

Northeast Ohio Regional EMS Protocol

COVID-19 Response Protocols and Standard of Care Exceptions

04.16.2020

A Product of Collaboration



The most current version of this protocol can be found at

<http://hospital.cecoms.cuyahogacounty.us/EMSProtocol.aspx>

COVID-19 EMS Protocol Supplement

PPE and Exposure	3-0
Adult Respiratory Distress / Airway	4-0
Pediatric Respiratory Distress / Airway	5-0
Respiratory Distress Key Points.....	6-0
Transport.....	7-0
Transport Key Points.....	8-0
ACS Exception.....	9-0
ACS Exception Key Points.....	10-0
Cardiac Arrest Exception.....	11-0
Cardiac Arrest Key Points.....	12-0
Change Log.....	13-0

Pages and table of contents are hyperlinked for quick access in Adobe reader
The header bar of each page will return to the table of contents

COVID-19 PPE and EXPOSURE

PPE REQUIREMENTS

PPE Requirements <i>suspected or known COVID-19 patients</i>	PPE Requirements <i>WITH</i> Aerosol Generating Procedures <i>Such as Breathing Treatments, Suction, CPAP, Airway Management, CPR</i>
<ul style="list-style-type: none"> • Surgical mask on patient during care where available • Surgical mask minimum on all providers, N95 preferred. • Gown preferred where available, follow departmental policy • Gloves • Eye Protection 	<ul style="list-style-type: none"> • Surgical mask on patient when not actively managing airway • N95 or greater level respiratory protection • Gown where available • Gloves • Eye Protection

PPE KEY POINTS

<ul style="list-style-type: none"> • Follow CDC guidelines for proper donning / doffing of PPE – PPE requirements may change frequently, check for updates • Surgical masks are to be used and reused throughout a shift unless soiled, damaged or exposed to person of concern (ex: coughing, aerosol generating procedure / treatment). • All providers are to wear at minimal a surgical mask, gloves and eye protection on all patient encounters. N95 Preferred. • If your PPE supply allows, all patients are to arrive at the hospitals wearing a surgical mask. If limited surgical mask, prioritize mask placement on patients with fever, cough, dyspnea or other flu like symptoms discussed in prior updates. Receiving EDs may want to place a mask on patients when then arrive. • N95 masks can be used by a single EMS provider until soiled, damaged, or exposed to a person of concern. This could mean multiple shift use for N95 mask. Consider placing initials on masks that are being reused and storing in a paper bag to allow moisture in a used mask to dissipate. • Departments using CAPR / PAPRs please follow your department policies for use and cleaning. • If gowns are not available and concerning droplet exposure occurred, change into a clean uniform, remembering to wash hands after touching soiled clothing. • Higher level of respiratory protection in excess of N95 include N99 mask, N100 mask, PAPR / CAPR, or full or partial facemasks with N95 or greater filters. • Remove and discard (if not being re-used) All PPE, including gloves after patient drop off and wash hands or disinfect in patient room. Disinfect and reuse durable eye protection, consider reuse of mask per current departmental practice. • Re-don PPE prior to decontamination of equipment. • Follow Medical Direction or departmental directives for reuse of scarce equipment. • Patient surgical masks may be replaced at the receiving hospital, 1:1 exchange for other PPE may vary by facility.

EXPOSURE

Exposure to COVID-19 Positive Patient <i>WITH</i> Appropriate PPE	Exposure to COVID-19 Positive Patient <i>WITHOUT</i> Appropriate PPE
<ul style="list-style-type: none"> • Safe to return to work without restrictions • Self - monitor for symptoms • If symptoms develop during the shift, the provider should wear a surgical mask, place themselves in self-isolation and notify the receiving hospital's Infection Control Department or follow departmental policy 	<ul style="list-style-type: none"> • Notify the receiving hospital's Infection Control Department and follow departmental exposure policies • The provider is to complete an exposure form • Self – monitor for symptoms following departmental policy • If symptoms develop during the shift, the provider should wear a surgical mask, place themselves in self-isolation

EXPOSURE KEY POINTS

<ul style="list-style-type: none"> • Self-Monitoring for symptoms includes taking temperature at least twice per day • Self-Monitoring programs are being initiated by many departments to assure staff are well and not reporting to work with possible symptoms. Departments may decide to use these for routine employee monitoring or just after possible exposure.

ADDITIONAL PERSONAL PROTECTION RECCOMENDATIONS

<ul style="list-style-type: none"> • During regional outbreaks it is recommended to wear surgical masks if available at station to prevent provider to provider contamination. • Maintain social distancing of at least 6' while at station and while sleeping. • Clean and disinfect common areas frequently. • Wash hands frequently. • Self-monitor per departmental policy including temperature. • Outside of patient care, it is recommended that surgical masks still be worn while on duty to help limit exposure and spread of the SARS-CoV-2 virus. It should be up to the individual departments to determine policy and exceptions.

