

Improving the Management and Follow-up of Atopic Dermatitis: A Delphi Process Report of Consensus between Hospital Dermatologists and Pharmacists

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Abstract: Atopic dermatitis is one of the most common dermatologic conditions and its treatment is often challenging. To establish consensus on recommendations for responding to various situations that arise when treating atopic dermatitis, a group of hospital pharmacists and dermatologists used the Delphi process. A scientific committee developed a Delphi survey with two blocks of questions to explore the group's views on (1) evaluating response to treatment in the patient with atopic dermatitis and (2) cooperation between the dermatology department and the hospital pharmacy service. The experts achieved an overall rate of consensus of 86% during the process. Conclusions were that dermatologists and hospital pharmacists need to maintain good communication and coordinate their interventions to optimize the management of atopic dermatitis and patients' responses to treatment.

Key words: atopic dermatitis; dermatology; pharmacy service hospital; patient care management; treatment; clinical practice guidelines; quality of health care

1. Introduction

Atopic dermatitis (AD) is a chronic inflammatory disease of immunologic origin, characterized by the presence of pruritus and eczema, and with a range of manifestations depending on the age of the patient and other factors. [1-3] It is estimated that AD is one of the most common skin diseases, and is associated with a high socioeconomic cost. [4] Between 20% and 25% of children are affected, [1] in particular babies. In adults, as many as 17% may have the condition, [5] with a third of cases being moderate to severe in intensity. [6] The pathophysiology of AD includes deregulation of the immune system and compromised skin barrier, [2] leading to a large number of atopic and nonatopic comorbidities. [7] Overall, these have a significant negative impact on the quality of patients' life with this disease [4] and there is a clear association with anxiety and depression. [8, 9]

Despite recent advances in therapeutics for AD, efficient control of moderate/severe disease is still challenging. In addition to the appropriate use of the pharmacological treatments available, collaboration between specialties could be a

beneficial factor for improving the health and quality of life of patients, as well as for increasing the effectiveness of treatment, thereby contributing to the sustainability of the health system. From the perspective of an increasingly restrictive pharmacoeconomic setting, the only way to ensure that innovative and expensive drugs can be used is to apply consensus protocols and pharmacotherapeutic guidelines drawn up not only by the corresponding clinical specialty, in this case dermatology, but also by the hospital pharmacy.

In view of the above, and given that many of the treatments indicated for moderate/severe AD are dispensed by the hospital pharmacy, a collaboration between dermatology and hospital pharmacy would seem appropriate. In order to address this aspect, in this article, the vision of dermatologists and hospital pharmacists has been shared, with the following objectives: assessment of the current situation, identification of points of conflict in management of AD, definition of working strategies, and proposal of recommendations for action in different situations.

2. Material and Methods

2.1 Scientific committee

The scientific committee was made up of four specialists (two dermatologists and two hospital pharmacists) with experience in AD. The functions of said committee consisted of performing an updated review of the medical literature on care of patients with AD, designing the Delphi questionnaire, and selecting an expert panel who would respond to the questionnaire. Once the responses from the expert panel were obtained, the scientific committee was also charged with analyzing the results, debating them, and drawing conclusions.

2.2 Expert panel

The selection of the panel of experts was based on having an equal number of dermatologists and pharmacists, 26 dermatologists and 25 hospital pharmacists, who had proven experience in the management of patients with AD and were recognized in this disease with relevant work and publications. Most of the experts were drawn from Catalonia and the Autonomous Region of Madrid, in line with the greater number of professionals in these regions; other regions were also represented however, with professionals from seven additional autonomous regions (see supplementary material, Tables S1 and S2).

2.3 Delphi methodology

Based on scientific evidence and clinical practice, a consensus was drawn up using the Delphi methodology [10] to evaluate any differences of opinion identified, as well as to make recommendations for management and identify possibilities of collaboration between two specialties.

The Delphi questionnaire was designed jointly by dermatology and hospital pharmacy. Initially, 73 assertions, were defined to reach consensus on. These were grouped into two blocks: (1) management and assessment of the patient (35 assertions) and (2) collaboration between dermatology and hospital pharmacy (38 assertions). For statistical analysis of the Delphi questionnaire, see Annex S1 in the supplementary material.

