

## Guidance Document for processing PM-JAY packages

### Management of Visceral injury and fracture long bone

**Procedures covered: 2**

**Specialty: Polytrauma, Orthopedics, Neurosurgery, General Surgery**

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)	ALOS
Management of Visceral injury and fracture long bone	Surgical intervention for Visceral injury and fixation of fracture of single long bone	S600008	ST005A	30,000	10 days
Management of Visceral injury and fracture long bone	Surgical intervention for Visceral injury and fixation of fracture of 2 or more long bones	S600009	ST005B	45,000	10 days

#### Minimum qualification of the treating doctor:

**Essential:** MS/DNB/Equivalent (General Surgery); MS/DNB/Equivalent (Orthopedic surgery); MCh/DNB/Equivalent (Neurosurgery/Surgical Gastroenterology)

**Special empanelment criteria/linkage to empanelment module:** Functional Operational Theatre

#### Disclaimer:

For monitoring and administering the claim management process of **Management of Visceral injury and fracture long bone**, 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 document 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:

### PENETRATING ABDOMINAL TRAUMA

#### Initial management

- A. Assess patient for airway, adequate gas exchange, circulatory or neurologic dysfunction.
- B. Assess number and sites of penetrating wounds.
- C. Determine mode of injury
- D. Treatment options

#### 1. Airway

- a. Administer 100%O<sub>2</sub>
- b. Suction
- c. Chin lift
- d. Oral airway (if obtunded)
- e. Nasopharyngeal airway
- f. Endotracheal intubation
- g. Surgical airway (i.e., for shotgun wounds to face)

#### 2. Breathing

- a. Needle decompression of chest, unilateral or bilateral
- b. Chest tube(s), unilateral or bilateral
- c. Ventilator (manual or mechanical)
- d. Thoracotomy or sternotomy

#### 3. Circulatory

- a. Insert two large-bore IVs, draw unstable patient laboratory studies, consider large-bore central line, 1 to 2 L of warmed Ringer's lactate/ normal saline IV, blood transfusion with profound or persistent hypotension. In general, a target BP of 90 mm Hg should not be exceeded until definitive control of the injury in the operating room.
- b. IV above and below diaphragm in penetrating torso trauma
- c. Avoid IV placement such that the wound is between the IV site and the heart.
- d. If signs of hypovolemia occur (e.g., thirst, base deficit, tachycardia, or hypotension), search for sites of blood loss.
- e. IV antibiotics

4. Place nasogastric or orogastric tube and urinary catheter at earliest convenience.

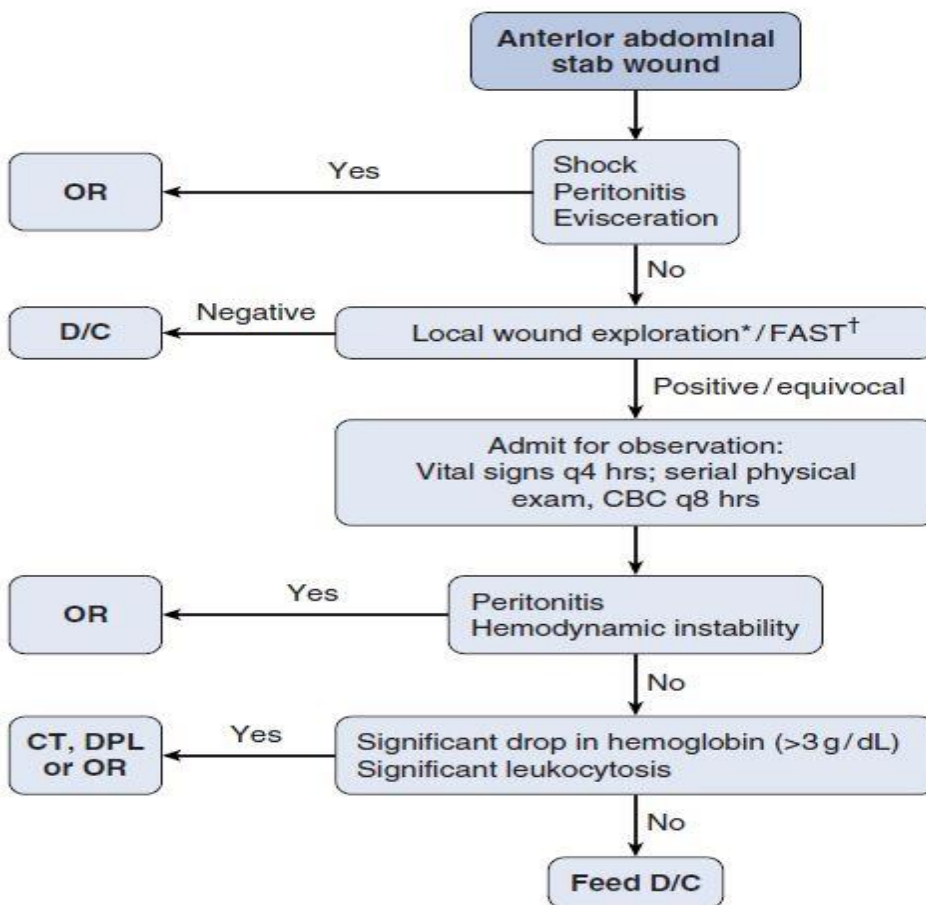
E. Hemodynamically unstable patient with a penetrating wound to the chest may require chest tube(s) and thoracotomy in emergency department or operating room (CTVS opinion).

