

RED RULES

Measure	Measure Definition	How Physicians Comply
Red Rules	<p>Rules that CANNOT be broken- by anyone Associated ONLY with processes that can cause harm Must be followed exactly (regardless of rank or role)</p> <p>Management and Medical Staff Leaders will ALWAYS support STOPPING to prevent a RED RULE from being violated Red Rules are in place to empower the ENTIRE workforce to take action if a critical rule is about to be broken.</p>	<p>Speak up and STOP work that will or is violating a RED RULE</p> <p style="text-align: center;">RED RULES in place Physician and Nursing</p> <ol style="list-style-type: none"> 1. Two Patient Identifiers: Name and Date of Birth 2. Time Out: Must be led by physician performing procedure 3. Professional Interactions: No verbal assaults or inappropriate physical contact <li style="text-align: center;">Nursing 4. Five Rights of Medication Administration 5. Falls Bundle

*** Failure to follow **RED RULES** will be reviewed and handled accordingly***

Measure	Metrics	How Physicians Comply
Retained Foreign Body (RFB)	1. A RFB is anything unintended (material/object) left in the body at completion of skin closure	1. Count prior to incision 2. Fully explore the wound prior to closing 3. Verify manual count is correct prior to closing 4. If the manual count is incorrect STOP and Do Not close the incision. Re-examine the surgical site/wound for missing equipment/material. Examine all areas and recount before closure. Utilize the RF surgical technology. 5. If count is still incorrect then: a) If the patient's condition permits, perform an intraoperative x-ray with radiologist read prior to skin closure b) In the event of a missing needle, document the size and type of needle(s) no x-ray is necessary because the needle would not likely show on x-ray.
Wrong Site Surgery (WSS)	A WSS is defined as a surgical or other invasive procedure performed on the wrong patient, or on the wrong body part or on the wrong side or site of the patient or implanting the wrong material or substance.	1. Perform a (Mandatory) standard time out (initiated by surgeon) with at least the following included: Correct Patient, Correct Site, Correct Procedure (When the same patient has two or more procedures: If the person performing the procedure changes, another time-out needs to be performed before starting each procedure). All activity should STOP during the time out and everyone should participate in the time out. 2. When possible, involve the patient in the verification process. 3. Mark the procedure site prior to the procedure being performed and before pt. is taking into procedure area when applicable.
VAP Bundle (IHI Evidenced Based Protocol For preventing VAP's) This is an all or nothing measure, all indicators must be met or contraindications must be documented. * Utilize Pulmonary Order set*	1. Head of Bed up 30 degrees 2. Peptic Ulcer Disease Prophylaxis 3. Deep Venous Thrombosis Prophylaxis 4. Daily Oral Care with Chlorhexidine 5. Sedation Vacation	1. Order HOB up 30 degrees or document a contraindication 2. Order a PUD prophylaxis to reduce stress related gastro-intestinal mucosal disorder 3. Order mechanical or pharmacological DVT prophylaxis at the time vent is ordered 4. Nursing function : Oral Care is done Q2-4 hours 5. Collaborate with nursing and respiratory to develop a patient centered care plan for weaning off ventilator.

Measure	Metrics	How Physicians Comply
Code Blue Documentation	1. Physician Signatures	1. Code physician is responsible to review and sign the code blue sheet. Please review documentation as this serves as the orders for the code team.

Example

Physician Signature _____ Date: _____ Time: _____
Physician Signature Signifies Approval of above medications and treatments

Before skin incision »»»»»»»»»»»»»»»»
TIMEOUT (Operating Room)
<<<<<<<<< STOP >>>>>>>>>
ALL ACTIVITY IS SUSPENDED & MUSIC SILENCED
NEW SURGEON / PROCEDURE - REPEAT TIMEOUT
SURGEON: INITIATES TIMEOUT
<input type="checkbox"/> ALL TEAM MEMBERS INTRODUCE THEMSELVES BY NAME & ROLE OR TEAM CONFIRMS NO CHANGES FROM PREVIOUS CASE
SURGEON: Verbalizes
<input type="checkbox"/> WHO IDENTIFIED THE PATIENT?
<input type="checkbox"/> PATIENT NAME, PROCEDURE, SIDE/SITE (CONFIRMATION FROM CONSENT)
<input type="checkbox"/> STATES WHETHER IMAGES ARE NEEDED AND AVAILABLE
<input type="checkbox"/> ANTICIPATED CRITICAL EVENTS OR MAJOR CONCERNS
ANESTHESIOLOGIST: Verbalizes
<input type="checkbox"/> PROPHYLACTIC ANTIBIOTICS GIVEN ON TIME, IF APPLICABLE
<input type="checkbox"/> ALLERGY STATUS CONFIRMED
<input type="checkbox"/> BLOCKS / REGIONALS / EPIDURALS DISCUSSED, IF APPLICABLE
<input type="checkbox"/> CONCERNS OR ANTICIPATED CRITICAL EVENTS (INVOLVING MEDICATION, HISTORY, INDUCTION, OR AIRWAY CONCERNS)
SCRUB PERSON: Verbalizes
<input type="checkbox"/> INSTRUMENT & IMPLANT STERILITY CONFIRMED
<input type="checkbox"/> MEDICATIONS & SOLUTIONS ON FIELD LABELED
CIRCULATOR: Verbalizes
<input type="checkbox"/> EQUIPMENT / DEVICES / IMPLANTS / BLOOD PRODUCTS AVAILABLE IF NEEDED
<input type="checkbox"/> FLUIDS FOR SPECIAL IRRIGATION AVAILABLE
INTRODUCTION OF ANY ANCILLARY STAFF & THEIR ROLE
<<<<<<<<< STOP >>>>>>>>>
<input type="checkbox"/> SURGEON: ASKS: ANY CONCERNS? AGREE? (ALL MUST VERBALIZE AGREEMENT)

Date: 8/25/2016

Example of poster located in procedural

Date: 8/25/2016

Quality Measure Overview

Measure	Metrics	How Physicians Comply
Tobacco Cessation	1. Adult Tobacco Cessation Counseling to anyone who has or is currently using within the last 12 months.	1. Document smoking cessation education and treatment offered in H&P or progress notes.
VTE	1. VTE-6 Potential Preventable VTE's.	1. Screen all admissions for VTE risk and score and treat appropriately
Acute Myocardial Infarct (AMI)	<p>1. Aspirin (ASA) on arrival. 2. Aspirin (ASA) at discharge</p> <p>3. ACE or ARB at discharge for LVSD 4. Beta Blocker RX at discharge 5. Statin at discharge.</p> <p>6. Primary PCI Reperfusion w/in 90 min. of hospital arrival. (Nursing staff required to record and follow Door to balloon time line) Internal Goal ≤ 75 mins</p> <p>7. Fibrinolysis Therapy received w/in 30 minutes of hospital arrival. (If indicated) * Utilize Chest Pain Admission orders. *</p>	<p>1-5. Physician must order the below medications as part of discharge medication list or document a contraindication in progress notes:</p> <p style="padding-left: 40px;">ASA, ACE or ARB, Beta blocker and Statin</p> <p>Document all discharge medications including: prescription and OTC medications that you want the patient to take</p> <p>6. A code STEMI page is utilized by Emergency room physicians and staff. This process pages the physician, Cath Lab, admitting and X ray. Physicians are required to respond to a STEMI page w/in 8 minutes and see the patient within 20 minutes or the ED staff will escalate to the Interventionalist on call.</p> <p>7. Alternative to PCI when it is not available</p>

