



Atopic Dermatitis Polypharmacy and Out-Of-Pocket Healthcare Expenses the United States

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Presented at the 4th Annual Revolutionizing Atopic Dermatitis Conference, Baltimore, MD April 9-11, 2022

FUNDING

Funding support for this work was provided by the National Eczema Association (NEA)

DISCLOSURES

RC has served as an advisory board member, consultant, and/or investigator for Abbvie, Arcutis, Arena, Dermavant Incyte, National Eczema Association (NEA), Pfizer, Regeneron, and Sanofi-Genzyme, and speaker for Abbvie, Incyte, Regeneron, Revolutionizing Atopic Dermatitis, Sanofi-Genzyme, and UCB.

WSB is an employee of the NEA and has served as an advisory board member and/or investigator for Incyte and Pfizer.

IJT is an employee of the NEA.

JIS served as a advisory board member, consultant, and/or investigator for Abbvie, AFYX Therapeutics, Arena Pharmaceuticals, Asana Biosciences, BiomX Inc, Bodewell, Boehringer Ingelheim, Bluefin Biomedicine, Celgene, Corrona Inc, Dermavant Sciences, Dermira, DS Biopharma, Eli Lilly, Incyte, Galderma, GlaxoSmithKline, Kiniksa Pharmaceuticals, Leo Pharma, MedImmune, Menlo Therapeutics, Ortho Dermatologics, Pfizer, RAPT Therapeutics, Regeneron, Sanofi-Genzyme, TARGET Pharma, and speaker for Eli Lilly, Maui Derm, Pfizer, Regeneron, and Sanofi-Genzyme.

BACKGROUND

- Variable severity, symptoms, burden, and course in atopic dermatitis (AD) contribute to heterogeneous treatment patterns, including polypharmacy.¹
- Polypharmacy (regular use of ≥5 but anywhere between 2-11 treatments) is associated with increased adverse events, inappropriate medication use, non-adherence, healthcare system burden, medication errors, healthcare visits, and costs.²
- US population-based studies previously showed increased overall OOP expenses among individuals with AD.³⁻⁵
- Prescription polypharmacy and its association with out-of-pocket (OOP) expenses in AD is poorly understood.

OBJECTIVE

- To characterize prescription polypharmacy and its association with OOP healthcare expenses among individuals with AD.

METHODS

- A 25-question voluntary online survey was administered to National Eczema Association members (N=113,502).
- Inclusion criteria (US residents age ≥18 years; self-report of AD or primary caregivers of individuals with AD) was met by 77.3% (1,118/1,447) of respondents.
- Survey areas included sociodemographic factors, AD severity and control measures, categories of OOP expenses, monthly and annual OOP expenses, and household financial impact.
- Chi-square tests were used for comparisons of categorical variables, Kruskal-Wallis one-way analysis of variance was used for comparison of median annual OOP costs

RESULTS

Polypharmacy was associated with respondent disease burden

Variable – freq (%)	Overall (n=1,118)	Total Number of Prescriptions				P-value
		0 (n=112)	1-2 (n=344)	3-4 (n=311)	≥5 (n=398)	
Current AD severity						
Clear	29 (2.6%)	5 (19.2%)	10 (29.5%)	7 (26.9%)	4 (15.4%)	<0.0001
Mild	238 (21.3%)	39 (13.0%)	103 (34.8%)	58 (34.8%)	31 (17.4%)	
Moderate	531 (47.5%)	53 (10.4%)	150 (29.5%)	169 (33.3%)	136 (26.8%)	
Severe	296 (26.5%)	12 (4.2%)	73 (25.6%)	69 (24.2%)	131 (46.0%)	
Current AD control						
Minimally controlled	258 (23.2%)	21 (8.5%)	81 (32.7%)	54 (21.8%)	92 (37.1%)	0.0005
Somewhat controlled	448 (40.1%)	29 (9.5%)	99 (28.2%)	89 (34.1%)	72 (27.2%)	
Moderately well controlled	300 (28.8%)	41 (10.0%)	126 (34.3%)	147 (30.8%)	117 (24.9%)	
Very well controlled	102 (9.1%)	19 (19.6%)	34 (35.4%)	21 (21.9%)	22 (22.9%)	
Number of flare days in past 30 days						
0	44 (4.0%)	7 (17.1%)	17 (41.5%)	7 (17.1%)	10 (24.4%)	<0.0001
1-3	271 (24.4%)	33 (12.7%)	93 (35.9%)	84 (32.4%)	49 (18.9%)	
4-7	208 (18.8%)	19 (9.4%)	89 (34.2%)	62 (30.7%)	52 (25.7%)	
8-10	151 (13.8%)	11 (7.4%)	47 (31.5%)	65 (36.9%)	38 (24.2%)	
≥11	437 (39.4%)	42 (10.0%)	118 (28.0%)	103 (24.5%)	158 (37.5%)	
Comorbidities						
Asthma	382 (34.5%)	32 (8.6%)	105 (28.3%)	107 (28.8%)	127 (34.2%)	0.013
Allergic rhinitis	557 (50.4%)	48 (9.9%)	158 (29.2%)	159 (29.4%)	176 (32.5%)	0.009
Food allergy	426 (38.5%)	30 (7.3%)	104 (25.2%)	126 (30.6%)	152 (36.9%)	<0.0001
Frequent/persistent skin infections	210 (19.0%)	10 (4.9%)	31 (15.1%)	54 (26.3%)	110 (54.7%)	<0.0001
Anxiety and/or depression	404 (36.5%)	33 (8.4%)	122 (30.9%)	114 (28.9%)	126 (31.9%)	0.15
HCP visits in past year						
0	113 (10.8%)	56 (49.6%)	44 (35.4%)	9 (9.7%)	3 (5.3%)	<0.0001
1-2	435 (40.8%)	40 (10.1%)	219 (50.3%)	61 (26.7%)	23 (12.9%)	
3-4	284 (26.5%)	11 (3.2%)	118 (21.5%)	118 (41.6%)	65 (33.8%)	
≥5	239 (22.4%)	6 (1.3%)	56 (9.8%)	96 (27.2%)	148 (61.9%)	

