

“Opening the black-box”: what can be learned from a disease-based approach?

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ABSTRACT

Policy makers are wrestling with the question of how to improve the performance of health care systems; choosing levels, methods of funding and mix of services. Meanwhile, there is great variation in these arrangements across countries and little understanding as to how this might impact performance. The purpose of this study is to address this gap through a disease-based approach using micro data. The study examines precisely how variations in diagnosis and treatment of certain diseases may be influenced by institutional incentives, and explores what the consequences are in terms of costs and health outcomes. The study focuses on diseases of high prevalence, and high cost, which disproportionately affect older age groups. The presentation will build on the results available for three of the diseases analysed within the project (Ischaemic Heart Disease, Breast Cancer, Stroke).

Preliminary results show striking differences across countries for all diseases in terms of the diffusion of technologies. The diffusion of medical knowledge is not enough to explain trends in treatment patterns, even amongst developed countries. This factor does not automatically ensure diffusion of the treatment, even if it plays a significant role. The less expensive medical discoveries seem widely diffused, whereas those involving expensive high technologies often face economic constraints. These are linked to the provider-payment incentives and the institutional characteristics of health care systems. As a result, levels of resources employed in health care systems vary more according to supply incentives than to pure epidemiological "demand" patterns.

However, epidemiology is not "exogenous" to the health care systems, as epidemiological trends are themselves shaped by economic factors: they can be influenced by preventive and diagnostic policies which are themselves subject to health policy and economic factors. Some countries may achieve lower mortality and improved outcomes mainly by using upstream population-based approaches, whereas others experience an intensive use of high technologies.

Understanding possible causes of variation in survival rates is a sensitive issue, which needs to be addressed with caution, even when proper longitudinal information is available. The results tend to show that outcomes of medical interventions are sensitive to the treatment patterns, themselves influenced by medical and non-medical economic factors. However, socio-economic factors and a heterogeneous case-mix in patient populations may also play a role across countries.

One of the lessons learned from the project has been that the steering of modern health care systems requires fairly integrated information systems, including specific registries and surveys and large administrative datasets. The results also underline the importance of the age dimension in developed countries, as the relative generosity of health care systems often translate to the availability of treatments up to an advanced age.