Quality Measure Overview

Measure	Metrics	How Physicians Comply
Heart Failure (HF)	<p>1. Written discharge instructions addressing the following: discharge medications, diet, activity level, follow-up appt. within 7 days of hospital discharge, weight monitoring and what to do if symptoms worsen.</p> <p>2. Left Ventricular Systolic Function Assessment.</p> <p>3. ACEI or ARB prescribed at discharge for patients with LVSD (left ventricular systolic function (LVSF) documented as an ejection fraction (EF) less than 40% or a narrative description consistent with moderate or severe systolic dysfunction).</p>	<p>1. Clearly address discharge medications, including home medications in discharge orders. Finalize D/C Orders. All heart failure patients must have a follow-up appointment: a physician visit within 7 days of discharge. The discharge nurse provides patient with the Heart Failure Self Care Booklet which includes written teaching regarding diet, medications, weight monitoring, follow-up, what to if symptoms worsen, and activity.</p> <p>2. Document in the record that left ventricular systolic function (LVSF) was assessed either prior to arrival, during hospitalization, or is planned for after discharge or document a reason for not assessing LVSF</p> <p>3. If ACEI or ARB not prescribed at discharge, document BOTH a reason for not prescribing an ACEI at discharge AND a reason for not prescribing an ARB at discharge.</p>
Community Acquired Pneumonia (PN)	<p>1. Appropriate Antibiotic selection (See PN admission orders)</p> <p>2. Blood Culture prior to antibiotic administration. (BC required for ICU patients)</p>	<p>1. Utilize/use PNE admission order-set. (Mandatory)</p> <p>2. Order Blood Cultures for any PN patients admitted to ICU within 24hrs.</p>
PSY	<p>HBIPS-1: Admission Screening for Violence Risk, Substance Use, Psychological Trauma History and Patient Strengths completed</p> <p>HBIPS-2: Hours of physical restraint use</p> <p>HBIPS-3: Hours of seclusion use</p> <p>HBIPS-4: Patients discharged on multiple antipsychotic medications</p> <p>HBIPS-5: Patients discharged on multiple antipsychotic medications with appropriate justification</p> <p>HBIPS-6: Post discharge continuing care plan created</p> <p>HBIPS-7: Post discharge continuing care plan transmitted to next level of care provider upon discharge patient Strengths completed</p> <p>8. Substance Use & Tobacco Use</p>	<p>1. Document appropriately</p> <p>2.Nursing</p> <p>3.Nursing</p> <p>4. Must document a medical reason for this</p> <p>5. Must document a medical reason for this</p> <p>6. Appropriate order and documentation</p> <p>7.Social Worker or CM will do this after your documentation is complete</p> <p>8. Screening appropriately and plan of cessation documented</p>

These measures/processes are subject to change based on Facility/CMS/Joint Commission requirements.

Quality Measure Overview

Measure	Metrics	How Physicians Comply
Surgical Care Improvement Project (SCIP)	<p>1. Prophylactic ABX delivered w/in 0-60 min. prior to surgical incision. (Anesthesia administers) Vancomycin and Levaquin are to be given w/in 0-120min. (Nursing administers).</p> <p>2. Appropriate Prophylactic ABX.</p> <p>3. Prophylactic antibiotics discontinued w/in 24 hrs., 48 hrs. for Cardiac/Vascular procedures (Cardiac pts. receive 5 doses post-op up to 36 hrs., Orthopedic procedures with an implant receive 2 post-op doses up to 18 hours, all other procedures receive one dose unless approved by order-sets committee.)</p> <p>4. Cardiac Surgery Patients with controlled Post-Operative Blood Glucose. (< 200)</p> <p>5. Surgical patients with appropriate Hair Removal.</p> <p>6. Urinary catheter removed on Post-op day 1 or 2 with day of surgery being day zero.</p> <p>7. Perioperative Temperature Management. ≥ 96.8 F or ≥ 36 degree C. (All patients are provided warming in the interop., unless otherwise directed)</p> <p>8 Patients on Beta-Blocker therapy prior to arrival who received a Beta-blocker during the Perioperative Period. (Perioperative period is defined as 24 hrs. prior to surgical incision through POD 2).</p> <p>9& 10. Patient received appropriate Venous Thromboembolism prophylaxis and timely (w/in 24 hrs. of admission through 24 hrs. after surgery end time).</p>	<p>1. Order antibiotics to be given in OR by anesthesia. Order Vancomycin and Levaquin on call to OR.</p> <p>2. Order Appropriate Prophylactic ABX Infections or possible infections must be documented prior to surgical incision on H&P, Pre-op assessment, or Progress notes.</p> <p>3. Discontinue prophylactic ABX w/in 24 hrs. & 48 Cardiac/Vascular OR Document continue antibiotics for an infections or possible infection</p> <p>4. Utilize Immediate Post-op CABG orders to meet this measure</p> <p>5. Only approved methods: Clippers, Depilatory or no hair removal</p> <p>6. Remove urinary cath on POD 1 or 2 OR document rational to continue.</p> <p>7. Document temperatures, and active warming methods. If warming is contraindicated then document intentional hypothermia.</p> <p>8. Instruct patients to take their prescribed Beta-blocker prior to surgery, (they may take the morning of surgery with a sip of water). For Inpatients resume home Beta-blockers after surgery or document a contraindication.</p> <p>9&10. Screen all admissions for VTE risk and score and treat appropriately</p>

