

Hot topics from the web

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Neonatal-talk www.infantgrapevine.co.uk and NICU-NET www.neonatology.org/nicu-net/join.html are becoming more popular, and thus more active. It must be remembered that the opinions expressed on these two forums are not necessarily evidence-based; it is intended that this page will promote further contributions – either to the Editor of *Infant* or directly to the appropriate site.



Vapotherm NICU-NET

The original posting to neonatal-talk about Vapotherm some months ago, and discussed at length in the previous issue of *Infant*, stimulated a great deal of interest that has now spread to NICU-NET. The numerous questions and answers submitted are summarised as follows.

Vapotherm is described as an alternative to nCPAP. However, it is neither pressure-based nor a closed-system and the prongs are half the size of the nostrils. It is a well-humidified 'high-flow' modality, which is safer and better tolerated than nCPAP for the following reasons:

- It can be used on very small (350g) infants who can be difficult to intubate and for whom CPAP prongs are too big
- Higher flows can be used than with nCPAP, although some units appear to use 1-5L for small infants (others 6-7L). Flow determination appears to be based on the clinical objective of therapy ie post-extubation, apnoeas and bradycardias, chronic lung disease; plus results of blood gases and chest x-ray.
- It does not deform the nose
- It does not increase nasal secretions
- It is easier for the parents to cuddle the baby
- Infants can be fed whilst it is in progress. This should depend on minimal RDS and should also follow assessment by a feeding specialist. The infant should be developmentally ready to feed and able to suck and swallow. Some specialists suggest trying with a dummy first. The secret appears to be to increase the feeds slowly. Concern

was raised about aspirating during feeding at higher Vapotherm flow rates; and also whether or not these infants could cope with the interruption of 'assisted' breathing in order to suck

- The ease of extubating babies onto Vapotherm is impressive
- There appear to be few reported complications, although some people are concerned about infection, particularly with *Pseudomonas*, because of the water content. One reply suggested that adequate cleaning as per unit policy/infection control should negate this risk. No pneumothoraces are reported.

Another query concerned infants who required additional nebulising drugs. Opinion differed as to whether or not the cannulae should be removed whilst this was in progress. Those units that did remove the cannulae thought that, as infants were obligatory nose breathers, the 'obstruction' the cannulae caused would interfere with delivery of the medication.

Although few peer-reviewed studies of Vapotherm high-flow nasal cannulae in neonates and children are available, a lot of research is on-going. In this litigious area, it is essential to have evidence-based protocols.

Further information (which includes a video) is available at www.vtherm.com

Transition to cot – infant temperatures neonatal-talk

This discussion was in response to a nurse wanting to review her protocols concerning what weight and gestation babies should be transferred from incubator to cot, and with what clothing *in situ*.

All respondees weaned the incubator temperature to its lowest setting (approximately 30°C) before considering transition. The weight of the infant varied between 1200g and 1800g. The majority of infants were transferred straight into a cot, mostly with a vest, baby-gro, hat, and I-3 blankets, maybe with a Spenco™ mattress. A couple of units used a waterbed initially, weaning the temperature of that before moving to a cot. However, one comment about this was that if the temperature of the waterbed was below 36.5°C the baby would be cooled via convection rather than warmed.

Other considerations were the general condition of the baby rather than actual gestation ie maturity, IUGR, and on-going medical needs such as phototherapy. Also, if the infant failed to maintain a core temperature of (approx.) 37°C in spite of several layers of clothing, he/she should be returned to the incubator.

Nobody mentioned that core temperature could be relevant to the ambient temperature of the NICU.

Rectal temperatures NICU-NET

It would appear that most units are now opposed to taking rectal temperatures, although some perform it only on admission to the unit to determine rectal patency and some if the axillary temperature is out of normal range (one incidence of below 32°C).

It would appear from one posting that causing rectal perforation from taking rectal temperatures is extremely rare (1 per 2 million), but vagal bradycardia can occur which can be long-lasting. This respondee determined rectal patency by 'other means'.