

BACKGROUND

Bloodless medicine is a set of evidence-based strategies consisting of 3 pillars: minimizing blood loss; optimizing tissue oxygenation; and managing anemia. Bloodless medicine affords healthcare providers with a treatment strategy in which the transfusion of allogeneic whole blood is not used. Hospitals around the country have implemented such programs centered around minimizing the use of donor blood or blood products such as red blood cells, white blood cells, plasma, and platelets to prevent transfusion-related infections and allergic reactions; and to promote faster recovery, and a shorter hospital stay.

PURPOSE

To implement and evaluate a multi-disciplinary Bloodless Surgery Protocol at University Medical Center to optimize care for patients for whom blood transfusion is not an option.

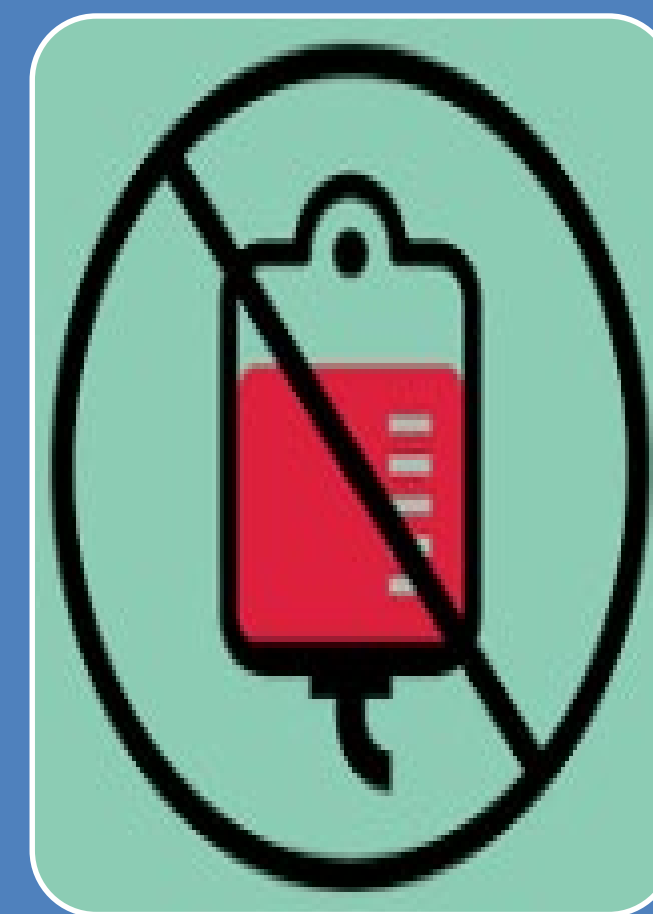
METHODS

A multidisciplinary group will be established to inform the creation and implementation of a Bloodless Medicine protocol at a large academic medical center in order to provide patients in whom transfusion is not an option, a meaningful and effective means of surgical and medical treatment. Pre-implementation and post-implementation analyses of rates of surgical site infection, length of stay, and cost analysis will be conducted.



>7g/dl

- Procrit
- Iron Sucrose
- Folic Acid
- Vitamin B12
- Supplemental O2
- Nutritional Support
- Infection Management
- DVT Prophylaxis



5-7g/dl

- As above and add:
- Redose Epoetin (Procrit)
- GI Stress Ulcer Prophylaxis
- Reduce intrapulmonary shunt (Chest PT, bed @30 degrees, bronchodilator therapy)
- Keep Euthermic, active cooling if elevated temp
- Neuromuscular blockers if necessary



<5g/dl

- As above and add:
- Aggressive Nutritional Support
- 100% Oxygen Therapy
- Minimize Oxygen utilization plus Non-Selective beta blocker

<https://onlinelibrary.wiley.com/doi/10.1002/ajh.25167>

RESULTS

- Patients receiving bloodless care have similar or better clinical outcomes compared to patients receiving standard care (i.e. fewer complications, reduced morbidity & mortality, reduced infection, length of stay and comorbidity issues).
- Show improved cost effectiveness and reduces waste for hospital.
- Show improved patient experience and satisfaction.

CONCLUSIONS

Examining the bloodless option for our patients may prevent adverse transfusion-associated complications, increase the appropriateness of transfusion, and reduce medical and surgical-related waste.

REFERENCES

- Frank SM, Hensley NB, Thomas AJ, Dawson CG, Resar LMS, Ulatowski JA, Crowe EP. Greater than sevenfold return on investment for a comprehensive patient blood management program with equivalent or improved outcomes. *Anesth Analg* 2024;138(6):1345-48
- Bower WF, Jin L, Underwood MJ, Lam YH, Lai PB. Peri-operative blood transfusion increases length of hospital stay and number of postoperative complications in non-cardiac surgical patients. *Hong Kong Med J* 2010;16(2):116-20.

