Dermatol Ther (Heidelb) (2021) 11:1571–1585
https://doi.org/10.1007/s13555-021-00580-2

ORIGINAL RESEARCH

Inadequate Disease Control, Treatment Dissatisfaction, and Quality-of-Life Impairments Among US Patients Receiving Topical Therapy for Atopic Dermatitis

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Received: June 7, 2021 / Accepted: July 6, 2021 / Published online: July 15, 2021

ABSTRACT

Introduction: Patients with atopic dermatitis (AD) experience burdensome symptoms and impaired quality of life (QoL). The objective of this study was to investigate the effects of topical AD therapies on disease control, physician and patient treatment satisfaction, and QoL in a real-world setting.

Methods: This was a retrospective, point-in-time study of physician-completed medical records and patient surveys drawn from two Adelphi AD Disease Specific Programmes™ (1. adults $\geq$ 18 years old; 2. pediatrics $\leq$ 17 years old) in the USA. Eligible physicians completed patient record forms and provided disease control assessments. Physicians and matched patients were surveyed regarding their satisfaction with current treatment. Patient-reported outcomes included the Dermatology Life Quality Index (DLQI), Children's DLQI (CDLQI), Patient-Oriented Eczema Measure (POEM), and the Work Productivity and Activity Impairment (WPAI) questionnaire.

Results: A total of 394 adult (topicals only, n = 284; topical plus systemic, n = 110) and 144 adolescent (aged 12–17 years; topicals only, n = 114; topical plus systemic, n = 30) patients who had received their current treatment for at least 1 month were included. Overall, 24.5% of patients had physician-reported uncontrolled disease (adults, 22.8%; adolescents, 29.2%). Rates of physician- and patient-reported dissatisfaction with current treatment were 32.0% (adults, 28.2%; adolescents, 42.4%) and 24.8% (adults, 24.0%; adolescents, 26.8%), respectively, and were higher for patients with uncontrolled versus controlled disease. Poorer disease control and higher rates of treatment dissatisfaction were generally reported among patients receiving topical plus systemic therapy versus topicals alone. Patients with uncontrolled versus controlled disease reported more impairment in the DLQI, CDLQI, POEM, and WPAI ($P < 0.05$ for all), with generally greater impairments observed among patients on topical plus systemic therapy versus topicals alone.

Conclusion: Patients receiving topical AD therapies experienced uncontrolled disease and reported decreased overall functioning and lower QoL. An unmet need for topical AD treatments that improve disease control and patient outcomes exists.

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PLAIN LANGUAGE SUMMARY

Atopic dermatitis (or eczema) is a common skin condition that causes dry, cracked, and itchy skin. Patients are frequently prescribed topical therapy, such as ointments and creams, to apply directly to the affected skin. Additionally, patients may be prescribed systemic therapies, which are oral or injectable medications that work throughout the entire body. This study included 394 adults and 144 adolescents (aged 12–17 years) with atopic dermatitis. All patients in the study were receiving topical therapy, and some received both topical and systemic therapy. The goal of the study was to evaluate how satisfied patients and their doctors were with current treatment and to learn how patients in the study felt about their quality of life. Patients and their doctors completed surveys that asked about feelings, symptoms, and whether their condition affects their work. The study results showed that patients had high levels of dissatisfaction with their treatment. Doctors reported that between one-fifth and one-quarter of adult patients and up to one-half of adolescent patients had uncontrolled disease (defined as changeable or worsening). Patients with uncontrolled disease reported higher dissatisfaction with their therapy and a negative outlook on their quality of life versus those with controlled disease (defined as stable or improving by their doctors). In summary, doctors and their patients currently using topical medications to treat atopic dermatitis reported that treatments were not working well enough and that uncontrolled disease was negatively affecting patients' quality of life and work, indicating that additional treatment options are needed.

Keywords: Atopic dermatitis; Disease control; Disease Specific Programme; Patient-reported outcomes; Patient satisfaction; Physician satisfaction; Quality of life; Real world; Topical therapy; Work impairment

Key Summary Points

Why carry out this study?

Patients with atopic dermatitis (AD) experience burdensome symptoms and have impairments in quality of life (QoL) and work productivity as a result of their disease.

Although topical therapies are initially used by the majority of patients with AD, they have several limitations, including local skin reactions and the inability to use in sensitive areas; the effects of currently available topical AD therapies on disease control, QoL, and work productivity have not been fully elucidated in a real-world setting.

This real-world analysis examined disease control, physician and patient satisfaction, and patient-reported outcomes (PROs) among adult and adolescent patients with AD receiving topical therapy (with or without systemic therapy) in the USA.

What was learned from the study?

Rates of physician- and patient-reported dissatisfaction were higher and impairment in PRO measures was greater among adult and adolescent patients with uncontrolled versus controlled AD; outcomes were generally worse among patients receiving topical plus systemic therapy versus topicals alone.

Many patients receiving standard-of-care topical AD therapies, alone or in combination with systemic therapy, had inadequate disease control and unsatisfactory outcomes, highlighting an unmet need for effective treatment strategies.

INTRODUCTION

Atopic dermatitis (AD) is a chronic, relapsing, highly pruritic inflammatory skin disease with a prevalence of approximately 10–15% in children and 5–10% in adults in the USA [1–3]. Although typically presenting before 5 years of age, AD can present at any age; persistent disease, with increased severity at diagnosis, is more likely when AD develops in early adolescence rather than early childhood or infancy [4–6]. AD is characterized by a variety of burdensome symptoms, which commonly include itch, excessive dryness or scaling of the skin, and red or inflamed skin [7]. Patients with AD of any severity often report sleep disturbances, impaired work productivity, and diminished quality of life (QoL) [2, 7–11].

