PEDIATRIC ATOPIC DERMATITIS

Characterization of pediatric patients with Atopic Dermatitis in Portugal: results from an online Physician Survey

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OBJECTIVE

Characterize the population of pediatric patients with Atopic Dermatitis (AD) in Portugal, according to each age category and severity of disease.
Highlight the main differences between the public and private sectors.

METHODS

Study Design

Qualitative exploratory interviews with selected health care professionals in pediatric AD **(N=9):** 1 Dermatologist, 3 Allergists, 1 Pediatrician, 1 General Practitioner, 3 Pharmacists.

Quantitative online survey for specialists both in the public and private sectors **(N=50):** The following criteria were used in the choice of respondents:

- **50% dermatologists** and **50% allergists**: for both specialties, 18% working in the public sector, 18% in the private sector and 64% in both sectors;
- Physicians following **at least 8 cases of moderate to severe** pediatric atopic dermatitis (monthly, in both sectors).

Simple Extrapolation Model

The **estimation model** was constructed based on the following **assumptions**:

- All dermatologists and allergists in Portugal treat / follow pediatric patients with atopic dermatitis;
- The sample of 25 allergists and 25 dermatologists used in the online survey is representative and unbiased, i.e., random sample;
- The number of patients is proportional to the number of physicians.

Using the results obtained in the quantitative survey, extrapolations were performed in order to reach national values of pediatric patients by **sector** (public and private) and by **AD severity** (mild, moderate to severe), and to estimate the number of pediatric AD patients treated by specialists (dermatologists or allergists) in Portugal.

RESULTS

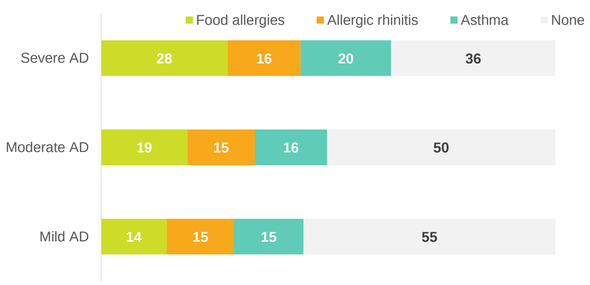
It is estimated that there are approximately **114,250** pediatric patients with AD in Portugal seen by Dermatologists and Allergists in 2021.

On average, 30% ~ 53% of patients with moderate to severe AD outgrow the disease throughout their lives

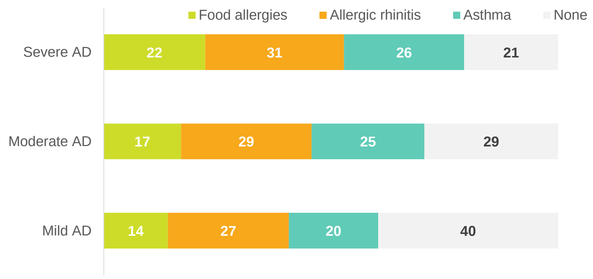
Comorbidities

Patients with atopic dermatitis often have **other type 2 inflammatory comorbidities** such as **asthma**, **food allergies** or **allergic rhinitis**.

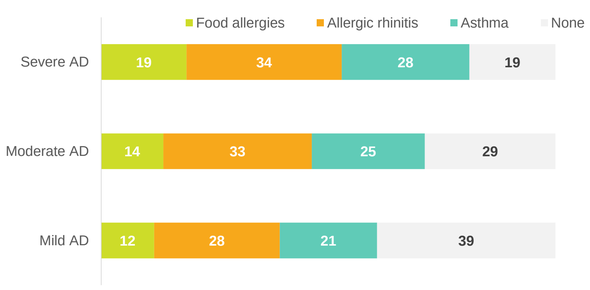
% Infants (< 2 years)



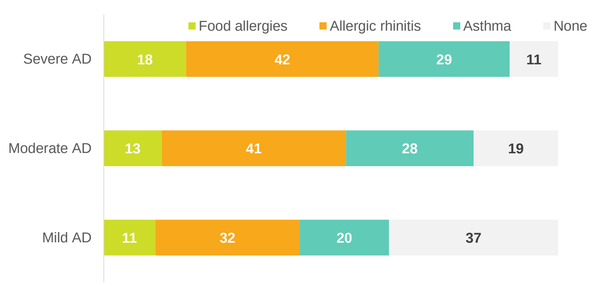
% Children (2 to 5)



