



Guidance document for processing PM-JAY packages

Special 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)
<p>Special Neonatal Care Package: Babies that required admission to SNCU or NICU: Babies admitted for short term care for conditions like:</p> <ul style="list-style-type: none"> • Mild Respiratory Distress/tachypnea • Mild encephalopathy • Severe jaundice requiring intensive phototherapy • Haemorrhagic disease of newborn • Unwell baby requiring monitoring • Some dehydration • Hypoglycaemia <p>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</p>	<p>Special Neonatal Care Package: Babies that required admission to SNCU or NICU: Babies admitted for short term care for conditions like:</p> <ul style="list-style-type: none"> • Mild Respiratory Distress/tachypnea • Mild encephalopathy • Severe jaundice requiring intensive phototherapy • Haemorrhagic disease of newborn • Unwell baby requiring monitoring • Some dehydration • Hypoglycaemia <p>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</p>	M300002	MN002A	3,000

ALOS: 3-6 days

Minimum qualification of the treating doctor:

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

Desirable: DM/DNB/Equivalent (in Neonatology)

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

Disclaimer:

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















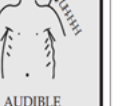
It will also serve as a tool for hospitals to determine and submit the mandatory documents required for claiming reimbursement of health benefit package under PMJAY.

1.2 Clinical key pointers:

• Mild Respiratory Distress/tachypnea

In addition to the below features, presence of nasal flaring, suprasternal retractions, decreased air entry on auscultation of the chest also will indicate the presence of respiratory distress.

Respiratory distress score: In order to objectively grade the severity, the signs of respiratory distress are assigned a numerical score. The final score is classified into mild (<5), moderate (5-7) and severe (>7) to indicate the severity of distress. The two commonly used respiratory distress scores are the Silverman Anderson score and Downes' Vidyasagar Score. Based on the score the mode of treatment can be decided.

	UPPER CHEST	LOWER CHEST	XIPHOID RETRACTIONS	NARES DILATATION	EXPIRATORY GRUNT
Grade 0	 SYNCHRONIZED	 NO Retractions	 NONE	 NONE	 NONE
Grade 1	 LAG ON INSPIRATION	 JUST VISIBLE	 JUST VISIBLE	 MINIMAL	 HEARD WITH STETHOSCOPE
Grade 2	 SEE-SAW	 MARKED	 MARKED	 MARKED	 AUDIBLE

Silverman Anderson score ⁷

Downe's score for grading severity of respiratory distress

Feature	Score 0	Score 1	Score 2
Cyanosis	None	In room air	In 40% FiO ₂
Retractions	None	Mild	Severe
Grunting	None	Audible with stethoscope	Audible without stethoscope
Air entry	Normal	Decreased	Barely audible
Respiratory rate	<60	60-80	>80 or apnea

Treatment

The basic principles of treatment include:

1. Supportive care
2. Respiratory support (oxygen therapy, Continuous positive airway pressure (CPAP))
3. Monitoring for and management of complications
4. Specific therapy

Supportive care: This includes maintenance of thermo-neutral environment by caring the infant under radiant warmer or in incubator, ensuring normal blood glucose levels with intravenous fluids and monitoring the vital parameters such as heart rate, respiratory rate and scoring of the respiratory distress.

• Mild encephalopathy

Neonatal Encephalopathy (NE) is “a clinically defined syndrome of disturbed neurological function in the earliest days of life in the term infant, manifested by difficulty with initiating and maintaining respiration, depression of tone and reflexes, sub normal level of consciousness and often seizures”.

Clinical stages of Encephalopathy

Stage 1 - Mild	<ul style="list-style-type: none"> • Duration < 24 hours with hyperalertness • Uninhibited Moro and stretch reflexes • Sympathetic effects • Normal electroencephalogram
Stage 2 - Moderate	<ul style="list-style-type: none"> • Reduced consciousness • Hypotonia • Decreased spontaneous movements with or without seizures
Stage 3 - Severe	<ul style="list-style-type: none"> • Stupor • Flaccidity • Seizures • Suppressed brain stem and autonomic functions • The EEG may be isopotential or have infrequent periodic discharges

Etiology

- Hypoxic-ischemic insult
- Metabolic disease
- Infection

- Drug exposure
- Nervous system malformation
- Neonatal stroke

The requirement for investigation to exclude these possibilities will depend on the presentation, history and clinical features of the individual case. The diagnosis of encephalopathy severity can be made on clinical grounds but this may be supported by aEEG findings including abnormal baseline, discontinuity, and presence of seizures.

