STANDARD TREATMENT WORKFLOW (STW)

Severe Pneumonia in Children

Shally Awasthi¹, Sushil Kabra², Neelam Mohan³, Pushpa Kini⁴, Suvasini Sharma⁵, Joseph Mathew⁶, Surjit Singh⁷, Kuldeep Singh⁸, Himanshu Chaturvedi⁹, Shinjini Bhatnagar¹⁰

¹King George's Medical University, Lucknow; ²All India Institute Of Medical Science, New Delhi; ³Medanta, Gurgaon; ⁴Kasturba Medical College, Manipal; ⁵Lady Hardinge Medical College, New Delhi; ⁶Postgraduate Institute of Medical Education and Research, Chandigarh; ⁷Postgraduate Institute of Medical Education and Research, Chandigarh; ⁸All India Institute Of Medical Science, Jodhpur; ⁹Balrampur Hospital, Lucknow; ¹⁰Translational Health Science and Technology Institute (THSTI), Faridabad

CORRESPONDING AUTHOR
Dr. Shally Awasthi, Professor & Head, Department of Paediatrics, King George's Medical University, Lucknow Uttar Pradesh 226003
Email: shally07@gmail.com

CITATION
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) for the Management of SEVERE ACUTE MALNUTRITION WITH COMPLICATIONS

ICD-10-E43

COMMUN PRESENTATION
- Feudng
- Not exclusively breastfed
- Bottle feeding
- Delayed/miadequate complementary feeding
- Poor appetite
- Not gaining weight
- Lethargic
- Disinterested in surroundings
- Delayed development

Additional symptoms of complications:
- Loose motions
- Jaundice
- Seizures
- Mucous infections
- Pneumonia
- Diarrhea
- Sepsis
- Skin infections
- Severe dehydration

DIAGNOSTIC CRITERIA FOR SAM & MAM

0–6 months
- Consider SAM if MUAC <10.0 cm
6–59 months
- Consider SAM if MUAC <11.5 cm or WHZ < −3 SD or bilateral pitting edema
- Consider MAM if MUAC is between 11.5–12.5 cm or WHZ is between 2–3 SD
>5 years
- Consider SAM if BMI ≤ 5 SD (severe thinness)
- Consider MAM if BMI ≤ 2 SD (thinness)

EXAMINE FOR
- Vital signs: PP, RR, CPT
- Lethargy, irritability
- Loss of subcutaneous fat
- Muscle wasting
- Pallor
- Signs of Vitamin B1, K and A deficiencies
- Respiratory distress
- Dehydration

Triage
SAM + GOOD APPETITE + NO MEdical COMPLICATION
- Home based treatment as oral amoxicillin
- 50 mg/kg/dose twice a day for 7–10 days
SAM + COMPLICATIONS / POOR APPETITE / FAINTED
- Hospitalize

INVESTIGATION
ESSENTIAL
- Hemogram, BSG, LFT, KFT, Chest X-ray
DESIRABLE
- ECG, Stool pH, Stool microscopic, Urine culture
OPTIONAL
- Blood Culture, Blood oxygen saturation

WHEN TO SUSPECT?
A new study has been published that examines the treatment of severe pneumonia in children. The study, led by Awasthi S, et al., explores the common presentations, signs, and symptoms of severe pneumonia and provides a standard treatment workflow (STW) for its management.

### Common Presentations
- Cough
- fever
- respiratory signs
- wheezing
- cyanosis
- tachypnea
- chest indrawing
- retractions

### Signs and Symptoms
- Sepsis
- Shock
- Encephalopathy
- Jaundice
- Convulsions
- Hypoglycemia
- Metabolic acidosis
- Respiratory acidosis
- Hypoxia

### Diagnostic Criteria for SAM and MAM
- SAM: Fever, tachypnea, dyspnea, hypotension, oliguria, jaundice, seizures
- MAM: Fever, tachypnea, dyspnea, hypotension, oliguria, jaundice, seizures, hypoglycemia

### Treating SAM
- Fluid resuscitation
- Antibiotics
- Oxygen therapy
- Nutritional support
- Intubation and ventilation

### Treating MAM
- Fluid resuscitation
- Antibiotics
- Oxygen therapy
- Nutritional support
- Intubation and ventilation

### Prevention
- Pneumonia vaccination
- Good hygiene practices
- Early identification and treatment

### Key Takeaways
- Early recognition and treatment are crucial for survival.
- Nutritional support plays a vital role in recovery.
- Intubation and ventilation may be necessary in severe cases.

This study provides a comprehensive approach to the management of severe pneumonia in children, highlighting the importance of early intervention and the need for continued research to improve treatment outcomes.