


Name of Policy: Maximum Surgical Blood Ordering Schedule (MSBOS) Policy Number: 3364-108-308 Approving Officer: Senior Hospital Administrator Director, Blood Transfusion Service Responsible Agent: Blood Transfusion Service Supervisor Administrative Director, Lab Scope: University of Toledo Medical Center Pathology/Laboratory – Blood Bank		 Effective date: 03/07/2025 Original effective date: 01/2005	
Key words: Surgical Blood, Maximum blood, Surgery, MSBOS, Crossmatch			
<input type="checkbox"/>	New policy proposal	<input checked="" type="checkbox"/>	Minor/technical revision of existing policy
<input type="checkbox"/>	Major revision of existing policy	<input type="checkbox"/>	Reaffirmation of existing policy

(A) Policy Statement

The Maximum Surgical Blood Ordering Schedule defines the number of units needed to meet the needs of at least 90% of patients undergoing a specific surgical procedure and or a procedure with a 10% or greater chance of requiring allogeneic blood. The schedule will be used to determine the number of units reserved for surgical patients. Surgeons or anesthesiologists may individualize specific requests and override the system to accommodate special needs.

(B) Purpose of Policy

The shelf life of a unit decreases each time a unit is held or crossmatched for a patient who does not use it. If more units than are required are put aside for a given surgery, then the unit is not available for another patient who may need the blood. Use of the schedule will allow better control of inventory and will be more cost effective, in that expense of unnecessary crossmatches will be avoided.

(C) Procedure

- (1) The surgery schedule for the next day will be examined prior to performing ordered crossmatches. Patient orders will be compared with the MSBOS and the recommendations of the MSBOS will take precedence over the orders received.

(2) Orders may deviate from the MSBOS if specifically requested and justified by the attending surgeon or anesthesiologist.

(3) See Attachment A for MSBOS limits.

(D) Definitions

(1) T/S = Type and Screen. Perform ABO and Rh type. Screen for red cell antibodies. Recommended for procedures requiring less than 0.5 units of blood per patient per procedure or in which 90% or more of patients are not transfused.

(2) C/T ratio= Crossmatch to Transfusion ratio. Ordinarily <2.0

(3) SBO = Standard Blood Order - Average number of units used for each procedure

(E) References

(1) AABB Technical Manual, current edition.

<p>Approved by:</p> <p>/s/</p> <hr/> <p>Lauren Stanoszek, M.D. Assistant Professor Director, Blood Transfusion Service</p> <p>3/1/2025</p> <hr/> <p>Date</p> <p>/s/</p> <hr/> <p>Russell Smith Pharm D, MBA, BCPS, CPEL, FACHE Senior Hospital Administrator</p> <p>3/7/2025</p> <hr/> <p>Date</p> <p><i>Review/Revision Completed by:</i> Danielle Weillnau MLS(ASCP)^{CM}</p>	<p>Policies Superseded by This Policy:</p> <ul style="list-style-type: none"> • <i>None</i> <p>Initial effective date: 01/2005</p> <p>All Review/Revision Dates:</p> <p>6/96 7/96 2/99 8/00 11/03 1/05 1/2008 6/9/2008 3/22/2011 3/01/2013 3/2/2015 3/1/2017 3/1/2019 3/1/2021 03/20/2023 03/07/2025</p> <p>Next review date: 03/07/2027</p>
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Attachment A**Maximum Surgical Blood Order Schedule - MSBOS**

Procedure	Units
General Surgery	
• Antrectomy and vagotomy	2
• Breast biopsy	T/S
• Cholecystectomy	T/S
• Colon resection	2
• Exploratory Laparotomy	T/S
• Gastrectomy	2
• Hernia repair	T/S
• Ileal bypass	T/S
• Inguinal herniorrhaphy	T/S
• Laryngectomy	2
• Liver biopsy	T/S
• Mastectomy, radical	T/S
• Pancreatectomy	4
• Splenectomy	2
• Thyroidecomy	T/S
• Transmesentric intrahepatic portosystemic shunt placement	4
• Vein stripping	T/S
• Whipple procedure-pancreaticoduodenectomy	4
Orthopedic	
• Arthroplasty	T/S
• Arthroscopy	T/S
• Bone graft-iliac	
• External fixation	
• Herniated disc	T/S
• Laminectomy	T/S
• Ligament repair	
• Open reduction	2
• Shoulder reconstruction	T/S
• Spinal fusion	3
• Total hip replacement	2-3
• Total knee replacement	T/S
Vascular	
• Aortic bypass with graft	4
• Endarterectomy	T/S
• Femoral-popliteal bypass with graft	2

OB-GYN	
• Abdomino-perineal repair	T/S
• Cesarean section	T/S
• D & C	T/S
• Hysterectomy abdominal/laparoscopic	T/S
• Hysterectomy, radical	2
• Laparoscopy	T/S
• Loop electrocautery excision procedure	
• Vaginal resuspension	T/S
Urology	
• Bladder, transurethral resection	T/S
• Cystourethroscopy	
• Nephrectomy, radical	1-3
• Radical prostatectomy, radical	1-2
• Prostatectomy, transurethral	T/S
• Renal transplant	T/S
Cardiothoracic	
• Aneurysm resection	6
• Redo coronary artery bypass graft	4
• Primary coronary artery bypass graft	2
• Lobectomy	T/S
• Lung biopsy	T/S
Oral	
• Tonsillectomy/adenoidectomy	
• Mastoidectomy	
Neurosurgery	
• Aneurysm, Cranial	2
• Anterior cervical discectomy, with or without fusion	T/S
• Craniotomy	2
• Laminectomy, Cervical, Thoracic or Lumbar, for decompression	T/S
• Laminectomy for tumor	2
• Lumbar or cervical fusion, posterior	2
• Lumbar peritoneal shunt	T/S
• Stereotactic brain biopsy	T/S

