State of New Jersey
Department of Human Services
Division of Medical Assistance & Health Services
New Jersey Drug Utilization Review Board

BULLETIN

Volume No. 01 No. 02 **May 2009**

TO: Physicians, Advanced Practice Nurses, Clinics, Federally Qualified Health Centers- **For Action**
Providers of Pharmaceutical Services, Health Maintenance Organizations – **For Information Only**

SUBJECT: **Clinical News from the New Jersey Drug Utilization Review Board (DURB)**

PURPOSE: To provide practitioners useful clinical information that may be helpful to the prescribing of prescription drugs

BACKGROUND: The DURB serves as an advisory board to the New Jersey Department of Human Services and the New Jersey Department of Health and Senior Services. The Board's responsibilities include recommending clinical standards based, in part, on the evaluation of prescription drug use by participants in the State's prescription drug programs. The Board is also responsible for disseminating information that the Board has determined would encourage appropriate drug utilization.

ACTION: Attached is a discussion regarding **Long Acting Beta-2 Agonists**.
This bulletin can be viewed electronically by visiting
http://www.nj.gov/humanservices/dmahs/durb.html.
The Board welcomes your comments regarding this bulletin. Send comments to
www.state.nj.us/humanservices/dmahs/durb.html. The Subject should read, "DURB Comments."

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Long Acting β-2 Agonists

Avoid Duplication of Therapy: Two LABAs should NOT be utilized simultaneously. This may increase the risk of asthma related deaths.

Long-acting β-agonists (LABAs) are the most potent bronchodilators available in clinical use. They interact with beta-receptors on cells and relax bronchial smooth muscle, decrease mast cell mediator release, inhibit the response of neutrophils, eosinophils, and lymphocytes, and affect edema formation. It is important to note that LABAs **DO NOT** reduce inflammation*. Effective for 12 hours or more, these medications are generally dosed twice daily for the management of moderate or persistent asthma in adolescents and adults 12 years of age and older.

Warnings Issued by FDA
Due to a possibility of increased risk of worsening wheezing and increase in asthma-related deaths, on March 2, 2006, the FDA approved new safety labeling with Black Box Warnings and Medication Guides for patients on Serevent® and Advair Diskus®. Data for the FDA safety advisory came about from the Salmeterol Multi-Center Asthma Research Trial (SMART). This 28-week placebo-controlled trial compared the safety of salmeterol with placebo. The results indicated that patients on salmeterol showed a small but significant increase in asthma related deaths (13 deaths out of 13,176) compared to placebo (3 out of 13,179). It was the result of this trial that encouraged the FDA to issue a Black Box Warning on Serevent® and Advair®. **As of May 11, 2007, all LABAs have this new safety information attached to the product.**

Prescribers should know that although LABAs decrease the frequency of asthmatic episodes, they may *increase* the chance of SEVERE asthma episodes and death when these episodes occur. Carefully evaluate the risks versus benefits when it comes to changing the medication of a patient who is well-controlled on a regimen containing a LABA or a combination of LABA and inhaled corticosteroids. On the other end of the spectrum, discontinuing a LABA-containing combination treatment may increase the risk of a severe exacerbation from under treatment. Follow guidelines appropriately to ensure proper and safe treatment of patients.

Points to Remember
- NEVER use as first line of therapy
- NEVER use LABAs as monotherapy for long-term asthma control
- Preferred therapy is to combine LABA with inhaled corticosteroids in ages 12 and older for moderate to severe-persistent asthma—Combinations products are available on the market
- NOT recommended for relief of acute symptoms or exacerbations
- Advise patient to have short-acting β-agonists at ALL times for rescue therapy
- Avoid DUPLICATION of LABAs

DRUG	Active ingredient	Indication	Dosage forms	Dosage and administration	Side Effects	Pregnancy Category
Serevent® $$	salmeterol	Long-term maintenance treatment of asthma and prevention of bronchospasm in children >4 with reversible obstructive airway disease and COPD	Diskus for oral inhalation	50 mcg twice daily: morning and evening	Headache, nausea, oral mucosal abnormality, pain in joints, sleep disturbances, dermatitis	C
Foradil® $$ Peforomist® (inhalation solution)	formoterol fumarate	Long-term maintenance of asthma, prevention of bronchospasm >5 years, COPD	~Capsule with dry powder formulation for oral inhalation ~Capsules should NOT be ingested orally	12 mcg twice daily: Morning and evening	Same as above:	C
***Advair Diskus®[1] $$$**	fluticasone and Salmeterol	Maintenance treatment of asthma >4 years; Maintenance treatment for COPD	Diskus for oral inhalation	100/50, 250/50, 200/50 Twice daily	Upper Respiratory tract infection, inflammation, pharyngitis, dysphonia, oral candidiasis, nausea vomiting, bronchitis, musculoskeletal pain	C
***Symbicort® $$$**	budesonide and formoterol	Long-term maintenance treatment of asthma patients >12 years; NOT for acute bronchospasm	Metered dose inhaler	160/4.5 80/4.5 Oral inhalation twice daily MAX: 640/18	Nasopharyngitis, headache, back pain, upper respiratiory tract infection, influenza, vomiting, stomach discomfort, oral candidiasis	C
Brovana® $$$$	aformoterol tartrate	Long-term maintenance treatment of COPD, chronic bronchitis, emphysema	~Solution in ready-to-use vials ~Inhalation Solution ~Via Nebulizer only	15 mcg twice a day via nebulizer Dosage exceeding 30 mcg is not recommended	Pain, chest pain, diarrhea, sinusitis, leg cramps, dyspnea, flu syndrome, peripheral edema, lung disorder	C

*Advair® and Symbicort® are combination products consisting of a LABA and a corticosteroid. The corticosteroid in these products reduce inflammation.

**Cost estimates supplied by First Data Bank as of March 2009 are based on 30 days supply of medication

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