

Maximum Surgical Blood Order Schedule (MSBOS)

August 23, 2021

MSBOS Document The following is William Beaumont Hospital's (Royal Oak campus) Maximum Surgical Blood Order Schedule (MSBOS).

Note: With Beaker System Wide – Go Live as of April 11, 2021, a Type and Screen within 30 days of the procedure (***without banding ONLY***) is now acceptable to be completed at any Beaumont Health Lab.

Breast:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Flaps	T & S
Total mastectomy with autologous reconstruction	T & S

Cardiovascular Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Aneurysm, thoracic resection	T & S w/ 4
Aneurysm, thoracoabdominal resection	6 units RBC, 4 units FFP
Atrial septal defect repair /PFO repair	T & S
Cardiotomy w/ bypass CABG w/wo	T & S w/ 2
Cardiotomy w/ bypass CABG (redo) w/wo	T & S w/ 4
Coarctation of aorta repair: adult	T & S w/ 3
Pacemaker, lead extraction	T & S
Patent ductus arteriosus repair	T & S w/ 1
Pericardectomy	T & S w/ 4
Valve replacement: AVR	T & S w/ 2
MVR	T & S w/ 2
Valve replacement redo AVR	T & S w/ 4
MVR	T & S w/ 4
Ventricular septal defect repair	T & S w/ 2

Colon & Rectal Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Altmier procedure	T & S
Colostomy Closure	T & S w/ 2
Ileostomy reversal	T & S
Open/ Laparoscopic Sigmoidectomy	T & S
Open/ Laparoscopic Cecectomy	T & S
Open/ Laparoscopic Right Colon	T & S
Open/ Laparoscopic Ileo-Colic Resection	T & S
Open/ Laparoscopic Abd. Colectomy and Ileoproctostomy	T & S
Open/ Laparoscopic Any Partial or total Abdominal Colectomy	T & S

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Open/ Laparoscopic Low Anterior Resection	T & S w/ 1
Abdominal Perineal Resection	T & S w/ 2
Open/ Laparoscopic Total Proctocolectomy and Ileal-Anal anastomosis	T & S w/ 2
Open/ Laparoscopic (Small or Large Bowel Resection)	T & S
Pelvic Exenteration	T & S w/ 2
Laparoscopic Assisted Colon Resection	T & S
Rectopexy	T & S

General Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Abdominal perineal resection or low anterior resection	T & S w/ 2
Adrenalectomy	T & S w/ 2
Altmier procedures	T & S
Colectomy-Colon Resection	T & S
Colostomy Closure/ Reversal/Takedown- complex with laparotomy resection and anastomosis	T & S
Entero-enterostomy/ small bowel resection	T & S
Exploratory Laparotomy	T & S
Gastric Resection	T & S
Gastric Bypass	T & S
Gastric Sleeve	T & S
Gastrojejunostomy	T & S
Laparoscopic gastric bypass or band	T & S
Hiatal hernia	T & S
Pancreatectomy: Lap and Open	T & S w/ 4
Paraesophageal hernia	T & S
Portal caval shunt	T & S w/ 6
Retroperitoneal exploration	T & S w/ 4
Ripstein procedure	T & S
Skin graft, split thickness	T & S
Splenectomy	T & S w/ 2
Vagotomy & pyloroplasty	T & S
Whipple (pancreatogastrojejunotomy)	T & S w/ 2

Neurosurgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Burr holes	T & S
Cordotomy	T & S
Chiari decompression	T & S
Crainectomy for syntosis (child)	T & S w/ 2
Cranioplasty	T & S
Craniotomy: aneurysm, cranial	T & S w/ 2

for STA, MCA, or PICA bypass	T & S w/ 2
for intracranial hematoma	T & S w/ 2
for tumor	T & S w/ 2
for AV malformation	T & S w/ 6
Discectomy, ant. cervical , fusion	T & S
Hypophysectomy	T & S
Laminectomy: cervical	T & S
Fusion	T & S
Lumbar peritoneal shunt: child	T & S
Meningomyelocele repair	T & S w/ 1
SEEG Procedure	T & S
Spinal cord untethering	T & S
Spinal fusion	T & S w/ 1
Spinal fusion w/ instrumentation	T & S w/ 2
Spine tumor	T & S w/ 2
Syringoperitoneal shunt: adult	T & S
child	T & S w/ 1
Thoracic or lumbar fusion: open	T & S w/ 2
minimally invasive	T & S
Visualase Procedure	T & S

Obstetrics & Gynecology:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Caesarian section: emergency	T & S
2nd repeat or 3rd C-section	T & S
Caesarian section: Hysterectomy	T & S w/ 4
Caesarian section: Previa	T & S w/ 2
Dilation & curettage: Incomplete abortion, Missed Abortion or Pregnancy Termination	Type and Screen only (Type and Screen for RhIG Evaluation purposes on women \leq 50 years old. No need to delay OR start time)
Dilation Evacuation	T & S w/ 2
Ectopic pregnancy, laparoscopy, or laparotomy to rule out	T & S
Exenteration	T & S w/ 4
Exploratory Laparotomy	T & S
Hysterectomy: radial nodes	T & S
TAH bil. salpingo-oophorectomy	T & S
unil. or bil. salpigo-oophorectomy	T & S
vaginal repair	T & S
Labor patient: vaginal delivery	T & S
high risk	T & S
Myomectomy: Adbominal	T & S

Pelvic lymph node dissection	T & S w/ 3
Placenta previa under observation	T & S
Presacral neurectomy	T & S
Vulvectomy	T & S
Tubal ligations:	T & S (postpartum specimen in Blood Bank)

