

Retrospective Study

Impact of Prior Authorizations on Topical Dermatological Prescriptions

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Introduction

Prior authorizations (PAs) present cost-saving for insurance companies but increase administrative time and cost burden for practices and delay treatment for patients. When PAs are required, only 52.8% of patients initiate treatment, dropping to <15% with PA denial [1]. Expensive copayments are also barriers. Patient Assistance Programs (PAPs) from manufacturers may reduce copayments in cases of inadequate insurance. However, PAPs are not available for most topical non-biologics, may involve multi-step PA processes, and may have limitations on number of dollars or times used per year.

In the United States, patients with high medication costs can obtain coupons through prescription price tracking companies such as GoodRx [2]. Drug coupons can be obtained irrespective of patients' insurance coverage, financial status and can be applied to any medications. GoodRx prices can be found on the company's website while some electronic health record systems even display the GoodRx price when prescribing. However, the coupons are pharmacy-chain specific, thus the coupon and prescriptions must be sent and filled accordingly. Since all patients are eligible for discount coupons, are PAs still worthwhile?

Methods

We performed a retrospective review of prescribed non-biologic topical dermatologic medications, PA requests, and copayments at Tufts Medical Center (TMC) from 10/1/2019 to 10/1/2020. This study was approved by the TMC Institutional Review Board.

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Results

15,438 non-biologic medications were prescribed, of which 10,879 were topical prescriptions and 590 (5.4%) required PAs. PAs were performed by our central pharmacy team which typically yields a higher approval rate of 72.4% [3]. Pharmacy technicians at TMC spend on average 30 minutes processing, submitting and following up on each non-biologic PA. Utilizing national mean wage plus benefits for a pharmacy technician of \$22.25/hr, we estimate each PA cost as \$11.13 [4], excluding appeals and peer-to-peer communications requiring more costly physician time. For the patient, paying a co-pay is almost always cost beneficial except for three medications: hydroquinone, benzoyl peroxide, and imiquimod for which the coupon price was less than the co-pay price (Table 1).

Medication Class	Rx	PA	PA/Rx	PA/all non-biologic PAs	Approved PAs		Avg copay price	Avg drug coupon price
	No.	No.	%	%	No.	%		
Topical Retinoid/Acne/Rosacea/Lightening								
Adapalene	133	13	9.8	1.6	7	53.8	\$6.00 (0.1%) \$26.74 (0.3%)	\$12.29 (0.1%) [†] \$52.29 (0.3%)
Adapalene/Benzoyl peroxide	5	2	40.0	0.2	1	50.0	\$24.33	\$34.45
Azelaic acid	151	15	9.9	1.8	10	66.7	\$16.72	\$67.91
Benzoyl peroxide	449	7	1.6	0.9	7	100.0	\$7.12	\$6.79 [†]
Benzoyl peroxide-clindamycin	46	5	10.9	0.6	0	0	\$7.31	\$28.84
Brimonidine	3	1	33	0.1	1	100.0	\$55.00	\$504.47
Dapsone	99	8	8.1	1.0	6	75.0	\$14.51	\$139.74
Ivermectin	22	7	31.8	0.9	5	71.4	\$30.50	\$138.94
Hydroquinone	124	1	0.8	0.1	0	0.0	\$36.38	\$19.99
Metronidazole	233	1	0.6	0.4	0	0.0	\$5.66	\$32.76
Oxymetazoline	17	4	23.5	0.6	1	25.0	\$45.00	\$443.80
Sulfacetamide	62	2	3.2	9.2	0	0.0	\$8.33	\$27.16
Tazarotene	33	9	27.3	1.1	8	88.9	\$35.21	\$79.04
Tretinoin	1109	174	15.7	21.1	142	81.6	\$14.70	\$24.09
Total	2486	249	10.0%	30.2%	188	75.5%		
Topical Steroids								
Aclometasone	65	0	0.0	0.0	-	-	\$5.96	\$11.15
Betamethasone	1156	20	1.7	2.4	9	45.0	\$5.94	\$16.03

