

BLS/ILS/ALS PROTOCOL MANUAL
Summary of Changes
Effective January 1, 2012

Global Change

Morphine Sulfate to "...up to 0.1 mg/kg slow IV to a maximum single dose of 10mg."

GPC

- D1: Initial Assessment - Added new language to support initial assessment of cardiac arrest using CAB (chest compressions, Airway, Breathing) instead of ABC (Airway, Breathing, Chest compressions).
- D3: Breathing – Removed 2)a & 2)b & 3
 - 2)a - Utilize pulse oximetry, if available. Oxygen treatment should be titrated to maintain a SPO₂ > 94%
 - 2)b – Patients with a history of prescribed home oxygen for for chronic conditions should receive their prescribed home dosage of oxygen or an amount sufficient to provide for a SPO₂ > 90%
- D4: Circulation – Added exact AHA language to state that an AED (automated external defibrillator) is now recommended for all ages including infants and children
- G4: Added notification of transport to hospital

Acute Cerebral Vascular Accident – changed protocol name to “Stroke”

Acute Coronary Syndrome (Suspected)

- The nitroglycerin and the erectile dysfunction warning boxes have been combined to read:
 - Systolic blood pressure < 100 mmHg
 - Bradycardia/tachycardia
 - Right ventricular infarction
 - Anyone who has taken erectile dysfunction medication, eg. Viagra in the last 48 hours

Caution is advised in patients with inferior wall STEMI, and a right-sided EKG should be performed to evaluate RV infarction.
- Moved #7 Administer Acetylsalicylic Acid (Aspirin) from ALS to BLS.
- #10: Added language limiting the number of doses of Nitroglycerin to 3.

Adult CCR Cardiac Arrest

- Name changed to Cardiac Arrest (Adult CCC CPR)
- Added Alert Box to read: “CCC CPR is only to be considered for the non-traumatic cardiac arrest patient.”
- #5: Changed to read “Witnessed arrest by EMS, begin Continuous Chest Compressions (CCC) at a rate of at least 100/min while preparing for AED use and defibrillate if prompted. Then immediately resume CCC. The depth of compressions should be at least 2 inches.”
- #6: Changed to read “Unwitnessed arrest, immediately begin CCC for 2 minutes while applying and preparing AED for analysis.”
- #7: Added the use of the Nasopharyngeal Airway (NPA).

- Replace “Do not interrupt compressions to apply oxygen, attempt in IV or perform other ALS Procedures” from the Alert Box with, “Interruptions in chest compressions are to be avoided.”
- #8: Added language, “If after 4 minutes of CCC CPR, if no advanced airway has been placed, initiate BVM ventilation at 8-10 BPM. Waveform capnography may be attached between the mask and BVM to monitor the effectiveness of CPR and possible return of spontaneous circulation.”
- #9: Remove “...chest compressions at 100/min...” and insert “CCC.”
- #13: Add “...check lung fields, and if clear...”
- #15: Added language, “Refer to specific medication and treatment protocols for Asystole/PEA, or VF/PVT.”
- #17: Remove “...400 compressions” and insert “...3-5 minutes.”
- Added alert box to address mechanical chest compression devices.
- Remove “strongly consider” in last Alert Box and clarified reference to destination.

Altered Mental Status

- #8: Change to read, “Administer Naloxone (Narcan) 1.0 – 2.0 mg”
- Add an Alert Box under Narcan stating “Not recommended for use in the newly born.”

Burns – Added “Suspected inhalation injury” to Alert Box

Cardiac Dysrhythmia: Asystole/PEA

- Combined the Asystole and PEA protocols
- Removed Atropine
- #5: Added language, “Perform rhythm checks after every 2 minutes of uninterrupted CPR and defibrillate if a shockable rhythm is present. Minimize the time off of the chest prior to shock delivery. Resume CPR immediately after shock delivery beginning with compressions. Refer to the VF/PVT protocol.”
- #6: Removed “If prolonged arrest...”
- #6: Removed sodium bicarbonate for acidosis in the H’s & T’s, and replaced it with Ventilation, CPR
- Added language to last Alert Box to follow the Induced Hypothermia protocol

Cardiac Dysrhythmia: Bradycardia

- Removed “For the Hemodynamically Unstable patient” and added the standards placed in the Adult Bradycardia (with pulse) from part 8 of the AHA Circulation journal to read: For patients experiencing persistent Bradycardia causing ONE or more of the following:
 - Hypotension
 - Acutely altered mental status
 - Signs of shock
 - Ischemic chest discomfort
 - Acute heart failure
- Re-ordered pediatric steps to keep together
- Removed Dopamine for pediatrics

- #4: Recommended the dosage should read IV/IO and remove ETT.
- #6: Added language, “For the pediatric patient. Epinephrine is the initial drug of choice if ventilator efforts are unsuccessful. Administer Epinephrine 0.01 mg/kg 1:10.000 IV or 0.1 mg/kg 1:1.000 ETT every 3-5 minutes, not to exceed adult dose.
- #7: Added language, “...if ventilatory efforts are ineffective...” and “If increased vagal tone or primary AV block is suspected...”

