



## Guidance document for processing PM-JAY packages

### Intensive Neonatal Care Package

Procedures covered: 1

Specialty: Neo-natal Care

Package name	Procedures name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Intensive Neonatal Care Package Babies with birthweight 1500-1799 g or Babies of any birthweight and at least one of the following conditions: • Need for mechanical ventilation for less than 24 hours or non-invasive respiratory support (CPAP, HFFNC) • Sepsis / pneumonia without complications • Hyperbilirubinemia requiring exchange transfusion • Seizures • Major congenital malformations (pre-surgical stabilization, not requiring ventilation) • Cholestasis significant enough requiring work up and in-hospital management • Congestive heart failure or shock Mother's stay and food in the hospital for breastfeeding, family centred care and (Kangaroo Mother Care) KMC is mandatory and included in the package rate	Intensive Neonatal Care Package Babies with birthweight 1500-1799 g or Babies of any birthweight and at least one of the following conditions: • Need for mechanical ventilation for less than 24 hours or non-invasive respiratory support (CPAP, HFFNC) • Sepsis / pneumonia without complications • Hyperbilirubinemia requiring exchange transfusion • Seizures • Major congenital malformations (pre-surgical stabilization, not requiring ventilation) • Cholestasis significant enough requiring work up and in-hospital management • Congestive heart failure or shock Mother's stay and food in the hospital for breastfeeding, family centred care and (Kangaroo Mother Care) KMC is mandatory and included in the package rate	M300003	MN003A	5,000

**ALOS: 5-10 days**

**Minimum qualification of the treating doctor:**

**Essential:** MD/DNB/DCH/Equivalent (in Pediatrics)

**Desirable:** DM/DNB/Equivalent (in Neonatology), referral to Pediatric Surgeon (Major Congenital Malformations)

**Special empanelment criteria/linkage to empanelment module:** Care at District/Tertiary Hospital (SNCU/NICU)

**Disclaimer:**

ICMR has issued clinical guidelines for 'Neonatal seizures', 'Sepsis in neonates' and 'Neonatal Jaundice' to be followed in country. For monitoring and administering the claim management process of **Intensive**



**Neonatal Care Package** 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 ICMR guidelines are also included in the document for better understanding of the SHA teams, Insurance companies and TPAs. 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 the ICMR poster and 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:**

#### **• Babies with birthweight 1500-1799 g**

##### **Common causes**

1. The mother may develop preterm labor or pre-labour rupture of the membranes. This is usually due to chorioamnionitis. Many women with chorioamnionitis do not have the clinical signs of infection (i.e. fever, abdominal tenderness or an offensive vaginal discharge)
2. Maternal illness such as hypertension, diabetes or heart disease. Many of these women have an induced labor or Caesarean section before term
3. Problems with the pregnancy such as placenta previa, placental abruption or cervical incompetence
4. Multiple pregnancy or polyhydramnios

##### **Common neonatal complications**

- Asphyxia necessitating resuscitation
- Metabolic hypoglycemia
- Mild respiratory distress
- Feed intolerance / GERD
- Sepsis



- Anemia of prematurity
- Neonatal Jaundice
- Poor feeding
- Hypothermia

Less common complications are infection, periventricular hemorrhage in the brain, bruising of the skin and patent ductus arteriosus.

### Care/Support

- Feeding support initial palladai or Nasogastric tube (depending on gestation)
- Kangaroo mother Care
- Thermal regulation
- Nonnutritive suckling

### Management

1. Treat the underlying cause
2. Resuscitation if the infant has poor breathing at birth
3. Prevent hypothermia
4. Prevent hypoglycaemia
5. Start early feeds or an intravenous 10% dextrose infusion
6. Prevent apnoea
7. Monitor the infant carefully and treat any of the common complications of low-birth-weight infants
8. Decide whether the infant needs to be transferred to a level III care

### **• Need for mechanical ventilation for less than 24 hours or non-invasive respiratory support (CPAP, HFFNC)**

National Neonatal Perinatal Database of India (NNPD) defines respiratory distress as presence of any two of the following features:

1. Respiratory rate (RR) >60/minute
2. Subcostal/intercostal recessions
3. Expiratory grunt/groaning

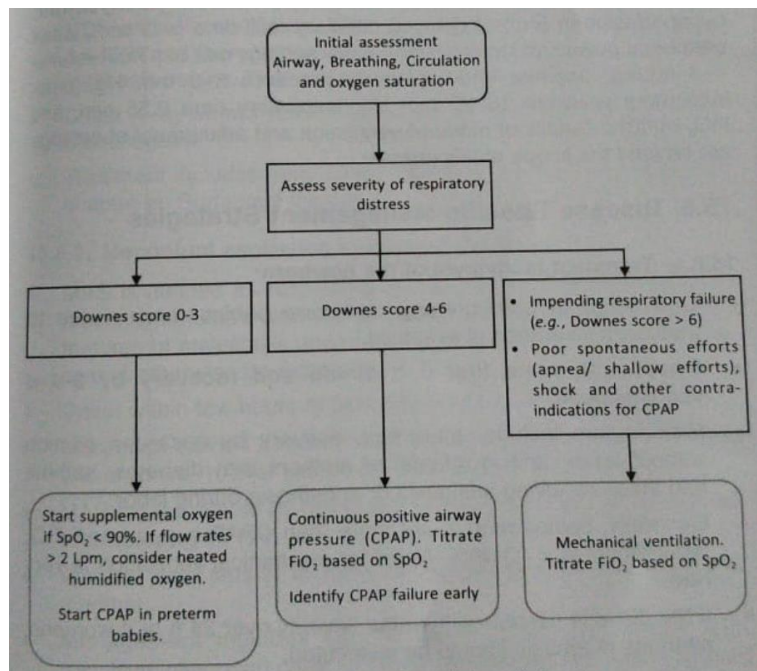
In addition to the above features, presence of nasal flaring, suprasternal retractions, decreased air entry on auscultation of the chest also indicates the presence of respiratory distress. The frequency of a given condition depends on various factors of which gestation is an important one. In preterm neonates, respiratory distress syndrome (RDS) is the most common cause while in the late preterm and term neonates transient tachypnea of newborn (TTN) is the predominant cause. Other common causes of respiratory distress among VLBW neonates include sepsis or pneumonia, transient tachypnea, air leak, patent ductus arteriosus etc. Among term neonates TTN, meconium aspiration syndrome (MAS), RDS, pneumothorax and pneumonia were the common causes.

### Grading the severity of Respiratory Distress

Both the scoring systems help to assess the severity of distress and to decide about the respiratory support that needs to be offered.

- Silverman Anderson score – assessment of preterm neonates with respiratory distress
- Downe's score – assessment of both preterm and term neonates

### Algorithm for initial management of respiratory distress



### Mechanical ventilation

#### Indications:



- Hypoxemia defined as  $\text{PaO}_2 < 50 \text{ mmHg}$  or oxygen saturation  $< 85\%$  on supplemental oxygen
- Hypercarbia;  $\text{PaCO}_2 < 60 \text{ mmHg}$  and  $\text{pH} < 7.2$
- Recurrent apnea or severe apnea requiring bag and mask ventilation
- Shallow respiratory efforts or gasping irregular respiration
- Failure of non-invasive support: Defined as worsening respiratory distress, and/or hypoxemia despite CPAP pressure of 7-8 cm  $\text{H}_2\text{O}$  and  $\text{FiO}_2$  of 50% or recurrent episodes of apnea

## **Noninvasive respiratory support**

### **I. Continuous positive airway pressure (CPAP)**

CPAP applied to premature infants with respiratory distress expands collapsed alveoli, splints the airway, reduces work of breathing and improves the pattern and regularity of respiration.

#### **Indications**

The prime requirement for starting CPAP in a neonate is the presence of good respiratory effort.

- CPAP is indicated in spontaneously breathing premature infant with respiratory distress (tachypnea, retractions or grunt), recurrent apneas not responding to medical management and post extubating from mechanical ventilation.
- In at-risk neonates for respiratory distress syndrome, CPAP should be started at the earliest sign of respiratory distress (mild to moderate retractions and or grunt).
- CPAP is also indicated in term neonates with respiratory distress and saturations less than 90% on hood oxygen.
- Apnea of prematurity
- Term neonates with meconium aspiration syndrome, pneumonia and occasionally transient tachypnea of newborn (TTN)

#### **Contra-indications**

- Poor respiratory efforts
- Recurrent or severe apnea requiring bag and mask ventilation
- congenital diaphragmatic hernia, tracheoesophageal fistula, choanal atresia, cleft palate and in those with severe cardio-vascular instability
- $\text{pH}$  is less than 7.25 and  $\text{PaCO}_2 > 60 \text{ mm of Hg}$

### **II. Heated humidified high flow nasal cannula (HFNC)**

HFNC has emerged as an alternative to CPAP in recent years. HFNC therapy refers to the administration of oxygen or blended oxygen and air to neonates via nasal cannula at higher flow (greater than 1 L/min.).

