

	Policy:	Administration of Salbutamol & Atrovent (Adult)
	Number:	
Approved by: MAC November 2008	Manual:	
Signature:	Section:	Medical Directive Emergency
	Page:	1 of 3

Procedure:

Salbutamol (Ventolin) MDI with spacer 100 mcg/puff; 4-8 puffs prn x 3 (**preferred**)

OR

Salbutamol (Ventolin) 5 mg/ml; 1 ml in 3 ml of saline via wet nebulizer mask over 10 minutes prn x 3

And

Atrovent 4 puffs by MDI with spacer q 20 min prn x 3 (**preferred**)

OR

Atrovent 500 mcg q 20 minutes prn x 3 doses for severe asthma

Indications:

Patients presenting with SOB and a history of asthma or COPD with one or more of the following symptoms;

- Cough
- Presence of respiratory distress, wheeze, tightness or decreased breath sounds during chest auscultation

Carry out febrile respiratory illness screening on all patients. If screen is positive, isolate patient prior to using nebulizer.

Note: For patients with severe respiratory distress, give medication and notify physician STAT

Contraindications:

Allergy or sensitivity to salbutamol or adrenergic amines (salmeterol, terbutaline, albuterol, formoterol)

Guidelines:

Reassess and document patient response and vital signs within 15 minutes following administration or as indicated.

Do PEFT or spirometry pre and post bronchodilator to objectively assess response to therapy.

Effective Date: January 01/2009	Revised Date:	Version: November 2008
File Name: Ventolin/Atrovent Administration (Adult) ED-Med-03		

References:

1. Dalcin Pde T, daRocha P, Franciscath E et al, Effect of clinical pathways on the management of acute asthma in the Emergency Department: Five Years of Evaluation. *J. Asthma* 2007. 44(4):273-9
2. Rodrigo, GJ, Rodrigo, C., hall JB. Acute asthma in adults: a Review. *Chest* 2004;125:1081
3. National Asthma Education and Prevention Program: Expert Panel Report III: Guidelines for the diagnosis and management of asthma. Bethesda, MD. National Heart, Lung, and Blood Institute, 2007. (NIH publication no. 08-4051) Available from www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm (Accessed September 1, 2007)
4. Martin, TG, Elenbaas, RM, Pingleton, SH. Use of peak expiratory flow rates to eliminate unnecessary arterial blood gases in acute asthma. *Ann Emerg med* 1982; 11:70
5. Idris, AH, McDermott, MF, Raucci, JC, et al. Emergency department treatment of sever asthma. Metered-dose inhaler plus holding chamber is equivalent in effectiveness to nebulizer. *Chest* 1993;103:665
6. Newman, KB, Milne, S, Hamilton, C. hall, K. A comparison of albuterol administered by metered-dose inhaler and spacer with albuterol by nebulizer in adults presenting to an urban emergency department with acute asthma. *Chest* 2002; 121:1036
7. Rebuck, AS, Chapman, KR, Abbound, R, et al. Nebulized anticholinergics and sympathomimetic treatment of asthma and chronic obstructive airways disease in the emergency room. *Am J Med* 1987; 82:59
8. O'Driscoll, BR, Taylor, RJ, Horsley, MG, et al. Nebulized salbutamol with and without ipratropium bromide in acute airflow obstruction. *Lancet* 1989; 1:1418
9. Rodrigo, GJ, Rodrigo, C. First-line therapy for adult patients with acute asthma receiving a multiple-dose protocol of ipratropium bromide plus albuterol in the emergency department. *Am J Respir Crit Care Med* 2000; 161:1862
10. Stoodley, RG, Aaron, SK, Dales, RE. The role of ipratropium bromide in the emergency management of acute asthma exacerbation: A meta-analysis of randomized clinical trials. *Ann Emerg Med* 1999; 34:8
11. Rodrigo, G, Rodrigo, C, Burschtin, O. A meta-analysis of the effects of ipratropium bromide in adults with acute asthma. *Am J Med* 1999; 107:363
12. Rodrigo, GJ, Rodrigo, C. The role of anticholinergics in acute asthma treatment: an evidence-based evaluation. *Chest* 2002; 121:1977
13. Karpel, JP, Schacter, EN, Fanta, C, et al. A comparison of ipratropium and albuterol vs. albuterol alone for the treatment of acute asthma. *Chest* 1996; 110:611
14. Garrett, JD, Town, GI, Rodwell, P, Kelly, AM. Nebulized salbutamol with and without ipratropium bromide in the treatment of acute asthma. *J. Allergy Clin Immunol* 1997; 100:165
15. Stein, LM, Cole, RP. Early administration of corticosteroids in emergency room treatment of acute asthma. *Ann Intern Med* 1990; 112:822
16. Emerman, CL, Cydulka, RK. A randomized comparison of 100 mg. vs. 500 mg dose of methylprednisolone in the treatment of acute asthma. *Chest* 1995; 107:1559
17. Edmonds, ML, Camargo, CA, Pollack, CV, Rowe, BH. Early use of inhaled corticosteroids in the emergency department treatment of acute asthma (Cochrane Review). *Cochrane Database Syst. Rev* 2001; 1:CD002308
18. Asthma team CCHMC Evidence based care guideline for managing an acute exacerbation of asthma. Available at: www.cincinnatichildrens.org/svc/alpha/h/health-policy/evidence-based/asthma.htm. Accessed on 2008-Feb-08
19. National Asthma Education and Prevention Program: Expert panel report III: Guidelines for the diagnosis and management of asthma. Bethesda, MD: National Heart, Lung and Blood

