A Patient Blood Management program uses a team approach to assess a patient’s blood management needs. The goal of the team is to develop a plan of care that uses pharmaceuticals, technology and techniques to decrease blood loss and to enhance blood cell production. This approach reduces or eliminates the need for a blood transfusion.

SABM’s Mission is to improve patient outcomes through optimal blood management. We encourage all individuals to become informed and educated in the management of their blood.

To find a blood management program in your area, visit www.sabm.org

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The Role of Blood in Your Body

Red blood cells bring oxygen to your organs and tissues. Oxygen is carried and released by hemoglobin (Hgb), a protein present in red blood cells. A lower than normal hemoglobin level is called anemia. Anemia is a condition that should not be left untreated. If it is severe, or allowed to progress for a long period of time, anemia can add risk to your health.

Know Your Blood Count

Your doctor can test your blood to determine hemoglobin level. Hemoglobin level tells your doctor if your body has enough red blood cells.

Normal Hemoglobin Ranges:
Male: 14-18 g/dL
Female: 12-16 g/dL

How do I proceed if my doctor says I am anemic?

- Undergo tests to find the cause of anemia
- Analyze blood to determine iron levels
- Get information about increasing your blood count with:
  - Iron therapy
  - Vitamin B12
  - Folic acid
  - Vitamin C
  - Erythropoietin
- Develop a treatment plan to improve your blood count (refer to “Strategies” box)

Before Hospital Visit

Discuss with your physician at least two weeks before surgery – Herbal medications, vitamin E, non-steroidal anti-inflammatory drugs (e.g. ibuprofen, naproxen) and medications that affect blood clotting (e.g. warfarin, dabigatran, aspirin, clopidogrel). These may increase your risk of bleeding during procedures.

Synthetic Erythropoietin – A hormone that stimulates production of red blood cells in your bone marrow

Iron (oral and intravenous) – A mineral essential for the formation of red blood cells

Vitamin B12, Folic Acid, Vitamin C – Vitamins necessary for red blood cell production

During Procedure

Intraoperative Blood Cell Recovery and Reinfusion – The process of collecting blood lost during surgery and returning it to the patient

Volume Expanders – Intravenous fluids made with water, salts, sugars or starches that help to maintain the correct amount of fluid in the blood vessels

Hemostatic Drug Therapy – Medications that assist with the clotting functions of blood

Acute Normovolemic Hemodilution – Removal of a specific amount of blood during surgery, replaced with intravenous (IV) fluids and returned during or after surgery

Strategies to Enhance Red Blood Cell Production and Minimize Blood Loss

If you are having a medical procedure, have a complete blood count (CBC) taken well in advance of your procedure date; four weeks prior is recommended. This allows the medical team time to optimize your health status well ahead of hospitalization. A combination of the following PBM-related strategies may be used:

Reduced Blood for Testing – Reducing either the number of times blood is drawn and/or the amount of blood used for testing, thus reducing the risk of anemia

Postoperative Blood Cell Recovery and Reinfusion – Collecting blood lost after surgery and returning it to the patient after it is appropriately processed

Meticulous Surgical Approach – Using surgical techniques and instruments that prevent or minimize blood loss

Advanced/Minimally Invasive Surgical Techniques and Devices – e.g., robotic and laparoscopic surgeries

Advanced Cauterization – Devices that use heat, electricity, vibration, or light to stop bleeding tissue

Thrombin and Adhesives – Human-derived or synthetic products that can be used in surgery to support the body’s ability to clot and reduce bleeding

Additional Strategies

Metformin – Reduces the risk of hypoglycemia during surgery

Pneumonectomy – Removing one lung

Lung Volume Reduction Surgery – Shrinking the size of the remaining lung

Hematopoietic Stem Cell Transplant – Transferring blood stem cells into a patient to replace diseased bone marrow

How am I part of the decision making process in PBM?

There are many strategies to manage the medical issues that result in anemia, clotting problems, or bleeding. For some patients, blood transfusion may never be an option because of medical, religious or other personal reasons. Each person must make an individual decision based on understanding with the assistance of the physician and healthcare team. Here a few questions you can ask your physician regarding your status:

What are the risks, benefits and alternatives to any proposed treatment, including blood transfusion?

What are you prepared to do to minimize or eliminate the likelihood of a blood transfusion in my care plan?

What can be done before, during, and after surgery to reduce my risk for bleeding?

If I am a patient for whom blood transfusion is NOT an option, what medical or surgical techniques are you planning on employing?

For a more detailed explanation of these terms, please visit www.sabm.org

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