**Crossmatch Guidelines – MSBOS**

**PRINCIPLE**

Type and screen is a policy in which blood is not crossmatched and reserved for patients undergoing surgical procedures that rarely require a transfusion. The patient's blood sample is obtained and properly labeled with name, hospital number, date, time, initials of person drawing the blood and the blood bank wristband number. It is tested for ABO, Rh, and unexpected antibodies, and then stored in the blood bank for immediate cross-matching should this prove necessary.

If transfusion becomes necessary, ABO and Rh compatible blood can be safely released, for patients with no clinically significant antibodies, after an immediate spin crossmatch. If the antibody screen is positive, the antibody must be identified and two (2) antigen-negative units for clinically significant antibodies will be crossmatched for use if needed.

**TYPES OF SURGICAL PROCEDURES**

1. Routine Surgical Patients

In most cases, patients for routine surgery will be handled as type and screen procedures. Patients

will have blood crossmatched per physician order.

2. Surgical Patients with Alloantibodies

Should a patient undergoing surgery have a demonstrated alloantibody during the type and screen

procedure, the number of units of blood ordered will be obtained negative for the corresponding

antigen(s), and will have antiglobulin crossmatches completed before surgery is undertaken. When

a patient has only a type and screen ordered, two (2) units of antigen negative crossmatch

compatible blood should be ordered and crossmatched for the patient.

Surgeons should be notified if their patients have antibodies that may cause a delay in obtaining

crossmatch compatible blood. When the last available units have been sent to surgery, surgery

should be called to inquire if more blood should be antigen typed and crossmatched.

3. "On-Hold" Blood Patients

On occasion, requests are received to type and crossmatch blood and have it available for

anticipated bleeding. These patients will be handled under the type and screen procedure, ABO

and Rh compatible blood will be available, but not crossmatched, until actually needed unless the

patient has Alloantibodies.

4. Patients with Active Bleeding:

When patients are actively bleeding and receiving transfusion therapy, the Blood Bank will attempt

to always keep at least two (2) units of crossmatched blood available for use during the procedure.

**MAXIMUM SURGICAL BLOOD ORDER SCHEDULE (MSBOS)**

The shelf life decreases each time a unit is held or crossmatched for a patient who does not use it. When physicians order more blood than needed, it is unavailable for other patients, which may increase the outdate rate. Below is a chart that gives guidelines as to how many units of blood should be crossmatched for a particular procedure or if only a type and screen (T/S) should be performed. These amounts can be varied by the physician.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Procedure** | **Units** | \* | **Procedure** | **Units** |
| **General Surgery** |  | \* | **Orthopedics** |  |
| Breast biopsy | T/S | \* | Arthroscopy | T/S |
| Colon resection | 2 | \* | Laminectomy | T/S |
| Exploratory laparotomy | T/S | \* | Spinal fusion | 3 |
| Gastrectomy | 2 | \* | Total hip replacement | 3 |
| Laryngectomy | 2 | \* | Total knee replacement | T/S |
| Mastectomy, radical | T/S | \* |  |  |
| Pancreatectomy | 4 | \* | **OB-GYN** |  |
| Splenectomy | 2 | \* | Abdomino-perineal repair | T/S |
| Thyroidectomy | T/S | \* | Cesarean section | T/S |
|  |  | \* | Dilation and curettage | T/S |
| **Cardiac-Thoracic** |  | \* | Hysterectomy, abdominal/laparoscopic | T/S |
| Aneurism resection | 6 | \* | Hysterectomy, radical | 2 |
| Redo coronary artery bypass graft | 4 | \* |  |  |
| Primary coronary artery bypass graft | 2 | \* | **Urology** |  |
| Lobectomy | T/S | \* | Bladder, transurethral resection | T/S |
| Lung Biopsy | T/S | \* | Nephrectomy, radical | 3 |
|  |  | \* | Radical prostatectomy, perineal | 2 |
| **Vascular** |  | \* | Prostatectomy, transurethral | T/S |
| Aortic bypass with graft | 4 | \* | Renal Transplant | 2 |
| Endarterectomy | T/S | \* |  |  |
| Femoral-popliteal bypass with graft | 2 | \* |  |  |

**REFERENCE**

Roback, J. (2011). Technical manual (17th ed.). Bethesda, Md.: AABB.

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