

V2023.1 Connecticut Statewide Protocol Changes

V2023.1 Protocol Update

The purpose of this document is to offer guidance to Sponsor Hospitals and their Services for educating on the V2023.1 protocols. It is understood that not every Sponsor Hospital/Service will be using or allowing every protocol, but providers still should be aware of the existence of those protocols.

It is up to the Sponsor Hospital/Service to decide on how to evaluate their providers' understanding of applicable protocols.

This update includes a few protocols that would benefit from a skills demonstration, and/or "hands on" practice by the provider.

Recommended Skills

6.3A Central Line Access – NEW PROTOCOL

6.7A Gastric Tube Insertion – NEW PROCEDURE- OG Tubes Only

Epinephrine Auto-Injector – Expanded scope for EMRs

IM naloxone via syringe – Expanded scope for EMR/EMT

Training conducted using this protocol update is approved by the Department of Public Health, Office of Emergency Medical Services for up to 2 hours CME - Approval # CT-F4-196

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Goal

At the end of a “rollout” session the providers will be able to discuss what the V2023.1 protocol changes are, as well as how the updates may affect their practice (dependent on their specific Sponsor Hospital).

Protocol Objectives

2.14 Nausea and Vomiting

- ALS will learn the dosing of droperidol as an anti-emetic
 - 0.625-1.25mg slow IV push over 1-2 minutes or IM
 - May repeat once after 10 minutes
- ALS provider will learn when to use droperidol as an anti-emetic (cannabinoid hyperemesis)
- ALS provider will review “Red Flag” warning for droperidol
 - Avoid droperidol in patients who are already on psychotropic medications which may precipitate serotonin syndrome or malignant hyperthermia.

2.20A Poisoning/Substance Abuse/Overdose

(NOTE: IM naloxone for EMRs see separate Educational Supplement)

- EMT/EMR will learn that administering naloxone via IM syringe has been added to their scope of practice.
- EMT/EMR will learn the dose of for naloxone via IM syringe is 0.4mg.
- EMT/EMR will understand the benefit of a 0.4mg dose vs. the IM dose (more reliable medication delivery).
- EMR will understand the need to properly document administration of IM naloxone
- EMR will learn that a repeat dose of naloxone may be given in 3-5 minutes.
- ALS provider will review addition of buprenorphine administration
 - Must be approved by Sponsor Hospital
 - Provider must have buprenorphine administration training prior to implementing

2.21 A/P Seizures

- BLS (EMT) will review the “emergency” medications commonly used by seizure patients and caregivers
 - “IN” midazolam or diazepam (**NEW**)
 - Rectal valium (Diastat)
- BLS and ALS providers will understand that they can assist with a patient’s prescribed “IN” or rectal emergency seizure medications
- BLS (EMT) providers will learn how to assist with a patient’s prescribed “IN” emergency seizure medication
- BLS and ALS providers will review updated definition of “status epilepticus.”
 - ...is defined as any generalized seizures lasting more than 5 minutes or recurrent seizures without regaining full consciousness in between.

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2.22P Septic Shock Pediatric & 2.3P Allergic Reaction/Anaphylaxis

- ALS providers will learn why the change to the upper range of both epinephrine and norepinephrine infusions
 - Easier dosing
 - Pedi MDs rarely administer > 0.5mcg/kg/min
 - ALS providers will learn the new dosing of the medication
 - Norepinephrine or Epinephrine dose changed from 0.1-2.0mcg/kg/min to a new dose of 0.5mcg/kg/min (range of 0.1-0.5mcg/kg/min)

2.3A/P Allergic Reaction/Anaphylaxis Adult/Pediatric

(NOTE: Auto injector for EMRs see separate Educational Supplement)

- EMR will learn that administering epinephrine for anaphylaxis via auto-injector has been added to their scope of practice
- EMR will learn the appropriate adult and pediatric doses of epinephrine.
- EMR will learn that Medical Control is required to administer a second dose
- EMR will understand the need to properly document administration of an epi auto-injector

2.5A/P Asthma/COPD/RAD

- BLS (EMT) will learn that IM epi has been added (standing order) for patients with known history of asthma AND have impending respiratory failure
- BLS (EMT) will review differentiating respiratory distress v. respiratory failure
- BLS (EMT) will review differentiating Asthma/COPD/RAD from other respiratory emergencies
- BLS (EMT) will review the proper use of epi pen and/or have taken the Epi “check and inject” program.
- BLS (EMT) will learn dosing for IM epi for COPD/Asthma/RAD
 - **ADULT:** Epinephrine 0.3 mg (0.3 ml) of 1 mg/ml (1:1,000) IM, lateral thigh preferred. For additional dosing, contact Direct Medical Oversight.
 - **PEDIATRIC:** Epinephrine 0.15 mg (0.15 ml) of 1 mg/ml (1:1,000) IM, lateral thigh preferred.
 - For additional dosing, contact Direct Medical Oversight.

