



WESTCHESTER REGIONAL EMERGENCY MEDICAL ADVISORY COMMITTEE

POLICY STATEMENT

Supersedes/Updates: New

No. 04 - 02

Date: April 19, 2004

Re: EMT-B
Administration of
Nebulized Albuterol

Pages: 3

Administration Of Nebulized Albuterol By EMT-Bs

PURPOSE:

To provide EMS agencies with regional guidelines on the appropriate possession and administration of nebulized albuterol by Emergency Medical Technician - Basic (EMT-B) responders.

BACKGROUND:

In the spring of 2001, the New York State Emergency Medical Advisory Committee (SEMAC) established a template protocol for administration of nebulized albuterol by Emergency Medical Technician – Basic (EMT-B) providers. Prior to the creation of the Westchester EMS Regional Emergency Medical Advisory Committee (REMAC), the Hudson Valley REMAC finalized a protocol and application procedure for EMS Agencies to seek approval allowing certified EMT-Bs within their service to possess and utilize nebulized albuterol. The Westchester REMAC approved its regional protocol for nebulized Albuterol administration in 2002 and allowed for the application of the procedure for agencies within the Westchester Region. Ambulance services located in Westchester that had been approved by the Hudson Valley REMAC were “grandfathered” into the system as participants in this program.

AUTHORIZATION:

A Westchester Regional EMS agency wishing provide administration of nebulized albuterol by EMT-Bs must submit:

1. A completed WREMAC application to provide “BLS Nebulized Albuterol”¹
2. A signed collaborative agreement² with the Physician Medical Director which shall at a minimum include:
 - The use of the NYS DOH BLS Protocols in conjunction with the Westchester approved EMT Special Procedure Protocols for Nebulized Albuterol Administration;

- The use of the NYS DOH EMT-B and Westchester REMAC approved BLS Nebulized Albuterol Administration Training Curriculum for the purpose of training all EMT-B (s) who are participating in the program;
 - Acquisition, use and storage of the medications in accordance with NYS DOH policy and a restocking plan established with the Medical Director.
 - Participation in any NYS DOH and/or Westchester REMAC approved Quality Improvement Plans.
3. A list of the NYS certified EMTs who have received the required training outlined by this policy.

Applications will be reviewed by the Westchester Regional EMS (WREMS) office for completeness and presented to the WREMAC for approval.

TRAINING

While the NYS DOH EMT-B curriculum does include the assisted administration of a pre-prescribed bronchodilator via a metered dose inhaler (MDI), a stand-alone curriculum has been established to train EMTs in providing the medication through a pressurized, oxygen driven nebulizer to patients experiencing an exacerbation of their previously diagnosed asthma. To augment the instruction provided in EMT-B certification, a training course must be completed which follows the attached curriculum³ and is approved by the overseeing Physician Medical Director. The Physician, or his or her designee, preferably an ALS provider, shall complete the in-service, which must be repeated yearly. A list of the EMT-B's trained shall be forwarded to the Regional EMS Office with the initial application and will be re-submitted annually.

MEDICATION STORAGE

The ambulance service must ensure that the albuterol is stocked and stored in accordance with NYS DOH Policy No. 00-15 Re: Storage and safeguarding of medications administered by EMT-B's, or any superceding policy.

ADMINISTRATION OF NEBULIZED ALBUTEROL BY EMT-Bs

Nebulized albuterol will be administered by EMT-Bs in accordance with the current NYS DOH BLS Treatment Protocol and the Westchester REMAC EMT-B Special Procedure Protocol 1: Nebulized Albuterol Treatment Protocol. All uses must be properly documented on the NYS Patient Care Report (PCR) or other state approved Ambulance Care Report (ACR).

ADVANCED EMTs WORKING FOR BLS SERVICES

Advanced EMTs authorized by NYS to administer medications that are working for a BLS Ambulance Agency in a BLS capacity **must** be in-serviced in the provision of

Nebulized Albuterol as a BLS provider. Significant protocol differences exist between ALS and BLS administration of the medication. Per NYS DOH, providers may not practice outside the level of care regionally approved for the agency.

BLS PROVIDERS WORKING FOR ALS SERVICES

EMT-Bs working for ALS services may participate in the Nebulized Albuterol Program as long as the BLS providers have undergone the required training and the agency has received REMAC authorization. ALS Services utilizing the program as part of a tiered response must continue to ensure the request for and provision of ALS for patients receiving BLS administration of nebulized albuterol.