Oral Maxillofacial Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Max AND Mand Osteotomy (2 jaw surg)	T & S
Radical Neck Dissection & mandibulatory & anterior pillar resection	T & S
Maxilectomy	T & S

Orthopedic Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Amputation	T & S
Arthroplasty – Revision/Conversion	T & S w/ 2
Hip	
Shoulder	T & S w/ 2
Bone tumor (*depends on size of the tumor)	T & S w/ 2
Corpectomy (Thoracic/ Lumbar)	T & S, 1-2
Disarticulation, hip	T & S w/ 4
Fracture, ORIF: (adult): hip	T & S w/ 2
(not for wrists, elbows or ankles) femur	T & S w/ 2
humerus	T & S w/ 2
tibial plateau	T & S w/ 1
shoulder, tibia & forearm	T & S
Fusion, ant. Cervical >2 levels	T & S
with instrumentation	T & S
Hemi arthroplasty /bipolar	T & S w/ 2
Lumbar decompression > 3 levels	T & S
Osteotomy long bone only (Do not draw on periacetabular osteotomies)	T & S w/ 2
Pinning (nailing): hip	T & S w/ 2
Spinal fusion	T & S w/ 1
Spinal fusion w/ instrumentation	T & S w/ 2
Intratrocchanteric	T & S

Otorhinolaryngology:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Acoustic tumor resection	T & S
Angiofibroma, resection	T & S w/ 2
Brachial cleft cyst, resection	T & S

Carotid body tumor resection	T & S w/ 2
Glomus jugular tumor excision	T & S w/ 4
Laryngectomy: simple	T & S
w/ radical neck	T & S
Mandibulectomy, hemi. or total	T & S
Maxillectomy	T & S w/ 2
Radical neck dissection	T & S
Retrolabyrinthine vestibular nerve resection	T & S
Temporal bone resection	T & S

Pediatric Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Inpatient surgery	As otherwise listed or per physician order
Total colectomy	T & S w/ 2
Congenital lung lesions (open/scope)	20cc/kg RBC
Biliary Atresia (Kasai)	20cc/kg RBC
Necrotizing Enteroocolitis (acute) & necrotizing enteroocolitis takedowns	40cc/kg RBC
Partial colectomy	T & S
Patent ductus arteriosus	80cc/kg RBC
Pectus Excavatum (Ravitch, Nuss & bar removal)	T & S w/ 2
Pediatric Abdominal Tumors Hepatic Neuroblastoma Wilms (Kidney)	T & S w/ 2
Spleen (open/lap)	T & S w/ 1
Addendum: Children \leq 12 mo., at the agreement of the staff pediatric anesthesiologist and staff surgeon, the patient may have the necessary Type & Screen / Type & Cross drawn in the OR during the initial phase of induction /sedation. The criteria for obtaining a Type & Screen / Type & Cross remain as previously determined.	

Peripheral Vascular Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Aneurysm, thoracic resection	6 units RBC, 4 units FFP
Aneurysm, thoracoabdominal resection	6 units RBC, 4 units FFP
Aortic aneurysm graft	T & S w/ 4
<i>Aorto-Iliac bypass</i>	T & S w/ 4
Aorto-Fem. bypass	T & S w/ 4
Ileo-Fem. bypass	T & S
Renal Artery Repair	T & S w/ 4
Carotid body tumor resection	T & S w/ 2
AAA Stent Grafts	T & S w/ 2
1 ST Rib resection	T & S

Plastic Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Cases >4 hours	T & S
Craniosynostosis repair surgeries	T & S
Deep Inferior Epigastric Perorator (DIEP) flap	T & S
Free Flaps	T & S
Latissimus Dorsi (LD) flaps	T & S
Skull surgeries	T & S

Thoracic Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Diaphragmatic hernia repair	T & S
Esophagectomy	T & S w/ 2
Thoracoscopy with Pulm resection	T & S w/ 2
Mediastinoscopy	T & S
Paraesophageal hernia	T & S
Pneumonectomy/Thoracotomy	T & S w/ 2
Sternotomy	T & S
Yag laser bronchoscopy	T & S

Transplant Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Kidney Transplant	T & S w/ 4 PRBC
Donor Nephrectomy	T & S w/ 2 PRBC
Liver Transplant	T & S w/ 10 PRBC, 4 FFP
OPEN liver resection	T & S w/ 4
LAPAROSCOPIC liver resection	T & S w/ 2 PRBC
LAPAROSCOPIC liver resection lobectomy	T & S w/ 4
Trisegmentectomy liver	T & S w/ 4
LAPAROSCOPIC radiofrequency liver tumor	T & S
Vascular access surgery	T & S
Portocaval or splenorenal shunt	T & S w/ 4
Exploration of transplant organ	T & S w/ 4
Biliary resection/bypass	T & S w/ 4

Urologic Surgery:

WHEN the surgical procedure is:	THEN the MSBOS test/unit is:
Anterior w/ buccal graft procedure	T & S
Cystectomy, total	T & S w/ 2
Cystocele repair with mesh	T & S
Ileal loop	T & S
Kidney biopsy (open)	T & S
Nephrectomy/Partial Nephrectomy	T & S w/ 2
Nephrolithotomy & Pyelolithotomy:	initial T & S

	redo	T & S w/ 2
	Percutaneous nephrostolithotomy	T & S
Prostatectomy:	perineal	T & S w/ 1
	open radical	T & S w/ 2
	robotic radical	T & S
	retropubic	T & S w/ 2
	suprapubic	T & S w/ 2
	Retroperitoneal lymph node dissection	T & S w/ 2
	Ureterolithotomy	T & S
	Ureterotomy	T & S
	Uretero-vag. or vesico-vag. fistula repair	T & S
Urethroplasty	anastomotic	T & S
	posterior	T & S
	Procedure not listed	T & S