3. Results

The 51 experts responded to two rounds of the Delphi questionnaire, using a numerical Likert scale; in addition, comments were permitted for each response. The 73 assertions defined by the scientific committee were submitted to the first round for consensus. The expert panel reached an initial consensus in 57 (78%) of the 73 assertions. The 16 assertions for which consensus was not reached were submitted to a second round, reaching agreement in 6 (38% consensus in the second round). The total number of assertions with consensus, taking into account both rounds, was 63, so the final percentage agreement was 86%. There was no disagreement in any of the assertions.

3.1 Management and assessment of the patient

In the first round, the experts reached consensus in 30 of the 35 assertions, corresponding to 86%. After the second round, the consensus increased to 32 out of 35, that is, a total of 91% (Table 1).

3.2 Assessment of treatment

With regard assessment of treatment, more than 60 scales have been proposed to measure the severity of AD; however, it was agreed that only three of these showed sufficient validity and reliability. These scales are the Eczema Area and Severity Index (EASI), the Severity Scoring of Atopic Dermatitis (SCORAD), and the Patient-Oriented Eczema Measure (POEM). The experts, in addition, agreed that it is appropriate to use at least two of these scales to determine the severity of AD.

AD impacts the quality of life of the patients and their family members, and so the experts agreed to suggest the incorporation of scales of quality of life into decision-making. Of the available scales, the Dermatology Life Quality Index (DLQI) is considered a suitable scale.

3.3 Therapeutic steps

The panel agreed that there is currently a substantial percentage of patients who are undertreated and who lack sufficient symptom control. Regarding the use of systemic immunosuppressants, the experts agreed that these should be limited to the most severe cases or those that do not respond to topical treatments. In the case of topical corticosteroids and calcineurin inhibitors, there was no consensus that these should be used in all cases of AD. Likewise, there was no agreement that narrow-band (NB) UVB phototherapy should be a mandatory prior step before systemic treatment. In the case of ciclosporin, there was agreement that poor tolerance or contraindication for this agent is sufficient grounds for proceeding to the next therapeutic step.

3.4 Control and follow-up of the patient

There was agreement that all patients with AD require regular monitoring and a follow-up schedule to assess clinical response. This should be protocolized and adapted to individual needs. There was also agreement that this plan should be shared between the dermatology department and the hospital pharmacy, establishing the accountabilities of each department and sharing this follow-up in the medical records. In the case of mild AD, the experts agreed that follow-up should be shared with primary healthcare. There was also agreement that hospital pharmacy should apply validated systems for stratifying patients according to their risk of adverse drug reactions to provide suitable pharmaceutical care according to risk.

3.5 Treatment adherence

There was agreement that lack of effectiveness of treatment, side effects, route of administration, regimen, and relationship between healthcare professional and patient are factors that may impact adherence to treatment. Therefore, a consensus was reached to regularly measure adherence to treatment using at least two types of measure, such as the Green-Morinsky test and dispensing records, [11] and to study individually which factors negatively impact adherence and propose specific strategies for improvement.

3.6 Collaboration between the dermatology department and hospital pharmacy

In this block, the experts reached a consensus in 27 of the 38 assertions, corresponding to 71%. After the second round, the consensus increased to 31 out of 38, thus attaining a total of 82% (Table 2).

3.7 Routes to improved care

An agreement has been reached to implement care pathways for patients, which have been agreed upon by different levels of care. The aim is to enhance the quality of care provided to the patient and to facilitate coordination among all

healthcare professionals in order to improve patient outcomes. The development of training activities is essential for improving diagnostic accuracy in primary healthcare and facilitating referral to specialist care. There was also agreement that specific training for healthcare professionals in non-pharmacological measures for the patients would improve their quality of life. There was consensus that patients with AD should have better access to the dermatologist; however, there was a lack of agreement as to whether there should be better access to the specialist pharmacist.

With regards to the remote models of care, the experts agreed, in the case of pharmaceutical care, that a patient should be assessed for suitability to receive this type of care. Moreover, there was consensus that the remote pharmacy tools should contribute to measurement of health outcomes in patients with AD. There was also agreement that telemedicine improves patient access to healthcare professionals.