COVID-19 RESPIRATORY DISTRESS and AIRWAY

Follow Field Termination of Resuscitation Protocol for Patients in Cardiac Arrest. Patients without ROSC Should not be Transported for all Health Care Providers Safety

UNIVERSAL PATIENT CARE PROTOCOL

PPE Minimum
Surgical Mask / Gown / Gloves / Eye Protection
Surgical Mask on Patient

12 LEAD EKG PROCEDURE
1ST Contact to EKG and Transmission < 10 Min

IV / IO PROCEDURE

This protocol is intended to be used in place of the standard Adult Respiratory Distress protocol and Adult Airway protocol for patients who present with viral symptoms

Mild – Symptoms

Refer to COVID-19 TRANSPORT SUPPLEMENT PROTOCOL

OXYGEN By Nasal Cannula Under Surgical Mask if Transported

Moderate / Severe Distress

CAPNOGRAPHY PROCEDURE

OXYGEN By Least Aerosol Producing Method to Maintain SpO₂ - NC / NRB

Consider and Prioritize Injectable Bronchodilators Over Inhaled

EPINEPHrine (ADRENALINE)
1 mg / ml (1:1000)
0.3 – 0.5 mg IM

Consider **MAGNESIUM SULFATE**
2 Grams IV Drip over 20 minutes

If > 50 Years or CAD
Use MAGNESIUM SULFATE First – Add Epinephrine if Unimproved
0.15 mg IM May Repeat Every 5 min

methylPREDNISolone (SOLU – MEDROL)
125 mg IV / IO

Only for Use in Cases Where Underlying COPD Or Asthma Are Likely Being Exacerbated by The Virus

Use the Following Only in Extremis and Not Responding to Above Treatments

ENHANCED PPE
Minimum PPE **PLUS** N95 or Higher-Level Protection **REQUIRED**

Obtain and Assist with Administration of Patients MDI Albuterol (Proventil) if Available – Preferred ALL PROVIDERS Administer 4 Puffs May Repeat

Treat with aerosol(s) **DUONEB (ALBUTEROL / IPRATROPIUM)**

Give in Location Other Than Ambulance if Able Without Risk to Others

CPAP PROCEDURE
Only If Refractory **Hypoxemia** / Not Responding to Basic Oxygenation Methods and Medications Above Use Viral Filter On CPAP if Available

Requires AIRWAY Management

CAPNOGRAPHY PROCEDURE

ENHANCED PPE
Minimum PPE **PLUS** N95 or Higher-Level Protection **REQUIRED**

BASIC MANEUVERS FIRST
Open Airway
Nasal / Oral Airway
Bag-Valve-Mask

STOP If Patient Spontaneously Breathing Place NRB on Patient While Preparing to Manage Airway
STOP If Not Spontaneously Breathing or Insufficient Breathing BVM With 2 Hand Mask Seal to Minimize Leakage Use Viral Filter on BVM Where Available Move Quickly to Airway Placement

Consider Sedation prior to Advanced Airway Placement as per Standard Adult Airway Management Protocol

Extraglottic (BIAD) AIRWAY Device

STOP No Medications Down Extraglottic (BIAD) Airway
STOP EMT Use in Pulseless & Apneic Patient Only
STOP Esophageal Disease

STOP Use the Following Only in Extremis and Not Responding to Above Treatments

Consider RSI Protocol **APPROVED DEPARTMENTS ONLY**

INTUBATION PROCEDURE

STOP Max 2 Intubation Attempts
STOP AEMT Apneic Patient Only
STOP Document Failed Attempt(s)

a

TRANSPORT to appropriate facility **CONTACT** receiving facility with **EARLY NOTIFICATION** of potential COVID-19 case **AND VERIFY HOSPITAL ARRIVAL / ACCESS PROCESS** before taking patient inside **CONSULT** Medical Direction where indicated **APPROPRIATE** transfer of care