% Children (6 to 11)



% Adolescents (12 to 17)



- For all age categories, the prevalence of atopic comorbidities tends to increase with severity level and with age
- Comorbidities are less common in infants, especially for mild to moderate disease
- Allergic rhinitis is more common in adolescents, although it also has a high prevalence in children aged 2 to 11
- Asthma is common in pediatric patients ≥ 2 y.o. and its prevalence varies from 20% to 29% for patients aged 2 to 17

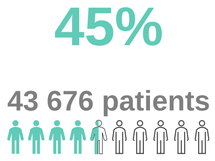
Sectors

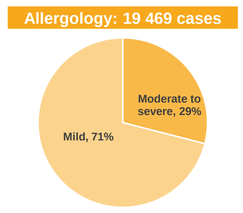
Public sector

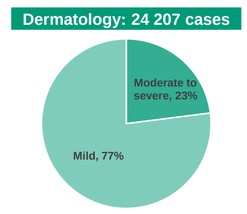
Number of patients by specialty and by severity level

45%

43 676 patients







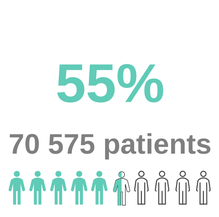
According to survey results, each physician sees approximately 32 patients per month in the public sector, regardless of their specialty (with 7 moderate to severe cases in dermatology and 9 in allergology).

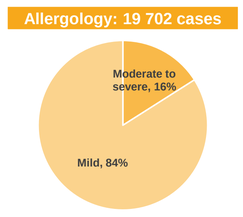
Private sector

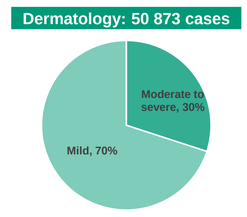
Number of patients by specialty and by severity level

55%

70 575 patients







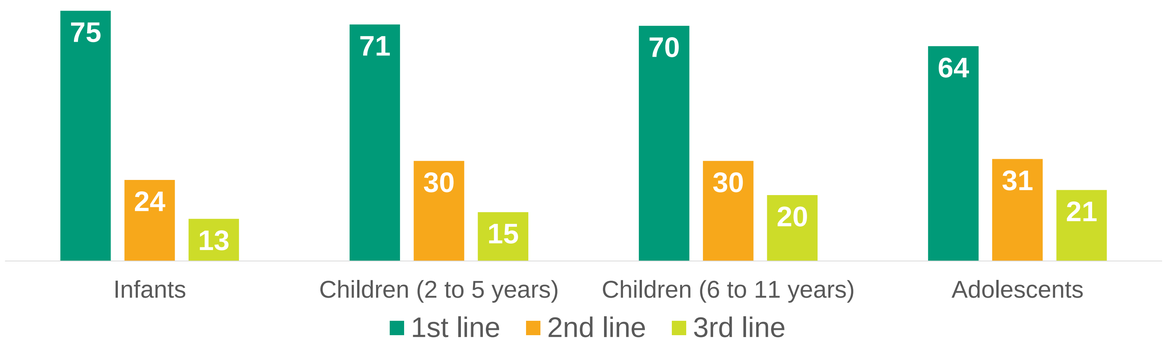
In the private sector, each physician sees approximately 20 patients per month, regardless of their specialty (with 6 moderate to severe cases in dermatology and 3 in allergology).

- There are more pediatric patients in the private sector than in the public sector*;
- In the private sector, a very high share of patients are in Dermatology (72% compared to 28% in Allergology) and dermatologists follow more moderate/severe cases than allergists;
- In the public sector, the number of pediatric patients in both specialties is similar and the percentage of moderate to severe cases does not vary significantly.

