

V2022.1 Protocol Update

The purpose of this document is to offer guidance to Sponsor Hospitals and their Services for educating on the V2022.1 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.

- CPR (practice given breaths 1 every 6 seconds) **3.2A**
- Suctioning of inserted advanced airway **5.9**
- Suctioning of Tracheostomy tube **5.11**
- Pelvic binding **6.12**

When provided in a classroom or distributive education format, this outline may be utilized for EMS continuing medical education – Approval # CT-F4-192. Students should claim only the continuing education hours commensurate with their participation in the training.

V2022.1 Connecticut Statewide Protocol Changes

Goal

At the end of a “rollout” session the providers will be able to discuss what the V2022.1 protocol changes are, as well as how the updates may affect their practice (dependent on their specific Sponsor Hospital).

Protocol Objectives

1.0 Routine Patient Care

- BLS and ALS providers will recognize that the definition of impending respiratory failure was corrected from “*less than 60 breaths per minute for any child*,” to “*greater than 60 breaths per minute for any child*.”
- ALS providers will discuss how to properly label a medication infusion
- ALS providers will defend why it is important to properly label medication infusions

2.9A Pain Management

- ALS providers will recognize that the IV/IO ketamine dose for pain has been decreased to:

“Ketamine 0.2 mg/kg IV/IO (Max 20mg/dose; Dilute dose in at least 10mL; Syringe push over 2-3 minutes or infusion) OR Ketamine 0.3 mg/kg IM (Max 30mg/dose)” from Ketamine 0.3 mg/kg IV/IO/IM (Max 30mg; Moderate/severe pain only)

- ALS providers will discuss why a lower dose of ketamine is still effective and safer
- ALS providers will explain why ketamine for pain should be given slowly.
- ALS providers will identify that a repeat dose of ketamine for pain is allowed.
- ALS providers will explain why alcohol intoxication was added as a “caution” for giving opioids and ketamine.
- ALS providers will explain why ketamine should be avoided when a patient has used cocaine.

3.2A Cardiac Arrest – Adult

- BLS and ALS providers will recognize that the changes reflect the most recent (2020) AHA update.
- BLS/ALS providers will discuss or demonstrate that BVM ventilation during chest compressions (w/ BLS airway), should be 1 breath every 6 seconds (vs. 1 breath every 10 compressions).
- BLS/ALS providers will discuss or demonstrate how to provide 1 breath every 6 seconds during the “recoil” part of a chest compression.
- ALS providers will identify that IV access is the preferred method for providing medications during a cardiac arrest.
- ALS providers will defend why administering epinephrine should be given as soon as possible in PEA or asystole.

- ALS providers will contrast why “*For initial PEA/Asystole, after 1 cycle of CPR (2 minutes) consider inserting supraglottic airway or endotracheal intubation.*” is different than the guidance for a VF/VT arrest, which is after 4 cycles of CPR.
- ALS providers will discuss why epinephrine is to be given every 3-5 minutes, (not every other cycle as previously listed).

3.2P Cardiac Arrest – Pediatric

- BLS/ALS providers will identify that the AHA updated ventilation guidance w/ an ALS airway in place to 1 breath every 2-3seconds, (no guidance listed in previous version of protocols).
- BLS/ALS providers will identify that ventilation guidance for BLS/ALS airways has been added to the protocol.
- ALS providers will defend why epinephrine should be given as soon as possible in PEA or asystole.
- ALS providers will identify that cuffed pediatric ETT are now allowed.
- ALS providers will list the advantages/disadvantages of using a cuffed pediatric ETT.
- ALS providers will describe the proper way to determine cuff size and cuff inflation pressure.
- ALS providers will defend the value of choosing the correct size cuffed ETT and ensuring proper cuff inflation pressure.

3.5A Tachycardia – Adult

- ALS providers will recognize that the definition for a wide complex tachycardia has been added. “QRS >0.12 seconds”
- ALS providers will recognize that the administration of magnesium for torsades de pointes has been changed from “over 5 minutes” to “over 2-5 minutes.”