EMT Intervention AEMT Intervention PARAMEDIC Intervention Online Medical Control

COVID-19 RESPIRATORY DISTRESS and AIRWAY

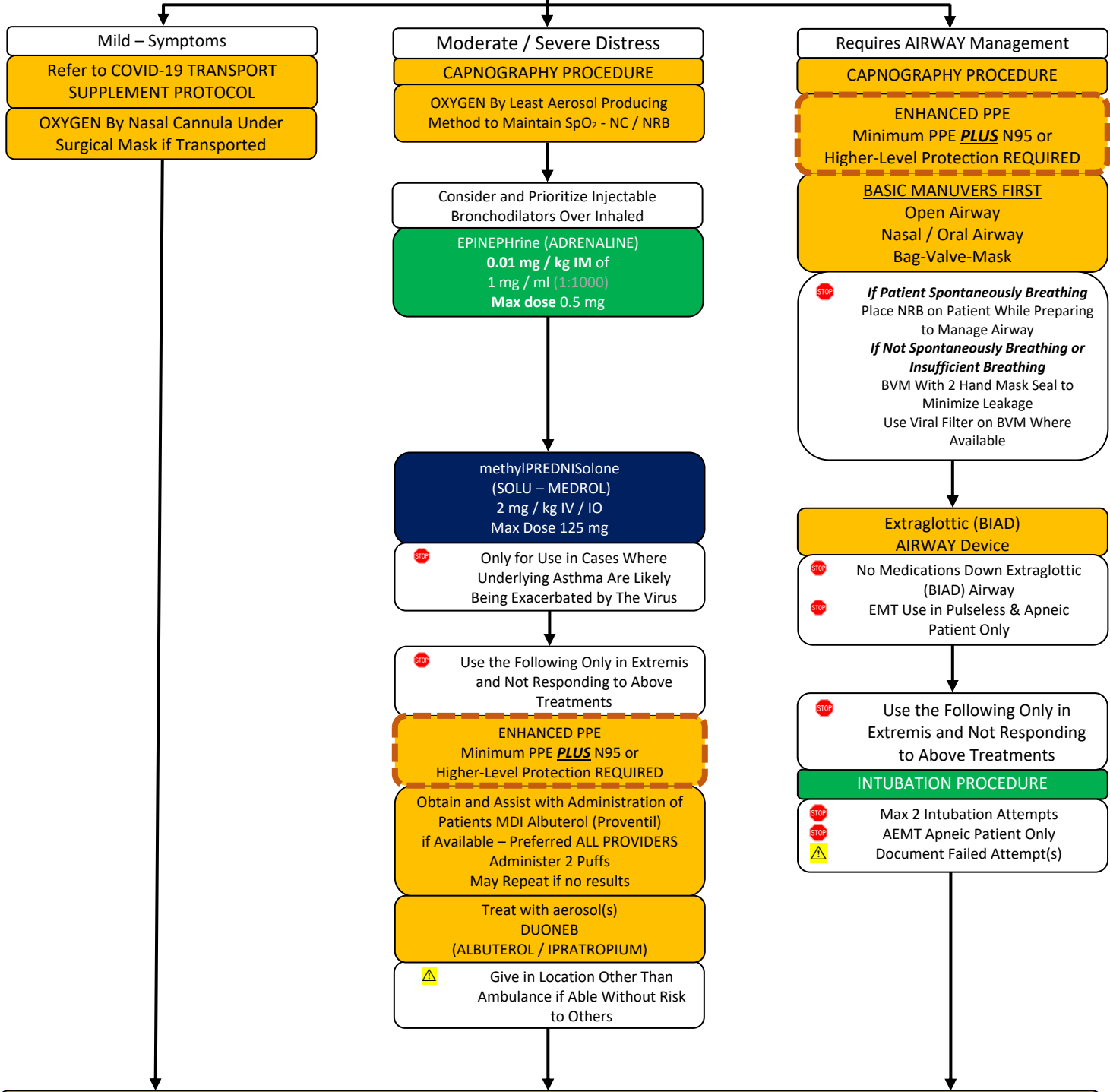
3-5 kg	6-7 kg	8-9 kg	10-11 kg	12-14 kg	15-18 kg	19-23 kg	24-29 kg	30-36 kg
6-11 lbs	13-15 lbs	18-20 lbs	22-24 lbs	26-31 lbs	33-37 lbs	42-51 lbs	53-64 lbs	66-81 lbs
18-24 in	24-26 in	26-29 in	29-33 in	33-38 in	38-43 in	43-48 in	48-52 in	52-57 in

UNIVERSAL PATIENT CARE PROTOCOL

PPE Minimum
Surgical Mask / Gown / Gloves / Eye Protection
Surgical Mask on Patient

IV / IO PROCEDURE

This protocol is intended to be used in place of the standard Pediatric Respiratory Distress protocol and Pediatric Airway protocol for patients who present with viral symptoms



TRANSPORT to appropriate facility **CONTACT** receiving facility with **EARLY NOTIFICATION** of potential COVID 19 case **AND VERIFY HOSPITAL ARRIVAL / ACCESS PROCESS** before taking patient inside **CONSULT** Medical Direction where indicated **APPROPRIATE** transfer of care

EMT Intervention
AEMT Intervention
PARAMEDIC Intervention
Online Medical Control

COVID-19 RESPIRATORY DISTRESS

History	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none"> Flu-like Illness 	<ul style="list-style-type: none"> Fever greater than 100.4 F Dyspnea Upper respiratory infection Cough Chills Weakness Body Aches Diarrhea, plus one of the above 	<ul style="list-style-type: none"> Cancer / tumors / lymphoma Medication or drug reaction Hyperthyroidism Heat related emergency Meningitis Pneumonia Influenza A / B or RSV

COVID-19 TREATMENT POINTS

General Management

- If your PPE supply allows, all patients are to arrive at the hospitals wearing a surgical mask. If limited surgical mask, prioritize mask placement on patients with fever, cough, dyspnea or other flu like symptoms discussed in prior updates. Receiving EDs may want to place a mask on patients when then arrive.
- Known of suspected COVID-19 patients should be transported to a full-service hospital with ICU capabilities.

