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CONFERENCE ABSTRACT

Multiple admissions for Ambulatory Care Sensitive Conditions: Target for intervention?

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Introduction: Ambulatory care sensitive conditions (ACSC) have been robustly studied as an indirect indicator of access and quality of (primary) care (1–6). Once these coincide with two fundamental objectives of integrated care (7) it makes sense to use the admissions for ACSC as an indirect indicator of integrated care. In Portugal this is a relevant phenomenon in the National Health Service that needs further in depth studying (8). The present study aims to identify if patients are admitted multiple times for an ACSC.

Objectives: Identify and characterize multiple admissions for ACSC in Portugal.

Methods: We designed a descriptive study that used data from the national inpatient discharge database (year 2013) enabling us to analyse over 1 million episodes. The admissions for ACSC were identified according to the Caminal et al (4) methodology using as exclusion criteria death before discharge, lengths of stay under 1 day and over 40 days, surgical and planned admissions. We considered multiple ACSC admissions when a patient was admitted more than once for any ACSC (be it the same or a different ACSC) in the year of analysis. To have an initial insight on possible explanations for the results we analysed basic characteristics of the patients (namely age, gender, number of secondary diagnosis of chronic diseases and number of body systems affected, length of stay and estimated financial impact). An estimated financial impact was calculated using the Central Administration of the Health Systems' price and average length of stay.

Results: We identified 115.441 admissions for ACSC (11.4% of all admissions), corresponding to 94.849 patients. In 15.3% of patients (14.537) we identified multiple admissions for ACSC, namely 35.129 (30.4% of the admissions for ACSC). The number of multiple admissions ranged from 2 to 16. In the majority of cases the patients were admitted twice (51.7%), while the multiple admissions between 2 and 5 added up 95% of cases. In 3.506 (9.9%) cases the patient was admitted at least twice for the same condition. The multiple admissions were separated, on average, by 67.5 days. The percentage of multiple admissions for heart failure and COPD were particularly relevant once they represent together 40% of admissions and moreover represent a higher share of the multiple admissions than of the single admissions. The estimated financial impact of the 35.129 multiple admissions was 73.742.770€.

When comparing the patients admitted only once to those with multiple admissions, those with multiple admissions are older 8.7 years on average ($p<0.001$), have more chronic diseases (1.4 on average – $p<0.001$) over a higher number of body systems ($p<0.001$), and on average, stay longer in the hospital (0.79 days on average – $p<0.001$).

When looking at this phenomenon from a geographic perspective we found significant variations between the Portuguese districts. There are nine districts with a percentage of multiple admissions for ACSC within 1.6 percentage points of the national average (30.4%), seven other have a lower percentage (minimum is 21.27%) and two have higher percentages (35.42% and 34.28%). These results do not account for population characteristics.

Discussion: Having a deeper knowledge of the admissions for ACSC allows a more insightful planning

of interventions and health policies. Knowing that older and more complex patients are more often admitted for ACSC allows for targeted interventions. However, should this be the target for the interventions? When prioritizing interventions the potential of improvement is always one of the most relevant perspectives, knowing that these patients will require higher attention from the providers in order to avoid their admission will lead to question the cost-effectiveness of the necessary interventions. Which is more cost-efective, the early intervention on preventing admissions for ACSC or targeting the pyramid's top higher users?

Conclusion: The multiple admissions for ACSC are an important phenomenon in Portugal. They occur in older patients with more chronic diseases, more often with heart failure and COPD. These characteristics may suggest the need for targeted and/or priority intervention.

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