Background: Multiple NRS modalities are used for post-extubation support in preterm neonates.

Objective: Seven NRS modalities were compared — constant flow continuous positive airway pressure (CPAP) (CF-CPAP) (bubble CPAP; ventilator CPAP), variable flow CPAP (VF-CPAP), high flow nasal cannula (HFNC), synchronized non-invasive positive pressure ventilation (S-NIPPV), nonsynchronized NIPPV (NS-NIPPV), bilevel CPAP (BiPAP), non-invasive high-frequency oscillation ventilation (nHFOV).

Design: Systematic review and network meta-analysis (NMA) using the Bayesian random-effects approach. MEDLINE, EMBASE, CENTRAL, WHO-ICTRP were searched. Main Outcome Measure: Requirement of invasive mechanical ventilation within 7 days of extubation.

Key Message: S-NIPPV might be the most effective modality for preventing extubation failure.

Choice of Mode of Non-invasive RESPIRATORY SUPPORT (NRS) FOR Post Extubation in preterm neonates

Efficacy of noninvasive respiratory support modes as postextubation respiratory support in preterm neonates: A Systematic Review & network Meta-Analysis Viraraghavan V Ramaswamy, Kiran More, Amit Gupta et al, Pediatric Pulmonology. 2020

"Synchronised-Noninvasive positive pressure ventilation (S-NIPPV) can be considered as preferred mode of respiratory support in preterm neonates after extubation from invasive ventilation"