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# Therapeutic education in atopic dermatitis: A position paper from the International Eczema Council

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**Background:** Atopic dermatitis (AD) is a chronic, inflammatory skin disease that affects as many as 12.5% of children aged 0-17 years and 3% of the adult population. In the United States, 31.6 million children and adults are estimated to be living with AD.

**Objective:** Therapeutic patient education (TPE) has proven its value in the management of chronic diseases for which adherence to therapy is suboptimal. This article explores experts' opinions and treatment practices to determine if TPE is a recommended and effective method for treating AD.

**Methods:** Forty-two (51%) of 82 Councilors and Associates of the International Eczema Council (IEC), an international group with expertise in AD, responded to an electronic survey on TPE and AD.

**Results:** Most respondents (97.5%) agreed that TPE should play an important role in the management of AD. Many respondents (82.9%) believed that all patients with AD, regardless of disease severity, could benefit from TPE.

**Limitations:** The International Eczema Council survey lacks specific information on AD severity.

**Conclusions:** Publications have shown the positive effect of TPE on the course of the disease, the prevention of complications, and the autonomy and quality of patient life. Survey respondents agreed that TPE can improve the quality of patient care and patient satisfaction with care. (JAAD Int 2021;3:8-13.)

**Key words:** atopic dermatitis; corticosteroids; eczema; eczema action plan; e-learning; pruritus; quality of life; therapeutic education; therapeutic patient education.

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## INTRODUCTION

Atopic dermatitis (AD) is a chronic, inflammatory skin disease that is estimated to affect 12.5% of children aged 0-17 years and 3% of the adult population.<sup>1</sup>

For AD, topical therapies remain the mainstay for most patients, but patient adherence to topical therapies is dishearteningly low.<sup>2</sup>

As many recommendations specify, therapeutic patient education (TPE) is now part of the management of AD.<sup>2</sup>

The International Eczema Council (IEC) brings together scientists and physicians dedicated to research, education, and the optimal management of AD for patients and families. To assess the role of TPE in the management of the disease, the IEC conducted a survey of its members.

This article reports on the role of TPE in chronic diseases in general and the peculiarities of TPE in AD. The types of TPE delivery and their advantages and disadvantages are discussed, and the results of the survey are presented in a final chapter.

### TPE in chronic diseases

Over the past several decades in North America and Europe, the role of physicians has shifted from experts “who decide what was right for any patient without consulting the patient’s wishes or preferences” to equal partners who are expected to play an active role in educating patients about their disease.<sup>3,4</sup> Patients, once expected to be unquestioning and passive, now weigh treatment options and participate in shared decision-making with their health care providers. Patient education rose to prominence in the 1970s in parallel with the establishment of patient advocacy groups and was applied to topics as disparate as hygiene, dental health, healthy diet, and exercise.<sup>4</sup> The terms “patient education” and “therapeutic patient education” are sometimes used interchangeably, but generally, the prefix “therapeutic” indicates guidance directed at the management of a disease.<sup>5</sup>

TPE has proven its value in the management of numerous chronic diseases for which adherence to therapy is suboptimal, such as congestive heart failure,<sup>6</sup> diabetes mellitus,<sup>7</sup> asthma,<sup>8</sup> and rheumatoid arthritis.<sup>9</sup>

In all chronic diseases, adherence to treatment ranges from 30% to 40% mainly because of a lack of TPE.<sup>10</sup>

In chronic and life-altering diseases other than AD, thoughtfully designed TPE interventions have demonstrated not only the power to increase knowledge of the disease but also to improve the quality of life (QOL), strengthen alignment of patient and provider goals, and even promote trust and self-expression.

