QUINTE HEALTHCARE CORPORATION

Clinical – Emergency Preparedness- Code Omega

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Department:	**Quality, Patient Safety and Interprofessional Practice**	**Policy Lead:**	Director Quality & Patient Safety
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1. POLICY

Quinte Healthcare Corporation (QHC) would like to ensure the safety of its patients by providing a state of preparedness to support or respond to a Code Omega- Massive Hemorrhage Protocol (MHP). This policy has been created to provide overall guidance to QHC employees in the event that a massive hemorrhage protocol (Code Omega) is initiated. This policy is designed for massive hemorrhage situations in the adult population but can be used as a resource for the paediatric population.

2. DEFINITIONS

Code Omega: Initiates a MHP which is an algorithm for hemorrhage management. A Code Omega is activated whenever the clinical care team identifies a life-threatening bleeding situation requiring mobilization of the blood bank, laboratory services, clinical resources, and anticipates urgent administration of more than 4 units of red blood cells. The goal of Code Omega/MHP is to improve patient outcomes, enhance communication between the clinical care team and Blood Bank, and decrease inappropriate utilization of blood components or products.

Many situations do not require a Code Omega/MHP to be initiated but can be managed with close communication between the Blood Bank and the clinical team caring for the patient

Massive Hemorrhage: is retrospectively defined by the replacement of one blood volume within 24 hours or the replacement of greater than 50% blood volume within 3 hours. Massive hemorrhage may occur in the setting of trauma, obstetrical hemorrhage, acute bleeding – usually gastrointestinal,

post-operative bleeding, and ruptured abdominal aortic aneurysms. Rare other events may lead to a massive bleeding situation.

Massive Hemorrhage in Paediatric Populations: is defined as:

- Transfusion support to replace ongoing blood loss of greater than 10% total blood volume per minute
- Transfusion greater than 100% total blood volume in 24 hours
- Transfusion greater than 50% total blood volume in 3 hours

This policy is designed for massive hemorrhage situations in the adult population but **can be used as a resource for the paediatric population**

Packed Red Blood Cells (RBC): Leuko-reduced red cell concentrate prepared from whole blood and suspended in a nutrient solution.
Our Blood and Blood Product inventory levels are governed by Canadian Blood Services (CBS) and Ontario Regional Coordinating network according to Hospital usage, distance from CBS supply and National Inventory levels. We stock about 100 units of packed red blood cells at Belleville General Hospital, half of which are group O the universal red blood cell donor. The Satellite sites (Trenton Memorial Hospital (TMH), Prince Edward County Memorial Hospital (PECMH), and North Hastings Hospital (NHH)) stock group O for Emergency purposes and obtain inventory from BG site. The Group O inventory at TMH, PECMH and NHH sites fluctuates; it is 10-20% of Belleville's Group O inventory during optimal National levels. Trauma patients can be safely transfused their native blood if they have received 20 units or less of group O uncrossed Red Blood Cells.

Frozen Plasma (FP): FP (290 mL) is prepared from whole blood and frozen within 24 hours of collection. FP contains all coagulation factors at levels similar to those of Apheresis Fresh Frozen Plasma (500 mL) (FFPA) with the exception of the labile factors V and VIII, which are slightly lower in FP but are sufficient for hemostasis. FP and FFPA can be used interchangeably. 2 FP take 20-30 minutes to thaw, 4 FP take 30-40 minutes to thaw. Belleville General Hospital stocks 30-40 units of plasma, including about 6-8 AB plasma which is the universal plasma donor. While FP is not stocked at the satellite locations, the recommendation is to utilize Prothrombin Complex Concentrate (PCCs) (Octaplex®) as an alternative (see PCCs below)

Platelets (PLT): One dose of platelets is either from a pool of four whole blood donations or an apheresis donation; both have a similar volume and platelet count. Belleville General Hospital routinely stocks one unit of platelets. Platelets are not stocked at the satellite sites. In the event of a Code Omega (MHP) is initiated, the Blood Bank will be working to have 2 doses of platelets available as soon as possible, then at least one dose thereafter. If there are no platelets in stock, QHC will contact Kingston Health Sciences Centre (KHSC) and or Canadian Blood Services in Ottawa. In that case, it may take up to 3 hours to obtain platelets. Continue to give all other blood products available while waiting for platelets.

