



The study was published in the latest issue of the magazine *PLoS ONE*

Non-hospital resources, the highest health cost of influenza A

Barcelona, 20 February 2012. A study by the **Healthcare Services Research Group at the IMIM (Hospital del Mar Research Institute)** has studied the per-patient costs associated with the pandemic influenza virus type H1N1, also called influenza A, from 2009. The study, conducted jointly with the CIBER (Biomedical Research Consortium on Epidemiology and Public Health, or CIBERESP), has centred on the use of healthcare resources and sick leave due to employees' temporary disability. This influenza affected more than 74 countries and caused some alarm due to its being declared pandemic and because several forecasts placed its financial burden at very high levels.

Spain recorded nearly **1 and a half million outpatient cases of influenza A**, which entailed a cost of € 940 per patient, and **only 3025 hospitalisations**, representing an average of € 6,236 per patient. The employment of non-hospital resources equaled 86% of the total expense for the influenza for health services. With respect to the impact on labour, temporary incapacities of employees were an **average of 30.5 days for hospitalised patients and some 9 days for outpatients**.

According to Jordi Alonso, coordinator of the IMIM Health Services Research Group, ***'this study has led to the determination of the real use of services due to influenza A as, until this time, evaluations were based on estimated or simulated data. Given that influenza A did not end up being as aggressive as forecast, we can state that these results would be similar to those for flu in a normal epidemic situation.'***

The study was performed thanks to cooperation with an extensive work group throughout Spain and has consisted of identifying and monitoring patients with confirmed diagnoses of influenza A, including both patients who required hospitalisation and patients who were attended at primary care centres. ***'A significant part of the work'*** comments Mariana Galante, who works with the IMIM Health Services Research Group and the main author of the article, ***'was to be able to assign a cost to each of the resources used'***.

'Our results could be interesting both for health service providers and for updating the financial evaluation in the field of healthcare. In similar circumstances, and even in the epidemic situation of flu every winter, health services receive an extremely high volume of queries on flu, and managing this demand could improve decision taking based on the evidence our study provides', ensures Olatz Garin, an investigator in this same group.

In the area of health economists and occupational health professionals, there is some debate about the cost entailed by the loss of productivity owing to different illnesses and how they should be measured. The results of this study have already caused interest among them. The conclusions of this project could also facilitate the development of practical clinical guidelines that minimise the use of some resources, such as hospitalisation, and maximise others, such as home care.

Finally, and as a future line, the group is working on studying the overall cost of influenza, combining the study results with other overall expenses including prevention campaigns, the purchase of vaccinations and absenteeism.

Reference article

Health Services Utilization, Work Absenteeism and Costs of Pandemic Influenza A (H1N1) 2009 in Spain: a Multicenter-Longitudinal Study. Mariana Galante, Olatz Garin, Elisa Sicuri, Francesc Cots, Anna García-Altés, Montserrat Ferrer, Àngela Domínguez, Jordi Alonso. PLoS ONE. PLoS ONE 7(2): e31696. doi:10.1371/journal.pone.0031696.

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