

STANDARD TREATMENT WORKFLOW (STW)

Neonatal Emergency Triage Assessment and Management

Ashok K Deorari¹, Praveen Kumar², Adhisivam B³, Anu Sachdeva⁴, Ashish Jain⁵, Ashish Mehta⁶, Asim Kumar Mallick⁷, Damera Yadaiah⁸, Deepak Chawla⁹, Geeta Gathwala¹⁰, Gopal Agrawal¹¹, J Kumutha¹², K Venkatnarayan¹³, M Jeeva Sankar¹⁴, Mangala Bharathi S¹⁵, Nandkishor S Kabra¹⁶, Neelam Kler¹⁷, Neeraj Gupta¹⁸, Nishad Plakkal¹⁹, Poorva Gohiya²⁰, Ramesh Agarwal²¹, Rhishikesh Thakre²², Ruchi N. Nanavati²³, S. Giridhar²⁴, Sandeep Kadam²⁵, Sarita Verma²⁶, Shiv Sajjan Saini²⁷, Siddarth Ramji²⁸, Sindhu Sivanandan²⁹, Sridhar Santhanam³⁰, Srinivas Murki³¹, Suja Mariam G³², Suksham Jain³³, Suman Rao PN³⁴, Sushma Nangia³⁵, Tapas Som³⁶, Venkateshan Sundaram³⁷

¹All India Institute Of Medical Science, New Delhi; ²Postgraduate Institute of Medical Education and Research, Chandigarh; ³Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry; ⁴All India Institute Of Medical Science, New Delhi; ⁵Maulana Azad Medical College (MAMC), New Delhi; ⁶ANCC, Ahmedabad; ⁷Nil Ratan Sircar Medical College and Hospital, Kolkata; ⁸Govt Hospital Nalgonda.Mother And Child Helth Center, Nalgonda; ⁹Government Medical College & Hospital, Chandigarh; ¹⁰Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences, Rohtak; ¹¹CH, Gurgaon; ¹²Stanley Medical College, Chennai; ¹³NITI Ayog, New Delhi; ¹⁴All India Institute Of Medical Science, New Delhi; ¹⁵Madras Medical College, Chennai; ¹⁶SH, Mumbai; ¹⁷Sir Ganga Ram Hospital, New Delhi; ¹⁸All India Institute Of Medical Science, Jodhpur; ¹⁹Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry; ²⁰Gandhi Medical College, Bhopal; ²¹All India Institute Of Medical Science, New Delhi; ²²NCH, Aurangabad; ²³KEM, Mumbai; ²⁴Chettinad Hospital And Research Institute, Chennai; ²⁵KEM Hospital, Pune; ²⁶Tata Institute of Social Sciences, Mumbai; ²⁷Postgraduate Institute of Medical Education and Research, Chandigarh; ²⁸Maulana Azad Medical College (MAMC), New Delhi; ²⁹Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry; ³⁰Christian Medical College, Vellore; ³¹PCH, Hyderabad; ³²Sri Ramakrishna Hospital, Coimbatore; ³³Government Medical College & Hospital, Chandigarh; ³⁴St John's Medical College Hospital, Bengaluru; ³⁵Lady Hardinge Medical College, New Delhi; ³⁶All India Institute of Medical Sciences, Bhubaneswar; ³⁷Postgraduate Institute of Medical Education and Research, Chandigarh

CORRESPONDING AUTHOR

Dr. Ashok K Deorari, Department of Neonatology, All India Institute of Medical Science, New Delhi
Email: ashokdeorari_56@hotmail.com

CITATION

Deorari AK, Kumar P, Adhisivam B, Sachdeva A, Jain A, Mehta A, Mallick AK, Yadaiah D, Chawla D, Gathwala G, Agrawal G, Kumutha J, Venkatnarayan K, Sankar MJ, Bharathi MS, Kabra V, Kler N, Gupta N, Plakkal N, Gohiya P, Agarwal R, Thakre R, Nanavati RN, Giridhar S, Kadam S, Verma S, Saini SS, Ramji S, Sivanandan S, Santhanam S, Murki S, Mariam SG, Jain S, Rao SPN, Nangia S, Som T, Sundaram V. Neonatal Emergency Triage Assessment and Management. Journal of the Epidemiology Foundation of India. 2024;2(1Suppl):S17-S18. DOI: <https://doi.org/10.56450/JEFI.2024.v2i1Suppl.009>