Cardiac Dysrhythmia: Monomorphic Ventricular Tachycardia

- #9: Added language, “Repeat dose of Etomidate, if necessary.”
- #11 : Added language, “If undifferentiated Monomorphic Ventricular Tachycardia is suspected to be SVT with aberrancy, administer Adenosine (Adenocard) 6 mg. fast IV. If first dose is unsuccessful, may repeat dose at 12 mg fast IV.
- Added Pediatric Adenosine dose by telemetry order.
- For pediatric Amiodarone, added that it be administered slow IV; and not to repeat if unsuccessful.
- Added language, “If Monomorphic Ventricular Tachycardia is suspected or confirmed...”

Cardiac Dysrhythmia: Pulseless Electrical Activity – Combined with Asystole

Cardiac Dysrhythmia: Supraventricular Tachycardia (Narrow Complex) – Housekeeping only

Cardiac Dysrhythmia: Torsades de Pointes

- Eliminated the use of synchronized cardioversion and replaced it with defibrillation
- Added language, “Pediatric defibrillation shall be at 2 J/kg. If unsuccessful, defibrillation should be attempted at 4 J/kg and continue at 4 J/kg until conversion occurs. Consider sedation prior to cardioversion or defibrillation; administer Etomidate 0.15 mg/kg IV.”
- Added language, “If Defibrillation is unsuccessful, administer Magnesium Sulfate 2 gm in 50cc NS over 10 minutes.”
- Removed Nos. 4, 5, 6
- For pediatrics added language, “...in 50cc NS over 10 minutes.”

Cardiac Dysrhythmia: Ventricular Fibrillation or Pulseless Ventricular Tachycardia

- Under witnessed arrest by EMS, added language, “initiate age appropriate CPR while preparing for immediate defibrillation. After defibrillation, resume uninterrupted CPR and continue for 2 minutes.”
- Removed “Pediatric ventilation rate is one breath every 6-8 seconds via BVM without pausing chest compressions.”
- Under Unwitnessed Arrest added language, “age appropriate CPR...” and removed “...chest compressions at the rate of 100/min.”
- Added #3 “If airway is manageable by BLS methods, consider delaying advanced airway management until after the completion of 2-3 cycles of compressions.”
- #4: Removed “...or initiate BVM ventilation at 6 BPM.”
- #4: Removed “...pediatric ventilation rate is one breath every 6-8 seconds via BVM without pausing chest compressions.”
- #5: Removed “...as soon as possible...” Added “...1.0 mg IV/IO/ETT after the second defibrillation if a shockable rhythm is present.”

- #5: Added language, "...every 3-5 minutes while cardiac arrest persists."
- #5: Removed "...every 400 compressions IV/IO/ETT until desired effect is achieved."
- #6: Removed "Analyze rhythm, defibrillate if prompted OR immediately resume chest compressions at 100/min for 2 minutes."
- #6: Added language, "Perform rhythm checks after every 2 minutes of uninterrupted CPR and perform defibrillation if a shockable rhythm is present. Minimize the time off of the chest prior to shock delivery. Resume CPR immediately after shock delivery beginning with compressions."
- #7: Added language, "If a shockable rhythm is present after the 3rd shock, consider the administration of..."
- #7: Removed "...unsuccessful, administer..."
- #7: Added language, "May repeat at a dose of 150 mg if refractory VF/PVT persists after the 5th shock."
- Added Alert Box to state, "If the initial rhythm prior to VF/PVT does not support the use of Amiodarone (e.g. complete heart block), then it should NOT be given."
- Added language to pediatric Amiodarone, "May repeat once after 5th shock."
- Added language, "If Torsades de Pointes is suspected, administer Magnesium Sulfate 2 gm slow IV instead of Amiodarone."
- Deleted Nos. 7, 8, 9, 10 and the last Alert Box
- #8: Removed "...if prolonged arrest..."
- #8: Removed "Sodium Bicarbonate" and replaced with "Ventilation, CPR"
- #8: Removed "Dysrhythmia Focused Therapy" and replaced with "Emergent PCI"
- #9: Added language, "If patient remains unresponsive to resuscitation efforts, consider Termination of Resuscitation."

Pulmonary Edema / CHF (Adult) – Added language, "...or 48 hours for tadalafil (Cialis)" to Alert Box.

Smoke Inhalation

- Change the language in Item #9 to read "If cardiac arrest or hypotension is present, administer Cyanokit® 5g IVPB over 15 minutes."
- Alert Box added to state that all patients need to be transferred to the Burn Center (UMC Adult Trauma Center or UMC Pediatric E.D.).
- Added pediatric dose.

Termination of Resuscitation

Added language to #2.a.1.) to read, "...and has capnography (if available) <10..."

Formulary

Added Hydroxocobalamin

(Guidelines)

Legal 2000 Patient Transport Guidelines

Added language, "Upon EMS activation to Southern Nevada Adult Mental Health Services, stable patients shall be transported to the hospital that recently medically cleared the patient, even if that facility is not the closest or has the lowest hold census."