A recent critical analysis of 35 meta-analyses published between 1999 and 2009 concluded that 64% of studies across all diseases found improvement of patient outcomes with TPE.<sup>11</sup>

### Difficulties of living with AD

The visible and chronic nature of AD can lead to feelings of helplessness, frustration, and self-consciousness about appearance as well as avoidance of activities and have a negative impact on social relationships. Children with AD often have poor/interrupted sleep, restricted diet, behavior and discipline problems, hyperactivity, irritability, restlessness, restricted outdoor play, and restricted clothing and are often avoided by other children and adults.<sup>12</sup>

Parents and caregivers also experience significant stress, often citing their helplessness to stop their children from scratching and their inability to reduce their children’s suffering. Parents of children with AD are more likely to suffer from anxiety and depression, which may be related to the perception of their children as vulnerable.<sup>13</sup>

Just as scratching and pruritus reinforce each other in AD, psychosocial stress factors are also involved in the itch-scratch cycle. A stressful event can induce a perception of itch and increased restlessness, both of which ultimately promote scratching. Interrupting this vicious circle with effective and correctly applied treatments is the goal of therapy for AD patients.<sup>14</sup>

### Treatment challenges leading to poor adherence

Poor adherence to therapy has many causes, and one particularly prominent cause is fear of topical corticosteroids (dubbed “corticophobia”) and other therapies because of Internet-disseminated misinformation and selective reporting of highly unusual cases. Standard cautionary labeling of topical

## CAPSULE SUMMARY

- Therapeutic patient education studies suggest a positive impact on patient outcomes. Its effect on atopic dermatitis was explored by a survey of experts.
- Summary review of therapeutic patient education and expert opinion illustrates how therapeutic patient education can improve the quality of care and patient satisfaction in clinical practice.

*Abbreviations used:*

AD:	atopic dermatitis
EAP:	eczema action plan
IEC:	International Eczema Council
QOL:	quality of life
TPE:	therapeutic patient education

steroids also contributes to patients' reluctance to adequately apply topical therapies.<sup>4</sup>

All patients with AD potentially benefit from improved basic skin care, including regular use of emollients, emollient application after bathing, and avoidance of irritating fabrics; patients with more severe disease may see improvement from bleach baths and/or wet wraps, as well. These lifestyle changes and procedural interventions require teaching. Ensuring that patients receive adequate therapy outside the clinical setting requires the effective exchange of skills and knowledge between patients and health care providers. TPE can provide that exchange.

### Frameworks for TPE in AD

Emanuel and Emanuel described 4 models by which physicians can interact with patients: paternalist, informative, interpretative, and deliberative. The first 3 models are physician-centered, but the deliberative model, in which physicians and patients share decision-making, is patient-centered.<sup>15</sup> As with other TPE interventions, TPE for AD should be patient-centered. TPE should not be forced upon patients.

The first step of any therapeutic intervention is assessment of the patients' beliefs, fears, hopes, and interest in learning more about their disease. Gagnayre calls this the "educational diagnosis,"<sup>16</sup> to be followed by the determination of the age-appropriate skills and knowledge needed by the patient/family, which he terms "educational objectives." Skills are then acquired at individual sessions, at collective workshops, at demonstrations, or through a personalized action plan. Finally, assessment is required to determine the success or failure of the therapeutic intervention and to fine-tune the intervention for future patients. Gagnayre's framework has been applied to AD patients.<sup>16</sup>

A critical first step in TPE for AD is the assessment of patient (and parental in the case of pediatric patients) concerns, priorities, understanding of the disease, and willingness to participate. In pediatric dermatology, cost and safety of prescribed medications are a common source of parental concern.<sup>13</sup> Misunderstanding of the natural course of AD by

patients/parents also may be a barrier to care, because unrealistic expectations may lead to undue frustration with relapses of disease. Other barriers to care, including forgetfulness and the complexity of treatment, should also be carefully identified and discussed with patients and family members at this first stage. Barbarot and Stalder developed a detailed guide for organizing this initial session with specific questions designed to elicit concerns and priorities from patients and parents.<sup>17</sup>

Once objectives have been established, an eczema action plan (EAP) should be created, agreed upon, and signed by all parties. Randomized controlled trials have shown that EAPs can improve patient understanding of the daily treatment plan, application location and duration, exacerbating factors, and the need to adjust treatment to severity according to the treatment plan.<sup>18</sup> Majority of patients find EAP useful.<sup>18</sup> For greatest success, EAPs should enumerate stepwise treatment and include visual diagrams and daily reminders.<sup>18</sup>

There is no single "right way" to provide TPE, given that improvement in outcomes has been seen with multiple modes of education. Individual appointments with trained nurses have been shown to be effective in improving outcomes in AD,<sup>19</sup> as have structured lecture and small group sessions stratified by age,<sup>20</sup> and online videos.<sup>21</sup> These delivery methods also have been effective in other diseases for which TPE has been successful.

