BUILDING AND SUSTAINING A BLOOD MANAGEMENT PROGRAM

How Creating and Implementing Standards for Transfusions Resulted in Better Clinical Outcomes and Cost Savings for Hospitals
BLOOD TRANSFUSIONS ARE AMONG THE MOST COMMON MEDICAL PROCEDURES at U.S. hospitals. But when it comes to this lifesaving treatment, more is not always better.

- Transfusions come with a higher risk of mortality and other dangerous complications.
- Transfusions are costly for hospitals. In a 2010 study published by Transfusion, a peer-reviewed academic journal, it was estimated that blood transfusion costs range from $522 to $1,183 per unit. The study also confirmed that blood transfusion-related costs for surgical patients are a significant resource drain - costing between $1.6 to $6.0 million per hospital surveyed.
- Transfusions are managed differently from hospital to hospital. Even today, with more than 15 million units of blood transfused per year in the United States, the practice is not by any means a standardized process.

Healthcare reform, reduced funds, rising blood costs, and the desire for better clinical outcomes have exposed the need for effective blood management. A growing number of hospitals are instituting blood management programs, which are guidelines as to when a transfusion is necessary or avoidable. A few forward-thinking hospitals – prompted by their physician partners who take the initiative – are spearheading the efforts, studying the impact, and developing the protocols.

This paper explains the need for blood management programs and how they can be implemented at hospitals to save money and produce positive patient outcomes.
THE NEED FOR BLOOD MANAGEMENT PROGRAMS

ACCORDING TO THE JOINT COMMISSION’S STUDY on appropriate blood management, the following issues in patient blood performance measures (PBM) were noted:

**Inconsistent Protocols**
- Informed consent for blood transfusions is not required by all states, and the consent process varies between hospitals
- Hospitals have different “acceptable” pre-transfusion lab values
- Lack of national guidelines causes inconsistent use of transfusions
- It’s difficult to identify transfusions during surgery
- Point-of-care testing is not used in all hospitals during surgery
- Transfusion orders are usually not required or documented during surgery

**Lack of Standardized Lexicon**
- Difficult to determine if documentation of clinical indication is “sufficient”
- No standardized definition is used for “bleeding”
- The order to transfuse is sometimes confused with the order to type and cross-match in surgery

**Inconsistent Education**
- Information about transfusion is not consistently given to patients
- Information is provided by a variety of staff
- Staff needs education about the risks, benefits and alternatives
THE MANY COSTS OF BLOOD

Direct: The average acquisition cost for one unit of red cells is $200.5

Activity-Based: U.S. range is $726.05 to $1,183.325

Indirect:
- Issuing and Delivering
- Testing
- Administration and Monitoring
- Inventory Management & Storage
- Legal

Transfusions also affect:
- Length of stay
- Infection rates
- Complication rates
- Mortality

TRANSFUSION PRACTICES VARY GREATLY

A STUDY DONE BY THE INSTITUTE OF MEDICINE (IOM) SUGGESTS THAT THERE IS WIDE VARIABILITY IN WHEN BLOOD TRANSFUSIONS ARE PERFORMED. This is partly because the decision to transfuse is largely affected by non-clinical factors in most cases. The evidence led the IOM to believe that transfusions in many hospitals may seem necessary, but are in fact inappropriate.7,8
This was the case for anesthesiologist Robert Brooker, M.D., who championed a blood management program at Memorial Healthcare in Hollywood, Fla.

90% of all improvement initiatives within hospitals and health systems are either wholly or partially dependent on doctors making them happen.

The tenets of this program are:

- **Work with cardiologists** before surgery to make sure the patient is not on unnecessary doses of blood thinners, which promote bleeding, and to ensure an anemic patient has proper pre-op medicine.

- **Draw a unit of blood** from the patient the day of surgery, in case it is needed.

- **Reduce the amount of plumbing** in the heart/lung machine, keeping the patient’s organs functioning during surgery so that it uses less blood-diluting fluids.

- **Carefully ration IV fluids** during surgery so the patient’s blood concentration does not drop unnecessarily.

- **Preserve and store red blood cells** from blood that’s lost during surgery, using a suction device called a “cell saver.”

- **Standardize the way anti-bleeding medications** are given during surgery.

- **Standardize what constitutes the “transfusion threshold,”** or how far blood levels can drop before triggering a decision to give the patient a transfusion.
CASE STUDY

MEMORIAL REGIONAL HOSPITAL (HOLLYWOOD, FLA.)

THE ADMINISTRATION AT MEMORIAL REGIONAL HOSPITAL in Florida had the goal to develop a top-notch cardiac surgery program, an element of which was to make open heart surgery safer. Sheridan anesthesiologist Dr. Robert Brooker, the hospital’s chief of cardiac anesthesia, initiated a blood conservation program to improve its transfusion rates.

“Cardiac surgery programs are under increasing scrutiny to provide the highest quality of care, and the rate of transfusions is an important measurement of quality of care,” — Dr. Brooker.

“Blood transfusions in heart surgery, or anywhere, are only good for you if you really need it. It’s like a liquid organ transplant. If you don’t absolutely need to have it to save your life, you shouldn’t get it.” — Dr. Brooker.

IN 2008, THE HOSPITAL STARTED FOLLOWING AN ESTABLISHED PROTOCOL and conducted a five-year study of the results of more than 1,000 patients. Dr. Brooker presented the findings at the 2013 American Society of Anesthesiologists annual meeting.

- 68% reduction in cardiac patients needing surgical transfusions, from 59% to 19%
- 80% decrease in the amount of blood needed, from 1.7 units to .33 units, saving $715.14 per unit
- 50% drop in heart surgery-related deaths, infections, strokes and re-operations
- 100% decrease in infections, falling from 3.2% to 0%
PHYSICIAN CHAMPIONS CHANGE HOSPITALS FOR THE BETTER

THE BLOOD MANAGEMENT PROGRAMS AT SEVERAL HOSPITALS, including the one outlined in this paper, were instituted and championed by Sheridan physicians who believe that leadership drives performance through integrity, excellence, creativity, teamwork and respect. Physician leaders at a hospital can greatly impact whether change happens or not and whether change is successful or not. Sheridan physicians embody the necessary dedication to collaborative leadership and hospital alignment needed in today's hospital environment.

To learn more about the processes behind various hospital initiatives and success stories, visit Sheridan's Resource Center online (www.sheridanhealthcare.com) for case studies, leadership briefs, and research and white papers. To discuss how our performance-driven solutions can help increase efficiency and communication in your hospital, contact us at THOUGHTLEADERSHIP@SHCR.COM or 855.252.2969.

REFERENCES:
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