

LETTERS TO THE EDITOR

Hospitalization Cost for Chronic Obstructive Pulmonary Disease in Andalusia, Spain: 1998 Through 2002

To the editor:

The detailed study by Masa et al¹ on the cost of chronic obstructive pulmonary disease (COPD) in Spain updated published studies with varying amounts of information on the costs of providing health care.^{2,3} Approaching the use of so-called administrative databases from the contrasting viewpoints of healthcare managers and clinicians—even studying them in mixed teams in countries where these databases are rigorously maintained—has made it possible to calculate the costs and quality of health care provision with previously unknown depth and clarity.⁴ It is worth bearing in mind that these databases were created with the aim of facilitating and fine-tuning a system of funding based on treatment processes. Record-keeping systems have been carefully designed for calculating costs arising from admissions, which are the ones institutions use for billing, and so they are amply validated.

The coding system for illnesses established in the International Classification of Diseases, Ninth Edition (Clinical Modification), and the classification of hospital stays by Diagnosis-Related Groups (DRGs) are so extensively and carefully implemented in Spain that it now seems safe to make calculations based on these data. While records may contain data that has been incorrectly input, the sheer volume of data should compensate for such defects.

At the same time, accounting systems have been developed that are efficient enough to provide reliable cost estimates.⁵

We have been given the opportunity to access the Minimum Basic Data Set of the Andalusian Public Health Service from 1998 through 2002. Over the 5-year period being studied this data set codifies 2 700 000 hospital discharge records, of which 83 722 (3%) correspond to the following DRGs: 88 (COPD), 15 688 records; 541 (respiratory problems other than infection, bronchitis and asthma with severe complications), 16 722; 96 (bronchitis and asthma with complications in patients over 17 years old), 17 195; 97 (bronchitis and asthma without complications in patients over 17 years old), 16 458; 542 (bronchitis and asthma with severe complications in patients over 17 years old), 17 659.

The weighting for each DRG was taken from the Spanish National Health Service official figures (available on www.msc.es/estadisticas_sanitarias/inventario.asp) and from the Health Care Financial Administrator (version AP14), which was used for comparison during this period both in Andalusia and in the other Spanish autonomous communities.

The information on costs incurred by the hospitals of the Andalusian Public Health Service during the period being studied was obtained from the actual costs published in the service's annual reports, except for the costs for 2002, which had not then been published. For 2002, budgeted costs adjusted for past mean deviations were used. The cost of hospital stays was estimated as 70% of the total costs of the hospital in accordance with studies by the Spanish National Health Care System published in 1995.⁵ All costs have been expressed in euro to make comparisons possible.

According to the weighting used by the Spanish National Health Care System, the cost of hospitalization for COPD in the 5-year period 1998-2002 ranged from € 52 350 000 in 1998 to € 69 532 375 in 2002 and accounted for 3.55% of total hospitalization costs. According to the weighting used by the Health Care Financial Administrator for 1998 to 2002, COPD costs ranged from € 62 314 000 to € 81 950 000 and accounted for 4.17% of total hospitalization costs.

The cost of a single hospital stay for each DRG in 2002 is shown in the table.

The databases were ceded by the Health Service Product Department of the Specialized Healthcare Section of the Health Service of Andalusia. We would like to thank the staff of this department for their cooperation and generosity.

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TABLE
Weighting of Selected Hospital Stays by Diagnosis-Related Groups and Cost Per Stay. Based on Data for 2002

DRG	Definition	Weighting	Cost (€)
88	Chronic obstructive pulmonary disease	0.9338	3190
541	Respiratory problems other than infections, bronchitis, and asthma with severe complications	1.2595	4302
96	Bronchitis and asthma with complications, age >17	0.9150	3126
97	Bronchitis and asthma without complications, age >17	0.7015	2396
542	Bronchitis and asthma with serious complications, age >17	1.0165	3472