

Meeting abstract

Open Access

Improving case mix for description and funding in rehabilitation in France: additive model is better than tree-classification

Pierre Métral*, N Ducret, A Patris and P Steunou

Address: ATIH agence technique de l'information sur l'Hospitalisation, 117 boulevard Vivier Merle 69392 Lyon cedex 03, France

Email: Pierre Métral* - pmetral@atih.sante.fr

* Corresponding author

from 24th Patient Classification Systems International (PCSI) Working Conference
Lisbon, Portugal. 8–11 October 2008

Published: 27 November 2008

BMC Health Services Research 2008, 8(Suppl 1):A2 doi:10.1186/1472-6963-8-S1-A2

This abstract is available from: <http://www.biomedcentral.com/1472-6963/8/S1/A2>

© 2008 Métral et al; licensee BioMed Central Ltd.

Introduction

Rehabilitation and post-acute geriatrics is a large field with a large panel of hospitals in France (1800). The French specific classification *Groupes Homogène de Journées* (GHJ-280 groups), developed in 1996, is neither good enough for easy use in health politics nor for funding. A new case-mix model, based on the same medical dataset and on analytic cost data, has been developed with a very significant improvement in R^2 for cost per day.

Methods

The analytic costs and medical rehab datasets of 32 French hospitals in the rehabilitation field have been used to build a new model. We used linear regression methods with different variables of the medical dataset and a different modality of these variables. Rather than building a new classification tree, we decided to keep the significant variables of the different components of cost (medical, nursing, rehabilitation, logistic) in an additive way. We propose at the end of this step a valorisation model of rehabilitation activity, with a basic amount of activity points for the medical group (70 groups), and additive activity points for the 7 other variables.

Results

The selected model, including 5 qualitative variables (medical group, age, comorbidity, medical objective, full-time or outpatient) and 3 quantitative variables (physical dependence, cognitive dependence, number of different

kinds of rehabilitation), improves the R^2 for cost variation per day from 30% to 44%.

Conclusion

This new classification, with just a part of it built as a tree (the initial part for medical groups), very significantly improves cost prediction in the rehabilitation field. It also improves the way professionals (medical, psychiatric and managerial) consider and accept it for use in planification and the health politic field. The reason is that they can more easily see the specificity of each hospital activity. France will use this model for funding rehabilitation hospitals beginning in 2009.