



Pennsylvania Statewide

Basic Life Support Protocols

**Pennsylvania Department of Health
Bureau of Emergency Medical Services**

2020

(717) 787-8740

March 16, 2020

Dear EMS Provider:

NOTE: These 2020 Statewide BLS Protocols are an update to the 2019 protocols for the sole purpose of updating the Statewide Influenza-like Illness Protocol #931 to provide additional guidance during the COVID-19 coronavirus pandemic. All EMS providers must immediately review the updated protocol #931.

The Bureau of EMS, Department of Health, is pleased to provide these updated “Statewide BLS Protocols” to the EMS providers of Pennsylvania.

This 2019 update contain many important changes, but some of the highlights include:

- a. the DMIST program to standardize the verbal report from EMS to receiving hospital personnel.
- b. an optional module for delivery of bronchodilator medication by nebulizer by EMT's.
- c. optional use of an 12-lead ECG device to obtain an electrocardiogram and transmit it for interpretation, when a system has the required capabilities.
- d. changes to encourage improved high-performance CPR and more care before transport of patients with cardiac arrest to improve outcomes.
- e. updates to align our protocols with the recently released National Scope of Practice Model. Fortunately, Pennsylvania has already adopted the majority of the enhancements within this new national scope of practice.

Pennsylvania has used Statewide BLS Protocols since Sept. 1, 2004, and this edition is an update to the version that was posted since June 10, 2017. To assist EMS providers when reviewing the changes, new sections of the protocols that correspond to this 2019 version are identified with yellow highlighting and sections that have been removed are struck through and highlighted. EMS providers may use this 2019 version of the statewide BLS protocols as soon as they are familiar with the changes, but all providers must be using these updated protocols by the effective date of Sept. 1, 2019.

EMS providers are permitted to perform patient care, within their Pa. defined scope of practice, when following the appropriate protocol(s) or when following the order of a medical command physician. Each EMS provider is responsible for being knowledgeable regarding current state-approved protocols so that he/she may provide the safest, highest quality and most effective care to patients.

To assist providers in becoming familiar with the changes to the protocols, a continuing education presentation is available to regions and agencies. This update is available for in-person presentations or the course can be completed on TRAIN PA, the on-line Learning Management System (LMS). **The 2019 BLS Protocol Update (BEMS course #1000022407 will be considered a core requirement for all levels of EMS providers that register their certification during the current time period. Furthermore, the completion of this course should be used by EMS agencies when ensuring that the agency's providers have been educated to the current protocols.**

When providing patient care under the EMS Act, EMS providers of all levels must follow applicable protocols. Although the Statewide BLS Protocols are written for BLS-level care, they also apply to the BLS-level care that is performed by all providers at or above the level of AEMT. Since written protocols cannot feasibly address all patient care situations that may develop, the Department expects EMS providers to use their training and judgment regarding any protocol-driven care that would be harmful to a patient. **When the practitioner believes that following a protocol is not in the best interest of the patient, the EMS practitioner should contact a medical command physician if possible.** Cases where deviation from the protocol is justified are rare. The reason for any deviation should be documented. All deviations are subject to investigation to determine whether or not they were appropriate. In all cases, EMS providers are expected to deliver care within the scope of practice for their level of certification.

The Department of Health's Bureau of EMS website will always contain the most current version of the EMS protocols, the scope of practice for each level of provider, important EMS Information Bulletins, and many other helpful resources. This information can be accessed online at www.health.pa.gov. The Statewide BLS Protocols may be directly printed or downloaded into a mobile device for easy reference.

The Department is committed to providing Pennsylvania's EMS providers with the most up-to-date protocols, and to do this requires periodic updates. The protocols will be reviewed regularly, and EMS providers are encouraged to provide recommendations for improvement at any time. Comments should be directed to the Commonwealth EMS Medical Director, Pennsylvania Department of Health, Bureau of EMS, 1310 Elmerton Avenue, Harrisburg, PA 17110.