4.3 Low Titer O Negative Whole Blood Transfusion

The following objectives are for the ALS providers to have a general understanding of what is required in the protocol. Any service wishing to begin a Whole Blood program should have a separate education program guided by their Sponsor Hospital.

- ALS providers will list the indications for administering whole blood in the pre-hospital setting.
- ALS providers will identify when Direct Medical Oversight orders are required to administer whole blood.
- ALS will list the additional “psychological parameters” are to administer blood.
- ALS providers will identify the contraindications for administering blood in the pre-hospital environment.
- ALS providers will identify the signs/symptoms of a transfusion reaction.
- ALS providers will state what documentation must be included in their PCR post blood administration.
- ALS providers will describe or demonstrate the procedure for administering blood

- Attempt to obtain consent
- Check expiration date of blood
- Assemble and use approved blood warming equipment to administer blood.
- Obtain vital signs every 10 minutes, including temperature.

4.6 Spinal Trauma

- BLS/ALS providers will discuss that *selective* SMR no longer applies to any patient under 3y/o or over 65y/o.
- BLS/ALS providers will defend why *selective* SMR no longer applies to patients <3y/o or >65y/o.
- BLS/ALS providers will identify that specific details have been added to the “range of motion exam” for SMR. *“Cervical rotation (45° either direction) or flexion/extension elicits midline spinal pain.”*
- BLS/ALS providers will discuss that clarification has been made to how to minimize movement of the patient when they are self-extricating. *“For ambulatory patients, move the stretcher as close to the patient as possible”*
- BLS/ALS providers will identify that “kyphosis, ankylosing spondylitis” have been added to reasons to use a towel roll/padding in place of a rigid cervical collar.
- BLS/ALS providers will identify that clarification has been made to how to position the patient on the stretcher:
 - *Lay the patient flat on the stretcher, secure firmly with all straps, and leave the cervical collar in place. Elevate the back of the stretcher only if necessary to support respiratory function, patient compliance or other significant treatment priority. If possible, limit any stretcher back elevation to <30°.*
 - *Patients with nausea or vomiting may be placed with stretcher back elevated or in a lateral recumbent position, maintaining the head in a neutral position using manual stabilization, padding, pillows, and/or the patient's arm.*

4.9 Traumatic Cardiac Arrest – NEW PROTOCOL

- BLS providers will review the interventions that are priority in a traumatic arrest.
 - CPR/BVM,AED, OPA/NPA, bleeding control, pelvic binder, SMR,
- BLS/ALS providers will identify the indications for application of this protocol
 - Cardiac arrest believed to have been caused by blunt force trauma, penetrating injury or massive hemorrhage.
- BLS/ALS providers will identify when this protocol does not apply in a case of traumatic arrest.
 - Exclusion criteria listed in protocol 4.9
- BLS/ALS providers will discuss how this protocol works with pre-existing Resuscitation Initiation and Termination protocol 6.17
- ALS providers will review the interventions that are priority in a traumatic arrest.
 - CPR/BVM,AED, OPA/NPA, bleeding control, pelvic binder, SMR. (BLS)
 - Advanced airway (cricothyrotomy if needed), IV/IO, fluid (LR), Blood, epi, needle decompression. (ALS)
- BLS/ALS providers will compare and contrast the various considerations concerning transport times and termination/presumption, and treatments.
 - **ALS** = Anticipated transport time to an ED/trauma center is 15 minutes or greater

AND here is no ROSC despite effective airway management, needle decompression (if indicated), pelvic binding (if indicated) and IV fluid therapy. Defer IV/IO until transporting except when transport interval is expected to be ≥ 15 minutes

- **BLS=** If anticipated transport time is ≥ 15 minutes and no paramedic is available, consider DMO consult for possible termination of resuscitation. If anticipated transport time is <15 minutes or if ROSC occurs, initiate rapid transport.
- Given a scenario, the BLS/ALS providers will be able to properly apply this protocol.
- BLS/ALS providers will be able to voice considerations for determining if an arrest is medical or traumatic in nature.