1. Chest tube may be diagnostic or therapeutic.

2. If patient is hemodynamically unstable after chest tubes, perform thoracotomy in emergency department OR

Thoracic cavity. Tracheal deviation, neck veins, bilateral equal breath sounds, chest x-ray, chest tubes (bilateral if precise mechanism of injury not known)

### ALGORITHM For Stab Wound



### Recommendations

1. Patients who are hemodynamically unstable or who have diffused abdominal tenderness should be taken emergently for laparotomy (level 1).

2. Patients who are hemodynamically stable with an unreliable clinical examination (i.e., brain injury, spinal cord injury, intoxication, or need for sedation or anaesthesia) should have further diagnostic investigation performed for intraperitoneal injury or undergo exploratory laparotomy (level 1).
3. A routine laparotomy is not indicated in hemodynamically stable patients with abdominal SWs without signs of peritonitis or diffuse abdominal tenderness (away) from the wounding site) in centers with surgical expertise (level 2).
4. Serial physical examination is reliable in detecting significant injuries after penetrating trauma to the abdomen, if performed by experienced clinicians and preferably by the same team (level 2).
5. In patients selected for initial NOM, abdominopelvic CT should be strongly considered as a diagnostic tool to facilitate initial management decisions (level 2).

#### **Absolute indications for exploratory laparotomy in abdominal injuries**

- A. Peritonitis
- B. Evisceration
- C. Impaled object
- D. Hemodynamic instability (documented or suspected intra-abdominal source)
- E. Associated bleeding from natural orifice

### **BLUNT ABDOMINAL TRAUMA**

#### **Initial management**

- A. Assess patient for airway, adequate gas exchange, circulatory or neurologic dysfunction.
- B. Assess number and sites of penetrating wounds.
- C. Determine mode of injury
- D. Treatment options
  1. Airway
    - a. Administer 100% O<sub>2</sub>
    - b. Suction
    - c. Chin lift
    - d. Oral airway (if obtunded)
    - e. Nasopharyngeal airway



- f. Endotracheal intubation
- g. Surgical airway (i.e., for shotgun wounds to face)

## 2. Breathing

- a. Needle decompression of chest, unilateral or bilateral
- b. Chest tube(s), unilateral or bilateral
- c. Ventilator (manual or mechanical)
- d. Thoracotomy or sternotomy

## 3. Circulatory

- a. Insert two large-bore IVs, draw unstable patient laboratory studies, consider large-bore central line, 1 to 2 L of warmed Ringer's lactate/ Normal saline IV, blood transfusion with profound or persistent hypotension. In general, a target BP-90 mmHg should not be exceeded until definitive control of the injury in the operating room.
- b. IV above and below diaphragm in penetrating torso trauma
- c. Avoid IV placement such that the wound is between the IV site and the heart.
- d. If signs of hypovolemia occur (e.g., thirst, base deficit, tachycardia, or hypotension), search for sites of blood loss.
- e. IV antibiotics

## 4. Place nasogastric or orogastric tube and urinary catheter at earliest convenience.

E. Hemodynamically unstable patient with a penetrating wound to the chest may require chest tube(s) and thoracotomy in emergency department or operating room.