> **Note:** once the MHP is called the Lead Physician automatically assumes authorization of ALL requests for blood inventory; the Blood Bank may need to initiate by Ontario Provincial Police (OPP).

Cryoprecipitate: Cryoprecipitate is a pool of 10 units, containing factor VIII, fibrinogen and von Willebrand Factors (vWF); it takes 30-45 minutes to pool. Belleville General Hospital stores one adult dose of cryoprecipitate. While Cryoprecipitate is not stocked at the satellite locations, the recommendation is to utilize Fibrinogen Concentrate as an alternative (see FP below)

Fibrinogen Concentrate (FC): 4 grams of fibrinogen concentrate is equivalent to 10 units of cryoprecipitate. Where cryoprecipitate cannot be provided (e.g., satellite sites), it is reasonable to

utilize fibrinogen concentrates (where available). Each gram of FC is reconstituted at the bedside in 50 mL of sterile water.

Prothrombin Complex Concentrate (PCC) (Octaplex®): Each 20 mL volume contains 500 units of Factor IX. PCC contains Vitamin K dependent factors II, VII, IX and X. Octaplex® is available at all QHC sites and recommended when FP is unavailable (e.g., satellite sites). PCC is reconstituted at the bedside.

Idarucizumab (Praxbind®): a specific antidote to dabigatran (Pradaxa) which provides immediate, complete and sustained reversal of the anticoagulant effects of dabigatran. It is only for dabigatran; it has no effect on other anticoagulants.
It is administered as two 2.5 grams IV for a total dose of 5 grams, no more than 15 minutes apart. It is kept in the Emergency Department at each of our four hospitals, as well as the Operating Room at BGH. It is stored in the fridge and must remain protected from light in the original package until use.

Tranexamic Acid: is best if given within one hour of injury. Tranexamic acid works in *all* surgeries, with no increase in myocardial infarction or thromboembolic events, odd ratio of 0.6 that it will reduce the risk of needing a blood transfusion, without any harm. Tranexamic acid improves coagulopathy (INR, PTT).

3. PROCEDURE

BGH Site: See Appendix 1B: Algorithm for Code Omega,
TMH/PECMH/NHH Sites:
See Appendix A: TMH/PECM/NHH Code Omega Procedure and,
Appendix 2B: Algorithm for Code Omega

1.0 **Decision to Activate** (See Appendix C: Tools for Triggering Code Omega)

The physician caring for the patient is responsible for identifying a potential massive hemorrhage situation and initiating the Code Omega/MHP. This physician will be the designated Code Omega/MHP lead. One of the four following criteria needs to be met in order to activate the Code Omega/ MHP. **Most importantly, the decision to initiate the Code Omega/MHP is a clinical judgment made by the physician caring for the patient.**

Inclusion Criteria:
Physician request due to massive bleeding and hemodynamic instability
OR "Critical administration threshold +" = 3 units of RBCs in 1 hour
OR Assessment of Blood Conservation (ABC) score >/= 2 or
OR Shock Index (SI) greater than 1.4

If patient meets the criteria, the Physician Lead delegates to the Communication Lead (typically a Lead RN/ Charge Nurse) to activate Code Omega/ MHP.

2.0 **Activation of Code Omega**

The Communication Lead will be the person responsible for calling the switchboard operator to activate the Code Omega (ext. 5999) and notifying the Blood Bank (ext. 2363). To minimize miscommunication only the Communication Lead should request initial and ongoing blood products.
The following information should be communicated to the blood bank (if it is known):

- Phone extension of the room
- Name of activating/Lead physician
- Specific patient location (e.g. Quinte 1, Operating Room #1)
- Patient name, gender and, approximate age
- Hospital Unit #
- Anticoagulant status
- Status of blood specimen for crossmatch (has it been drawn)
- Patient's clinical status and initial estimated blood requirements

The switchboard operator will respond by overhead paging and repeating 3 times "Code Omega" and the location.

