

# Wyoming Drug Utilization Review

## A General Overview of Antihistamines for Allergic Rhinitis and Allergic Conjunctivitis

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### Allergic Rhinitis

A common question at the pharmacy counter from spring to fall is how to treat itchy eyes, ears, nose or throat, runny nose, sneezing, and sometimes a stuffy nose; these are general symptoms of allergic rhinitis.<sup>1,2</sup> This allergic response occurs when immunoglobulin E (IgE) is activated by allergens that are inhaled and contact mucous membranes.<sup>1</sup> Inflammatory mediators such as histamine, leukotrienes, prostaglandin D<sub>2</sub>,

tryptase, kinins, and mast cells are then released.<sup>1</sup> Rhinitis develops when histamine is released and the nasal mucosa becomes inflamed, resulting in sneezing, nasal itching, watery rhinorrhea, and sometimes nasal congestion.<sup>1</sup> After two years of age the symptoms of allergic rhinitis can appear.<sup>2</sup>

Seasonal allergic rhinitis is usually in response to pollen producing trees in the spring, grasses in the summer, and weeds in the fall.<sup>1</sup> Alternatively, in patients with allergic rhinitis, symptoms are generally mild and can occur year round due to dust mites, animal dander, molds, or to specific allergens.<sup>1</sup> One-half to two-thirds of patients have a combination of seasonal and nonseasonal allergic rhinitis.<sup>1</sup>

In the US, allergic rhinitis is the sixth most prevalent chronic disease affecting 8.8 to 16% of the population.<sup>1</sup> Allergic rhinitis impacts quality of life, work or school performance, and asthma for some patients.<sup>1,3</sup> Allergic rhinitis can occur due to a genetic predisposition, allergen exposure, and other risk factors such as an elevated serum IgE level before six years of age, eczema, and intense second-hand

smoke exposure.<sup>1</sup> Allergy testing can identify the cause of the allergen response in the patient, however any antihistamines administered need to be discontinued at least four days before testing begins.<sup>1,2</sup>

A patient may experience insomnia, chronic malaise, fatigue, and poor work or school performance if their allergic rhinitis is left untreated or insufficiently treated.<sup>1</sup> Inadequately treated patients may also experience the inability to smell or taste, postnasal drip with cough, hoarseness, and possibly nasal or vocal polyps.<sup>1</sup>

Patients with allergic rhinitis should try to avoid the allergen they are sensitive to; otherwise antihistamines, decongestants (oxymetazoline, phenylephrine, etc.), local corticosteroids (beclomethasone dipropionate, fluticasone, etc.), mast cell stabilizers (cromolyn, montelukast), or nasal anticholinergics (ipratropium bromide) can be used.<sup>1</sup> Antihistamines are the first line of treatment for allergic rhinitis, and can be given systemically, by ophthalmic drops, or intranasally.<sup>1</sup> Topical antihistamines are preferred particularly if patients are affected by drowsiness caused by systemic antihistamines.

### Antihistamines

There are many oral antihistamines and many formulations for each available. First-generation antihistamines include: clemastine, chlorpheniramine, and diphenhydramine. These first-generation antihistamines are generally more sedating, have more frequent dosing, and more adverse effects. Second-generation antihistamines include: cetirizine, desloratadine, fexofenadine, levocetirizine, and loratadine. The second-generation antihistamines are well absorbed, have faster onset, and a longer duration of action. If patients experience intolerable adverse effects from systemic antihistamines they should then try topical intranasal (azelastine and olopatadine) or ophthalmic antihistamines (azelastine, epinastine, ketotifen, and olopatadine).

### Allergic Conjunctivitis

Allergic conjunctivitis results in red, watery eyes and is experienced by some patients with allergic rhinitis.<sup>1,2</sup> Allergic conjunctivitis primarily can be treated with artificial tears and then ophthalmic antihistamines or antihistamine and decongestant combination products.<sup>1,2</sup> Ophthalmic antihistamines are the treatment of choice in patients who experience only allergic conjunctivitis and can be used in conjunction with other

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# WY-DUR Board Meeting Update

The DUR Board met for its bimonthly business meeting on September 25, 2008. Highlights of this meeting include the following.