Quality Measure Overview

Measure	Metrics	How Physicians Comply
Hospital Inpatient Immunization	1. IMM-1a- Pneumococcal Immunization- Overall Rate 2. IMM-1b- Pneumococcal Immunization- Age 65 and older 3. IMM-1c- Pneumococcal Immunization- High Risk Populations (Age 6 through 64 years) 4. IMM-2- Influenza Immunization	1-3. IMM-1a-1c Nursing protocol in which nursing will assess to see if the patient meets the criteria for vaccine status. If the patient does meet the criteria then the patient will receive the vaccine the prior to discharge. 4. Same nursing protocol as above
****If there is valid medical reason a patient should not be vaccinated please document the reason in the progress notes as well as dc order for the vaccine.****		
Emergency Department Inpatient Quality Measures	1. ED-1a-Median Time from ED Arrival to ED Departure for Admitted ED Patients- Overall Rate ED-1b-Median Time from ED Arrival to ED Departure for Admitted ED Patients- Reporting 2. ED-2a- Admit Decision Time to ED Departure Time for Admitted Patients- Overall Rate ED-2b- Admit Decision Time to ED Departure Time for Admitted Patients- Reporting Measure ED-2c- Admit Decision Time to ED Departure Time for Admitted Patients- Psychiatric/ Mental Health Patients	1. These are timing metrics, so accurate documentation in the medical record is essential. Capture the time in which you preformed the medical intervention vs the time in which you are documented it.
Stroke (STK) Inpatient	1. STK-1: VTE Prophylaxis 2. STK-2 : D/C'd on Antithrombotic Therapy 3. STK-3 : Anticoagulation Therapy for Atrial Fib/ Flutter 4. STK-4 : Thrombolytic Therapy 5. STK-5 : Antithrobolytic Therapy by End of Hospital day 2 Dc'd on Statin 6. STK-8 : Stroke Education 7. STK- 10: Assessed for Rehabilitation	1. Stoke Activation &Consult the Stoke Team for CMC only 2. Utilization of Stroke Order set

Quality Measure Overview

Measure	Metrics	How Physicians Comply
SEP 1 Bundle 3 hour bundle completion \leq 3hrs. of symptomology 6 hour bundle completion \leq 6hrs. of symptomology	Severe Sepsis: Early Management Bundle, Sever Sepsis/ Septic Shock 1. Lactate Level \leq 3 hrs. 2. Blood Cultures Drawn Prior to ABX \leq 3 hrs. 3. Broad Spectrum Antibiotic \leq 3 hrs. Septic Shock: Early Management Bundle, Sever Sepsis/ Septic Shock 1. Lactate Level \leq 3 hrs. 2. Broad Spectrum Antibiotic \leq 3 hrs. 3. Blood Cultures Drawn Prior to ABX \leq 3 hrs. 4. Fluid resuscitation 30ml/kg crystalloid fluids \leq 3 hrs. 5. Reassess volume status and tissue perfusion 6. If still hypotensive after fluid resuscitation the Vasopressors 7. Reassess volume status and tissue perfusion <i>**Lactate level redraw within 6 hrs. for all results \geq 2</i>	1. Sepsis Order Set Utilization- Will aid in EBP and gold standard of care and improved outcomes 2. Documentation when deviating from recommendations 3. Utilization of Sepsis documentation template in P-DOC
PC	PC-01 Elective Delivery prior to 39 weeks PC-02 Cesarean Section-Nulliparous women with a term, singleton baby in a vertex position delivered by cesarean section PC-03 Antenatal Steroids PC-04 Health Care-Associated Bloodstream Infections in Newborns PC-05 Exclusive Breast Milk Feeding	1. Elective Deliveries prior to 39 weeks must have medical necessity documented in the record 2. Measurement of all C-Sections in this population 3. Appropriate order and documentation of antenatal steroids. 5. Encourage breast feeding

Quality Measure Overview

Measure	Metrics	How Physicians Comply
Children's Asthma Care (CAC) Children's Hospital only Children's Metrics ≤ 17 yrs. old	CAC-1 Inpatient asthma admissions ages 2-17 received a reliever/bronchodilator during hospitalization.	CAC-1 Order Reliever/Bronchodilator to relieve and gain control of acute asthma exacerbation and reduce severity as quickly as possible.
	CAC-2 Inpatient asthma admissions ages 2-17 received systemic corticosteroids	CAC-2 Order Systemic corticosteroids to gain control of acute asthma exacerbation and reduce severity as quickly as possible
	CAC-3 Inpatient asthma admission ages 2-17 Home Management Plan of Care (HMPC) document given to the patient and/or caregiver prior to discharge. Included in this document is :	CAC-3 HMPC
	<ol style="list-style-type: none"> 1. Arrangements for Follow-care have been made (physician/clinic phone number, address, and appointment information.) 2. Control/mitigation of environmental and other triggers. 3. Asthma Action Plan part of the HMPC. All the following must be addressed: Use of Controllers, Use relievers, and what steps to follow if initial treatment does not improve patient's respiratory state. 	<ol style="list-style-type: none"> 1. Physician is responsible for making sure nursing staff is given follow up information so they can make the arrangements and provide appropriate, complete documentation 2. Physician is responsible for ordering Asthma education to be done (this is automatic if Asthma Admission Order Set is utilized). 3. Physician is responsible for filling out the Asthma Action Plan or providing the information needed for the nurses to fill out prior to dismissal. <i>See Asthma Action Plan</i>
<i>*CAC-3 is an all or none initiative. Failure to provide any of the steps above will result in failure of the measure.</i>		

Outpatient Hospital Measures

Measure	Metrics	How Physicians Comply
Outpatient Surgery		1. Follow all the SCIP measure as the apply 2. Order Appropriate ABX *** Pre-op infections must be documented prior to incision. (H&P, Pre-op assessment, or Progress notes.) Infections or possible infections are the only acceptable deviation.
Emergency Department Out patient Quality Measures	OP-18-Median Time from ED Arrival to ED Departure for Discharged ED Patients OP-19-Transition Record with Specified Element Received by Discharged Patients OP-20- Door to Diagnostic Evaluation by a Qualified Medical Personnel OP-22- Left Without Being Seen	1. Documentation of time you see the patient 2. Documentation of time of each order
Pain Management of Long Bone Fracture	OP-21-Median Time to Pain Management for Long Bone Fractures	1. Order correct pain medication or document a reason why no pain medication was ordered
Stroke	OP-23- Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED arrival	1. Order/Interpret evaluation test timely 2. Document last known well.

