

"Can we measure hospital quality from physicians' choices?"

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Abstract

In this paper, we propose an alternative methodology to rank hospitals based on the choices of Medical Schools graduates over training vacancies. We argue that our measure of relative hospital quality has the following desirable properties: a) robustness to manipulation from the hospital's administrators; b) comprehensiveness in the scope of the services analyzed; c) inexpensive in terms of data requirements, and d) not subject to selection biases. Accurate measures of health provider quality are needed in order to establish incentive mechanisms, to assess the need for quality improvement, or simply to increase market transparency and competition. Public report cards in certain US states and the NHS ranking system in the UK are two attempts at constructing quality rankings of health care providers.

Although the need for such rankings is widely recognized, the criticisms at these attempts reveal the difficulties involved in this task. Most criticisms alert to the inadequate risk-adjustment and the potential for perverse consequences such as patient selection. The recent literature, using sophisticated econometric models is capable of controlling for case-mix, hospital and patient selection, and measurement error. The detailed data needed for these evaluations is, however, often unavailable to researchers. In those countries, such as Spain, where there is neither public hospital rankings nor public data on hospital output measures such as mortality rates our methodology is a valid alternative. We develop this methodology for the Spanish case.

In Spain graduates choose hospital training vacancies in a sequential manner that depends on their average grade. We have data on the sequence of choices made by graduates from 1995 to 2000. We complement this information with available data on hospital and graduates characteristics. Our framework relies on three assumptions. First, high quality hospitals provide high quality training. Second, graduates are well informed decision makers who are well qualified to assess hospital quality. Third, they prefer to choose a high quality vacancy rather than a low quality one *ceteris paribus*. If these assumptions hold, then the first physicians to choose are likely to grab the best vacancies while the ones who choose last are stuck with the worst available. Thus, it is possible to infer from physicians' choices quality differentials amongst hospitals. We model the physician's decision as a nested-logit a la McFadden. Unlike in standard applications of McFadden's model, in our application the choice set is not constant across physicians but it shrinks along the sequential hospital choice process.