Topical therapies, including corticosteroids and calcineurin inhibitors, are standard of care for many patients with AD [12, 13]. More recently, the phosphodiesterase 4 inhibitor crisaborole has also been approved for the treatment of children and adults with mild to moderate AD [14]. Prolonged use of topical corticosteroids is associated with diminished skin health, and both topical calcineurin inhibitors and crisaborole may cause application site reactions, such as stinging and burning, that may prompt treatment discontinuation [12, 15, 16]. For patients with more severe disease, or those with inadequately controlled symptoms on topical therapy, systemic therapies including corticosteroids, immunosuppressants, and the subcutaneously administered interleukin (IL)-4/IL-13 inhibitor dupilumab may be considered as monotherapy or in combination with topical treatment [17, 18].

Contemporary real-world studies examining patient-reported outcomes (PROs) among patients on current topical therapies are needed to highlight the level of disease control and patient satisfaction, or lack thereof, with current treatments. Prior analyses from the Adelphi AD Disease Specific Programme (DSP™) showed that adult patients with a history of moderate to severe AD who had uncontrolled versus controlled symptoms reported higher rates of itch and sleep disturbances that interfered with daily living, as well as higher scores on the Dermatology Life Quality Index (DLQI), Patient-Oriented Eczema Measure (POEM), and Work Productivity and Activity Impairment (WPAI), indicating greater impairment [19, 20]. The objective of the real-world analysis reported here was to evaluate disease control, physician and patient satisfaction, and PROs among adolescent and adult patients with AD receiving topical therapy, alone or in combination with systemic therapy, in order to better understand the unmet needs of patients using topical treatments in the USA.

METHODS

Study Design

This was a retrospective, point-in-time, observational study of physician-completed medical records and patient surveys drawn from two Adelphi AD DSPs™. One DSP was conducted in adults (≥ 18 years) in 2018 and the other DSP was in pediatric patients (≤ 17 years) in 2019; the methodology was broadly similar across the two DSPs (Fig. 1). Patient record forms completed by physicians about their patients with AD included details on patient demographics, clinical characteristics, and treatment history. On the basis of physician responses to a multiple-choice question on the patient record form following discussions with their patients, AD was defined as either controlled ("improving" or "stable" per the questionnaire) or uncontrolled ("changeable," "deteriorating slowly," or "deteriorating rapidly" per the questionnaire) on the day of consultation. Physicians were also surveyed regarding their satisfaction with the patient's current treatment and disease control. The patient self-completion form captured PROs including DLQI [21] (adults), Children's DLQI (CDLQI [22]; adolescents), POEM [23], and WPAI [24] (adults only) questionnaires. Higher values indicate worse QoL on the DLQI/CDLQI, more severe disease on POEM, and greater impairment on the WPAI. Patient surveys were linked to the physician-completed medical records for the same patient during data collection and analysis.

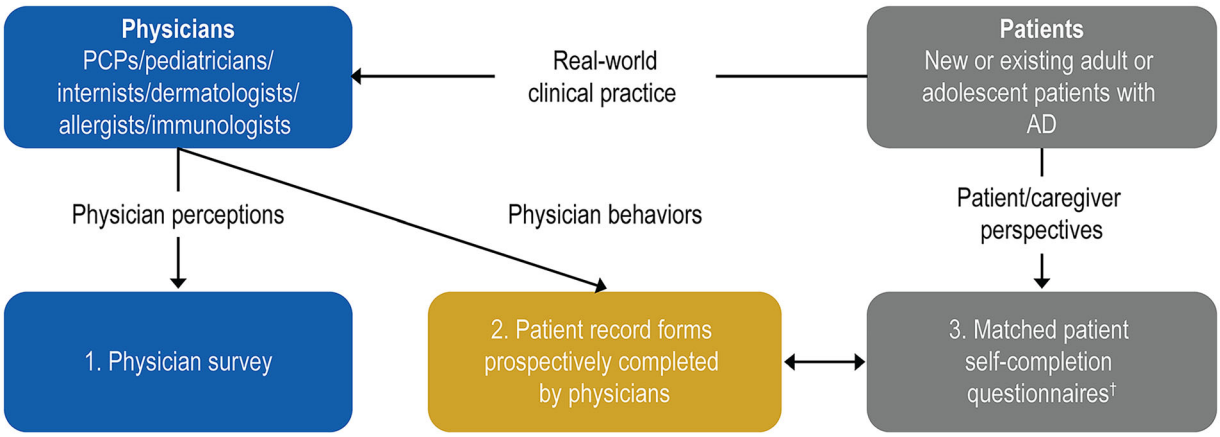

Fig. 1 Study design schematic. AD atopic dermatitis, PCP primary care physician. †Patient-reported outcomes data were matched against the patient record forms completed by physicians for the same patient. Patient self-completion data were not available for every patient; participation was voluntary, and consent was obtained

Participants

For the adult DSP, primary care physicians (PCPs)/internists and specialists (dermatologists and allergists/immunologists) from the USA actively involved in AD management with a minimum monthly workload of five adult patients with a history of moderate to severe AD (at least one moderate and at least one severe) were eligible to participate. Each physician was asked to complete an initial survey and a patient record form for each of their next five consecutive patients with AD.

The pediatric DSP included physicians identifying as PCPs/internists, pediatricians, and specialists (dermatologists and allergists/immunologists) who were actively involved in AD drug management in pediatric patients. The minimum monthly workload was four patients for PCPs/internists and pediatricians (at least one currently mild with no history of moderate to severe AD, at least one currently mild with history of moderate to severe AD, and at least one currently moderate) and six patients for specialists (at least one currently mild with a history of moderate to severe AD, at least three currently moderate, and at least one currently severe). To ensure adequate representation of adolescent patients by disease severity, PCPs/internists and pediatricians were asked to provide patient record forms for the next eight patients (two currently mild with no history of moderate to severe AD, two currently mild with a history of moderate to severe AD, two currently moderate, and two currently severe); specialists were asked to provide forms for their next six patients with AD (one currently mild with a history of moderate to severe AD, three currently moderate, and two currently severe) who met study eligibility criteria for the current analysis.

For this analysis, eligible patients were adults (≥ 18 years) and adolescents (12–17 years) either currently experiencing or with a history of moderate or severe AD who had been receiving their current AD therapy for at least 1 month. AD severity was based on subjective rating by the treating physician.

