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Introducing a Pre-feeding Oral Stimulation Exercise Program to Nursing Staff for Preterm Infants in Neonatal Intensive Care Unit (NICU)

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Introduction

Oral feeding skill is often underdeveloped among pre-term infants due to the poor coordination of breathing, sucking and swallowing. Currently, tube feeding is commonly used as a safe feeding route but the prolonged transition time from tube feeding to exclusive oral feeding may lead to complications such as prolonged length of stay and elevated medical cost. The practice of oral stimulation exercise (OSE) and non-nutritive sucking (NNS) were suggested by the literature to have significant positive impacts in reducing the transition time. However, no standardized OSE nor NNS protocol could be identified in Hong Kong neonatal intensive care unit settings. To address this service gap, a comprehensive pre-feeding oral stimulation exercise (POSE) program is proposed.

Objectives

To critically appraise the current evidence regarding OSE and NNS interventions and to propose the POSE program to the NICU nurses.

Methodology

Electronic literature search of five databases plus manual checks on all articles published between 2000 and 2016 on NNS and OSE were conducted. Among 329 results yielded, 13 papers with a NNS or OSE protocol were extracted. Extracted studies were then critically appraised with the Effective Public Health Practice Project Quality Assessment Tool.

Result

With an overall moderate to strong rating, the intervention protocol suggested by Fucile et al (2002) was selected to be incorporate into the proposed POSE program. The 15-minute POSE protocol consisted of 12-minute stroking of cheeks, lips, gum and tongue of preterm infants and three mins NNS with pacifier.

The proposed POSE program includes two phases. In phase one, a face-to-face training workshop, which use lecture, video and demonstration on the POSE protocol intervention, will be provided to equip NICU nurses. In phase two, the trained nurses will be audited in clinical setting on their competence and compliance in using the protocol. Both the training workshop and the implementation of the POSE protocol will be evaluated by multiple measures.

In conclusion, the POSE program may accelerate the transition from tube feeding to exclusive oral feeding of preterm infants. Hence, the associated complications and use of tertiary medical facilities will be reduced.