### Evidence for the benefit of TPE in AD

Numerous studies have examined the effectiveness of TPE for AD in randomized clinical trials,<sup>18</sup> with evidence overall suggesting a positive impact of TPE on outcomes such as disease severity, treatment adherence, QOL, and coping with itch.<sup>17</sup> The studies vary in terms of interventions studied, including multisession group workshops facilitated by multidisciplinary teams (eg, dermatologists, nurses, psychologists, and dietitians), as well as nurse-led educational sessions. In several studies that did not find a significant effect of TPE on QOL, the educational component was less than 30 minutes, highlighting the importance of comprehensive TPE. Recently, a prospective, randomized controlled multicenter study in Germany investigated the effect of a comprehensive 12-hour training session for adult patients. This educational program showed significant beneficial effects on a variety of psychosocial parameters in addition to AD severity.<sup>22</sup>

There is some evidence for the cost-effectiveness of TPE. However, more trials are needed to compare different program methods to standard treatment using outcomes, such as treatment and prescription

costs, number of hospital days, and indirect costs, such as missed school or lost wages.<sup>23</sup>

## METHODS

A 28-question electronic questionnaire (TAB 1) was developed by the IEC's TPE task force and sent to all 82 IEC Councilors and Associates. Responses were discussed in February 2018 at a Councilor and Associate session in San Diego, California.

## RESULTS

Forty-two (51%) Councilors and Associates responded to the survey, representing many countries and regions: Asia, Australia, Canada, Europe, India, South America, the Middle East, the United Kingdom, and the United States.

Nearly one-third of respondents see more than 100 patients with AD per month. Subjects discussed were the following:

- *Patient profile:* On average, 20% of these providers' patients had mild AD, 45% had moderate AD, and 35% had severe AD.
- *TPE and AD management:* Nearly all respondents (97.5%) agreed that TPE should play an important role in the management of persistent, treatment-refractory AD. Most respondents (82.9%) also believed that all patients with AD, regardless of severity, could benefit from TPE.
- *Circumstances in which TPE is appropriate:* TPE was appropriate, respondents said, in cases of treatment failure (92.1%), corticosteroid phobia (87.8%), high financial or psychosocial burden of disease (85.4%), lack of patient motivation (80.5%), and disease severity that warrants systemic therapy (82.9%).
- *Practical organization and setting:* 51% of respondents do not use an atopy school. The most common reported setting for TPE is an in-office visit. It is likely that in-office TPE is not delivered through a formalized team-based program.
- *Contrasting experiences:* There are clear differences between the formal German program of atopy school, which demonstrated efficacy according to evidence-based criteria,<sup>22</sup> and the Brazilian experience, in which 75% of patients indicated AD improvement after having attended an informal support group.
- *Tools:* Most of the respondents (80.0%) reported providing TPE tools, including handouts, videos, photos, and order sets, to patients and their caregivers. Many also reported providing materials to other physicians, residents, nurses, pharmacists, etc. This suggests that TPE tools can have the added benefit of educating allied health care professionals.

- *Propositions:*

- Specialist dermatologic nurses providing a formal model of TPE could offer an efficient alternative to current TPE delivery methods.
- Specialists are developing online forums and web-based programs for the delivery of TPE.
- A promising recent development was the educational training of other health care providers during training sessions (TPE Day) in France, Canada, and the United States.