## Indications

- Post extubation support
- To aid in weaning from CPAP in preterm neonates
- As an alternative to CPAP in stable preterm neonates who are at risk of or have established nasal trauma or for better nursing care to promote mother-infant bonding, kangaroo care and oral feeding
- Apnea of prematurity
- It is not recommended as a primary mode of respiratory support in preterm neonates with RDS

## Contra-indications

- Poor spontaneous efforts
- Neonates with severe RDS,
- recurrent or severe apnea requiring bag and mask ventilation
- Congenital anomalies of the upper

## • Sepsis / pneumonia without complications

Neonatal sepsis is defined by the presence of clinical signs and symptoms of septicemia, pneumonia or meningitis along with isolation of pathogen from any of the sterile body fluids namely blood, cerebrospinal fluid or urine or abscess.

Clinical sepsis is defined as the presence of signs and symptoms of sepsis but with a negative blood or CSF culture.

- Suspected sepsis (or rule-out sepsis/risk of sepsis): infection suspected because of risk factors – maternal fever or foul-smelling liquor or spontaneous onset of preterm labor or prolonged rupture of membranes (>24h)
- Presumed or clinical sepsis: clinical and laboratory findings consistent with infection without a positive culture
- Early onset sepsis (EOS): Onset  $\leq$  72h of life, mainly due to infection acquired before/during delivery
- Late onset sepsis (LOS): Onset > 72h of life, presumed to be due to infection acquired after delivery

## • Hyperbilirubinemia requiring exchange transfusion

Exchange transfusion removes bilirubin and antibody coated erythrocytes as well as circulating antibodies from the infant's blood and replaces them with uncoated donor red blood cells that lack the sensitizing antigen. It is very rapid method for lowering dangerously high serum bilirubin.

## Indications for Exchange transfusion

- Immediate exchange transfusion
  - Features of bilirubin encephalopathy irrespective of bilirubin levels
  - Serum bilirubin levels  $\geq 5\text{mg/dL}$  above exchange levels
- Other indications for exchange transfusion
  - When TSB rises rapidly to exchange levels despite intensive phototherapy (plotting on American Academy of Pediatrics (AAP) charts for neonates  $\geq 35$  wk gestation/National Institute for Health and Care Excellence (NICE) guidelines for preterm  $< 35$  wk gestation)
- Exchange transfusion in Rh iso-immunization
  - Cord bilirubin is  $5\text{ mg/dL}$  or more
  - Cord Hb is  $10\text{ g/dL}$  or less
  - Bilirubin levels  $> 10\text{ mg/dL}$  by 24 h of age
  - Bilirubin levels above the age specific exchange cut-off levels
  - H/o previous sibling requiring exchange transfusion because of Rh isoimmunization and the index patient is born with pallor, hepatosplenomegaly and positive DCT

## Features of bilirubin encephalopathy (BE)

- Initial Phase – Lethargy, poor suck, hypotonia, slightly high-pitched cry
- Intermediate phase – irritability, variable tone and retrocollis or opisthotonos
- Advanced phase – coma, absent suck, shrill cry and marked opisthotonos

Bilirubin induced neurological damage (BIND) score helps to identify early signs and severity of BE.

BIND Score	Severity
0	Normal Neonate
1-3	Subtle Encephalopathy
4-6	Moderate Encephalopathy
7-9	Advanced Encephalopathy

## • Seizures

A neonatal seizure is a sudden paroxysmal depolarization of a group of neurons resulting in a transient alteration in sensory, motor, behavior or autonomic activity, with or without a alteration of consciousness in the neonatal age group.

Seizure in neonatal period are grouped in different ways, the most common grouping used is as:

- Epileptic seizures: phenomenon associated with corresponding EEG changes e.g. clonic seizures
- Non-epileptic seizures: clinical seizures without corresponding EEG correlate e.g. subtle seizures
- EEG seizures: abnormal EEG activity with no clinical correlation

### **Important etiologies of neonatal seizures**

Among neonates with seizures, the four most common aetiologies are:

1. The HIE (38-48%)
2. Neonatal Hypoglycaemia (3-7.5%)
3. Hypocalcaemia (2.3-9%)
4. CNS Infection (5.5-10.3%)

#### **• Major congenital malformations (pre-surgical stabilization, not requiring ventilation)**

(Respective detailed PMJAY guidance documents can be reviewed for more information)

Congenital anomalies are defined as abnormalities of body structure or function that are present at birth and are of prenatal origin. Synonymous terms that are often used are “birth defects”, “congenital abnormalities” and “congenital malformations”, but the latter has a more specific meaning. Major congenital malformations are abnormalities that have medical, surgical, or cosmetic significance. Malformations can result from genetic or teratogenic environmental factors. Major malformations are those that have medical and/or social implications. These often require surgical repair or are life threatening.

