

A microscopic view of several red blood cells, which are biconcave discs, against a dark red background. The cells are arranged in a cluster, with some in the foreground and others in the background, creating a sense of depth.

PATIENT BLOOD MANAGEMENT

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Blood Transfusion

The benefits have generally been overestimated
And
The risks have been underestimated

What is the solution?

WHAT IS PATIENT BLOOD MANAGEMENT?

Patient Blood Management (PBM) is the scientific use of safe and effective medical and surgical techniques designed to prevent anemia and decrease bleeding in an effort to improve patient outcome.



WHY PATIENT BLOOD MANAGEMENT?

- Ensures that the decision to transfuse blood is made with careful attention to the risks and benefits for each individual.
- Informs patients and encourages their participation in transfusion decisions.
- Uses state-of-the-art techniques to avoid the need for blood transfusion.
- Minimizes unnecessary sources of blood loss..

WHY PATIENT BLOOD MANAGEMENT?

- Uses advance planning to build blood counts before procedures
- Reduces unnecessary hospital & patient care costs.
- Improves patient safety by minimizing exposure to blood.
- Can reduce the risk of hospital-acquired complications and infections.

WHY PATIENT BLOOD MANAGEMENT?

- **To decrease complications associated with transfusion**

Adverse Event	Approximate Risk Per-Unit Transfusion of RBCs
Febrile reaction ¹¹	1:60 ^a
Transfusion-associated circulatory overload ^{12,13}	1:100 ^b
Allergic reaction ¹⁴	1:250
Transfusion-related acute lung injury ¹⁵	1:12 000
Hepatitis C virus infection ¹⁶	1:1 149 000
Hepatitis B virus infection ¹⁷	1:1 208 000 to 1:843 000 ^c
Human immunodeficiency virus infection ¹⁶	1:1 467 000
Fatal hemolysis ¹⁸	1:1 972 000

Clinical Practice Guidelines From the AABB Red Blood Cell Transfusion Thresholds and Storage. Evidence review 2016

PBM CONSERVES BLOOD SUPPLY

- Predictable drops in donations during:
 - Busy summer vacation months.
 - Holiday seasons / weekends.
 - Bad weather or disaster situations.
- Changing perception of social responsibility among new generations of donors.

Maximum Surgical Blood Ordering Schedule (MSBOS)

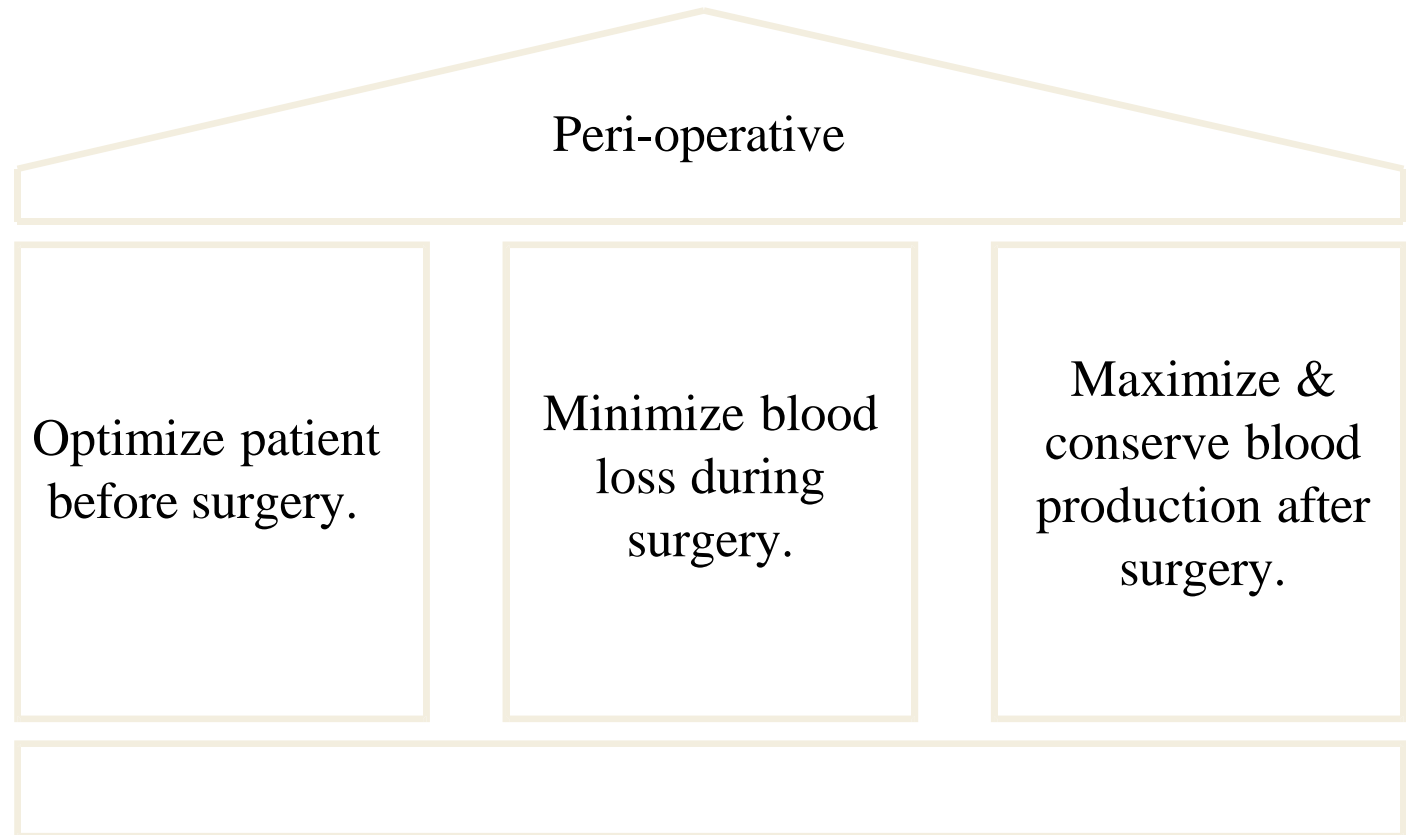
Identifies the number of units typically required by 80% to 90% of the patients undergoing a specific surgical procedure where transfusion is likely.

