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CHALLENGES IN THE IMPLEMENTATION OF THE EAACI AIT GUIDELINES

A SITUATIONAL ANALYSIS OF CURRENT PROVISION OF ALLERGEN IMMUNOTHERAPY

∞ Supplementary materials ∞

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NARRATIVE SUMMARY OF FINDINGS FROM THE QUESTIONNAIRE

Table S1 Recommendations to improve uptake of AIT in primary care (thematic analysis combined between two surveys)

Recommendation	Explanatory statements quoted from the survey
Strengthen awareness through educational training and practice opportunities	<ul style="list-style-type: none"> The use of immunotherapy in primary care is very much depending on the training and knowledge of primary care doctors - at the moment in [country], it is not suitable due to lack of training and knowledge. Reading the guidelines of allergy immunotherapy and use of them in primary care after taking a rapid training course. Involvement at teaching university and government- ministerial levels in advancing the specialty, especially since there is evidence that this kind of therapy is very much needed in the region
Reimbursement policies and more time	<ul style="list-style-type: none"> GP's have no time to do it. Due to high workload pressures in primary care the initial goal would need to be to increase workforce in general! Reimbursement policies.
Resolving legal issues	<ul style="list-style-type: none"> Not now, we are struggling with health insurance funds to allow GP to diagnose and treat allergic diseases (asthma and allergic rhinitis). Legally issues about access to therapy for GPs remain unsolved. In our country AIT is not used, ie.not applied at the level of primary care (AIT can be introduced and performed only by doctors with subspecialty in Allergology and Immunology at secondary and tertiary level).
Improved collaboration between primary and specialist care	<ul style="list-style-type: none"> Support from secondary care. Referral links to consultants. Acknowledgement of and appreciation for primary care physicians' input and initial management of patients.
Availability of national guidelines	<ul style="list-style-type: none"> National guidelines on management algorithms for persons with allergies. Electronic database of patients that could benefit from it and of doctors that could apply it.
Strengthened evidence base	<ul style="list-style-type: none"> Research to demonstrate benefit and cost-effectiveness. More evidence on efficacy and education around case selection.

LITERATURE SEARCH STRATEGY

(DP and ER) searched Pubmed using the following terms:

using the terms allergy AND primary care AND immunotherapy

("hypersensitivity"[MeSH Terms] OR "hypersensitivity"[All Fields] OR "allergy"[All Fields] OR "allergy and immunology"[MeSH Terms] OR

("allergy"[All Fields]AND "immunology"[All Fields])OR "allergy and immunology"[All Fields] AND ("primary health care"[MeSH Terms] OR ("primary"[All Fields] AND "health"[All Fields] AND "care"[All Fields]) OR "primary health care"[All Fields] OR ("primary"[All Fields] AND "care"[All Fields]) OR "primary care"[All Fields]) AND ("immunotherapy"[MeSH Terms] OR "immunotherapy"[All Fields]). It was limited to year 2000-2016 and was run in September 2016.

This yielded 20 papers

10 were excluded as they were surveys of a secondary care population, Randomised clinical trials, estimates of cost effectiveness or guidelines.

Of the remaining 10 papers, one was a duplicate and was excluded leaving 9 papers for evaluation.

The search was supplemented by the library of the Royal College of GPs

Run by discovery process with access to following databases to cover last ten years

Search words Allergy, Immunotherapy, primary care

The complete list of additional journals to the Medline database is below:

- BMJ : British Medical Journal - General Practice Edition
- Education for Primary Care
- European Journal of General Practice
- Evidence-Based Medicine
- Family Practice
- Health Service Journal
- Journal of Evaluation in Clinical Practice
- Journal of Family Practice
- Journal of Medical Biography
- Journal of Public Health
- Lancet - International edition
- Medical Care
- Medical Education
- New England Journal of Medicine - International Ed
- Primary Health Care Research and Development
- Pulse - England
- Quality in Primary Care

This yielded a total of 39 papers. There Were eight duplicates, leaving 31 abstracts. Of these 30 were rejected although one did report a negative trial of immunotherapy in primary care (de Bot CM; Moed H; Berger MY; Röder E; Hop WC; de Groot H; de Jongste JC; van Wijk RG; Bindels PJ; van der Wouden JC, *Pediatric Allergy And Immunology*: 2012 Mar; Vol. 23 (2), pp. 150-8) thought to be due to an inadequate dose of the allergen.