The Board reviewed utilization of more than one triptan medication as well as high dose triptans. There was no utilization of two or more triptans. The majority of high dose triptan use is with Imitrex 100 mg. The Board approved the draft criteria as submitted.

**Preferred medications are: Imitrex (all forms) and Maxalt and Maxalt MLT.**

**Claims of non-preferred medications will be approved if:**

- **Documentation of trial and failure of both preferred medications.**

The Board approved the draft ARB criteria as submitted.

**Preferred medications are: Cozaar, Diovan, Benicar, Micardis, and Avapro.**

**Claims of non-preferred medications will be approved if:**

- **Documentation of trial and failure of all preferred medications.**

**Clients currently on non-preferred ARBs will be grandfathered.**

Both the Triptan and ARB criteria have been released for public comment. They are also posted on the DUR website at [www.uwyo.edu/DUR](http://www.uwyo.edu/DUR). Comments may be sent by email to [alewis13@uwyo.edu](mailto:alewis13@uwyo.edu) or by mail to: Wyoming Drug Utilization Review, Dept. 3375, 1000 East University Avenue, Laramie, WY 82071.

The Board approved policies for new drugs and modified formulations and for exception of anticonvulsant drugs to the generic mandatory policy. (See inset.)

The Preferred Drug List Advisory Committee (PDLAC) met on October 15, 2008 in Cheyenne. The agenda and minutes can be viewed at [www.uwyo.edu/PDL](http://www.uwyo.edu/PDL). Classes for consideration included ADHD medications and atypical anti-psychotics.

The next DUR Board meeting will be held November 20, 2008 in Casper. Topics for discussion will include further discussion of the brand vs. generic preferred drug issue, further discussion on Versa Foam products and Atopiclair and prior authorization criteria for the ADHD agents and atypical anti-psychotic medications based on PDLAC recommendations. An agenda will be posted approximately two weeks prior to the meeting.

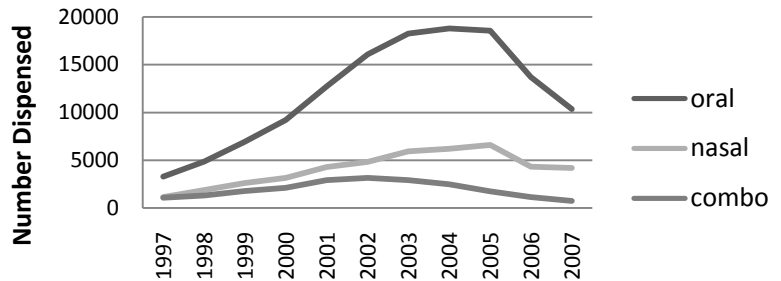
## Anticonvulsant Policy

Continued use of a brand name anticonvulsant following introduction of a generic version will be allowed if the recipient has an epilepsy diagnosis and has been on the brand name in the previous year. If the recipient has not been on the brand name within the previous year, the generic mandatory policy will be enforced (requiring efficacy trial of generic or documentation of adverse effect from generic formulation).

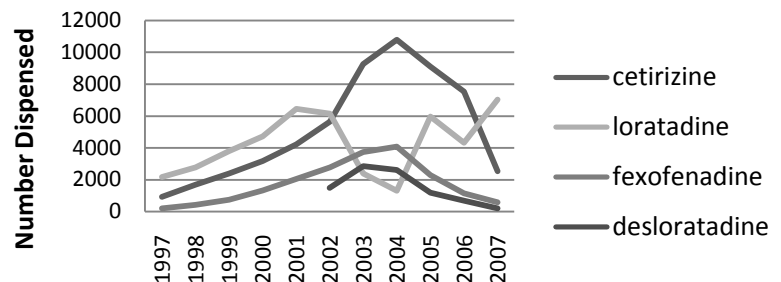
## New Drugs, Formulations and Indications Policy

Following introduction to the market, new drugs, new formulations of existing drugs and new indications will require prior authorization until published literature is available through standard literature review processes. Exceptions to this rule will be handled on a case by case basis.