Issued and Authorized by:



Dr. Nicholas DeRobertis, MD, FACEP
Chair, Westchester Regional Emergency Medical Advisory Committee

¹ Attachment 1 – Westchester REMAC Application for BLS Administration of Nebulized Albuterol

² Attachment 2 - Collaborative Agreement for BLS Administration of Nebulized Albuterol

³ Attachment 3 - Westchester REMAC Approved Curriculum for BLS Administration of Nebulized Albuterol



Westchester Regional Emergency Medical Advisory Committee BLS Nebulized Albuterol Application

To be completed by Applicant. Please type or print legibly.

Agency Name _____

Agency Code _____

Agency Address _____

City _____ State _____ Zip _____ Email _____

Contact Name _____ **Title** _____

Agency Phone () _____ **Agency Fax** () _____

Medical Director _____

Medical Director Address _____

City _____ State _____ Zip _____ Email _____

MD Phone () _____ **MD Fax** () _____

The following documentation is attached to this application:

- ▶ Signed BLS Nebulized Albuterol Collaborative Agreement
- ▶ Listing of EMTs who have received training to provide BLS Nebulized Albuterol

Number of Vehicles that will carry Albuterol _____

Has a Restocking Plan been developed with the Agency Medical Director? Yes No

The Agency and the Medical Director understand that this program must be conducted in accordance with the protocols and policies established by the Westchester Regional Emergency Medical Advisory Committee and the NYS Department of Health. Any deviation from these protocols and policies must be immediately reported to the Agency Medical Director and the Regional Medical Director and may result in the revocation of approval to participate in this program.

Signature of EMS Agency Executive Officer Date _____
Signature of Agency Medical Director Date

To be completed by the Regional Office

Received By/ Date _____

Application Complete Yes No

REMAC Approval Date _____



Westchester Regional Emergency Medical Advisory Committee BLS Nebulized Albuterol Collaborative Agreement

Between an Emergency Medical Service (EMS) agency and a Physician Medical Director for the Provision of Nebulized Albuterol Administration in New York State, in the Westchester EMS Region

The following agreement stands between the _____ (Participating EMS Agency) and _____, (Physician) as Medical Director, authorizing the use of nebulized Albuterol for the treatment of asthma, by members who are certified as Emergency Medical Technicians (EMT). The following conditions must be observed by the Agency and its participating EMTs:

1. The EMT shall administer nebulized Albuterol according to the terms set forth by the NYS DOH BLS Treatment Protocols and the Westchester Regional Medical Advisory Committee (REMAC) EMT-B Special Procedure Protocols. This includes;
 - a) Administration is limited to NYS DOH certified EMTs who have received the required training and are working for an agency that has received REMAC authorization to provide this care.
 - b) Use of Albuterol is limited to patients between one and sixty-five years of age, who are experiencing an exacerbation of their previously diagnosed asthma.
 - c) For severe respiratory distress, advance life support (ALS) is requested, and transport to the hospital is not delayed.
 - d) Medical Control is contacted prior to administering Albuterol to patients with a history of Angina, Myocardial Infarction, Arrhythmia, or Congestive Heart Failure.
2. The Agency is responsible for the purchase of Albuterol and nebulizer equipment, and to maintain an adequate stock so that Albuterol is available at all times.
3. Providers of the Agency are responsible to store Albuterol in accordance with New York State Department of Health (NYS DOH) Policy Statement 00-15 Re: Storage and safeguarding of medications administered by EMT-B's, or any superceding policy.
4. Providers of the Agency are responsible to inspect the Albuterol for expiration date and replace the units as necessary.
5. Prior to the provision of BLS Administered Nebulized Albuterol, an EMS Agency shall file with the WREMSCO a completed Application to Provide Nebulized Albuterol and this collaborative agreement.
6. The Agency must participate in any Quality Assurance (QA) / Quality Improvement (QI) projects designated by the REMAC in regards to provision of Nebulized Albuterol by EMTs. The Agency agrees to include the review all BLS Nebulized Albuterol administrations in the Agency's quality improvement plan that is required by the NYS DOH.

The responsibilities of the Medical Director shall include, but not be limited to the following:

1. Approve and provide initial instruction and continuing education for all participating agency EMTs in the assessment of asthma and proper use of Albuterol based upon the NYS DOH EMT-B and Westchester REMAC approved BLS Nebulized Albuterol Administration Training curriculums;
2. Provide the agency with the authorization to purchase Albuterol.
3. Review all uses of Albuterol under this agreement and provide appropriate quality assurance feedback.