Management

Recognition and documentation of NE is vital to subsequent management and neonatal outcome.

- Adequate resuscitation should be instituted at birth, as per standard guidelines
- Cord gases or lactate should be collected if perinatal asphyxia is suspected
- A low Apgar score at 5 minutes indicates an abnormal condition at birth but it is not exclusive to asphyxia so drug exposure, trauma, hypovolemia, infection, or congenital anomalies may need to be excluded
- For infants requiring resuscitation at birth a note should be made of:
 - time for regular spontaneous ventilation to be established
 - time to first detection of a heart rate
 - time to Heart rate > 100, as a slow recovery of the heart rate (>100bpm) despite adequate resuscitation may indicate a severe insult
 - meconium staining of umbilical cord and skin as it suggests prolonged exposure to meconium (> 3 hrs)
- Observe neurological signs and evaluate severity of the encephalopathy. If available also consider cotside amplitude integrated EEG monitoring
- Aim to complete assessment & initiate plan within the first 60 min after birth
- Encephalopathy progresses over time so serial observation is important. Use of the Simplified Sarnat Criteria may assist in documenting progression. Once stabilized, if required the infant can be transported to level III center for cooling and ongoing care.

Staging based on serial clinical examination is useful in predicting prognosis after NE. All infants should have a convalescent neurological examination performed and the results documented in notes and discharge summary.

• **Severe jaundice requiring intensive phototherapy**

Icterus or jaundice is yellowish discoloration of skin, sclera and mucus membrane. Jaundice should be observed in broad daylight. Severity of jaundice is assessed based on the onset, intensity of skin discoloration, associated clinical signs of hemolysis, lab reports and clinical features of bilirubin induced brain dysfunction.