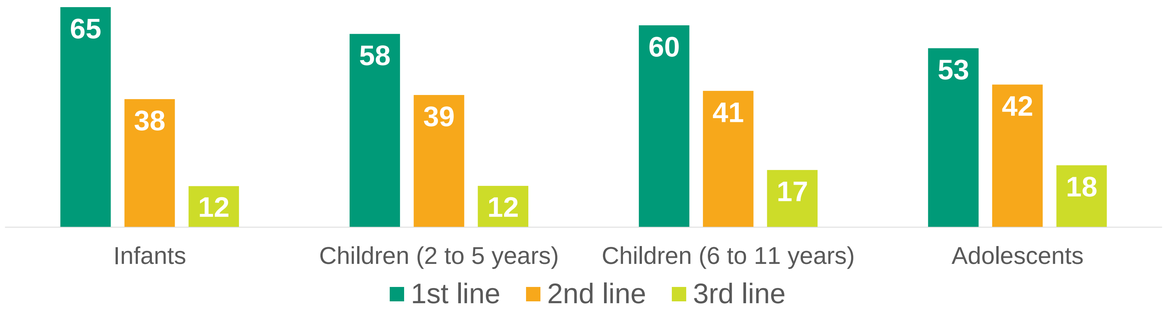
*However, this trend may be reversing given the number of referrals from the private to the public sector in benefit of treating patients with approved therapies versus off-label.

Lines of treatment

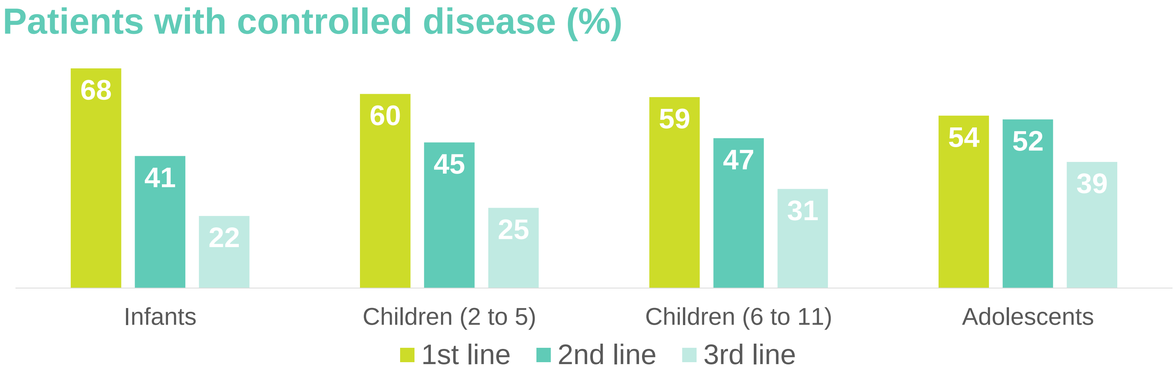
% Patients with **mild AD** on 1st, 2nd and 3rd lines of treatment



% Patients with **moderate to severe AD** on 1st, 2nd and 3rd lines of treatment



Patients with controlled disease (%)



Physicians were asked what they consider to be 1st, 2nd, and 3rd lines of treatment for each severity level and age category. Acc. to survey results, emollients and mild potency corticosteroids represent the 1st line of treatment, topical calcineurin inhibitors (and systemic therapy for older children with moderate/severe AD) represent the 2nd line, and the 3rd line is characterized mainly by systemic immunosuppressive therapies (off-label).

Moderate to severe cases that persist over time are repeatedly medicated with immunosuppressants (off-label) and their cumulative side effects require therapeutic escalation. Therefore, it is expected that older children will switch to 2nd and 3rd lines of treatment. Nonetheless, the no. of controlled patients decreases as the line increases, for all ages.

CONCLUSIONS

- The number of pediatric patients without comorbidities decreases with age, since as the patient ages, there is less likelihood to outgrow the AD.
- Patients with mild disease are usually followed by GPs or pediatricians, while moderate to severe cases are referred to Dermatology or Allergology. In both sectors, Dermatology is the specialty that stands out in the follow-up of pediatric patients, particularly in the private sector. Dermatology also has a higher share of moderate to severe cases in the private sector. In the public sector, patients are more evenly distributed across specialties, which may be explained by the long waiting lists in dermatology and, thus, a higher number of patients being referred to this specialty.
- Regardless of age, although there are fewer patients in the 3rd line of treatment, the number of uncontrolled patients is highest for this line. It can be concluded that a significant percentage of patients do not have their disease controlled, despite treated with systemic immunosuppressive therapies (off-label).

Acknowledgments

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