Table 1. Block I. Management and assessment of the patient. Management and assessment of patients with moderate/severe AD. Assessment of response to treatment.

	Round	Mean	Median	Interquartile range	% outside the median	Outcome
1. Diagnosis of atopic dermatitis (AD) does not usually require additional tests in infants	2	6.19	7	4	16.67	Agreement
2. More than 60 scales have been proposed to measure the severity of AD but only three of these have shown sufficient validity and reliability: EASI (Eczema Area and Severity Index), SCORAD (Severity Scoring of Atopic Dermatitis) and its objective SCORAD variant, and POEM (Patient-Oriented Eczema Measure)	1	6.82	7	2	27.45	Agreement
3. It is appropriate to perform measures with at least two scales to determine the severity of AD	1	7.45	8	2	19.61	Agreement
4. AD has a high impact on activities of daily living, both for the affected person and their family members, and so it is necessary to incorporate quality of life scales into the decision-making process	1	8.45	9	1	1.96	Agreement
5. The QoL scales should be applied to baseline evaluation of the patient	1	8.27	9	1	3.92	Agreement
6. The DLQI is a suitable scale for evaluating QoL in AD	1	6.63	7	2	29.41	Agreement
7. Currently, a substantial percentage of patients are undertreated and lack sufficient symptom control	1	7.39	8	2	23.53	Agreement
8. The use of systemic immunosuppressants should be limited to the most severe cases or those who do not respond to topical treatments	1	7.65	8	2	15.69	Agreement
9. Only the moderate/severe forms of AD (SCORAD > 25) are candidates for systemic immunosuppressants	2	5.98	6	3	66.67	Indeterminate
10. Topical corticosteroids and calcineurin inhibitors should be used in cases of AD	2	4.77	4	4	85.42	No consensus
11. NB-UVB phototherapy is a step prior to systemic treatment	2	5.96	7	2	37.5	Indeterminate
12. Before moving to a new therapeutic step, an exhaustive assessment should be made of adherence to previously prescribed treatments and recommendations	1	8.31	9	1	3.92	Agreement
13. The choice of systemic treatment should take into account the comorbidity profile of the patients and their preferences	1	8.53	9	1	0	Agreement

14. In AD, immune pathways are affected, with deregulation of multiple axes of immune response, and so the use of systemic agents that target cytokine or mediator block is indicated	1	8.1	8	1	5.88	Agreement
15. There are monoclonal antibodies approved or in development for AD that target different inflammatory pathways implicated in AD pathogenesis	1	8.59	9	1	1.96	Agreement
16. Certain pathophysiological situations (kidney or liver failure, advanced age, pregnancy) or the presence of certain comorbidities (cardiovascular disease, neoplasms, neuropsychiatric disorders) may impact the choice of treatment	1	8.75	9	0	0	Agreement
17. Poor tolerance of ciclosporin is sufficient grounds for using treatment from a therapeutic step above ciclosporin	1	7.31	8	3	29.41	Agreement
18. Contraindication for ciclosporin is sufficient grounds for using treatment from a therapeutic step above ciclosporin	1	7.9	8	2	15.69	Agreement
19. It is important to record health outcomes to assess the effectiveness, safety, and efficiency of treatments used in AD	1	8.18	8	1	5.88	Agreement
20. All patients with AD require a follow-up schedule to monitor clinical response	1	8.18	9	1	7.84	Agreement
21. The plan to monitor clinical response should be tailored to individual needs	1	7.8	9	2	17.65	Agreement
22. The plan to monitor clinical response should follow a protocol	1	8.04	8	1	9.8	Agreement
23. All patients with AD require regular monitoring/continual follow-up	1	6.98	8	3	29.41	Agreement
24. Follow-up of patients with cases of mild AD can be shared with primary health care	1	8.16	8	2	3.92	Agreement
25. Follow-up of patients with moderate/severe AD requires dermatology and possibly other specialists, depending on the comorbidities	1	8.65	9	1	1.96	Agreement
26. A follow-up plan for patients with AD should be shared between the dermatology department and hospital pharmacy, establishing the accountabilities of each department and sharing this follow-up in the medical history	1	7.73	9	2	13.73	Agreement
27. Hospital pharmacy should apply validated systems for stratifying patients according to their risk of adverse drug reactions to provide suitable pharmaceutical care in line with the risk	1	7.33	8	2	21.57	Agreement
28. Treatment adherence should be assessed regularly	1	8.61	9	1	0	Agreement
29. At least two methods should be used for measuring treatment adherence	2	6.08	8	3	22.45	Agreement
30. Factors that negatively impact adherence to treatment should be determined on an individual basis and specific strategies considered for each case	1	8.18	8	1	5.88	Agreement
31. Lack of effectiveness negatively impacts treatment adherence	1	8.39	9	1	3.92	Agreement
32. Adverse reactions to therapy negatively impact treatment adherence	1	8.47	9	1	1.96	Agreement
33. The route of administration influences adherence to treatment	1	7.29	8	2	19.61	Agreement
34. The regimen influences adherence to treatment	1	7.78	8	2	15.69	Agreement
35. The relationship between the patient and healthcare professional influences adherence to treatment	1	8.14	9	2	9.8	Agreement