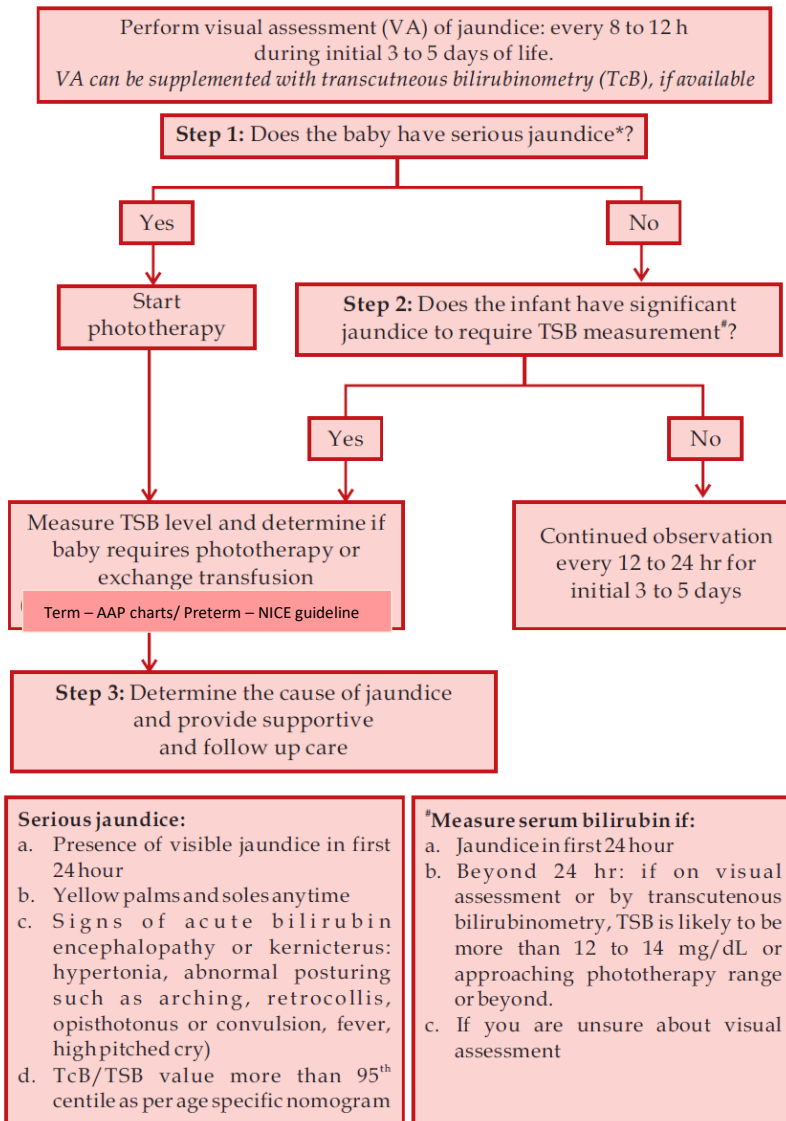
Classification

- Jaundice after 24 hours is often physiological (use transcutaneous bilirubinometer)
- Alert signs in neonatal jaundice (pathological jaundice)
 - Clinical jaundice in first 24 hrs of life
 - Total serum bilirubin increasing by $> 5\text{mg/dl/day}$
 - TSB $> 15\text{ mg/dl}$
 - Conjugated serum bilirubin $> 2\text{ mg/dl}$
 - Clinical jaundice persisting for > 2 weeks in full term and > 3 weeks in preterm neonates

Approach and Management

- As a first step, serious jaundice should be ruled out. Assess the severity of jaundice and risk factors for bilirubin encephalopathy
- Based on Transcutaneous bilirubinometer plotting Serum bilirubin should be done to start phototherapy
- Chart on the American academy of Pediatrics (AAP) nomogram (Term and late preterm infants (≥ 35 wk gestation)) to decide on role of phototherapy or exchange transfusion based on gestation, birth weight and postnatal age in hours
- If the level exceeds the line indicated for each category, start intensive phototherapy
- Infants are designated as low, medium and higher risk based on their gestational age and presence of risk factors that can pre-dispose to bilirubin induced brain damage. These risk factors include iso-immune hemolytic anemia, G6PD deficiency, asphyxia, lethargy, temperature instability, sepsis and acidosis
- Monitoring through TSB levels
- Adequate feeding

Approach to an infant with Jaundice



• Haemorrhagic disease of newborn (HDN)

Bleeding may occur due to defective coagulation, thrombocytopenia or combines coagulation and platelet defects. Newborn babies are predisposed to develop vitamin deficiency and hemorrhagic manifestations or vitamin K-dependent bleeding.

