BLOOD MANAGEMENT TENETS

Goal: Create a multidisciplinary culture of blood conservation through research, education, collaboration.

Pre-op:

- Check quantitative platelet aggregation study for patients on preop DAPT to guide operative timing
- Evolving evidence suggests that preoperative intravenous Fe and erythropoietin may mitigate the need for PRBC transfusions in patients with preoperative anemia.

Intraoperative:

- The importance of meticulous hemostasis by the surgeon cannot be overstated. Employing a checklist to look for bleeding before closing the chest can help reduce blood loss.
- Antifibrinolytic agent should be utilized unless contraindicated
- Maximize RAP/VAP
- Transfusion threshold = Hgb 7 g/dl
- If Hgb is 7 g/dl, transfusion may not be necessary. The following indicators of adequate oxygen delivery may aid decision-making:
    - Lactate
    - HCO3
    - Base Deficit
- Acute Normovolemic Hemodilution (ANH) is a reasonable consideration to help avoid allogenic blood transfusion in select patients. There is evidence suggesting that the efficacy of ANH may be proportional to the volume of blood removed.

Postoperative:

- A threshold Hgb 7.5 g/dl is recommended before considering transfusion and has been shown to be safe in the literature (TRICS Trial, 2018)
- Each decision to transfuse should be discussed with cardiac surgery team leaders

Note: This document is meant to represent MCSQI's consensus opinion on the fundamentals of conservative blood management. There are also more comprehensive and stricter options that many are successfully employing, but this is meant to represent a good starting point for those interested in basic blood conservation.