

Apnea and Bradycardia in Infants < 44 Weeks Post Menstrual Age

All infants < 44 weeks post-menstrual age (PMA) who are acutely ill and all babies < 36 weeks PMA who are hospitalized on a neonatal unit on the Minneapolis campus will be monitored for both apnea and bradycardia starting at admission. This guideline is intended to assist clinical decision making for individual patients, not to replace it. It may not apply equally to all infants.

Methylxanthine Management

1. Initiate caffeine
 - a. Infants < 28 weeks: order caffeine within 24 hours of admission or prior to extubation
 - b. Infants > 28 weeks: order caffeine or aminophylline if having > 5 spells/day or spells needing vigorous stimulation
2. Trial off caffeine
 - a. 32-34 weeks gestation or infrequent (< 3/day) or mild spells, whichever is first
 - b. 36 weeks gestation, as apnea at this age typically related to obstruction, not central

Discharge Management

1. Discharge with a home apnea monitor
 - a. Preterm infants having apnea (> 20sec) or bradycardia (< 80 bpm for > 10 seconds or with color change) clinically apparent within 5-7 days of discharge
 - b. Medical diagnosis with apnea is likely co-morbidity, i.e. uncontrolled seizures, severe gastroesophageal reflux, airway anomalies, idiopathic apnea of infancy, ALTE
 - c. Infants on caffeine or caffeine discontinued < 7 days prior to discharge
2. Discharge without a home apnea monitor
 - a. No episodes of clinically significant apnea or bradycardia for a minimum of 5 days
 - b. If caffeine discontinued in the last 5 days, there should be no episodes of clinically significant apnea or bradycardia for a minimum of 7 days
3. Discharge with an oximeter:
 - a. Infants requiring oxygen, but without apnea, will be discharged on an oxygen saturation monitor vigorous stimulation

Use of home monitors

The goal of apnea monitoring is to alert caretakers to apneic or bradycardic events. While low birth weight is a known risk factor for SIDS, apnea of prematurity has not been shown to be an independent risk factor. Currently there are no diagnostic studies that predict which infants are likely to die of SIDS. Home monitoring is not prescribed to prevent SIDS.

1. Arrange in conjunction with Children's of MN Apnea Program
2. Apnea Program will maintain contact with family and primary physician after discharge.
3. Apnea Program will provide troubleshooting, downloading of memory units, and determine when to stop medications and monitoring
4. Parents to complete CPR, monitor, and apnea response training
5. Home monitors may be utilized on hospitalized patients upon physician order, typically after parent training has been completed.