

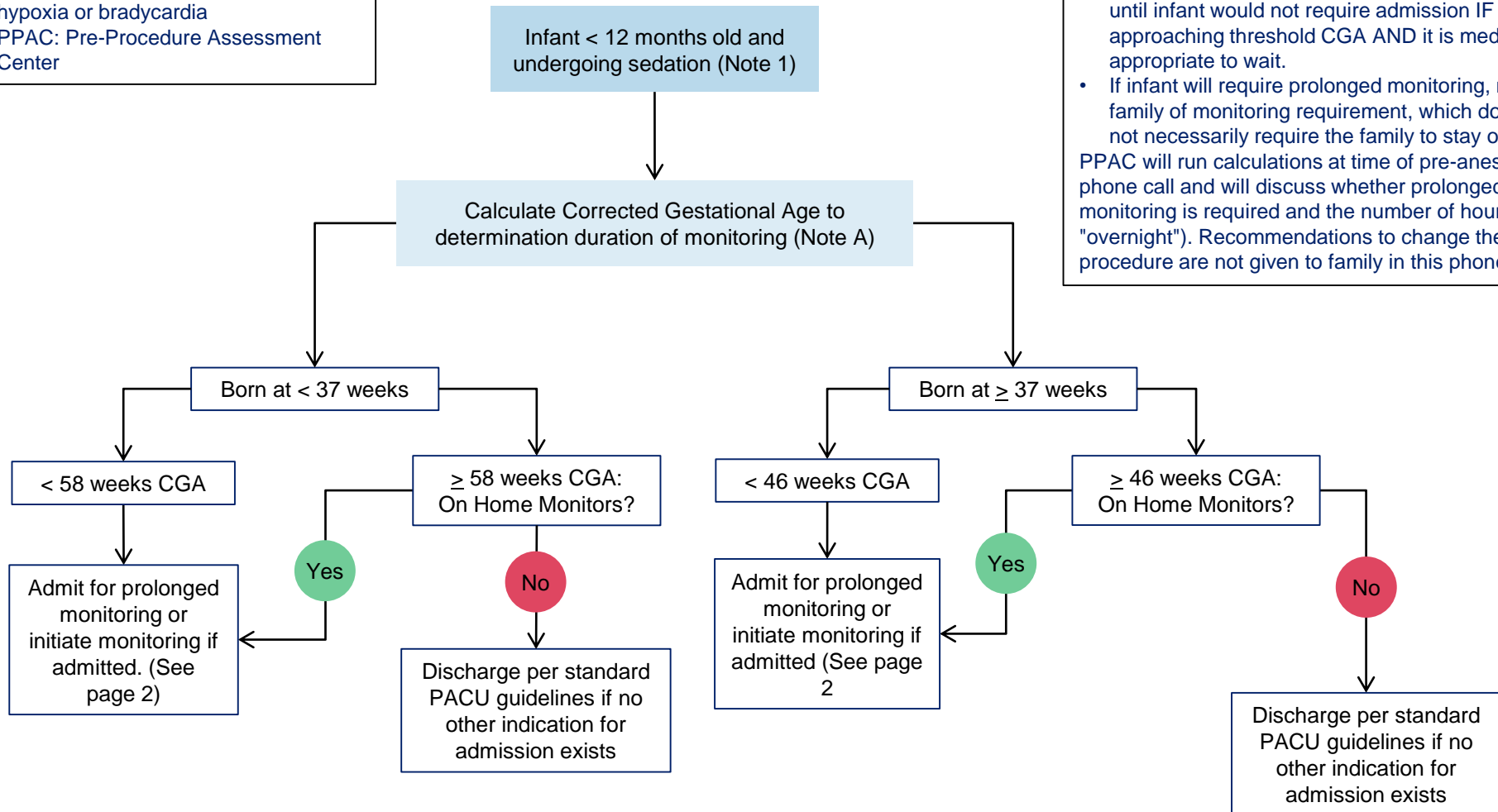
**Aim:** To standardize post-sedation infant monitoring in line with national standards.

**Definitions**

- Corrected Gestational Age (CGA)
- Apnea: cessation of breathing for 20 seconds, with or without associate hypoxia or bradycardia
- PPAC: Pre-Procedure Assessment Center

Note A: PCPs and proceduralists encouraged to use the calculator when ordering imaging studies or scheduling cases.

