

Surgical Patient Optimization Guideline Checklist

Health Delivery Systems

Level 3



The current state of the issue

Anemia and poor glycemic control are key modifiable risk factors that worsen perioperative outcomes in those undergoing major surgery. Both preoperative anemia and perioperative hyperglycemia are associated with longer hospital stays^[i], increased costs, higher morbidity and mortality^{[ii],[iii]}, and worse recovery. Even mild anemia can affect 30-day outcomes, and perioperative glucose levels predict short-term mortality^[iv], while evidence shows hyperglycemia impacts non-diabetic patients more negatively than those with diabetes. In Washington state, there is significant variation in practices regarding anemia management and glycemic optimization in patients with and without diabetes.

Preoperative Glycemic Optimization

- Provide dedicated staff for support in scheduling follow up appointments**, including with primary care and endocrinology for those with new intraoperative hyperglycemia



Perioperative Anemia Control

- Dedicate quality improvement initiatives** for anemia optimization in presurgical patients
 - Identify surgical populations with highest risk for transfusion and/or blood loss in procedure to pilot anemia optimization protocols
 - Identify champion in each targeted surgical specialty to promote change
 - Utilize relevant quality and process measures to track progress. Also see Evaluation Framework.
- Consider developing dedicated resources/team to direct patients that need further evaluation of underlying cause of anemia** (e.g., preoperative anemia optimization clinic)

Resources

- The Bree Report on Surgical Patient Optimization is meant to supplement these resources.
 - [Full Bree Report on Surgical Patient Optimization](#)
 - [Implementation Guide on Surgical Patient Optimization](#)
 - [Surgical COAP](#)
 - [Spine COAP](#)
 - [Guidelines - ERAS® Society](#)
 - [Clinical Strategies to Avoid Blood Transfusion](#)

Read the full Bree Report on Surgical Patient Optimizations online by scanning the QR code:



Connect with the Bree Collaborative at bree@qualityhealth.org

References: [\[1\]](#) Schatz C, Plötz W, Beckmann J, Bredow K, Leidl R, Buschner P. Associations of preoperative anemia and postoperative hemoglobin values with hospital costs in total knee arthroplasty (TKA). *Arch Orthop Trauma Surg.* 2023 Nov;143(11):6741-6751. [\[2\]](#) Musallam KM, et al. . Preoperative anaemia and postoperative outcomes in non-cardiac surgery: a retrospective cohort study. *Lancet.* 2011 Oct 15;378(9800):1396-407. [\[3\]](#) Myles, P. S., Richards, T., Klein, A., Wood, E. M., Wallace, S., Shulman, M. A., Martin, C., Bellomo, R., Corcoran, T. B., Peyton, P. J., Story, D. A., Leslie, K., Forbes, A., & RELIEF Trial Investigators (2022). Postoperative anaemia and patient-centred outcomes after major abdominal surgery: a retrospective cohort study. *British journal of anaesthesia,* 129(3), 346-354. <https://doi.org/10.1016/j.bja.2022.06.014> [\[4\]](#) van den Boom, W., Schroeder, R. A., Manning, M. W., Setji, T. L., Fiestan, G. O., & Dunson, D. B. (2018). Effect of A1C and Glucose on Postoperative Mortality in Noncardiac and Cardiac Surgeries. *Diabetes care,* 41(4), 782-788.