



Guidance document for PM JAY package

Pulmonary Stenosis Repair

Procedures covered/ Procedure Count: 2

Specialty: CTVS

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)	ALOS
Surgical Correction of Category - II Congenital Heart Disease	Infundibular Pulmonary stenosis (PS) repair	New Package	SV002G	120,000 + Cost of implant	10 days
Surgical Correction of Category - II Congenital Heart Disease	Valvular PS repair	New Package	SV002H	120,000 + Cost of implant	10 days

Minimum qualification of the treating doctor:

Essential: M.Ch./DNB/equivalent (Cardiothoracic Surgery)

Special empanelment criteria/linkage to empanelment module: Cardiothoracic Surgery OT

Disclaimer:

For monitoring and administering the claim management process of **Pulmonic Stenosis Repair**, 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:

Pulmonary stenosis (PS) is a common congenital heart defect, occurring either as an isolated lesion or in association with other CHD. The prevalence of isolated PS is 7/10,000 and is found in 8%–10% of all patients with CHD. The obstruction is at the valve level in 80% to 90% of patients, and the rest have obstruction below or above the pulmonary valve. Isolated subvalvular PS is uncommon, and it is generally associated with a VSD.

Diagnostic workup

- i. Clinical assessment: Phasic ejection click, a hallmark feature of valvular PS may be absent in dysplastic pulmonary valve.
- ii. X-ray chest: This may be normal in patients with mild-to-moderate PS. Prominent pulmonary artery segment due to poststenotic dilation of main and left pulmonary artery localizes the obstruction to valve level. Cardiomegaly with right atrial and right ventricular enlargement indicates right ventricular dysfunction. The pulmonary vascularity is reduced in those with right-to-left shunt at atrial level and in severe cases with reduced cardiac output. The dilated RV is rounded rather than boot shaped (typical of TOF). PS due to dysplastic valve stenosis may not show poststenotic dilation of pulmonary trunk.
- iii. ECG: Patients with moderate or severe PS show right-axis deviation and right ventricular hypertrophy. In neonates with critical PS, ECG may show normal QRS axis and left ventricular dominance, especially if the right ventricular cavity is small. Older patients with severe PS may also show right atrial enlargement. R wave amplitude in lead V1 and R/S ratio in leads V1 and V6 correlate with severity of PS. Superior or left-axis deviation may be found in infants with PS who have congenital Rubella syndrome or Noonan syndrome.
- iv. Echocardiography: It is the key diagnostic tool for assessing the site and severity of PS, morphology of the pulmonary valve, pulmonary annulus diameter, pulmonary valve competence, additional sub- or supravulvar stenosis, evaluation of right ventricular size and function, associated tricuspid regurgitation, other features such as post-stenotic dilation of the main and branch pulmonary arteries, tricuspid valve morphology and shunting across ASD.
- v. Cardiac catheterization and angiography: Performed primarily for therapeutic balloon valvuloplasty. Angiography is the gold standard for detailed imaging in patients with peripheral pulmonic stenosis.
- vi. CTA/cMRI: Indicated for diagnosis and planning management of patients with peripheral pulmonic stenosis.

Indications and timing of treatment

Valvular pulmonic stenosis

- i. Immediate intervention required for:

- a. Newborns with severe PS who are duct dependent (Class I)
- b. Infants, children, or adults with right ventricular dysfunction due to severe PS, regardless of the valve gradient (Class I)

ii. Elective balloon dilatation for:

- a. Asymptomatic or symptomatic patients with valvular PS having peak instantaneous gradient by echo-Doppler of >64 mmHg (Class I)
- b. Neonates and infants with any degree of PS who have mild hypoxia due to mild hypoplasia of RV, even if right ventricular function is normal (Class IIa)
- c. Patients with valvular pulmonic stenosis due to dysplastic valve, who meet the above criteria (Class IIa)

Mode of intervention

- i. Balloon dilatation (Class I)
- ii. Surgical intervention reserved only for (Class I):
 - a. Subvalvular or supra valvular PS with indications same as in valvular stenosis
 - b. Noonan syndrome (dysplastic valve) with hypoplastic annulus
 - c. Failed balloon dilatation

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	Infundibular PS repair	Valvular PS repair
i. At the time of Pre-authorization		
a. Clinical notes	Yes	Yes
b. Echo/Doppler report	Yes	Yes
ii. At the time of claim submission		
a. Procedure / Operative notes	Yes	Yes
b. Post procedure stills of ECHO with report	Yes	Yes
c. 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:

1. Was the Echo/ Doppler report suggestive of pulmonic stenosis? Yes

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

References

1. Saxena A, Relan J, Agarwal R, et.al, Indian guidelines for indications and timing of intervention for common congenital heart diseases: Revised and updated consensus statement of the Working group on management of congenital heart diseases. Ann Pediatr Card 2019;12:254-86