Two further papers were identified: Variation in examination and treatment offers to patients with allergic diseases in general practice and Prevalence and treatment profile of patients with grass pollen and house dust mite allergy.

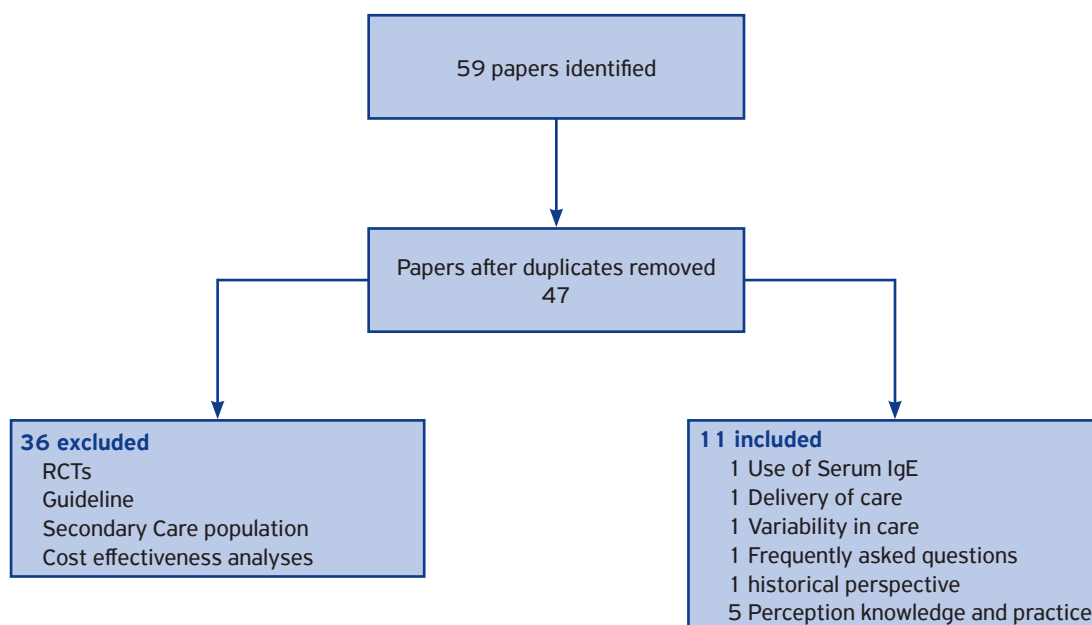
Included papers

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Excluded papers

1. Virchow JC, Backer V, Kuna P, Prieto L, Nolte H, Villesen HH, et al. Efficacy of a House Dust Mite Sublingual Allergen Immunotherapy Tablet in Adults With Allergic Asthma: A Randomized Clinical Trial. *JAMA* 2016;315:1715-1725.
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3. Zolkipli Z, Roberts G, Cornelius V, Clayton B, Pearson S, Michaelis L et al. Randomized controlled trial of primary prevention of atopy using house dust mite allergen oral immunotherapy in early childhood. *J Allergy Clin Immunol* 2015;136:1541-7.e1-11.
4. Bellanti JA, Settignano RA. Wheels within wheals: the burden of urticaria and angioedema. *Allergy Asthma Proc* 2015;36:89-91.
5. Seidman MD, Gurgel RK, Lin SY, Schwartz SR, Baroody FM, Bonner JR et al. Clinical practice guideline: Allergic rhinitis. *Otolaryngol Head Neck Surg* 2015;152:S1-43
6. Domínguez-Ortega J, Phillips-Anglés E, Barranco P, Quirce S. Cost-effectiveness of asthma therapy: a comprehensive review. *J Asthma* 2015;52:529-537.
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16. Nieto A, Mazon A, Martin-Mateos MA, Plaza AM, Garde J, Alonso E et al. Pediatric allergy and immunology in Spain. *Pediatr Allergy Immunol* 2011;22:742-750.
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26. Grönlund H, Saarne T, Gafvelin G, Van Hage M. The major cat allergen, Fel d 1, in diagnosis and therapy. *Int Arch Allergy Immunol* 2010;151:265-274.
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28. Price D, Bond C, Bouchard J, Costa R, Keenan J, Levy ML et al. International Primary Care Respiratory Group (IPCRG) guidelines: management of allergic rhinitis. *Prim Care Respir J* 2006;15:58-70.
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ONLINE QUESTIONNAIRES FOR STAKEHOLDERS AND GENERAL PRACTITIONERS