Clobetasol	546	40	7.3	4.9	28	70.0	\$6.49	\$17.35
Desonide	138	9	6.5	1.1	5	55.6	\$4.66	\$15.81
Desoximetasone	10	2	20	0.2	2	100.0	\$3.33	\$22.36
Fluocinolone	160	6	3.8	0.7	6	100.00	\$11.21	\$23.74
Fluocinonide	246	9	3.7	1.1	6	66.7	\$2.67	\$12.75
Halobetasol	114	9	7.9	1.1	7	77.8	\$10.22	\$16.20
Hydrocortisone	896	2	0.2	0.2	1	50.0	\$3.53	\$5.84
Mometasone	205	0	0.0	0.0	-	-	\$4.93	\$9.23
Triamcinolone	1066	5	0.5	0.6	5	100.0	\$3.73	\$4.46
Total	4542	102	2.2%	12.4%	69	67.6%		
Topical Antibiotics/Antifungals								
Ciclopirox	83	7	8.4	0.9	4	57.1	\$4.24	\$22.45
Clindamycin	1043	19	1.8	2.3	16	84.2	\$7.16	\$31.87
Econazole	168	1	0.6	0.1	1	100.0	\$4.37	\$10.50
Efinaconazole	5	1	40.0	0.2	0	0.0	\$40.00	\$641.72
Erythromycin	15	1	6.7	0.1	1	100.0	\$13.07	\$19.45
Ketoconazole	1092	1	0.1	0.1	0	0.0	\$3.93	\$11.18
Mupirocin	311	0	0.0	0.0	-	-	\$4.22	\$8.52
Total	2717	30	1.1%	3.6%	22	73.3%		
Topical Immunomodulators/Other								
Calcipotriene	93	12	12.9	1.5	9	75.0	\$6.76	\$76.39
Calcipotriene-beta-methasone	19	5	26.3	0.6	2	40.0	\$3.57	\$167.88
Crisaborole	106	34	32.1	4.1	21	61.8	\$16.80	\$669.46
Fluorouracil	185	1	0.54	0.12	1	100.0	\$18.53	\$45.50
Imiquimod	36	0	0.0	0.0	-	-	\$20.59	\$15.74
Pimecrolimus	136	49	36.0	6.0	36	73.5	\$12.28	\$84.91
Tacrolimus	559	108	19.3	13.1	83	76.9	\$17.87	\$51.29
Total	1134	209	18.4%	25.4%	152	72.7%		

Table 1: Prescription rates, prior authorization rates and copayment prices of non-biologic topical agents in a 12-month period.

†OTC

- GoodRx < Copayment
- GoodRx > Copayment but < WTP
- GoodRx > Copayment and > WTP

In a 2012 study, patient median Willingness to Pay (WTP) for dermatology prescriptions to control disease was reported as \$30/month for all income groups [5]. Accounting for an average inflation rate of 1.94%/year, this equates to \$35.75 in 2021. Using WTP as a threshold, 62.9% of the topical medications requiring PAs had coupon prices below patient’s median WTP. The average price difference between co-pay and discounted coupon rate was \$10.09, less than the PA cost. Of note, 100% of topical steroids were within the WTP with an average price difference of \$8.39. Limitations include the retrospective design, single academic center and drug prices subject to market fluctuations.

Discussion

Overall, when the coupon price is less than the copayment, patients and the practice would benefit by avoiding treatment delays and PA costs through use of a coupon. If the coupon price greatly exceeds the copayment, completing the PA or switching to a covered prescription is ideal. However, additional consideration is needed when the coupon price is below the WTP. Although the PA will save the patient money and allow them to pay towards their deductible, the lack of guaranteed approval, delay in filling, risk of non-adherence, time and cost to the practice, and potential decline in patient satisfaction should be considered. Conversely, notable downsides of GoodRx are continuous price and vendor fluctuations, requiring a search at the time of each prescription. Thus, if GoodRx pricing is not embedded within the EHR workflow, it may still cause practices extra time during critical, high volume, in-clinic time which would need to be considered. Evaluating common topical medication drug-coupon prices compared to co-pay costs may help practitioners decide how best to manage their practices.

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References

- Guo LN, Nambudiri VE (2021) Impact of prior authorizations on dermatology patients: A cross-sectional analysis. *J Am Acad Dermatol* 85: 217-220.
- Hong M, Shcherbakova N (2021) Comparison of Discounted and Undiscounted Cash Prices for Cardiovascular Medications by Type of US Community Pharmacy. *J Gen Intern Med* 36: 114-120.
- Popatia S, Flood KS, Golbari NM, Patel PV, Olbricht SM, et al. (2019) Examining the prior authorization process, patient outcomes, and the impact of a pharmacy intervention: A single-center review. *J Am Acad Dermatol* 81: 1308-1318.
- USA Bureau of Labor Statistics (2021) Occupational Employment and Wages. U.S. Bureau of Labor Statistics Website, USA.
- Seidler AM, Bayoumi AM, Goldstein MK, Cruz PD Jr, Chen SC (2021) Willingness to pay in dermatology: assessment of the burden of skin diseases. *J Invest Dermatol* 132: 1785-1790.BVGFGFV.



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