AstraZeneca

STUDY REPORT SUMMARY

ASTRAZENECA PHARMACEUTICALS

FINISHED PRODUCT:	No product
ACTIVE INGREDIENT:	No drug

Study No: NIS-RES-DUM-2010/1

Estimated resource use and costs of asthma patients in the Region of Valencia (RV).

Developmental Phase: Health Economics Study
Study Completion Date: 02.06.2011
Date of Report: 10.12.2012

OBJECTIVES

Primary objective

• To estimate the management and use of resources involved in adult healthcare for patients with asthma in the Region of Valencia (RV) based on daily clinical practice conditions.

Secondary objectives

• To estimate the mean cost of healthcare for patients with asthma in the RV.

• To establish the overall efficacy of healthcare for patients with asthma.

• To establish the current efficacy of healthcare for patients with asthma.

• Modelling the health budget according to different efficacy objectives for the next five years.

METHODS

Sampling

For sample selection, a multiple-stage design was used: proportional sample, based on the population size of each province, of patients with asthma in the Region of Valencia over 15 years of age. The sample was distributed in Valencia, Castellon, and Alicante.

In each province, a random patient sample was selected from a health department chosen on a conditioned random basis. If a health department including two hospitals was selected at random, it was ruled out and another department was chosen at random. If a single department per province was not sufficient to obtain the sample, another one was selected. The pneumology and/or allergology department was contacted in each department selected. Data were obtained from the electronic clinical outpatient history (SIA+GAIA) through the Directorate General of Pharmacy and Health Products, and the data necessary to complete the CRF were obtained from the pneumology and/or allergology clinical histories.

Sample size

A total of 261 patients will be studied in three provinces: Valencia, Castellon, and Alicante.

Study variables

Variables collected from the clinical histories of pneumology or allergology (CRF):

- ► Socio-demographic: Age, sex, smoking, and exposure to irritant agents
- ► Concomitant diseases: CIE9 codes. General and asthma-related
- ► Clinical (referred to the past 12 months):
    - o Type of asthma
    - o Drug therapy for concomitant diseases related to asthma
    - o Drug therapy for asthma (maintenance)
    - o Acute aggravations of asthma dealt with: number in one year, degree of acute aggravations, and drug therapy
    - o Scheduled and non-scheduled visits to the specialist physician.
    - o Visits to the emergency room related to asthma.
    - o Hospital admissions
    - o Diagnostic tests
    - o Assessment of efficacy and treatment compliance.

Variables collected from the electronic clinical outpatient history (SIA + GAIA):

- ► Socio-demographic: Age, sex
- ► Concomitant disease: CIE9 codes. General and asthma-related
- ► Clinical (referred to the past 12 months):
    - o Scheduled visits to primary care physician and nurse
    - o Maintenance drugs (and devices) for asthma
    - o Visits to the emergency room, physicians and nurses related to asthma.
    - o Type of asthma
    - o Diagnostic tests
    - o Hospital admissions
    - o Duration of temporary general and asthma-related disabilities (TD).

Monitoring and performance of the study

Any patient diagnosed with asthma at least one year before the beginning of the study has been included. The duration of the inclusion period was 1 month and data were collected from the 12 months of patient monitoring prior to inclusion in the study.

Statistical analysis

A univariate descriptive analysis will be performed to know the sample tested. A bivariate analysis will be performed on pairs of variables where a possible causal relationship is estimated. Finally, a multivariate analysis was included to establish the factors determining costs and to what extent they do it.

RESULTS

Asthma affects over 5% of the adult population and involves a high use of socio-economic resources in industrialised countries[i]. These costs are expected to increase in coming years as a result of factors such as the increased prevalence and life expectancy of the population and the emergence of new drugs and therapeutic methods[ii].

Due to the increased prevalence and growing associated morbidity-mortality, this disease generates a high use of health resources and involves a high economic burden for the community. It can be assured that supporting the costs derived from asthma in developed countries accounts for 1% to 2% of the resources allotted to public health.[iii]

In Spain, the AsmaCost study estimates that the mean annual costs of a patient with asthma in Spain amounts to €1,726 from the standpoint of community. The main results of the study show that the health resources generating the highest economic cost are medicines against asthma (32.1%), examinations (27.3%), and hospital admissions (15.2%). The remaining percentage of (11.2%) corresponds to costs unrelated to healthcare. Also these costs depend on the individual control level of each patient and to what extent acute aggravations are prevented[iv].

This multicentre, epidemiological, observational, retrospective study was performed by assessing the data obtained in the clinical histories of patients with asthma in specialised care clinics (reference pneumologists and/or allergologists) and in the electronic outpatient clinical history (SIA + GAIA) in the health centres of the Region of Valencia (Hospital de la Plana, Hospital Arnau de Vilanova, Hospital Lluís Alcanyis, and Hospital Virgen de los Lirios).

The total sample of patients included in the study involved 292 cases, of which 16 cases were excluded for non-compliance with the exclusion criterion "being older than 15 years" and 15 cases due to the asthma having been diagnosed less than one year before. The total evaluable cases included in the final analysis were 261 patients.

The mean cost of a patient with asthma in the Region of Valencia is €1,423.10.

By type of asthma, the mean cost per patient is €780.24, €1,029.86, €1,747.04, and €3,110.93, for intermittent, mild, moderate and severe asthma, respectively.

LITERATURE

[i] Evans R, Mullally DI, Wilson RW, Gergen PJ, Rosenberg HM, Grauman JS et al. National trends in the morbidity and mortality of asthma in the US. Prevalence, hospitalization and death from asthma over two decades: 1965-1984.Chest 1987; 91: Suppl 6, pp 65-74.

[ii] De Miguel Díez J.Farmaeconomía en el asma y en la EPOC. Arch Bronconeumol. 2005;41:239-41

[iii] National Institutes of Health. Global Strategy for asthma management and prevention. Publication nº 02-3659. Bethesda: National Heart, Lung and Blood Institute; 2002.

[iv] EvaMartínez-Moragón et al, Coste económico del paciente asmático en España (estudio AsmaCost).