Table 2. Block II. Collaboration between the dermatology department and hospital pharmacy. Routes to improved patient care, care optimization, and improvement in the quality and effectiveness of care. Challenges in care management. Shared challenges.

	Round	Mean	Median	Interquartile range	% outside the median	Outcome
36. Defining a care pathway for the patients, agreed between different levels of care, improves the care provided	1	8.29	9	1	9.8	Agreement
37. Coordination between all professionals implicated in care of patients with AD improves health outcomes	1	8.29	9	1	5.88	Agreement
38. The development of training activities is essential for improving diagnostic accuracy in primary healthcare and facilitating referral to specialist care	1	8.24	8	1	3.92	Agreement
39. Specific training for healthcare professionals in nonpharmacological measures that patients can adopt and improves their quality of life	1	8.06	8	2	3.92	Agreement
40. Specialist pharmacists in hospital pharmacy should define jointly with the dermatologist the therapeutic goals for the patient with AD to attain	2	5.53	6	4	65.31	Indeterminate
41. The specialist hospital pharmacist should elaborate pharmacotherapeutic follow-up jointly for the patient	1	6.94	8	2	27.45	Agreement
42. A specific stratification model should be developed for the patient with AD	2	6	7	3	26.53	Agreement
43. PRO scales are recommended to measure the health outcomes achieved with treatment of patients with AD	1	8.02	8	1	11.76	Agreement
44. Remote care models are increasingly common (telemedicine, telepharmacy, etc.). In the case of pharmaceutical care, it is recommended to assess the suitability of each patient with AD individually before using this type of care	2	6.31	7	3	16.33	Agreement
45. The channels of communication between levels of care and specialties should be improved	1	7.94	8	2	9.8	Agreement
46. The creation of spaces for exchange of knowledge between professionals is necessary	1	7.96	8	2	9.8	Agreement
47. Alliances should be encouraged between scientific societies focused on improving care to patients with AD	1	7.75	8	2	15.69	Agreement
48. Patients with AD should have better access to the dermatologist	1	7.71	8	2	23.53	Agreement
49. Patients with AD should have better access to the hospital pharmacist	2	6.61	7	3	42.86	Indeterminate
50. Alliances with patient associations should be established	1	7.71	8	2	15.69	Agreement
51. In the management of treatment, administration, and assessment of compliance, communication between the hospital pharmacist and the dermatologist is essential	1	8.04	9	1	11.76	Agreement
52. Communication with the patient is essential, both on the part of the hospital pharmacist and the dermatologist	1	8.18	9	1	3.92	Agreement
53. Joint appointments with the dermatologist and hospital pharmacist could greatly facilitate the indication of certain treatments	2	5.39	6	4	65.31	Indeterminate
54. Health education of the patient should be performed by the dermatologist	2	6.43	6	4	61.22	Indeterminate