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INFECTION CONTROL / BODY SUBSTANCE ISOLATION GUIDELINES

Criteria:

- A.** These guidelines should be used whenever contact with patient body substances is anticipated and/or when cleaning areas or equipment contaminated with blood or other body fluids.
- B.** Your patients may have communicable diseases without you knowing it; therefore, these guidelines should be followed for care of all patients.

System Requirements:

- A.** These guidelines provide general information related to body substance isolation and the use of universal precautions. These guidelines are not designed to supersede an EMS agency's infection control policy [as required by EMSS Act regulation 28 § 1027.3(p)], but this general information may augment the agency's policy.
- B.** These guidelines do not comprehensively cover all possible situations, and EMS practitioner judgment should be used when the EMS agency's infection control policy does not provide specific direction.

Procedure:

A. All patients:

1. Wear gloves on all calls where contact with blood or body fluid (including wound drainage, urine, vomit, feces, diarrhea, saliva, nasal discharge) is anticipated or when handling items or equipment that may be contaminated with blood or other body fluids.
2. Wash your hands often and after every call. Wash hands even after using gloves:
 - a. Use hot water with soap and wash for 15 seconds before rinsing and drying.
 - b. If water is not available, use alcohol or a hand-cleaning germicide.
3. Keep all open cuts and abrasions covered with adhesive bandages that repel liquids. (e.g. cover with commercial occlusive dressings or medical gloves)
4. Use goggles or glasses when spraying or splashing of body fluids is possible. (e.g. spitting or arterial bleed). As soon as possible, the EMS practitioner should wash face, neck and any other body surfaces exposed or potentially exposed to splashed body fluids.
5. Use pocket masks with filters/ one-way valves or bag-valve-masks when ventilating a patient.
6. If an EMS practitioner has an exposure to blood or body fluids¹, the practitioner must follow the agency's infection control policy and the incident must be immediately reported to the agency infection control officer as required. EMS practitioners who have had an exposure² should be evaluated as soon as possible, since antiviral prophylactic treatment that decreases the chance of HIV infection must be initiated within hours to be most effective. In most cases, it is best to be evaluated at a medical facility, preferably the facility that treated the patient (donor of the blood or body fluids), as soon as possible after the exposure.
7. Preventing exposure to respiratory diseases:
 - a. Respiratory precautions should be used when caring for any patient with a known or suspected infectious disease that is transmitted by respiratory droplets. (e.g. tuberculosis, influenza, or SARS)
 - b. HEPA mask (N-95 or better), gowns, goggles and gloves should be worn during patient contact.
 - c. A mask should be placed upon the patient if his/her respiratory condition permits.
 - d. Notify receiving facility of patient's condition so appropriate isolation room can be prepared.

8. Thoroughly clean and disinfect equipment after each use following agency guidelines that are consistent with Center for Disease Control recommendations.
9. Place all disposable equipment and contaminated trash in a clearly marked plastic red Biohazard bag and dispose of appropriately.
 - a. Contaminated uniforms and clothing should be removed, placed in an appropriately marked red Biohazard bag and laundered / decontaminated.
 - b. All needles and sharps must be disposed of in a sharps receptacle unit and disposed of appropriately.

Notes:

1. At-risk exposure is defined as “a percutaneous injury (e.g. needle stick or cut with a sharp object) or contact of mucous membrane or non-intact skin (e.g. exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue or other body fluids that are potentially infectious.” Other “potentially” infectious materials (risk of transmission is unknown) are CSF (cerebral spinal fluid), synovial, pleural, peritoneal, pericardial and amniotic fluid, semen and vaginal secretions. Feces, nasal secretions, saliva, sputum, sweat, tears, urine and vomitus are not considered potentially infectious unless they contain blood.

SUSPECTED INFLUENZA-LIKE ILLNESS (ILI) STATEWIDE BLS PROTOCOL

Criteria:

- A. This protocol applies to all patients encountered by EMS during an epidemic/ pandemic of influenza. [Note: Infectious diseases are dynamic and EMS providers should frequently check the EMS Protocols Link on the Pennsylvania Department of Health Bureau of EMS's webpage at <http://www.health.state.pa.us/ems> for the most current version of this protocol]
- B. The Centers for Disease Control and Prevention (CDC) has declared an epidemic of a viral illness like **COVID-19 coronavirus**, H1N1 influenza A, SARS or avian influenza.

