

# Global assessment of the knowledge and confidence in managing allergic disorders amongst primary care paediatricians across Europe: An EAACI Task Force Report.

Martha Cabrera<sup>1</sup>, D Ryan<sup>2</sup>, Michel Erlewyn-Lajeunesse<sup>3</sup>, Michael Levin<sup>4</sup>, Ana Martínez-Cañavate<sup>5</sup>, Villaizán Pérez Carmen<sup>6</sup>, Elizabeth Angier<sup>3</sup>, Juan Trujillo<sup>7</sup>, JM. Cárdenas-Rebollo<sup>8</sup>, and Reali L<sup>9</sup>

<sup>1</sup>Hospital Los Madronos

<sup>2</sup>The University of Edinburgh Edinburgh Medical School

<sup>3</sup>University of Southampton Faculty of Medicine

<sup>4</sup>University of South Africa - Cape Town Campus

<sup>5</sup>Hospital Universitario Virgen de las Nieves

<sup>6</sup>Santa Bárbara Health Center

<sup>7</sup>Cork University Hospital

<sup>8</sup>Universidad CEU San Pablo

<sup>9</sup>Asl Rm1

April 15, 2024

## Abstract

Background Paediatricians are often the first point of contact for children in Primary Care (PC), but still perceive gaps in their allergy knowledge. We investigated self-perceived knowledge gaps and educational needs in paediatricians across healthcare systems in Europe so that future educational initiatives may better support the delivery of allergy services in PC. Methods A multinational survey was circulated to paediatricians who care for children and adolescents with allergy problems in PC by the EAACI Allergy Educational Needs in Primary Care Paediatricians Task Force during February to March 2023. A 5-point Likert scale was used to assess level of agreement with questionnaire statements. 30 surveys per country was the cut-off for inclusion and statistical analysis. Results 1,991 respondents were obtained from 56 countries across Europe and 210 responses were from countries with a cut-off below 30 participants per country. Primary care paediatricians (PCPs) comprised 74.4% of the respondents. The majority (65.3%) were contracted to state or district health services. 61.7% had awareness of guidelines for onward allergy referral in their countries but only 22.3% were aware of the EAACI competencies document for allied health professionals for allergy. Total sample respondents versus PCP's showed 52% and 47% of them have access to allergy investigations in their PC facility (mainly specific IgE and skin prick tests); 67.6% and 58.9% have access to immunotherapy, respectively. The main barrier for referral to a specialist was consideration that the patient's condition could be diagnosed and treated in this PC facility, (57.8% and 63.6% respectively). The main reasons for referral was the need for hospital assessment, and partial response to first line treatment (55.4% and 59.2%, 47% and 50.7%, respectively). Learning and assessment methods preference was fairly equally divided between: Traditional methods (45.7% and 50.1% respectively) and e-Learning 45.5% and 44.9%, respectively. Generalist Physicians (GP's) have the poorest access to allergy investigations (32.7%,  $p=0.000$ ). The majority of the total sample (91.9%) assess patients with allergic pathology. 868 (43.6%) and 1,117 (46.1%), received allergy training as undergraduates and postgraduates respectively [these proportions in PCPs were higher (45% and 59%), respectively]. PCPs with special interest in allergology experienced greater exposure to allergy teaching as postgraduates. GP's received the largest amount of allergy teaching as undergraduate. Identifying allergic disease based on clinical presentation, respondents felt most confident in the management of eczema/atopic dermatitis (87.4%) and rhinitis/asthma (86.2%), and least confident

in allergen immunotherapy (36.9%) and latex allergy (30.8%). Conclusion This study exploring the confidence of PCP's to diagnose, manage and refer patients with allergy, demonstrated knowledge gaps and educational needs for allergy clinical practice. It detects areas in need of urgent improvement especially in latex and allergen immunotherapy. It is important to ensure dissemination of allergy guidelines and supporting EAACI documents since the majority of PCPs lack awareness of them. This survey has enabled us to identify what the educational priorities of PCPs are and how they would like to have them met.

### Hosted file

Global assessment of the knowledge and confidence in managing allergic disorders amongst primary care p available at <https://authorea.com/users/768689/articles/832927-global-assessment-of-the-knowledge-and-confidence-in-managing-allergic-disorders-amongst-primary-care-paediatricians-across-europe-an-eaaci-task-force-report>

### Hosted file

Global assessment of the knowledge and confidence in managing allergic disorders amongst primary care p available at <https://authorea.com/users/768689/articles/832927-global-assessment-of-the-knowledge-and-confidence-in-managing-allergic-disorders-amongst-primary-care-paediatricians-across-europe-an-eaaci-task-force-report>

### Hosted file

Position paper promotion\_Final PCPsExCom.docx available at <https://authorea.com/users/768689/articles/832927-global-assessment-of-the-knowledge-and-confidence-in-managing-allergic-disorders-amongst-primary-care-paediatricians-across-europe-an-eaaci-task-force-report>

### Hosted file

Table 1.xlsx available at <https://authorea.com/users/768689/articles/832927-global-assessment-of-the-knowledge-and-confidence-in-managing-allergic-disorders-amongst-primary-care-paediatricians-across-europe-an-eaaci-task-force-report>

### Hosted file

Table 2.xlsx available at <https://authorea.com/users/768689/articles/832927-global-assessment-of-the-knowledge-and-confidence-in-managing-allergic-disorders-amongst-primary-care-paediatricians-across-europe-an-eaaci-task-force-report>

Date: 9 January 2024

Title: An EAACI Task Force Report: Global assessment of the knowledge and confidence in managing allergic disorders amongst primary care paediatricians across Europe.