Other Out Patient Measures include: AMI, Chest Pain
Endo

Name, Doctor Name,
Doctor Phone Number
& Date **must** be filled
out

Asthma Action Plan
Covenant Children's Hospital - Home Management Plan of Care

Name _____ Date _____
Doctor's Name _____ Doctor Office Phone _____

GREEN ZONE - FEELING GOOD

Child feels good:

- Breathing is good
- No cough or wheeze
- Can work/play
- Sleeps all night
- Able to do usual activities

Peak flow above: _____

CONTROL MEDICATION

Medication	STRENGTH	HOW MUCH	WHEN TO TAKE IT
<input type="checkbox"/> Budesonide (Pulmicort)			
<input type="checkbox"/> Fluticasone (Flovent)			
<input type="checkbox"/> Advair			
<input type="checkbox"/> Montelukast (Singulair)			
<input type="checkbox"/> Premedicate 20 minutes before EXERCISE or EXPOSURE TO KNOWN TRIGGERS			

YELLOW ZONE - NOT FEELING WELL

Child has **any** of these:

- Cough
- Wheezes
- Tight chest
- Waking up at night
- Can do some, but not all, usual activities

Peak flow between: _____ to _____

CONTINUE TO TAKE EVERY DAY MEDICATIONS

Step 1: Add Quick Relief Medication

QUICK RELIEF MEDICATION

Medication	STRENGTH	HOW MUCH	WHEN TO TAKE IT
<input type="checkbox"/> Albuterol (Ventolin)			
<input type="checkbox"/> Levalbuterol (Xopenex)			

Step 2: Monitor your symptoms

- If symptoms **GO AWAY** quickly return to **GREEN ZONE**
- If symptoms **CONTINUE** or return within one hour of the Quick Relief Medication, **GO ON**

Take Quick Relief Medication every 20 minutes for total of 3 treatments

Call your healthcare provider within 2 hours of modifying your medication routine

Change your Control Medications by _____

RED ZONE - FEELING BAD

Child has **any** of these:

- Breathing hard and fast
- Quick Relief Medications have not helped
- Cannot walk or play
- Cannot talk easily
- Retractions

Peak flow below: _____

Take your Quick Relief Medication now and call your physician

IF UNABLE TO CONTACT YOUR DOCTOR OR NURSE: Call 9-1-1 or go to the nearest emergency room and continue using your Quick Relief Medication

If skin color changes or your lips turn blue, seek immediate medical attention, CALL 9-1-1!

FOR SCHOOL NURSE: This child is capable of carrying and administering the above Quick Relief Medication for asthma.

☐ YES ☐ NO (Texas Inhaler Law)

My child has my permission to self administer the above Quick Relief Medication at school

Name of School child is currently attending _____

DATE/TIME _____

GRADE _____

COVENANT CHILDREN'S HOSPITAL
LUMBOCK, TEXAS
HMPC ASTHMA ACTION PLAN
PAGE 1 OF 3

WHITE - Patient, CANARY - Chart, PINK - School Nurse/PCP, Orange - Communications

Must check which
control med the patient
is being sent home with

Complete premedicate
box with reliever med
information

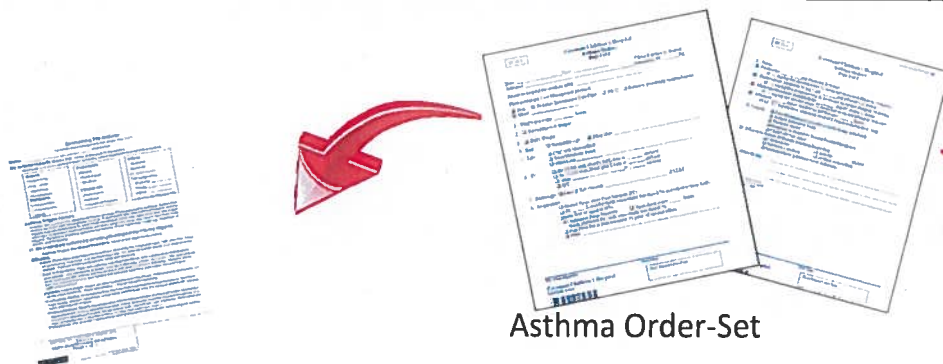
Must match home med
reconciliation sheet.
Patient may be on
Albuterol inhaler and
Xopenex nebulizer or vice
versa. Patient must have a
reliever med

Take Quick Relief
Med every 20
minutes may or
may not be selected
by doctor

Please make sure
all medications
match
Home Med
Reconciliation
Form, Doctor's
Discharge Orders
and Prescriptions!

Peak flow is optional but
good information if
available.

For school nurse is
optional. This allows the
child to carry their inhaler with
them at school.



Asthma Core Measures

Completed Home Management Plan
of Care (HMPC) **colored copy**
given to patient/caregiver



Relievers/
Corticosteroids

Evaluation/Education

Level I Trauma Activation Automatic Activation of Full Trauma Team	Level II Trauma Activation Partial Team Activation minus the Trauma Surgeon ED Physician to evaluate within 15 minutes of patient arrival	Level III Trauma Activation
<ul style="list-style-type: none"> GCS \leq 12 or falling level of consciousness Confirmed blood pressure of SBP < 90 at any time in adults and age-specific hypotension in children Intubated patients transferred from scene Patients with respiratory compromise or obstruction <p>** Includes intubated patients who have been transferred from another facility with ongoing respiratory compromise **</p> <ul style="list-style-type: none"> Patients receiving blood or blood products to maintain their vital signs Penetrating injuries to head, neck, chest, abdomen, pelvis, or extremities proximal to elbow or knee Two or more long bone fractures Complicated pelvic fractures Limb Paralysis Utilization of tourniquets to control bleeding on amputations proximal to wrist or ankle Open depressed skull fracture Patients meeting Level II criteria may be upgraded to Level I at the discretion of ED physician <p>** Isolated Head injuries with either localized mechanism of injury (i.e. ground or same level falls) may have Neurosurgical evaluation only **</p> <p>** Patients with GCS \leq 10 will have Neurosurgical evaluation with Trauma Team Activation **</p>	<p>Anatomic Criteria:</p> <ul style="list-style-type: none"> Burns 2nd or 3rd degree and \geq 20% TBSA or high voltage electrical injuries (\geq 1,000 volts) or suspected inhalation Injuries Trauma & Pregnancy \geq 20 weeks with significant MOI <p>Mechanism of Injury:</p> <ul style="list-style-type: none"> Falls \geq 20 feet or 2.5 times patient height MCC \geq 20 mph Ejection (Partial or Complete) from automobile Auto versus pedestrian/bicyclist resulting in being thrown, run over, or with \geq 20 mph impact High- Risk Automobile Crashes: <ul style="list-style-type: none"> Death in same passenger compartment Intrusion \geq 12 inches on occupant side; \geq 18 inches <u>Any side</u> Extrication time \geq 20 min MVC rollover \geq 40 mph Patients on anticoagulant or antiplatelet medication (not ASA) at risk for TBI, Chest or Abdominal trauma with known or suspected blunt trauma (may include ground level fall) <p>**Transfers: Trauma Surgeon will be activated on all patients accepted by the Trauma Service, ED Physicians will evaluate patient only if the Trauma Surgeon is not immediately available**</p>	<ul style="list-style-type: none"> Isolated injuries transferred from another facility for the services of a surgical specialist Patients with isolated injuries presenting to the ED and determined by the ED physician to require a surgical specialist evaluation Patients that do not meet Level I or Level II Activation Criteria but have a high index of suspicion based on mechanism of injury that obscure injuries may be present

