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Respiratory epidemiology home survey in a general population sample of Central Italy: the IMCA2 Project feasibility study

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BACKGROUND

The European Commission plans to implement Health Interview & Examination Surveys (HES) in order to overcome the limitations of Health Interview Surveys (HIS).

AIM

In the context of the Programme Community Action in Public Health of DG SANCO, the multicentric European project IMCA II (Indicators for Monitoring COPD and Asthma in the EU) aims at assessing the feasibility of performing interviews and objective measurements at home.

MATERIAL AND METHODS

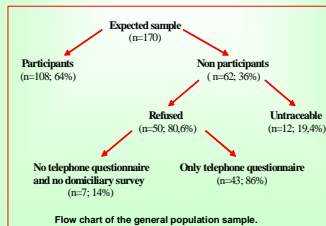
A general population sample (n=170; mean age 33.0 yrs±20.7 SD, age range 6-93 yrs; 45.9% male) was selected from a pre-existent database of an epidemiological survey performed in 1991-93 in Pisa, Italy.

An information technology tool was developed by the coordinating centre (IMM, Barcelona) of IMCA II project to integrate questionnaire design and filling, measurements carried out by sensors, management of fieldwork, data collection monitoring, on-line encrypt transmission to the central server. Questionnaire on socio-demographic characteristics, respiratory symptoms/diseases, asthma treatment, smoking habits, and measurements were carried out at home.

Participants aged 6-14 years were interviewed using the children's questionnaire based on a selection of questions from the ISAAC II protocol; for participants aged 14+ a selection of questions from the ECRHS II questionnaire was administered. Furthermore, during the first established phone contact, a short questionnaire on personal characteristics and respiratory symptoms was also administered to non participants.

For each study participant, the following measurements were performed and transmitted to a PC via Bluetooth: spirometry, blood pressure, pulse-oximetry, weight and height.

A blood sample to evaluate haemachrome, C-Reactive Protein and yGT was collected from each subject, in the Institute of Clinical Physiology of National Research Council (IFC-CNR).



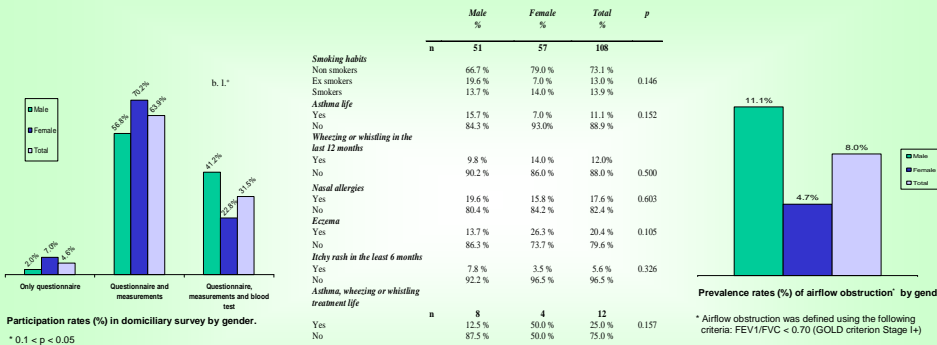
RESULTS (1)

	Participants		p	Participants in the domiciliary survey		p	Participants in the telephone short questionnaire		p
	n	108		n	108		n	43	
Age (years)									
Mean ± SD	31.48±19.68	35.53±22.41	0.221	31.48±19.68	34.37±22.43	0.435			
Gender (%)									
Male	47.2	43.5		47.2	38.5		47.2	38.5	0.455
Female	52.8	56.5	0.644	52.8	60.5	0.392	52.8	60.5	
Smoking habits									
Non smokers	75.0	79.1		75.0	79.1	0.136	75.0	79.1	
Smokers	11.1	11.6		11.1	11.6		11.1	11.6	
Ex-smokers	13.9	9.3		13.9	9.3		13.9	9.3	
Chronic bronchitis, emphysema or BPCO									
Yes	5.6	2.3		5.6	2.3		5.6	2.3	0.455
No	92.8	97.7		92.8	97.7		92.8	97.7	
Don't Know	1.8	0		1.8	0		1.8	0	
Asthma									
Yes	10.2	11.6		10.2	11.6		10.2	11.6	0.795
No	88.9	88.4		88.9	88.4		88.9	88.4	
Don't Know	0.9	0		0.9	0		0.9	0	
Pulmonary diseases									
Yes	14.8	11.6		14.8	11.6		14.8	11.6	0.710
No	84.3	88.4		84.3	88.4		84.3	88.4	
Don't Know	0.9	0		0.9	0		0.9	0	

Comparison of the descriptive characteristics between participants and non participants in the domiciliary survey IMCA2.

Comparison of the descriptive characteristics and diseases between participants in the domiciliary survey and participants only in the telephone short questionnaire.

RESULTS (2)



CONCLUSIONS

IMCA2 has developed a promising tool to perform interviews and objective measurements at home in the context of respiratory surveys; the feasibility of this kind of surveys is confirmed by the high participation rate in Pisa. This tool is now being used in a pilot study on 8000 subjects which will determine prevalence rates of asthma and COPD in the elderly in Spain, Italy, Germany and Sweden.