	Round	Mean	Median	Interquartile range	% outside the median	Outcome
55. Health education of the patient should be performed by the hospital pharmacist	2	4.27	5	3	48.98	Indeterminate
56. Education about the disease is essential in the two specialties for facilitating communication	1	7.59	8	2	17.65	Agreement
57. A point of contact for AD in the dermatology department facilitates communication with hospital pharmacy	1	8.04	9	1	11.76	Agreement
58. A point of contact for dermatology in hospital pharmacy facilitates communication with dermatology	1	8	9	1	11.76	Agreement
59. It is recommended to create specific units for AD	1	7.39	8	2	21.57	Agreement
60. Scientific societies should participate in the development of consensus treatment protocols	1	8.24	9	1	5.88	Agreement
61. A good relationship between the physician and the patient improves health outcomes of the patient	1	8.37	9	1	5.88	Agreement
62. For the design of care pathways, human factors in the care should be taken into account	1	7.98	8	1	11.76	Agreement
63. The shared risk agreements favor the access of patients with AD to innovative drugs	2	6.43	7	3	38.78	Indeterminate
64. The shared risk agreements should have readily measurable outcomes that align with regular care practices	1	8	8	2	9.8	Agreement
65. Work should be done to simplify access to the data entry platform to assess reimbursement agreements by outcomes	1	8.06	9	1	11.76	Agreement
66. Valtermed is a useful tool for assessing health outcomes	2	6.14	7	3	46.94	Indeterminate
67. Efforts should be made to obtain clinical data that enables assessment of reimbursement agreements through integration of hospital databases with tools at the national level	1	7.45	8	2	17.65	Agreement
68. Remote pharmacy tools should contribute to measurement of health outcomes in patients with AD	1	7.35	8	2	19.61	Agreement
69. Telemedicine improves patient access to healthcare professionals	1	6.82	7	2	29.41	Agreement
70. Presence of a dermatologist/specialized unit in AD would facilitate patient access to certain drugs.	1	7.53	8	2	21.57	Agreement
71. Presence of a specialist hospital pharmacist in AD in dermatology would facilitate patient access to certain drugs.	2	5.92	7	3	22.45	Agreement
72. Access to drugs with shared risk agreement is more time-consuming than those without such an agreement	1	7.84	8	2	15.69	Agreement
73. Access to drugs included in the shared risk programs may limit some physicians when prescribing the medication	2	5.86	7	5	24.49	Agreement

3.8 Coordination and communication between levels of care

There was agreement that the channels of communication between levels of care and specialties should be improved. Knowledge exchange between professionals and establishment of alliances with scientific societies and patient associations were considered necessary for such communication. The experts also recommended that scientific societies participate in the development of consensus treatment protocols. According to the experts, communication between the hospital pharmacist and the dermatologist is essential for an aging treatment, administration, and assessment of compliance. It is also essential for both specialists to communicate with the patients. However, consensus was not reached as to whether an

appointment with both professionals present could facilitate the indication of certain treatments, nor whether the hospital pharmacist should jointly set the therapeutic goals of the patients jointly with the dermatologist. The experts did agree though that the presence of a point of contact for AD within the dermatology department and the presence in the pharmacy department of a contact for dermatology would facilitate communication between the departments. In the case of health education of the patient, the experts did not reach an agreement as to what should be covered exclusively by the dermatologist or the pharmacist.

3.9 Challenges in care management

There was agreement that the presence of a dermatology point of contact for AD or a specialized unit, as well as a hospital pharmacists specialized in dermatology would facilitate patient access to certain drugs. With regards to the development of agreements on shared risk, the experts agreed that these should have readily measurable outcomes that align with regular care practices. Access to drugs included in the programs of shared risk is time consuming, and so certain physicians may be limited in prescribing the medication. However, the experts did not reach consensus on which agreements could help patient access to innovative drugs.