2.6 Behavioral Emergencies Adult/Pediatric

- Providers will learn about “Pediatric Urgent Crisis Centers” (PUCC)
- Providers will understand that Sponsor Hospital approval is required for this part of the protocol
- Providers will learn that transport to these centers are for ages 4-18y/o.
- Providers will understand how to contact their closest PUCC
- Providers will understand how to properly triage a patient to a PUCC

3.1A Bradycardia

- ALS provider will review updated dose of atropine to 1mg – to align with AHA.
 - Previous dosage was 0.5mg IV/IO every 3-5 minutes for a total of 3mg.

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3.2A Cardiac Arrest

- BLS and ALS providers will learn that “CCR” or continuous compressions with a BLS airway has been removed from protocol.
- BLS and ALS providers will learn that administering passive O2 (via NRB) is no longer part of protocol
- BLS and ALS providers will know that CPR should be performed based on ILCOR/AHA standards
 - Compression/Ventilation ratios with pauses for ventilation
 - Continuous compressions once advanced airway is placed
- ALS providers (AEMT) will learn that they can administer IV epinephrine during a cardiac arrest.
- ALS providers (AEMT) will learn the appropriate dosing/timing and appropriate EKG rhythm for administering epinephrine during a cardiac arrest.
- ALS providers will review updated guidance on timing of advanced airway placement and ventilation evaluation
 - Consideration of early advanced airway for arrests of respiratory etiology
 - Consideration of SGA/ETT if inadequate ventilation with BVM
 - Emphasis on early use/interpretation of ETCO2
- BLS and ALS providers will learn that mechanical CPR devices should not be applied until at least 8 minutes of manual CPR have been performed
- BLS and ALS providers will review that interruptions in compressions should be no longer than 10 seconds (including when applying a mechanical CPR device)
- ALS provider will review change to sodium bicarbonate usage in a cardiac arrest.
 - Removed “pre-existing” acidosis and hyperkalemia
 - Limits use to sodium channel blocker overdose
- ALS provider will review decision making process covering working an arrest on scene vs. transporting the patient
 - Consider early transport for rare cases where there is a strong suspicion of a reversible cause that can be addressed in hospital but not in the field, such as acute myocardial infarction or pulmonary embolism.
 - Consider transport for cases of persistent VF/VT or PEA with high ETCO2 for whom there may be hospital specific treatments indicated or for whom all EMS treatment options have been exhausted.
- ALS providers will review how to minimize the peri-shock charge period by pre-charging their defibrillator prior to the rhythm check. (At the 1min 45 second mark)
- ALS providers will review the use of either calcium chloride or calcium gluconate for suspected hyperkalemia in cardiac arrest.
 - Review added guidance to Cardiac arrest protocol (directly from 2.10 Hyperkalemia)
 - Note that calcium gluconate is now a 3gram dose (previously 2grams)

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3.2P Cardiac Arrest- Pediatric

- ALS provider will learn that a 3rd, higher, energy dose has been added to the defibrillation of a pediatric patient. The dose will now be: 2j/kg,4j/kg,6j/kg/8j/kg (instead of only 2j/kg then 4j/kg)
- ALS provider will learn that cuffed pediatric ETT are now preferred over uncuffed ETT
- ALS provider will review change to sodium bicarbonate usage in a cardiac arrest.
 - Removed “pre-existing” acidosis and hyperkalemia (see hyperkalemia protocol for guidance)
 - Limits use to sodium channel blocker overdose

3.5 Tachycardia Adult

- ALS provider will understand that protocol does not apply to “Sinus Tachycardia”
- ALS provider will learn that “sustained rate of >150bpm” has been removed for treating stable a-fib with RVR.
- ALS provider will understand that carotid sinus massage is not an acceptable as a vagal maneuver.
- ALS provider will learn what the “modified Valsalva” maneuver is.
- ALS provider will know that Cardizem is no longer a weight based dose, but is to be given as a 10mg bolus every 10minutes as needed (max. of 30mg)
- ALS provider will understand that adenosine is not the initial recommended medication for a wide complex tachycardia, that is should be used if it is a suspected supraventricular rhythm.

