

## PARALLEL SESSION 4

Friday 12 November: 13.00–14.30

# 4.1. Workshop: Monitoring chronic respiratory diseases in Europe: what we know, new challenges and new opportunities for public health intervention

Chairs: E. Duran, Spain and Iveta Nagyova, Slovak Republic

Organizer: The IMCA Group & the EUPHA Section on Chronic Diseases

Obstructive lung diseases such as COPD and asthma are the most frequent causes of respiratory ill health covering all ages and producing a substantial and growing diseases burden worldwide. Despite the recognized need to monitor the epidemiology, clinical management and outcomes of the respiratory conditions at all ages at national and European level, the information available at present is still very limited. In order to firstly identify the key information necessary to monitor chronic respiratory diseases (CRD), the IMCA I project set up a panel of specialists in respiratory medicine, public health, epidemiology and agreed on a set of indicators to be included in the DG SANCO ECHI Group Framework. The assessment of data sources soon revealed the important limitations of the data coming from large international research studies and also routinely collected databases. Within the context of the IMCA II project three major efforts have been made. First, the information coming from research or routine data bases in Europe have been summarized and identified its strengths and limitations. Second, through the IMCA-HES Feasibility study the feasibility of using of new ICT tools to implement large epidemiological studies or surveys, perform home-based measurements including spirometry and monitor online quality data collection have been assessed. Third, due to the lack of information on CRD in the elderly population the IMCA-Respiratory Health Survey in the Elderly was successfully implemented using the technological tools previously tested. Finally, the IMCA II project confirmed that European nations lack of a standardized system to compare the burden of CRD and to evaluate the impact of preventive strategies and clinical management on health outcomes. In order to overcome the lack of information and improve respiratory health monitoring a specific module to be included in the future European Health Examination (EHES) has been recommended. This workshop bring the opportunity to share the experience of the IMCA project with public health professionals and explore future initiative for health information developments and public health interventions in the field of respiratory diseases.

### The IMCA project: achievements and new challenges in monitoring respiratory diseases in Europe

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### Introduction

European nations lack a standardized system to compare the burden of chronic respiratory diseases (CRD) and to evaluate the impact of preventive strategies and clinical management on health outcomes.

### Objective

To agree a set of indicators to monitor major CRD in the EU suitable for inclusion in the DG SANCO European Community Health Indicators Project.

### Methods

For asthma and COPD a panel of specialists in respiratory medicine, public health and epidemiology constructed a list of indicators according to the DG SANCO ECHI Group Framework. Following a literature review this list was modified into four main groups: (i) demography and socio-economic, (ii) health status, (iii) determinants of health and (iv) health systems. For each indicator, the rationale, aims, possible data sources, data quality, methods to be used for data collection, data presentation, potential use, consistency at international level and priority was evaluated. Indicators were then prioritized.

### Results

A total of 262 indicators were proposed for COPD and asthma. The top 4 indicators for COPD were as follows: prevalence of physician diagnosed COPD, prevalence of smoking, hospital admissions and age-specific death rate. For asthma they were as follows: prevalence of physician diagnosed asthma, prevalence of wheeze, prevalence of asthma attacks and hospital admission rates. For many nations in the EU this information is still not ready available. See details at [www.imca.cat](http://www.imca.cat).

### Conclusions

Across the EU, routine health information systems and nationally based health examination surveys should aim to obtain data to generate these indicators.

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### The IMCA—Respiratory Health Survey in the Elderly: methodological issues and preliminary results

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## Introduction

COPD produces a substantial and growing disease burden worldwide and specially in the elderly population. In Europe, there is not any population-based study assessing the prevalence and clinical management of COPD focused on this age group.

## Objective

- (i) To estimate the prevalence of asthma and COPD in the elderly population in four European countries.
- (ii) To estimate the indicators on asthma and COPD recommended and defined by the IMCA I project.