4. Discussion

Moderate/severe AD still requires a complex approach, due to the multifaceted nature of the disease. [4, 7-9, 12-14] An initial evaluation should be performed of the scope and severity of the disease in order to select the most suitable therapy. [9] In addition to the conventional systemic treatments recommended by the European guidelines, [15] new therapeutic families have recently become available (biologics and synthetic molecules). Through the use of these new agents, the goal is to regulate or inhibit the activity of different cell mediators implicated in the inflammatory pathways that underlie AD manifestations. [3, 16, 17] Several biologics have been approved and many others are in development or can be used off-label in AD. We are still awaiting consensus guidelines to define the therapeutic steps with biologics. With regards to the recommendations for systemic immunosuppressants, there is disagreement as to whether these should be administered to patients with moderate/severe AD (SCORAD > 25); the experts noted that other variables should be taken into account such as the site of the lesions, the lack of response to other treatments, contraindications, and also quality of life. Moreover, although there is agreement that patients with severe forms (SCORAD > 50) and those with unsatisfactory response to topical treatments should be candidates for receiving these agents, it is worth noting that the guidelines have not yet defined an algorithm to indicate the optimal time to start these drugs. Nevertheless, the experts do recommend taking into account comorbidities and patient preference when choosing treatment over another. We have used the SCORAD scale as we consider it the most complete scale that offers the evaluation best adapted to the clinical situation of the patient, even though the EASI scale is the most widely used in clinical trials. Regarding topical corticosteroids and calcineurin inhibitor use in all patients, discrepancies were identified in the following: (1) in the mildest forms, experts held the opinion that pharmacologic options may not be necessary, with non-pharmacologic alternatives being sufficient [15] and (2) in the most severe forms, they may not be sufficient from the outset. There was also a discrepancy for accepting NB-UVB phototherapy as a prior step to systemic therapy; the need to attend the hospital several days is a major limitation. The interpretation whether the therapeutic goal has been achieved is a crucial question, which involves assessing several factors (clinical, patient satisfaction, safety, convenience) and for which there is still no consensus in Spain. The responses reported in this study record the opinion of each participant, based on their own experience. An important aspect to consider in the assessment of treatment and one which the experts recommend to include in plans for patient follow-up are patient reported outcomes (PROs), in agreement with Cohen et al., [18] whose report identified them as an essential item. The complexity of management of patients with AD often means that the outcomes are not to their

satisfaction. PROs complement the outcomes, thus improving case management. [19] The experts recommend that follow-up of patients is shared between dermatology and hospital pharmacy, and they propose a multidisciplinary approach when AD is accompanied by other manifestations, both in adults and in children, [20] as recommended by the technical report issued by Fundamed. [9] In contrast, no consensus was reached on whether therapeutic goals should be defined jointly; some authors think that this should be the remit of the dermatologist with the pharmacists supporting the decisions made by the clinician. When analyzing the scores with the Delphi method, a wide range of responses was observed: there were similar numbers of votes in the ranges 1-3, 4-6, and 7-9. The discrepancy on this point is based on the idea that responsibility for diagnosis, choice of therapeutic goals, and choice of pharmacologic treatment corresponds to the dermatologist. The pharmacist participates in this process as a collaborative figure, is crucial for improving aspects of therapeutic compliance and safety, and reinforcing the suitability of the prescription. In this viewpoint, the authors who hold different opinions do not believe that it is necessary for two professions to jointly evaluate patients, as this will not increase any clinical benefits. The design of a combined follow-up, based on alternative consultations between the two specialties, could add value to the process, as it would avoid unnecessary appointments for well-controlled patients (for example, spreading out the appointments), at the same time as ensuring compliance and detection of any potential safety issues. Another point of contention was the possibility that a dermatologist and hospital pharmacist see the patients together to facilitate the indication of certain treatments. The experts note that while this would be the ideal situation to know the patients better, it is not realistic; they propose alternatives such as interdisciplinary sessions, or that the hospital pharmacist rotates with dermatology. To favor therapeutic compliance, the experts agree that there should be a good relationship between the patient and physician. They therefore recommend improving patient access to the dermatologist as also noted by Cohen et al. [18] In this context, the remote care models will become increasingly important. [21] With regards to the greater patient access to the hospital pharmacist, there is a greater trend to agreement, but there is more variability than in other questions and there was no consensus reached. This could be the result of large differences in organization and resources in Spanish hospitals, such that the need for access is perceived according to the particular situation of the respondent. It is not unexpected that there was no consensus on this question, as the specific dedication of a pharmacist to patients with AD is not usual in many hospitals, understandably for reasons related to care requiring diversification to several specialties. This is a model that could be considered in most of the centers, with doubts about the potential benefits (basically, the dermatologists question the need for this 'super specialization') on the one hand and the risks (greater work load and care pressure, delays in care, etc.) on the other. As a result, there are no comparative data to support one model or the other, and the range of opinions explains the lack of consensus. As an intermediate scenario and with greater practical applications, most hospital pharmacy departments opt for assigning tasks associated with dermatology to a stable part of their personnel (1 or 2 pharmacists), who thus acquire deeper knowledge of both the specialty and the local needs of each department and their patients. With a view to facilitating therapeutic compliance, education of the patient and their carers is essential. They may be worried about the side effects of topical corticosteroids, have difficulty applying treatments, doubt their effectiveness, and need to be aware of other non-pharmacological measures to improve their quality of life. [22-24] The experts were not in agreement as to who should be responsible for this task of education. Several noted that it would be the responsibility of both the dermatologist and hospital pharmacist, with support from nursing, as indicated in the guidelines, [15] primary care, and community pharmacists, always aiming to transmit a uniform and agreed message. In conclusion, at present, a series of challenges remain in the management of care of moderate/severe AD. [18, 25] The experts propose starting from an interdisciplinary approach to AD and improving communication and collaboration between dermatology and hospital pharmacy, with the aim of finding faster, more