Ethics

The study protocol was submitted to the Western Independent Review Board for approval. The adult DSP was granted an ethics waiver as it was considered to be minimal risk. Approval was granted for administration of the survey to adolescents. Physicians and patients provided informed consent before participation, and no personally identifiable information, as defined by the Health Insurance Portability and Accountability Act, was collected. All responses

captured on the data collection forms were deidentified to preserve both physician and patient confidentiality.

Statistical Analyses

Analyses of disease control, physician and patient satisfaction, and PROs were conducted in the subpopulation of patients who were currently receiving topical therapy (corticosteroids, calcineurin inhibitors, or crisaborole) alone or in addition to systemic therapy (corticosteroids, immunosuppressants, or biologics). Continuous and categorical variables were described using descriptive statistics. Independent sample *t* tests compared patients with controlled versus uncontrolled disease. A *P* value less than 0.05 was considered statistically significant. Data were analyzed using STATA version 16.1 (StataCorp LP, College Station, TX).

RESULTS

Study Population

For the adult patient population, 150 physicians (60 PCPs/internists, 70 dermatologists, and 20 allergists/immunologists) participated in the DSP (Table 1). The total adult patient population sampled consisted of 749 patients. After exclusion of patients who had not been on their current therapy for at least 1 month, 424 matched adult patients met analysis requirements and were included. In the adolescent patient population, 103 physicians (10 PCPs/internists, 22 pediatricians, 50 dermatologists, and 21 allergists/immunologists) provided data for 304 patients. After patients who had not been on their current therapy for at least 1 month were excluded, 151 eligible matched adolescent patients were included.

Out of the total 575 patients included in the study, 538 (93.6%; adults, $n = 394$; adolescents, $n = 144$) received topical therapy and were included in the analysis. Of these patients, 398 (adults, $n = 284$; adolescents, $n = 114$) received topical therapy only, and 140 (adults, $n = 110$; adolescents, $n = 30$) received topical plus systemic therapy (Table 2). Mean (SD) age was 38.2 (15.0) years for the adult cohort and 14.6 (1.7)

Table 1 Summary of participating physicians from the Adelphi AD DSP™

Physician type, *n* (%)	Adult AD DSP™ (*n* = 150)	Adolescent AD DSP™ (*n* = 103)
PCP/internist	60 (40.0)	10 (9.7)
Pediatrician	N/A	22 (21.4)
Dermatologist	70 (46.7)	50 (48.5)
Allergist/immunologist	20 (13.3)	21 (20.4)

AD atopic dermatitis, *DSP* Disease Specific Programme, *N/A* not applicable, *PCP* primary care physician

Table 2 Current treatments

Treatment type, *n* (%)	Adult patients with AD (*n* = 424)	Adolescent patients with AD (*n* = 151)
Topical only[a]	284 (67.0)	114 (75.5)
Topical plus systemic	110 (25.9)	30 (19.9)
Systemic only[b]	13 (3.1)	4 (2.6)
No current or prior treatments	15 (3.5)	3 (2.0)
Other[c]	2 (0.5)	0

As described by the treating physician. Table includes treatments for all patients who received current treatment for at least 1 month; subsequent analyses only examined patients receiving topical only or topical plus systemic therapy (adult, $n = 394$; adolescent, $n = 144$)

AD atopic dermatitis

[a] Includes topical corticosteroids, topical calcineurin inhibitors, or crisaborole

[b] Includes systemic corticosteroids, systemic immunosuppressants, or biologics

[c] Not topical corticosteroids, topical calcineurin inhibitors, crisaborole, systemic corticosteroids, systemic immunosuppressants, or biologics

Table 3 Patient demographics and baseline clinical characteristics

Parameter	Adult patients			Adolescent patients		
	Topical only (*n* = 284)	Topical plus systemic (*n* = 110)	Total (*n* = 394)	Topical only (*n* = 114)	Topical plus systemic (*n* = 30)	Total (*n* = 144)
Age, mean (SD) (years)	37.9 (15.2)	39.1 (14.4)	38.2 (15.0)	14.4 (1.7)	15.3 (1.8)	14.6 (1.7)
Male, *n* (%)	122 (43.0)	55 (50.0)	177 (44.9)	67 (58.8)	18 (60.0)	85 (59.0)
BMI, mean (SD) (kg/m^2)	25.5 (4.6)	26.7 (3.6)	25.8 (4.4)	22.1 (2.5)	23.4 (4.0)	22.4 (2.9)
Race/ethnicity, *n* (%)						
White	197 (69.4)	81 (73.6)	278 (70.6)	83 (72.8)	23 (76.7)	106 (73.6)
Hispanic/Latino	27 (9.5)	7 (6.4)	34 (8.6)	5 (4.4)	2 (6.7)	7 (4.9)
Black	21 (7.4)	5 (4.5)	26 (6.6)	12 (10.5)	2 (6.7)	14 (9.7)
Other	39 (13.7)	17 (15.5)	56 (14.2)	14 (12.3)	3 (10.0)	17 (11.8)
≥ 1 type II inflammatory disease, *n* (%)[a]	158 (55.6)	56 (50.9)	214 (54.3)	61 (53.5)	21 (70.0)	82 (56.9)
Allergic rhinitis	105 (37.0)	39 (35.5)	144 (36.5)	42 (36.8)	11 (36.7)	53 (36.8)
Asthma	78 (27.5)	33 (30.0)	111 (28.2)	28 (24.6)	10 (33.3)	38 (26.4)
Allergic contact dermatitis	32 (11.3)	11 (10.0)	43 (10.9)	4 (3.5)	3 (10.0)	7 (4.9)
Concomitant conditions, *n* (%)						
Cardiovascular diseases	63 (22.2)	25 (22.7)	88 (22.3)	0	0	0
Mood/sleep disorders	52 (18.3)	25 (22.7)	77 (19.5)	2 (1.8)	3 (10.0)	5 (3.5)
Metabolic diseases	36 (12.7)	7 (6.4)	43 (10.9)	1 (0.9)	2 (6.7)	3 (2.1)
Other	34 (12.0)	9 (8.2)	43 (10.9)	66 (57.9)	20 (66.7)	86 (59.7)
None of the above	164 (57.7)	60 (54.5)	224 (56.9)	47 (41.2)	9 (30.0)	56 (38.9)
Current IGA score, *n* (%)						
0	10 (3.5)	2 (1.8)	12 (3.0)	3 (2.6)	1 (3.3)	4 (2.8)
1	37 (13.0)	10 (9.1)	47 (11.9)	12 (10.5)	3 (10.0)	15 (10.4)
2	103 (36.3)	15 (13.6)	118 (29.9)	28 (24.6)	1 (3.3)	29 (20.1)
3	128 (45.1)	76 (69.1)	204 (51.8)	55 (48.2)	11 (36.7)	66 (45.8)
4	6 (2.1)	7 (6.4)	13 (3.3)	16 (14.0)	14 (46.7)	30 (20.8)