## Methods

The study has a population-based cross-sectional design carried out in five European centres: Barcelona (Spain), Uppsala (Sweden), Ulm (Germany), Pisa (Italy) and Rome (Italy). In all centres the sample was randomly selected from a population registry and includes individuals aged 65 and over. Information on respiratory conditions was collected by the 'IMCA-RHSE Core Questionnaire' and the 'IMCA-RHSE Core measurements'. The measurements included were weight, height, blood pressure, pulse-oximetry, pre-bronchodilator spirometry and post-bronchodilator spirometry. Barcelona and Ulm centres also collected the 'IMCA-RHSE Optional Questionnaire' including: LAPQ physical activity, Barthel Index, Hospital Anxiety and Depression Scale (HADS), Mini Mental State Examination (MMSE), quality of life (SF-12) and the Mini Nutritional Assessment (MNA). The 'IMCA-RHSE Optional measurements' included Short Physical Performance Test.

## Results

At this stage, the fieldwork is still ongoing and a total sample ( $N=5431$ ) individuals is already collected. It is expected to have finalized the study in 2 months and having a final sample of ( $N=7100$ ).

## Conclusions

This will be the first population-based international survey assessing COPD and asthma focused in the elderly population and providing relevant information for public health intervention.

## IMCA Recommendations on questionnaires and measurements to include in the future European Health Examination Survey (EHES)

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## Introduction

Health Examination Surveys (HES) are limited in Europe and most of them do not include measurements to assess chronic respiratory diseases (CRD) due to its methodological and organizational complexity.

## Objective

- (i) To assess the feasibility of using new ICT tools for performing interviews and home measurements in the context of large-scale international respiratory surveys,
- (ii) To recommend a module on respiratory diseases to be included in the new European Health Examination Survey (EHES)

## Methods

The study has a population-based cross-sectional and multicentre design carried out in 10 European centres: Barcelona (Spain), Uppsala (Sweden), Ulm (Germany), Pisa (Italy), Rome (Italy), Warsaw (Poland), Sofia (Bulgaria), Athens (Greece), Bergen (Norway). The sample was randomly selected from population registry and included individuals from 6 to 65 years old. Information on disease and respiratory symptoms was collected by GAL<sup>2</sup>LEN (adults) and ISAAC (children) questionnaires. Spirometry, blood pressure, pulse-oximetry, height and weight measurements were performed using sensors. The new ICT tool operating through a technological platform supporting chronic care was used for data collection and transmission.

## Results

A total of 556 individuals were included (56% males and 44% females) with mean age of 51 + 2.3. Asthma prevalence was 10.3%, wheeze in the last 12 months 12.5%, and 53.6% of asthmatic individuals are currently taking asthma medication. All individuals completed the questionnaire and 91.6 % accepted to perform the measurements at home and all results were successfully transmitted to the central database with high level of security and confidentiality.

## Conclusions

The IMCA Group, recommends the inclusion of a module on respiratory in the future European Health Examination Survey (EHES).

## Wireless mobile technologies facilitates home-based spirometry testing and online data processing in large epidemiological surveys: results from the IMCA-HES Feasibility Study

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## Introduction

New ICT tools to facilitate the performance of home-based spirometry testing are available. However, there are no studies showing the feasibility of using these tools and obtain high quality of data in large epidemiological surveys or health examination surveys (HES).

## Objective

To assess the feasibility of using wireless mobile technology as a tool for performing high-quality home-based spirometry tests in the context of large-scale international respiratory surveys.

## Methods

The study has a population-based cross-sectional and multicentre design carried out in 10 European centres: Barcelona (Spain), Uppsala (Sweden), Ulm (Germany), Pisa (Italy), Rome (Italy), Warsaw (Poland), Sofia (Bulgaria), Athens (Greece), Bergen (Norway). The sample was randomly selected from population registry and included individuals from 6 to 65 years old. Pre- and post-bronchodilator spirometry tests were performed using the NDD Easy One. Tests quality was assessed using the grades A, B, C, D, E and F and spirometry curves were assessed individually by a technician.