



## Original Article

## Prevalence and Features of Asthma in Young Adults in Urban Areas of Argentina<sup>☆</sup>



Sergio J. Arias,<sup>a,\*</sup> Hugo Neffen,<sup>b</sup> Juan Carlos Bossio,<sup>a</sup> Carina A. Calabrese,<sup>c</sup> Alejandro J. Videla,<sup>c,d</sup> Gustavo A. Armando,<sup>a</sup> Joseph M. Antó<sup>e,f,g,h</sup>

<sup>a</sup> Instituto Nacional de Enfermedades Respiratorias Dr. Emilio Coni, Administración Nacional de Laboratorios e Institutos de Salud (ANLIS) Carlos Malbrán, Ministerio de Salud de la Nación, Santa Fe, Argentina

<sup>b</sup> Centro de Alergia, Inmunología y Enfermedades Respiratorias, Santa Fe, Argentina

<sup>c</sup> Programa Nacional de Prevención y Control de Enfermedades Respiratorias Crónicas, Dirección de Promoción de la Salud y Control de Enfermedades No Transmisibles, Ministerio de Salud de la Nación Argentina, Buenos Aires, Argentina

<sup>d</sup> Servicio de Neumonología, Hospital Universitario Austral, Pilar, Argentina

<sup>e</sup> Instituto de Salud Global de Barcelona (ISGlobal), Centre for Research in Environmental Epidemiology (CREAL), Barcelona, Spain

<sup>f</sup> Hospital del Mar Medical Research Institute, Barcelona, Spain

<sup>g</sup> Universitat Pompeu Fabra (UPF), Barcelona, Spain

<sup>h</sup> Centro de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), Barcelona, Spain

## ARTICLE INFO

## Article history:

Received 6 May 2017

Accepted 30 August 2017

Available online 2 February 2018

## Keywords:

Asthma

Prevalence of asthma

Asthma in young adults

## ABSTRACT

**Objective:** To investigate the burden of asthma in a young adult population in urban areas of Argentina.

**Design:** A nationwide telephone survey in subjects aged 20–44 years was performed in urban areas in Argentina. The European Community Respiratory Health Survey questionnaire was used. Asthma was defined as an exacerbation in the last year or use of asthma medications.

**Results:** In total, 1521 subjects responded (62.4% females, mean age 33 years), of whom 91 were classified as asthmatics (5.9%, 95% CI 4.7–7.1). Prevalence adjusted for age, sex and education level was 6.4% (95% CI 5.1–7.7). Wheezing was reported by 13.9% (95% CI 11.6–16.2) and a diagnosis of asthma by 9.5% (95% CI 8.0–11.0). Among individuals with a diagnosis of asthma ( $n=154$ ), 71.3% had undergone spirometry. Among those treated ( $n=77$ ), 51.9% used medications daily and 46.8% as a rescue measure. Of those reporting an exacerbation in the last year ( $n=60$ ), 55% had attended an emergency department and 23% were admitted. Asthma was associated with rhinitis (OR 11.1, 95% CI 6.2–19.9) and family history (OR 3.6, 95% CI 2.3–5.5).

**Conclusion:** Asthma prevalence in young adults in Argentina is similar to Europe. Although attacks and admissions were common, regular use of medications was reported by half of those treated. These results may be useful for other Latin American countries.

© 2017 SEPAR. Published by Elsevier España, S.L.U. All rights reserved.

## Prevalencia y características clínicas del asma en adultos jóvenes en zonas urbanas de Argentina

## RESUMEN

**Objetivo:** Estimar la carga del asma en la población adulta joven en zonas urbanas de Argentina.

**Diseño:** Se realizó una encuesta telefónica a nivel nacional en sujetos de 20 a 44 años en áreas urbanas de Argentina. Se utilizó el cuestionario de la *European Community Respiratory Health Survey*. El asma se definió como ataque en el último año o uso de medicamentos para el asma.

**Resultados:** Mil quinientos veintiún sujetos fueron encuestados (62,4% mujeres, edad media 33 años). Noventa y uno fueron clasificados como asmáticos (5,9%, IC 95% 4,7-7,1). La prevalencia ajustada por edad, sexo y nivel educativo fue de 6,4% (IC 95% 5,1-7,7). El porcentaje de sibilancia fue de un 13,9% (IC 95% 11,6-16,2) y el de diagnóstico médico de asma, de un 9,5% (IC 95% 8,0-11,0). Entre los diagnósticos

## Palabras clave:

Asma

Prevalencia de asma

Asma en adultos jóvenes

<sup>☆</sup> Please cite this article as: Arias SJ, Neffen H, Bossio JC, Calabrese CA, Videla AJ, Armando GA, et al. Prevalencia y características clínicas del asma en adultos jóvenes en zonas urbanas de Argentina. Arch Bronconeumol. 2018;54:134–139.

\* Corresponding author.

E-mail address: [sergio.arias@arnet.com.ar](mailto:sergio.arias@arnet.com.ar) (S.J. Arias).

(n=154), el 71,3% realizó una espirometría y el 51,9% de los tratados (n=77) utilizaba medicamentos diariamente y un 46,8% como rescate. De los que reportaron algún ataque en el último año (n=60), un 55% tuvieron una visita a Urgencias y un 23,3% fueron hospitalizados. El asma se asoció con rinitis (OR 11,1; IC 95% 6,2–19,9) e historia familiar (OR 3,6; IC 95% 2,3–5,5).

