

“Revolving door” syndrome and predictors of hospital readmissions to Internal Medicine wards: results from an Italian retrospective case-control study

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Abstract

Introduction and aim of the study: Hospital readmissions represent an increasing and highly expensive cost for National Health Services. Aim of this retrospective case-control study was to compare patients who required one or more repeated hospitalizations to those who had only one, in the year 2018 at the Department of Internal Medicine of Pontedera Hospital (Pisa, Italy). Materials and Methods: All the data were retrieved matching data from our electronic health record with our diagnosis-related group (DRG) software system. Continuous variables were defined means \pm standard deviation; categorical variables were given as percentage. The independent sample t test was used for the continuous variables and chi-square test for categorical variables. Significance was inferred for $p < 0.05$. Results: In 2018 a total of 3012 patients were hospitalized. Among these, 14.1% ($n=426$; mean age 79.7 ± 11.9 ; range 23-100) were defined as revolving; data were compared with controls ($n=420$; 13.9%; mean age 75.9 ± 14.7 ; range 22-99) who had only one hospitalization. Patients main provenance was in both groups a Home-based health care. Revolving patients showed higher mean age, higher rate of chronic comorbidities and mortality. Cancer was equally distributed in both groups. Sepsis was the most relevant factor associated with re-hospitalizations and mortality. Skin ulcers were present in about half of revolving patients, but they were coded as DRG only in an absolute minority. Conclusions: readmissions to Internal Medicine Departments are frequent and mainly related to the severity of chronic diseases affecting the patients. Sepsis was the most relevant condition associated with readmissions, leading to a very high mortality rate. Skin ulcers affected about half of revolving patients, but their DRG were significantly underestimated. Preventing sepsis and investing resources in chronic diseases assistance, represent a key challenge for the future, especially in an outpatient setting.

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