Exclusion Criteria:

- A. None

System Requirements:

- A. All levels of responders should have fit-tested disposable N95 respirator, eye protection, and disposable non-sterile gloves and gown.
- B. EMS agencies in geographic areas with confirmed cases of ILI should screen their EMS providers for fever or symptoms of acute respiratory illness before each shift, and EMS providers should immediately report symptoms that develop during or after a shift. EMS agencies should work with their occupational health programs, EMS agency medical director, and EMS regional councils to make sure that long-term PPE needs and prophylactic antiviral needs (as directed by the PaDOH) are addressed.
- C. EMS agencies should consider providing equipment issues related to aerosolized contamination. For example, stocking bronchodilator MDIs with spacers, supplying appropriate viral filters for BVM devices, and reviewing outflow from CPAP and other devices.
- D. Dispatch/ PSAP Issues:
 1. PSAP call takers should screen callers to determine if the patient, or someone at the incident location, has symptoms of "influenza-like illness" (ILI - which include nasal congestion/ runny nose, sore throat, cough, fever, or other flu-like symptoms), and symptoms of "influenza-like illness" should be communicated to responders prior to arrival at the scene. Ask patient to meet EMS at the door, if the patient condition permits.
 2. EMS agencies should collaborate with their PSAP, regional EMS council, and medical director/ PSAP medical director/ regional EMS medical director to review resources dispatched to calls. For some categories of calls, it may be reasonable to send only an ambulance (BLS when appropriate) to avoid exposure to first responders (including QRS, firefighters, law enforcement). If a community becomes inundated with calls for possible ILI, it may be appropriate to send only a QRS/first responder or to direct the caller to other community resources established for individuals with symptoms of ILI.

Procedure:

A. All Patients:

1. If symptoms of ILI are suspected based upon dispatch information, consider limiting the number of initial providers that approach the patient or enter a residence.
2. **Hand Hygiene:**
 - a. Perform hand hygiene by using alcohol-based hand rub (ABHR) with 60-95% alcohol or washing hands with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water.
 - b. Perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE, including gloves. ABHR hand cleanser should be used on gloves before doffing PPE to avoid contamination during doffing. Use care to avoid contaminating the dispenser of ABHR. Hand hygiene after removing PPE is particularly important to remove any pathogens that might have been transferred to bare hands during the removal process.

