

## **Interventions to Improve Primary Care Provider Management of**

### **Atopic Dermatitis: A Systematic Review**

Emily A. Croce<sup>1,2</sup>, MSN, APRN, CPNP-PC, PhD Student; Fabiana Castro Porto Silva Lopes<sup>3</sup>, MD; Maria Anna Leszczynska<sup>3</sup>, MD; Jennifer Ruth<sup>1,3</sup>, MD; Jonathan I. Silverberg<sup>4,5</sup>, MD, PhD, MPH

<sup>1</sup>Dell Children's Medical Group, Pediatric and Adolescent Dermatology, Austin, TX; <sup>2</sup>The University of Texas at Austin School of Nursing, Austin, TX; <sup>3</sup>Dell Medical School, University of Texas at Austin, Division of Dermatology, Austin, Texas;

<sup>4</sup>The George Washington University School of Medicine and Health Sciences, Department of Dermatology, Washington, DC;

<sup>5</sup>Feinberg School of Medicine at Northwestern University, Department of Dermatology, Chicago, IL

**Background:** Atopic dermatitis (AD) is common and burdensome. The majority of AD patients are managed by primary care providers (PCPs). PCP discomfort diagnosing and managing AD leads to suboptimal patient outcomes. **Objective:** To evaluate the efficacy of previously published interventions aimed at improving PCP management of AD. **Methods:** A systematic review was performed of studies of interventions to improve PCP management of AD. PubMed, MEDLINE, Embase, Scopus, LILACS, Cochrane, GREAT, and CINAHL were searched from database origin to February 24, 2020. Two reviewers independently performed the title/abstract and full-text review, and data extraction. Risk of bias and evidence of quality were assessed using the Cochrane risk of bias (ROB 2) tool and the Newcastle-Ottawa Scale (NOS). **Results:** Overall, 3,009 non-duplicate articles were screened; 145 full text articles were assessed. Thirteen met inclusion criteria, including 8 RCTs, 2 cohort studies, 2 qualitative studies and 1 study type not stated. Seven studies found that intervention led to a significant PCP improvement in knowledge and/or a significant improvement in patient outcome, including dermatology-trained nurses consulting patients, clinician education paired with expert consultation, pairing trainees with clinical mentors, giving clinicians a treatment guide, clinician education paired with a treatment guide, eczema action plans (EAP), and education paired with EAP. Three studies did not lead to significant improvement, and three studies did not report significance. **Limitations:**

Studies had moderate-high risk-of-bias, moderate quality, and heterogeneous designs.

**Conclusion:** There is little evidence supporting the efficacy of interventions aimed at improving PCP management of AD. Further research is required to better understand whether interventions to improve PCP management of AD can be effective and how they should be performed. **Future Recommendations:** Based on the findings, several recommendations for future interventions in order to employ a high-quality, clinically meaningful study design have been made. Assessment of the clinical impact of the intervention should be performed by including patient/family variables such as QoL, disease control, and disease severity. Ideally, provider and patient changes would be assessed longitudinally to determine whether improvements are retained over time. Our findings support the use of an educational intervention to increase provider knowledge, which should focus on evidence-based, expert consensus guidelines for primary care management of AD. Finally, PCPs would likely benefit from following a therapeutic ladder or treatment algorithm in order to implement their newfound knowledge based on objective patient criteria.