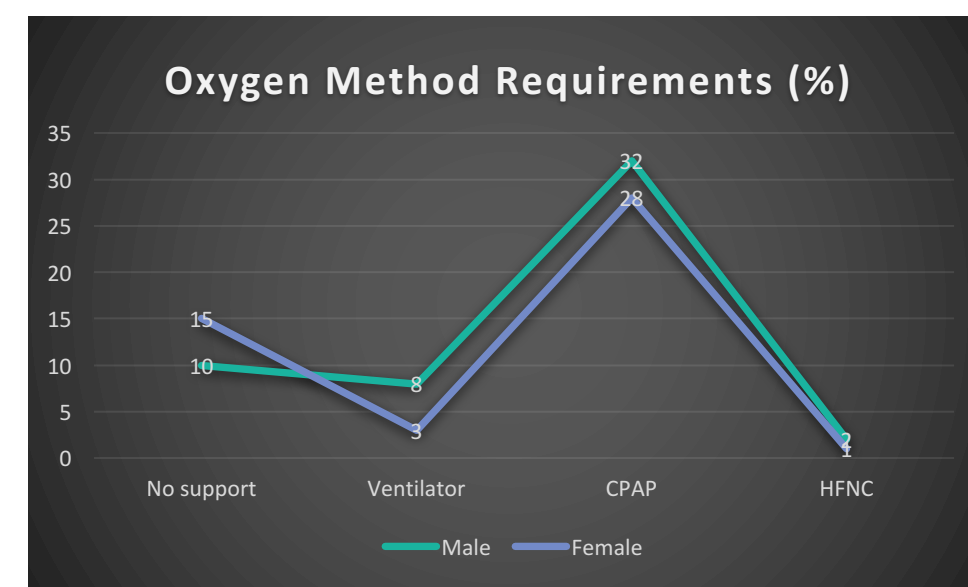


Airway Clearance of the Moderate to Late Preterm Neonate: A Retrospective Study

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ABSTRACT

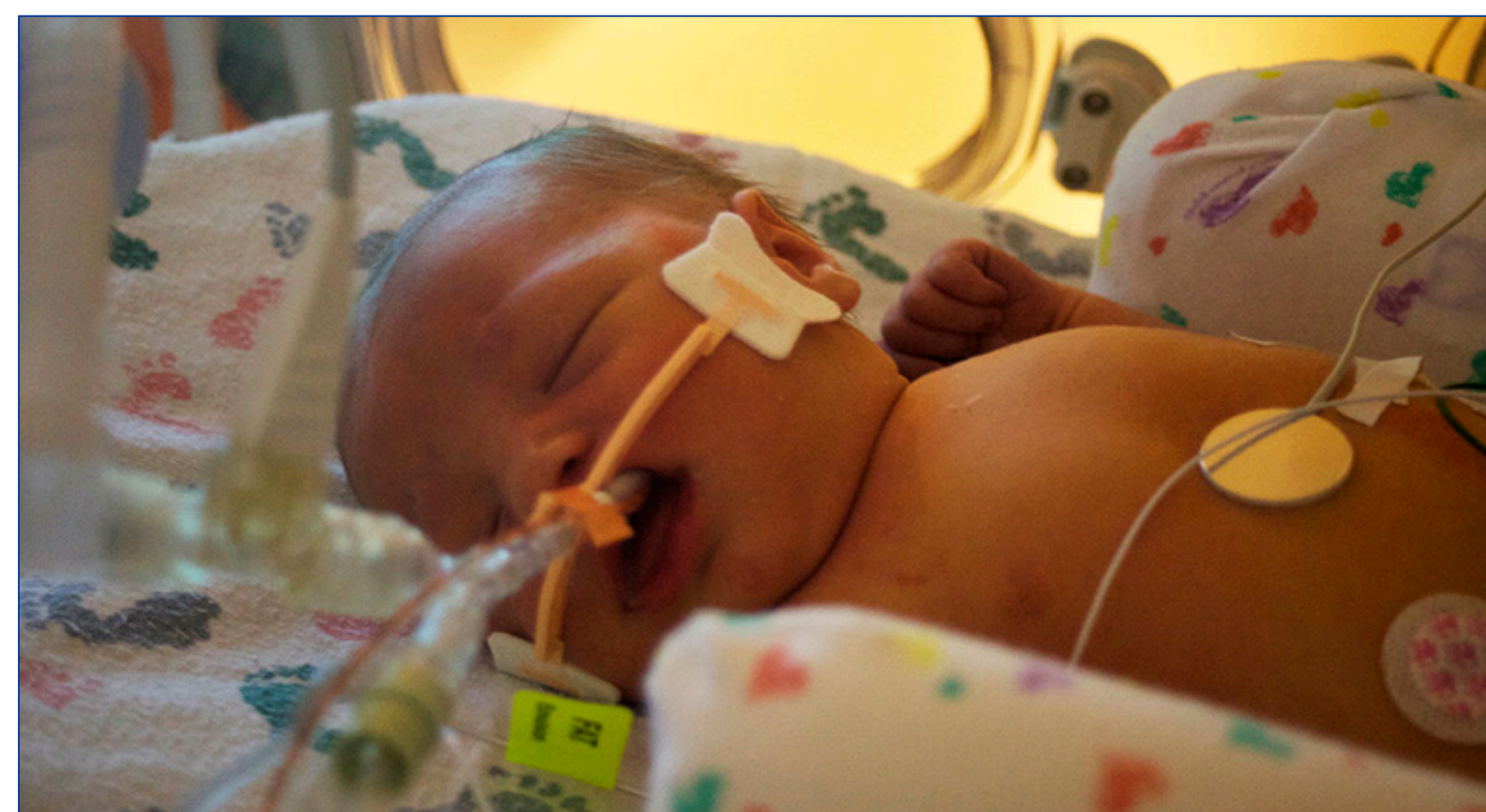
- There is minimal scientific evidence available to defend the use of routine suctioning in the NICU setting
- An extensive review of the literature revealed a lack of standardized criteria or guidelines for suctioning in the NICU (Gardner & Shirland, 2009)
- Most literature indicates the harmful effects of suctioning including bradycardia, desaturation of oxygen, apnea, inflammation of airways, and/or bronchospasms.
- There is minimal literature describing the different methods of airway clearance and tolerance of each suctioning method in the NICU



