Posting Date: 2020-05-13
Posting History Dates:
Next Review Date: 2025-05-13

Title: TRAUMA – Adult Trauma Bay Considerations During COVID-19

Applies to: All members of the HHS Trauma Team

1.0 Purpose

1.1 This policy outlines the modifications to the trauma team due to COVID-19.

2.0 Equipment/Supplies- PPE

- N95 Respirator Masks
- Impervious gowns
- Face shields
- Gloves

3.0 Procedure

3.1 Pre-Arrival Preparation

3.1.1 During the COVID-19 pandemic, the following tiers will be used to determine the "Primary Trauma Team", personal protective equipment (PPE) required, "Ready Team" and preferred location of the resuscitation.

3.1.2 The *0, *1, *2 trauma team activation fan-out effectively immediately will no longer refer to ETA (i.e. STAT, 5 min, 15 min) but will be based rather on the anticipated need for intubation and other Aerosol Generating Medical Procedures (AGMPs).

3.1.3 The Emergency Department (ED) charge nurse should inquire specifically over the EMS patch:

- Does the patient screen negative, positive, or indeterminate for COVID-19?
- Has the airway been secured with intubation? If no;
- Is there an immediate or anticipated need for intubation?
- Has there been a hypotensive episode with a systolic blood pressure less than 80 mmHg?

3.1.4 The trauma team will be activated with as much time as possible prior to the patients anticipated arrival to allow for pre-arrival preparation.
Ideally the ED charge nurse should try to activate the trauma team when the estimated time of arrival (ETA) is approximately 10 minutes.

3.1.5 Both the "Primary Trauma Team" and Ready Team" will be expected to respond STAT to all trauma team activations.

3.1.6 Obtunded and/or patients intubated on scene will be treated as presumptive COVID-19 positive.

3.1.7 Intubated trauma patients that are arriving from another hospital's emergency department (i.e. TTL accepts via CritiCall) will be treated as presumptive COVID-19 positive.

- TTL will inform the ED charge nurse of which tiered response is required (i.e. *0, *1 etc.)
- In this setting the TTL will decide whether "Anaesthesia" is needed as a member of the "Primary Trauma Team" or "Ready Team" as the airway has already been secured.

3.1.8 For non-intubated trauma patients that arrive from another ED (i.e. TTL accepts via CritiCall) the TTL will;

- Inquire with the referring physician whether the patient has screened negative for COVID-19 and document in the TTL note
- Obtain direct household contact number and document in the TTL note
- Contact household contact PRIOR to patient's arrival to perform screen
- Repeat screen with awake patients as above

3.1.9 Only the Primary Trauma Team outlined in the table (see appendix should initially don PPE and enter the resuscitation area. Unless requested by the primary team, the "Ready Team" may not enter the resuscitation are. These individuals will wait outside in the hallway near the trauma bay entrance or in the trauma charting area.

3.1.10 Members of the "Primary Trauma Team" and "Ready Team" will include:

- Trauma Team Leader (TTL)
- General Surgery Resident
- Anesthesia Resident
- Orthopaedic Surgery Resident
- Respiratory Therapist
- Emergency Room Nurses x 2
- X-ray tech
- Nurse or Resident active as PPE Safety Officer
- Chartine Nurse

N.B.** Trauma surgeon on-call will now be included in the trauma fan out for all *0 Trauma team Acitvations. Trauma surgeon is not expected to attend to the trauma in person but needs to call-in to inquire whether they are needed to attend to trauma.

3.1.11 Additional trauma scenarios requiring potential airborne precautions that should prompt either *0 or *1 activation will include:

- Needle decompression in the field with no chest tube
- Open pneumothorax or sucking chest wounds
- Self-inflicted stab would/laceration to the neck
- Gun shot wounds (GSWs) to head of neck.

3.1.12 Given t he elective surgery slow down, lead gowns should be available in the PPE Donning Station and should be worn by all "Primary Trauma Team" members under their PPE. Alternatively a lead glass shield should be kept in the trauma bay to minimize radiation exposure and effectively eliminate the need for "Primary team Members" to leave the trauma bay.

3.1.13 All other individuals (e.g. police, ED staff) must remain outside of the trauma by for the entirety of the resuscitation.

