

Alliance for Life Sciences: From Strategies to Actions in Central and Eastern Europe”

ERAllergies

“Evaluation of respiratory allergies burden in particular urban areas and identification of best practices to improve their management and prevention”

The ERAllergies project entitled: *Evaluation of respiratory allergies burden in particular urban areas and identification of best practices to improve their management and prevention* has been implemented by Carol Davila University of Medicine and Pharmacy from Bucharest together with St Anne’s University Hospital from Brno, Medical University from Lodz and Medical University from Sofia, in the frame of Alliance4Life initiative. The goal of the project was to establish a consortium with partners from four different Central and Eastern European countries based on their expertise in the field of respiratory allergies and to collect relevant data from their regions in terms of allergic diseases burden, environmental exposure, and health policies. It also aimed to identify the most relevant areas and issues which may be addressed in further studies and provide inspiration for expanding epidemiological and clinical investigations in the field of allergies in these countries. Special focus was placed on assessing the awareness of Family Medicine doctors regarding various aspects and consequences associated with respiratory allergies, difficulties in medical practice and collaboration with specialists.

A questionnaire with 21 questions referring to patients with respiratory allergies was developed and directly addressed to Family medicine (FM) specialists from Bucharest, during the National Family Medicine Conference held on 25th October 2023. We collected 218 on-site completed questionnaires out of the 600 active participants at the conference. The questionnaire has also been distributed, and responses collected, in small groups of GPs in the other three countries from the consortium.

Based on the questionnaire responses, we can conclude that general practitioners in East-Central European countries have a good understanding of common allergy symptoms and recognize the presence and importance of allergic diseases in community healthcare. They are also aware of potential risk factors for the onset and worsening of respiratory allergy symptoms. Family doctors generally believe that pollen is the most important allergen in the pathogenesis of allergy symptoms. More than 80 % of the responders expressed their interest for training in allergic diseases domain, since less than half got it before .

The survey's findings aid in highlighting variations in allergy treatment and practice among countries with similar social and historical backgrounds. Numerous factors specific to the region of Central and Eastern Europe can also be identified as having an impact on the prevalence and burden of respiratory allergies.

These include, but are not limited to:

- relatively higher concentrations of particulate matter and other pollutants in selected areas of this geographical location as compared with Western European countries
- higher allergen exposure in households due to impaired living conditions in selected social backgrounds
- uneven distribution of specialist and primary healthcare access
- insufficient numbers of physicians in general and allergists specifically
- limitations in access to selected treatment modalities due to still relatively lower income and economic performance of the countries in this area as compared to Western Europe

The aforementioned factors, particularly environmental pollution and lifestyle, have long been identified as contributing to differences in allergy prevalence and burden among historically and economically distinct areas.

Aside from reassessing allergy prevalence and analyzing air pollution and lifestyle patterns, further research into changes in sensitization patterns and the economic burden caused by allergy is required in this geographical area. Results obtained in such investigations may provide further insight into possible changes in allergy prevalence and burden due to modifications in the social and economic environment.

In order to increase the effectiveness of medical care for these patients, we plan to conduct a correlated analysis in the future using the data from this study with European strategies for the use of cutting-edge technologies for data collection, diagnosis, and treatment of respiratory allergies in urban environments. The next step is to create a diagnostic report by gathering and evaluating data from Bucharest, Brno, Lodz, and Sofia, with the assistance of primary healthcare professionals. The second purpose is to create a cross-country medical registry of respiratory allergies that can be utilized as a statistical database while keeping patient information entirely secret.

More advanced research combining epidemiology with information on air pollution and environmental conditions is warranted and ought to be planned, as East-Central European general practitioners have identified air pollution and climate change as potential causes and aggravators of respiratory allergies. The unique characteristics and air quality conditions found in the countries of Central and Eastern Europe serve to emphasize their significance.

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