guidance of PROCESSING TEAM and TRANSACTION MANAGEMENT SYSTEM of AB PM-JAY for the claims of procedures mentioned above. The hospitals can also refer to this document so that they have the insight on how the claims will be processed. However, this document doesn't provide any guidance on clinical and therapeutic management of patient. In that respect the hospitals and physicians may refer to any other relevant material as per the extant professional norms.

### **PART I: GUIDELINES FOR CLINICIANS AND HEALTHCARE PROVIDERS**

#### **1.1 Objective:**

The purpose of this section is to act as a guidance & a clinical decision support tool for the clinicians in deciding the line of treatment, plan clinical management of patient and decide referral of cases to the appropriate level of care (as required) for treatment of patients under PMJAY and selection of corresponding Health Benefit Package.

It will also serve as a tool for hospitals to determine and submit the mandatory documents required for claiming reimbursement of health benefit package under PMJAY.

## 1.2 Clinical key pointers:

Chest tube placement (also called tube thoracostomy) is a common procedure in daily clinical practice which is performed to drain fluid, blood, or air from the pleural cavity. It also serves as a route to instill antibiotics (post-pneumonectomy empyemas), sclerosing agents (pleurodesis), as well as fibrinolytics, DNase, and/or saline (complicated parapneumonic effusions and empyemas). Pleural disease is common and presents frequently both as emergency and as acute admissions. On the other hand, indwelling pleural catheters (IPC) are becoming a first-line palliative therapy for symptomatic malignant and persistent benign pleural effusions.

The administration of prophylactic antibiotics prior to chest tube placement is only recommended in patients with penetrating chest injuries to prevent the development of empyema.

### Indications

- Pneumothorax
  - In any ventilated patient
  - Tension pneumothorax after initial needle relief
  - Persistent or recurrent pneumothorax after simple aspiration
  - Large secondary spontaneous pneumothorax in patients over 50 years
- Hemothorax
- Empyema and complicated parapneumonic pleural effusion
- Malignant pleural effusion
- Pleurodesis (sclerotherapy)
- Postoperative – thoracotomy, esophagectomy, cardiac surgery

### Contraindications

- Severe pleural adhesions
- Uncorrected/Refractory coagulopathy
- Diaphragmatic hernia
- Local infection

### Aftercare

- Document using the chest drain insertion paperwork. This will include: indication, operator, consent, insertion site, anaesthetic used, drain size, depth, complications, sutures and fixation device, samples and post procedure instructions

- If drain is for fluid clamp after 1000ml has drained. Repeat observations. If observations are stable and patient is not unwell then drain can be opened up again after an hour.
- Prescribe analgesia (intercostal nerve block)
- Prescribe regular flushes for the drain
- Send any samples taken
- Request X-ray (timing at the discretion of clinical team)
- IPC-related infection develops in about 5% of the cases and the infections can often be managed conservatively.

### **Breathing exercises and chest physiotherapy**

- Breathing exercises and chest physiotherapy are the main keys for achieving quick lung expansion and faster recovery.
- Incentive spirometry provides the impetus for expanding the lung quickly.
- Upper-limb movements, especially at the shoulder, help restore the movements of the chest wall.
- Steam inhalations and nebulized bronchodilators may also encourage quick lung expansion.

### **Complications:**

- Tube dislodgement
- Chest bottle elevation with fluid flowing into the chest cavity
- Damage to intercostal nerve, artery or vein
- Damage to internal mammary artery if puncture is too medial
- Intercostal myalgia
- Introduction of pleural infection
- Laceration or puncture of intra thoracic or intra-abdominal organs
- Local cellulitis
- Local hematoma
- Mediastinal emphysema
- Subcutaneous emphysema

### **Timing and Criteria for Removal of Chest Tube**

Main considerations include the following:

- Initial indication for chest-tube placement
- Whether the patient is mechanically ventilated
- Daily chest-tube output
- Presence of an air leak

- Full expansion of lungs on chest radiographs

The timing of tube removal depends on clinical and radiologic evidence of complete drainage of all abnormal contents of the pleural cavity, as well as complete expansion of the lung.

### 1.3 Mandatory documents- For healthcare providers

Following documents should be uploaded by the concerned hospital staff at the time of pre-authorization and claims submission

Mandatory documents	Intercostal drainage Only	Isolated Intercostal Drainage and Management of ICD, Intercostal Block, Antibiotics & Physiotherapy
<b>i. At the time of Pre-authorization</b>		
a. Clinical notes with evaluation findings, indication of procedure and planned line of management	Yes	Yes
b. Documentation of intercostal block, antibiotics, and physiotherapy as applicable	Optional	Yes
c. Chest X-Ray PA	Yes	Yes
d. <b>Optional</b> CT scan Ultrasound	Yes	Yes
<b>ii. At the time of claim submission</b>		
a. Detailed Indoor case papers (ICPs)	Yes	Yes
b. Detailed Procedure / Operative notes	Yes	Yes
c. Post procedure Chest X-ray with reports	Yes	Yes
d. Detailed Discharge Summary	Yes	Yes

## **PART II: GUIDELINES FOR PROCESSING TEAM**

### **PART III: GUIDELINES FOR TRANSACTION MANAGEMENT SYSTEM (TMS)**

**3.1 Objective:** To enable setting up of cross check mechanisms/rule engines within the IT platform (TMS) to ensure compliance with STGs and to prevent fraud / abuse of the Health Benefit Package.

**3.2 Below mentioned are the scenarios where a provision would be built in TMS for pop-ups:**

- Was the X-ray report suggestive of Intercostal drainage procedure? Yes
- Was the clinical presentation indicative of procedure? Yes



Till the time the functionality is being developed, the processing doctors shall check the above manually.

## References

1. Standard Treatment Guidelines. A Manual for Medical Practitioners.2010. *Health & Family Welfare Department Government of Tamilnadu*
2. Insertion and Management of Chest Drains Clinical Guideline. NHS. V2.0. November 2019  
<https://doclibrary-rcht.cornwall.nhs.uk/DocumentsLibrary/RoyalCornwallHospitalsTrust/Clinical/Respiratory/InsertionAndManagementOfChestDrainsClinicalGuideline.pdf>
3. Laws D, Neville E, Duffy J. BTS guidelines for the insertion of a chest drain. *Thorax* 2003;**58**:ii53-ii59.
4. Porcel JM. Chest Tube Drainage of the Pleural Space: A Concise Review for Pulmonologists. *Tuberc Respir Dis (Seoul)*. 2018;81(2):106-115. doi:10.4046/trd.2017.0107
5. <https://emedicine.medscape.com/article/1503275-technique#showall>