- The switchboard operator will also send a message to Emergency Department Hospitality Service Representative (HSR- D2, E2, NC2), Respiratory Therapist, Intensivist and Anaesthesia on-call to respond to the Code Omega/ MHP.
- The HSR will become the Designated Runner

For the duration of the Code Omega/MHP the switchboard operator will announce "Code Omega still in effect" on a 1 hour basis.

Initial blood work should be drawn prior to transfusion and sent to the lab with a STAT label. This will expedite the Blood Banks ability to supply group specific units.
The initial blood work sent will be the MHP Panel.

MHP Panel

Type and Screen (to crossmatch), CBC, INR, aPTT, fibrinogen, Lytes (Na, K, Cl), Ca, Mg, Albumin, Urea, Cr, ABG, VBG

***ABG and VBG are transported on ice**

At BGH Blood work will be transported to the lab by the Code Omega/MHP Designated Runner (preferable) or transported using the tube system if appropriate (**this must be communicated to the lab**).

At TMH, PECMH and NHH blood work must be sent to lab via taxi (See Appendix A) and lab must be notified. Any Point of Care testing can be completed at the discretion of the lead physician.

Tube Colour	**Test**
2 *Full* light blue tops (3 mL)	☒ Discard (1 tube) ☒ INR ☒ APTT ☒ Fibrinogen
gold top (5 mL) **NOTE: collect an ORANGE top instead of the SST for quicker processing**	☒Electrolytes (Na, K, Cl) ☒Calcium ☒Mg ☒Albumin ☒Urea ☒Cr
1 lavender top (7 mL) with wrist band #	☒Type and screen to crossmatch 4 packed red blood cells *If the patient has already been crossed and typed send 1 lavender tube (7mL) with current wristband #*
lavender top (3 mL)	☒ CBC
Heparinized Syringe	☒ ABG with lactate ☒ VBG with lactate
iSTAT Point of Care	**CHEM8+:** Na, K, Cl, iCa, BUN/Urea, TCO2, Cr, Hct, AnGap, Hb

Heparinized syringe *Non-heparinized syringe*	**CG4+:** pH, PCO2, PO2, Lactate, HCO3, TCO2, BE, sO2 PT/INR
Q7 RP500 *Heparinized syringe*	Panel 1:Glucose, Lactate, NA, K, Cl, iCa, Total HgB Panel 2: Ph,PCO2, PO2

MHP2 Panel should be sent hourly *if possible* (CBC, INR, PTT, and Fibrinogen) and transported to the lab by the Code Omega/MHP Designated Runner (preferable) or using the tube system.
Any additional tests will be ordered and sent on an as needed basis.

Tube Colour	**Test**
2 *full* light blue tops	☒ Discard (1 Tube) ☒ INR ☒ APTT ☒ Fibrinogen
1 lavender top tube (3mL)	☒ CBC
iSTAT Point of Care *Heparinized syringe* *Non-heparinized syringe*	**CHEM8+:** Na, K, Cl, iCa, BUN/Urea, TCO2, Cr, Hct, AnGap, Hb **CG4+:** pH, PCO2, PO2, Lactate, HCO3, TCO2, BE, sO2 PT/INR
Q7 RP500 *Heparinized syringe*	Panel 1:Glucose, Lactate, NA, K, Cl, iCa, Total HgB Panel 2: Ph,PCO2, PO2

At BGH, the Code Omega/MHP Designated Runner will transport packs of blood from Blood Bank as well as return empty packs to the Blood Bank.
Removal of a MHP pack from Blood Bank will signal the preparation of the next MHP pack

MHP Pack 1 (4 RBC) is sent first.

Deciding which group of red cells to provide will depend on how quickly a sample is received in the Blood Bank for processing.

- See section 3.O RBC/FP Selection

MHP Pack 2 (4 RBC, 2 FP, 1 PLT, 2 grams FC) will follow MHP Pack 1

The platelets will be handed over to the Code Omega/MHP Designated Runner; platelets must never be put in a refrigerated environment.