- *Outcome assessment:*

- Most providers (80.0%) reported relying on the patients' informal assessment of whether their AD is better or worse.
- Many respondents (70.0%) regularly used formal physician assessments of disease severity (eg, Eczema area and severity index, SCORing AD).
- Patient-reported outcomes are useful tools to motivate and help patients manage their disease over long periods; patient-oriented SCORing AD was effective and fast in measuring eczema lesions, itch, and sleeplessness.<sup>24,25</sup>
- All survey respondents agreed that TPE can improve the quality of patient care and patient satisfaction with care.

- *Obstacles:*

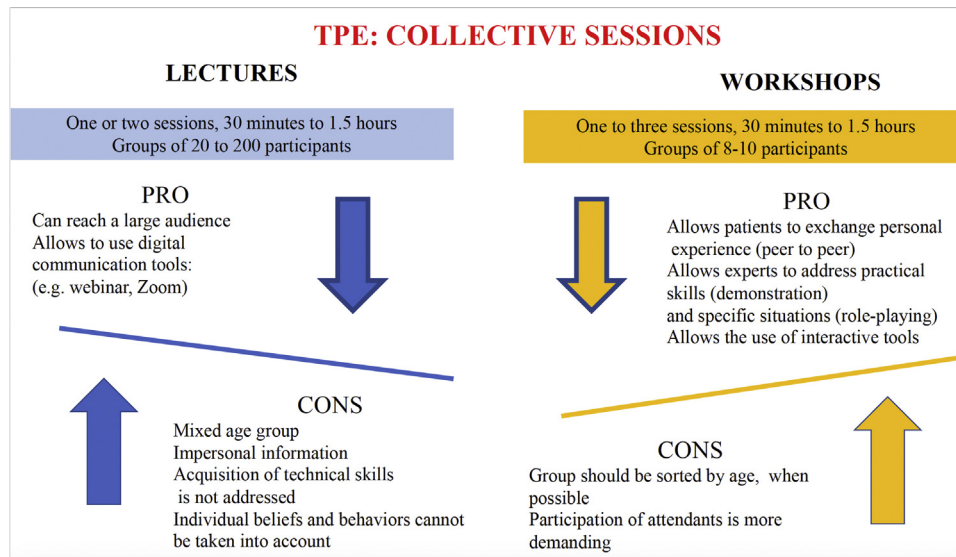
- TPE is more complex than just giving patients handouts or showing instructional videos.
- TPE providers need training.
- TPE is a time-consuming process, and the lack of funding and excessive bureaucracy limit its practical implementation.

## Survey comments from respondents

All experts who responded to the survey had extensive experience in the treatment of AD and agreed that TPE is an appropriate response to therapeutic failure, regardless of its cause. But the debate was colored by how the word "education" was perceived. The informative approach (directing patients to web sites and giving them brochures) was widely accepted and applied with only a few experts using the deliberative (patient-centered) approach seen in the atopic school.

These 2 complementary approaches (informative and deliberative) led to the following comments from respondents regarding TPE:

- Multiple messages communicated by multiple health care providers (including pharmacists) can create confusion among patients and lead to corticophobia.



**Fig 1.** Collective sessions for TPE in AD showing the advantages and disadvantages that result from the implementation of TPE in AD through lectures and workshops. *AD*, Atopic Dermatitis; *TPE*, therapeutic patient education.

- General information given to patients is often counterproductive. Patients need information about their specific problems, and it is imperative to begin the educative process this way.
- The patient-centered approach used in atopic schools (German model)<sup>20,22</sup> is not easily exportable to different cultural and economic contexts (Fig 1).
- Nurses play an essential role in encouraging communication with patients. Experts highlighted the positive role of specialist nurses to explain hygiene in cases of mild disease. Their integration into the medical teams is recommended.
- The idea of developing high-quality e-learning tools using artificial intelligence is an interesting suggestion.
- E-learning tools should be adapted for use by specific healthcare providers (eg, pharmacists, nurses).
- To improve the evidence-based quality of TPE, there is a need to develop patient-reported outcome tools capable of assessing acquired skills.

## CONCLUSION

TPE has become indispensable for managing chronic diseases. Multiple publications have shown the positive effect of TPE on the course of the disease, the prevention of complications, and the autonomy and quality of patient life.