Signature of EMS Agency Executive Officer

Date

Signature of Agency Medical Director

Date



Objectives (cognitive):

- Identify the various causes of dyspnea that may mimic asthma.
- Identify the signs of respiratory distress.
- Differentiate between respiratory distress and respiratory failure.
- Describe the assessment of a patient with respiratory distress.
- Discuss the general pathophysiology of asthma.
- List the signs and symptoms of asthma.
- Describe the B.L.S. treatment for a patient with respiratory distress.
- Describe the B.L.S. treatment for a patient with respiratory failure.
- Identify when A.L.S. should be requested for asthma care.
- List 5 diagnostic signs and symptoms that must be assessed and documented prior to the first Albuterol treatment.
- Recite the indications for the use of Albuterol.
- Identify the "5 Rights" of medication administration.
- Identify the proper dose of Albuterol for patients between the age of 1 and 65.
- Recite the B.L.S. protocol for the administration of Albuterol.
- List 5 diagnostic signs and symptoms that must be assessed and documented following the Albuterol treatment(s).
- Recite the procedure for documenting treatment and for recording changes of the patient's condition.

Objectives (Psychomotor) :

- Demonstrate assessment of respiratory rate and quality.
- Detect accessory muscle use.
- Demonstrate proper assessment of lung sounds.
- Demonstrate the use of the "Borg" scale.
- If available, demonstrate proper use of a peak flow meter and recall when to use it.
- Demonstrate how to assemble a nebulizer and attach it to an oxygen tank.
- Demonstrate how to measure the proper dose of Albuterol.
- Demonstrate how to administer the nebulized Albuterol.
- Perform a thorough post treatment assessment of a patient.



I. Differential Diagnosis of Bronchospasm

1. COPD
2. Pulmonary embolus
3. Anaphylactic reactions
4. Pulmonary edema
5. Asthma

II. Pathophysiology

A. Reversible smooth muscle spasm of the airway associated with hypersensitivity of the airway to different stimuli.

1. Smooth muscle contraction
2. Mucosal edema
3. Mucous plugging

B. Triggers of Asthma Attacks

1. Allergies
2. Infection
3. Stress
4. Temperature change
5. Seasonal changes

C. Signs and Symptoms

1. Dyspnea
2. Wheezing
3. Tachypnea
4. Tachycardia
5. Cyanosis
6. Cough
7. Accessory muscle use
8. Inability to speak in complete sentences
9. Anxiety (hypoxia)
10. Prolonged expiratory phase
11. Tripod positioning



III. Assessment

A. *Solicit patient history*

1. Chief complaint
2. History of present illness
 - a) How long
 - b) Events leading up to
 - c) How severe
 - d) Aggravating / Alleviating factors
 - e) Other complaints
 - f) Steroid use in last 24 hours (PO / inhaled)
 - g) Other medications
3. Past medical history
 - a) Confirm asthma history
 - b) Other medical conditions (cardiac?)
 - c) E.D. visits for asthma in last 12 months
 - d) Hospital admissions for asthma in last 12 months
 - e) Previously intubated due to asthma?
 - f) Allergies to medications etc.

B. *Physical Exam*

1. Position found (tripod position)
2. Pursed lip breathing
3. Vital signs
4. Ability to speak in complete sentences
5. Accessory muscle use
6. Lung sounds
 - a) No Wheezing
 - b) Audible wheezing without a stethoscope
 - c) Audible with a stethoscope
 - d) Poor air movement (decreased breath sounds)
7. Patient self-assessment of severity (Borg scale)
8. Peak flow for age 5 and over (if available) or lethargy/irritability for patients under 5 years of age

IV. Pharmacology: Albuterol

A. *Actions*

1. Bronchodilator



2. Minimal side effects

B. Indications

1. Relief of bronchospasm
2. Use with caution in patients with pertinent cardiac history

C. Contraindications

1. Patients with known hypersensitivity to the drug

V. Albuterol Administration – The 5 “Rights”

A. Time

1. Patient experiencing an exacerbation of their previously diagnosed asthma.

B. Patient

1. Is not in respiratory failure
2. Is between one (1) and sixty-five (65) years of age
3. Is not allergic to Albuterol
4. For patients with a history of angina, myocardial infarction, arrhythmia or congestive heart failure, approval received from medical control

C. Drug

Check Albuterol three (3) times prior to administration for

1. Name/Label/Expiration
2. Discoloration
3. Particulate matter/clarity

D. Dose

1. One unit dose (2.5mg/3cc or 0.083%) via nebulizer @ 6-10 LPM. or at a flow rate that will deliver the drug over 5 to 15 minutes
2. Dose may be repeated once, after 10 minutes, if symptoms persist, for a total of two (2) doses

E. Route

1. Adult – nebulized Albuterol on a standard handheld nebulizer.
2. Pediatric – nebulized Albuterol on a standard handheld nebulizer or via non-rebreather.