#### **Referral to Pediatric Surgery**

- Hemodynamically stable
- RR < 60 beats/min
- Temperature (normothermia)
- Oxygenation (maintaining saturation in the desired range)
- Perfusion (normal Capillary refill time)
- Blood sugar (Normoglycemia)



## Major congenital malformations

Head and craniofacial structures
<b>Skull</b>
Anencephaly
Encephalocele (occipital, frontal)
Holoprosencephaly
Hydrocephaly
<b>Eyes</b>
Microphthalmia
Anophthalmia
Colobomas (iris, retina)
<b>Ears</b>
Microtia (types II through IV)
<b>Mouth and throat</b>
Cleft lip
Cleft palate
Severe micrognathia (Robin sequence)
Macro- or microglossia
<b>Neck</b>
Cystic hygroma
<b>Chest</b>
Pectus excavatum
Absent or hypoplastic clavicles
<b>Back</b>
Meningomyelocele
Spina bifida
<b>Abdomen</b>
Omphalocele
Gastroschisis
<b>Genitalia</b>
Ambiguous genitalia
<b>Extremities</b>
<b>Arms</b>
Absent or limb deficiencies
<b>Hands and feet</b>
Polydactyly, complete syndactyly, polysyndactyly
Absent digits
Ectrodactyly
<b>Cardiovascular and great vessels</b>
Tetralogy of Fallot
Truncus arteriosus
Hypoplastic left heart
Ventricular or atrial septal defect
Transposition of the great vessels
Interrupted aortic arch type B
Total anomaly of pulmonary venous return
Hypoplasia or coarctation of the aorta

## • Cholestasis significant enough requiring work up and in-hospital management

Neonatal cholestasis (NC) is defined as conjugated hyperbilirubinemia occurring in the newborn as a consequence of diminished bile flow. Conjugated hyperbilirubinemia in a neonate is defined as a serum direct/conjugated bilirubin concentration greater than 1.0 mg/dL if the total serum bilirubin (TSB) is <5.0 mg/dL or greater than 20 percent of TSB if the TSB is >5.0 mg/dL.