BMI body mass index, *IGA* Investigator's Global Assessment

[a] The three most commonly reported type II inflammatory diseases are shown

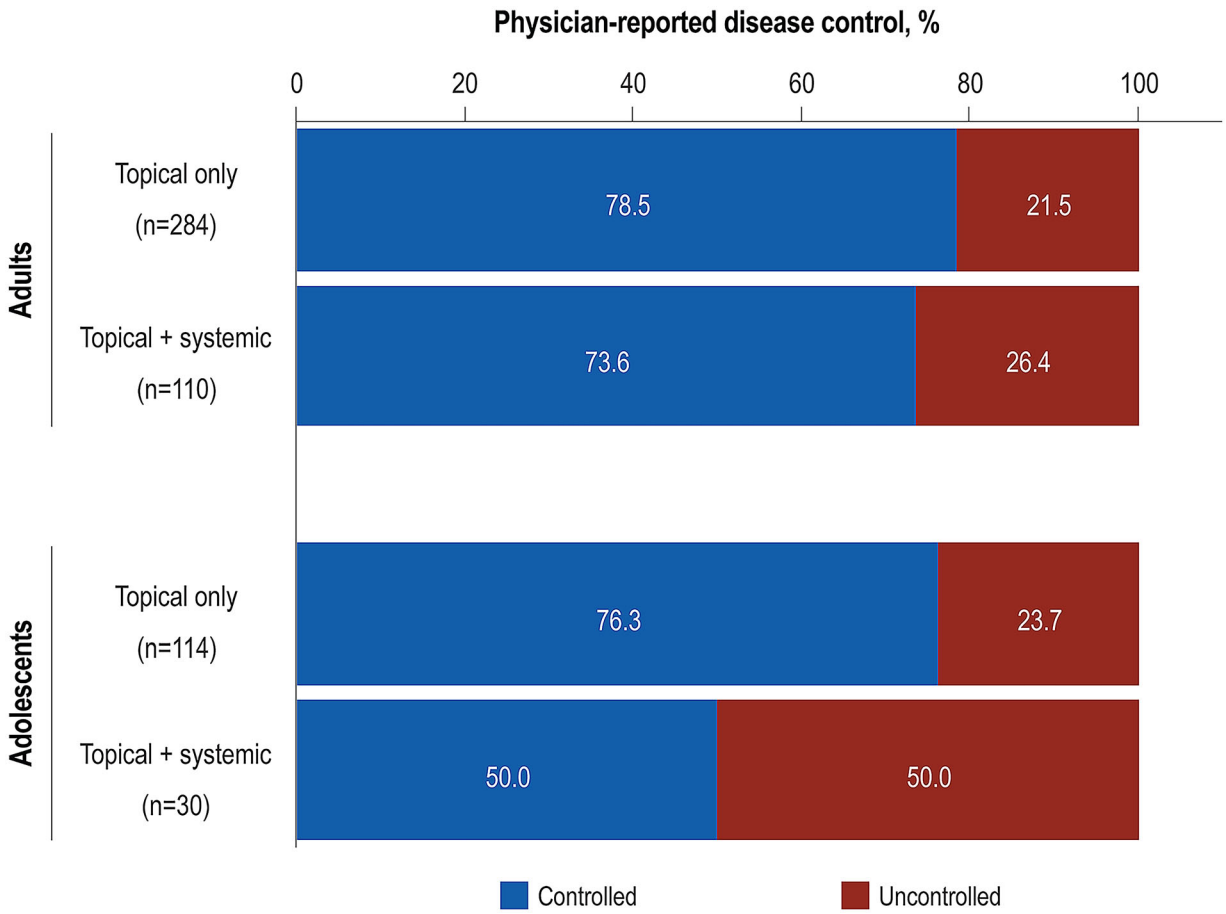

Fig. 2 Physician-defined disease control. †Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changeable

years for the adolescent cohort. Patient demographics and baseline clinical characteristics were generally similar among those receiving topical therapy alone compared with topical plus systemic therapy for both the adult and adolescent cohorts (Table 3). Among adult patients, 246 (62.4%) were working full time and 34 (8.6%) were working part time at the time of the study. Approximately half of patients had at least one concomitant type II inflammatory disease (i.e., T helper type 2 allergic immune response), with allergic rhinitis (overall, 36.6%; adults, 36.5%; adolescents, 36.8%) and asthma (overall, 27.7%; adults, 28.2%; adolescents, 26.4%) being the most common.

