Clinical Outcomes and Symptom Management in Pediatric Patients Following Eczema Action Plans: A Quality Improvement Project

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Abstract: Eczema is a chronic atopy condition requiring long-term daily management in children. Written action plans for other chronic atopic conditions, such as asthma and food allergies, are widely recommended and distributed to pediatric patients' parents and caregivers, seeking to improve clinical outcomes and become empowered to manage the patient's everchanging symptoms. Written action plans for eczema, referred to as "asthma of the skin," are not routinely used in practice. Parents of children suffering from eczema rarely receive a written action plan to follow, and commendations supporting eczema action plans are inconsistent. Pediatric patients between birth and 18 years old who were followed for eczema at an urban Midwest community hospital were eligible to participate in this quality improvement project. At the initial visit, parents received instructions on individualized eczema action plans for their child and completed two validated surveys: Health Confidence Score (HCS) and Patient-Oriented Eczema Measure (POEM). Pre- and post-survey responses were collected, and clinical symptom presentation at follow-up were outcome determinants. Project implementation was guided by Institute for Healthcare Improvement's Step-up Framework and the Plan-Do-Study-Act cycle. This project measured clinical outcomes and parent confidence in self-management of their child's eczema symptoms with the responses from 26 participant surveys. Presurvey responses were collected from 36 participants, though ten were lost to follow-up. Average POEM scores improved by 53%, while average HCS scores remained unchanged. Of seven completed in-person follow-up visits, six clinical progress notes documented improvement. Individualized eczema action plans can be seamlessly incorporated into primary and specialty care visits for pediatric patients suffering from eczema. Following a patient-specific eczema action plan may lessen the daily physical and mental burdens of uncontrolled eczema for children and parents, managing symptoms that chronically flare and recede. Furthermore, incorporating eczema action plans into practice potentially reduces the likely underestimated \$5.3 billion economic disease burden of eczema on the U.S. healthcare system.

Keywords: atopic dermatitis, eczema action plan, eczema symptom management, pediatric eczema

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