Polypharmacy (≥5 Rx treatments) was associated with:

- increased AD severity
- poorer control
- increased flares
- increased HCP visits
- allergic and infectious comorbidities

Polypharmacy was associated with multiple categories of OOP expenditures

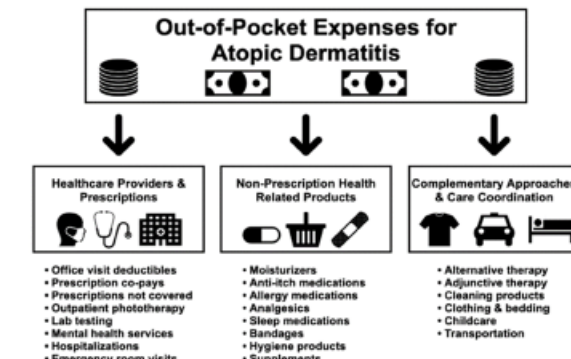


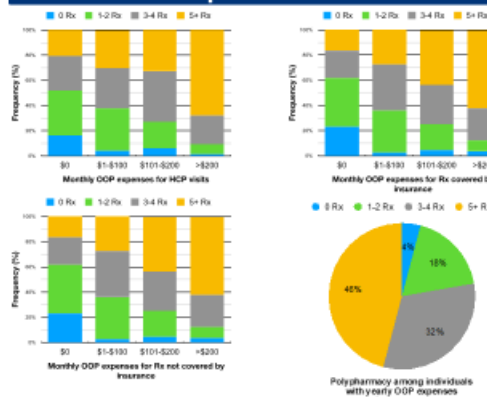
Figure adapted from: Chovatiya R, Begolka W, Chovatiya R, Thibau J, Silverberg JI. Dermatitis. 2021 Oct 1;32(1S):S62-S70

Polypharmacy was associated with all queried categories of OOP expenses

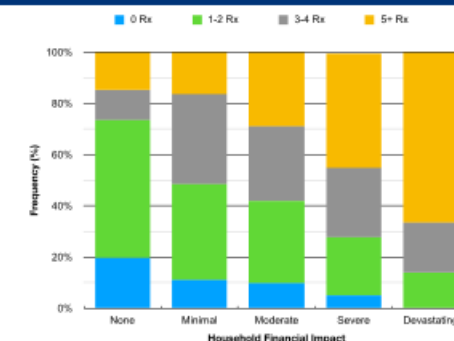
- healthcare providers
- non-Rx products
- complementary approaches
- care coordination

RESULTS

Polypharmacy was associated with increased monthly and yearly OOP expenditures



Polypharmacy was associated increased financial impact



CONCLUSIONS

- Individuals with AD report considerable polypharmacy which is associated with increased OOP expenses and significant household financial impact.
- Strategies are needed to reduce polypharmacy, minimize OOP costs, and optimize clinical outcomes.

Polypharmacy was associated with systemic and topical Rx use

- biologics (dupilumab)
- oral immunosuppressants (AZA, CsA, MTX, SCS)
- oral antimicrobials
- topical calcineurin inhibitor (P≤0.005 for all)

*P,0.0001 for all figures

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