Airway Management

- When high risk droplet procedures are required, the provider is recommended to wear a minimum of eye protection, gown, gloves and a N95. This may include intubation, CPAP, suction, aerosol treatments or care management of symptomatic tracheostomy patient.
- If BVM management of patient is required, use 2 hand mask seal and gentle reduced volume ventilation to help prevent aerosolization of virus.
- If a patient has an unstable airway, don PPE as described above and place an advanced airway. An extraglottic airway creates less exposure to aerosols / droplets and is preferred. Intubation is permitted as a backup. Consider placing a towel around a properly secured airway to help prevent sprayed droplets.
- Video laryngoscopy is preferred to help assure distance from the patient during intubation when it is required.
- Do not use delivery of high flow oxygen via nasal cannula during intubation procedure in COVID-19 cases.
- In-line HEPA filters, where available, should be utilized during ventilation of patients with ETT or supraglottic airway. Use with CPAP or nebulized treatments can vary with product. If using in-line sampling capnography as well, make sure the HEPA filter is placed closest to the patient and capnography sampling connector is after the HEPA filter.

Oxygen Delivery

- Place oxygen delivery devices (nasal cannulas / non-rebreathers) under surgical mask to help prevent aerosolization of virus, particularly if the patient is coughing.

Inhaled Medications

- If the patient has a metered dose inhaler, make sure this goes with the patient if transported. EMS may utilize patients MDI in place of standard aerosol treatments to help minimize risk of these procedures in these patients.
- If nebulized treatments must be given, attempt to give in location other than the ambulance, but also nowhere that will expose others. Assure receiving facility is aware of this in EMS to Hospital report.
- Consider the use of IM epinephrine or IV magnesium per standard respiratory distress protocols for severe cases. This is indicated earlier and for milder symptoms in these cases to help minimize the risk associated with nebulized treatments.

Cardiac Arrest

- In the absence of ROSC, follow termination of resuscitation guidelines.

Transfer of Care Management

- To limit exposure to others in common areas, discontinue all aerosol treatments / CPAP / BVM ventilation without HEPA filter immediately prior to entering ED and resume immediately in the patient's room with the door closed.

GENERAL KEY POINTS

- Status asthmaticus** - severe prolonged asthma attack unresponsive to therapy - life threatening!
- If the patient is over 50 years of age, has a history of cardiac disease, or if the patient's heart rate is >120 EPINEPHrine (Adrenaline) may precipitate cardiac ischemia.
- Monitor pulse oximetry continuously during treatment and transport.
- A silent chest in respiratory distress is a pre - respiratory arrest sign.
- Be alert for respiratory depression in COPD patients on prolonged high flow oxygen administration.
- DO NOT withhold oxygen from hypoxic patients.
- If Albuterol (Proventil) and / or Ipratropium (Atrovent) is given, monitor the patient's cardiac rhythm.
- Assure enough expiration time when ventilating COPD or asthma patients to prevent breath stacking and Co2 elimination.
- Albuterol (Proventil) and Ipratropium (Atrovent) can be given down an ETT or Tracheotomy during ventilation if there is evidence of bronchoconstriction.
- EtCo2 measurement is mandatory with all methods of intubation. Document results of SpO2.**
- Limit intubation attempts to 2 per patient max.**
- If unable to intubate, continue BVM ventilations, transport rapidly, and **notify receiving hospital early.**
- Do not assume hyperventilation is psychogenic - use oxygen, not a paper bag.
- Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- Consider c-collar to help maintain airway placement for all managed airway patients.
- Consider the use of intubation aids such as a bougie or video laryngoscope to facilitate intubation.
- Extraglottic airway device / BIAD (Blind Insertion Airway Device) Examples (not limited to); King Airway, LMA, Combitube, iGel

COVID-19 TRANSPORT

Known or suspected COVID-19 Patient

One or more viral symptoms present;

- Fever
- Cough
- Nasal / Chest Congestion
- Sore Throat
- Body Aches
- Dyspnea

Provider and Patient PPE for droplet precautions per most current guidelines

Limit number of providers with patient contact, only as many as required for indicated interventions

UNIVERSAL PATIENT CARE PROTOCOL

Conduct Patient Assessment – EMS Taken Vitals

Vital Signs – **All**

- SBP \geq 100
- Resp < 22
- Spo2 \geq 94 RA
- HR < 110
- No decreased LOC

Patient Medical History - **All**

- Age < 60 > 3 years
- Not ESRD on dialysis
- No CAD/HF
- No lung or heart disease
- Not immunocompromised
- No History of HTN

Stable for NO TRANSPORT

Determine Suitability for Home Care

- Appropriate Care Givers are available (if needed)
- There is separate space for the patient to recover without sharing with others
- The patient has access to food, water, and other necessities
- There are no household members with high risk history (Noted above)

Release without transport to care of self with standard non-transport release if patient consents to non-transport. Contact Medical Control only if the patient does not consent. Medical Control contact not required if within above criteria.