Disease Control

Per physician assessment, 132 patients (24.5%; adults, 22.8%; adolescents, 29.2%) had uncontrolled disease. Slightly more adults had uncontrolled disease on topical plus systemic therapy versus topical therapy alone (26.4% vs 21.5%; Fig. 2). Uncontrolled disease was also more common, and to a greater extent versus adults, among adolescents receiving topical plus systemic therapy versus topical therapy alone (50.0% vs 23.7%; Fig. 2). The overall rate of physician-reported dissatisfaction with disease control was 32.0% and was higher for the adolescent (42.4%) versus adult (28.2%) patient cohort. Physicians reported similar rates of dissatisfaction with disease control for their adult patients receiving topical plus systemic therapy

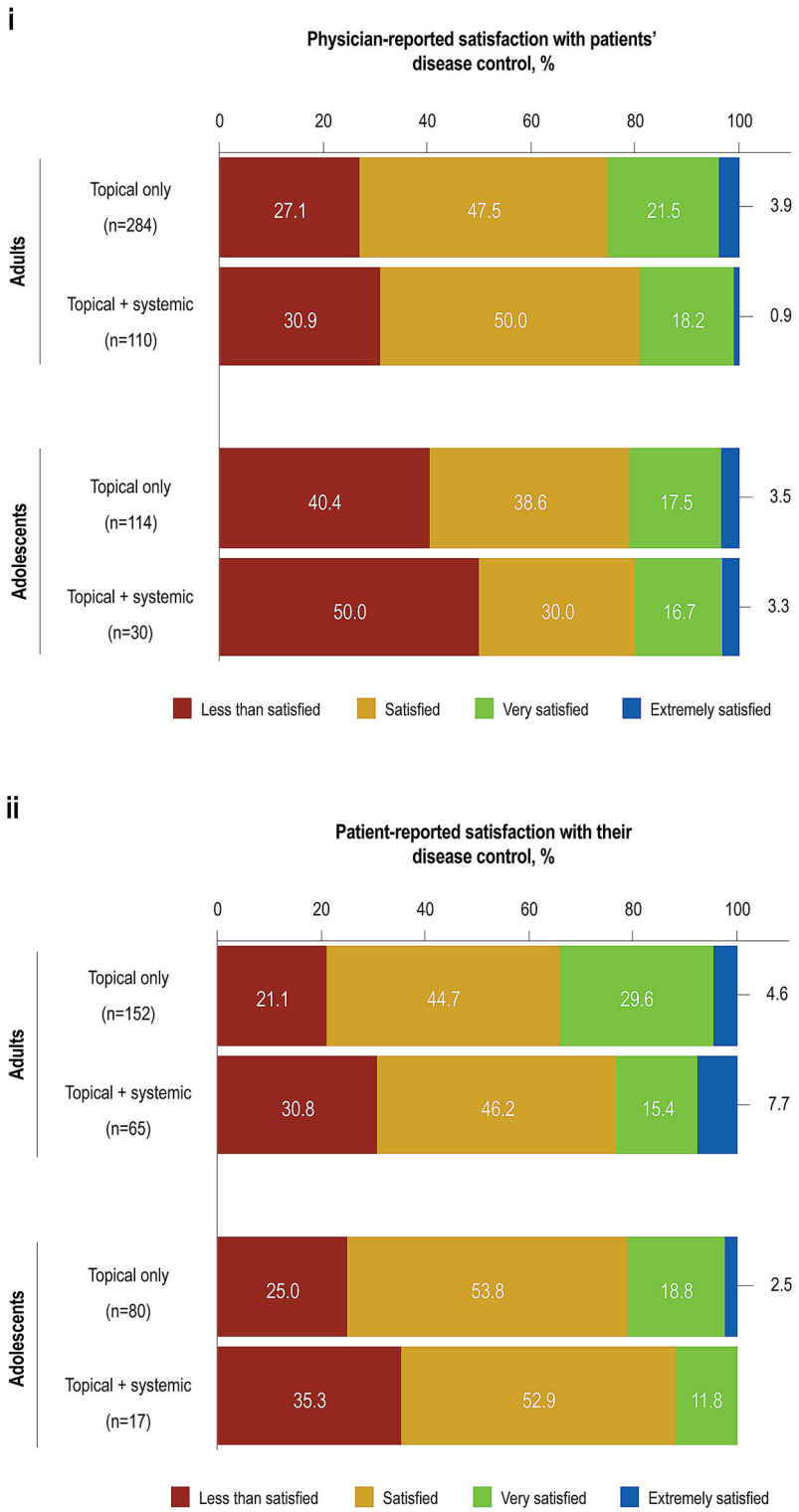

Fig. 3 Rates of **i** physician and **ii** patient satisfaction with disease control on current treatment

