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Real-World Direct and Indirect Economic Burden of Alopecia Areata Among Patients in the United States

Ahmed M Soliman[1], Zhengxi Chen[1], Zachary Babcock[1], Mark I. Kaldas[1], Benjamin Ungar*[2], Arash Mostaghimi[3]

[1]AbbVie Inc, North Chicago, IL, United States
[2]Department of Dermatology, Icahn School of Medicine at Mount Sinai, New York, NY, United States
[3]Department of Dermatology, Brigham & Women's Hospital, Harvard Medical School, Boston, MA, United States

Introduction & Objectives: Alopecia areata (AA) is an autoimmune disease of hair loss with substantial psychosocial impact on patients, leading to increased use of healthcare resources and reduction in work productivity. In this study, we evaluate direct healthcare costs and indirect work-associated costs for patients with AA compared with a matched control cohort, with an emphasis on the impact of disease severity.

Materials & Methods: This real-world study used claims data from the Merative MarketScan database in the United States from 2017 to 2024. Eligible patients were 12–64 years old with continuous enrolment in medical and pharmacy benefits 12 months pre- and post-index. Patients with AA had ≥1 inpatient or ≥2 outpatient claims for AA (index date) and were matched 1:4 to patients without AA diagnosis (non-AA controls) based on age, sex, region and insurance type. Among patients with AA, a previously described claims-based algorithm was used to stratify AA as moderate-to-severe or mild.1 Patient demographics and clinical characteristics were reported at baseline. At 12 months post-index, mean direct costs and work-associated indirect costs (lost wages overall or due to absenteeism, short- and long-term disability) were compared, among patients with and without AA, and stratified by disease severity.

Results: Among 13,568 patients with AA and 54,272 matched controls, mean age was 38.8 years and 59% were female. After 12 months follow-up, all-cause total healthcare costs were $3725 higher for patients with AA than matched controls ($p<0.01$; **Table 1**). Total medical costs accounted for the biggest difference in costs between patients with AA and matched controls ($1989; $p<0.01$). Among patients with moderate-to-severe AA (N=4527), all-cause total healthcare costs were $9120 higher than patients with mild AA (N=10,861; $p<0.01$). The greatest difference in cost between patients with moderate-to-severe and mild AA was due to total pharmacy costs ($5365; $p<0.01$). Healthcare costs related to AA were also $2477 higher in patients with moderate-to-severe AA than mild AA ($p<0.01$). Overall lost wages were numerically higher for patients with AA ($14,528) compared with non-AA matches ($12,722; $p=0.058$). Absenteeism costs accounted for the majority of the cost difference between patients with AA and non-AA matches ($1172; $p<0.01$). Among patients with moderate-to-severe AA, overall lost wages ($15,784) were similar to patients with mild AA ($14,072; $p=0.429$). Results were similar when adjusted for additional baseline characteristics [results not shown].

Conclusion: Patients with AA incur higher direct and indirect economic costs compared with non-AA patients, which increase as disease severity increases.

Reference:

1. Senna M, et al. *Adv Ther.* 2021;38:4646–58.

Table 1: Healthcare Costs and Work-Associated Costs Per Patient at 12-Month Follow-Up

	Patients With AA N=13,568	Non-AA Matches N=54,272	Difference in AA vs Non-AA	Moderate-to-Severe AA N=4527	Mild AA N=10,861	Difference in Moderate-to-Severe vs Mild AA
Mean Unadjusted All-Cause Healthcare Costs (SD)[a,b]						
Total Healthcare	$11,819 ($39,201)	$8094 ($30,575)	$3725**	$18,117 ($40,875)	$8997 ($35,865)	$9120**
Total Medical	$7461 ($31,566)	$5472 ($22,675)	$1989**	$9943 ($24,850)	$6188 ($31,835)	$3755**
Hospitalization	$1954 ($27,968)	$1581 ($16,788)	$373	$2286 ($17,664)	$1639 ($29,232)	$647
Outpatient	$4546 ($9117)	$3082 ($9085)	$1464**	$6214 ($11,502)	$3801 ($7472)	$2413**
Emergency Room	$615 ($2691)	$499 ($2616)	$116**	$957 ($3435)	$466 ($2179)	$491**
Dermatologist	$413 ($567)	$49 ($284)	$364**	$476 ($743)	$392 ($467)	$84**
Total Pharmacy	$4358 ($19,326)	$2622 ($17,130)	$1736**	$8174 ($27,006)	$2809 ($14,010)	$5365**
AA-related Total Healthcare				$3702 ($11,796)	$1225 ($24,390)	$2477**
Mean Unadjusted Wages Lost (SD)[b,c,d]						
Overall Lost Wages	$14,528 ($24,429) n=653	$12,722 ($21,057) n=2612	$1806	$15,784 ($19,876) n=174	$14,072 ($25,890) n=479	$1712
Absenteeism	$11,145 ($12,785) n=686	$9973 ($10,492) n=2618	$1172**	$11,744 ($12,476) n=195	$10,911 ($12,905) n=491	$832
Short-term Disability	$2996 ($15,443) n=618	$2645 ($14,427) n=2228	$351*	$4261 ($18,043) n=236	$2527 ($14,334) n=382	$1735**
Long-term Disability	$269 ($6263) n=28	$127 ($4122) n=64	$142*	$248 ($5646) n=11	$277 ($6482) n=17	$29

*p<0.05; **p<0.01.
[a]T-tests were used for p values. [b]Adjusted to 2023 US dollars. [c]Tweedie regression was used for p values for differences between groups. [d]Limited to patients who were HPM eligible for each category.
AA, alopecia areata; HPM, Health and Productivity Management database; SD, standard deviation; US, United States.