Provide patient resources for hotlines, testing, and / or telemedicine.
Complete thorough PCR regarding assessment and instructions given.

Vital Signs – **Any**

- SBP < 100
- Resp > 22
- Spo2 < 94 RA
- HR > 110
- Decreased LOC

Patient Medical History - **Any**

- Age > 60 < 3
- ESRD on dialysis
- Lung or heart disease
- Immunocompromised
- History HTN/CAD/HF

Unstable - TRANSPORT

Patient Complaint - **Any**

Chest Pain, Shortness of breath, or Syncope

ALS ASSESSMENT (WHERE AVAILABLE)

Minimize aerosol or droplet producing procedures unless required such as CPAP and aerosol treatments

Obtain phone numbers for key family / caregivers and provide to receiving Hospital as visitation / access to patient likely to be restricted. Give to receiving facility

TRANSPORT to appropriate facility
CONTACT receiving facility as early as possible to indicate a person of interest for COVID-19.
Follow Hospital instructions for access to Hospital once at destination.

CONSULT Medical Direction where indicated

Remove PPE with caution following established doffing techniques and discard appropriately.
Through decontamination for ambulance and equipment following current disinfection standards.

EMT Intervention

AEMT Intervention

PARAMEDIC Intervention

MED CONTROL Consult

COVID-19 TRANSPORT

History	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none"> • Flu-like Illness 	<ul style="list-style-type: none"> • Fever greater than 100.4 F • Dyspnea • Upper respiratory infection • Cough • Chills • Weakness • Body Aches • Diarrhea, plus one of the above 	<ul style="list-style-type: none"> • Cancer / tumors / lymphoma • Medication or drug reaction • Hyperthyroidism • Heat related emergency • Meningitis • Pneumonia • Influenza A/B or RSV

KEY POINTS

- If a patient is not transported from a location other than home, discourage the use of public transportation.
- Turn on vent fan and HVAC to create negative pressure in ambulance during transport.
- Please do not enter the Emergency Department with a suspected COVID-19 patient until you have verified the ED is ready to receive the patient. This usually involves clearing hallways of other personnel/patients, preparing isolation rooms, and closing other patient's doors.
- Consider finishing or halting aerosol producing treatments during transition from ambulance to the Emergency Department.
- If patient is transported, obtain phone numbers for family and / or caregivers if applicable as the visitation of the patient is likely to be restricted at the hospital. Give this information to the receiving facility.
- For calls in apartment buildings, multi-family dwellings, or skilled nursing facilities, the patient should wait in their residence and public safety providers will meet them there. This will allow public safety providers to place a mask on the patient, limiting droplet spread in common areas.

ACUTE CORONARY SYNDROME EXCEPTION

UNIVERSAL PATIENT CARE PROTOCOL

Do not give OXYGEN unless SpO₂ <94%

CAPNOGRAPHY PROCEDURE

IV / IO PROCEDURE

12 LEAD EKG PROCEDURE - LEFT

Look for ST Elevation - **Transmit to ED**

EKG INDICATES STEMI - CONSULT PHYSICIAN IF UNSURE

Strongly encourage transport to hospital with interventional Cath lab (PCI) when STEMI is present on 12 lead

If ST Elevation Leads II, III, Avf
12 LEAD EKG PROCEDURE - RIGHT
Right Sided Precordial Lead V4R - Transmit to ED
DO NOT DELAY TRANSPORT TO ACQUIRE RIGHT SIDED 12 LEAD
USE CAUTION - NITROGLYCERINE (NITRO-STAT) if elevation in V4R

Use caution with acute septal wall MI
(V1, V2) – Watch for AV blocks – Consider placing pacing pads

ASPIRIN
324 mg chew and swallow
(81 mg / tab x4)

NITROGLYCERIN (NITRO-STAT / Go-Nitro)
0.4 mg (400 mcg) SL
(If SBP >110 with IV or SBP >120 without IV)
May give up to 3 total, every 5 minutes if working

Erectile Dysfunction / Pulmonary HTN drug use within 48 hrs.
EMT use requires DIRECT Med Control

If cocaine or stimulant Induced STEMI include
MIDAZOLAM (VERSED) 2.5 mg IV / IO or 5 mg IM / IN
OR
LORazepam (ATIVAN) 1 – 2 mg IV / IO / IM / IN

If Midazolam (Versed) or LORazepam (Ativan) Unavailable,
See Medication Section for DiazePAM (Valium)

IF Nausea / Vomiting
ONDANSETRON (ZOFRAN) 4 mg IV / IM
OR
PROMETHAZINE (PHENERGAN) 12.5 mg IV / 25 mg IM

ONDANSETRON (ZOFRAN) Oral Disintegrating Tablet (ODT)
if Nausea / Vomiting - 4 mg Oral – may repeat max 8 mg

Paramedic Treatment if Confirmed STEMI

TICAGRELOR (BRILINTA)
180 mg Chew and Swallow PO

HEPARIN
60 Units / kg IV / IO
Max Dose 4000 Units

CONSIDER fentaNYL (SUBLIMAZE)
25 – 100 mcg IV / IM / IN / IO – SLOW IV – Max 100 mcg

