What is blood conservation?

Efforts to reduce the demand on the available supply, which take many forms and can be exercised at every point of patient care.

I. Pre-operative Planning
   a. Check pre-op Hgb (many patients are anemic preop)
   b. Optimize pre-op Hgb level with supplementary Fe, B12, folate, and occasionally EPO
   c. Avoid anticoagulants, including: NSAIDS, anti-platelet agents, heparin, warfarin, possibly some herbal supplements
   d. Consider preoperative autologous blood donation in suitable donors and clinical scenarios

II. Intraoperative Considerations
   a. Good surgical technique extremely important
   b. Avoid/minimize allogeneic transfusion. Consider PABD, ANH, intra and post-operative blood salvage
      i. Can combine cell salvage with ANH,
      ii. Can fractionate salvaged WB, give RBC back first, sequester plasma and platelets for use when coagulopathy develops

III. Adjunctive Strategies
   a. Use point-of-care testing in the OR, to make transfusion decisions on rapidly available quantitative data, rather than observation/estimates.
   b. Micro-sampling: draw the minimum amount of blood required for laboratory tests
   c. Keep the patient warm: Coagulopathy and platelet dysfunction are exacerbated by hypothermia
   d. Deliberate hypotension to reduce active blood loss
   e. Appropriate positioning of the patient to minimized blood loss
   f. Drug therapy (See section on pharmacologic agents for more details)
      i. Aprotinin, ε- amino caproic acid (Amicar)- anti-fibrinolytic agents, inhibit plasmin or plasminogen
      ii. Desmopressin (DDAVP)- analog of vasopressin, increases release of vWF, thus increases FVIII levels
      iii. Recombinant activated FVII (Novo-seven): bypasses the coagulation cascade