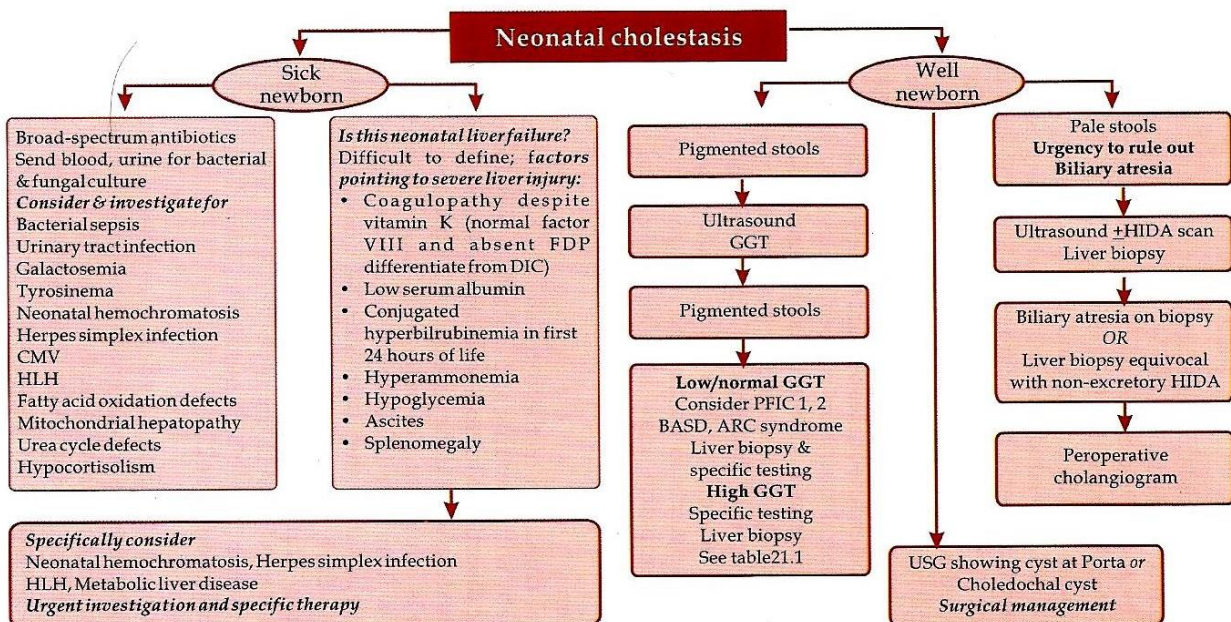
### Symptoms

Any newborn with jaundice and dark yellow urine staining the diaper with or without pale stools should be strongly suspected to have NC. However, if jaundice is associated with dark urine and/or pale stools, it is suggestive of cholestasis.

Associated factors:

1. Hepatosplenomegaly
2. Dehydration
3. Failure to thrive (clinically unwell, poor feeding, poor weight gain)

### Diagnostic approach to Neonatal Cholestasis



CMV: cytomegalovirus, HLH: hemophagocytic lymphohistiocytosis, DIC: disseminated intravascular coagulation, GGT: gamma glutamyl transferase, PFIC: progressive familial intrahepatic cholestasis, BASD: bile acid synthetic defect, HIDA: Hepatobiliary scintigraphy, ARC arthrogryposis renal dysfunction cholestasis syndrome

### Management

The therapy for cholestasis is treating the underlying etiology of the disease.

General Management:

- Medium chain Triglycerides (MCT) oil
- Fat soluble Supplements



➤ Vitamin A,D,E,K

- Water soluble supplements (Twice the RDA)
- Calcium
- Phosphate
- Zinc
- Ursodeoxycholic acid
- Prophylactic phenobarbitone
- Portal hypertension – propranolol
- Pediatric Surgical consultation if required
- End stage disease – Liver transplantation

• **Congestive heart failure or shock**

(Respective detailed PMJAY guidance documents can be reviewed for more information)

Shock is a state of acute circulatory failure resulting in decreased tissue and organ perfusion which leads to depletion of oxygen and substrate in the cells.

**Shock is a progressive disorder but can generally be divided into 3 phases:**

1. Compensated

Clinical signs at this time include pallor, tachycardia, cool peripheral skin, and prolonged capillary refill time.

2. Uncompensated

Clinical signs at this stage include hypotension, very prolonged capillary refill time, tachycardia, cold skin, rapid breathing (to compensate for the metabolic acidosis), and reduced or absent urine output.

3. Irreversible

Early recognition and effective treatment of shock are crucial to prevent inevitable progression to this stage. Hypotension is a late sign of shock.

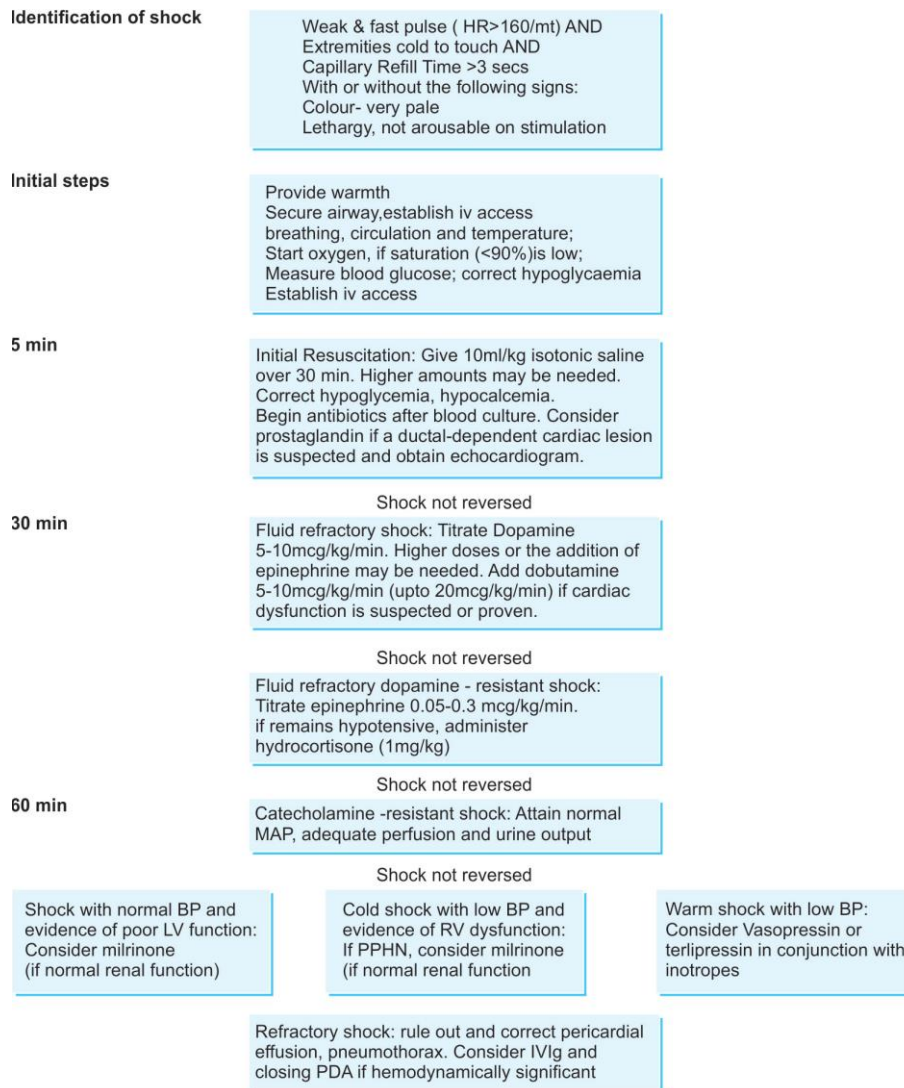
Non-specific signs: lethargy, irritability and unresponsiveness to painful stimuli, generalized hypotonia, decreased deep tendon reflex