- B. Patients with medical condition that requires immediate care and EMS providers suspect possible influenza-like illness (ILI) but cannot complete assessment for suspected case of ILI (for example a cardiac arrest with preceding respiratory illness):**
1. EMS providers should don PPE for suspected case of ILI before proceeding with patient care/resuscitation.¹
- C. If there HAS NOT been ILI reported in the geographic area:**
1. Assess patient while staying at least 6 feet away from patient and bystanders with symptoms and exercise appropriate routine respiratory droplet precautions (cough etiquette, hand hygiene, and spatial separation) while assessing all patients for suspected cases of ILI.
 2. Assess all patients for “influenza-like illness” (ILI = nasal congestion/ runny nose, sore throat, or cough with or without fever ($\geq 100^{\circ}\text{F}$ or 37.8°C if measured)).
 - a. If no ILI, proceed to protocol #201 and other appropriate protocols.
 3. If ILI, place a standard surgical mask on the patient (if tolerated) and use appropriate PPE for ILI.^{1,2,3,4}
- D. If the CDC HAS reported cases of confirmed ILI in the geographic area:**
1. Address scene safety:
 - a. If EMS providers have been advised by PSAP that there is potential “influenza-like illness” (ILI) on scene, EMS providers should don PPE for suspected case of ILI prior to entering scene.¹
 - b. If PSAP has not identified individuals with symptoms of ILI on scene, EMS providers should stay more than 6 feet away from patient and bystanders with symptoms and exercise appropriate routine respiratory droplet precautions (cough etiquette, hand hygiene, and spatial separation) while assessing all patients for suspected cases of ILI.
 2. Assess all patients for “influenza-like illness” (ILI = nasal congestion/ runny nose, sore throat, or cough with or without fever ($\geq 100^{\circ}\text{F}$ or 37.8°C if measured)).
 - a. If ILI, don appropriate PPE for suspected case of ILI before proceeding with care.^{1,2,3,4}
 - b. If no ILI, proceed to protocol #201 and other appropriate protocols.
- E. All patients:**
1. Proceed to protocol #201 and other appropriate protocols
 - a. Assess pulse oximetry, if available. See protocol #226.
 - b. Apply oxygen, if appropriate. See protocol #202.³
 2. If patient has symptoms of ILI or is a case of suspected ILI:
 - a. Contact the receiving facility prior to arrival and advise of “influenza-like illness”.
 3. **Treatment precautions:**
 - a. **Aerosol-generating procedures (e.g. nebulized bronchodilator treatments, CPAP, endotracheal intubation, or CPR)**
 - 1) **Aerosol-generating procedures should not be deferred if they are needed to treat a life-threatening illness.**
 - 2) **Consider contact with medical command if aerosol-generating procedures may be deferred in a relatively stable patient.**
 - 3) **If possible, consider performing aerosol-generating procedure in an area that is most well ventilated, for example in patient’s home or in back of ambulance with all doors open and HVAC system activated rather than in confines of a closed ambulance patient compartment,**
 - 4) **In place of nebulized bronchodilators, consider carrying albuterol MDI and spacer and giving patient puffs in place of nebulizer treatments. **Five puffs of albuterol from an MDI has been shown to be equivalent to a nebulizer treatment.** Once used, MDI inhalers should be discarded and not used on another patient.**
 - b. **Avoid steroids: Unlike patients with reactive or obstructive airway disease from asthma or COPD exacerbation, patients with ILI are unlikely to benefit and may be harmed by steroids. ALS providers following Statewide Asthma/COPD/Bronchospasm Protocol #4022**

should not administer steroid to these patients unless ordered by medical command physician.

4. Contact Medical Command, if indicated/ required.
 - a. For isolated ILI or suspected case of ILI in otherwise stable patients, regional protocol may require contact with medical command prior to transport for possible integration or care with local pandemic plan.
5. During transport, limit the number of providers in the patient compartment to essential personnel to minimize possible exposures. Limit the number of family members or other passengers transported in either the patient compartment or front passenger compartment. Drivers may remove PPE, dispose of PPE properly, and perform hand hygiene before entering the driving compartment. If the driving compartment is not isolated from the patient compartment, the driver should wear a standard mask during transport.
6. Before returning to service, clean/ decontaminate the vehicle following “Interim Guidance for Cleaning Emergency Medical Service Transport Vehicles during an Influenza Pandemic” available at http://www.pandemicflu.gov/plan/healthcare/cleaning_ems.html.⁵

Possible MC Orders:

- A. If traditional medical systems become overwhelmed by the numbers of suspected ILI patients, the Department of Health may establish alternatives to traditional care that may be ordered by medical command or by regional EMS protocol. These alternatives may include assessment without transport, delivery of antivirals to the patient’s residence, referral or diversion to somewhere other than an emergency department, etc.

