What is the decision-making process for speech-language therapists in deciding to feed infants on high flow nasal cannula oxygen therapy?

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Aims & Objectives

- To develop an understanding of the literature
- To consider how YOU might carry out a piece of research
- To reflect on your own practice

Motivation

- Non-invasive respiratory support has gained increased acceptance and popularity with infants
- In many neonatal units High Flow Nasal Cannula (HFNC) oxygen therapy is being used as an alternative to nasal continuous positive airway pressure (nCPAP)
- Benefits of HFNC oxygen therapy are multifactorial
- The decision to feed an infant on HFNC oxygen therapy does not have a specific, set protocol

Purpose

- To identify how speech-language therapists (SLTs) perceive their role in relation to implementing early feeding intervention when treating an infant on HFNC oxygen therapy

- To identify what factors lead an SLT to initiate feeding trials for an infant on HFNC oxygen therapy

Background

- Extremely-Low-Birth-Weight infants
- Respiratory support
- Impacts of respiratory support
- Pre-feeding interventions
- Feeding on HFNC Oxygen Therapy
- Clinical decision-making

Method

- An explorative, qualitative study design
- Qualitative interviews with open-ended questions

Participants

Table 1: Participant characteristics *n* = 9

Setting*	**Gender**	**Full-time (FT) / Part-time (PT)***	**Years working as an SLT**
Acute, Neonatal.	Female: 9 Male: 0	FT: 5 PT: 4	Mean: 19.6 years Range: 35 years Standard Deviation: +/- 11.5 years

Participants

Inclusion criteria:

- Qualified SLTs presently working with a neonatal caseload
- Actively and recently involved in the decision making of feeding infants on HFNC oxygen therapy
- Not currently participating in another project about dysphagia

Data collection

- The data was thematically analysed using a Framework approach (Richie & Spencer, 1994)

- Nvivo software was used to manage the data

Results

Table 2: Themes and subthemes based on thematic analysis.

Theme	**Subtheme**
Role of the SLT	Feeding assessment Communication
Clinical factors	Gestational age Respiratory
Other factors	Infant's presentation Plan Instinct
Pre-feeding	
Feeding	Oral feeding and enteral feeding Volume of oral intake
Don't feed on HFNC oxygen therapy	
Setting dependent	
Role of the MDT	

Summary

- HFNC oxygen therapy has multiple benefits
- SLTs considered a range of clinical and other factors
- These factors are usually discussed within a multidisciplinary team
- The SLTs role in communication was not discussed – surprising!?
- The work place has an effect of the decision-making process of SLTs

Future research

- Asking about clinical decision-making is an important and necessary part of the research process, as such it needs to be done on a broader scale by considering:
    - Practice of SLTs across the United Kingdom
    - Practice across disciplines

Workshop

- **Group A:**

  Ferrara, L., Bidiwala, A., Sher, I., Pirzada, M., Barlev, D., Islam, S., ... & Hanna, N. (2017). Effect of nasal continuous positive airway pressure on the pharyngeal swallow in neonates. *Journal of Perinatology*, *37*(4), 398-403

- **Group B:**

  Leder, S. B., Siner, J. M., Bizzarro, M. J., McGinley, B. M., & Lefton-Greif, M. A. (2016). Oral alimentation in neonatal and adult populations requiring high-flow oxygen via nasal cannula. *Dysphagia*, *31*(2), 154-159

Workshop

Consider the following:

1. How do the papers relate to the presentation?
2. How relevant are the papers to clinical practice?
3. Look at each group of neonatal participants, give feedback on any thoughts related to gestational age, post menstrual age, etc.
4. What do you find challenging about the papers (this can be practice, or design, or both)?
5. How would you re-design this study so that it is relevant for a SLT caseload?
6. What else should we be doing in research to develop clearer protocols for introducing oral feeding with premature infants?

Questions

Key references

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- Testa, G., Iodice, F., Ricci, Z., Vitale, V., De Razza, F., Haiberger, R., ... & Cogo, P. (2014). Comparative evaluation of high-flow nasal cannula and conventional oxygen therapy in paediatric cardiac surgical patients: a randomized controlled trial. *Interactive cardiovascular and thoracic surgery*, *19*(3), 456-461.
- Yoder, B. A., Albertine, K. H., & Null, D. M. (2016, June). High-frequency ventilation for non-invasive respiratory support of neonates. In *Seminars in Fetal and Neonatal Medicine* (Vol. 21, No. 3, pp. 162-173). WB Saunders.