## Types of Shock

Sr. No	Types	Causes
1	Cardiogenic	Perinatal Asphyxia, congenital heart disease, cardiomyopathy (IDM), heart failure, arrhythmias, or myocardial ischemia, bacterial toxins
2	Hypovolemic	Acute blood loss – antepartum haemorrhage, umbilical cord accidents, traumatic birth, twin-to-twin transfusion, peri-operative, IVH
3	Distributive	Sepsis, vasodilators, myocardial depression, or endothelial injury
4	Obstructive	<p>Inflow obstructions:</p> <ul style="list-style-type: none"> <li>• TAPVR</li> <li>• Acquired inflow obstructions - air or thrombotic embolus</li> <li>• Increased intrathoracic pressure caused by high airway pressures or air-leak syndromes (e.g. pneumothorax).</li> </ul> <p>Outflow obstructions:</p> <ul style="list-style-type: none"> <li>• Pulmonary stenosis or atresia / Aortic stenosis or atresia</li> </ul> <p>Hypertrophic subaortic stenosis (IDM) Coarctation of the aorta</p>
5	Dissociative	Profound anemia or methemoglobinemia

## Management

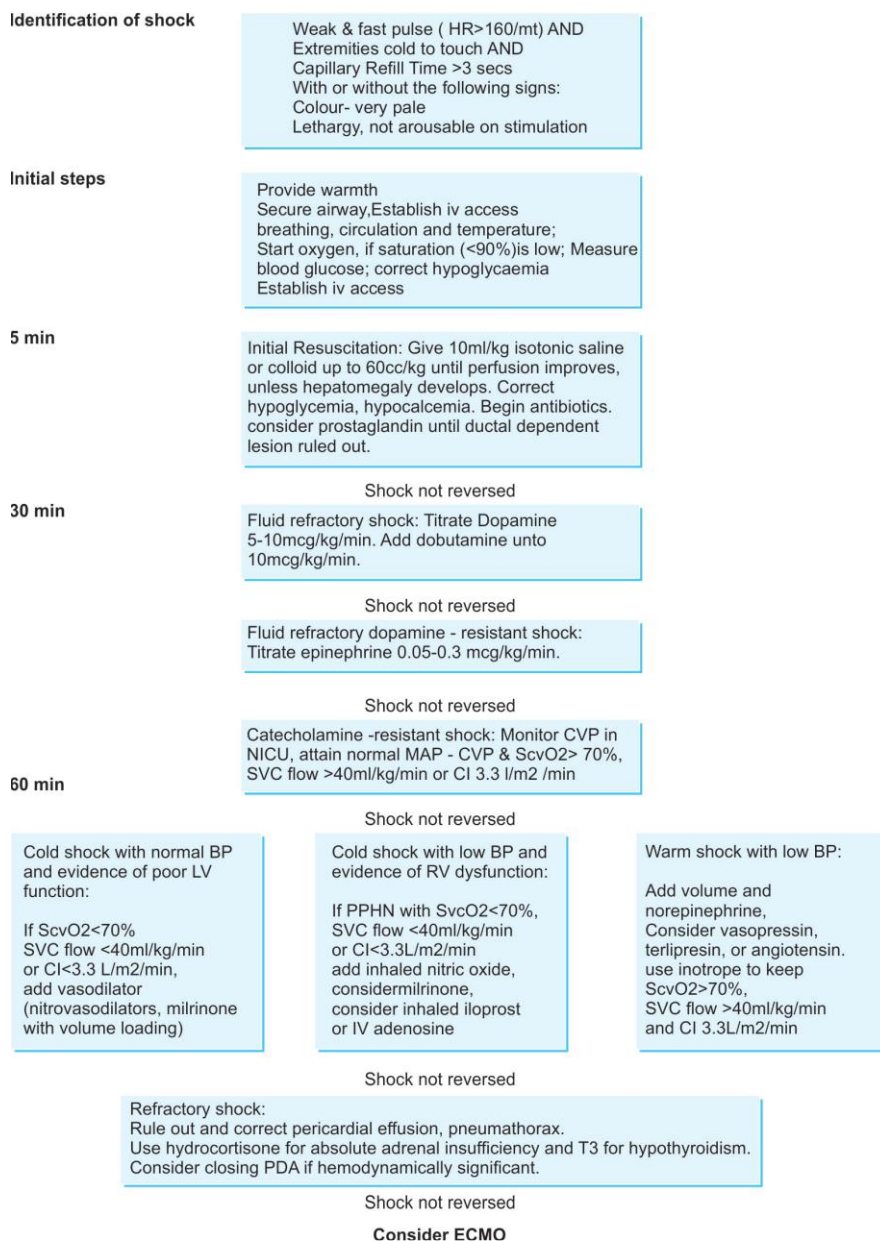
### Flow chart 1: Suggested Treatment algorithm for Preterm