- 1. Chest tube may be diagnostic or therapeutic.
- 2. If patient is hemodynamically unstable after chest tubes, perform thoracotomy in emergency department OR

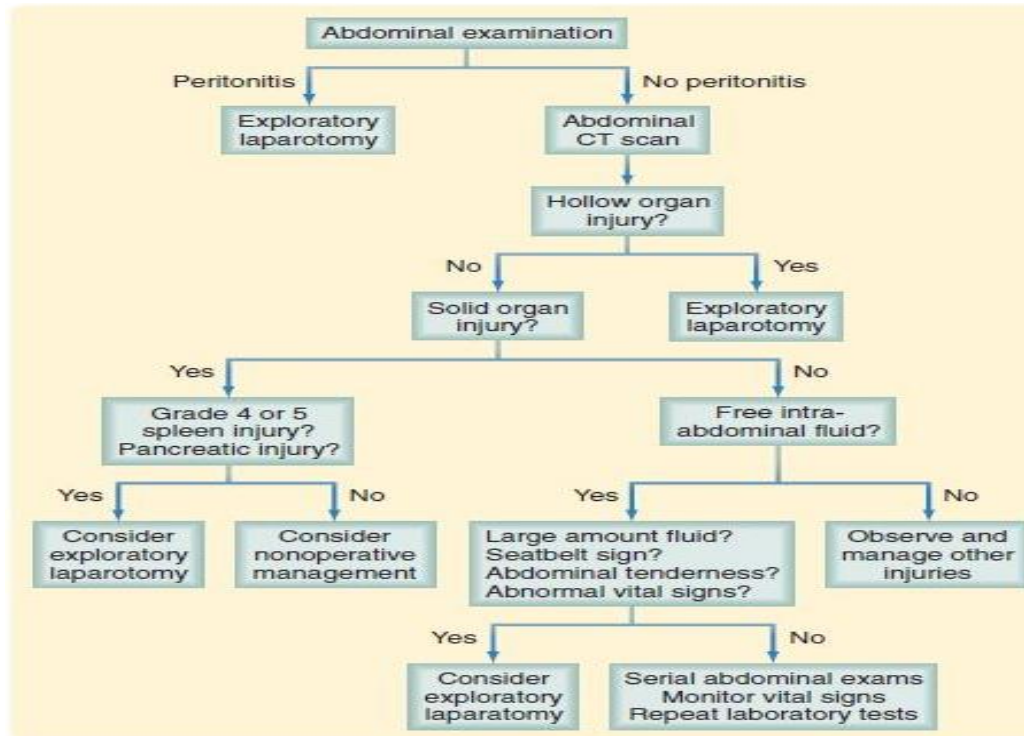
Thoracic cavity. Tracheal deviation, neck veins, bilateral equal breath sounds, chest x-ray, chest tubes (bilateral if precise mechanism of injury not known)

### **Criteria for positive Diagnostic peritoneal lavage (DPL)**

- a) 10 mL gross blood on aspiration
- b) >100,000 red blood cells/mm<sup>3</sup>
- c) >500 white blood cells/mm<sup>3</sup>
- d) Bacteria

- e) Bile
- f) Food particles

## ALGORITHM



## Recommendations

### Level 1

- 1) Exploratory laparotomy is indicated for patients with a positive DPL
- 2) Focused Assessment with Sonography for Trauma (FAST) may be considered as the initial diagnostic modality to exclude hemoperitoneum

### Level 2

- 1) When Diagnostic Peritoneal Lavage is used, clinical decisions should be made on the basis of the presence of gross blood on initial aspiration (i.e., 10 mL) or microscopic analysis of lavage effluent
- 2) Exploratory laparotomy is indicated in hemodynamically unstable patients with a positive FAST. In hemodynamically stable patients with a positive FAST, follow-up CT scan permits nonoperative management of select injuries.
- 3) Surveillance studies (i.e., DPL, CT scan, repeat FAST) should be considered in hemodynamically stable patients with indeterminate FAST results.