5.3.1A Cricothyrotomy – Surgical

- ALS providers will review the procedure as it is updated.
 - The procedure was re-formatted to make it clearer.
 - The procedure adds more detail on land marking.
 - The procedure increases the length of the vertical incision;
 - “Holding the scalpel like a pen between thumb and forefingers, make an approximately 5 cm (2”) vertical incision through the skin and soft tissue at the midline of the neck over the cricothyroid membrane. Incision should start just above the thyroid cartilage and extend below the cricoid ring. This incision may be extended up to 10 cm (4”) if neck is obese and/or unable to palpate landmarks.”
 - Previous version had 3cm incision, with no recommendation for inability to palpate landmarks.

5.7 Quantitative Waveform Capnography.

- ALS providers will review the different parts of the capnography waveform. (A picture of a waveform w/ explanation has been added to the protocol)
- ALS providers will realize that the protocol is re-formatted to make it clearer.

5.8A/P Rapid Sequence Intubation (Adult & Pediatric)

- ALS providers will identify that the “Cormack-Lehane” glottic views have been removed from the protocol.
- ALS providers will review the RSI checklist
- ALS providers will list one example of when the “RSI” checklist could prevent a dangerous error/procedure.
- ALS providers will identify that “Positioning” has been added to the “7-Ps”
- ALS providers will identify the recommended head positioning (ear to sternal notch, sniffing position.)
- ALS providers will identify the indications for administering phenylephrine in the ADULT population during RSI procedure.
 - Hypotension (before, during or after intubation)
- ALS providers will list the dosing and timing of phenylephrine delivery (50-200mcg, every 2-5 minutes).
- ALS providers will discuss the ways in which phenylephrine is constituted (PFS or pre-diluted vial) and explain which method should be considered safer.
- ALS providers will explain what other treatment(s) should be ensured for hypotension during RSI procedure.

- ALS providers will identify that CPAP/Bi-PAP are included under ways to pre-oxygenate a patient prior to RSI procedure.
- ALS providers will identify that atropine has been removed from the “pre-medication” portion of the adult RSI procedure.
- ALS providers will note that for sedative options in the ADULT population, the maximum dose of etomidate is now 30mg **instead of** 40mg.
- ALS providers will note that the indications for atropine in the pediatric RSI protocol have been modified from:
 - Consider atropine 0.02 mg/Kg IV/IO (min 0.1mg in children) for children with bradycardia, all children <1 being intubated, children <5 receiving succinylcholine.. **TO** **“Consider atropine 0.02 mg/kg IV/IO for children with bradycardia, all children <1 years being intubated and children <5 years receiving succinylcholine.”**
- ALS providers will discuss the indications for RSI, understanding that:
 - Severe airway compromise/and or imminent respiratory failure must be present
 - Securing of the airway and/or providing ventilation are not amendable to less invasive techniques/treatment.
- ALS providers will note that ketamine dosing for the PEDIATRIC patient is now 2mg/kg IV/IO (instead of 1-2mg IV/IO).
- ALS providers will note that the Fentanyl dosing for the PEDIATRIC patient is not 1-2mcg/kg (max of 100mcg) **instead of** just 1mcg/kg (max of 100mcg)

5.9 Suctioning of the Inserted Airway

- BLS providers will identify that they now may perform deep suctioning of inserted advanced airways (i.e. ETT or SGA).
- BLS providers will discuss how to determine the appropriate depth for suctioning.
- BLS providers will identify the time allotted for suctioning in the pediatric patient.
- BLS providers will demonstrate how to use saline to assist with suctioning.
- BLS providers will discuss the dangers of not using a sterile technique when suctioning.