(RDS-respiratory distress syndrome, NRP-Neonatal Resuscitation Program, CVP-central venous pressure, MAP mean arterial pressure, ScvO<sub>2</sub>-central venous oxygen saturation, SVC superior vena cava, CI-cardiac index, VLBWvery low birth weight, PDA-patent ductus arteriosus, PPHN-persistent pulmonary hypertension of the newborn)



## Flow chart 2: Treatment Algorithm for Term Newborns



### 1.3 STANDARD TREATMENT WORKFLOW (DHR-ICMR STW)<sup>i</sup>- For clinicians/ treating doctor

<https://stw.icmr.org.in/stws>

### 1.4 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	Intensive Neonatal Care Package
<b>i. At the time of Pre-authorization</b>	
Clinical notes including evaluation findings and planned line of management	Yes
<b><u>Babies with birthweight 1500-1799 g</u></b> <b>Mandatory</b> Birth weight Gestation age Ballard scoring for determining maturity Respiratory support - Silverman score need for Surfactant/Chest X-ray/CPAP/MV Retinopathy of Prematurity (ROP) screening (can be discharged – First ROP screening venue/date should be documented on the discharge summary to be done before 30 days of age and <2kg weight)  <b>Optional</b> Caffeine administration – (Apnea of prematurity) Neurosonogram Blood sugar Serum Calcium Serum electrolytes Septic screen Total Serum Bilirubin 2D ECHO Hearing assessment Thyroid profile	Yes
<b><u>Need for mechanical ventilation for less than 24 hours or non-invasive respiratory support</u></b> <b>Mandatory</b> Pulse oximetry Chest X-Ray Arterial Blood Gas (ABG) analysis <b>Optional</b> Echocardiography Sepsis screen Blood glucose Electrolytes	Yes
<b><u>Sepsis / pneumonia without complications</u></b> Chest X-ray Septic screen <b><u>Optional</u></b>	Yes

Blood Culture	
<b><u>Hyperbilirubinemia requiring exchange transfusion</u></b> <b>Mandatory</b> Liver function test Coomb's test (Direct) Complete blood count Blood grouping (mother and newborn) Hearing assessment (BERA) – can be discharged with documentation of BERA screening planned before 3 months age with venue/date <b>Optional</b> Neurosonogram G6PD enzyme activity	Yes
<b><u>Seizures</u></b> <b>Mandatory</b> Sr Electrolytes Blood Sugar Serum Calcium Septic Screen Cerebrospinal fluid (CSF) examination Neurosonogram Electroencephalogram (EEG) – based on availability <b>Optional</b> Ammonia Lactate Urine Reducing Substance Serum Magnesium Serum bilirubin (if icteric) Hematocrit (if plethoric and/or at risk for polycythemia) Blood Gas Analysis TORCH screen for congenital infections Work-up for inborn errors of metabolism CT/MRI Brain	Yes
<b><u>Major congenital malformations (pre-surgical stabilization, not requiring ventilation)</u></b> <b>Mandatory</b> Clinical Examination Clinical photograph <b>Optional</b> Laboratory studies are guided by the clinical presentation – based on etiology Chest X-ray Erect Abdomen X-ray	Yes



