



Guidance document for PM JAY

Atrial Septal Defect

Procedures covered/ Procedure Count: 7

Specialty: Cardiology/ CTVS

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price	ALOS
ASD Device Closure	ASD Device Closure	S1200014	MC007A	36,900+ Cost of implant	2 days
Surgical Correction of Category - I Congenital Heart Disease	Isolated Secundum Atrial Septal Defect (ASD) Repair	S1300024	SV001B	100,000	10 days
Surgical Correction of Category - II Congenital Heart Disease	ASD closure + Partial Anomalous Venous Drainage Repair	New Package	SV002A	120,000 + Cost of implant	12 days
Surgical Correction of Category - II Congenital Heart Disease	ASD Closure + Mitral procedure	New Package	SV002B	120,000 + Cost of implant	12 days
Surgical Correction of Category - II Congenital Heart Disease	ASD Closure + Tricuspid Procedure	New Package	SV002C	120,000 + Cost of implant	12 days
Surgical Correction of Category - II Congenital Heart Disease	ASD Closure + Pulmonary Procedure	New Package	SV002D	120,000 + Cost of implant	12 days
Surgical Correction of Category - II Congenital Heart Disease	ASD Closure + Infundibular Procedure	New Package	SV002E	120,000 + Cost of implant	12 days

Minimum qualification of the treating doctor:

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

Special empanelment criteria/linkage to empanelment module:

Procedure name	Cardiac Catheterisation lab	CCU/ ICCU	Qualified cardiologist (DM/ DNB cardiology)	Qualified cardiothoracic surgeon (MCh/ DNB)
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				cardiovascular thoracic surgery)
ASD Device Closure	Yes	Yes	Yes	No
Isolated Secundum Atrial Septal Defect (ASD) Repair	No	Yes	No	Yes
ASD Closure + Partial Anomalous Venous Drainage Repair	No	Yes	No	Yes
ASD Closure + Mitral procedure	No	Yes	No	Yes
ASD Closure + Tricuspid Procedure	No	Yes	No	Yes
ASD Closure + Pulmonary Procedure	No	Yes	No	Yes
ASD Closure + Infundibular Repair	No	Yes	No	Yes

Disclaimer:

“For monitoring and administering the claim management process of ASD Closure, 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:

Atrial septal defect (ASD) is the second most common congenital heart defect with a prevalence of 56/100,000 live births. Higher estimates have been reported more recently, perhaps related to wide availability of echocardiography. ASD is responsible for 15%–20% of all congenital heart defects. They are usually diagnosed incidentally in childhood due to a murmur. Symptoms may develop as age advances. Atrial arrhythmias tend to occur in those over 40 years of age. Spontaneous closure of the defect is rare if defect is >8 mm at birth and after 2–3 years of age. Very rarely, an ASD can enlarge on follow-up. 14% of patients with large ASD develop the serious complication of pulmonary vascular disease, usually between 20 and 40 years of age. However, in a series from India, pulmonary vascular disease developed in the first decade in 7% of patients with secundum ASD.

Types of atrial septal defect

- i. Ostium secundum (~75%)
- ii. Ostium primum (15%–20%)
- iii. Sinus venosus (5%–10%)
- iv. Coronary sinus (<1%)

Clinical Features

Atrial septal defects are frequently asymptomatic. The characteristic murmur is a soft, systolic ejection murmur over the pulmonic area (second intercostal space) combined with a wide, fixed splitting of S2. Many ASDs go undiagnosed until adulthood; therefore, treatment, especially of large defects, is often delayed. Untreated large defects can cause exercise intolerance, cardiac dysrhythmias, palpitations, increased incidence of pneumonia, pulmonary hypertension and increased mortality. Eisenmenger syndrome is a rare, but severe complication of untreated ASDs due to vascular remodeling caused by chronic over flow (through a left-to-right shunt). As the vascular resistance increases right atrial pressures approach systemic. When right atrial pressures exceed systemic pressures, there is a reversal of shunt flow. Clinically Eisenmenger syndrome patients develop chronic cyanosis, increased pulmonary vascular resistance, dyspnea on exertion, syncope, and increased susceptibility to infection.

Diagnostic workup

- i. Clinical assessment
- ii. X-ray chest: Right atrial enlargement, right ventricular enlargement, dilated main pulmonary artery segment, and increased pulmonary vasculature markings
- iii. Electrocardiogram (ECG): Signs of right ventricular volume overload, seen as incomplete right bundle branch block and right atrial enlargement. Crochetage sign

(notched R wave in all inferior limb leads) may be seen in those with large left-to-right shunts.

- iv. Echocardiography: This is the key tool not only for the diagnosis of ASD, but also for determining its location and number, for the assessment of pulmonary artery pressure and pulmonary venous drainage, and for evaluating for suitability for device closure of the defect. Transesophageal echo may be required if transthoracic windows are suboptimal. Transesophageal echo is often performed in the cardiac catheterization laboratory during device closure of ASD.
- v. Cardiac catheterization: It is mostly performed for device closure of the defect. A diagnostic catheterization is required in those with pulmonary hypertension and suspected pulmonary vascular disease.

Indication for closure

An ASD with left to right shunt, associated with evidence of right ventricular volume overload without evidence of irreversible pulmonary vascular disease (Class I).

Indications for ASD closure remain the same, irrespective of the method of closure.

Contraindication for closure

Severe pulmonary arterial hypertension or irreversible pulmonary vascular occlusive disease (Class III). Patients with borderline operability due to pulmonary vascular disease should be referred to a higher center for further evaluation.

Ideal age of closure

- i. In an asymptomatic child: 2–4 years (Class I). For sinus venosus defect, surgery may be delayed to 4-5 years (Class IIa).
- ii. Symptomatic ASD in infancy (congestive heart failure and pulmonary artery hypertension): seen in about 8%–10% of cases. Early closure is recommended (Class I) after ruling out associated lesions (e.g., total anomalous pulmonary venous drainage, left ventricular inflow obstruction, and aortopulmonary window [APW]).
- iii. If presenting beyond ideal age: Elective closure irrespective of age as long as there is left-to-right shunt with right heart volume overload and pulmonary vascular resistance (PVR) is within operable range (Class I).
- iv. Symptomatic sequel of paradoxical emboli such as stroke or recurrent transient ischemic attack due to transient right-to-left shunting at the atrial level (Class IIa). This complication is more likely with patent foramen ovale with or without atrial septal aneurysm.

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	ASD Device Closure	Isolated Secundum Atrial Septal Defect (ASD) Repair	ASD Closure + Partial Anomalous Venous Drainage Repair	ASD Closure + Mitral Procedure	ASD Closure + Tricuspid Procedure	ASD Closure + Pulmonary Procedure	ASD Closure + Infundibular Repair
i. At the time of Pre-authorization							
Clinical notes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Echo/Doppler report	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ii. At the time of claim submission							
Procedure / Operative notes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Post procedure stills of ECHO with report	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Detailed Discharge Summary	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Invoice/ barcode of blade / device used	Yes	No	Yes	Yes	Yes	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 patient's Echo/Doppler report showing Atrial Septal Defect? Yes

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

References

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