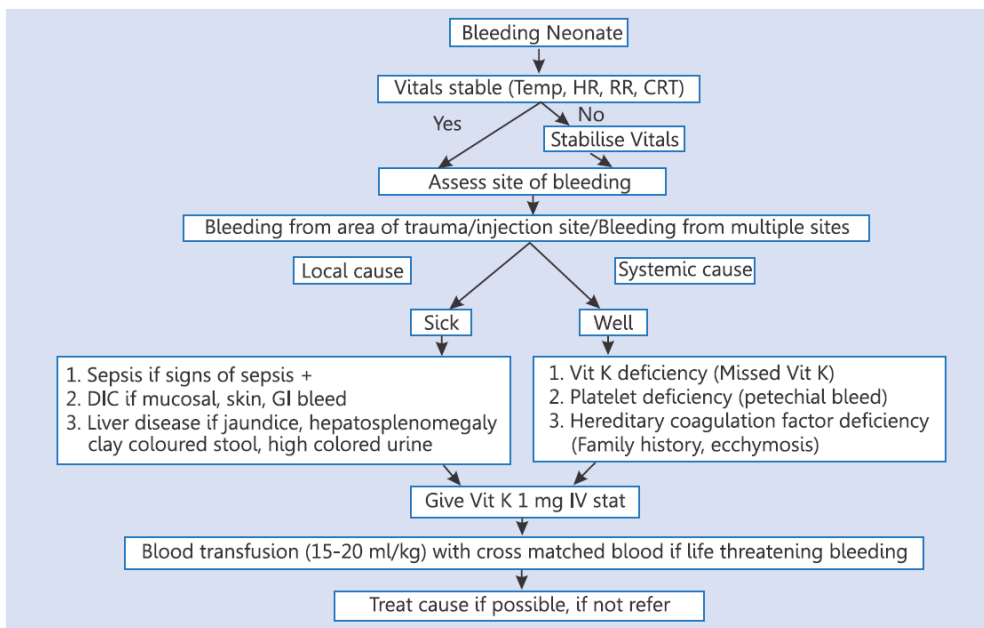
Classification

1. Early HDN – Severe life-threatening manifestations are seen in-utero or within 24 hours of life. The site of bleeding is usually concealed inside the body cavities, like cranium, thorax, and abdomen. Vitamin K deficiency occurs in-utero due to maternal intake of certain drugs.
2. Classical HDN – It is the most common and occurs due to physiological vitamin K deficiency in the newborn period which is further aggravated by inadequate intake of vitamin K due to breastfeeding. The classical HDN usually manifests during 2nd and 3rd (up to 1-7 days) day of life and is characterized by bleeding from umbilical stump, nose, GI tract and following a surgical procedure such as circumcision. The manifestations are not very severe, and disease can be managed by administration of vitamin K.
3. Late HDN – The bleeding manifestations occur after first week (usually 2-16 weeks) of life. The condition is rare in formula fed infants and in infants who had received injectable vitamin K at birth. The infant may be apparently healthy but more often there are predisposing conditions which are known to produce vitamin K deficiency viz. chronic diarrhea, malabsorption, hepatic cholestasis, prolonged administration of broad-spectrum antibiotics. The bleeding may occur from any site but more commonly from intracranial vessels, mucous membranes, skin and GI tract.

Diagnosis

The association of predisposing factors and age at onset of bleeding offer useful clues. The infants with hemorrhagic disease of the newborn do not appear ill or toxic which easily differentiates them from disseminated intravascular coagulation. The laboratory parameters pertaining to vitamin K-dependent coagulation factors are deranged.

Management of a bleeding neonate



• **Unwell baby requiring monitoring**

Manually assess heart rate, respiratory rate, perfusion, oxygenation and temperature a minimum of approximately every 6 hours. Timing is based on assessment of the infant to ensure that sleep is protected.

Perform physical assessment of hydration and review fluid status every 4-6 hours or more frequently as clinically indicated.

Neurologic assessment includes: level of consciousness, limb movements and tone, gag, suck, response to stimuli, fontanelles, head circumference and vital signs. It may include assessment of pupils as required for term infants.

Evaluation of newborn with symptoms of vomiting, excess crying, well baby with fever, increase in abdominal girth along with history of feeding and other vital signs should be documented.

• **Some dehydration**

Isonatremic disorders - Dehydration

a. Predisposing factors frequently involve equivalent losses of Na and water (through thoracostomy, nasogastric, or ventriculostomy drainage) or third-space losses that accompany peritonitis, gastroschisis, or omphalocele. Renal Na and water losses in the VLBW infant can lead to hypovolemia despite normal body tonicity.

b. Diagnosis. Dehydration is usually manifested by weight loss, decreased urine output, and increased urine SG. However, infants of <32 weeks' gestation may not demonstrate oliguria in response to hypovolemia. Poor skin turgor, tachycardia, hypotension, metabolic acidosis, and increasing BUN may coexist. A low FENa (Fractional excretion of sodium) (<1%) is usually only seen in infants of >32 weeks' gestational age.

c. Therapy. Administer Na and water to first correct deficits and then adjust to equal maintenance needs plus ongoing losses. Acute isonatremic dehydration may require IV infusion of 10 mL/kg of NS if acute weight loss is >10% of body weight with signs of poor cardiac output.