Questions for Allergy Immunotherapy: Stakeholders

1. What country are you representing?

Please comment below

2. Are you representing a patient group, allergy charity or a specialist society?

Please comment below

3. Is allergy immunotherapy available in your country?

- (1) Yes
 (2) No
 (3) Don't know

Comments

4. Which allergy immunotherapy is available in your country?

- (1) Venom
 (2) Tree
 (3) Grass
 (4) Mould

- (5) Cat
 (6) Dog
 (7) HDM
 (8) Don't know

Comments

5. Does your country have a national policy on allergy immunotherapy?

- (1) Yes
 (2) No
 (3) Don't know

Comments

6. Does your country have national allergy immunotherapy guidelines?

- (1) Yes
 (2) No
 (3) Don't Know

Comments

7. Which national guidelines on allergy immunotherapy exist?

Please tick off all that apply

- (1) Advice on immunotherapy on venom
- (2) Advice on immunotherapy on asthma
- (3) Advice on immunotherapy on rhinitis
- (4) Advice for specialists
- (5) Advice for primary care physicians
- (6) Don't know

Comments

8. Are there agreed pathways for allergy patient care?

Please tick off all that apply

- (1) Shared care
- (2) Referral criteria
- (3) Follow up and monitoring
- (4) Agreement between health care professionals
- (5) Don't know

Comments

9. If there is a pathway is there training on allergy immunotherapy for specialists and for primary care?

- (1) Yes
- (2) No
- (3) Not applicable

Comments

10. Are the following allergy tests available to confirm diagnosis?

	Yes	No
Specific IgE tests available to primary care?	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>
Specific IgE tests available to specialists?	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>
Skin Prick tests available to primary care?	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>
Skin Prick tests available to specialists?	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>

Comments

11. In which clinical location is the subcutaneous allergy immunotherapy given?

- (1) Specialist
- (2) Primary care
- (3) Shared care
- (4) Don't know

Comments

12. Who normally makes the decision to discontinue the treatment of allergy immunotherapy?

- (1) GP
- (2) Specialist
- (3) Patient
- (4) Don't know

Comments

13. Is there reimbursement for the allergy immunotherapy treatment product?

- (1) Yes
- (2) No
- (3) Don't know

Comments

13a. What type of reimbursement?

- (1) Full funding
- (2) Partial funding

Comments

13b. Who reimburses the allergy immunotherapy treatment product?

Please tick off all that apply

- (1) The state
- (2) The insurance
- (3) Private
- (4) Co pay mixed private/state
- (5) Not relevante
- (6) Don't know

Comments

14. Is there reimbursement for the administration?

- (1) Yes
- (2) No
- (3) Don't know

Comments

14a. Who reimburses the administration?