### Usage of Allergy Medications Wyoming Medicaid



### Usage of 4 Top Oral Antihistamines Wyoming Medicaid



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allergy agents such as nasal corticosteroids.<sup>1</sup> Combination antihistamine and decongestant products containing pheniramine maleate and naphazoline should not be used in contact lens wearers or for longer than 72 hours.<sup>5</sup>

### **Contraindications/warnings**

In patients who have peptic ulcers, symptomatic prostatic hypertrophy, bladder neck obstruction, or pyloroduodenal obstruction, or are elderly, debilitated, or use monoamine oxidase inhibitors simultaneously; antihistamines are contraindicated.<sup>2,4,6</sup> Antihistamines should not be used in patients with compromised lung function such as chronic obstructive pulmonary disease, or sleep apnea.<sup>4</sup> Patients with renal or hepatic impairment should take lower doses of loratadine, desloratadine, and cetirizine.<sup>4</sup> First-generation antihistamines are not to be used in newborns, premature infants, nursing mothers, or patients with narrow-angle glaucoma.<sup>2,4,6</sup>

### **Adverse effects**

Drowsiness is a major concern with all antihistamines. Patients need to be counseled on this adverse event, as it can lead to impaired driving, coordination, and motor skills.<sup>2</sup> Additional central nervous system depressants, especially alcohol, will enhance the effect of drowsiness experienced.

Antihistamines cause anticholinergic effects, resulting in unpleasant adverse effects such as: dry eyes, mouth, and nose, blurred vision, urinary retention, constipation, and possible tachycardia.<sup>1,4,6</sup> Anticholinergic effects are undesirable in elderly patients with urinary retention or concurrently taking other anticholinergic medications.<sup>1,4,6</sup> Patients with high intraocular pressures, hyperthyroidism, and cardiovascular disease should take antihistamines with extreme caution.<sup>1,4,6</sup>

Gastrointestinal adverse effects possibly encountered with antihistamines include: loss of appetite, or weight gain with increased appetite, nausea, vomiting, and epigastric distress.<sup>1,4,6</sup> Taking the antihistamine with food or a full glass of water will diminish the gastrointestinal adverse effects.<sup>1</sup>

Antihistamines may produce a paradoxical central nervous system stimulatory effect in children and elderly; the resulting symptoms include anxiety, hallucinations, appetite stimulation, muscle dyskinesias, and activation of epileptogenic foci.<sup>2,4,6</sup> Young patients and elderly can also experience nervousness, tremor, insomnia, agitation, and irritability at elevated doses.<sup>2</sup> Elderly patients should receive lower dosages because they are more likely to experience dizziness, excessive sedation, syncope, toxic confusional states, and hypotension.<sup>4</sup>

### **Patient education**

Patients should be counseled to not double the dose of their antihistamine if a dose is missed.<sup>4,6</sup> Furthermore, patients taking antihistamines need to be cautious when taking

additional OTC allergy, cold, and sleep preparations that may also include an antihistamine as one of their ingredients. Patients should be warned of the drowsiness effect of antihistamines and the increase in effect if taken with other central nervous system depressants such as alcohol.<sup>4,6</sup>

Patients who wear contacts should wait 10 minutes after instilling ophthalmic antihistamines before inserting their contacts.<sup>6</sup> Avoid contamination of the dropper bottle by not allowing the bottle tip to touch the eye.<sup>6</sup>

### **Usage**

The use of oral and nasal antihistamines, and combination products containing antihistamines and decongestants has been rapidly declining since 2004-2005. This may be due to brand and generic products becoming available over-the-counter, which provides a greater ease of access for the patient.

The prescription sales of the top four oral antihistamines: cetirizine, loratadine, fexofenadine, and desloratadine, has changed dramatically in the past ten years. The sales of cetirizine and loratadine are inversely related.

### **Conclusion**

There are many different antihistamines and formulations for each antihistamine available. The first-generation antihistamines are generally well tolerated and effective in many patients, and are the least expensive of the antihistamines. Patient safety should however be the main concern and first-generation antihistamines may not be the best choice. Many second-generation antihistamines are now available as generics and OTC, and are a good option for treating allergic rhinitis. When deciding which antihistamine is best for the patient, the patient's symptoms, adverse effects, and the cost of the antihistamine need to be assessed. The patient's comorbid conditions, pregnancy, and lactation need to be evaluated before the antihistamine is chosen. The patient should receive relief from their allergic symptoms within three to four days. If patients become tolerant, switching to another antihistamine may relieve their symptoms.

### **References**

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**October 2008**

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