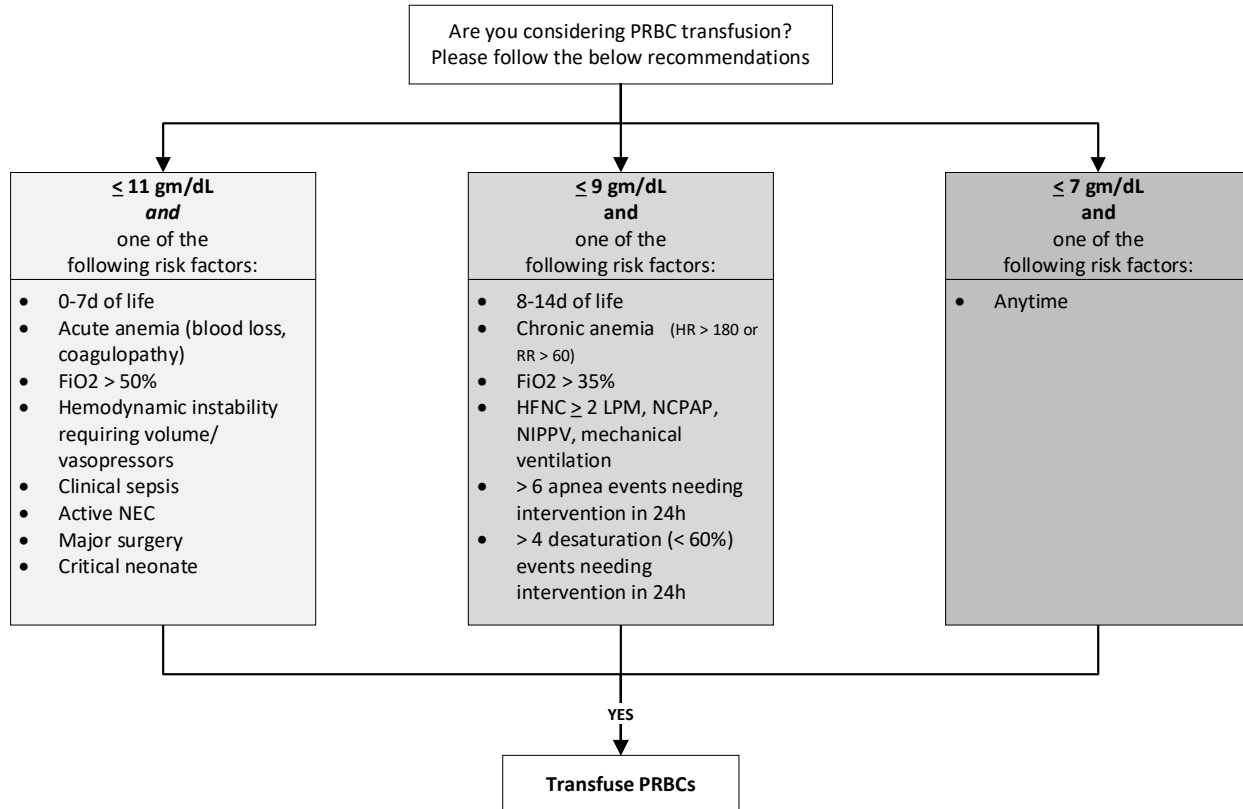


Neonatal Pack Red Blood Cell (PRBC) Transfusions

Background

- In extremely low-birth-weight infants, a higher hemoglobin threshold for PRBC transfusion did not improve survival without neurodevelopmental impairment at 22 to 26 months of age, corrected for prematurity.¹
- Current evidence favors minimizing the exposure of premature infants to prolonged periods of severe anemia. But the exact thresholds of hematocrit/hemoglobin levels when RBC transfusions become necessary are still unclear.²
- Randomized controlled trials on transfusion thresholds and treatment with recombinant human erythropoietin or darbepoetin have not provided significant evidence for the association between transfusion and Necrotizing enterocolitis (NEC) in very preterm infants.²



Considerations

- Some critical neonates may need PRBC transfusion to keep Hemoglobin > 12 gm/dL (ECMO, PPHN, Cyanotic heart disease, HS PDA etc)
- Transfusion thresholds are suggested ranges. They can be modified at the discretion of physician based on clinical judgment.
- There is inadequate evidence regarding the practice of withholding feedings in the peri-transfusion period and effect on rates of Transfusion Associated Necrotizing Enterocolitis (TANEC).³
- Routine Peri-transfusion feeding changes are not recommended unless physician orders.
- For additional transfusion guidance, refer to policy: [AAH Blood and Blood Product Transfusion/Administration for the Adult and Pediatric/Neonatal Patient](#)

References

- Higher or Lower Hemoglobin Transfusion Thresholds for Preterm Infants. Kriplani et al, NEJM 2020
- Current Understanding of Transfusion-associated Necrotizing Enterocolitis. Khashu et al, Newborn 2022

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3. Feeding Practices and Effects on Transfusion-Associated Necrotizing Enterocolitis in Premature Neonates. Killion, E, Advances in Neonatal care 2021

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