suitable, and more efficient solutions for patients and thus improving management of the disease.

Appendix A. Supplementary Data

The following are the supplementary data to this article.

Table S1. Composition of the expert panel

Bossacoma Busquets	Ferrán	Martínez Simón	José Javier
Capilla Montes	Cristina	Menchén Viso	Belén
Cardona Pascual	Ignacio	Miquel Miquel	Javier
Crespo Diz	Carlos	Navarro	Andrés
Curto Barredo	Laia	Navarro Triviño	Francisco
Díaz	Blanca	Ortiz Frutos	Javier
Domínguez Cruz	Javier	Pena Villanueva	Paula
Dorta	Sara	Pereyra Rodríguez	José
Espinosa Bosch	María	Pérez Robayna	Nuria
Folguera	Carlos	Riande González	Purificación
Gemma Melè Ninot	Gemma	Romero Jiménez	Rosa
Gilaberte Calzada	Fermina Yolanda	Sánchez Gilo	Araceli
González Colominas	Elena	Sanchez Gundin	Julia
González Quesada	Alicia	Sanchez los Arcos	Leire
Gómez Armayones	Sara	Santos Alarcon	Sergio
Guiu Segura	Josep María	Sarobe	Maite
Hernández Montoya	Carlos	Seguí Solanes	Carlos
Iglesias Puzas	Álvaro	Serra Baldrich	Esther
Illaro Uranga	Aitziber	Sierra García	Francisco
Linerós Martín	Beatriz María	Silvestre	Juan Francisco
López Broseta	Pilar	Soria Gili	Xavier
López García	Belén	Tous Romero	Fátima
López Rodríguez	Inmaculada	Valcuende Rosique	Alejandro
Losa López	Laura	Vicente Escrig	Esther
Marrón Moya	Servando	Vidal Sarro	David
Martín González	Isabel		

Table S2. Demographic characteristics of the expert panel

Gender % (N = 51)	
Female	29 (57%)
Male	22 (43%)
Geographical distribution %	
Andalusia	7 (14%)
Aragon	2 (4%)
Cantabria	2 (4%)
Catalonia	15 (29%)
Canary Islands	4 (8%)
Galicia	2 (4%)
Madrid	12 (23%)
Navarra	1 (2%)
Valencian Community	6 (12%)

Appendix S1

The statistical analysis of the data in both rounds took into account: (i) The median situation of the scores for each item. (ii) The interpretation of the "consensus" levels of the items. Thus, an item is considered consensual when there is "concordance" of opinion in the panel, i.e., when the experts scoring outside the 3-point region ([1-3], [4-6], [7-9]) containing the median are less than one third of the respondents. In such a case, the value of the median will determine the group consensus reached: majority "disagree" with the item (if the median is ≤ 3) or majority "agree" with the item (if the median is ≥ 7). Cases where the median is in the 4-6 region will be considered "doubtful" items for a representative majority of the group. On the contrary, it is established that there is "discordance" of criteria in the panel when the scores of one third or more of the panelists are in the region [1-3] and of another third or more in the region [7-9]. The remaining inconsistent or inconsistent items will be considered as an "uncertain" consensus level [4-6] and will be voted on in the second round of voting. The items with highly dispersed opinions from the respondents were also re evaluated, with a quartile interval range ≥ 4 points (score range between P25 and P75 values in the distribution).

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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