

Advair[®] Utilization for Non-Asthma/COPD Indications

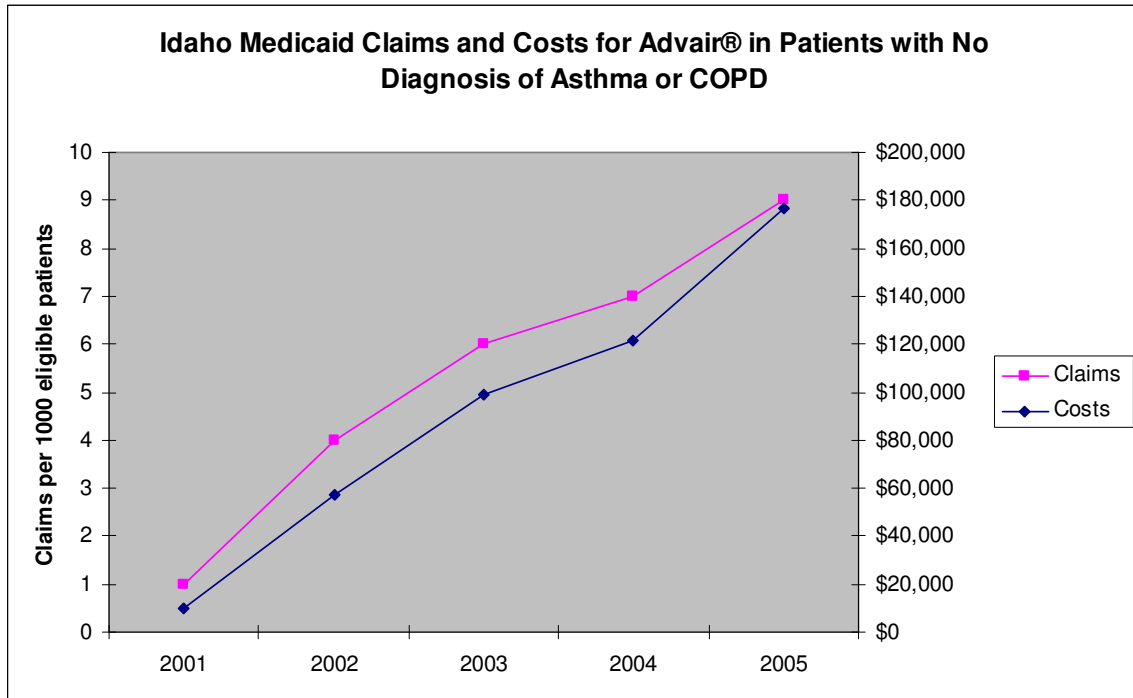
Advair[®] (fluticasone/salmeterol), an inhaled corticosteroid/long-acting β_2 -agonist combination, was approved by the FDA in August 2000 for patients > 4 years of age with asthma or chronic obstructive pulmonary disorder (COPD). Both its demonstrated efficacy as a long-term controller medication and its ease of use have led to widespread prescribing.

While the majority of utilization appears to be for the treatment of asthma or COPD, a review of Idaho Medicaid claims in 2005 indicated that several hundred patients were prescribed the medication for non-asthma/COPD indications, and this number continues to grow each year as shown in Figure 1 (see reverse). In 2005 Idaho Medicaid spent over \$176,000 on Advair[®] for these patients. The most common of such off-label uses include cough, acute bronchitis, and symptomatic treatment for upper respiratory tract infections.

KEY POINTS

- There have been no clinical trials evaluating Advair[®] in cough or acute bronchitis
- Clinical trials evaluating treatment of cough with an inhaled steroid (beclomethasone) have shown no benefit compared to placebo; there have been no studies evaluating long-acting β_2 -agonists in cough^{1,2}
 - Cough is better treated with suppressant agents such as dextromethorphan, codeine, and/or ipratropium^{3,4}
- There have been no clinical trials evaluating the use of inhaled corticosteroids or long-acting β_2 -agonists in patients with acute bronchitis
 - Acute bronchitis is often viral and is best treated with acetaminophen, antitussives, and/or nasal decongestants^{5,6}
- Advair[®] is most appropriately used in patients with a diagnosis of asthma or COPD
 - In asthma, inhaled corticosteroids \pm long-acting β_2 -agonists are indicated for use in moderate persistent or severe persistent asthma in combination with a short-acting β_2 -agonist as needed⁷
 - In COPD, inhaled corticosteroids are recommended as second-line treatment following a previous trial of an inhaled anticholinergic, β_2 -agonist, and/or methylxanthine⁸
- Advair[®] is expensive (cost per Diskus; www.drugstore.com)
 - 100/50 mcg: \$146.47
 - 250/50 mcg: \$166.99
 - 500/50 mcg: \$229.87
- Recent evidence raising safety concerns of long-acting β_2 -agonists further supports more judicious use of Advair[®]⁹

Figure 1: Idaho Medicaid Claims and Costs for Advair® in Patients without a Diagnosis of Asthma or COPD



References

1. Boulet L, Milot J, Boutet et al. Airway inflammation in nonasthmatic subjects with chronic cough. *Am J Respir Crit Care Med.* 1994;149(2 pt 1):482-89.
2. Evald T, Munch E, Kok-Jensen A. Chronic non-asthmatic cough is not affected by inhaled beclomethasone dipropionate. A controlled double-blind clinical trial. *Allergy.* 1989;44(7):510-14.
3. Pratter, M. Unexplained (idiopathic) cough: ACCP evidence-based clinical practice guidelines. *Chest.* 2006;129:222S-31S
4. Bolser D. Cough suppressant and pharmacologic protussive therapy: ACCP evidence-based clinical practice guidelines. *Chest.* 2006;129(1 Suppl):238S-49S.
5. Braman S. Chronic cough due to acute bronchitis: ACCP evidence-based clinical practice guidelines. *Chest.* 2006;129(1 Suppl):95-103.
6. Knuston, D, Braun C. Diagnosis and management of acute bronchitis. *Am Fam Physician.* 2002;65(10):2039-44.
7. National Asthma Education and Prevention Program. Expert Panel Report: Guidelines for the diagnosis and management of asthma update on selected topics 2002. *J Allergy Clin Immunol.* 2002;110(5 Suppl):S141-219.
8. Global strategy for diagnosis, management, and prevention of chronic obstructive pulmonary disease. NHLBI/WHO Global initiative for Chronic Obstructive Lung Disease (GOLD) Workshop summary. *Am J Respir Crit Care Med.* 2001;163:1256-76.
9. Salpeter S, Buckley N, Ormiston T, et al. Meta-analysis: effect of long-acting beta-agonists on severe asthma exacerbations and asthma-related deaths. *Ann Intern Med.* 2006;144(12):904-12.