

A Journey to Improve Care for Pediatric Patients Diagnosed with Atopic Dermatitis



Samantha Casselman, DNP, RN, CPNP-PC
Mandy Moratazavi, DNP, RN, CPNP-PC
Diana Jacobson, PhD, RN, PPCNP-BC, PMHS, FAANP
Judith O'Haver, PhD, RN, CPNP-PC

BACKGROUND

The most effective approach to optimize patient education for parents of children with atopic dermatitis (AD), remains complex and unique to every patient experience. Many professional dermatology, allergy and patient advocacy organizations have developed AD management recommendations². The mainstays of treatment include daily maintenance therapy, protocols to treat flares, the use of appropriate skin care products and trigger-free household products, avoidance of known triggers, secondary infection prevention and treatment, and appropriate follow-up¹. According to the latest evidence-based reviews, the addition of an eczema action plan (EAP), nurse led patient education and educational video may assist patients and caregivers improve self-management, decrease the length of follow-up visits, decrease the number of follow-up visits, and improve quality of life³.

OBJECTIVES

Eczema Video	Eczema Action Plan
Evaluate whether an instructional video for treating pediatric AD will 1. Improve disease severity utilizing the Three Item Severity Scale (TISS) 2. Improve quality of life utilizing the Patient Oriented Eczema Measure (POEM).	Pilot project to evaluate whether an Eczema Action Plan (EAP) will improve patient outcomes for care of their atopic dermatitis and increase their understanding as part of an end of visit summary.

METHODS

Eczema Video	Eczema Action Plan
Institutional Review Board (IRB) approval. Population: 1 month to 17 years old and their caregivers. Inclusion: 1) Mild to severe AD 2) English speaking 3) Patient 1 month to 17 years old being 4) patient seen in pediatric dermatology clinic. Exclusion: 1) No diagnosis of AD 2) Non English-speaking patients and families 3) Adolescents >17 years old.	Institutional Review Board (IRB) approval. Population: 0 to 8 years old and their caregivers. Inclusion: 1) Mild to severe AD 2) English speaking 3) Patient 0-8 years old being seen in pediatric dermatology clinic. Exclusion: 1) No diagnosis of AD 2) Non English-speaking patients and families 3) Children > 8 years old.
INTERVENTION: Educational video provided after clinic visit	INTERVENTION: End of visit education with eczema action plan.

INTERVENTIONS

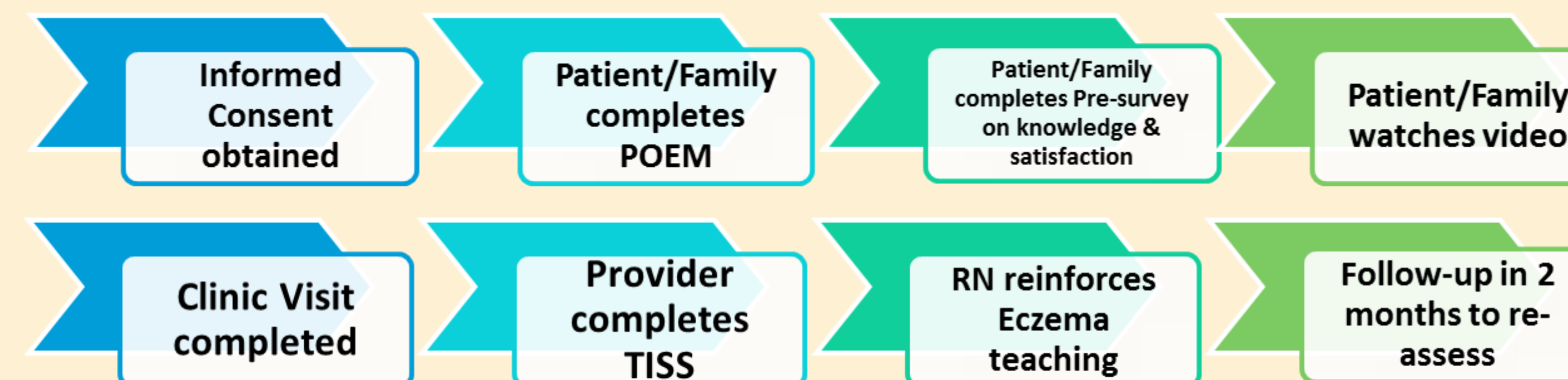
Eczema video examples and Methods

What is Eczema?
• The most common type of dermatitis is atopic dermatitis.
• Atopic dermatitis is a common skin problem in childhood that affects up to 20% of children in the U.S.

Allergies and Eczema
There is often a family history of atopy.
ATOPIC TRIAD: Eczema, Allergies, Asthma.
This does not mean your child will have asthma, allergies and eczema, but we do know that children with very severe eczema are more likely to develop asthma and allergies.

How to Treat Eczema
• The key to treating eczema is to treat EVERY time it comes back.
• Treat your child's eczema if it is itchy, red, rough, you can see it OR feel it.
• If you don't treat it, eczema can worsen and create a risk for a skin infection.