Benefits of the MSBOS

decrease in the crossmatch to transfusion ratio (C:T)

C:T ratio of less than or equal to (\leq) 2 is considered appropriate

PBM IN SURGERY



PBM SURGICAL STRATEGIES

Optimize patient before surgery.

- ✓ Assess patient fitness for surgery.
- ✓ Anemia Identification and Correction.
- ✓ Correct bleeding disorders.
- ✓ Assess medications and herbs that increase bleeding.
- ✓ Use of Preoperative Autologous Blood Donation(PAD)

PBM SURGICAL STRATEGIES

Minimize blood loss during surgery.

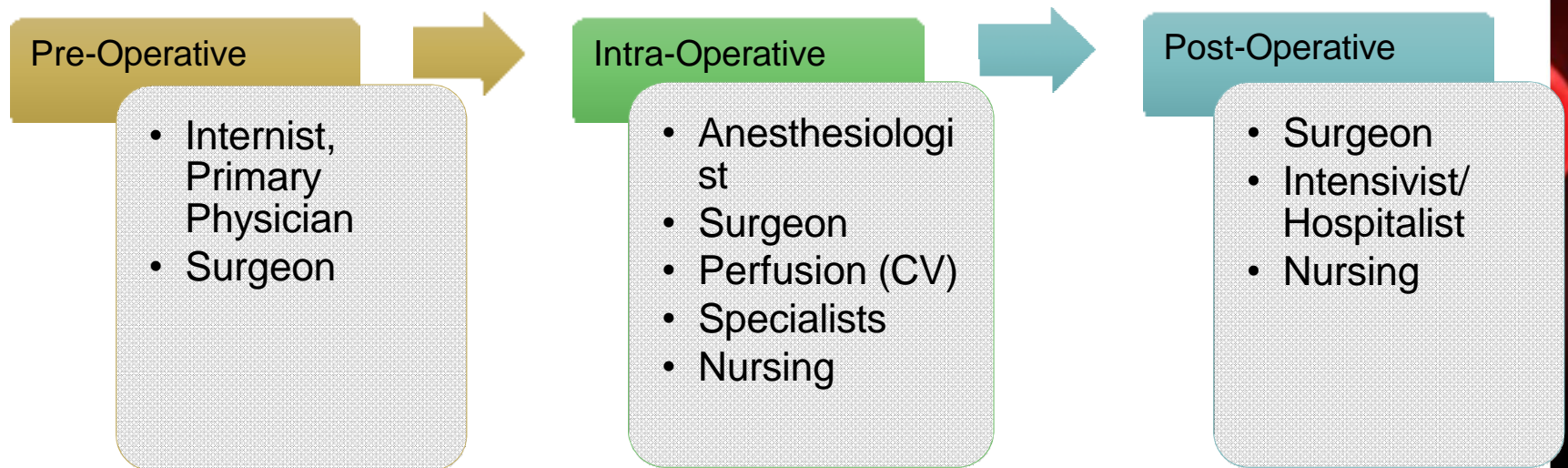
- ✓ Precise surgical technique.
- ✓ Surgical devices that control bleeding.
- ✓ Drugs that control bleeding.
- ✓ Minimally invasive technology.
- ✓ Anesthesia & fluid management.
- ✓ Blood salvage.
- ✓ Patient position during surgery

PBM SURGICAL STRATEGIES

Maximize & conserve blood production after surgery.

- ✓ Monitor and correct bleeding.
- ✓ Tolerance of permissive anemia.
- ✓ Increase patient blood production.
- ✓ Minimize blood sampling.

PBM PROGRAMS: A TEAM APPROACH



PBM Programs are more successful when everyone works together:

- ✓ Administration
- ✓ Physicians
- ✓ Nurses
- ✓ Patients

A hospital-based philosophy that
every drop of blood counts

PBM PROGRAMS: ADMINISTRATIVE AND CLINICAL ESSENTIALS

- Physician leadership and expertise.
- Core patient blood management team.
- Hospital-wide blood conservation policy and protocols.
- Continuing education for physicians and nursing.
- Community and patient education.

PBM :WHAT CAN PATIENTS DO TO IMPROVE THEIR OUTCOMES?

- Are you willing to investigate low red blood cell count (anemia) and take the time to correct it with iron, vitamins or growth factors before coming to the hospital?

(Choose a doctor who will work with you. Know your blood counts.)

- Are you willing ask your physician about patient blood management strategies early before surgery?

(Choose a hospital with a patient blood management program in your area @ www.sabm.org.)

- Are you willing to ask your physician if minimizing blood draws is right for you?

PBM REALITIES

- Patient blood management options should be a part of making good health care choices.
- Building up blood counts before surgery may help you to avoid a blood transfusion.
- Sometimes, several patient blood management strategies can be used at the same time to avoid a blood transfusion.
- No single approach (drug, device, technique) is effective for everyone.

PBM PROGRAMS: WHY HOSPITALS EMBRACE A BLOOD CONSERVATION CULTURE

- Responsive to public concern over blood safety.
 - Sustains the blood supply.
 - Improved technology, devices and pharmaceuticals.
 - Imperative to reducing hospital costs.
 - Increases hospital through-put (fast-track).
 - Improves physician skills.
 - Improves patient care.
- Gives recognition as a “Best Practices” hospital.