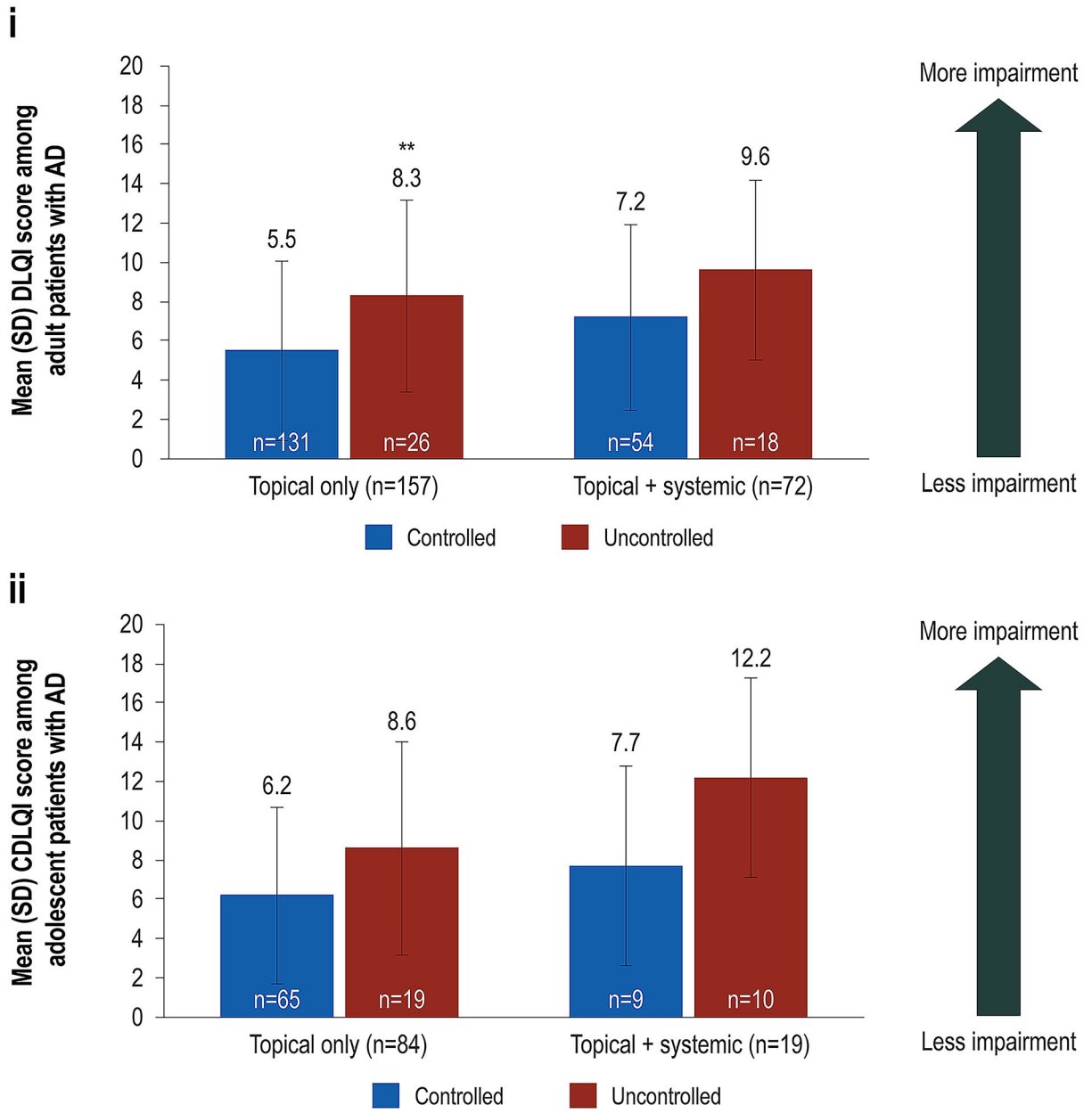

Fig. 4 **i** DLQI and **ii** CDLQI scores among patients on topical AD therapy with controlled vs uncontrolled disease. †AD atopic dermatitis, CDLQI Children's Dermatology Life Quality Index, DLQI Dermatology Life Quality Index. $^{**}P < 0.01$. †Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changeable

versus topical therapy alone ("less than satisfied" in 30.9% vs 27.1%, respectively; Fig. 3i). Physicians of adolescent patients were generally less satisfied with disease control for patients receiving topical plus systemic therapy versus topicals alone ("less than satisfied" in 50.0% vs 40.4%, respectively). Out of 314 patients with evaluable responses regarding satisfaction with their current treatment, 78 (24.8%; adults, 24.0%; adolescents, 26.8%) reported being dissatisfied. Patients receiving topical plus systemic therapy reported being "less than satisfied" with