TRAUMA TEAM ACTIVATION CRITERIA

LEVEL 1		LEVEL 2																										
Automatic Activation of FULL Trauma Team		Scene Calls – ED Physician will evaluate and consult a Trauma Surgical Specialist if admission required Transfers – TS will be activated on all patients accepted by Trauma. ED Physician will evaluate if TS not immediately available.																										
Airway	● Intubated ● Difficult/Unstable Airway	Pulseless Arrest with active CPR with blunt trauma Blunt chest trauma with new arrhythmia	Orthopedic Emergencies (30 min response): <ul style="list-style-type: none"> Open fractures proximal to wrist or ankle Compartment Syndrome Fractures with neurovascular compromise Large extremity soft tissue wounds requiring complex closure with or w/o fracture Neurosurgical Emergencies: (30 min response): <ul style="list-style-type: none"> Presence of epidural hematoma with midline shift and/or acute neurological deterioration (if patient not meeting Level 1 criteria) (60 min response): <ul style="list-style-type: none"> Presence of SDH >1cm or midline shift >5mm Neurological deficit OR spinal cord bruise on CT 																									
	Respiratory compromise or insufficiency (hypoxia, use of accessory muscles, grunting)																											
Circulation	● Pulseless Arrest with active CPR with penetrating trauma ● Requires 40ml/kg bolus OR blood product ● Any abnormal v/s OR cap refill >2sec OR ↓ SBP																											
	<table border="1"> <thead> <tr> <th>AGE</th><th>SBP</th><th>AGE</th><th>SBP</th></tr> </thead> <tbody> <tr> <td>0-1 y/o</td><td><70</td><td>6 y/o</td><td><82</td></tr> <tr> <td>1 y/o</td><td><72</td><td>7 y/o</td><td><84</td></tr> <tr> <td>2 y/o</td><td><74</td><td>8 y/o</td><td><86</td></tr> <tr> <td>3 y/o</td><td><76</td><td>9 y/o</td><td><88</td></tr> <tr> <td>4 y/o</td><td><78</td><td>> 10 y/o</td><td><90</td></tr> <tr> <td>5 y/o</td><td><80</td><td></td><td></td></tr> </tbody> </table>			AGE	SBP	AGE	SBP	0-1 y/o	<70	6 y/o	<82	1 y/o	<72	7 y/o	<84	2 y/o	<74	8 y/o	<86	3 y/o	<76	9 y/o	<88	4 y/o	<78	> 10 y/o	<90	5 y/o
AGE	SBP	AGE	SBP																									
0-1 y/o	<70	6 y/o	<82																									
1 y/o	<72	7 y/o	<84																									
2 y/o	<74	8 y/o	<86																									
3 y/o	<76	9 y/o	<88																									
4 y/o	<78	> 10 y/o	<90																									
5 y/o	<80																											
Disability	<ul style="list-style-type: none"> GCS < 13 OR P or U on AVPU OR GCS Deteriorating by 2 with traumatic MOI 	<ul style="list-style-type: none"> Traumatic intracranial hemorrhage CT with acute herniation or impending herniation Presence of epidural hematoma with midline shift 	LEVEL 3 Trauma Consult																									
Other	<ul style="list-style-type: none"> Penetrating injuries to the head, neck, torso or extremities proximal to the elbow/knee ED Physician Discretion 	<ul style="list-style-type: none"> Solid organ injury OR blunt abdominal trauma with pain or seatbelt sign 																										
Secondary Survey: MOI, Anatomic Indicators	<ul style="list-style-type: none"> Vital sign instability regardless of MOI Open or depressed skull fracture Paralysis or suspected spinal cord injury Flail chest Unstable pelvic fracture Amputation proximal to the wrist or ankle Two or more proximal long bone fractures (humerus or femur) Crushed, degloved, or mangled extremity 	<ul style="list-style-type: none"> Fall > 10 feet OR 3 x patients height High-Risk Automobile Crashes: <ul style="list-style-type: none"> Ejection (Partial or Complete) from vehicle Death in Same Passenger Compartment Intrusion of vehicle >12 inch Occupant Side; >18 inch any side High energy dissipation/rapid deceleration: <ul style="list-style-type: none"> Auto vs. pedestrian/bike thrown, run over or >20mph impact Ejection from ATV/Animal/Motorcycle Motorcycle/ATV crash >10mph Blast or explosions Striking fixed object with momentum Hanging or strangulation Submersions/Drownings with sign of injury Suspected NAT with injury 2-3" burns >10% TBSA and/or inhalation injury OR electrical burn Significant dog bite to head/neck 	Neurosurgical Emergencies: (120 min response): <ul style="list-style-type: none"> Extra axial bleeding without mass effect Spinal trauma with positive findings but no spinal cord bruise or neurological deficit (24 hour response): <ul style="list-style-type: none"> Minor CT abnormality/normal exam (SDH <5mm) Persistent, unexplained decreased mental status C-Spine clearance needed, cannot be cleared by Trauma Surgeon 																									
		Patients may be UPGRADED IMMEDIATELY as needed																										

Contact List

Clinical Excellence		
Department	Contact	Phone Number
Quality Management	QM Main Number	806-725-0489
Adult Quality Contact:	Cherry Orr, RN	806-725-1488
Pediatric Quality Contact:	Kim McAuley	806-725-6734
Transfusion Safety Coordinator	Karin Whitten, MT (ASCP)SBB, CPPS	806-725-0059
Infection Prevention	Infection Prevention Main Phone Number	806-725-4334

Adult ED CMC		
Department	Contact	Phone Number
AED/Trauma/ BH Director	Tammy Jones,MSN,RN,NEA-BC	806-725-0069 OR 806-778-6430
AED Manager	Vanessa Milam	806-725-4445

Specialist		
Department	Contact	Phone Number
Stroke Coordinator	Suzi Mitchell, MSN,RN,CEN	806-725-1630 OR 806-781-6643
Regional Sepsis Coordinator	Jamie Roney,DNP,RN-BC,BSHCM,CCRN-K	806-725-4689

Blood Management/Transfusion Safety:

- Blood transfusion is the most commonly performed procedure in the hospital inpatient
- The Joint Commission National Patient Safety Goal 16.01.01 includes the evaluation for overuse and inappropriate use of RBC transfusions
- St. Joe's as a system started Blood Management/Transfusion Safety Program in 2013
- **The Goal of Blood Management is to Reduce Transfusions and Have Better Outcomes for our Patients**
 - According to studies only about 11% of transfusions are beneficial to the patient
 - **Each unit** transfused increases morbidity and mortality significantly; this is significant for even ONE unit (*ONE dose – Pedi: 10-15mLs/Kg*)
 - Each unit can increase the risk of complications (infection, transfusion reaction, etc) by 50%
- **The goal is not to eliminate transfusions but give the *Minimum Effective Dose***
 - Assess each patient clinically not just transfuse to a number (Hgb)
 - Give one unit and re-assess the patient to see if they really need more to get over their symptoms
- Guidelines in place:
 - Hgb <7.0 g/dL, <8g/dL with ACS; *Neonates Hgb<10g/dL*
 - Plt < 10,000 with marrow failure, <20,000 with bleed, <50,000 going for procedure, <100,000 for neuro procedure
 - INR \geq 2.0
 - Again these are guidelines and each patient should be assessed for symptoms