4.3 Low Titer O Negative Whole Blood Transfusion (Prehospital Blood Product Transfusion)

- ALS Provider will note protocol name change: Prehospital Blood Product Transfusion
- ALS provider will know that protocol has been expanded to add Type O, (Rh negative and positive) low titer whole blood and Packed Red Blood Cells
- ALS provider will ensure that they consider the ramifications of administering blood to any women of child bearing potential

4.8 Traumatic Brain Injury A/P

- BLS/ALS provider will understand the importance of preventing the 3 “Hs” (hypoxia, hypotension and hypocapnia) in a suspected brain injury patient.
- BLS/ALS provider will review how to prevent any of the 3 Hs from occurring during treatment of a head injury patient.
- BLS/ALS provider will learn that hyperventilation is no longer referenced in the protocol.
- BLS/ALS provider will understand why using normal ventilatory rates, and ETCO₂ values is the preferred method for management of the brain injury patient.
- ALS provider will learn why advanced airway placement should be avoided unless the patient can’t be effectively ventilated/oxygenated with BLS airway maneuvers.
- BLS/ALS providers will learn that the goal SpO₂ changed from maintaining a SPO₂ greater than 90% to maintaining a SPO₂ greater than 94%

4.10 Hemorrhage Control

- BLS/ALS providers will learn that this protocol replaces the tourniquet protocol – placing all hemorrhage control under one protocol
- BLS/ALS provider will learn that junctional tourniquets are now allowed in protocol
- BLS/ALS provider will learn the proper use/placement of a junctional tourniquet.

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- ALS provider will review how Tranexamic acid (TXA) works in the setting of hemorrhage control
- ALS provider will learn the indications/contraindications for administering TXA
- ALS provider will learn the correct dosing for TXA
 - 1 gram in 50-100mL NS/LR/D5W over minimum of 10 minutes

6.3A Central Line Access – NEW PROTOCOL – Recommend hands on skill

- ALS provider will learn why central lines are used and where they are placed
- ALS provider will learn when in an emergency situation they may access a central line
- ALS provider will learn proper procedure for accessing a central line, including equipment required.
- ALS provider will demonstrate proper access of a central line
- ALS provider will learn contraindications for accessing a central line.
- ALS provider will understand that protocol does not include accessing subcutaneous ports
- ALS provider will appreciate the risk of infection when choosing to access a central line.
- ALS provider will know why it is important to ensure that receiving facility is aware that EMS accessed the central line.
- ALS provider will be able to explain why they would access a central line versus placing an IO.

6.7 DNR Orders

- BLS/ALS provider will understand what bracelets/orders they can accept for the DNR patient
- BLS/ALS provider will know that there are now reference pictures in the protocol for types of acceptable DNR bracelets and forms.
- BLS/ALS providers will know that protocol clarifies use of a living will or advanced directive by EMS providers
- BLS/ALS providers will have a better understanding of who can/cannot ask resuscitation to be withheld.
- A BLS/ALS providers will understand that a discussion regarding goals of care/end of life, should be had with hospice and/or medical control when there is any confusion on validity of DNR/MOLST.

6.7A Gastric Tube Insertion – NEW PROCEDURE- OG Tubes Only - Recommend hands on skill

- ALS provider will learn that Nasogastric tubes have been removed from protocol, and only orogastric tubes are allowed.
- ALS provider will understand the indications for placing an OG tube
- ALS provider will understand the contraindications for OG tube
- ALS provider will learn the equipment required for placement of an OG tube
- ALS provider will learn the procedure for placing an OG tube
- ALS provider will demonstrate proper placement of an OG tube

6.8 Intraosseous Access

- ALS provider will review images that have been added to assist with better land marking/placement of IO needle.

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6.10 Needle Decompression

- ALS provider will learn that the indications for performing a needle decompression have been updated:
 - Any traumatic cardiac arrest with chest or abdominal trauma undergoing resuscitation.
 - Suspected tension pneumothorax **AND** either
 - Persistent and/or worsening hypoxia despite supplemental oxygen **OR**
 - Hypotension and/or rapidly worsening hemodynamics
- ALS provider will learn that one of the clinical signs of a tension pneumothorax has been changed from “decreased breath sounds” to “absent breath sounds.”

6.14 Refusal of Care

- BLS/ALS provider will learn the difference between police filling out a Police Request for Emergency Examination (PREE) for a patient with psychiatric disabilities and a patient who is intoxicated, where a PREE is not necessary.
- BLS/ALS provider will review the State of CT definitions of the following:
 - Legally emancipated minor
 - Conservatorship
 - Medical power of attorney or legal health care representative
- BLS/ALS providers will understand Direct Medical Oversight’s role when attempting to convince a patient to be transported.

