CONFERENCE ABSTRACT

Complex care needs in people with chronic diseases: population prevalence and characterization in primary care

16th International Conference on Integrated Care, Barcelona 23-25 May 2016

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Introduction: Risk adjustment variables for population stratification are based, primarily, on the burden of disease and the pattern of use of resources. They do not include other variables that, according to available evidence determines the complexity, such as coordination of care on a regional level, certain patient characteristics (adherence to treatments or visits, mental disorders, etc...) and, especially, socioeconomic, cultural, environmental and behavioural context.

In Catalonia, a strategy for proactive identification of complex chronic patients (CCP) by healthcare professionals in primary care, based on clinical judgment and broad criteria, encompassing clinical and psychosocial variables, combined with Clinical Risk Groups (CRG, a risk-adjustment tool and clinically-based classification system used to measure a population's burden of illness) has been promoted by the Chronicity Prevention and Care Program (CPCP) from the Department of Health. To the best of our knowledge, this strategy of identifying CCP from combination of risk adjustment and clinical judgment is a pioneering and unique experience worldwide. 101415 persons (1.3% of the population of Catalonia) have been identified as CCP by healthcare professionals in primary care between 1st February and 31st December 2013.

43.3% of CCP identified (44014 persons) present a complexity not explained by theoretical construct proposed for identifying complex chronic population, defined by mortality, primary care contacts, hospitalization, emergency hospitalizations and pharmaceutical expenditure in the fourth and fifth quintiles of population distribution (CRG 5 severity 6; CRG 6 severity 5-6; CRG 7 severity 2-6, CRG 8 severity 3-6; and CRG 9 severity 2-6), increasing the possibility of being identified in this group when decreases the number of advanced chronic organic

failure diseases, visits to primary care, urgent hospitalization and pharmaceutical spending and when increases age. But to date, it is unknown what the variables that would explain this complexity are. On the other hand, prevalence of CCP and, within these group, prevalence of those patients with advanced chronic disease (CCP-ACD) has not been yet established.

The objectives of this study are 1) to determine the population prevalence of patients with chronic diseases and complex care needs (CCP and CCP-ACD), according to the construct based on clinical judgment and broad criteria, encompassing clinical and psychosocial variables, promoted by the CPCP in an urban population, 2) to describe the frequency and distribution of CPCP criteria for identifying patients with chronic diseases and complex care needs, and 3) to identify CPCP criteria that predict complexity.

Methods: Population-based cross-sectional study based on information contained in the morbidity database of Catalonia in 2015 and professional electronic medical records. Setting: three primary care urban practices placed in Sabadell (Barcelona) belonging to the Catalan Institute of Health (ICS). According to this database, population with CRG≥5 and older than 14 years old (24762 inhabitants) were reviewed and CCP and CCP-ACD were identified and coded in the Shared Clinical Record of Catalonia, a common technological platform accessible to all providers of public health network.

Study population is that which was recorded by healthcare professionals as CCP and CCP-ACD in the Shared Clinical Record of Catalonia on 30th September 2015.

We will characterize chronic patients and compare the characteristics of people with and without complex care needs, according to professionals' criteria by using chi-square or t-student tests, as appropriate. We will also compare the characteristics of primary care professionals who report the highest versus the lowest proportions of patients with complex care needs. We will construct a multivariate logistic regression model to identify independent predictors of professional-defined patient complexity with the following steps: a) selection of variables that predict complex care needs identified according to professionals' criteria (bivariate analysis); b) process of model construction (likelihood ratio test) and c) validation of its predictive ability (goodness of fit) using discrimination index (C statistic) and index calibration (Hosmer-Lemeshow). In addition, there will be a logistic regression tree and, as an exploratory way, a multivariate factor analysis will be performed.

Results: (progress report) The identification and data collection was carried out between 1st July and 30th September 2015. It is expected to have the results of the study in February 2016.

Discussion: Patient complexity is probably a multifaceted concept not fully captured by the number or type of medical conditions or by previous health care costs. The data provided by this study will allow to characterize the complexity beyond the risk-adjustment tools that, according to available evidence, are not enough to identify people with chronic complex care needs. This research can also help for a deeper understanding of the multiple sources of patient complexity and their interactions.

Conclusion: Not applicable