GLOBAL CLASSIFICATION AND CODING OF HYPERSENSITIVITY DISEASES
The European Academy of Allergy and Clinical Immunology (EAACI) - World Allergy Organization (WAO) survey for a better coding in the International Coding of Diseases (ICD)


THE CURRENT SCOPE OF THE PROBLEM

The International Coding of Diseases (ICD) is a global health information system developed by the World Health Organization (WHO) to monitor disease morbidity and mortality worldwide, designed to promote international comparability in the collection, processing, classification, and presentation of disease statistics. This codification is in use in more than 100 countries, available in 43 different languages and is responsible for allocating about 70% of the world’s health expenditures.

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<th>The International Coding of Diseases (ICD)</th>
<th>What is the ICD?</th>
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<td>It is a global health information system developed by the World Health Organization (WHO) used to classify and monitor diseases and other health problems recorded on many types of health and vital records including death certificates and health records.</td>
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**Importances of the ICD:**

- Increasingly used in clinical care and research to define diseases and study disease patterns, manage health care, monitor outcomes and allocate resources.
- In use in more than 100 countries
- Translated into 43 languages
- Moves about 70% of the world’s health expenditures

**The ICD revision:**

- For the first time, WHO opens the discussion of the ongoing 11th revision for the public opinion, inviting experts and stakeholders to make comments and proposals.
- Topic Advisory Groups (TAG): formed by scientists from all WHO regions responsible for contributing to planning and coordinating advisory body for specific issues which are key topics in the update and revision process.
- Taking the opportunity of the EAACI food allergy and anaphylaxis guideline process, we started in April 2013 to aim at changing the codifications in allergy by contacting the TAG leaderships.

Hypersensitivity diseases cover several clinical presentations, both mild and severe, impacting quality of life of allergic sufferers and world’s health expenditures. Few
years ago, EAACI and WAO joined forces to propose a revision of the nomenclature of allergies for global use but did not attempt at that time to liaise with the WHO ICD. The inadequacy of ICD-10 to these conditions results in misclassification and/or under notification, leads to low visibility of these disorders and hampers the general accuracy of official statistics.

### Outcomes of the Misclassification of Hypersensitivity Diseases in the International Coding of Diseases

- Allergy and Clinical Immunology is not recognized as a specialty by WHO
- Low accuracy of epidemiological data
- Influence in the formal diagnosis and in health care management
- Direct impact in the allocation of resources
- Decreases the chance of monitoring and evaluating research, prevention and treatment

Understanding that coding definitions should be standardized with a view of enabling trend analyses and international comparisons, the ongoing WHO ICD-11 revision is a unique opportunity to improve the hypersensitivity diseases coding system so as to facilitate epidemiological studies, as well as the evaluation of the true size of the allergy epidemic and its consequences.

### IMPLEMENTATION GAPS AND POSSIBLE STRATEGY

EAACI has developed a thorough strategy:

(i) to understand why allergic diseases nomenclature was not included into the ongoing ICD-11 revision (Beta phase),
(ii) to better appraise the process of ICD review,
(iii) to possibly meet the influential groups for discussion and possible changes.

In order to achieve such goals, we firstly analyzed the example of psychiatrists (how they developed their Diagnostic and Statistical Manual of Mental Disorders), identified the groups in charge of the revision, and secondly developed a survey amongst EAACI members together with the WAO.
Taking all the above into account, we designed a survey with the following purposes:

- to underline the inadequacy of the ICD-10 for the codification of allergic and hypersensitivity diseases,
- to contribute to improvements to be made in the forthcoming revision of ICD.

The global survey of health care professionals’ attitudes towards allergic disorders classification was proposed to members of EAACI and WAO worldwide.

**EAACI-WAO SURVEY ON THE GLOBAL CLASSIFICATION AND CODING OF HYPERSENSITIVITY DISEASES**

A web-based survey has been constructed, in English, launched via Internet to:

- Participating members of EAACI (individuals) and
- WAO representatives (responding on behalf of national allergy societies).

The online questionnaire was circulated for 6 weeks (August to October 2013) and had an anonymous and voluntary nature.

As a result, we had 612 responses from 144 countries from all WHO global regions – AFRO (primarily sub-Saharan Africa), AMRO (the Americas), EMRO (Eastern Mediterranean/North Africa), EURO (Europe), SEARO (Southeast Asia), and WPRO (Western Pacific) – and across the global sample.
Representative members of both EAACI and WAO, from all WHO regions, implemented the survey.

The responders were mainly clinicians with more than 10 years of professional experience responsible for seeing more 50 allergic patients per month, spending more than 20 hours per week with patients suffering from allergic diseases.
A clear need to include hypersensitivity diseases’ classification to the ICD-11

The EAACI-WAO Global Survey is the first and most broadly international survey ever conducted to analyze health professionals’ attitudes toward allergic disorders’ classification. Based on the proportion of time spent by participating professionals in seeing patients, the survey was successful in reaching practicing allergists worldwide.

The study was framed to evaluate the adequacy of ICD-10 to classify hypersensitivity/allergic diseases and try to assist WHO in the ongoing revision of the ICD-10. It was not set up to compare and contrast the ICD and the EAACI-WAO classification.

The results of the survey demonstrated that the ICD-10 is the most used classification worldwide, but it was not considered appropriate in clinical practice by the majority of participants, who were asked to justify. Some comments regarding the ICD-10 are striking: “unclear”, “obsolete”, “insufficient and inadequate for allergic conditions”, “not enough accurate”, “missing hypersensitivity diseases”, “does not reflect reality”, “allergic diseases are not unified”, “this classification doesn’t reflect all variety forms of allergic diseases” among others.

Members using ICD-10 and/or EAACI-WAO classification
Classification in use worldwide and opinion of appropriateness (Yes/No) of the classification for the clinical practice*.

- Eighty-eight members were not using any classification and were not included in the analysis.

The information on accuracy and ease of use is of direct relevance to the ICD revision, as it points directly to categories where there are perceived problems in the definition and diagnostic guidance.

We therefore demonstrated that ICD-10 is not easy and accurate for the majority of responders and therefore does not code appropriately the wide spectrum of allergic diseases.
We also showed that the classification of allergic diseases supports our specialty by asking: “Please indicate in which of the following classification systems you feel your specialty is better represented?” The classification system elected as being better representative of the specialty was the EAACI-WAO Classification.

Percentage indication in which classification the specialty is better represented.

Participants emphasized the strong need for a simpler, multidisciplinary and more clinically useful classification in particular for generating national health statistics and for facilitating communication among clinicians.

**As conclusion**, we are convinced that the current survey provides both a baseline and a set of specific targets for improvement related to the definition and description of specific allergic disorder categories, as well as more general guidance on a series of important issues.

The results of this survey show the need to update the current ICD with a classification of allergic diseases and can be useful to the WHO in improving the clinical utility of ICD and its global acceptability.

Based on this survey, we have been trying to get in touch with ICD revision steering group to convince WHO to have a chapter dedicated to allergic diseases.