Name of corresponding author: Dr. Martha Cabrera Sierra, MD. PhD.

Point by point response.

Dear ExCom reviewers: enclosed please find the new version of the paper entitled: "An EAACI Task Force Report: Global assessment of the knowledge and confidence in managing allergic disorders amongst primary care paediatricians across Europe".

Following the instructions and suggestions of the reviewers, the paper has been significantly improved and made more comprehensible. In most instances, we have accommodated the suggestions of the reviewers and changed the text accordingly.

It is now clearer to follow and contains the most relevant information for the readers. Thank you very much for giving us this opportunity, considering "Pediatric Allergy and Immunology" journal to publish our work.

Please let us know if there are additional comments/suggestions.

Sincerely yours,



Martha Cabrera. MD, PhD.

Point by Point Response

Reviewers comments for "Cabrera et al"

Dear author,

We would appreciate if you read carefully the following comments from the two reviewers allocated to your manuscript. Please integrate the comments in your manuscript as much as possible and send the revised manuscript back to us in 2 copies – one version with marked track changes and a second clean version without track changes.

Best Regards,

Zyanya Diaz

Reviewer 1

Please find my comments to the authors below:

- Give the first paragraph a title "introduction". **DONE**
- Results much too long. Only give key-results here **DONE**
- "Introduction" instead "Background": content of this part is fine **DONE**
- "Methods" fine

- Has there been any funding from EAACI for this initiative? Pls disclose this. **ADDED**
- Has there been any ethical approval for this survey? It was included in Methods: **Participation and survey responses were anonymized. Given that this was a non-interventional study to understand clinician's educational needs, ethics committee approval was not sought. Participant confidentiality was been maintained.**
- Discussion: could be longer (see above, author-guidelines).  
**The discussion was extending according the key messages of the results.**
- Add more references, especially to the discussion **DONE**.
- Select 3-4 key-results-figures for the paper, put the rest (especially Fig. 7 !) in the supplementary material **DONE**
- Please let a native-speaker help you with the language-editing which needs improvement **DONE**
- Add author-contribution section **ADDED**
- Add COI-section **ADDED**
- Add corresponding author's address **ADDED**

Reviewer 2

I read the paper entitled "Cabrera et al. – "Global assessment of the knowledge and onfidence in managing allergic disorders amongst primary care paediatricians across Europe"

I have the following comments:

From an EAACI perspective:

The paper builds on previous EAACI task force studies and gives a good insight into the state of allergy care among pediatric primary physicians.

Regarding EAACI references I suggest to include "Ryan D, Gerth van Wijk R, Angier E et al Challenges in the implementation of the EAACI AIT guidelines: A situational analysis of current provision of allergen immunotherapy. Allergy. 2018 Apr;73(4):827-836. doi: 10.1111/all.13264. Epub 2017 Dec 12. PMID: 28850687." Although this paper focus on GPs and AIT it can be seen as an overview of barriers and educational needs in primary care with AIT as showcase. **ADDED**

From a scientific point of view:

Abstract:

The abstract is extensive, but the format will depend on the requirements of the journal.

**FORMATED "Pediatric Allergy and Immunology" Authors's Guidelines**

Up to 58.4% have access to allergy investigations but 6.2% don't have access to them. What about the remaining 35.4%?

**BLANKS (no responses=MISSING VALUES).**

Results:

It is stated that primary care physicians have the lowest confidence in handling latex allergy. That might be important, but the number of patients with latex allergy is declining due to avoidance measures of latex avoidance such as use of non-powdered gloves in hospitals and other healthcare sides. For me the lack of confidence in drug allergy is much more important. Think of mislabeling of drug especially penicillin allergy. There should be more emphasis on that.

INCLUDED

I wonder whether table 1 will be readable when printed.

This table was summarized with total sample and total Primary Care Paediatricians samples. Stratified by countries data was included in a separate annex.

Annex 2 is a mixture of English and Spanish, please revise. All headings and legends were translated into English.

A general comment: in many countries the pediatric primary care physician is the first contact person for the patient. Is this true for all countries included in this study? In some countries, the patient has to be referred by the GP to a pediatrician. Maybe the authors can clarify that.

DONE. Included and explained.