Notes:

1. Personal Protective Equipment (PPE)
 - a. **For case of suspected ILI**– don fit-tested disposable N95 respirator and eye protection (e.g., goggles; eye shield – **personal glasses or contact lenses are NOT considered adequate eye protection**), disposable non-sterile gloves, and gown, when coming into close contact with the patient.
 - I. EMS providers should wear this PPE when in close contact with patient (within 6 feet of patient), when in the patient compartment of the ambulance with the patient, and when in the front passenger compartment of the ambulance (unless the patient compartment and passenger compartments of the ambulance are physically separate).
 - II. All EMS providers engaged in aerosol generating activities (e.g. endotracheal intubation, nebulizer treatments, BVM ventilation, or CPR) should wear PPE for suspected ILI unless EMS providers are able to rule out ILI. **If N-95 masks or gowns are in short supply, they should be prioritized to patients requiring treatments that are likely to generate respiratory aerosols.**
 - III. EMS providers who cannot wear a fit-tested N95 respirator (e.g. due to beard or unavailability of supplies) should wear a standard surgical mask and avoid engaging in aerosol generating activities if possible. **Optionally powered air purifying respirators (PAPRs) can be used. PAPR’s provide a higher level of respiratory protection. A Reusable, fit-tested, elastomeric respirators are a viable option for respiratory protection and are assigned the same protection classification (APF) as N95s.**
 - IV. Use good respiratory hygiene – use non-sterile gloves for contact with patient, patient secretions, or surfaces that may have been contaminated. Follow hand hygiene, including hand washing or cleansing with alcohol-based hand disinfectant after contact.
 - b. **Any reusable PPE must be properly cleaned, decontaminated, and maintained after and between uses. EMS agencies should have policies and procedures describing a recommended sequence for safely donning and doffing PPE.**
2. Use of standard surgical masks on patients - **Source Control**:
 - a. **Increased emphasis should be placed on early identification and implementation of source control (i.e., putting a face mask on patients presenting with symptoms of respiratory infection).**

- b. Patients with ILI should wear a standard surgical mask, if tolerated, during patient assessment, care, transport, and transportation in public areas of receiving facility.
 - c. Small facemasks are available that can be worn by children, but it may be problematic for children to wear them correctly and consistently. Moreover, no facemasks (or respirators) have been cleared by the FDA specifically for use by children.
 - d. Oxygen can be applied by nasal cannula under a standard surgical mask, if tolerated. Oxygen applied by NRB mask can reduce spread of droplets by cough, and this can be further reduced by covering the NRB with a standard surgical mask if tolerated.
3. Encourage good patient compartment vehicle airflow/ ventilation to reduce the concentration of aerosol accumulation when possible.
 4. Cleaning the EMS vehicle after transporting a suspected or confirmed case of ILI:
 - a. The following are general guidelines for cleaning or maintaining EMS vehicles and equipment. This guidance may be modified or additional procedures may be recommended by the CDC as new information becomes available.
 - b. EMS providers should wear appropriate PPE when cleaning vehicle and equipment, (disposable gown and gloves). A face shield or facemask and goggles should also be worn if splashes or sprays during cleaning are anticipated.
 - c. Routine cleaning with soap or detergent and water to remove soil and organic matter, followed by the proper use of disinfectants, are the basic components of effective environmental management of influenza. Reducing the number of influenza virus particles on a surface through these steps can reduce the chances of hand transfer of the virus. Influenza viruses are susceptible to inactivation by a number of chemical disinfectants readily available from consumer and commercial sources.
 - d. After the patient has been removed and prior to cleaning, the air within the vehicle may be exhausted by opening the doors and windows of the vehicle while the ventilation system is running. This should be done outdoors and away from pedestrian traffic. Routine cleaning methods should be employed throughout the vehicle and on non-disposable equipment.
 - e. Clean and disinfect the vehicle in accordance with standard operating procedures. All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls, work surfaces) should be thoroughly cleaned and disinfected using an EPA-registered hospital grade disinfectant in accordance with the product label.
 - f. Clean and disinfect reusable patient-care equipment before use on another patient, according to manufacturer's instructions.
 - g. Follow standard operating procedures for the containment and disposal of used PPE and regulated medical waste.
 - h. Follow standard operating procedures for containing and laundering used linen. Avoid shaking the linen.

Performance Parameters:

- A. Review cases of ILI where patient was not transported.

Additional Resources:

www.health.state.pa.us Pennsylvania Department of Health

www.cdc.gov Centers for Disease Control

www.pandemicflu.gov U.S. Health and Human Services pandemic flu information