ORIGINAL ARTICLE

Racial and ethnic differences in health care utilization for childhood eczema: An analysis of the 2001-2013 Medical Expenditure Panel Surveys

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Background: Eczema is a common chronic inflammatory disease of the skin. Studies suggest differences in disease prevalence and severity by race/ethnicity. Our knowledge of health care utilization for eczema among different racial/ethnic groups remains limited.

Objective: To evaluate health care utilization for childhood eczema among different racial/ethnic groups in the United States.

Methods: We performed a cohort study of non-Hispanic white (reference), non-Hispanic black, and Hispanic white individuals under the age of 18 years with caregiver-reported eczema (N = 2043) pooled from the 2-year longitudinal cohorts of the 2001-2013 Medical Expenditure Panel Surveys. Health care utilization outcomes were evaluated over the 2-year follow-up period by race/ethnicity using multivariable regression.

Results: Among all children with eczema, non-Hispanic blacks were less likely than whites to report an ambulatory visit for eczema (adjusted odds ratio [OR_{adj}] 0.69; 95% confidence interval [CI] 0.51-0.92). Among those with ≥1 ambulatory visit for eczema, non-Hispanic blacks reported more visits (adjusted incidence rate ratio [IRR_{adj}] 1.68; 95% CI 1.10-2.55) and prescriptions (IRR_{adj} 1.22; 95% CI 1.01-1.46) than whites and were more likely than whites to report a dermatology visit (OR_{adj} 1.82; 95% CI 1.06-3.14) for eczema.

Limitations: We used caregiver- or self-reported data.

Conclusion: Our findings suggest disparities in health care utilization for eczema among non-Hispanic black children despite utilization patterns suggestive of more severe disease. (J Am Acad Dermatol http://dx.doi.org/10.1016/j.jaad.2017.08.035.)

Key words: ambulatory visits; atopic dermatitis; eczema; ethnicity; health care disparities; health care utilization; prescriptions; race.

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Eczema is a common chronic inflammatory disease of the skin that is associated with significant negative physical and psychosocial effects.[1-5] The prevalence of childhood eczema in the United States is estimated at 10% or more[6,7] and differs by race and ethnicity, with the disease being more common among non-Hispanic black children (17.1% prevalence) than among non-Hispanic whites (11.2%) and Hispanic whites (13.7%).[7,8] Eczema might also be more severe among racial/ethnic minority children, though the exact nature of this relationship remains unclear.[6] Although data suggest that at least the physical burden of eczema might be greater among racial/ethnic minority children, it remains unclear if health care utilization for childhood eczema reflects this greater burden.

CAPSULE SUMMARY

- Health care utilization for eczema among racial/ethnic groups is underexamined.
- Though health care utilization patterns among those who accessed care suggested more severe eczema among non-Hispanic blacks than whites, overall, blacks were less likely to report an ambulatory visit for eczema.
- Our results suggest racial disparities in health care utilization for childhood eczema.

Previous studies have found lower health care utilization among racial/ethnic minorities across multiple medical conditions including an aggregate of dermatologic diseases.[9-12] Racial/ethnic minority children also have poorer access to medical care including primary care.[13,14] Few studies have specifically examined health care utilization for eczema by race/ethnicity. Two studies using data from the National Ambulatory Medical Care Survey or the National Hospital Ambulatory Medical Care Survey found minority race/ethnicity to be associated with increased health care utilization as measured by ambulatory visits for eczema.[15,16] However, these studies were limited by their inclusion of only those individuals with eczema who were accessing medical care. Thus, the purpose of our study was to evaluate health care utilization among all children with eczema by race/ethnicity at a population level and with individual-level granularity using data from the Medical Expenditure Panel Surveys.

METHODS

Study design and data source

We conducted a cohort study using data from the Medical Expenditure Panel Survey (MEPS), which generates estimates that are nationally representative of the US civilian noninstitutionalized population and is the most complete source of data on health care utilization, cost, and health insurance coverage in the United States.[17] The MEPS introduces a new panel of individuals each year that are drawn from a subset of participants from the previous year's National Health Interview Survey. Each panel includes 5 rounds of interviews over a 2-year follow-up period and collects self- or caregiver-reported information on demographic and socioeconomic characteristics, health insurance coverage, medical conditions, and health care utilization measures. Reported medical conditions were recorded verbatim, professionally designated as International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes, and then collapsed into 3-digit ICD-9 code categories to preserve confidentiality. This study was conducted according to the Declaration of Helsinki and reported according to the Strengthening the Reporting of Observational Studies in Epidemiology statement.[18] The study was granted exempt status by the University of Pennsylvania Institutional Review Board.

Study population

Our study population was limited to survey respondents reporting atopic dermatitis or eczema (ICD-9 codes 691 or 692). Both ICD-9 codes were included because of low prevalence and probable underutilization of the more specific ICD-9 691 code. Analyses were further limited to respondents aged 0-17 years, a pediatric population that is more likely to have true atopic dermatitis. Respondents from years 2001-2013, years in which there were consistent reporting options for race/ethnicity, were pooled for analyses. Lastly, only those individuals who self-identified as non-Hispanic white, non-Hispanic black, and Hispanic white were included as the sample sizes of other races were too small to generate stable estimates.

Definitions of exposure and covariates

The Longitudinal Files provided information on race/ethnicity (the primary explanatory variable or exposure) categorized as non-Hispanic white (reference), non-Hispanic black, and Hispanic white, age, sex, census region, health insurance type, household income level, and survey years. Information on age and census region was collected at the time of interview for each of the 5 survey rounds; health insurance type and household