3.1.14 An available nurse or resident will act as the Safety Officer.

3.1.15 The safety officer will be positioned near the PPE Donning Station.

3.2 Initial Trauma Resuscitation

3.2.1 Place ear-loop mask on a non-intubated patient as soon as safe from an airway perspective.

3.2.2 Mask conservation strategy is to be used. One mask during patient's entire resuscitation (unless contaminated).

3.2.3 **No** auscultation is to be performed unless the patient is hypoxic (oxygen saturation less than 90% on 5L by nasal prongs **and is** absolutely necessary.

- If auscultation performed, a single use (non-personal) stethoscope will be used
- Be extremely careful not to disrupt PPE or touch face when using disposable stethoscope

3.2.4 FAST ultrasound should be limited to those who it will immediately impact management (hemodynamically abnormal patients without an immediate indication for operation). FAST should not be used if the patient will undergo a CT scan.

3.3 Procedures in the Trauma Bay

3.3.1 PPE w ill be worn for all patients undergoing AGMPs according to the HHS PPE during AGMP Protocol.

3.3.2 Specifically for trauma resuscitations, AGMPs will also include:
- Any chest tube insertions
- ED Thoracotomies
- Emergency surgical airway

3.3.3 ED Thoracotomies should be limited to those patients with isolated penetrating injury to the chest and have signs of life or evidence of cardiac motion or hemopericardium on ultrasound.

3.3.4 Pre-prepared chest tube bundles should be created and kept in a plastic bag in the trauma bay to minimize contamination when searching for supplies. These bundles should include:
- Chest tube tray
- Scalpel
- 0-sild suture x 2
- Chlorhexidine or Proviodine prep
- 10ml syringe
- Blunt tipped needle
- Injection needle
- Atrium chest drain
- 28 or 32 Fr. Chest tube

3.4 Unanticipated need for AGMP during a non-AGMP resuscitation

3.4.1 Ina situation where there becomes an unanticipated need for an emergent/urgent intubation during an non-AGMP resuscitation (*2):
- The most senior anesthesia resident (or most experienced person in airway management) on the "Ready Team" will don N95 respirator, gown, gloves, face shield
- They will entre the trauma bay and temporarily support the airway
- All of the "Primary Trauma Team" will leave the trauma bay and doff any droplet PPE
- The TTL, RT, Trauma fellow/resident, and nurse will don N95 respirator, gown, gloves, face shield and re-entre the trauma bay
- Intubation will be performed in accordance with HHS PERI - Anesthesia Recommendations for Airway Management of Patients with Suspected or Confirmed COVID – 19

4.0 Roles and Responsibilities

4.1 Trauma Team Leader (TTL):

4.1.1 Prior to the patient arrival the TTL will:
- Gather the team and complete the pre-briefing checklist
- Decide if a staff anaesthesiologist will immediately be needed as part or primary team or for anticipated difficult airways, as second anesthetist
- Huddle with anaesthesia and RT regarding airway management
- Ensure only primary team assembles and dons PPE

4.1.2 During the resuscitation:
- Reassess whether any additional team member is required to join primary team of can leave the resuscitation area (e.g. RT)

4.1.3 At the end of the resuscitation:
- Completes patient screening
- Designate which staff is required to transport patient
- Oversee appropriate patient transport

4.1.4 At all times:
- Be mindful of PPE donning and doffing of the team

4.2 The Safety Officer:

4.2.1 Oversee PPE donning and doffing for all tam members entering and exiting the resuscitation area.

4.2.2 Access to the resuscitation area and trauma bay per the policy points above.

4.2.3 Act as a runner for additional equipment required.

4.3 The Charge Nurse:

4.3.1 Maintain a log of individuals entering the resuscitation area (required if a patient screens positive post-resuscitation).

4.3.2. Will scribe everyone's name in the trauma assessment record in order to limit contact with the paper record.

4.3.3 Will write at the top of the trauma assessment record "COVID-19 Modified Trauma Activation".

4.4 The Respiratory Therapist:

4.4.1 Ensure intubation equipment for *0 and *1 patients is prepared. Intubation will be performed in accordance with PERI - Anesthesia Recommendations for Airway Management of Patients with Suspected or Confirmed COVID – 19.

5.0 Transport

5.1 For trauma patients who are presumed positive or confirmed ositive for COVID-10 and non intubated being transported to Diagnostic Imaging/CT:

5.1.1. The transport team will consist of two teams

Team A:

- TTL and circulating nurse who will lead the transport
- May be comprised of additional members depending on the patient's condition to facilitate safe transport
- As a minimum team A should consist of the TTL and circulating nurse

Team B:

- Two additional team members of the "Primary Trauma Team" who will assist with opening doors and log roll

5.1.2 The following sequence should be performed to ensure appropriate PPE:

Team A:

- Doff gown and gloves in the trauma bay
- Remove lead
- Keep on N(% masks and face shields
- Don new gown and gloves outside of trauma bay

Team B:

- Doff all PPE except for face shield and mask

5.1.3 Security (or an individual who is not a member of the transport team) will ensure hallways are clear of obstacles or persons prior to the patient leaving the trauma bay.

