

# Third-Party Payer Cost of Atopic Dermatitis and Eczema in the United States

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## ABSTRACT

### BACKGROUND

Atopic dermatitis/eczema (AD/E) is a common disease. Few studies have attempted to quantify the cost to third-party payers.

### OBJECTIVE

To identify the annual cost to private insurance and Medicaid payers in the United States of medical services and prescription drugs for the treatment of AD/E.

### METHODS

We conducted a retrospective study using claims data from 1997 and 1998 from a private insurer and a state Medicaid program to analyze costs incurred. Beneficiaries were considered to have AD/E if they had at least one claim in 1997 with a primary or secondary listing of one of three diagnosis codes: 691.8, other atopic dermatitis and related conditions; 692.9, contact dermatitis and other eczema of unspecified cause; or 373.3, noninfectious dermatoses of eyelid. Patients who did not meet the diagnosis criterion served as a “control” group in each payer for comparisons of expenditures with the AD/E group. Additional costs of disease were analyzed prospectively based on input from a panel of the physician authors. Physicians defined all ICD-9-CM diagnosis codes and prescription drug categories as “most likely,” “possible,” or “definitely not” related to the costs of diagnosing and managing patients with AD/E.

### RESULTS

Disease prevalence was 2.4% (private insurer) to 2.6% (Medicaid) of all eligible beneficiaries and 3.5% to 4.1% of patients submitting at least one health care claim during the study period. Medicaid-insured patients used outpatient hospital visits and hospitalizations at a greater rate than did privately-insured patients; neither used emergency rooms extensively. The third-party payer cost of illness for AD/E ranged from \$0.9 to \$3.8 billion when projected across the total number of people under age 65 insured by private insurance and Medicaid in the US. Nearly one-third of all health care costs for patients with AD/E may be attributed to AD/E and co-morbid conditions.

## RESULTS

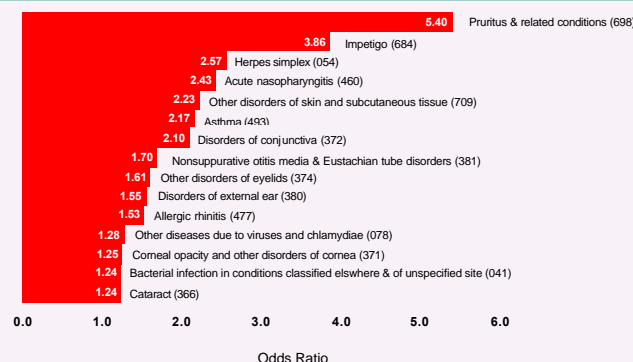
**Table I. Disease prevalence by payer**

|  | Private Insurer | Medicaid    |
|--|-----------------|-------------|
| Total covered patients                     | 1.5 million     | 3.5 million |
| Total patients with at least one claim     | 1.0 million     | 2.2 million |
| Patients with claim of 691.8               | 5,015           | 19,664      |
| Patients with claim of 692.9               | 31,508          | 73,563      |
| Patients with claim of 373.3               | 383             | 203         |
| Total atopic dermatitis/eczema patients    | 35,404          | 89,381      |
| Disease prevalence (insured population)    | 2.4%            | 2.6%        |
| Disease prevalence (patients with a claim) | 3.5%            | 4.1%        |

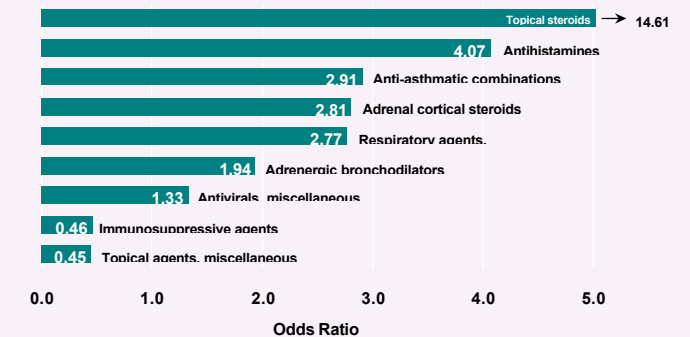
**Table II. Total claims and annual costs within single payer populations**

|   | Private Insurer<br>(n=35,404) | Medicaid<br>(n=89,381) |
|---|-------------------------------|------------------------|
| Total health care expenditures for AD/E patients (all claims) | \$64 million                  | \$400 million          |
| Mean expenditure per patient (all claims)                     | \$1,810                       | \$4,480                |
| Expenditures for AD/E diagnosis codes                         | \$3 million                   | \$11 million           |
| Expenditures for “most likely” related                        |                               |                        |
| Co-morbidities  | \$3 million                   | \$22 million           |
| Prescription drugs  | \$2 million                   | \$8 million            |
| Expenditures for “possibly” related                           |                               |                        |
| Co-morbidities  | \$10 million                  | \$58 million           |
| Prescription drugs  | \$3 million                   | \$13 million           |
| Total of all AD/E related claims                              | \$20 million                  | \$111 million          |
| Mean expenditure per patient (all related claims)             | \$580                         | \$1,250                |
| 95% confidence interval (all related claims)                  | \$558 to \$598                | \$1,216 to \$1,275     |

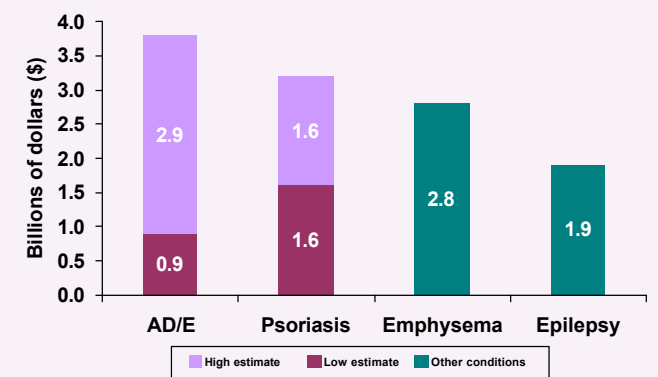
**Figure 1. Odds ratios of “most likely” related co-morbidities**



**Figure 2. Odds ratios of “most likely” related pharmacy items**



**Figure 3. Comparison of the annual cost-of-illness estimate in the US for AD/E with estimates for other conditions**



## Conclusions

Annual costs of AD/E are similar to other diseases such as emphysema, psoriasis, and epilepsy. Patients incur significant costs associated with AD/E and co-morbid conditions.

## References

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Research supported by Fujisawa Healthcare, Inc.