If fentaNYL (Sublimaze) is unavailable, See Medication Section for Morphine Sulfate
Routine use of opiate pain control discouraged if TICAGRELOR (BRILINTA) being utilized – interferes with absorption

Utilize this for ALL ACS Patients, regardless of COVID-19 symptoms, until Medical Direction advises otherwise

NO STEMI ON EKG - ISCHEMIC CHEST PAIN

ASPIRIN
324 mg chew and swallow
(81 mg / tab x4)

NITROGLYCERIN (NITRO-STAT / Go-Nitro)
0.4 mg (400 mcg) SL
(If SBP >110 with IV or SBP >120 without IV)
May give up to 3 total, every 5 minutes

Erectile Dysfunction / Pulmonary HTN drug use within 48 hrs.

fentaNYL (SUBLIMAZE)
25 – 100 mcg IV / IM / IN / IO – SLOW IV – Max 100 mcg

If fentaNYL (Sublimaze) is unavailable, See Medication Section for Morphine Sulfate

IF Nausea / Vomiting
ONDANSETRON (ZOFRAN) 4 mg IV / IM
OR
PROMETHAZINE (PHENERGAN) 12.5 mg IV / 25 mg IM

ONDANSETRON (ZOFRAN) Oral Disintegrating Tablet (ODT)
if Nausea / Vomiting - 4 mg Oral – may repeat max 8 mg

Hospital STEMI management may change during COVID-19 outbreak
Contact receiving facility prior to administration of these agents

TRANSPORT to appropriate facility (PCI)
CONTACT receiving facility
CONSULT Medical Direction where indicated
APPROPRIATE transfer of care

EMT Intervention

AEMT Intervention

PARAMEDIC Intervention

Online Medical Control

ACUTE CORONARY SYNDROME **EXCEPTION**

HISTORY	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none"> • Age • Medications • Past medical history (MI, angina, diabetes) • Allergies • Recent physical exertion • Onset • Palliation / Provocation • Quality (crampy, constant, sharp, dull, etc.) • Region / Radiation / Referred • Severity (1-10) • Time (duration / repetition) 	<ul style="list-style-type: none"> • CP (pain, pressure, aching, tightness) • Location (substernal, epigastric, arm, jaw, neck, shoulder) • Radiation of pain • Pale, diaphoresis • Shortness of breath • Nausea, vomiting, dizziness 	<ul style="list-style-type: none"> • Trauma vs. medical • Angina vs. myocardial infarction • Pericarditis • Pulmonary embolism • Asthma / COPD • Pneumothorax • Aortic dissection or aneurysm • GE reflux or hiatal hernia • Esophageal spasm • Chest wall injury or pain • Pleural pain

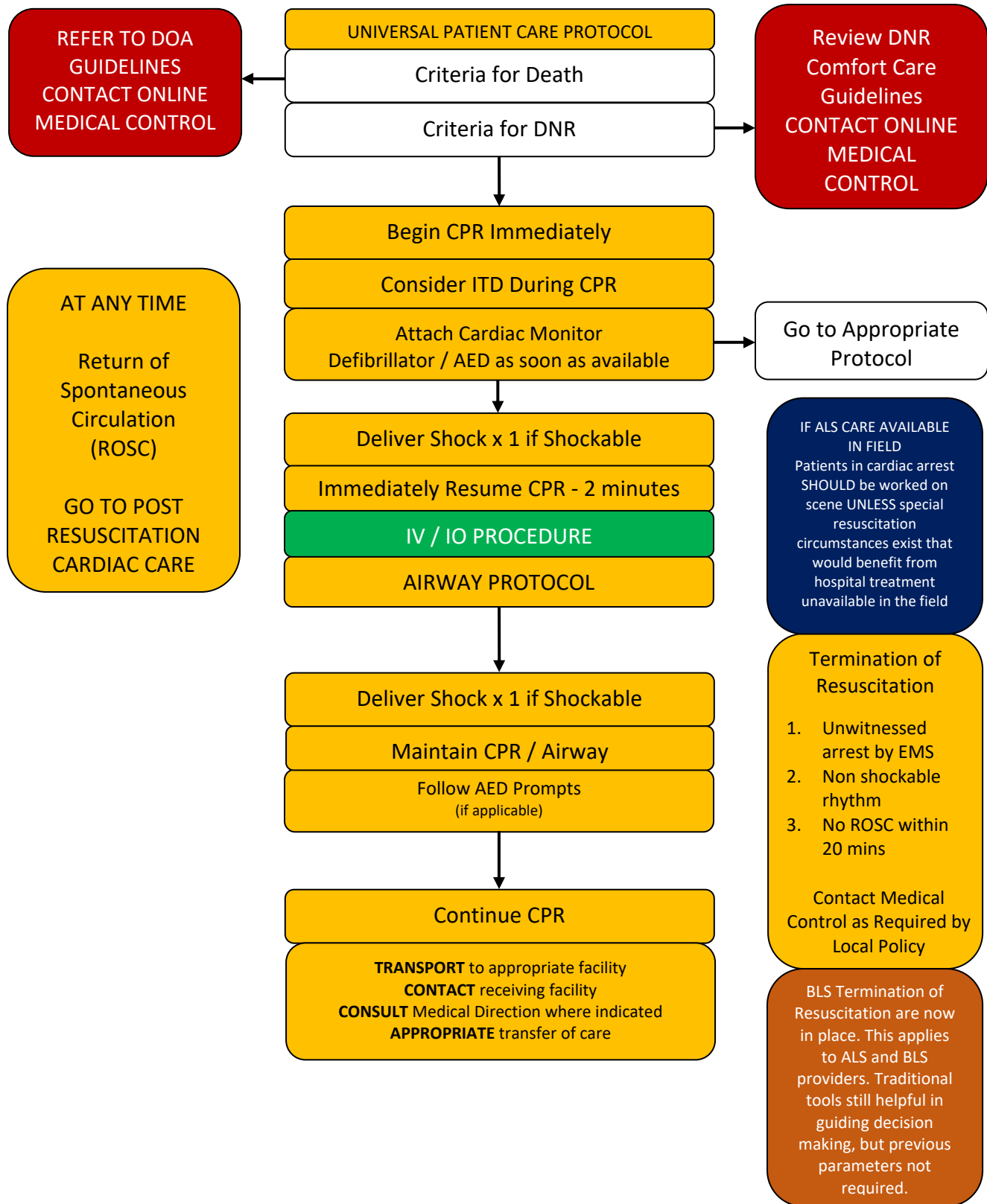
Anti-Platelet and Anti-Coagulant Medications