If you have any questions about transfusion or possible transfusion reactions you can contact:

Karin Whitten, Transfusion Safety Coordinator 725-0059 (o), 806-928-1288 (c)
Blood bank: 725-4256 (CMC), 725-6914 (CCH)

Ordering Blood Products-Adult

Other (11)

Orders Meds Sets Favorites Category Name

Transfer Notifications Assoc Data Cont from Amb Oncology

Search

CLICK ON SETS

1 Selected Items.

Cardio/CT Surg	Transfusion
Surgical Svcs	Hold Blood For Surgery
Behavioral Hlth	Massive Transfusion - Non-OB
Critical Care	Massive Transfusion - OB
Protocol	Transfuse Blood By Criteria
Emergency Dept	Transfuse Blood Routine
ENT	Transfuse Blood Stat
GI	Cset Do Not Use
Hem/Oncology	Ortho
Med/ID/Endo	Anesthesia
Neuro/NS Surg	
OB/GYN	
Nephro/Urology	
Pulmonology	
Convenience	
Admissions	
Ophthalmology	
NB/MICU	
Medication Sets	
Procedures	

CHECK

Always utilize order sets to order blood products and transfusions. This will ensure that all orders are placed correctly.

- *Transfuse Routine Today* – utilize to order routine products and transfusion today
- *Transfuse Blood STAT* – utilize to order stat products and transfusion
- *Transfuse by Criteria* – utilize to order products (type & cross) and give transfusion criteria for nursing
- *Hold Blood for Surgery* – utilize to have products Type & Crossed in Blood Bank

View Review Renew Hold Resume Stop Undo Edit Link Unlink

Select Prev Next Cancel Save

SELECT View

Ordering Blood Products-Pedi

CLICK ON SETS

CHECK

1 Selected Items.

<input type="checkbox"/> Surgical Svcs	<input type="checkbox"/> Transfusion
<input type="checkbox"/> Behavioral Hlth	<input checked="" type="checkbox"/> NB NICU Transfuse Blood
<input type="checkbox"/> Protocol	<input checked="" type="checkbox"/> PED PICU Transfuse Blood
<input type="checkbox"/> Emergency Dept	<input type="checkbox"/> CSet Do Not Use
<input type="checkbox"/> Med/ID/Endo	<input type="checkbox"/> Anesthesia
<input type="checkbox"/> Peds/PICU	
<input type="checkbox"/> OB/GYN	
<input type="checkbox"/> Convenience	
<input type="checkbox"/> Ophthalmology	
<input type="checkbox"/> NB/NICU	
<input type="checkbox"/> Medication Sets	
<input type="checkbox"/> Procedures	

SELECT view

Select

Prev Next

Cancel

Save

Select the product you are requesting by checking next to "header". This generates both the blood bank order and the nursing order.

<input type="checkbox"/> Transfuse Blood Routine	
<input checked="" type="checkbox"/> * Consent Blood Transfusion (PCS) Today Now Once	<input type="checkbox"/> PRBC-Routine-Today
<input checked="" type="checkbox"/> Packed Red Cells	***Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be transfused.***
<input checked="" type="checkbox"/> Packed Red Blood Cells (PRBC) (BBK) Today Now - QUANTITY 1 - Quantity: 1	<input checked="" type="checkbox"/> * Transfuse Packed Red Cells (PCS) Today Now Once - Number of Units to give NOW: 1
<input type="checkbox"/> PLT-Routine-Today	<input type="checkbox"/> PLT-Routine-Today
Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be transfused.	
1 Apheresis Unit = 5 Pack	
Platelets (PLT) (BBKNOC) Today Now - QUANTITY 1 - No special request.	<input checked="" type="checkbox"/> * Transfuse Platelets (PCS) Today Now Once - Number of Units to give NOW: 1
<input type="checkbox"/> Plasma-Routine-Today	<input type="checkbox"/> Plasma-Routine-Today
Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be transfused.	
A dose of 10-15mL/kg is usually adequate to correct coagulopathy	
Plasma (FFP) (BBKNOC) Today Now	<input checked="" type="checkbox"/> * Transfuse Plasma (PCS) Today Now Once
<input type="checkbox"/> Cryo-Routine-Today	<input type="checkbox"/> Cryo-Routine-Today
Cryoprecipitate	

Note: Consent is automatically checked, if you know the pt already has a consent, uncheck.

By checking the header this will check both the BBK order and the nursing order to transfuse

Select the product you are requesting by checking next to "header". This generates both the blood bank order and the nursing order.

Note: Consent is automatically checked, if you know the pt already has a consent, uncheck.

By checking the header this will check both the BBK order and the nursing order to transfuse

<input type="checkbox"/> NB NICU Transfuse Blood	
Nursing	
<input checked="" type="checkbox"/> * Consent Blood Transfusion (PCS) Today Now Once	<input type="checkbox"/> Edit
* NPO Now (PCS) Today Now As Directed (See Comments) - NPO for Transfusion	<input type="checkbox"/> Edit
<input checked="" type="checkbox"/> NB-NICU-PRBC-Routine-Today	
Packed Red Cells	
***Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be transfused ***	
<input checked="" type="checkbox"/> Packed Red Blood Cells (PRBC) (BBK) Today Now - QUANTITY 1 - MD to enter mL PRBC	<input type="checkbox"/> Edit
<input checked="" type="checkbox"/> * NB Transfuse PRBCs (PCS) Today Now Once - MD to enter mL PRBC	<input type="checkbox"/> Edit
<input type="checkbox"/> NB-NICU-PLT-Routine-Today	
Platelets	
***Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be transfused ***	
<input type="checkbox"/> Platelets (PLT) (BBKNOC) Today Now - QUANTITY 1 - MD to enter mL PLT	<input type="checkbox"/> Edit
<input type="checkbox"/> * NB Transfuse Platelets (PCS) Today Now Once - MD to enter mL PLT	<input type="checkbox"/> Edit
<input type="checkbox"/> NB-NICU-Plasma-Routine-Today	
Plasma	
***Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be transfused ***	
A dose of 10-15mL/kg is usually adequate to correct coagulopathy	
<input type="checkbox"/> Plasma (FFP) (BBKNOC) Today Now - QUANTITY 1 - MD to enter mL FFP	<input type="checkbox"/> Edit
<input type="checkbox"/> * NB Transfuse Plasma (PCS) Today Now Once - MD to enter mL FFP	<input type="checkbox"/> Edit
<input type="checkbox"/> NB-NICU-Cryo-Routine-Today	
Cryoprecipitate	

