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Infant communication. How should we define this, and is it important?

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Abstract

Infants born preterm are at high risk of developing speech, language and communication difficulties in their early years. Published literature investigating early parent - infant interaction often describe "communication" with reference to early bonding.

Strategies such as bonding, attachment, responsiveness to cues and skin to skin care are essential precursor skills for the development of productive dyadic relationships. However, studies that consider speech, language and communication support for families when receiving care for their infant on a neonatal unit are sparse. This paper discusses communication from a linguistic perspective and the authors argue why this is important.

1 Introduction

The current COVID -19 pandemic has heightened interest in and drawn attention to specific areas of neonatal care which have been unintentionally masked by confusion and inconsistency when describing communication with infants (Green, et al., 2020; Harding, et al., 2019). We refer specifically to how the term "communication" is used when carers are developing confident interaction exchanges with preterm infants. Communication, from our perspective, should include learning to understand language, facial expression, gesture and tone of voice and learning to be a communication partner during interaction by using gestures, facial expressions, and vocalisations and ultimately use of word approximations / words with intent or in response to others.

Typically, "communication" is used in the literature to describe the development of attachment through skin to skin care and responsiveness to infant behaviours on neonatal units with little reference as to how these important early skills can be channeled towards providing a foundation for a rich linguistic learning environment. Undoubtedly, strategies such as bonding, attachment, responsiveness to cues and skin to skin care are essential precursor skills for the development of productive dyadic relationships. Creating such a relationship can provide a foundation for developing communication and language competence both on the neonatal unit, and when families return home. In this short

Contemporary Issue paper, we wish to address why “communication” with infants receiving care on neonatal units requires more research, and we wish to emphasise clearly what we mean by communication. We argue that clearer differentiation between early bonding skills and communication in terms of spoken language and associated and accompanying non-verbal interaction needs greater clarification. Clarity will hopefully ensure that the most appropriate strategies will be utilised and encouraged when working with parents and infants on neonatal units.

1.1 Context

For parents, learning to care for and interact with an infant on a neonatal unit presents unexpected complications with time needed to learn to cope with the situation and to develop confidence when caring for and being close to their infant in a healthcare setting (Green, et al., 2020). Becoming attached to the infant through involvement in everyday care activities within the neonatal environment can support physical and emotional closeness for both the infant and parents. This allows important precursor skills to emerge for developing early parent – infant interaction and communication (Evans, et al., 2014). Specifically, vocal stimuli from parents can improve preterm infants’ stability (i.e. heart rate, oxygen saturation, respiratory rate, behavioural measures) with benefits including better feeding development. Early communication strategies to enhance parental and neonatal healthcare professional sensitivity to an infant through use of eye contact; initiating talking with and responding to the infant and using natural gestures and facial expressions; as well as singing and reading can increase attachment and bonding, support improved parent well – being, reduce parental mental health problems and improve the interpretation of early infant communication signals during everyday care (Evans, et al., 2014).

Few studies investigate in detail the types of early communication interaction between preterm infants and their parents on a neonatal unit, and if interventions to support and encourage parent – infant communication are effective (Harding, et al., 2019). Studies which investigate approaches such as early feeding (tube and oral) and skin to skin care, which are important for bonding and parent mental health, often allude to communication when discussing outcomes but do not address communication outcomes in terms of linguistic components (Buil, et al., 2020). We recognise that such approaches are important antecedents for communication, but although some outcomes may relate to interaction, many of these studies fail to address the necessary skills to facilitate early communication as we understand “communication” to be and lack identification of specific language and communication skills (Harding, et al., 2019). Published literature that describes emerging communication and turn taking skills between parent and infant from birth focus mainly on the healthy term population. Early interaction styles between preterm infants and parents have shown to vary once at home and to be less rich linguistically when compared with typically developing peers. In addition, there have been very few detailed observations of similar early interaction and communication on a neonatal unit.