The first 4 plasma will be group AB if the patients' blood group is not known.

MHP Pack 3 (4 RBC, 2 FP) will follow MHP Pack 2.

This pack must be initiated with a phone call to Blood Bank to trigger the thawing of plasma and provide an update on transfusion requirements. MHP Pack 3 will continue until Code Omega/MHP is terminated by the physician.

***Cryoprecipitate / Fibrinogen Concentrate and additional Platelet** orders are to be called to the Blood Bank by Communication Lead/ Lead Physician.

Pack	**Contents**
1	4 RBC
2	4 RBC, 2 FP, 1 PLT, 2 grams Fibrinogen Concentrate
3+ *Initiated with a call to Blood Bank*	4 RBC, 2 FP (repeat until Code Omega/MHP terminated)
Call blood bank (ext. 2363) to initiate orders for:	

Platelets, Cryoprecipitate or Fibrinogen concentrate (where available)	10 units of cryoprecipitate or 2 grams of fibrinogen concentrate if fibrinogen less than 2 grams/L ***For obstetrics: early and aggressive use of cryoprecipitate or fibrinogen concentrate**

The Blood Bank will contact the Communication Lead if any issues with supply arise. Constant reassessment of the patient situation and communication with the Blood Bank is critical to good patient care. **If an adverse reaction occurs the Communication Lead must notify Blood Bank immediately at extension 2363.**

Monitor: *Every Hour*

- **The possibility to terminate Code Omega**
- MHP2 panel (PLUS additional blood work as requested)
- Urine output
- Temperature
- Potential hypocalcemia, acidosis and hyperkalemia

3.0 **RBC/FP Selection:**

In situations where immediate blood product resuscitation is required, there may not be time to request group specific blood from the Blood Bank (the preferred situation). In this situation, order 4 units of uncross-matched blood. This will place the Blood Bank on alert for a potential Code Omega/ MHP; if additional units are ordered the Blood Bank will contact the unit to discuss the need for activating the Code Omega.
If a Code Omega/ MHP is activated after 4 units of uncross-matched blood have been given, MHP Pack 2 will be sent.

4 units of red blood cells may be:
If patient's blood group is unknown group O RBCs are given

- O negative uncross-matched (for women of child bearing potential less than 45 years)
- O positive uncross-matched for everyone else

Once patients' blood group is known but antibody screen is incomplete give

- group specific uncross-matched
- group specific and cross-matched by immediate spin
  If antibody screen is positive it may NOT be possible to supply antigen negative units during active bleeding.

2 units of frozen plasma (thawed)

- if the patients' blood group is not known the first 2 will be AB plasma
- once patients' blood group is known Group specific or group compatible will be thawed

4.0 **Considerations:**

- Tranexamic acid 2 grams should be given **within 1 hour or as soon as possible** to the onset of the hemorrhage
- Consider giving: 1 gram Calcium chloride IV
- Immediate collection of 2 large lavenders with patients label and Wrist Band Number this will expedite the release of group specific crossmatch compatible units

- As with the use of any blood product, consent must be documented. Follow section 21 and 22 (Emergency Treatment without Consent) of the Consent to Treatment Policy (2.10.3) in emergency situations
- Blood warmers may be used for red cells only. Temperature of warmer must be documented if used.
- Transfuse additional platelets when patient's platelet count is less than 50 or when a clinical decision is made
- Reference Appendix 1B/2B and/or Protocol (Appendix F) for anticoagulant antidotes
- Pooled cryoprecipitate (10 units) must be considered if the massive hemorrhage situation is associated with an obstetrical bleed or the fibrinogen is less than 1.5 grams/L
- Blood product wastage will be monitored and reported to the Transfusion Committee
- Consider consulting: Obstetrics, anaesthesia, surgery, Intensive Care Unit, Hematology, GI, Interventional Radiology etc.
- Consider history of present illness, medications, allergies, special populations
- Consider special populations (e.g., obstetrical hemorrhage, paediatrics, Jehovah's Witness, Hemophilia, Sickle Cell Disease, ITP). Consult Appendix D: Special Populations

5.0 **Termination of Code Omega**

Code Omega/ MHP is terminated when

- Bleeding is controlled
- Patient is transferred to a tertiary care centre
- Future transfusions are goal oriented (based on bloodwork or clinical scenario)
- Patient dies

The Communication Lead will be the person responsible for calling the operator to terminate the Code Omega (ext. 5999) and notifying the Blood Bank (ext. 2363).