- Institute, 2007. (NIH publication no. 08-4051) Full text available at : www.nhlbi.nih.gov/guidelines/asthma/asthgdlm.htm (Accessed February 8, 2008)*
20. Craven, D, Kerckmar, CM, Myers, TR, et al. Ipratropium bromide plus nebulized albuterol for the treatment of hospitalized children with acute asthma. *J Pediatr* 2001; 138:51
 21. National Asthma Education and Prevention Program: Expert panel report III: Guidelines for the diagnosis and management of asthma. Bethesda, MD: National Heart, Lung, and Blood Institute, 2007. (NIH publication no. 08-4051). Full text available at: www.nhlbi.nih.gov/guidelines/asthma/asthgdlm.htm (Accessed February 8, 2008).
 22. Rodrigo J et al. Anticholinergics in the treatment of children and adults with acute asthma: a systematic review with meta-analysis. *Thorax* 2005; 60(9): 740-746
 23. Rodrigo GJ et al. *The Role of Anticholinergics in Acute Asthma Treatment* : An Evidence-Based Evaluation.* *Chest* 2002; 121(6): 1977 - 1987.
 24. Turner, JR, Corkery, KJ, Eckman, D, et al. Equivalence of continuous flow nebulizer and metered-dose inhaler with reservoir bag for treatment of acute airflow obstruction. *Chest* 1988; 93:476.
 25. Salzman, GA, Steele, MT, Pribble, JP, et al. Aerosolized metaproterenol in the treatment of asthmatics with severe airflow obstruction. Comparison of two delivery methods. *Chest* 1989; 95:1017.
 26. Idris, AH, McDermott, MF, Raucchi, JC, et al. Emergency department treatment of severe asthma. Metered-dose inhaler plus holding chamber is equivalent in effectiveness to nebulizer. *Chest* 1993; 103:665.
 27. Newman, KB, Milne, S, Hamilton, C, Hall, K. A comparison of albuterol administered by metered-dose inhaler and spacer with albuterol by nebulizer in adults presenting to an urban emergency department with acute asthma. *Chest* 2002; 121:1036.
 28. Stoodley, RG, Aaron, SD, Dales, RE. The role of ipratropium bromide in the emergency management of acute asthma exacerbation: A metaanalysis of randomized clinical trials. *Ann Emerg Med* 1999; 34:8.