6.16 Restraint

- BLS/ALS providers will understand that the term “excited/agitated delirium” is no longer used, and has been replaced with “Extreme agitation/combativeness.”
- ALS provider will learn that Zyprexa (olanzapine) is no longer allowed for sedation of agitated patients.
- ALS provider will learn that droperidol has been added for sedation.
 - ALS provider will learn the indications and contraindications
 - ALS provider will learn the correct dosing for droperidol is 2.5 mg / IV IO or 5mg IM, repeat once in 10 minutes.
- ALS provider will understand that ketamine is to be used for only the most severely agitated patients, who present an immediate risk of harm.
- ALS provider will know that ketamine dosing for the severely agitated patient is based on actual body weight and **NOT** ideal body weight.
- ALS providers will review the “escalating” approach to treating the agitated patient using references provided in the protocol.
 - RASS score (review chart)
 - “Mild, Moderate, Severe” visual reference
- ALS provider will understand RASS score
- ALS provider should understand the importance of thorough documentation of the patient’s presentation, using the RASS score.

6.19A Transcutaneous Pacing (TCP) – NEW PROCEDURE

- ALS provider will understand the indications/contraindication for using TCP
- ALS provider will learn the initial pacing rate that should be set.
- ALS provider will learn the initial mA that should be set

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- ALS provider will review the difference between electrical and mechanical capture, and how to assess it.
- ALS provider will understand that if the mA have reached 130, and no capture has occurred – they should do the following:
 - Confirm good therapy pad contact. If applicable, switch to anterior/posterior pad placement
 - Consider and treat reversible causes (see Protocol [Bradycardia 3.1A](#)):
 - ✓ Hypoxia / hypoventilation
 - ✓ Hyperkalemia
 - ✓ Toxin or medication overdose
 - ✓ Inadequate perfusion
- ALS providers will review the considerations for medicating a patient who is being paced.

6.20 Trauma Triage and Transport

- BLS/ALS providers will review the new updated format for Trauma Triage
 - Red (injury patterns/vital guidelines) = Level I/II
 - Yellow (MOI/EMS judgement)
- BLS/ALS providers will review Level I, II and III trauma center definitions
- BLS/ALS providers will understand that Level I/II trauma centers are seen as equivalent
- BLS/ALS providers will review pediatric specific vital signs provided

6.21 Ventricular Assist Device (VAD)

- BLS/ALS provider will review the updated flow chart for updated procedures
 - BLS/ALS provider will understand the difference between “simple” and “extensive” VAD trouble-shooting.
 - BLS/ALS provider will understand that the AED/Monitor should be placed prior to starting CPR
 - BLS/ALS provider will learn that CPR should be started in a “non-perfusing” VAD patient prior to performing extensive VAD trouble shooting
 - BLS/ALS provider should understand that simple VAD trouble shooting should be done prior to starting CPR
 - Driveline disconnection (i.e. detached controller)
 - Dead battery

7.0 Hazardous Material Exposure

- BLS/ALS provider will review new check list format
- BLS/ALS provider will know that protocol contains CT specific contact information for response and identification of hazardous materials.

7.2 Radiation Injuries

- BLS/ALS providers will review the updated PEARLS section
- BLS/ALS providers will learn what the appropriate PPE is for a radiation incident
- BLS/ALS providers will learn their individual risk of radiation exposure when treating a patient who has also been exposed.
- BLS/ALS providers will learn the new triage tips

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Appendices

Appendix 1: Adult Medication Reference

Etomidate

- Max dosing for RSI corrected to 30mg

Ketamine

- ALS provider will know that ketamine should be administered based on Ideal Body Weight (IBW) for the following:
 - RSI Induction
 - Analgesia
 - Post-airway sedation
- ALS provider will know that IBW reference is in the protocols' appendix

Appendix 2: Pediatric Medication Reference

- ALS provider will know that dopamine is no longer in the reference
- ALS provider will review the Pediatric Color-Coded Medication Reference that provides guidelines for new infusion ranges for epinephrine and norepinephrine
- ALS provider will know that cuffed ETT sizing has been added

Appendix 5: Ideal Body Weight Chart

- ALS provider will understand how to use this to calculate associated medication doses and vent settings.

Appendix 6: OPIOID Survivor Guidelines & Withdrawal Scale (COWS)

- ALS provider will review and understand scale
- ALS provider will understand how scale supports Protocol 2.20

Scope of Practice Update (see separate educational supplements)

Naloxone

- EMT/EMR will learn that administering naloxone via IM syringe has been added to their scope of practice.
- EMT/EMR provider will understand that in order to perform this expansion to their scope of practice they will need the following: 1 – Sponsor Hospital Approval 2- Training

Epinephrine Auto-Injector

- EMR will learn that administering epinephrine for anaphylaxis via auto-injector has been added to their scope of practice
- EMR provider will understand that in order to perform this expansion to their scope of practice they will need the following: 1- Sponsor Hospital Approval 2- Training

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