The Communication Lead will be responsible for alerting the Blood Bank to any location changes for the patient. It is critical that they also let the Blood Bank know in a timely manner when Code Omega/MHP is **terminated** because this will end the preparation of MHP Packs. Any unused product must be stored correctly and returned to the blood bank immediately if not used. If patient is transferred, sending RBC/PLT/FP with transfer is ideal to reduce wastage.

The Communication Lead will be responsible for calling the operator to terminate Code Omega/MHP. The switchboard operator will respond by overhead paging and repeating 3 times "Code Omega Terminated".

6.0 **Quality Improvement Process**

The Communication Lead is responsible for submitting a QHC Cares Report; Code Omega/MHP is treated as a critical event regardless of the outcome.

Code Omegas/ MHPs will be debriefed. These debriefs will include key members of the Code Omega/MHP Team (Lead Physician, Communication Lead, Blood Bank and the Designated Runner). These debriefs will be facilitated with the intention of improving the Code Omega/MHP Process and providing staff support.

As per the Provincial Recommendations for Massive Hemorrhage Protocol from The Ontario Regional Blood Coordinating Network (ORBCON) the protocol should be reviewed at a minimum of every three years to ensure it aligns with the current science and clinical trial activity in the area of

massive hemorrhage, coagulopathy, and MHPs. QHCs MHPs will be reviewed at a minimum of every three years to ensure alignment with the scientific evidence and the Provincial MHP. The protocol revision is to be conducted by a multidisciplinary team and approved by the Hospital Transfusion Committee and the Medical Advisory Committee.

7.0 **Goals of Code Omega**

These goals should be used as guidelines only and should not replace clinical judgment. These goals are not supported by good quality evidence but are endorsed by clinical guidelines. In a bleeding patient:

Measurement	**Target**
Hemoglobin	Greater than 70 grams/L
Platelets	Greater than 50 x 10^9/L Greater than 100 x 10^9/L if CNS injury
INR	Less than 1.8
PTT	Less than 1.5 times upper limit of normal
Fibrinogen	Greater than 2 grams/L
Ionized calcium	Greater than 1.15 mmol/L
Temperature	36-37.5 degrees Celsius

8.0 **Roles and Responsibilities of Code Omega Respondents:**

Resources are mobilized immediately to support patient care using a co-ordination of the multi-disciplinary team. The responsibilities of the team member are as follows:

Physician Lead:

- A **designated** physician of the clinical care team that will lead the Code Omega/MHP
- Responsible to notify the Communication Lead to initiate the Code Omega/MHP, notify Blood Bank and obtain the MHP protocol binder (available in every department)
- Manage care for the bleeding patient
- Sign for uncrossmatched blood or delegate Communication Lead to sign
- Notify Blood Bank of additional orders for platelets plus any Cryoprecipitate/Fibrinogen Concentrates
- Assumes responsibility if the Blood Bank initiates additional blood inventory by OPP
- Ensure that 2 large bore IVs (minimum 18g) are placed and rapid infusers or pressure bags are in the room
- If peripheral IV access is not available, consider a central venous catheter or intra-osseous line
- Consider placing an arterial line if possible
- Warm patient
- Ensure MHP Panel blood work is sent immediately
- Consults as needed: anaesthesia, OB, surgeon, ICU, paediatrics, hematology, GI, IVR, etc.
- Decision to terminate MHP
    - Bleeding is controlled
    - Patient is being transferred to a tertiary care centre
    - Future transfusions are goal directed based on bloodwork or clinical scenario
    - Death
- Participate in post-Code Omega/MHP debrief

Communication Lead (See Appendix E: Code Omega/ MHP Communication Lead Checklist)