Common Locations for Eczema
• Insides of elbows
• Backs of knees
• Face
• Hands
• Ankles
• Some types can cover most of the body



Eczema Action Plan and Methods

• Participants completed informed consent and a pre-intervention survey with an end of visit eczema action plan.

• A two-week follow-up phone call was placed and the 11 question post-intervention survey was completed.

• Surveys were analyzed using SPSS software.

• Results were reported using descriptive statistics.

Green zone → you have no red, itchy rash.
• Lukewarm bath/shower for 5-10 minutes.
• Put moisturizer on all skin twice a day.
• Bleach baths/swimming/Clor wash _____ times a week.
• Avoid things that make your eczema worse.
• Use free and clear laundry detergent. Avoid scented fabric softeners/dryer sheets.
• Use only fragrance free products on your hair and skin.
• Keep fingernails short and clean.

Yellow zone → you have some red, itchy rashes.
• Body: 1st _____ for ___ days, 2nd _____ for ___ days or until clear.
• Face: 1st _____ for ___ days, 2nd _____ for ___ days or until clear.
• Scalp: _____ apply _____
• Itching: Take _____ once before bed.
• Bleach baths or swim in a chlorinated pool _____ times a week.

Red zone → you have very bad red, itchy, bleeding rashes.
• Body (thick rashes): 1st _____ for ___ days, 2nd _____ for ___ days, 3rd _____ for ___ days or until clear.
• Body (thin rashes): 1st _____ for ___ days, 2nd _____ for ___ days or until clear.
• Face: 1st _____ for ___ days, 2nd _____ for ___ days or until clear.
• Scalp: _____ apply _____
• Itching: Take _____ once before bed.
• Bleach baths or swim in a chlorinated pool _____ times a week.

Bleach Bath Recipe:
1 TSP PER GALLON HOT WATER
BLEACH (SOPHOMOL) 1/2 CUP PER GALLON HOT WATER

When to call the dermatologist:
• Skin is oozing pus
• Yellow crusting
• Swelling
• Spreading redness
• Fever
• Flu-like symptoms
• Pain
• Eczema is not getting better

RESULTS

Eczema Video	Eczema Action Plan
N=23. Mean age: 2.65 years. 70% patients completed all pre/post evaluations in person or through phone follow-up 30% patients were lost to follow-up. 56% were new patients to the clinic at the first visit. 93.8% of patients felt the video helped them understand how to treat AD. Improved understanding on how to treat AD pre and post intervention (M= 8.59 pre and M= 9.69 post using a 10 point Likert scale. A paired samples t-test baseline and follow-up POEM resulted in significant improvements (.000). TISS baseline to follow-up also resulted in statistical significance (p=.001).	N=14. Mean age: 2.53 years. 21.4% of participants were familiar with the concept of an eczema action plan. 61.5% of patients were follow-up patients to the dermatology clinic for AD. 10 participants completed the post-interventions survey. 50% of participants found the EAP helpful. 70% of participants found the EAP improved their understanding of eczema severity and proper management. 80% used the EAP during the two-week intervention period. 40% used the EAP on a daily basis.

DISCUSSION

The findings suggested clinical significance in disease severity, improved patient satisfaction, utilization and improved confidence among parents using the EAP or the educational video.

A significant improvement in disease severity and quality of life was demonstrated with implementation of the educational video.

Clinical significance was demonstrated with use of the EAP. Parent's demonstrated improved confidence and understanding in how to treat their child's AD between office visits and felt that the eczema action plan was helpful.

These findings are in congruence with previously published reports utilizing eczema action plans⁴.

The EAP and patient educational video proved beneficial for patient teaching and provided a customized educational tool that parent's appreciate.

Limitations:

Small sample size on a convenience sample in a single clinic.

Time constraints to watch video.

Follow-up evaluation challenging to assess improvements.

Future directions:

Incorporate the video and EAP into our eczema school program.

Creation of an 'Eczema Tool Kit' to provide primary care providers with tools to care for mild to moderate atopic dermatitis in the primary care setting.

References

- Cox, H., Lloyd, K., Williams, H., Arkwright, P., Brown, T., Clark, C., ... Warner, J. (2017). Emollients, education, and quality of life: The RCPCH care pathway for children with eczema. Archives of Disease in Childhood, 96(2), 19-24. doi: 10.1136/archdischild-2011-300695
- Eichenfield, L. F., Boguniewicz, M., Simpson, E. L., Russell, J. J., Block, J. K., Feldman, S. R., ... & Paller, A. S. (2015). Translating atopic dermatitis management guidelines into ECZEMA ACTION PLAN 17 practice for primary care providers. Pediatrics, 136(3), 554-565. doi: 10.1542/peds.2014-3678
- Fortson, E.A. (2017). Management of atopic dermatitis. Advances in Experimental Medicine and Biology, 1027, 19-159. doi: 10.1007/978-3-319-64804-0_12.
- Lee, H.J., Son, S.W., & Cho, S.H. (2016). A comprehensive review of the treatment of atopic eczema. Allergy, Asthma and Immunology, 8(3), 181-190. doi: 10.4168/air.2016.8.3.181