**Conclusión:** La prevalencia de asma en adultos jóvenes en Argentina es similar a la de Europa. Aunque los ataques y las admisiones fueron comunes, el uso regular de los medicamentos fue informado por la mitad de los tratados. Los resultados pueden ser útiles para otros países de América Latina.

© 2017 SEPAR. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

## Introduction

The World Health Organization has warned that the prevalence of asthma is on the rise in many regions of the world, and that this disease is the most common chronic illness in children.<sup>1</sup> It is estimated that asthma affects more than 300 million people around the world, causing approximately 250 000 deaths per year.<sup>2</sup>

Asthma is highly prevalent in many cities in Latin America, as reported by the International Study of Asthma and Allergies in Childhood (ISAAC).<sup>3</sup> In Latin America, asthma mortality rates were high in the 1980s, but a gradual decline was subsequently observed in most of the countries studied, probably due to changes in therapeutic management and increased prescription of anti-inflammatory drugs.<sup>4–8</sup> Asthma is one of the 10 leading causes of years lived with disability in several countries in Latin America.<sup>9</sup>

The ISAAC study, conducted in 1995, reported a 15.4% and 17.3% prevalence of wheezing among Argentine children aged 6–7 years living in Buenos Aires and Rosario, respectively.<sup>10</sup> In 2001, prevalence among the group aged 13–14 years was 9.9% in Buenos Aires, 11.8% in Rosario, and 11.2% in Cordoba. Phase 3 of the study was performed in Cordoba, where an increase in prevalence of up to 13.6% was reported.<sup>4</sup>

Prevalence studies in adult asthma are hampered by the definition of the disease, so to determine its prevalence, methodologies proven reliable in other regions must be used.<sup>11</sup>

Despite the difficulties and the complexity of defining the problem and how to measure it, collecting data on the epidemiological situation of asthma will allow priorities and at-risk populations to be identified and will pave the way for public health.

Given the significant burden of asthma morbidity in Argentina and the need to clarify the situation in young adults, this study was conducted to estimate the prevalence of asthma among individuals aged 20–44 years, and to evaluate the characteristics of care and disease determinants.

## Materials and Methods

A cross-sectional study was conducted in a population aged 20–44 years, in 28 cities with at least 100 000 inhabitants throughout the Republic of Argentina, between October and December 2014.

A structured questionnaire with 22 closed questions was administered. This was a shortened version of the previously validated Spanish version of the European Community Respiratory Health Survey (ECRHS) questionnaire.<sup>12–15</sup> The questionnaire was administered in a telephone call, on landlines, using the computer-assisted telephone interviewing (CATI) system. Subjects who gave their verbal consent were included in the study.

The questionnaire included demographic information (age, sex, province, city, healthcare coverage, occupation, education), asthma symptoms (wheezing, chest tightness, dyspnea, cough), asthma care characteristics (medical attention during asthma attacks, asthma medication), smoking (history of exposure to tobacco smoke, smoking habit), anthropometric characteristics (weight and height), and physical activity (frequency).

The sample size was set at 1500 respondents assuming a prevalence of asthma of 4%, as determined by the ECRHS in a population of the same age range.<sup>15</sup> Individuals were selected by simple random sampling, stratified by geographic area.

An individual with asthma was defined as one who responded in the affirmative to any of the following questions: “Have you had an asthma attack in the last 12 months?”, or “Are you currently taking asthma medication?”.<sup>14,16,17</sup> The prevalence of wheezing was also based on a positive response to the following question: “Have you had wheezing or whistling in the chest in the last 12 months?”. The presence of asthma according to the ECRHS definition was also determined: having had an asthma attack, use of medications for asthma, or waking in the night with a feeling of chest tightness or oppression any time in the last 12 months.<sup>14,17</sup> To correct for the difference in the surveyed population and the general population of the country, asthma prevalence rates adjusted for age, sex, and level of education were calculated for each of the definitions used, along with their 95% confidence intervals. Adjustment was made by the direct method, using the population of Argentina from the census of 2010 as the reference population.

The characteristics of the cases that met the definition of asthma were described by calculating the percentages of the characteristics studied, along with the confidence interval. The association between the presence of asthma according to the definition used and these characteristics was evaluated by calculating the odds ratio and the 95% confidence interval.

The asymptotic approximation to the normal distribution or the exact method were used to calculate confidence intervals of the percentages, and the Woolf method was used for the odds ratio.

Data were loaded into a central database for analysis. MS Excel 2013 and IBM SPSS Statistics 21 were used for the preparation of tables and statistical analysis.

This study was approved by the Ethics and Safety Advisory Research Committee of the Universidad Nacional del Litoral. All participants were asked to give their recorded verbal consent, which was read in the same way for all respondents, and if subjects agreed to participate, they were asked to indicate this clearly in the recording, and to confirm, for the record, that any doubts or additional questions had been resolved before consent was given. The data collected were transferred to a database from which all information relating to the identification of subjects was deleted to ensure their anonymity; all investigators with access to personal data from the respondents were also required to sign a non-disclosure agreement.

## Results

A total of 5283 phone calls were made in the 28 cities; 2252 respondents fell outside the age range for this study, 72 did not give their age, and 2959 were in the appropriate age group. Of these 2959, 1438 did not give their consent to the survey. Distribution of the 1521 individuals interviewed met the proportional distribution per city (Fig. 1).

Table 1 shows the distribution of the general characteristics of the population. Women were predominant in all age groups: 55.9%

Download English Version:

<https://daneshyari.com/en/article/8819315>

Download Persian Version:

<https://daneshyari.com/article/8819315>

[Daneshyari.com](https://daneshyari.com)