

## Factors Related to Pediatrician Assessment of Atopic Dermatitis Severity □

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### Introduction

Atopic dermatitis (AD), often referred to as eczema, is one of the most common skin disorders affecting the pediatric population.<sup>1</sup> Although pediatricians diagnose eczema frequently, classification of severity can be challenging, as score-based indices (e.g., EASI, SCORAD) are complicated and designed primarily for use in clinical trials. These instruments are used infrequently by general pediatricians and may be associated with discrepancies in AD classification between providers.<sup>2</sup> Accurate assessment of AD severity is critical to assist pediatricians in following the 2017 Addendum Guidelines for the Prevention of Peanut Allergy in the US.<sup>3</sup> Thus, this study aimed to characterize the factors that pediatric residents use to assess AD severity.

### Methods

As part of a study performed at the Ann and Robert H. Lurie Children's Hospital of Chicago, pediatric residents (n=41) who had diagnosed AD in 4-9 month old infants during well child visits were surveyed on which factors they have ever used and the most important factor to classify disease severity. Response options included percent body surface area (BSA) affected, previous diagnosis of severe AD by another physician, need for prescription-strength medication, intensity of AD, subjective signs (pruritus and sleep disruption), history of secondary infection, history of AD-related emergency department visits or hospitalizations, and referral to Dermatology. Descriptive statistics were used to analyze the data.

### Results

Results of the survey are presented in Table 1. Factors most frequently utilized to categorize the severity of AD were disease intensity (degree of erythema, oozing, crusting, thickening, etc.) (92.7%), percent BSA affected (85.4%), need for prescription-strength medication (61%), need for Dermatology referral (68.3%), and history of AD-related ED visits or hospitalizations (58.5%). Previous diagnosis of severe AD by another physician (39%) and subjective symptoms such as nighttime awakening and pruritus (31.7%) were the least frequently utilized. Factors rated as most important by residents were AD intensity (61%), followed by percent BSA involved (14.6%). □

### Discussion

In the present study, pediatric residents utilized the disease intensity of atopic dermatitis as the most important factor when classifying severity, followed by percent body surface area affected. These factors successfully correlate with two categories of the SCORAD Index, "Intensity" and "Extent" which are mostly used to determine the severity of AD for research studies<sup>2,4</sup> Subjective factors was least frequently utilized to determine severity which also correlates with the previous studies reporting that the end result of the SCORAD index is influenced by widely divergent gradings of the subjective items by caregivers or patients.<sup>2</sup> Moreover, it is associated with discrepancies in the classification of AD severity among providers.<sup>2,5</sup> Objective SCORAD, which uses only objective criteria including the intensity and extent of AD, has also been utilized in different studies ;however, a study done by Hon et al. demonstrated that misestimation in the intensity may tremendously alter the severity grading of objective SCORAD.<sup>6</sup> On the other hand, the Three Item Severity score, which only uses the intensity of erythema, edema, and excoriations is quicker and easier to perform, but less sensitive compared to the objective SCORAD index.<sup>2</sup>

In conclusion, accurate classification of the severity of infantile AD is extremely important when it comes to recommending early introduction of peanut containing products versus IgE testing /Referral to Allergy/Immunology prior to such introduction. There is still a need for an easier and more sensitive scoring system in daily practice. An easy-to-use AD classification system incorporating the intensity and percent BSA may help pediatricians standardize their assessment of disease severity and improve accurate application of the guidelines for the prevention of peanut allergy. □