Clopidogrel (Plavix), Prasugrel (Effient), Ticagrelor (Brilinta), Ticlopidine (Ticlid), Apixaban (Eliquis), Dabigatran (Pradaxa), Edoxaban (Savaysa), Fondaparinux (Arixtra), Rivaroxaban (Xarelto), Warfarin (Coumadin, Jantoven), Betrixaban (Bevyxxa)

KEY POINTS

- During COVID-19 outbreak some hospitals may manage patient in the ED rather than send to the Cath lab. Call before all administrations of Ticagrelor (Brilinta) or Heparin as these interventions may interfere with medical management of these cases. This applies to all cases, not just suspected or known COVID-19 cases with ACS.
- Make the scene safe: All chest pain patients must have an IV and 12 Lead EKG.
- Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro.
- If patient has taken Nitroglycerin (Nitro-stat) without relief, consider potency of the medication.
- If positive ECG changes, establish a second IV while enroute to the hospital.
- Monitor for hypotension after administration of Nitroglycerin (Nitro-stat) or FentaNYL (Sublimaze).
- Nitroglycerin (Nitro-stat) or FentaNYL (Sublimaze) may be repeated per dosing guidelines in the **MEDICATIONS SECTION**.
- Diabetics / geriatric patients often have atypical pain, vague, or only generalized complaints. Be suspicious of a "silent MI".
- Refer to the **BRADYCARDIA PROTOCOL** (HR < 60 bpm) or **NARROW COMPLEX TACHYCARDIA PROTOCOL** (HR > 150 bpm) if indicated.
- If the patient becomes hypotensive from Nitroglycerin (Nitro-stat), FentaNYL (Sublimaze) administration, place the patient in the Trendelenburg position and administer a Normal Saline bolus.
- Be prepared to administer Narcan (Naloxone) if the patient experiences respiratory depression due to FentaNYL (Sublimaze) administration.
- If pulmonary edema is present, refer to the **CHF / ACUTE PULMONARY EDEMA PROTOCOL**. Consider other causes of chest pain such as aortic aneurysms, pericarditis, esophageal reflux, pneumonia, pneumothorax, costochondritis, pleurisy, pancreatitis, appendicitis, cholecystitis (gallbladder), and pulmonary embolism.
- Aspirin can be administered to a patient on Coumadin (Warfarin), unless the patient's physician has advised them otherwise.
- If the patient took a dose of Aspirin that was less than 324 mg in the last (24) hours, then additional Aspirin can be administered to achieve a therapeutic dose of 324 mg.
- DO NOT administer Nitroglycerin (Nitro-stat) to a patient who took an erectile dysfunction medication; Sildenafil (Viagra), Tadalafil (Cialis), Vardenafil (Levitra), etc. within the last 48 hours due to potential severe hypotension.
- Nitroglycerin (Nitro-stat) can be administered to a patient by EMS if the patient has already taken their own prior to your arrival. Document it if the patient had any changes in their symptoms or a headache after taking their own Nitroglycerin. Nitroglycerin (Nitro-stat) can be administered to a hypertensive patient complaining of chest discomfort without Medical Direction permission.
- Nitroglycerin (Nitro-stat) can be administered without an IV as long as patient has a BP greater than 120 mmHg, without signs of inferior wall MI.
- DO NOT treat PVC's with Amiodarone (Cordarone) unless patient develops runs of V-Tach, or has sustained V-tach.
- Pulse oximetry is not an indicator of myocardial perfusion.
- Only administer oxygen if the patient is hypoxic with a SpO₂ of less than 94. Do not withhold oxygen from patients that are short of breath regardless of SpO₂.
- Once applied to a known or suspected ACS patient do not remove a 12 lead EKG, even if the initial EKG is unremarkable. Some devices continue to look for ST segment changes and will alert if there are changes.

