

ID: 679783

## Explaining variations in waiting time for elective surgery in Portugal

J. Perelman, C. Mateus, Escola Nacional de Saúde Pública, Universidade Nova de Lisboa, PORTUGAL;

### Objetivos (Objectives):

Long waiting times for elective surgery are considered as one of the major challenges faced by the Portuguese NHS and generally of all NHS-type health care systems. Despite the large number of studies in this field, the literature remains poorly conclusive about the causes of waiting times with a consequent indeterminacy about the most effective policies. In the present study, we seek to identify the explanatory factors of variations in individual waiting times for elective surgery in Portugal focusing on both supply-side and demand-side indicators. This analysis also allows discuss the equity issue in waiting times through distinguishing “fair” and “unfair” determinants of variations, and the ability of policies to produce uniform results among heterogenous institutions and individuals.

A new management system for waiting lists was implemented in Portugal in June 2004 which included a maximum 9-months waiting time guarantee (MWTG) and a prioritization of patients according to clinical criteria. The MWTG aimed at diminishing the risk of reduced benefit of treatment and lengthy pain while the prioritization aimed at improving the equity and efficiency of the system through treating first those with higher needs. Then, the MWTG was expected to redistribute from high-capacity to low-capacity hospitals since the patient was automatically transferred to another hospital after 9 months in case she had not been treated yet. However, although preliminary evaluations showed a decrease in waiting times, they also revealed the persistent variations between patients on the list.

### Metodologia (Methodology):

To perform our analysis, we use data on waiting lists for elective surgery procedures at all NHS Portuguese hospitals between the 31st of December 2007 and the 31st of December 2008 (179,345 patients). This list includes the patients treated during the year 2008 and those still waiting to be treated by the 31st of December 2008. Waiting time is analyzed using a piecewise-constant exponential model, which allows accounting for censoring (those still waiting by the 31/12/2008) and is more flexible than parametric survival models. Demand explanatory factors include the patient’s age, her priority level, the pathology and treatment required. Supply factors include the hospital status (academic, private or public management), occupancy rate, capacity (FTE physicians, surgeons and nurses) and degree of competition in the area.

### Resultados (Results):

We first observe that “priority” patients wait significantly less than “non-priority” ones. Though, “high-priority” patients are not systematically admitted earlier than “priority” ones. On the meantime, the proportion of non-priority patients remains constant in the list

(we do not observe any decrease in new low-priority patients in the list neither an increase in low-priority patients getting out of the list before intervention). Meanwhile, other patient's characteristics are significantly associated to waiting times, which are not related to clinical needs. In particular, gender is significantly associated to waiting times for a series of surgical interventions. We also observe huge disparities according to the patient's area of residence for all interventions, which do not decrease over time. Although the hospital status is not significant, other hospital characteristics appear to positively influence waiting times, namely the high occupancy rate and the low degree of hospital concentration in the area.

**Conclusões (Conclusions):**

Our analysis indicates that variations are related to both supply and demand factors. Hence, even if the MAWT was successful in reducing waiting times, this success was certainly not uniform across institutions and patients. Also, these variations question the consequences in terms of equity of the reform, as most of the sources of variation are unrelated to patients' needs.