- Consider waiting to schedule for sedated procedure until infant would not require admission IF approaching threshold CGA AND it is medically appropriate to wait.
- If infant will require prolonged monitoring, notify the family of monitoring requirement, which does not necessarily require the family to stay overnight. PPAC will run calculations at time of pre-anesthesia phone call and will discuss whether prolonged monitoring is required and the number of hours (not "overnight"). Recommendations to change the date of procedure are not given to family in this phone call.



Disclaimer: This guideline is designed for general use with most patients; each clinician should use their own independent judgment to meet the needs of each individual patient. This guideline is not a substitute for professional medical advice, diagnosis or treatment.

**Aim:** To standardize post sedation infant monitoring in line with national guidelines.

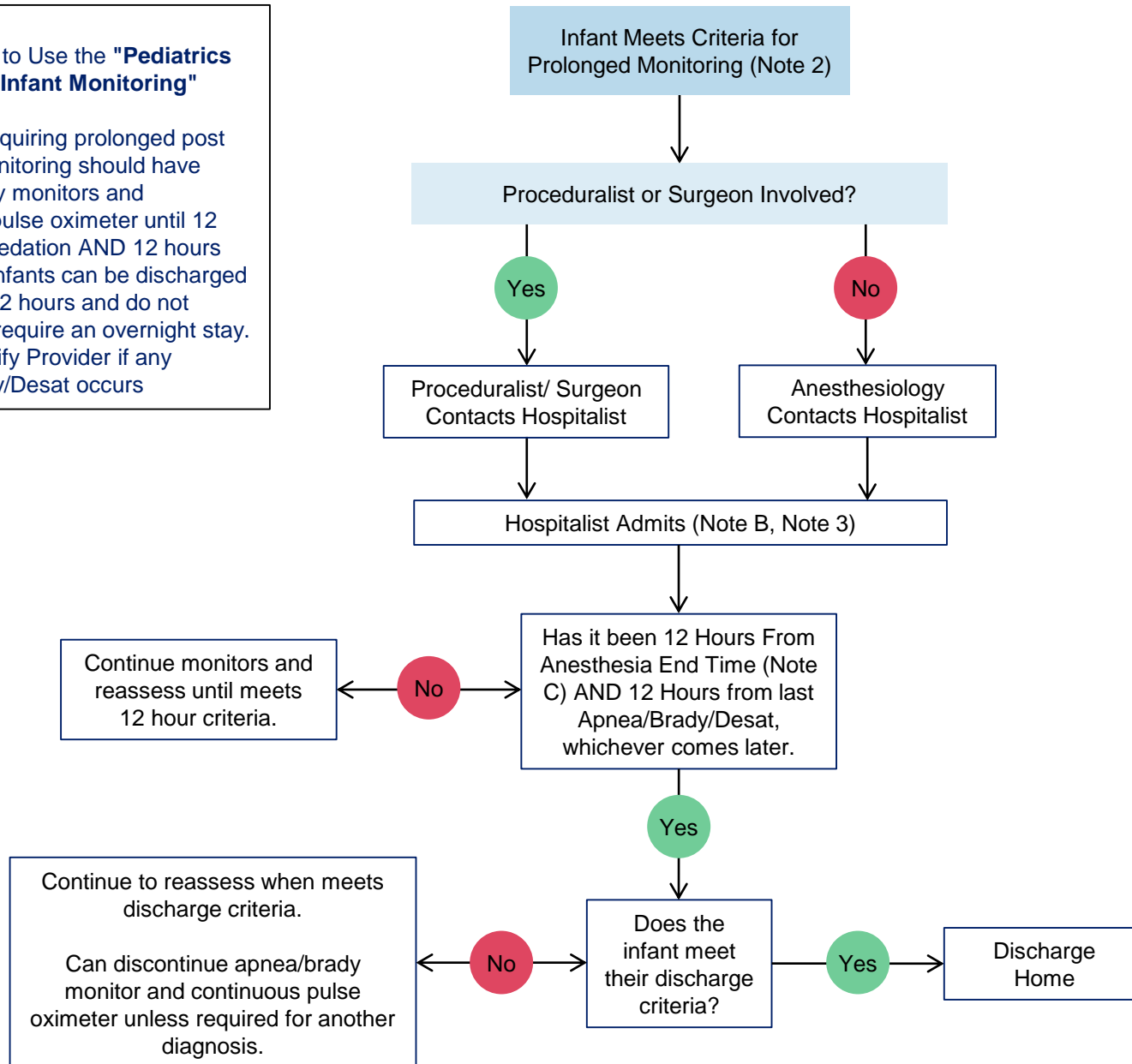
**Note B:**

Recommended to Use the "**Pediatrics Post Sedation Infant Monitoring**" Order Set

