



Guidance document for processing PM-JAY packages

Hydrocephalus

Packages covered/ package count: 1

Specialty: General Medicine, Pediatric Medical Management

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Hydrocephalus	Hydrocephalus	M100062, M200083	MG051A	General Ward- 1,800/- HDU – 2,700/- ICU without ventilator– 3,600/- ICU with Ventilator– 4,500/-

ALOS:NA

Minimum qualification of the treating doctor:

Essential: MBBS;

Desirable: DNB / MD (General Medicine/General surgery / Pediatric Medicine/Pediatric surgery/Neurosurgery/Neuro medicine)

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

Disclaimer:

“For monitoring and administering the claim management process of **Hydrocephalus**, 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:



Hydrocephalus is a condition wherein excess of cerebrospinal fluid (CSF) accumulates within the ventricular system and cisterns of the brain leading to increased intracranial pressure (ICP) and related consequences. This can apparently result from various causes that can affect a fetus, infant, child or adult (Rekate). Numerous definitions of hydrocephalus have been proposed. Summarily, it can be described as an imbalance between production and absorption of CSF. Over production of CSF can also be a cause of hydrocephalus due to choroid plexus tumors, but these are rare (tumors) in clinical practice.

The presentation of hydrocephalus differs in the case of the neonate and infant compared with the older child or adult. Prior to closure of the cranial sutures and obliteration of the fontanella, hydrocephalus results in disproportionate head growth. Thus, over the first 2–3 years of life, measurement of the occipito-frontal circumference and plotting this on a centile chart provides a simple and sensitive test. Wherever possible, sequential measurements (corrected for gestational age) should be obtained in order that the trend of head growth in relation to the centile lines can be demonstrated. Clinical symptoms are often subtle and include general irritability, poor feeding and slow attainment of milestones. In addition to head size, clinical signs include bulging of the fontanelles, wide separation of the cranial sutures, prominence of scalp veins, and “setting sun” of the eyes.

In older children and adults, the classical symptom complex consisting of raised ICP, headache, vomiting and drowsiness is more likely to herald an underlying diagnosis of hydrocephalus. When hydrocephalus has developed insidiously, cognitive impairment, poor concentration and behavioral changes occur. Visual obscurations and papilledema are more common in adults than in the younger age group. In both groups of patients, the presence of bradycardia, hypertension and irregularities in breathing pattern implies critical elevation of ICP and should be treated promptly.

Diagnosis

In the neonate, the supratentorial ventricular system can be reliably evaluated using ultrasound. This is the imaging modality of choice in the investigation and monitoring of the infant with an open fontanella. Hematomas or other ventricular masses responsible for hydrocephalus can also be identified. Ultrasound provides a non-invasive and readily available tool for both diagnostic purposes and for measuring ventricular size in serial studies. In order to fully evaluate the entire ventricular system and investigate the underlying etiology of hydrocephalus, CT or MRI imaging is required.

Treatment

Treatment of hydrocephalus is indicated wherever the hydrocephalus is progressive and associated with increased ICP. A variety of treatments have been tried for hydrocephalus.

Medical management

Medical measures may be appropriate under certain circumstances. Osmotic diuretics and acetazolamide (inhibitor of carbonic anhydrase) have been used. Carbonic anhydrase is an



enzyme present in the choroid plexus and is necessary for the formation of CSF. However, the effects are not sustained. Hence, it is useful in only as a temporary measure in post-hemorrhagic hydrocephalus. Historically, compression bandage of the head had been advocated in neonatal hydrocephalus.

Bypassing the site of obstruction to CSF flow by diverting the CSF from ventricular cavity to a site where it is readily absorbed is the basic principle underlying the treatment of hydrocephalus. Based on this, shunt procedures have become the mainstay of surgical treatment even in severe hydrocephalus. Shunts can alter the process dramatically in infantile hydrocephalus. Endoscopic 3rd ventriculostomy is an important alternative in select situations beyond 1 year. Numerous shunt systems have been devised and marketed

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	Hydrocephalus
i. At the time of Pre-authorization	
a. Clinical Notes including evaluation findings, indications for the procedure, and planned line of treatment	Yes
b. Neuroimaging report	Yes
ii. At the time of claim submission	
a. Detailed Indoor case papers with details of treatment given	Yes
b. Detailed procedure notes	Yes
c. Detailed Discharge Summary	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 neuroimaging report submitted suggestive of hydrocephalus ? Yes



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

References:

1. Venkataramana NK. Hydrocephalus Indian scenario - A review. *J Pediatr Neurosci.* 2011;6(Suppl 1):S11-S22