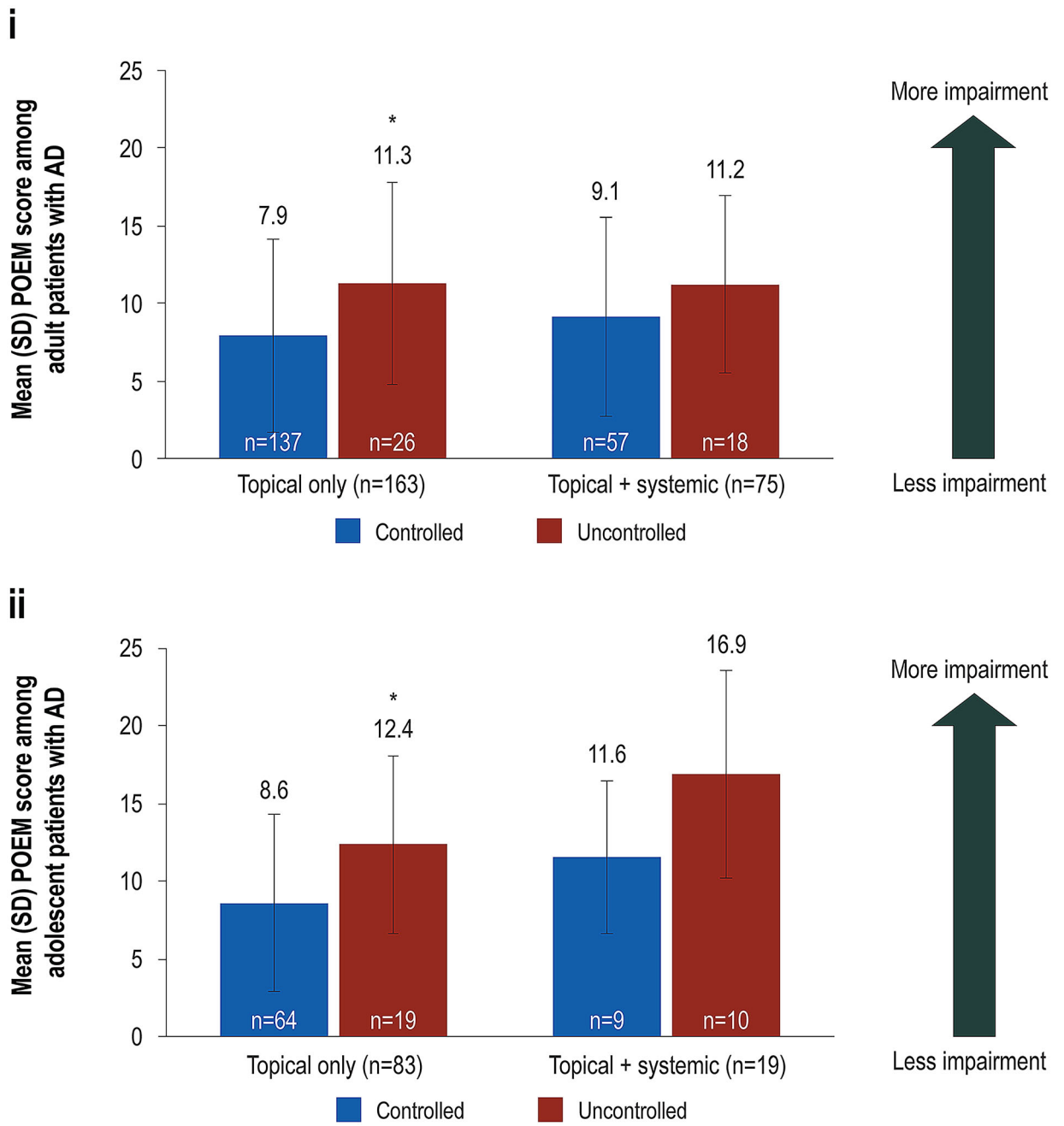

Fig. 5 POEM scores among **i** adult and **ii** adolescent patients on topical AD therapy with controlled vs uncontrolled disease. †AD atopic dermatitis, POEM Patient-Oriented Eczema Measure. *$P < 0.05$. †Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changeable

treatment more often than those receiving topicals alone for both the adult (30.8% vs 21.1%, respectively) and adolescent cohorts (35.3% vs 25.0%; Fig. 3ii).

Patient-Reported Outcomes

In the adult patient cohort, mean (SD) DLQI score was 6.5 (4.8); among adolescents, mean

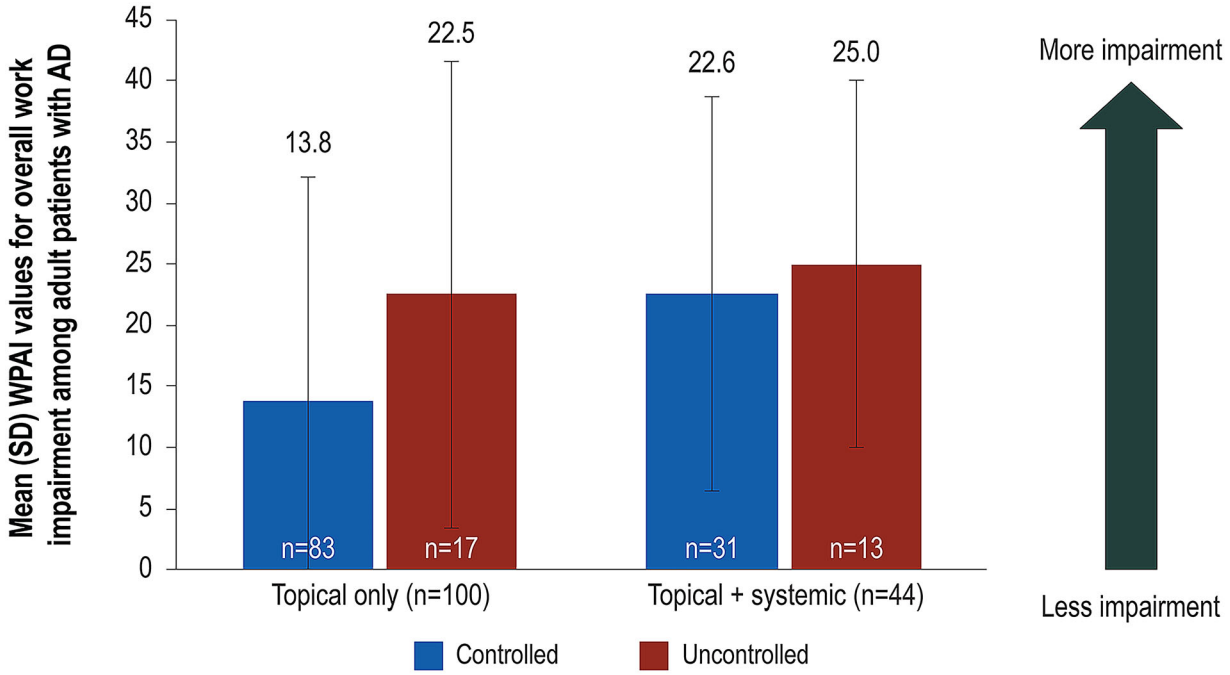

Fig. 6 WPAI values for overall work impairment among adult patients on topical AD therapy with controlled vs uncontrolled disease. †AD atopic dermatitis, WPAI Work Productivity and Activity Impairment. †Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changeable

(SD) CDLQI score was 7.3 (5.1). Greater QoL impairment was observed for physician-defined uncontrolled versus controlled disease in both DLQI (mean [SD] score, 8.8 [4.8] vs 6.0 [4.6]; $P = 0.0003$) and CDLQI (mean [SD] score, 9.8 [5.5] vs 6.3 [4.6], respectively; $P = 0.0015$). DLQI and CDLQI scores were typically further increased among patients receiving topical plus systemic therapy versus topical therapy alone (Fig. 4).

Mean (SD) POEM scores were 8.8 (6.3) and 10.4 (6.2) among adult and adolescent patients, respectively. Higher POEM scores were seen among patients with uncontrolled versus controlled disease in both the adult (mean [SD], 11.3 [6.1] vs 8.3 [6.2]; $P = 0.0037$) and adolescent (mean [SD], 13.9 [6.3] vs 9.0 [5.7]; $P = 0.0002$) patient cohorts. POEM scores among adolescents were generally higher than those in adults for all categories. Among adolescents, POEM scores were higher for patients receiving topical plus systemic therapy versus topicals alone, irrespective of disease control (Fig. 5).

In the adult patient cohort, WPAI scores showed that mean (SD) percent of overall work impairment was 17.7 (18.2). WPAI values were higher among patients with uncontrolled versus controlled disease (mean [SD], 23.5 [17.2] vs 16.2 [18.2], respectively; $P = 0.0488$). This trend was observed for both users of topical therapy alone (mean [SD], 22.5 [19.1] vs 13.8 [18.4] for uncontrolled vs controlled disease, respectively) and topical plus systemic therapy (mean, 25.0 [15.0] vs 22.6 [16.1] for uncontrolled vs controlled disease; Fig. 6).