5.1.4 Charting nurse or resident will call CT tech (ext. 46948) to confirm that the CT scan is ready and confirm which CT scan will be used.

5.1.5 Team B will open doors for team A during transport.

5.1.6 Team B dons gowns and gloves outside of CT and join team A in CT room.

5.1.7 Patient is transferred to CT scanner table.

5.1.8 Team A and team B doff gown and gloves in CT room and enter control room retaining face shield and masks.

5.1.9 Team A and team B don gown and gloves outside of CT and complete patent transfer off CT

scanner table.

5.1.10 Team A retain PPE for transport.

5.1.11 Team B doff gown and gloves in CT room but keep N95 masks and face shield then open doors for the team during transport.

5.1.12 Team B does not take the same elevator.

5.1.13 Team A and team B doff PPE at destination.

5.2 Transport of the intubated trauma patient to CT scan who is a person under investigation (PUI) or positive COVID-19

5.2.1 Transport of the intubated trauma patient should be performed in accordance with IC – Transportation of Patients Within or Between Healthcare Facilities of Who are Suspected or Confirmed COVID-19.

5.2.2 Sedate/paralyze patients for transport to minimize the possibility of tube disconnect.

5.2.3 Specifically, for trauma patients who are PUI or confirmed positive for COVID-19 and intubated being transported to CT scan.

5.2.4 The transport team will consist of two teams.

Team A:

- TTL and circulating nurse who will lead the transport
- Team a may be comprised of additional members depending on the patient's condition to facilitate safe transport.
- As a minimum team A should consist of the TTE and circulating nurse.

Team B:

- Trauma fellow or resident and RT responsible for patient's airway

5.2.5 The following sequence should be performed to ensure appropriate PPE:

- Team A and B:
  - Doff gown and gloves in the trauma bay.
  - Remove lead.
  - Keep on N95 masks and face shields.
  - Don new gown and gloves outside of trauma bay.
- TTL pushes stretcher.
- RT pushes ventilator.
- Security (or an individual who is not a member of the transport team) will ensure hallways are clear of obstacles or persons prior to the patient leaving the trauma bay.
- Charting nurse or resident will call CT tech (ext. 46948) to confirm that the CT scan is ready and which CT scan will be used.
- Charting nurse will open doors for Team A and B.
- Charting nurse does not enter CT and does not require PPE.
- Team A and B transfer patient to CT scanner table.
- Team A and B doff gown and gloves in the CT room and enter control room keeping on N95 masks and face shields.
- Team and B don gown and gloves outside of CT and complete patient transfer off CT scanner table.
- Team A and B retain PPE for transport.
- Charting nurse opens doors but does not take the same elevator.
- Tam A and B doff PPE at destination.

5.3 Transport of the non-intubated trauma patient for priority 1 trauma

laparotomy/thoracotomy who is PUI or confirmed COVID-19

5.3.1 For non-intubated trauma patients s ho are presumed positive or confirmed positive for COVID-19 and being transported to the operating room:

- Place ear loop mask on a non-intubated patient as soon as safe from an airway perspective

5.3.2 The transport team will consist of two teams.

Team A:

- TTL and circulating nurse who will led the transport.
- Team A may be comprised of additional members depending on the patient's condition to facilitate safe transport.
- As a minimum team A should considt of the TTL and circulating nurse.

Team B:

- Two additional team members of the "Primary Trauma Team" who will assist with opening doors.

5.3.3 The following sequence should be performed to ensure appropriate PPE.

- Team A:
  - Doff gown and gloves in the trauma bay.
  - Remove lead.
  - Keep on N95 masks and face shields.
  - Don new gown and gloves outside of trauma bay.
- Team B:
  - Doff all PPE except for face shield and mask.
- Security (or an individual who is not a member of the transport team) will ensure that hallways are clear of obstacles or people and securing the elevator and have ready for transport.
- Charting nurse or resident will call the Operating Room (OR) (ext. 46277) to confirm that the OR is ready and transport can begin.
- Team B will open doors for team A during transport.
- Team B does not take the same elevator.
- Team A and team B doff PPE at destination.