Preterm birth is a risk factor for a range of difficulties, including language development (Harding, et al., 2019). Infants born preterm are at increased risk of developing speech, language and communication needs (SLCN) (Rabie, et al., 2015). SLCN can significantly impact on educational achievements and the ability to engage socially during a child's early years, primary age and into young adulthood. Difficulties are wide ranging and include problems with understanding spoken language, being able to learn and use words, developing word linkage and grammar, turn taking using words learnt whilst understanding how to participate in a linguistic interaction and being able to sequence speech sounds accurately. Given the societal barriers that impact on access and inclusion for people with speech, language and communication needs, it is urgent that communication environments be improved and enriched for parents caring for their infants on neonatal units. Providing support for parents can maximise the potential for an enriched communication environment and also give families the confidence to use appropriate strategies to provide inclusive communication where necessary, once discharged home from the neonatal unit. The benefits of using communication with infants and the lack of opportunities for them to experience regular interactions with familiar people has been noted more during the recent pandemic. Use of sustained neonatal healthcare professional and parent face masks during COVID - 19, along with reduced parent contact for infant care has been considered as a matter of serious concern, specifically in relation to bonding, developing confident infant care skills, and in particular learning to be a supportive and responsive communication partner. It has become apparent that specific foundation skills which are necessary to enable positive communication environments for both developing preterm infants and adults who care for them including their parents are poorly understood by neonatal healthcare professionals, thus limiting the quality of interaction styles which can be encouraged by parents when developing skills for infant care. Very few studies have described core elements of early communication with preterm infants (Coppola & Cassiba, 2010), though it is now evident that there is a critical need to do so (Harding, et al., 2019).

2 Communication & how we could improve intervention for infants

Harding, et al., (2019) describe in their systematic review investigating communication for infants receiving care on neonatal units that communication and interaction should include use of gaze and eye contact; positioning to enable communication through gesture and vocalisation; talking directly to the infant and responding to vocalisations initiated and use of gestures during communication. Providing a positive communication structure for families to develop a meaningful interactional style for linguistic exchanges is fundamental to supporting and improving an infant's learning environment. Early dyadic synchrony moves beyond interpretation of infant states and homeostatic regulation towards mutual responsiveness and a harmonious interest in sustaining multi-sensory processing, and thus contingency, engagement and core components of speech, language and communication development (Harrist & Waugh, 2002).

Speech and language therapists work with families and other professionals in healthcare, social care and education to establish and sustain communication and interaction – rich environments. This can involve introducing a range of strategies that support receptive language development as well as modelling and learning expressive language skills within an interactive context. Parent-Child Interaction is one approach which acknowledges the importance of parent knowledge of their own child’s communication style alongside the speech and language therapist’s knowledge of language development. On neonatal units, speech and language therapists observe parent – infant interaction and encourage families to develop confidence as communication partners with their infant.

Rather than creating a new tool to enhance communication on neonatal units for families, it could be possible to utilise strategies that have already been successfully validated and researched in other paediatric clinical populations. Adapted use of an approach such as Parent-Child Interaction for infants on neonatal units and their parents could be considered and adjusted for use within a neonatal unit context. Falkus, et al., (2016) describe adaptation of Parent-Child Interaction applied to a more clinically focused inner city setting, highlighting that it is possible to utilise relevant components of this approach to support and improve communication and interaction for both parents and young children. This is an important method of promoting a positive communication dynamic where parents wishing to become confident and competent communication partners identify their communication strengths and work in partnership with relevant healthcare professionals to integrate relevant speech, language and communication strategies to improve the interactive language environment for both their child and themselves.

3 Conclusions

Typical parent – preterm infant interaction in the early stages of development is poorly understood and the need for a clear definition is an urgent necessity. Increased mask wearing as part of PPE use and reduced parent visiting during the pandemic has meant that communication and interaction are compromised despite being an essential part of infant development (Green, et al., 2020). Research has identified that infants born preterm are at high risk of developing lifelong speech, language and communication needs that can increase exclusion (Rabie, et al., 2015). Healthcare professionals, in particular speech and language therapists working closely with their neonatal team members, are in an important position to provide support for parents to ensure the development of confident communication partner skills with their infants. Active involvement alongside learning to understand an infant’s early communication style is a low - cost intervention that can empower parents, reduce the severity of impact of mental health conditions and improve quality of life. It is recognised that the maturing infant may still develop some speech, language and communication needs, but introducing early communication support for parents on neonatal units can maximise language development potential and ensure that an enriched communication environment is sustained throughout childhood. We recommend

that further research investigates the emerging communication dynamic of infants and carers (both parents and neonatal healthcare professionals) on neonatal units, and we advocate investigations into careful adaptations of approaches such as Parent - Child Interaction for use on neonatal units. Interventions such as these can support carers to feel confident when communicating with the developing infant, whilst at the same time supporting the development of essential strategies that can promote and sustain rich interactive environments to mitigate challenges with language acquisition.

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