In AD, TPE is increasingly proposed as a means to increase treatment adherence, to avoid treatment

failure, and to improve the patient QOL. IEC expert clinicians, most of whom were hospital-based, responded to and discussed a 28-question survey. Their responses heightened physician awareness of the crucial role of TPE. They concluded that TPE can improve the quality of patient care and patient satisfaction with care and that there is much to be done in this area compared with the advances in TPE for other chronic conditions.

TPE approaches depend on considerations that include the clinical setting, the country and its organization of health services, and socioeconomic and cultural factors.

In the future, digital tools could create new opportunities for research by assisting in the recruitment of patients, calculation of cost-benefit ratio assessment, and other study-related work.

## Conflicts of interest

Dr Eichenfield is an advisory board member with honorarium for Ortho Derm/Valeant; a data safety monitoring board member for Glenmark; a consultant with honorarium for Almirall, Arcutis, Asana, Biersdorf, Celgene, Dermavant, Dermira, DS Biopharma, Forte, Galderma Labs, Incyte, Kyowa Hakkin Kirin, Leo, Lilly, Matrisys, Menlo Therapeutics, Novan, Ortho Derm/Valeant, Novartis, Otsuka/Medimetrics, and Pfizer/Anacor; a consultant with no compensation for TopMD; an investigator with honorarium for AbbVie and Pfizer/Anacor; and an investigator with no compensation for Leo and Regeneron/Sanofi. Dr Barbarot received research grants from Pierre Fabre Laboratory and Fondation pour la dermatite atopique and honorarium from Bioderma, Laboratoire La Roche Posay, Sanofi-Genzyme, AbbVie,

Novartis, Janssen, and Leo Pharma. Dr Deleuran is an advisor/consultant for AbbVie, AOBiome, Dermavant, Dermira, Eli Lilly, Exeltis, Galderma, IntraDerm, Johnson and Johnson, Kiniksa, L'Oreal, Menlo Therapeutics, Micros, Pfizer, Pierre Fabre, Realm, Regeneron/Sanofi-Genzyme, Theraplex, UCB, and Unilever and a speaker for L'Oreal, Pfizer, and Regeneron/Sanofi-Genzyme. Dr Lio is an investigator for AbbVie, Regeneron/Sanofi-Genzyme, and AOBiome; an advisor/consultant for AbbVie, AOBiome, Dermavant, Dermira, Eli Lilly, Exeltis, Galderma, IntraDerm, Johnson and Johnson, Kiniksa, L'Oreal, Menlo Therapeutics, Micros, Pfizer, Pierre Fabre, Realm, Regeneron/Sanofi-Genzyme, Theraplex, UCB, and Unilever; and a speaker for L'Oreal, Pfizer, and Regeneron/Sanofi-Genzyme. Dr Marcoux is a principal investigator for AbbVie, Celgene, Leo Pharma, Lilly, Pfizer, and Sanofi; an advisory board member for AbbVie, Leo Pharma, Lilly, Pfizer, and Sanofi; and a speaker for AbbVie, Leo Pharma, Lilly, Pfizer, and Sanofi. Dr Nosbaum is consultant/investigator for Sanofi Regeneron, Novartis, Lilly, Pfizer, Pierre Fabre, Medac, and AbbVie. Drs Kusari, Han, and Stalder have no conflicts of interest to declare.