5.4 Transport of the intubated trauma patient for priority 1 trauma laparotomy/thoracotomy who is PUI or confirmed COVID-19

5.4.1 Transport of the intubated trauma patient should be performed in accordance with IC – Transportation of Patients Within or Between Healthcare Facilities of Who are Suspected or Confirmed COVID-19.

5.4.2 Sedate/paralyze the patient for transport to minimize the possicility of tube disconnect.

5.4.3 Specifically for intubated trauma patients who are PUI or confirmed positive for COVID-19 being transported to the OR.

Team A:

- TTL and circulating nurse who will lead the transport.
- Team A may be comprised of additional members depending on the patient's condition to facilitate safe transport.
- As a minimum team A should consist of the TTL and circulating nurse.

Team B:

- Trauma fellow or resident
- RT (responsible to patient's airway)

5.4.4 The following sequence should be performed to ensure appropriate PPE.

Team A and B:

- Doff gown and gloves in the trauma bay.
- Remove lead.
- Keep on N95 masks and face shields.
- Don new gown and gloves outside of trauma bay.
- TTL pushed stretcher.
- RT pushed ventilator.
- Security (or an individual who is not a member of the transport team) will ensure hallways are clear of obstacles and people, and secure elevator and ready for transport.
- Charting nurse or resident will call OR (ext. 46277)and confirm that the OR is ready and transport can begin.
- Charting nurse will open doors for team A and B.
- Charting nurse does not take the same elevator.
- Charting nurse does not require PPE.
- Team A and B doff PPE at destination.

6.0 Cross References

TRAUMA - GENERAL Site Emergency Department - Trauma Team Activation Guidelines
IC - Coronavirus Infectious Disease (COVID-19) Surveillance and Management of
IC – Transportation of Patients Within or Between Healthcare Facilities of Who are Suspected or Confirmed COVID-19
PERI - Anesthaesia Recommendations for Airway Management of Patients with Suspected or Confirmed COVID – 19

10.0 Developed By

Surgeon in Chief
Department of Anaesthesia
Trauma Team

11.0 In Consultation With

Infection Prevention and Control
COVID-19 SME group

12.0 Approved By

COVID-19 Corporate Command Centre

13.0 Appendices

Modified Trauma Team Response during Covid-19 Pandemic.

Keyword Assignment	COVID-19, covid, coronavirus, trauma team, trauma bay

Posting Date: 2020-05-13
Posting History Dates:
Next Review Date: 2025-05-13

Title: TRAUMA – Adult Trauma Bay Considerations During COVID-19

Modified Trauma Team response During COVID-19 Pandemic

	Description	Primary Trauma Team (in resuscitation area)	PPE (for ALL Primary Trauma Team)	"Ready Team" (not in resuscitation area/not in PPE)	Preferred location
***0**	Patient with high likelihood of requiring intubation AND urgent resuscitation (e.g. prehospital cardiac arrest or prehospital BP less than 80)	• TTL • Trauma Fellow or Resident • Most senior anaesthesia resident available in hospital • Most senior General Surgery (GS) resident available in hospital • Most senior Orthopaedic surgery resident available in hospital • Nurse x 2 • RT	**Airborne** Precautions: • N95 • Face shield • Impervious gowns • Gloves	• Other available GS resident(s) • Anaesthesia backup • Charting nurse • EA • CT Triage (during daytime) • X-ray tech	Trauma Bay 3 or 4
***1**	Patient with high likelihood of requiring intubation but hemodynamically normal (e.g. prehospital hypoxia or less than 6)	• TTL • Trauma Fellow or Resident • Most senior anaesthesia resident available in hospital • Most senior GS resident available in hospital • Nurse • RT	**Airborne** Precautions: • N95 • Face shield • Impervious gowns • Gloves	• Other available GS resident(s) • Anaesthesia backup • Orthopaedic surgery resident • Charting nurse • EA • CT Triage (during daytime) • X-ray tech	Trauma Bay 3 or 4

***2**	Patient with low likelihood of requiring intubation or acute resuscitation	• TTL • Trauma fellow or Resident • Most senior GS resident available in hospital • Nurse	Droplet Precautions (if patient deteriorates, **airborne** precautions required) • Surgical mask with eye protection or face shield • Cloth gown • Gloves	• RT • Anaesthesia resident • Other available GS resident(s) • Orthopaedic surgery resident • Charting nurse • EA • CT Triage (during daytime) • X-ray tech	Any Trauma Bay