

## NURSING SATISFACTION OF NASAL POSITIVE DISTENDING PRESSURE DEVICES IN THE NEWBORN INTENSIVE CARE UNIT

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**BACKGROUND** In the newborn intensive care unit (NICU), nursing satisfaction can greatly influence the ease of implementation and the quality of delivery of respiratory support. We trialed several new device systems of nasal positive distending pressure over the last 6 months. We postulate that there is wide variation in levels of nursing satisfaction between devices.

**METHODS** An assessment tool in the form of a questionnaire was used to evaluate aspects of nursing satisfaction by 17 NICU bedside nurses over four devices of nasal positive distending pressure. These were 1) Neotech Binasal airway with ventilator CPAP, 2) Hudson prongs with bubble CPAP, 3) Arabella prongs with flow driver CPAP, and 4) Vapotherm nasal cannula with high flow heated/humidified gas. Using a Likert scale of 1 to 5 (1 = Strongly Disagree to 5 = Strongly Agree), nurses who had received in-service training and cared for babies using all four devices rated easiness to set up, easiness to maintain position, need for assistance from RT, flexibility of circuit, soft/comfortable prongs, apparent risk of injury to nose, availability of sizes, ability to position the infant prone and side lying, easiness to insert and change prongs, and apparent effect on feeding.

**RESULTS** The Vapotherm device consistently scored higher in nursing satisfaction compared to all other devices ( $p < 0.001$ ). The Neotech Binasal airway scored higher than the remaining two devices ( $p < 0.001$ ). No difference was seen between the Hudson prong/bubble CPAP device and the Arabella prong/flow driver device. (See Fig. 1)

**CONCLUSION** Considerable differences exist in nursing satisfaction of nasal positive distending pressure devices. These may greatly affect quality of delivery and ease of implementation of respiratory support. If safety and efficacy of the four devices were equal, then nursing satisfaction could be considered an important factor in choosing a device. Fig. 1 Likert Scale Scores of 11 Aspects of Nursing Satisfaction (Q1-11) of Four Devices for Nasal Positive Distending Pressure