- 4) CT scanning is recommended for the evaluation of hemodynamically stable patients with equivocal findings on physical examination, associated neurologic injury, or multiple extra-abdominal injuries. Under these circumstances, patients with a negative CT scan should be admitted for observation.
- 5) CT scanning is the diagnostic modality of choice for nonoperative management of solid visceral injuries.
- 6) In hemodynamically stable patients, DPL and CT scanning are complementary diagnostic modalities.

### Level 3

- 1) Objective diagnostic testing (i.e., FAST, DPL, CT scanning) is indicated for patients with abnormal mentation, equivocal findings on physical examination, multiple injuries, concomitant chest injury, or hematuria.
- 2) Patients with seat belt sign should be admitted for observation and serial physical examination. The presence of intraperitoneal fluid on FAST or CT scan in a patient with seat belt sign suggests the presence of an intra-abdominal injury that may require surgery.
- 3) CT scanning is indicated for the evaluation of suspected renal injuries. In the patient at high risk for intra-abdominal injury (e.g., multiple orthopaedic injuries, severe chest wall trauma, neurologic impairment), a follow-up CT scan should be considered after a negative FAST.
- 4) In hemodynamically stable patients with a positive DPL, follow-up CT scan should be considered, especially in the presence of pelvic fracture or suspected injuries to the genitourinary tract, diaphragm, or pancreas.

### 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 document	Surgical intervention for Visceral injury and fixation of fracture of single long bone	Surgical intervention for Visceral injury and fixation of fracture of 2 or more long bones
<b>i. At the time of Pre-authorization</b>		
a. Clinical Notes detailing the injury and need for surgery	Yes	Yes
b. Medico legal case report/ FIR copy of accident	Yes	Yes

c. X-ray/ CT report of fractured limb	Yes	Yes
d. CT abdomen film and report	Yes	Yes
<b>ii. At the time of claim submission</b>		
a. Detailed Indoor case papers	Yes	Yes
b. Detailed Procedure/ Operative notes	Yes	Yes
c. Post op clinical photograph	Optional	Optional
d. Detailed discharge summary	Yes	Yes

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

**2.1 Objective:** To provide guidance to the pre-authorization and claims processing team in ascertaining the medical necessity of procedure carried out vis a vis the patient's medical condition as evidenced by supporting documents/investigation reports etc, in deciding the admissibility and quantum of claim and compliance with mandatory documents by the hospital.

**2.2 Following mandatory documents to be diligently reviewed by the pre-auth / claims processing personnel:**

<b>Mandatory document</b>	<b>Surgical intervention for Visceral injury and fixation of fracture of single long bone</b>	<b>Surgical intervention for Visceral injury and fixation of fracture of 2 or more long bones</b>
<b>i. At the time of Pre-authorization</b>		
a. Clinical notes – details of accident, signs & symptoms, indication for surgery, and planned line of treatment?	Yes	Yes
b. Was the Medico legal report/ FIR copy of the accident submitted?	Yes	Yes
c. Did X-ray/ CT report suggest fracture of one long bone?	Yes	No
d. Did X-ray/ CT report suggest fracture of more than one long bone?	No	Yes
e. Was CT abdomen report submitted?	Yes	Yes
<b>ii. At the time of claim submission</b>		



a. Were the indoor case papers submitted?	Yes	Yes
b. Are the detailed Procedure/ Operation notes submitted?	Yes	Yes
c. Is there a Detailed Discharge Summary mentioning date of follow-up submitted?	Yes	Yes
d. Did the post op clinical photograph show repair of visceral injury?	Optional	Optional

### **PART III: GUIDELINES FOR IT**

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:**

1. Was CT report suggestive of visceral injury? Yes
2. Did X-ray/ CT report suggest fracture of one or more long bone? Yes

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

### **References**

1. Abdominal Injuries, Protocol for emergency and trauma care, Govt Medical College Thiruvananthapuram. Pg: 33-42