- **RN Team lead unless otherwise delegated**
- It will be their responsibility to coordinate staff responses as required and to liaise with other departments (i.e. laboratory, OR, transport services, endoscopy etc.)
- Obtain MHP/Code Omega binder
- Initiate Code Omega/MHP by contacting switchboard operator at ext. 5999 and notify the Blood Bank directly (ext. 2363)
- Communicate a dedicated Code Omega/MHP phone line to the operator and Blood Bank
- Identify Lead Physician and give them **Physician Code Omega/MHP Algorithm** (Appendix 1B/2B**)** and **Code Omega/MHP Protocol** (Appendix F)
- Determine Designated Runner and give **Designated Runner Instruction Sheet** (Appendix G) complete with **Patient Label**
- Complete the **Code Omega/MHP Checklist** (Appendix E) and **Code Omega/MHP Documentation Record** (Appendix H) (or delegate this task to be completed)
- Delegate an RN to draw MHP and MHP2 Panels
- Retrieve blood work results in a timely fashion and communicate them to the Lead Physician
- Notify the appropriate transport resource to get blood
    - This will be the dedicated Code Omega/MHP Runner in most instances
    - In the circumstances that no dedicated MHP Runner is available a Porter should be used
- Notify the Blood Bank and the operator of any location changes
- Notify the Blood Bank and the operator of the decision to discontinue Code Omega/MHP
- Fill out a QHC Cares Report: Code Omega/ MHP is considered a Critical Event
- Participate in post-Code Omega/MHP debrief

Emergency Department Code Nurse

- Respond to location of the Code Omega/MHP in response to the overhead page
- Bring the Rapid Infuser/Warmer and disposable tubing to the site of the Code Omega/MHP
- Remain on site to set up the Rapid Infuser/Warmer and help administer blood products
- Assist with collection of blood work, ensure this is sent to the Lab STAT
- Ensure that and assist with 2 large bore IV (minimum 18g) placement
- Ensure that and assist with placing all monitors and lines

Intensive Care Unit Code Nurse

- Respond to location of the Code Omega/MHP in response to the overhead page
- Bring Bair Hugger and disposable warming blankets to the site of the Code Omega/MHP and remain on site to set it up *(Bringing the Bair Hugger is not necessary if the Code Omega is called in the Emergency Department, Operating Room, Post-Anesthesia Care Unit or on Quinte 7- they have Bair Huggers on these units).*
- Communicate with ICU so that a bed can be made available
- Assist with collection of blood work, ensure this is sent to the Lab STAT
- Ensure that and assist with 2 large bore IV (minimum 18g) placement
- Ensure that and assist with placing all monitors and lines

Documentation Nurse

- Use **Code Omega/MHP Protocol Documentation Record** (Appendix H) (In MHP binder)
- Track medications, fluids and blood products given
- Track decision to initiate and terminate Code Omega/MHP, as well as decision to transport

Intensivist

- Communicate with ICU so that a bed can be made available
- Assist with resuscitation, support Lead Physician in executing the Code Omega/MHP

Respiratory Therapist
- Assist with airway management
- Assist with IStat testing if trained

Anaesthesia
- Assist with airway management, resuscitation and central venous access and arterial lines

Blood Bank, Medical Laboratory Technologist (BB MLT)
- Communicate with Core Lab
- Code Omega/MHP takes priority over all other blood work for the Blood Bank and Core Lab
- Establish a designated MLT as contact with Communication Lead
- If activated after hours the Operator is to alert Laboratory Manager. Laboratory Manager will contact the lab to inquire if additional personnel are required
- Prepare MHP packs: MLTS follow Blood Bank specific Code Omega/MHP Procedure
    - DO NOT DELAY sending RBCs while FP is thawing
    - Check stock of platelets/arrange urgent supply of platelets by OPP
    - Continue to prepare the next MHP pack once the first is picked up
- If requested for obstetrical peri-partum haemorrhage, prepare:
    - Cryoprecipitate pool if ordered (Fibrinogen Concentrate may be substituted)
    - O negative uncrossed blood if appropriate
- Rh Immune Globulin shall be given within 72 hours, in the likely event of transfusing Rh Positive Platelets to Rh Negative women less than 45 years
- Once blood group is known switch to group specific
- If group specific or Rh Negative is at critical levels or depleted switch to O Positive
- Monitor Inventory and place urgent order when necessary
- Notify Communication Lead or Physician Lead:
    - When crossmatch compatible are ready for issue
    - Delays due to cross-matching complications (i.e., antibodies), delays in obtaining blood products
- Participate in post-Code Omega/MHP debrief