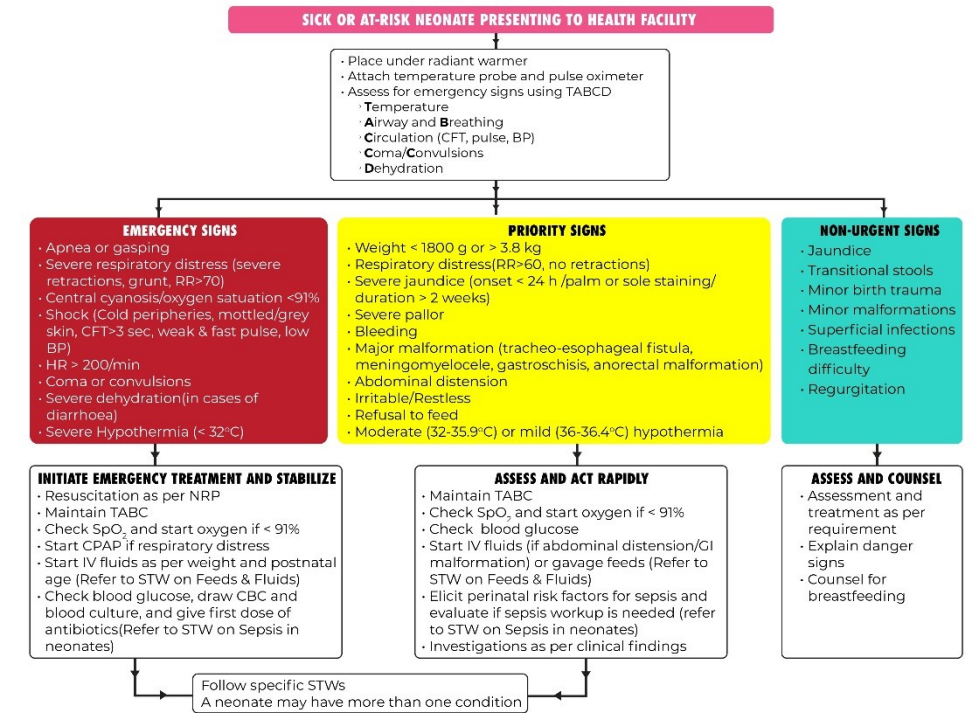
This work is licensed under a Creative Commons Attribution 4.0 International License.

©The Author(s). 2024 Open Access

DISCLAIMER

This article/STW, was originally published by Indian Council of Medical Research (ICMR) under Standard Treatment Workflow. The reprinting of this article in Journal of the Epidemiology Foundation of India (JEFI) is done with the permission of ICMR. The content of this article is presented as it was published, with no modifications or alterations. The views and opinions expressed in the article are those of the authors and do not necessarily reflect the official policy or position of JEFI or its editorial board. This initiative of JEFI to reprint STW is to disseminate these workflows among Health Care Professionals for wider adoption and guiding path for Patient Care.

Standard Treatment Workflow (STW) NEONATAL EMERGENCY TRIAGE ASSESSMENT AND MANAGEMENT



SPECIFIC MANAGEMENT WORKFLOWS

SHOCK	<ul style="list-style-type: none"> Provide warmth IV NS 10mL/kg bolus over 30-60 min May repeat bolus if evidence of volume deficit Consider inotropes
HR > 200 /MIN	<ul style="list-style-type: none"> Urgent ECG-look for p waves If SVT, consider ice-pack and IV adenosine Check for and correct hyperthermia if present
SEVERE DEHYDRATION (Diarrhoea plus any two of lethargy, very slow skin pinch and sunken eyes)	<ul style="list-style-type: none"> Provide warmth IV 30 mL/kg of RL or NS in 1 hour followed by 70 mL/kg in next 5 hours (WHO plan C) If IV not possible, give ORS at 20 mL/kg/h for 6 hours Assess 1-2 hourly and titrate the volume of fluids
HYPOTHERMIA (Refer to STW on thermal care of newborn)	<ul style="list-style-type: none"> Mild (36-36.4°C): Warm environment, skin-to-skin contact, breastfeeding Moderate (32-35.9°C): Place under servo-controlled warmer; skin-to-skin contact till arranged Severe (< 32°C): As for moderate hypothermia plus IV fluids and inj. vitamin K
HYPOGLYCEMIA (Refer to STW on neonatal hypoglycemia)	<ul style="list-style-type: none"> Blood glucose < 45mg/dL and asymptomatic : supervised breastfeeding or EBM Blood glucose < 20 mg/dL OR symptomatic : 2mL/kg 10% dextrose IV followed by infusion @ 6mg/kg/min
JAUNDICE (Refer to STW on neonatal jaundice)	<ul style="list-style-type: none"> Serious jaundice (onset at < 24 h of age, palm or sole staining, or signs of acute bilirubin encephalopathy): Intensive phototherapy, consider IV fluids if suspicion of dehydration, prepare for exchange blood transfusion
SEIZURES (Refer to STW on neonatal seizures)	<ul style="list-style-type: none"> Maintain TABC Check blood glucose by glucometer: If < 45 mg/dL, 2mL/kg 10% dextrose IV followed by infusion @ 6mg/kg/min If not controlled, 2 mL/kg 10% calcium gluconate IV, diluted 1:1 with D5, D10 or DW, over 10 min under cardiac monitoring If not controlled, Inj. Phenobarbitone 20 mg/kg IV over 15 mins. If seizures persist after 15 min. consider another bolus of 10mg/kg phenobarbitone over 10 min
SURGICAL	<ul style="list-style-type: none"> Cover any skin defects with warm saline sterile gauze Maintain hydration Consult surgeon
BREASTFEEDING DIFFICULTY	<ul style="list-style-type: none"> Observe and look for proper positioning and attachment of baby during breastfeeding Counsel mother

ABBREVIATIONS

CFT: Capillary filling time	NRP: Neonatal resuscitation protocol	SVT: Supraventricular tachycardia
CPAP: Continuous positive airway pressure	NS: Normal saline	STW: Standard treatment workflow
ECG: Electrocardiogram	RL: Ringer lactate	TABC: Temperature, airway, breathing, circulation
EBM: Expressed breastmilk	SpO₂: Pulse oxygen saturation	

REFERENCE

1. Guideline for Paediatric emergency triage, assessment and treatment. World Health Organization 2016. Available at <https://apps.who.int>

IDENTIFICATION AND PROMPT TREATMENT OF EMERGENCY AND PRIORITY SIGNS IS THE KEY TO PREVENT MORTALITY

This STW has 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 website of DHR for more information: (stw.icmr.org.in) for more information.
 ©Department of Health Research, Ministry of Health & Family Welfare, Government of India.