CARDIAC ARREST EXCEPTION



EMT Intervention	AEMT Intervention	PARAMEDIC Intervention	Online Medical Control
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CARDIAC ARREST EXCEPTION

HISTORY	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none"> • Events leading to arrest • Estimated downtime • Past medical history • Medications • Existence of terminal illness • Signs of lividity, rigor mortis • DNR 	<ul style="list-style-type: none"> • Unresponsive • Apneic • Pulseless 	<ul style="list-style-type: none"> • Medical vs. trauma • V-fib vs. pulseless V-tach • Asystole • Pulseless electrical activity (PEA)

KEY POINTS

- Termination of Resuscitation with NO transport to the hospital should be performed when there is an unwitnessed arrest, a non-shockable rhythm (either by manual or AED interpretation), and no field ROSC within 20 minutes.
- Patients may always be transported from unsafe scenes to assure provider welfare.
- Contact Medical Control as required by local policy for field termination.
- Always minimize interruptions to chest compressions.
- Consider attachment of ITD to enhance circulation with chest compressions. Remove if there is a return of spontaneous circulation (ROSC).
- Success is based on proper planning and execution. Procedures require space and patient access, make room to work.
- Reassess airway frequently and with every patient move.
- Maternal arrest - Treat mother per appropriate protocol with immediate notification to Online Medical Control and rapid transport.
- If the patient converts to another rhythm, refer to the appropriate protocol and treat accordingly.
- Attempt to obtain patient history from family members or bystanders.
 - Estimated down time
 - Medical history
 - Complaints prior to arrest
 - Bystander CPR prior to EMS arrival
 - AED use prior to EMS arrival
- Administer Dextrose only if the patient has a blood glucose level < 70 mg / dl. Dextrose should be administered as soon as hypoglycemia is determined.
- Reassess the patient if the interventions do not produce any changes.
- If indicated, refer to the TERMINATION OF RESUSCIATION EFFORTS POLICY.
- If patient is pregnant and in cardiac arrest, manually manipulate the uterus to the left during CPR

COVID-19 EMS Protocol Supplement Change Log

03.31.2020

Page	Change
1-0	Added orange box in upper right-hand corner regarding following field termination protocols
1-0	Added "Drip" to Magnesium Sulfate administration
3-0	Field termination bullet point added
5-0	Added last bullet point regarding multifamily dwellings and SNF's.
6-0	Changed left column of top chart to "without aerosol generating procedures" to "suspected or known COVID-19 patients"
6-0	Added "where available" to gowns and surgical masks
6-0	Added "CPR" to such as descriptions of with aerosol generating procedures in right column of top chart.
6-0	Added "Remove and discard (if not being re-used) All PPE, including gloves after patient drop off and wash hands"
6-0	Added "Follow Medical Direction or departmental directives for reuse of scarce equipment."
6-0	Added Additional Personal Protection Recommendations chart at bottom of page
6-0	Added "Patient surgical masks may be replaced at the receiving hospital, 1:1 exchange for other PPE may vary by facility"
7-0	Created change log page

04.03.2020

Page	Change
3-0	Added discontinuation of treatments statement during movement through ED
3-0	Added transport to hospital with ICU capabilities
6-0	Clarified "regional" outbreak
6-0	Added while on duty bullet point

04.09.2020

Page	Change
1-0	Added cover page with web link to online access
2-0	Added table of contents page
ALL	Re-ordered pages, putting PPE first in order
4-0	Changed verbiage for sedation prior to airway management to match base protocol
6-0	Grouped COVID treatment points by topic
6-0	Added bullet point for BVM gently
6-0	Added bullet point for video laryngoscopy
6-0	Added bullet point for oxygen delivery devices
8-0	Added bullet point regarding HVAC and vent in ambulance
9-0	Added exception for ACS protocol for systems giving prehospital ticagrelor(brilinta) or heparin requires receiving hospital contact prior to admin
10-0	Added ACS exception key points page with ticagrelor(brilinta) or heparin administration points
11-0	Added cardiac arrest protocol exception with BLS field termination points
12-0	Added cardiac arrest protocol key points exception with BLS field termination points

04.15.2020

Page	Change
3-0	Added considerations for reuse of masks per departmental policy and reuse of durable eye protection
6-0	Added consideration for the use of a towel over a secured airway to help with droplet mitigation
6-0	Reworded ROSC / field termination bullet point