Order

Packed Red Blood Cells (PRBC) (BBK)

Note: defaults to one unit

* Priority	R
* Quantity	1
* Date	5/11/18
* Time	1429

Series?	
Directions	
Stop Date	
Stop Time	
Count	

* Collected By Care Area?	Y
@*Print Label Now?	Y

This Order Includes Type & Crossmatch.
 Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be given

* Justification for RBC	Hgb < 7.0 g/dL
-------------------------	----------------

If Special Circumstances, please specify:

--

* Is Product For Scheduled Procedure (Y/N):	N
For Scheduled Procedure Enter Date/Time	
CMV Safe (Y/N)	

* Irradiated (Y/N)	N
--------------------	---

* Split Unit (Y/N)	N
--------------------	---

* Autologous/Direct Donor Units (Y/N):	N
--	---

If patient is less than 30kg, indicate ml to be given NOW

Packed Cells Comment:

~ACTUAL PROVIDER ORDER ABOVE, BELOW IS FOR POM DISPLAY ONLY~

Complete all areas with an asterisk (all will default to "N" except justification)

Order

Packed Red Blood Cells (PRBC) (BBK)

* Priority
* Quantity
* Date
Time

R
1
5/11/18
1407

Series?
Directions
Stop Date
Stop Time
Count

* Collected By Care Area?

Y
Y

@*Print Label Now?

This Order Includes Type & Crossmatch.
Nursing transfusion order (which is indicated by an asterisk) must be entered in order for product to be given

* Justification for RBC

Special Circumstances

If Special Circumstances, please specify:

* Is Product For Scheduled Procedure (Y/N): N
For Scheduled Procedure Enter Date/Time
CMV-Safe (Y/N)

* Irradiated (Y/N)

Y

* Split Unit (Y/N)

Y

* Autologous/Direct Donor Units (Y/N): N

If patient is less than 30kg, indicate mL to be given NOW
Packed Cells Comment:

~ACTUAL PROVIDER ORDER ABOVE, BELOW IS FOR POM DISPLAY ONLY~

MD to enter mL PRBC

For NB
order
all fields
are pre-
filled. The
only thing
that has to
be entered
is the
volume to
be given

Medication	
Pre-Transfusion Acetaminophen (Tylenol) 650 MG PO pre-med PRN (Blood Transfusion)	Edit
COMMENTS: Adult Max Acetaminophen: 4000 mg per 24 hrs (from all sources) diphenhydramine (Benadryl) 50 MG PO pre-med PRN (Blood Transfusion)	
Post-Transfusion Furosemide (Lasix) 40 MG PO post transfusion PRN (Blood Transfusion)	Edit
Furosemide Inj (Lasix Inj) 40 MG IVP post transfusion PRN (Blood Transfusion)	Edit
Link to Problem List	
Problem List (PROB) Today Now	Edit
Order Set Tracking-No Action Needed ✓ ZTAG-E-Transfuse-Routine-Today (TAG) Today Now	
<div> Add Set Add Procedure Add Medication/IV Remove Cont From Amb </div> <div> Cancel OK </div>	

Other orders may be placed
inside the adult order sets

17	Megestrol (Megace) 40 MG PO ac		08/16/14	1600	Active			
18	morphine Inj (morphine Inj) 2 MG IVP q4hr PRN PAIN, Moderate to ...		08/20/14	2045	Active			
19	Ondansetron Inj (Zofran Inj) 4 MG IVP q4hr PRN NAUSEA/VOMITING		08/11/14	2105	Active			
+ Microbiology (1)								
+ Imaging Svcs (2)								
+ Other (4)								
- New Orders (4)								
27	* Consent Blood Transfusion (PCS) ...		8/21/14	1456	New		*	
28	ZTAG-E-Transfuse-Routine-Today (TA...	R	8/21/14	1456	New		*	
29	Packed Red Blood Cells (PRBC) (BBK)	R	8/21/14	1456	New		*	
30	* Transfuse Packed Red Cells (PCS)...		8/21/14	1456	New		*	

Orders Meds Sets
 Favorites Category Name

Transfer Notifications Assoc Data
 Cont from Amb Oncology

Search |

0 Selected Items.

View Review Renew Hold Stop Undo Edit Link Unlink

Select Prev Next Cancel Save

Lab Order Explanation

Type and Screen	Type and Cross Match
The blood bank staff will perform all necessary testing on the patient's sample. Until a request is received for blood, units will not be crossmatched and set aside in the blood bank for that patient. However, once a request for blood is received, blood can be made available. This order should be used when the likelihood of the patient needing a blood transfusion is slight.	The blood bank staff will perform all necessary testing on the patient's sample AND crossmatch the number of units requested. In the blood bank, these units will be set aside for the patient and are immediately available once the physician determines there is a need to transfuse the patient
Neonatal Protocol: A type and screen will be performed when admitted to the NICU. Protocol is good until patient is 4 months of age unless there is maternal antibody present. If antibody is present then type and screen will have to be repeated (specimen is good for 3 days) until the antibody clears the patient's system. Once antibody has cleared, patient can go on protocol.	

Massive Transfusion Protocol

**Blood Bank
X 54256**

Pt. at risk for uncontrollable bleeding – Immediate need for blood?

No

Continue resuscitation

Yes

Within 3 hours of trauma

Administer tranexamic acid (TXA)

- Available in ED (1gm in 10mL soln)
- Add 10 mL TXA soln to 100 mL NS bag
- Loading dose 1gm IVPB over 10 min

Based on TEG

Obtain 2-4 units uncrossmatched blood from Blood Bank

- Consider thawed FFP
- Consider tranexamic acid
- Draw & send STAT labs: T&C, CBC no DIFF, PT/PTT/Fib, TEG
- Prepare fluid warmer/rapid infuser – to prevent hypothermia & coagulopathy

Continue resuscitation:
Blood PRN

Yes

Pt responds to initial resuscitation?

No

Activate Massive Transfusion Protocol (MTP)

- Trauma MD/Attending: Initiates protocol
- RN/Charge RN: Order using MTP Orderset form
 - Calls Blood Bank 54256 & gives brief report (MD name, Pt name, MRN, synopsis)
 - Sends blood order to Blood Bank on paper
 - Designates runner to pick up blood
- Blood Bank: Notifies additional resources, if needed
 - Enters blood orders into computer

Blood Bank prepares 1st pack: 5u RBCs, 5u FFP, 1 Plt
(Ready in approx. 20 min)

ER/OR sends runner to Blood Bank to pick up cooler

- Must have patient's ID (MRN) with them to pick-up blood
- Orders not necessary

RN checks & administers MTP products according to CMC policy VIII-1-a Administration of Blood

- Use rapid infuser/fluid warmer
- Clearly document all product given & lab results
- Use point-of-care testing when available

Ongoing bleeding?