RESEARCH OBJECTIVES

At the conclusion of this study, researchers Will be able to:

- Describe the current practice for suctioning neonates
- Describe outcomes related to suctioning neonates
- Describe clinical implications for suctioning neonates



RESULTS

- Participants: Female (47%), Male (53%); Males in the suctioned population required more ventilatory assistance
- Birth model of neonates requiring airway clearance: Vaginal birth (34.5%) Cesarean section (65.5%)
- Most occurrences of airway clearance - 34 weeks gestation
- 85% of participants experienced ventilatory assistance: Ventilator(45%), CPAP (37%), HFNC (2%), NIPPV (1%)
- Suctioning modes were: Oropharyngeal (46%), Inline (28%), Nasopharyngeal (6%), Endotracheal (8%) Bulb syringe (11%)
- After suction events, nurses reported: No distress (74%), Equal bilateral breath sounds (30%), Desaturation (6%), Color change, apnea, or bradycardia (<1%)

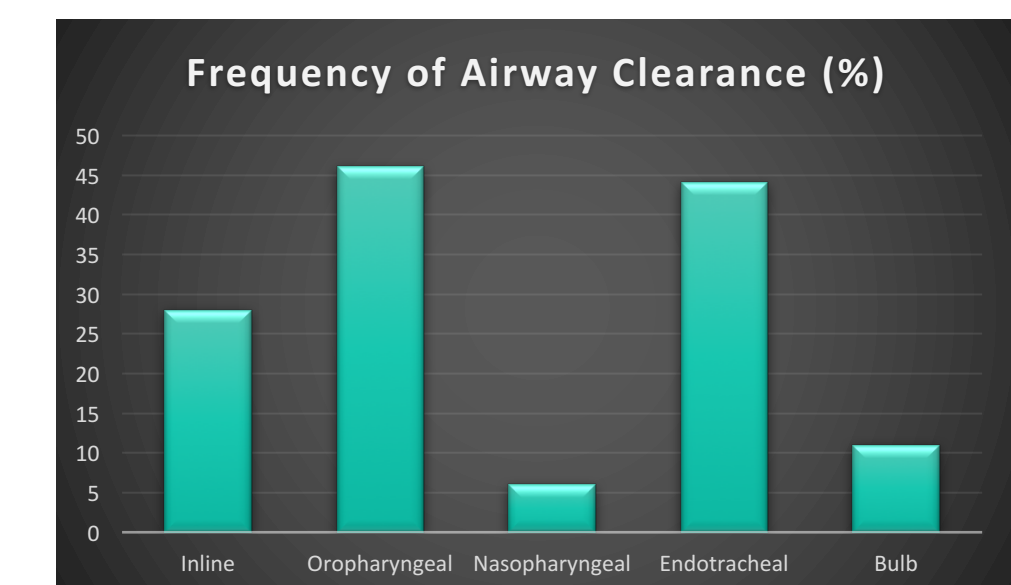


METHODS

- A descriptive, retrospective chart review to analyze airway clearance practices in a level III regional NICU
- Sample size: N=87, Suctioning events: N=384
- Practices reviewed: suctioning via inline suction, suction catheter, soft tip "Little Sucker", and bulb syringe to determine the frequency, color, consistency, and tolerance of airway clearance
- Convenience sample; admissions between 2016-2017
- Inclusion criteria: 32 -36 weeks/6 days, or moderate to late preterm infants as defined by WHO
- Exclusion Criteria: surgery with general anesthesia. No participant was excluded based on age, gender, or ethnicity.

CONCLUSIONS

- Electronic medical records promote less detailed, narrative documentation and more button focused charting. This could hinder the evidenced-based use of airway clearance of the NICU patient
- Results indicate the routine use of airway clearance (without indication) in the NICU setting as evidenced by no indication of distress (74%) and breath sounds clear and equal immediately after suctioning in 30% of events
- More studies are needed to evaluate suction practices applied in the NICU setting



IMPLICATIONS

- Suggest careful review of EMR documentation related to airway clearance
- Review and revise unit-based protocols for airway clearance of the NICU patient based on mode of suctioning which are in alignment with NANN guidelines
- Provide on-going unit-based staff education and competency evaluation related to airway clearance of the NICU patient

