

Respiratory Distress in Neonates

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Standard Treatment Workflow (STW) RESPIRATORY DISTRESS IN NEONATES ICD-10-P22.0



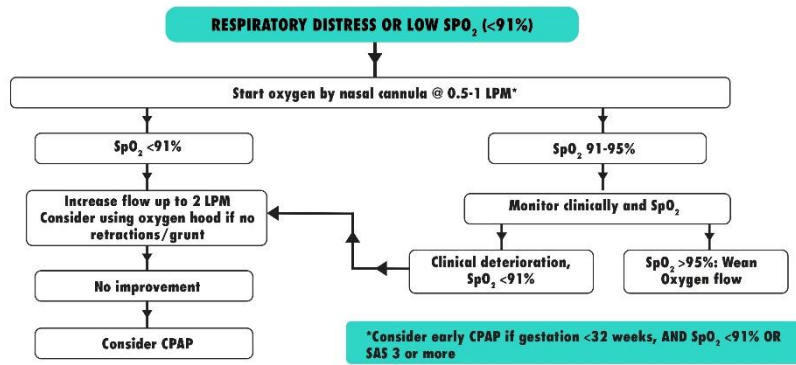
- ACTIONS**
- Rapid assessment of TABC (temperature, airway, breathing, circulation) and stabilize the baby
 - Admit the baby in SNCU/NICU
 - Nurse in a radiant warmer/incubator; monitor with continuous pulse oximetry
 - Quantify the severity of RD using Silverman Anderson Score [SAS]
 - Closely monitor RR, SAS, SpO₂, and CFT
 - Most neonates with RD can be fed enterally (by breastfeeding [if RR<70 bpm and not on respiratory support] or orogastric tube). Those with severe distress or any contraindication to enteral feeding should be given IV fluids

- GOALS**
- To alleviate the work of breathing by providing appropriate respiratory support
 - To maintain oxygen saturations from 91% to 95%
 - Identify and treat the underlying cause

| | UPPER CHEST | LOWER CHEST | XIPHOID RETRACTIONS | NARES DILATATION | EXPIRATORY GRUNT |
|---------|-------------|-------------|---------------------|------------------|------------------|
| Grade 0 | | | | | |
| Grade 1 | | | | | |
| Grade 2 | | | | | |

SILVERMAN ANDERSON SCORE (SAS)

- RESPIRATORY SUPPORT**
- SpO₂ < 91%: Oxygen by nasal prongs (NP) 0.5-1.0 Lpm (max. 2 Lpm)
 - Gestation ≥ 32 weeks: CPAP if SAS 4 >, OR no improvement with NP oxygen
 - Gestation < 32 weeks: CPAP if SpO₂ < 91% OR SAS 1-3
 - Those with severe RD (SAS of 5 > ; FiO₂ of more than 60-70%), unresponsive to CPAP, having shock or repeated episodes of apnea, may require mechanical ventilation and referral (See STW on Transport)



- ASSESS AND TREAT THE UNDERLYING CAUSE**
- **RESPIRATORY DISTRESS SYNDROME (RDS):** Consider surfactant replacement therapy as per indication
 - **PNEUMONIA-SEPSIS:** Treat with antibiotics as per unit's protocol (refer to sepsis STW)

- WHAT NOT TO DO**
- DO NOT let SpO₂ exceed 95% while supplementing oxygen. High oxygen saturation is a risk factor for retinopathy of prematurity
 - DO NOT give unnecessary IV fluids, antibiotics, blood products or drugs
 - DO NOT perform unnecessary investigations (CBC, CRP, routine ABG)
 - DO NOT do routine chest X-ray in all neonates with RD. Perform chest X-ray if RD is persisting beyond 6 hours of age, there is worsening or a diagnostic dilemma

ABBREVIATIONS

| | | |
|--|---------------------------------|--------------------------------------|
| BW: Birth weight | GA: Gestational age | RR: Respiratory rate |
| CPAP: Continuous positive airway pressure | IV: Intravenous | SAS: Silverman Anderson score |
| CFT: Capillary filling time | RD: Respiratory distress | |

REFERENCES

1. Oxygen therapy in neonates, and Surfactant Replacement therapy in neonates. Evidence-based Clinical Practice Guidelines. National Neonatology Forum India. Available at www.nnfi.org/cpg

PREVENT HYPOXIA AND HYPEROXIA

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.
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