Blue Ridge Emergency Medical Services Council, Inc.

SEPTEMBER 2016 BREMS PROTOCOL CHANGES

~EXPANDED OVERVIEW~

- AHA changes to CPR:
  - A minimum of 100 compressions per minute, not to exceed 120.
  - Compressions should be at a minimum of 2 inches (not to exceed 2.4 inches) in depth.
    - **Note: For infants & children, compressions should be at a minimum of 2 inches (not to exceed 2.4 inches) in depth for children and a maximum of 1 1⁄2 inches in depth for infants.*
  - Advanced Airway Ventilation rate is 1 ventilation every 6 seconds for adults & children.
    - **Special note for BLS Rescue Breaths**:
      - Adults – 1 breath every 5-6 seconds
      - Pediatrics – 1 breath every 3-5 seconds

- New medications being added to the drug boxes are as follows:
  - Ketorolac (Toradol) for mild to moderate pain management -
    - Please emphasize to all providers, per the OMD committee, that the following are absolute contraindications for the administration of Ketorolac (Toradol):
      - **DO NOT ADMINISTER:** To any renal disease and/or renal failure patient, any stage of pregnancy, active labor, or actively nursing, Multi-systems trauma, or patients who are currently on anti-coagulants, for the exception of ASA
      - Patients with an allergy/hypersensitivity to Toradol, NSAIDs, or ASA (Aspirin)
    - Other cautions/considerations:
      - Age < 15 years
      - Patients with a history of peptic ulcer disease, GI bleeding, or GI perforation
      - Hypovolemia
      - Cerebral bleeding, or other known active bleed
      - Caution: Age >65 or Weight <50 kg

Blue Ridge Emergency Medical Services Council, Inc.

SEPTEMBER 2016 BREMS PROTOCOL CHANGES

~EXPANDED OVERVIEW~

- Levophed for hypotension related to cardiogenic, neurogenic and septic shock. Dopamine will no longer be utilized as a vasopressor in our drug boxes. It is important to note that agencies will need to obtain a **250 mL bag of D5W** for mixing Levophed.
  Normal Saline Fluid is not acceptable.
  - In order to properly administer Levophed, you must have a patent IV site above the hand, at minimum **20G.**
  - Please emphasize to all providers, per the OMD Committee, that the following are absolute contraindications for the administration of Levophed:
    - Allergy/hypersensitivity to Levophed
      - *As with any patient when considering medication administration, ask further questions to define "sensitivity" versus a true severe allergic reaction. Do not administer if the patient has a previous history of an anaphylactic reaction to Levophed. Monitor for signs of airway compromise, altered mental status, hypoxia, hypotension, uticaria (rash) or hives.*
    - Not administered to pediatrics
    - Hypovolemia/severe volume depletion and/or dehydration
    - History of mesenteric or peripheral vascular thrombus because of risks of increasing ischemia and/or extending the area of the infarction
    - Caution: Patients taking MAOIs, antihistamines, anti-depressants, or imipramine types because of risk of prolonged hypertension

SEPTEMBER 2016 BREMS PROTOCOL CHANGES

~EXPANDED OVERVIEW~

- Dextrose 10% as an IV drip/bolus treatment for hypoglycemia.
  - **D50% prefilled syringes will be removed from the current drug boxes.** However, please keep in mind, that in the event that either LGH or another outlying pharmacy cannot replace D10% due to availability, D50% will be placed in the box. Therefore, both medications will remain in the protocol.
  - D10% can be administered via IV drip at 100 mLs, then cut back to KVO and repeated once after follow up BGL monitoring as necessary. If administered via a drip, monitor the drip closely to ensure not to exceed a dose of 100 mLs.
    - *D10% can also be administered via a 3-way stopcock valve and syringe method as well.*

- Albuterol Sulfate- there have been two (2) additional doses of Albuterol Sulfate added to the drug box for a total of four (4).

- Narcan (Naloxone)- there has been one (1) additional dose of Narcan added to the drug box for a total of two (2).

- The M.A.D. Intranasal delivery device will be utilized for the following medications:
  - Afrin, Glucagon, Midazolam and Naloxone
  - While this method of administration has been utilized by ALS providers in the past, there are new medications added for this. Therefore we are adding this to the training update and there is now a procedure listed for it in the protocols. Please refer to the training materials provided for further instruction.

- Most agencies have received their Quik Clot gauze at this point. Sean Regan has developed the protocol and procedure for this. Please reference that and review with your providers and agencies. It should be noted, that per the OMD Committee, the provider should **"pack" the gauze** rather than just applying it to the wound.

SEPTEMBER 2016 BREMS PROTOCOL CHANGES

~EXPANDED OVERVIEW~

- Lactated Ringers will now be utilized for profound volume depletion in patients who present with septic shock. The rationale for this from the OMD Committee is that too great of an amount of Normal Saline Fluid could result in hyperchloremic metabolic acidosis in patients who may already be acidotic from septic shock. Therefore, in the event of Sepsis, providers are asked to administer Lactated Ringers as a first line treatment. The recommended dose per the OMD Committee is 500 mL boluses of LR titrated to a systolic BP of 90 mmHg, max of 20-30 mL/kg. If the patient is refractory to fluid resuscitation, then utilize Norepi/Levophed if needed.
    - It is important to note that permissive hypotension is acceptable (90 systolic) secondary to washout.
    - *Agencies will be responsible for the initial purchase of LR. Once purchased and administered to a patient, LGH will replace the LR.*

- There is now a secure box in LGH Medical Control that the ED Physicians have requested for all EMS providers to place a PPCR in this box for cardiac arrest codes called in the field. Please relay the importance of this to all providers. The rationale is that when a provider calls for on-line direction to cease resuscitative measures in the field, the physician may not always get to see the run sheet, since historically it is typically only placed in the drug box. So, when the time comes for that particular physician to sign the death certificate, they want to review the run report prior to signing off on the death certificate.

- The OMD Committee has requested that in the event that a provider is presented with a ventricular fibrillation or a pulseless ventricular tachycardia cardiac arrest, **that resuscitative measures continue for a minimum of 40 minutes**. Please note this change from the traditional 20, only in this circumstance.

- Training materials are available from your department leaders and the BREMS staff, as well as our website.

Blue Ridge Emergency Medical Services Council, Inc.

SEPTEMBER 2016 BREMS PROTOCOL CHANGES

~EXPANDED OVERVIEW~

- Please note, that due to these changes to the drug boxes, there will be a logistical drug box exchange that will take place in all hospital facilities BREMS providers utilize. There will be details sent to the localities/agencies.