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**The impact of chronic conditions on hospitalization activity: the Portuguese NHS case**Jose Lemos<sup>1</sup><sup>1</sup> Faculdade de Economia da Universidade Nova de Lisboa, Lisbon, PORTUGALContact: [botelhodelemos@yahoo.co.uk](mailto:botelhodelemos@yahoo.co.uk)

**Objectivos (Objectives):** The objective of this paper is to assess how relevant chronic conditions, in this case, diabetes, hypertension, stroke and COPD are evolving in the hospitalization activity of SNS hospitals and their respective impacts.

**Metodologia (Methodology):** Data was collected from the DRG database of ACSS that collects all records of hospitalization activity, for the study it was considered production from 1994 to 2008. The total sample has 60 hospitals. The first part of the analysis presents the evolution of relevant time series, for the period of 1994-2008, both in absolute terms and in relative terms, these are the evolution of hospitalization days, the evolution of the number of episodes, the mean hospitalization time per episode and emergencies admissions evolution. The second part of the analysis presents an econometric model for each of the four conditions, with the objective to estimate the factors that influence hospitalization duration per episode. The estimation method was the panel least squares, all models were estimated with a trend, and it was considered fixed effects in the cross sections. Episodes were identified in the database according to their respective DRG. After the estimation, it is performed a simulation for each condition which consists in the measurement of the direct impacts, which are reflected by the increase/decrease in the number of cases and the indirect impacts that are reflected by augmented/diminished hospitalization durations due to more or less hospitalization episodes.

**Resultados (Results):** Hypertension is having less weight on the hospitalization activity, its relative importance, in terms of total episodes decreased by 75,94%. An increase in 10% in the number of hospitalization admissions would raise costs in € 106.974, the efficiency effect would account for a reduction of € 16.823 from the initial € 123.797 of direct effects. Stroke, has having less 54,97% in relative importance. An increase on average of 10 cases in all hospitals would increase direct costs by € 2.820.595, that would be reduced by the efficiency effect of € 222.793. Diabetes also had its relative importance decreased by 50,95%. An increase on average of 10 cases in all hospitals would cost more € 2.868.205, with indirect effects representing € 127.161 from these cost. COPD saw its relative importance increased by 74,43%. A reduction of 10% in hospitalization cases would lead to a saving of € 4.177.530, from these savings, € 220.454 would be from indirect effects.

**Conclusões (Conclusions):** All conditions expect COPD saw its weight on hospitalization activity decrease, but these results call the attention not only for the importance of controlling COPD, but also the importance of prevention, as except in the case of stroke, hypertension and diabetes are having growing incidences. The simulations that were presented in the results section can give an order of magnitudes of the cost that SNS would bear if hospitalization cases increase, which in the case of diabetes and stroke are not negligible. In the case of COPD is demonstrated that a reduction by 10% in the number of hospitalization cases would allow a saving of more than € 4 million.