neonates and infants with complex congenital heart defect in a cardiac intensive care unit and that can be affected by nursing interventions?

Different predictors were found in the literature which may introduce feeding problems. Intubation time is reported to play an important role, especially if it exceeds 7 days. In addition, it has been shown that surgical intervention on or nearby the aortic arc leads to a higher risk of vocal cord dysfunctions.

Another factor is trans-esophageal echocardiography which was found in several studies - especially in children who weigh less than 5.5 kilograms. Many children were lacking preoperative oral feeding experience when discharged from the hospital with feeding tubes.

The goal of the care giving team must be an early extubation and a teaching in the assessment of feeding patterns to identify complications early. A crucial factor in this is the inclusion of the parents and to instill confidence in their ability to care for their child. Individual support for the parents should be offered.

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EDUCATION WITH PLEASURE= HIGH LEVEL OF KNOWLEDGE AND TREATMENT QUALITY

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Background and aims: One of the main factors for satisfaction from the chosen profession is defined by nurses as a level of knowledge (Zurmehly, 2008). Thus, taking into account that medicine is in the process of continuous development, the nurses have to learn and to update themselves all the time. According to professional books, the accepted practice in medicine is reference to dry facts, without emotions, thus the use of uncommon resources constitutes an "antidote" to regular learning. If the educator can use his imagination and to apply diverse techniques involving various senses and emotions, the trainee would be prevented from getting tired and would succeed better in the process of learning. The results of such learning would be higher than usual (Bradshaw & Lowenstein, 2007).

There is no doubt that for most of the people, childhood is remembered as the most happy and successful part of their lives when they have believed in eternal life, in perfectness of parents, and in their own success. So why not to implement these trivial facts to obtain ideal learning - with no pressure, with deriving self-confidence and pleasure from the very process of learning?

Methods: To raise the motivation for self-learning and eventually to raise the level of knowledge and to improve the treatment quality, a novel instruction method was introduced intended to deepen the knowledge in the simplest way, the way connecting us to our childhood, to the times when learning brought joy, happiness, and the wish to know more.

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A NEW APPROACH TO PREOPERATIVE INFORMATION OF CHILDREN 2-7 YEARS OLD AT AARHUS UNIVERSITY HOSPITAL, SKEJBY

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Background: Preoperative information to children often fails to respect the child´s age and ability to understand the message thus causing anxiety to the child and leaving it with no effective coping strategy. In addition, the parents need to enhance their knowledge about anaesthesia to assist staff providing supportive preoperative information to children.

Aims: To explore the importance of a new preoperative information programme associated to the children´s age, skills and the family resources.

To document the close interaction between the children, staff and parents.

Method: A randomized controlled trial where children between two and seven years of age and their parents are assigned to one of two groups: *The control* group receive standard care; and *The intervention* group receive preoperative information programme where anaesthesiologists and nurse anaesthetists are trained in children´s behaviour and communication which support children´s needs entering the operation room (OR) and initiation of the anaesthetic procedure. The intervention includes a visit at OR for the children and the family and information leaflet will be surrendered.

Results: Outcomes variables will be the satisfaction of parents, children's coping strategies in the OR and behaviour after surgery, and staff behaviour

in relation to the children. Children's behaviour will be measured on selected days after surgery and followed up six months after.

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EXPIRATORY RESISTANCE OF CPAP DEVICES FOR PRETERM INFANTS

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Introduction: CPAP systems for preterm infants work with conventional ventilators or use a jet ventilation system. It is assumed that the most important advantage of jet-CPAP systems is a lower expiratory resistance. We investigated the expiratory resistance of seven different CPAP systems.

Methods: We studied two primary-care CPAP systems, 3 jet-CPAP generators and 2 conventional CPAP devices. All devices were adjusted at 6 mbar and connected with a test lung simulating a standardized expiration volume. Maximum pressure increase during expiration was measured and maximum expiratory resistance was calculated.

Results: In primary-care CPAP devices the maximum expiratory resistance of the Benveniste valve was 9.7mbar/l/s (SD 1.2) while that of the Neopuff was 102.8mbar/l/s (SD 7.9) ($p< 0.01$). In jet-CPAP devices the expiratory resistance of the Infant Flow was 6.8mbar/l/s (SD 1.7), the one of the Medijet REF 1000 was 43.5mbar/l/s (SD 1.5) and that of the Medijet REF 1010 was 36.7mbar/l/s (SD 0.3) ($p< 0.01$). In conventional CPAP systems the expiratory resistance of the Baby-Flow was 29.7mbar/l/s (SD 1.1) and that of the Bubble-CPAP was 37.1mbar/l/s (SD 4.3) ($p< 0.01$).

Conclusion: All CPAP devices created an expiratory resistance. Jet-CPAP devices did not produce lower expiratory resistance than conventional CPAP devices.

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ADJUSTMENTS OF SPO_2 ALARM LIMITS AND CORRESPONDING SPO_2 LEVELS IN VERY PRETERM INFANTS

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Background and aims: To prevent excess levels of pulse oximetry saturation (SpO_2) in very preterm infants (VPIs), alarms are used. These alarms sound frequently, which causes a burden on patients and staff. Preset alarm limits may deviate from the protocol for several reasons. We investigated adherence to the protocol and the relation between alarm limits and corresponding SpO_2 levels.

Methods: Inclusion criteria were: gestational age < 30 weeks, birth weight ≤1250 grams, and FiO2>21% at start of data-recording. Alarm limits, SpO_2, and FiO_2 were collected for 3 days continuously. The protocol prescribes alarm limits of 88 and 94 (when FiO_2>21%) or 88 and 100 (when FiO_2 =21%).

Results: Twelve VPIs were included: (median (min-max)) gestational age was $26^{2/7}$ ($24^{2/7}$-28) weeks, birthweight was 760 (545-935) grams, postnatal age was 4 (2-12) days. Data was collected for 658 hours (~1 Hz).

When FiO_2 was >21% (566 hrs.) alarm limits were set according to the protocol in 64% of time. In 26% the upper alarm limit was set up to 99. In 10% the upper limit was set to 100. Commonly used alarm limits and corresponding SpO_2 levels are shown in Figure 1 and Figure 2.

Conclusions: Alarm limits deviate from the protocol frequently. No relation was found between preset alarm limits and the distribution of SpO_2 levels. We advice to check alarm limits regularly, and register (reasons for) alarm limit adjustments.