

Impact of Ophthalmic Antihistamines Formulary Coverage in a Medicaid Pediatric Accountable Care Organization (ACO)



Candace Zheng, Ling Wang, Jennifer Klima, Jon Vecchiet, Emily Middleton, Francine Taylor, Sean Gleeson, Chet Kaczor



Background

Topical ophthalmic antihistamines are commonly prescribed to treat signs and symptoms of allergic conjunctivitis in the pediatric population. Allergic conjunctivitis occurs frequently in pediatric patients with a history of allergic rhinitis, eczema and asthma. The ocular allergic response is primarily caused by type 1 hypersensitivity reactions. Allergens bind to sensitized immunoglobulin E antibodies on mast cells causing the release of histamine and prostaglandins among other immune mediators. This in turn causes itching, swelling, redness and discharge.¹⁻² Ophthalmic antihistamines including ketotifen, azelastine and olopatadine (Pataday® and Patanol®) are approved for use in children with allergic conjunctivitis and can be used alone to treat allergic conjunctivitis.^{1,3} Limited head to head trials exist comparing the ophthalmic antihistamines to show superiority of one over the other.^{4,5} Due to the lack of data on efficacy, cost should be assessed in choosing therapy. Ketotifen and azelastine are both available generically with Pataday® and Patanol® available as branded products. Pediatric accountable care organization (ACO) provided recommendations to the five, Medicaid managed care organizations (MCO) to cover ketotifen with no restrictions followed by azelastine if tried and failed ketotifen. Pataday® and Patanol® should require prior authorization for coverage. Coverage summary document was disseminated informing practitioners coverage details.

Results

Recommendation for change in formulary coverage was accepted by one MCO. Four out of the five MCOs had restrictions in place including prior authorization on both branded Pataday® and Patanol®. MCO 2 implemented ACO recommendation for change in formulary coverage requiring step therapy for azelastine and prior authorization for Patanol®. MCO 2 did not implement prior authorization requirement for Pataday®. Table 2 displays the prescription claims data before and after intervention (formulary change recommendation and coverage summary document). The prescription claims data display a noted increase in paid, PMPM and PMPY for ketotifen and azelastine while a significant decrease was noted for Pataday® and Patanol®. The trend for PMPM correlated with the number of prescription claims and percentage change year over year. Figure 1 and Figure 2 demonstrate the change in the number of prescription claims previous to intervention and post-intervention. Calculated overall cost savings totaled \$113,250 comparing baseline total paid to 12 months post implementation of change in formulary coverage and dissemination of coverage summary document.

Table 2: Prescription Claims Analysis

Drug Name	Year	Number of Prescription Claims	Paid	PMPM	PMPY
AZELASTINE	FY 2013	629	\$47,109.49	\$ 0.013	\$0.16
AZELASTINE	FY 2014	1081	\$53,950.42	\$ 0.015	\$0.18
AZELASTINE	FY 2015	1690	\$77,102.52	\$ 0.020	\$0.24
KETOTIFEN	FY 2013	391	\$4,175.46	\$ 0.001	\$0.01
KETOTIFEN	FY 2014	1544	\$16,089.49	\$ 0.004	\$0.05
KETOTIFEN	FY 2015	2421	\$24,272.59	\$ 0.006	\$0.07
PATADAY	FY 2013	2025	\$231,923.12	\$ 0.064	\$0.77
PATADAY	FY 2014	841	\$102,575.13	\$ 0.028	\$0.34
PATADAY	FY 2015	511	\$68,446.57	\$ 0.017	\$0.21
PATANOL	FY 2013	4014	\$515,552.34	\$ 0.143	\$1.72
PATANOL	FY 2014	1319	\$176,602.89	\$ 0.049	\$0.58
PATANOL	FY 2015	383	\$66,145.38	\$ 0.017	\$0.20

Figure 1: Overall MCO Prescription Claims Utilization

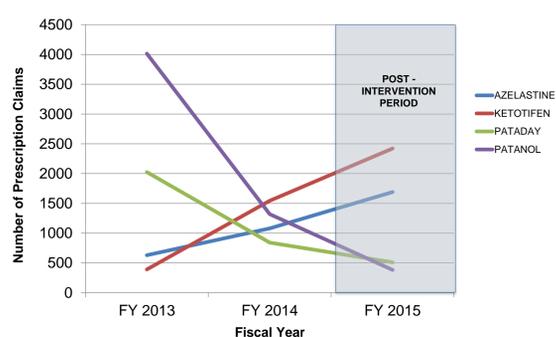
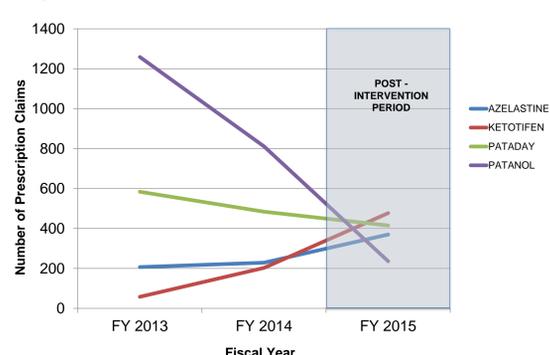