- All Infants requiring prolonged post sedation monitoring should have apnea/ brady monitors and continuous pulse oximeter until 12 hours post sedation AND 12 hours event free. Infants can be discharged after those 12 hours and do not necessarily require an overnight stay.
- Nurse to notify Provider if any Apnea/Brady/Desat occurs

**Note C: Anesthesia End Time:**

- For general anesthesia, use end of Phase 1. This can be found in "Flowsheets," "Iview Documentation," "Times"
- For sedation, use Returned to Baseline "Yes." This can be found in "Flowsheets," "Sedation- Level/Score"



**Note 1: AAP Recommendations**

Certain infants are at a higher risk of post-sedation apnea, bradycardia, and desaturations. Infants meeting certain criteria require post-anesthesia cardiorespiratory monitoring. While the AAP recommends monitoring infants, they do not provide exact parameters. Based on previous literature, it is estimated that approximately six percent of infants will experience post-op apnea.

**Note 2: Shorter Monitoring**

Monitoring guidelines may be adjusted to less than 12 hours for infants in all categories if there is a discussion between the surgeon, anesthesiologist and the family that results in a decision to discharge the patient before the 12 hour time period.

**Note 3: Documenting and Billing**

Children's Minnesota Providers, for assistance with required documentation and recommended billing, refer to internal Star Net link for Post Sedation Infant Billing and Documenting.

**WORKGROUP:** Allison Mariani, Josh Short, Christopher Altman, Ashan Nookala, Shayna Fleming, Christina Monson, Cassie Flo, Terri Jarvi, Courtney Kenefick, Jen Rivera, Katie Nitz, Erin Adams

**REFERENCES:**

1. Uffman JC, Kim SS, Quan LN, Shelton T, Beltran RJ, Jatana KR, Chian T, and Tobias JD. Adverse events in infants less than 6 months of age after ambulatory surgery and diagnostics imaging requiring anesthesia. *Pediatr Qual Saf.* 2022 7:4:e574.
2. Fanelli D, Kim D, King TS, Weller GE, and Dalal PG. Recovery characteristics in neonates following general anesthesia: a retrospective chart review. *Cureus.* 2021 13(7): e16126.
3. Ozdemir T and Arikan A. Postoperative apnea after inguinal hernia repair in formerly premature infants: impacts of gestational age, postconceptional age, and comorbidities. *Pediatr Surg Int.* 2013 29: 801-4.
4. Cote CJ, Zaslavsky A, Downes JJ, Kurth CD, Welborn LG, Warner LO, and Malviya SV. Postoperative apnea in former preterm infants after inguinal herniorrhaphy. *Anesthesiology.* 1995 82: 809-22.
5. Davidson AJ, Morton NS, Arnup SJ, de Graaff JC, Disma N, Withington DE, et al. Apnea after awake regional and general anesthesia in infants: the general anesthesia compared to spinal anesthesia—comparing apnea and neurodevelopmental outcomes, a randomized controlled trial. *Anesthesiology.* 2015; 123(1): 38-54).
6. Cote CJ, Wilson S, American Academy of Pediatrics, American Academy of Pediatric Dentistry. Guidelines for monitoring and management of pediatric patients before, during, and after sedation for diagnostics and therapeutic procedures: update 2016. *Pediatrics.* 2016; 138(1): e20161212.
7. Kurth CD, Cote CJ. Postoperative apnea in former preterm infants: general anesthesia or spinal anesthesia- do we have an answer? *Anesthesiology.* 2015; 123 (1) 15-7.
8. University of Iowa Stead Family Children's hospital Clinical Practice Guideline: Monitoring for apnea after general anesthesia, deep sedation, or spinal anesthesia in young infants. Revised 2018.
9. Stanford Children's Health: Admission of Infants after anesthesia and sedation. Revised 2018.
10. Ann & Robert H. Lurie Children's Hospital of Chicago: Observation Policy for Infants after Anesthesia. Revised 2018.