

NH Regional Trauma Team Resuscitation Algorithm for Novel Coronavirus (COVID-19): VERSION 1

All major trauma patients presenting to the ED should be assumed COVID-19 infected; therefore, PPE precautions are required for all patients

PRE-HOSPITAL NOTIFICATION or TRIAGE ASSESSMENT

- Make note of clinical indicators that place patient at higher risk of requiring Aerosol Generating Medical Procedure¹
- Determine appropriate response below. If in doubt, escalate to higher risk category

Patient likely to require Aerosol Generating Medical Procedure (AGMP)*?

Low Risk Screen for Aerosolization

- Physiologically STABLE
- Controllable & cooperative

Contact + Droplet Precautions:

- Gown, gloves, eye/face protection
- Surgical mask
- Patient masked if able

Move Patient to Trauma/Resuscitation Room

- Maintain closed door if possible
- Continue Primary Assessment
- All equipment brought into room must remain until terminally cleaned

***AGMP required at any time?**

NO

- Continue Assessment & Treatment as required
- Maintain Contact + Droplet Precautions

YES

Transfer to Isolation Room (if available) or Closed Room

- Essential personnel only
- Essential AGMP equipment only
- AGMP by most experienced provider
- Perform essential procedures only
- Nurse charting outside room

High Risk Screen for Aerosolization

- Physiologically UNSTABLE
- Agitated or Altered LOC (GCS < 15)

Contact + Droplet + Airborne Precautions:

- Airborne PPE for all AGMPs*
- Gown, gloves, eye/face protection, N95 respirator

Highly Unstable?

Likely to require surgical intervention or multiple AGMP

NO

YES

Transfer to Operating Room (if available)

- Early communication with the Surgical Team
- Consider negative pressure OR
- **Designated Route of Movement to be cleared prior to transferring patient

DISPOSITION

1. Perform COVID-19 testing ASAP after completion of initial management if being admitted
 2. Prepare for possible admission with early notification to pre-determined ward/unit
- OR
3. Early notification to PTN for transfer requiring definitive care ([see NH Transfer Algorithm](#))

*Aerosol Generating Medical Procedure (AGMP)

- Open Airway Injuries
- Endotracheal Intubation
- Surgical Airway Insertion
- Suctioning
- Thoracotomy
- Naso / Orogastric Tube Insertion
- Positive Pressure Ventilation
- Endotracheal Extubation
- Chest Tube Insertion
- CPR
- Central Line Insertion



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NH Regional Trauma Team Resuscitation Guiding Principles Novel Coronavirus (COVID-19): VERSION 1

GUIDING PRINCIPLES

1. The provincial trauma system will continue to function by usual processes and protocols (triage, transport, referral patterns, care standards) with local modifications implemented to reduce COVID-19 transmission.
 2. All providers involved in the care of major trauma must be familiar with NHA infection control practices and successfully complete N95 respirator fit testing in the last two years.
 3. If available and appropriate for care, all major trauma patients arriving to the Emergency Department (ED) should be directed to a negative pressure isolation area, otherwise use a private resuscitation room/area with proper personal protective equipment (PPE).
 4. Where access to a negative pressure isolation area is limited, major trauma patients arriving to ED should be **immediately triaged** by an emergency physician or similarly qualified provider to a **low risk** or **high risk response** for initial assessment and management.
 5. A **low risk response** directs patients who are stable, alert and cooperative with no clear need for AGMP (intubation, chest tube) to initial management with contact and droplet precautions in an appropriate assessment area. **Negative pressure isolation is not required.**
 6. A **high risk response** directs patients who are unstable, agitated, uncooperative, have a potential lung injury open to the environment, have high oxygen requirements, demonstrate altered LOC, or are likely to need an urgent high-risk AGMP (intubation, chest tube) to initial management in a **negative pressure isolation area** (if available or use proper precautions), employing the following principles:
 - Use the smallest, most experienced team possible
 - Appropriate Airborne PPE must be worn: gloves, gown, N95 respirator and face shield/goggles
 - Adopt a lower threshold for **early intubation** in patients (e.g. elderly with multiple rib fractures) in order to promote early containment of aerosols
 - CPR should not be performed in major trauma (blunt or penetrating), unless a medical event such as dysrhythmia, myocardial infarction or pulmonary embolism may have directly preceded or precipitated the injury
 - **Efforts should be made to preserve and protect supplies, equipment and personnel.** To prevent potential contamination of unused supplies, only bring essential equipment into the room.
- NOTE: Must wear Airborne PPE post conclusion of procedure according to rate or air circulation in room.
- If negative pressure room is not available, AGMP to be performed in a closed room, and Airborne PPE must be worn post conclusion of procedure for 90 minutes while inside the room.
7. Diagnostic and other procedures unlikely to direct decision-making should not be performed.
 8. Acceptable standards of care should be pursued, although consideration should be given to modifying procedures that pose a high risk for airborne transmission (CPR, intubation) and/or forgoing those that offer negligible benefit (ED thoracotomy in blunt trauma).
 9. If CT imaging to be performed in the assessment of adult major trauma, **whole body CT is recommended** to simplify and expedite diagnostic work up and disposition planning.
 - In pediatric patients, usual imaging aimed at minimizing radiation exposure should pertain.
 10. Reporting on chest CT, if performed, should include comment on whether findings are compatible with COVID-19 pneumonia using standard language.
 11. Admitted major trauma patients should continue to be managed under contact and droplet precautions **with relocation to a private room wherever possible.**
 12. Have ****Designated Routes of Movement** pre-determined to various areas of the hospital (i.e. ED assessment room to CT, OR and ward/unit); ensure movement route is clear of people and equipment prior to moving patient.
 13. If transfer to definitive care is required, do not delay transport – **notify PTN immediately.**

Adapted and adopted from **Trauma Services BC** “*Recommendations for Major Trauma Management during the COVID-19 Pandemic Guideline*” – available on the BC CDC website:

Resources available on OurNH under ‘Novel Coronavirus’ or by contacting a NH Trauma Coordinator:



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