#### REFERENCES

- Sidbury R, Tom WL, Eichenfield LF, et al. Guidelines of care for the management of atopic dermatitis. *J Am Acad Dermatol*. 2014;71(6):1218-1233.
- Krejci-Manwaring J, Tusa MG, Carroll C, et al. Stealth monitoring of adherence to topical medication: adherence is very poor in children with atopic dermatitis. *J Am Acad Dermatol*. 2007;56(2):211-216.
- Murphy J, Coster G. Issues in patient compliance. *Drugs*. 1997;54(6):797-800.
- Hoving C, Visser A, Mullen PD, van den Borne B. A history of patient education by health professionals in Europe and North America: from authority to shared decision making education. *Patient Educ Couns*. 2010;78(3):275-281.
- Bartlett EE. Historical glimpses of patient education in the United States. *Patient Educ Couns*. 1986;8(2):135-149.
- Albano MG, Jourdain P, De Andrade V, Domenke A, Desnos M, d'Ivernois JF. Therapeutic patient education in heart failure: do studies provide sufficient information about the educational programme? *Arch Cardiovasc Dis*. 2014;107(5):328-339.
- Golay A, Lagger G, Chambouleyron M, Carrard I, Lasserre-Moutet A. Therapeutic education of diabetic patients. *Diabetes Metab Res Rev*. 2008;24(3):192-196.
- Gardner A, Kaplan B, Brown W, et al. National standards for asthma self-management education. *Ann Allergy Asthma Immunol*. 2015;114(3):178-186.
- Manning VL, Hurley MV, Scott DL, Coker B, Choy E, Bearne LM. Education, self-management, and upper extremity exercise training in people with rheumatoid arthritis: a randomized controlled trial. *Arthritis Care Res (Hoboken)*. 2014;66(2):217-227.
- Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med*. 2005;353(5):487-497.
- Njom Nlend AE, Lyeb AS, Moyo S, Nsangou D. Therapeutic patient education and disclosure of status of HIV infected children in Yaounde, Cameroon Achievements and competence. *Med Sante Trop*. 2016;26(3):308-311.
- Chamlin SL, Frieden IJ, Williams ML, Chren MM. Effects of atopic dermatitis on young American children and their families. *Pediatrics*. 2004;114(3):607-611.
- Lifschitz C. The impact of atopic dermatitis on quality of life. *Ann Nutr Metab*. 2015;66(suppl 1):34-40.
- Suarez AL, Feramisco JD, Koo J, Steinhoff M. Psychoneuroimmunology of psychological stress and atopic dermatitis: pathophysiologic and therapeutic updates. *Acta Derm Venereol*. 2012;92(1):7-15.
- Emanuel EJ, Emanuel LL. Four models of the physician-patient relationship. *JAMA*. 1992;267(16):2221-2226.
- Gagnayre R. Therapeutic education and patients' competence. In favor of competence training. *Ann Dermatol Venereol*. 2002;129(8-9):985-989.
- Barbarot S, Stalder JF. Therapeutic patient education in atopic eczema. *Br J Dermatol*. 2014;170(suppl 1):44-48.
- Sauder MB, McEvoy A, Sampson M, et al. The effectiveness of written action plans in atopic dermatitis. *Pediatr Dermatol*. 2016;33(2):e151-e153.
- Chinn D, Poyner T, Sibley G. Randomized controlled trial of a single dermatology nurse consultation in primary care on the quality of life of children with atopic eczema. *Br J Dermatol*. 2002;146(3):432-439.
- Staab D, Diepgen TL, Fartasch M, et al. Age related, structured educational programmes for the management of atopic dermatitis in children and adolescents: multi-centre, randomised controlled trial. *BMJ*. 2006;332(7547):933-938.
- Armstrong AW, Kim RH, Idriss NZ, Larsen LN, Lio PA. Online video improves clinical outcomes in adults with atopic dermatitis: a randomized controlled trial. *J Am Acad Dermatol*. 2011;64(3):502-507.
- Heratizadeh A, Werfel T, Wollenberg A, et al. Effects of structured patient education in adults with atopic dermatitis: multicenter randomized controlled trial. *J Allergy Clin Immunol*. 2017;140(3):845-853.
- Stalder JF, Bernier C, Ball A, et al. Therapeutic patient education in atopic dermatitis: worldwide experiences. *Pediatr Dermatol*. 2013;30(3):329-334.
- Stalder JF, Barbarot S, Wollenberg A, et al. Patient-oriented SCORAD (PO-SCORAD): a new self-assessment scale in atopic dermatitis validated in Europe. *Allergy*. 2011;66(8):1114-1121.
- Coutanceau C, Stalder JF. Analysis of correlations between patient oriented SCORAD (PO-SCORAD) and other assessment scores of atopic dermatitis severity and quality of life. *Dermatology*. 2014;229(3):248-255.