

Neonatal Transport

*The Newsletter of the Maryland Regional Neonatal Transport Program
June 2010*

Pre-medication for non-emergent intubation

Respiratory distress is the most common reason that a neonate is referred for transport to a tertiary care center. A variety of modalities for respiratory support are available and utilized during transport, but determining how to best stabilize the neonate in preparation for transport is often a challenge. The decision to intubate and initiate mechanical ventilation must include the current assessment and potential challenges related to transport.¹ Successful intubation should be accomplished in a controlled environment with minimal attempts. Several studies support the use of premedication of the neonate prior to a non-emergency intubation, but the ideal combination of medications has not yet been identified. However, in evaluating the outcome of a successful intubation with the fewest complications, the evidence supports some combination of premedication versus no premedication.^{2,3}

Intubation should be completed without delay or premedication for the delivery room resuscitation, or in life-threatening conditions in which the patient does not yet have intravenous access.⁴ In the transport setting before the arrival of the team at the referring center, advising the referring physician about the emergent versus non-emergent intubation is a challenge. Ideally, the decision to intubate is made before an acute deterioration occurs that would make premedication impossible, or at least ill-advised. In the referral hospital setting, Porter et al, found that barriers in using premedication in preparation for intubation include the timely availability of appropriate pharmacologic agents, potential adverse reactions from the medication, the comfort level of nursing staff in administering those medications, and a concern that intubation

would not be successful.⁵ The unique challenges of transport include: defining the non-emergent intubation in the referral hospital setting, availability of pharmacologic agents in the referral hospital, and outreach education implications.

References

1. Karlsen, K. (2006). The STABLE Program, Learner Manual. STABLE, Park City, UT
2. AAP(2010) Clinical Report—Premedication for Nonemergency Endotracheal Intubation in the Neonate *Pediatrics* 2010;125:608-615).
3. Leilich, P. Moore, M. Willett, B. (2009). Premedication prior to intubation in the Neonatal Intensive Care Unit—An Evidence Base Project, Unpublished Manuscript
4. Anand KJS; International Evidence-Based Group for Neonatal Pain. Consensus statement for the prevention and management of pain in the newborn. *Arch Pediatr Adolesc Med.* 2001;155(2):173-180)
5. Porter F, Wolf C, Gold J, Lotsoff D, Miller J. Pain and pain management in newborn infants: a survey of physicians and nurses. *Pediatrics.* 1997;100(4):626-632

Key Elements

Pre-medication for non-emergent intubations by MRNTP

1. Non-emergent is defined by any infant who can tolerate bag mask ventilation, continuous nasal airway pressure, nasal cannula or blow by oxygen for at least 5 minutes without further deterioration.
2. Reliable IV access is required.
3. All supplies are available for bag mask ventilation and intubation.
4. Cardiorespiratory monitoring is in place and continues throughout the procedure.
5. Narcan available at the bedside
6. First administer vagolytic agent,
Atropine 0.02 mg/kg IV/IM

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7. Second administer an analgesic
Fentanyl 1-4 mcg /kg IV or
IM GIVE OVER AT LEAST 3 MINUTES
8. Third administer a muscle relaxant
Vecuronium 0.1 mg/kg IV
9. Document medications, tolerance of
procedure, number of attempts in the
transport record.

MRNTP Practice Initiative

The Maryland Regional Neonatal Transport Program (MRNTP) is embarking on a practice initiative to strengthen the collaboration between referral hospital staff and the transport team with the ultimate goal of optimizing patient stabilization. As you may know, the S.T.A.B.L.E. program provides an evidenced based curriculum to bridge the gap between the post-resuscitation and the pre-transport phase of care. A portion of that curriculum is the Pre-Transport Stabilization Self-Assessment tool (PSSAT). This tool is not currently utilized but has the capability to serve as a quality improvement measure for the pre-transport stabilization process. The tool is available in the S.T.A.B.L.E. Learner's Manual and can also be accessed on line at:

http://www.stableprogram.org/docs/pssat_form.pdf

One measure on the PSSAT is the tracking of glucose values, which is slated to be the first focus of the practice initiative given the importance of maintaining appropriate glucose homeostasis in the ill neonate. The project leader is Beth Diehl-Svrjcek, Neonatal Transport Nurse in collaboration with the transport coordinator, Webra Price-Douglas. Five hospitals will be participating in the pilot phase before the project reaches out to the entire referral network. Please stayed tune for more details!

MRNTP Outreach Education Outreach Education

NRP Instructor Course
August 24, 2010- COMPACT Center

NRP

6.25.10- BWMC & MEC

7.8.10- LifeLine

7.19.10-Lifeline

9.10.10- BWMC & MEC

11.18.10-LifeLine

STABLE

8.3.10- Calvert Memorial

10.26.10-Mt.Washington Conference Center

11.10.10-AAMC

11.30.10- Mt.Washington Conference Center

12.9.10- Mt.Washington Conference Center

STABLE CARDIAC

Not too Hot or Cold

Transport Chart Review

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