Please tick off all that apply

- (1) The state
- (2) The insurance
- (3) Private
- (4) Co pay mixed private/state
- (5) Don't know
- (6) Not relevante

Comments

15. Do you consider any of the following barriers to allergy immunotherapy?

Please tick off all that apply

- (1) Fees for time
- (2) Reimbursement barriers to patients travel costs
- (3) Time off work for patients
- (4) Accessibility
- (5) Beliefs about efficacy
- (6) Beliefs about safety
- (7) Costs to patients travel time and time off work etc.
- (8) Don't know

Comments

Primary care _____

Specialists _____

Comments

16. Is accreditation required to administer immunotherapy?

	Yes	No	Don't know
Specialist	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
Primary care	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>

Comments

18. Do you have any thoughts on what may help support the use of allergy immunotherapy in primary care?

17. On a scale of 0-10 how aware of allergy immunotherapy do you think the different categories are?

From 0 (not aware) to 10 (completely aware)
 The general public _____

Thank you for your valuable time which will inform the construction of the European Academy of Allergy and Clinical Immunology (EAACI) AIT guidelines and make them more relevant to your needs.

Questions for Allergy Immunotherapy: General Practitioners

1. Which country are you representing?

2. Do you think GPs in your country are competent in taking an allergy history?

(1) Yes
 (2) No
 (3) Don't know

Comments

3. Do you think GPs in your country use allergy tests to support their diagnosis? Please tick one box on each line

	Yes	No, not available	Not reimbursed	Other
Skin Prick test	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Specific IgE	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>
Other	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>

Comments

4. Does your country have guidelines for allergy immunotherapy in primary care?

- (1) Yes
- (2) No
- (3) Don't know

Comments

4a. Which guidelines including allergy immunotherapy are GPs following?

- (1) National Specialist
- (2) National GP
- (3) Not available

Comments

5. Do you think that GPs are aware that allergy immunotherapy can be sublingual or subcutaneous?

- (1) Yes
- (2) No
- (3) Don't know

Comments

6. Do you think GPs would ever consider recommending allergy immunotherapy for treatment of? Please tick one box on each line

	Yes	No	Don't know
Allergic rhinitis	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
Allergic asthma	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>
Venom allergy	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>

Comments

7. Do you think GPs would consider perform immunotherapy themselves or refer in the following cases?

Please tick off all that apply

	Allergic rhinitis	Allergic asthma	Venom allergy
GPs would do the immunotherapy themselves	(1) <input type="checkbox"/>	(1) <input type="checkbox"/>	(1) <input type="checkbox"/>
GPs would refer	(2) <input type="checkbox"/>	(2) <input type="checkbox"/>	(2) <input type="checkbox"/>
Not available	(3) <input type="checkbox"/>	(3) <input type="checkbox"/>	(3) <input type="checkbox"/>
It depends on reimbursement	(4) <input type="checkbox"/>	(4) <input type="checkbox"/>	(4) <input type="checkbox"/>
Don't know	(5) <input type="checkbox"/>	(5) <input type="checkbox"/>	(5) <input type="checkbox"/>

Comments

8. With regards to allergy immunotherapy is there the possibility of collaboration (shared care) with an allergy specialist?

- (1) Yes
- (2) No
- (3) Don't know

Comments

8a. What form of collaboration do GPs have with the specialist? Please tick off all that apply

- (1) Referral
- (2) Advice and guidance
- (3) Shared care
- (4) Confirm diagnosis
- (5) Patient selection
- (6) Not relevant

Comments

9. Which of the following do you think GPs consider as barriers to primary care working with allergy immunotherapy? Please tick off all that apply

- (1) Lack of knowledge
- (2) Lack of infrastructure/equipment
- (3) Communication with specialists
- (4) Reimbursement policies
- (5) Time pressures
- (6) Uncertainty about efficacy
- (7) Not available on the market
- (8) None of the above

Comments

10. Is formal training on allergy immunotherapy available?

- (1) Yes
- (2) No
- (3) Don't know

Comments

11. Is allergy immunotherapy normally part of formal GP training?

- (1) Yes
- (2) No
- (4) Don't know

Comments

12. Do you have any thoughts on what may help support the use of allergy immunotherapy in primary care?

Thank you for your valuable time which will inform the construction of the European Academy of Allergy and Clinical Immunology (EAACI) AIT guidelines and make them more relevant to your needs.