• **Hypoglycaemia**

Hypoglycemia is defined as a blood glucose level of less than 45 mg/dl in all newborns. Hypoglycemia may be symptomatic or asymptomatic.

Neonates at risk of hypoglycemia



- Born at less than 37 weeks gestation
- Large for gestational age (LGA) with birth weight greater than the 90th percentile on the infant growth chart
- Small for gestational age (SGA) with birth weight less than the 10th percentile on the infant growth chart
- Infant of diabetic mother (IDM)
- Sick neonates (perinatal asphyxia, hypothermia, poor &/or delayed feeding, sepsis, shock, respiratory distress and polycythemia)
- Babies predominantly on intravenous fluids

Symptoms

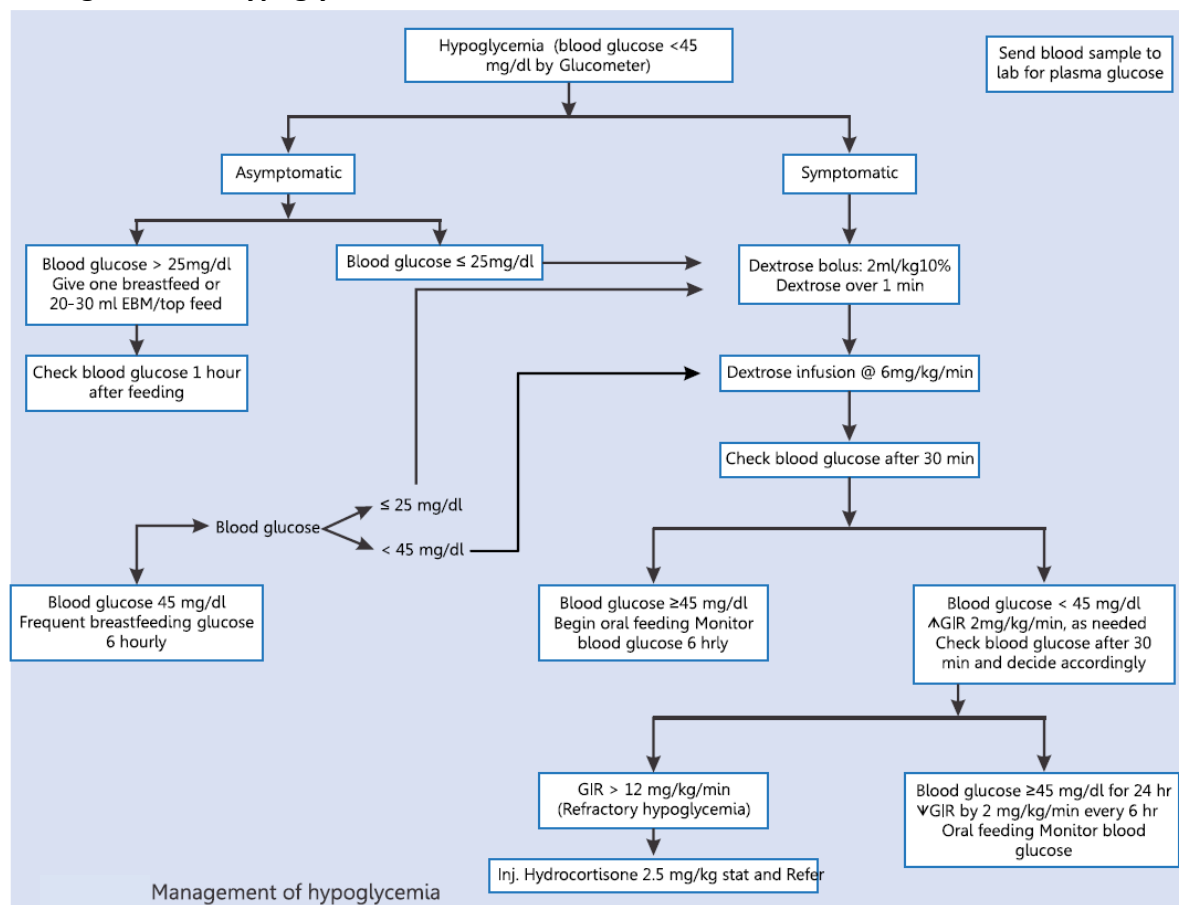
➤ Mild Symptoms:

- Jitteriness or tremulousness
- Limpness, mild lethargy
- Difficulty feeding
- Eye rolling
- Weak or high-pitched cry

➤ Severe Symptoms:

- Apnea or tachypnea
- Seizures
- Cyanosis
- Cardiac failure / arrest
- Episodes of sweating
- Pallor
- Hypothermia

Management of Hypoglycemia



If hypoglycemia persists despite above management, give one dose of hydrocortisone: 2.5 mg/kg IV and refer to a higher health facility for further evaluation and management. Newborns with hypoglycemia should be followed-up for neurodevelopmental status.

1.3 STANDARD TREATMENT WORKFLOW (DHR-ICMR STW)ⁱ- 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	Special Newborn Care Package
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i. At the time of Pre-authorization	
Clinical notes including evaluation findings and planned line of management	Yes
• <u>Mild Respiratory Distress/tachypnea</u> Mandatory (one or more) Chest X-ray Hemoglobin Blood sugar Sepsis screen Blood culture Optional 2DECHO Arterial Blood Gas (ABG) analysis	Yes
• <u>Mild encephalopathy</u> Mandatory (one or more) Arterial Blood Gas (ABG)/Cord blood analysis Blood sugar Serum Electrolytes Serum Creatinine Optional Septic screen/CSF Analysis (Meningitis) Metabolic profile (for fatty acid defects)	Yes
• <u>Severe jaundice requiring intensive phototherapy</u> Mandatory Liver function test Coomb's test (Direct) Hemoglobin, reticulocyte count, peripheral smear for evidence of hemolysis Blood grouping (mother and newborn) Optional Sepsis screen G6PD enzyme activity (for boys) Hearing assessment (BERA)	Yes
• <u>Haemorrhagic disease of newborn</u> Mandatory Complete blood count Coagulation profile – Prothrombin Time, Activated Partial Thromboplastin Time Sepsis screen Optional Liver Function Test D-Dimer test Ferritin	Yes

PIVKA (vitamin K deficiency) Apt test USG skull/abdomen	
• Unwell baby requiring monitoring Blood sugar Serum Calcium Sepsis screen Serum Electrolytes Abdominal girth Optional Neurosonogram	Yes
• Some dehydration Clinical evaluation Serum electrolytes Urine analysis	Yes
• Hypoglycaemia Mandatory Blood sugar Optional Sepsis screen	
ii. At the time of claim submission	
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:

• Mild Respiratory Distress/tachypnea

- Chest X-ray/ sepsis screen indicative of diagnosis? Yes/Not Applicable
- Respiratory severity score documented? Yes/Not Applicable

• Mild encephalopathy

- a. Was APGAR score/HIE score/ septic screen documented? Yes/Not Applicable

• **Severe jaundice requiring intensive phototherapy**

- a. Was the TSB levels plotted on respective nomogram and indicative of intensive phototherapy? Yes/Not Applicable

• **Hemorrhagic disease of newborn**

- a. Were complete blood count/septic screen/coagulation profile investigations done? Yes/Not Applicable

• **Unwell baby requiring monitoring**

- a. Monitoring charts including HR, RR, oxygenation, perfusion, temperature documented? Yes/Not Applicable
b. Monitoring charts if any procedure done or on ventilatory support available? Yes/Not Applicable

• **Some dehydration**

- a. Was there a documentation of weight loss, decreased urine output, and increased urine specific gravity? Yes/Not Applicable

• **Hypoglycemia**

- a. Was the blood sugar documented < 45mg/dl? Yes/Not Applicable

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

References

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11. Standard Treatment Guidelines. A Manual for Medical Practitioners. Health & Family Welfare Department. Government of Tamil Nadu. 2010

Acknowledgment:

^[1] 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) for more information. © Indian Council of Medical Research and Department of Health Research, Ministry of Health & Family Welfare, Government of India.