5.11 Tracheostomy Care

- BLS providers will identify the “parts” of various types of tracheostomy tubes.
- BLS providers will differentiate between a cuffed and “un-cuffed” tracheostomy tube.
- BLS providers will discuss or demonstrate the procedure for suctioning a tracheostomy:
 - Selection of proper suction pressure
 - Selection/measurement of proper suction catheter length
 - Appropriate depth of suctioning (no >2-3”)
 - Use of saline flush to help loosen secretions
- BLS providers will review the steps to take to relieve respiratory distress in a tracheostomy patient prior to suctioning.
- Given a scenario, BLS providers will demonstrate the proper procedure for suctioning a tracheostomy.
- ALS providers will identify the “parts” of various types of tracheostomy tubes
- ALS providers will demonstrate the procedure for exchanging a tracheostomy tube for an ETT (w/ bougie assistance).
- ALS providers will demonstrate the procedure for exchanging one tracheostomy tube for another.

5.12 Ventilator

- BLS/ALS providers will review the “PEARLS” for guidance during transport.
- ALS providers will identify that the PEEP setting is now initially 5 cm H₂O and may be increased to 10 cm H₂O.
- ALS providers will identify that the high-pressure alarm setting should be 35cmH₂O instead of 30 cm H₂O.

6.1 Abuse and Neglect of the Children and Elderly

- BLS/ALS providers will list the additional vulnerable populations added. (Disability, Human trafficking victims).
- BLS/ALS providers will explain the procedure for reporting abuse of persons with disabilities and Human Trafficking.
- BLS/ALS providers will give one example each of signs of the following: Elder abuse, Human Trafficking, Sexual assault, abuse of a person w/ a disability.

6.2 Air Medical Transport (AMT)

- BLS/ALS providers will identify that a burn center is now added to “definitive care” for transport.
- BLS/ALS providers will review the criteria for burns for AMT consideration.
- BLS/ALS providers will defend why AMT is not to be used for a patient in cardiac arrest.
- BLS/ALS providers will review when to transport to the closest facility for either, direct transfer to AMT or Emergency Department.

6.5 Consent for Treatment of a Minor

- BLS/ALS providers will discuss that “another adult family member” is now approved for consent for treatment if a parent/legal guardian is not available.
- BLS/ALS providers will review when restraint of a minor is appropriate when the minor attempts to refuse care.

6.9 Naloxone Leave Behind – NEW PROTOCOL

- BLS/ALS providers will discuss the “Naloxone Overdose Prevention kit” program.
- BLS/ALS providers will identify that this program is only to be conducted with Sponsor Hospital approval.
- BLS/ALS providers will identify with whom an overdose prevention kit can be left.
- BLS/ALS providers will list the elements of an overdose prevention kit.
- BLS/ALS providers will learn what information should be collected when a kit is left.

6.11 Pediatric Transportation

- BLS/ALS providers will review the guiding principles for restraining a pediatric patient.
 - Minimizing injury in the event of an ambulance crash
 - Optimal location is on the stretcher
 - Recommendation for agencies to have policies/procedures for pediatric transport
 - Recommendation for agencies to have pediatric specific transport equipment.
- BLS/ALS providers will discuss current recommendations of transporting a mother and newborn.
- BLS/ALS providers will identify that it is not appropriate for a child to be transported on bench seat or “side facing” seat.
- BLS/ALS providers will identify that a rear-facing car seat is not to be used in the captain’s chair.

6.12 Pelvic Fracture Stabilization – NEW PROTOCOL

- BLS/ALS providers will review indications for pelvic fracture stabilization.
- BLS/ALS providers will review contraindications for pelvic fracture stabilization.
- BLS/ALS providers will explain the risk to the patient of an unrecognized/untreated pelvic fracture.
- BLS/ALS providers will review proper device(s) that may be used to stabilize a pelvic fracture.
- BLS/ALS providers will demonstrate the use of their agency specific device.

Appendix 3 – Scope of Practice

- BLS/ALS providers will review entire scope of practice as numerous updates and formatting changes were made.
- BLS providers will identify that under “medication administration,” “rectal” was added to address assisting with rectal diazepam
- BLS providers will note that tracheobronchial suctioning of the intubated patient has been added but requires sponsor hospital approval.
- ALS providers will note the addition of BiPAP and High flow nasal cannula.

COVID-19 EMS Non-Transport Guidance

- BLS/ALS providers will review additional guidance added concerning follow-up of patients who are not transported.