Progetto

"I profili di cura dei Nuclei di Cure Primarie"

Riferimenti bibliografici

Anno 2010

Servizio Assistenza Distrettuale, Medicina Generale,
Pianificazione e Sviluppo dei Servizi Sanitari

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Abstract

BACKGROUND AND OBJECTIVES: Automated pharmacy data have been used to develop a measure of chronic disease status in the general population. The objectives of this project were to refine and apply a model of chronic disease identification using Italian automated pharmacy data; to describe how this model may identify patterns of morbidity in Emilia Romagna, a large Italian region; and to compare estimated prevalence rates using pharmacy data with those available from a 2000 Emilia Romagna disease surveillance study.

METHODS: Using the Chronic Disease Score, a list of chronic conditions related to the consumption of drugs under the Italian pharmaceutical dispensing system was created. Clinical review identified medication classes within the Italian National Therapeutic Formulary that were linked to the management of each chronic condition. Algorithms were then tested on pharmaceutical claims data from Emilia Romagna for 2001 to verify the applicability of the classification scheme.

RESULTS: Thirty-one chronic condition drug groups (CCDGs) were identified. Applying the model to the pharmacy data, approximately 1.5 million individuals (37.1%) of the population were identified as having one or more of the 31 CCDGs. The 31 CCDGs accounted for 77% (E556 million) of 2001 pharmaceutical expenditures. Cardiovascular diseases, rheumatological conditions, chronic respiratory illness, gastrointestinal diseases and psychiatric diseases were the most frequent chronic conditions. External validation comparing rates of the diseases found through using pharmacy data with those of a 2000 Emilia Romagna disease surveillance study showed similar prevalence of illness.

CONCLUSIONS: Using Italian automated pharmacy data, a measure of population-based chronic disease status was developed. Applying the model to pharmaceutical claims from Emilia Romagna 2001, a large proportion of the population was identified as having chronic conditions. Pharmacy data may be a valuable alternative to survey data to assess the extent to which large populations are affected by chronic conditions.

Clark DO, Von Korff M, Saunders K, et al. A chronic disease score with empirically derived weights. Medical Care 1995;33(8):783-95

Abstract

Different types of medication prescribed during a 6-month period for the treatment and management of chronic conditions were utilized in the refinement and validation of a chronic disease score. Prescription data, in addition to age and sex, were utilized to develop a chronic disease score based on empirically derived weights for each of three outcomes: total cost, outpatient cost, and primary care visits. The ability of the revised chronic disease score to predict health care utilization, costs, hospitalization, and mortality was compared to an earlier version of the chronic disease score (original) that was derived through clinical judgments of disease severity. The predictive validity of the chronic disease score is also compared to ambulatory care groups, which utilize outpatient diagnoses to form mutually exclusive diagnostic categories. Models based on a concurrent 6-month period and a 6-month prospective period (ie, the 6-month period after the chronic disease score or ambulatory care group derivation period) were estimated using a random one half sample of 250,000 managed-care enrollees aged 18 and older. The remaining one half of the enrollee population was used as a validation sample. The revised chronic disease score showed improved estimation and prediction over the original chronic disease score. The difference in variance explained prospectively by the revised chronic disease score versus the ambulatory care groups, conversely, was small. The revised chronic disease score was a better predictor of mortality than the ambulatory care groups. The combination of revised chronic disease score and ambulatory care groups showed only marginally greater predictive power than either one alone. These results suggest that the revised chronic disease score and ambulatory care groups with empirically derived weights provide improved prediction of health care utilization and costs, as well as hospitalization and mortality, over age and sex alone. We recommend the revised chronic disease score with total cost weights for general use as a severity measure because of its relative advantage in predicting mortality compared to the outpatient cost and primary care visit weights.

Louis DZ, Taroni F, Melotti R et al. Increasing appropriateness of hospital admissions in the Emilia-Romagna region of Italy. Journal of Health Services Research & Policy 13(4);2008:202-208

Abstract

OBJECTIVES: The Emilia-Romagna region of Italy has reduced the number of available hospital beds and introduced financial incentives to curb hospital use. The goal of this study was to assess the impact of these policies on changes over time in the number of acute hospital admissions classified in diagnosis related groups (DRGs) that could be treated safely and effectively in alternative, less costly settings.

METHODS: The assessment of the appropriate site of care was based on analysis of hospital discharge data for all hospitals for the selected diagnosis related groups in the Emilia-Romagna region for 2001 to 2005. The necessity for acute hospital admission was based on the severity of a patient's principal diagnosis, co-morbid diseases and, for surgical admissions, procedure performed.

RESULTS: From 2001 to 2005, potentially inappropriate medical admissions of more than one day decreased from 20,076 to 11,580, a 42% decrease. Inappropriate admissions decreased in both public and private hospitals but there remained a higher rate of inappropriate admissions to private hospitals. Potentially inappropriate medical admissions accounted for 128,319 bed-days in 2001 and 68,968 bed-days in 2005, a reduction of 59,351 bed-days. Potentially inappropriate surgical admissions decreased from 7383 in 2001 to 4349 in 2005, a 41% decrease. Bed-days consumed by inappropriate surgical admissions decreased from 23,181 in 2001 to 13,660 in 2005.

CONCLUSIONS: The Emilia-Romagna region has succeeded in reducing the use of acute hospital beds for patients in selected diagnosis related groups. However, there are still substantial numbers of admissions that could potentially be treated in less costly settings.