DISCUSSION

In this retrospective observational survey study, physicians reported uncontrolled disease among about one-fifth to one-half of adolescent and adult patients receiving topical therapy. A similar proportion of patients receiving topical therapy reported being "less than satisfied" with

their current treatment. Patients with uncontrolled disease reported worse QoL, higher symptom burden, and more work impairment versus those with controlled disease. Taken together, these results suggest that topical therapies were insufficient to treat AD, both from a physician and patient perspective.

Findings from this study support extensive literature showing that patients with AD experience reduced QoL and work impairment. Itch and sleep disturbance are associated with reduced QoL and impaired overall health [2, 25, 26]. Previous studies have demonstrated that both adults and children of all ages with eczema or AD report a higher occurrence of sleep disturbances such as fatigue, insomnia, and poor sleep quality compared with unaffected individuals [2, 8]. Several reports have demonstrated that patients with AD have markedly diminished QoL [7, 10, 27], including a survey of adult patients with AD in the USA who frequently reported that AD limited their lifestyle, caused them to avoid social interactions because of their appearance, and impacted their activities [7]. Furthermore, in a study of children aged 5–15 years with chronic skin diseases, those with AD showed greater QoL impairment from both the patient and caregiver's perspective compared with several other diseases, including acne, alopecia, and urticaria [11]. Additionally, in patient surveys conducted in the USA and Europe, adults with AD attributed a substantial impairment in work productivity to their AD [9, 28], with worse impairment associated with higher DLQI scores [28]. The present study similarly showed deficits across work productivity and QoL domains in patients receiving standard-of-care topical therapy, alone or in combination with systemic therapy, with the most pronounced impairments observed among those with uncontrolled disease.

This study showed that patients with uncontrolled AD receiving topical therapy had worse QoL, symptom burden, and work impairments versus those with controlled AD, expanding upon previous AD DSP analyses that showed similar findings in patients with moderate to severe disease [19, 20]. The lower DLQI scores among patients receiving topical therapy alone compared with topical plus systemic therapy observed in this study have also been previously described in a Danish registry study of patients receiving topical corticosteroids alone versus combined oral and topical treatment [29]. Findings from the present study further highlight the unmet need for well-tolerated topical AD therapies that offer disease control. Previous studies describe shortfalls of currently available topical therapies, including diminished skin health associated with chronic application of topical corticosteroids and local skin reactions reported with topical calcineurin inhibitors and crisaborole [12, 15, 16]. In the current study, physicians reported uncontrolled AD in between one-fifth and one-quarter of adult patients and up to half of adolescent patients receiving topical AD treatments. Furthermore, approximately a quarter of adult and adolescent patients on topical AD therapies reported dissatisfaction with their current treatment. Several topical therapies are in development for the treatment of AD, including Janus kinase inhibitors and a therapeutic aryl hydrocarbon receptor-modulating agent [18]. The effect of these therapies on disease control, treatment satisfaction, and QoL in a real-world setting remains to be seen.

The study was potentially limited by response bias inherent in retrospective and self-reported outcomes studies. Additionally, physicians were asked to choose a consecutive series of patients to avoid selection bias, but no formal source data verification procedures were employed. Diagnosis of the target patient group and classification of controlled versus uncontrolled disease were based on the judgment of the responding physician and not standardized criteria.

CONCLUSIONS

Physicians of patients receiving topical AD therapies frequently report dissatisfaction related to disease control. Many patients receiving topical AD therapies have uncontrolled disease and report decreased QoL and impairments in work productivity. An unmet need remains for

patients using topical AD treatments that can improve disease control and patient outcomes.

ACKNOWLEDGEMENTS

Funding. Support for this study and funding for the journal's Rapid Service Fee were provided by Incyte Corporation (Wilmington, DE, USA).

Medical Writing, Editorial, and Other Assistance. The authors thank Gary Milligan (Adelphi Real World, Bollington, UK) for statistical analysis support. Writing assistance was provided by Jane Kovalevich, PhD, an employee of ICON (North Wales, PA, USA) and funded by Incyte Corporation (Wilmington, DE, USA).

Authorship. All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship for this article, take responsibility for the integrity of the work as a whole, and have given their approval for this version to be published.

Authorship Contributions. Peter Anderson contributed to the study design, data analysis, data interpretation, and drafting of the manuscript. Jenny Austin contributed to the study design, data analysis, data interpretation, and drafting of the manuscript. Jennifer H. Lofland contributed to the study design, data analysis, data interpretation, and drafting of the manuscript. James Piercy contributed to the study design, data analysis, data interpretation, and drafting of the manuscript. Vijay N. Joish contributed to the study design, data analysis, data interpretation, and drafting of the manuscript.

Prior Presentation. This work was previously presented in part at the 2021 Society for Investigative Dermatology (SID) Virtual Meeting (May 3–8, 2021) and the 2021 Revolutionizing Atopic Dermatitis (RAD) Virtual Conference (June 13, 2021).

Disclosures. Peter Anderson, Jenny Austin, and James Piercy are employees of Adelphi Real World, which received funding for this project from Incyte Corporation. Jennifer H. Lofland and Vijay N. Joish are employees and shareholders of Incyte Corporation.

Compliance with Ethics Guidelines. The study protocol was submitted to the Western Independent Review Board for approval. The adult DSP was granted an ethics waiver as it was considered to be minimal risk. Approval was granted for administration of the survey to adolescents. Physicians and patients provided informed consent before participation, and no personally identifiable information as defined by the Health Insurance Portability and Accountability Act was collected. All responses captured on the data collection forms were deidentified to preserve both physician and patient confidentiality.

Data Availability. The data sets generated and/or analyzed during the current study are not publicly available. Data collection was undertaken by Adelphi Real World as part of an independent survey, entitled the Adelphi Atopic Dermatitis Disease Specific Programme (DSP^{TM}). All data that support the findings of this study are the intellectual property of Adelphi Real World. The analysis of the data presented in this study was funded by Incyte Corporation, who did not influence the original survey through either contribution to the design of questionnaires or data collection.

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