Switchboard Operator
- Overhead paging:
    - Initiation: “Code Omega Initiated” and location 3 times
    - Every hour: “Code Omega still in effect”
    - Termination: “Code Omega no longer in effect” 3 times
- Send message/pages to the following to respond to the Code Omega/MHP
    - Emergency Department Hospitality Service Representative (HSR), D2, E2, NC2
    - Respiratory Therapist
    - Intensivist on-call
    - Anaesthesia on-call
    - Laboratory Manager to initiate additional Lab Personnel
    - Hospitality Service Team Leader
    - Clinical Risk Specialist
    - Code Omega Policy/Practice Leads

    - Message Admin on-call
- If activated after 1600, message Admin on Call

HSR- Job Assignment D2, E2, NC2 *(Critically Important)*

- A **designated runner** must be identified and assigned for the duration of the massive hemorrhage situation. This is the HSR Staff responsible for D2, E2, NC2.
- In the circumstances that the HSR (D2, E2, NC2) is unavailable, a housekeeping lead hand can be designated as the Designated Runner
- Code Omega/MHP takes priority over all other duties and breaks
- All of these transports will be done in a STAT manner
- This HSR will only be responsible for:
    - **Reporting to location of Code Omega/MHP**
    - Identify role with Communication Lead and Blood Bank Technologist
    - Providing phone number/pager number to the Communication Lead and Blood Bank Technologist
    - Transporting blood samples to the lab (or UCC to use the tube system)
    - Transporting MHP packs to the site of the Code Omega/MHP
    - Verbal handoff to Communication Lead at drop-off
    - Communication Lead is to instruct on when to proceed to the Blood Bank for pick up next MHP pack- **Designated Runner should stay on site until this instruction is given** (Blood Bank may page the Designated runner to pick up product (e.g., thawed FP))
    - Returning empty boxes to the Blood Bank
- The HSR/Designated Runner will remain dedicated to the Code Omega/MHP until it is terminated, at which point any unused product will be returned to the Blood Bank
- Participate in post-Code Omega/MHP debrief

APPENDICES AND REFERENCES

Appendices:

Appendix A – TMH, PECM, NHH Site Code Omega Procedure
Appendix 1B – Algorithm for Code Omega/ Massive Hemorrhage Protocol (MHP) – BGH
Appendix 2B – Algorithm for Code Omega/ Massive Hemorrhage Protocol (MHP) – TMH/PECMH/NHH
Appendix C – Code Omega / Massive Hemorrhage Protocol (MHP) Tools for Triggering Code Omega
Appendix D – Code Omega / Massive Hemorrhage Protocol (MHP) Special Populations
Appendix 1E – Code Omega / Massive Hemorrhage Protocol (MHP) Communication Lead Checklist- BGH
Appendix 2E – Code Omega / Massive Hemorrhage Protocol (MHP) Communication Lead Checklist- TMH/PECMH/NHH
Appendix 1F – Code Omega / Massive Hemorrhage Protocol (MHP) Protocol- BGH
Appendix 2F – Code Omega / Massive Hemorrhage Protocol (MHP) Protocol- TMH/PECMH/NHH
Appendix G – Code Omega / Massive Hemorrhage Protocol (MHP) Instructions for HSR Designated Runner
Appendix 1H – Code Omega / Massive Hemorrhage Protocol (MHP) Documentation Record- BGH
Appendix 2H – Code Omega / Massive Hemorrhage Protocol (MHP) Documentation Record- TMH/PECMH/NHH
Appendix I – NAC Statement on Fibrinogen Concentrate - 2018

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