<b><u>Cholestasis significant enough requiring work up and in-hospital management</u></b> <b>Mandatory</b> Liver Function test Thyroid profile Septic Screen USG Abdomen Urine for bile pigments HIDA scan (based on the availability) <b>Optional</b> MRI, CECT Abdomen	Yes
<b><u>Congestive heart failure or shock</u></b> Complete blood count Coagulation parameters (prothrombin time, activated partial thromboplastin time) Electrolytes, blood sugar, BUN/creatinine and urinalysis Functional Echocardiography Chest X-ray Electrocardiogram Neurosonogram Arterial Blood Gas (ABG) analysis Serum lactate Culture Cross matching and typing of blood	Yes
<b>ii. At the time of claim submission</b>	
Detailed Indoor case papers (ICPs)	Yes
Investigations reports (if done)	Yes
Detailed Procedure notes and indication (if any)	Yes
Detailed discharge summary	Yes

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

### **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:**

- **Babies with birthweight 1500-1799 g**



- a. Was the neonate born at birth weight 1500-1799 grams documented? Yes/Not Applicable

**• Need for mechanical ventilation for less than 24 hours or non-invasive respiratory support (CPAP, HFFNC)**

- a. Was the indication for ventilatory support requirement documented? Yes/Not Applicable

**• Sepsis / pneumonia without complications**

- a. Were sepsis screen/blood culture/Chest X-ray reports submitted? Yes/Not Applicable

**• Hyperbilirubinemia requiring exchange transfusion**

- a. Was the indication of Exchange transfusion documented? Yes/Not Applicable

**• Seizures**

- a. Were the reports of Sr Electrolytes/Blood Sugar/Serum Calcium/Septic Screen/Cerebrospinal fluid (CSF) examination/Neurosonogram submitted? Yes/Not Applicable

**• Major congenital malformations (pre-surgical stabilization, not requiring ventilation)**

- a. Was there an indication of ventilation requirement? No  
b. Was the clinical photograph indicative of surgery? Yes/Not Applicable

**• Cholestasis significant enough requiring work up and in-hospital management**

- a. Was the TSB report (elevated direct fraction) submitted? Yes/Not Applicable

**• Congestive heart failure or shock**

- a. Were investigations and clinical presentation confirming the diagnosis? Yes/Not Applicable

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

**References**

1. Vishnu Bhat, Nishad Plakkal. NICU Protocols of JIPMER. Indian Journal of Pediatrics. 2020.
2. Carlos A Bacino. Birth defects: Epidemiology, types, and patterns – UpToDate.
3. Rhishikesh Thakre, Srinivas Murki. Protocols in Neonatology: Indian Academy of Pediatrics Neonatology Chapter. 2nd Edition, 2019.



4. Ramesh Agarwal, Ashok Deorari, Vinod K Paul, et al. AIIMS Protocols in Neonatology. Volume I & II. Second Edition. 2019
5. [https://www.perinatalweb.org/assets/cms/uploads/files/care\\_plan\\_final.pdf](https://www.perinatalweb.org/assets/cms/uploads/files/care_plan_final.pdf)
6. Standard Treatment Guidelines. Department of Public Health & Family Welfare. Madhya Pradesh. 2016.
7. STANDARD TREATMENT GUIDELINES PEDIATRICS & PEDIATRIC SURGERY. Ministry of Health & Family Welfare Govt. of India
8. Standard Treatment Guideline & Essential Medicine List. Janani Shishu Suraksha Karyakram. Health & Family Welfare Department. Government of Odisha.
9. Standard Treatment Guidelines. A Manual for Medical Practitioners. Health & Family Welfare Department. Government of Tamil Nadu. 2010

---

**Acknowledgment:**

<sup>[1]</sup> Standard Treatment Workflows of India. 2019 Edition, vol. 1, New Delhi, Indian council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India. These STWs have been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the web portal ([stw.icmr.org.in](http://stw.icmr.org.in)) for more information. © Indian Council of Medical Research and Department of Health Research, Ministry of Health & Family Welfare, Government of India.