Figure 2: MCO 2 Prescription Claims Utilization



Objectives

- Assess the overall cost impact of change in formulary coverage of ophthalmic antihistamines
- Evaluate the impact of ophthalmic antihistamine coverage summary document on prescribing patterns

Methods

Pataday® and Patanol® were identified as highly utilized medications in the pediatric ACO. Coverage criteria was evaluated for ketotifen, azelastine, Pataday® and Patanol®. Pediatric ACO performed analyses utilizing prescription claims data to evaluate the impact on cost and prescribing if coverage criteria were changed. Recommendations on coverage for ketotifen, azelastine, Pataday® and Patanol® were provided to the Medicaid MCOs. An ophthalmic antihistamines coverage summary document (Table 1) for the five, Medicaid MCOs was created and shared with network practitioners. The coverage summary document also provided estimated cost per prescription and dosing information. Recommendation to MCOs and dissemination of coverage summary was implemented in April and June 2014, respectively. Prescription claims data for azelastine, ketotifen, Pataday® and Patanol® were analyzed from June 1, 2012 through May 1, 2015. Claims data was characterized by number of prescription claims filled, paid per year, paid per member per month (PMPM) and paid per member per year (PMPY). These metrics were further stratified by year: June 2012 through May 2013 (FY 2013), June 2013 through May 2014 (FY 2014) and June 2014 through May 2015 (FY 2015).

Table 1: Coverage Summary Document

	Generic Drug Name (Brand Name)	MCO 1	MCO 2	MCO 3	MCO 4	MCO 5
1 st Choice	Ketotifen (Zaditor®) (\$11) Dosing: 1 drop in each eye twice daily	Covered without any restrictions				
2 nd Choice	Azelastine (Optivar®) (\$57) Dosing: 1 drop in each eye twice daily	Covered without any restrictions	Step therapy: Must trial and fail ketotifen	Step therapy: Must trial and fail ketotifen	Step therapy: Must trial and fail ketotifen	Covered without any restrictions
3 rd Choice	Olopatadine (Pataday®) (\$150) Dosing: 1 drop in each eye once daily	Prior authorization required	Prior authorization required	Prior authorization required	Prior authorization required	Prior authorization required
	Olopatadine (Patanol®) (\$170) Dosing: 1 drop in each eye twice daily	Prior authorization required	Covered without any restrictions	Prior authorization required	Prior authorization required	Prior authorization required

Discussion

Our findings demonstrate utilization management of ophthalmic antihistamines using step therapy and prior authorization combined with practitioner education was effective in impacting prescribing patterns. Limitations to the study include the combined analyses measuring the impact of both interventions. It remains unclear the cost savings attributed to each intervention. Additionally, calculated cost savings could be due to utilization management tools or practitioner education implemented by the MCOs. Rebates were not accounted for in the calculated cost savings. Due to the unique structure of the pediatric ACO, various initiatives from multiple stakeholders could have influenced utilization.

Continued collaboration of the pediatric ACO with the five, MCOs will allow for further improvements to drive improved quality and outcomes while decreasing cost.

Acknowledgements

Thank you to Partners for Kids, Nationwide Children's Hospital Pharmacy Department and the Data Resource Center

References

1. Abelson MB, Granet D: Ocular allergy in pediatric practice. *Curr Allergy Asthma Rep* 2006, 6(4):306-311.
2. La Rosa M, Lionetti E, Reibaldi M, Russo A, Longo A, Leonardi S, Tomarchio S, Avitabile T, Reibaldi A. Allergic conjunctivitis: a comprehensive review of the literature. *Ital J Pediatr*. 2013 Mar 14;39:18.
3. American Optometric Association. Optometric Clinical Practice Guideline. Care of the patient with conjunctivitis. [guideline on the Internet]. 2007 [cited 2016 Jan 4]. Available from: <http://www.aoa.org/x4813.xml>.
4. Abelson MB, Spangler DL, Epstein AB, Mah FS, Crampton HJ. Efficacy of once-daily olopatadine 0.2% ophthalmic solution compared to twice-daily olopatadine 0.1% ophthalmic solution for the treatment of ocular itching induced by conjunctival allergen challenge. *Curr Eye Res*. 2007 Dec;32(12):1017-22.
5. Ganz M, Koll E, Gausche J, Detjen P, Orfan N. Ketotifen fumarate and olopatadine hydrochloride in the treatment of allergic conjunctivitis: a real-world comparison of efficacy and ocular comfort. *Adv Ther*. 2003 Mar-Apr;20(2):79-91.