Yes

No

Deactivate MTP

- Write order
- Call Blood Bank immediately x54256
- Return unused products to blood bank immediately

Goal Directed Transfusion

Bleeding slowed

Use 1:1:1 ratio (1 plasma:1RBC:1 Aph Plt for every 5 RBCs) until surgical bleeding is controlled or there is evidence of bleeding control after angioembolization, then use

Goal Directed Therapy

Product	Threshold
Plts and/or DDAVP (0.3mcg/kg)	Rapid TEG G<5.3 TEG G<4.5 Plt<100,000 (1 Aph Plt) Plt<50,000 (2 Aph Plt)
Plasma	Rapid TEG ACT>128 TEG R >9 INR >1.5 PTT >40 sec
Cryo	Rapid TEG K >2 TEG K >4 Fibrinogen <180
Antifibrinolytic TXA	Rapid TEG or TEG LY30 >3

Send runner to pick up MTP packs from Blood Bank Q 20-60 min or until protocol terminated

- Blood bank stays one pack ahead until protocol ended

RN to administer packs Q 15-20 min or as indicated by pt status

- Monitor VS, UO, labs
- Record strict I/O

Administer TXA infusion

(only if bolus given in ED)

- Obtain from pharmacy
- Infusion: 1gm in 500mL NS
- Administer over 8 hrs at 62.5 mL/hr

Appropriate Initial Interventions:

- Intravenous/intraosseous access – 2 access points
- Labs – T&S, CBC, Coags, lytes, ionized Ca, rapidTEG (10 min delay)
- Continuous monitoring – VS, acid/base, intake/output
- Aggressive re-warming – include warmed RBC & plasma
- Prevent/reverse acidosis
- Correct hypocalcemia
 - Ca gluconate 20-50 mg/kg/dose IV slowly (1mL/min)
- Transfuse uncrossmatched RBCs on hand

Other Considerations:

- Heparin reversal – Protamine 1 mg IV per 100U of heparin
- Warfarin reversal – Vitamin K 5 mg IV/IM
- CRF & Von Willebrand's
 - DDAVP 0.3mcg/kg IV over 10 mins (max 20mcg)
- Consider antifibrinolytics - Tranexamic acid (TXA)
- Consider rFVII (Novo VII) – 20-40 mcg/kg

Pediatric Massive Transfusion Protocol

Anticipate replacement of 50% of blood volume (40mL/kg) in 3 hours **OR** estimated blood loss exceeding 0.5mL/kg/min

Blood Bank
X 5-6914

Activate Massive Transfusion Protocol (MTP)

- Trauma MD/Attending: Initiates protocol
- Scribe RN/Charge RN: Writes verbal order
 - Calls Blood Bank 5-6914 & gives brief report (MD name, Pt name, MRN, Pt weight, synopsis)
 - Sends blood order to Blood Bank on paper
 - Designates runner to pick up blood
- Blood Bank: Notifies additional resources, if needed
 - Enters blood orders into computer

Based on TEG

Consider: Tranexamic acid (TXA)

- Loading dose: 15mg/kg (max total dose 1gm) over 10 min
- Maintenance: 2mg/kg/hr for 8 hours

Blood Bank prepares MTP pack:

- <20kg: 2units RBCs, 2units FFP, ½ Plt pheresis
 - >20kg: 3units RBCs, 2units FFP, ½ Plt pheresis
 - >50kg: use Adult MTP (5RBC/5FFP/1 Plt pheresis)
- (Ready in approx. 20 min)

ER/OR sends runner to Blood Bank to pick up cooler

- Must have patient's ID (MRN) with them to pick-up blood
- Orders not necessary

RN checks & administers MTP products according to CMC policy VIII-1-a Administration of Blood

- Use rapid infuser/fluid warmer
- Clearly document all product given & lab results
- Use point-of-care testing when available

Send runner to pick up MTP packs from Blood Bank Q 20-60 min or until protocol terminated

- Blood bank stays one pack ahead until protocol ended
- RN to administer packs Q 15-20 min or as indicated by pt status
- Monitor VS, UO, labs
- Record strict I/O

Deactivate MTP

- Write order
- Call Blood Bank immediately x5-6914
- Return unused products to blood bank immediately

Yes

No

Q30 min:
Ongoing
Bleeding?

General Pediatric Guidelines for Goal Directed Transfusion

Product	Threshold	Dose
RBCs	Aim for Hgb ≥ 10.0 in bleeding coagulopathic patients	Hgb ≥ 7.0 is sufficient in most stable non-bleeding patients
Plasma	Rapid TEG ACT 118-150 ACT 150-170 ACT > 170 If INR > 1.5	Give 10 mL/kg plasma Give 15 mL/kg plasma Give 20 mL/kg plasma Give 10-15 mL/kg plasma
Platelets	Rapid TEG G < 5.3 If plt < 50,000	Give 10-15 mL/kg plt pheresis Give 5-10 mL/kg plt pheresis (should not use warmer or rapid infuser for plts)
Cryo	Rapid TEG K > 2 Fibrinogen < 180	Give 10mL/kg (each unit contains 10-15 mLs)
Anti-fibrinolytic	Rapid TEG LY30 > 3	Consider: TXA 10 mg/kg IV or Amicar 200mg/kg

Massive Transfusion Protocol-OB

1. Activate MTP-OB by calling the blood bank- ext 5-4619 and order using the MTP-OB order set in Meditech
2. Blood Bank will prepare 1st pack:
 - a. 6 RBCs (first 2 going out uncrossmatched if needed)
 - b. 4 Plasma
 - c. 1 Platelet Pheresis
 - d. 1 Pool (5) Cryo
3. Runner will be sent after 1st pack
4. Blood Bank will prepare subsequent packs:
 - a. 4 RBCs
 - b. 4 Plasma
 - c. 1 Platelet Pheresis
 - d. 1 Pool (5) Cryo
5. *Blood Bank will continue to prepare packs until called and told to terminate MTP (5-6914)*

OB High Risk Protocol

- For previas, accretias, etc. Please call Blood Bank (5-6914) and let them know you have a high risk patient and give an estimated date of delivery, if known
- Before delivery order products in Meditech with comment "OB High Risk Protocol"
 - 2 RBCs
 - 2 Plasma
 - 1 Platelet Pheresis
- Blood bank will send RBCs and Plasma to the OR at the time of delivery. The Platelet will be held in the Blood Bank unless requested
- If the patient hemorrhages then MTP-OB can be activated (see above)