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Health care utilisation in Europe: New evidence from the ECHP

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ABSTRACT

The ECHP is used to analyse health care utilisation care in Europe. We estimate a new latent class hurdle model for panel data and compare it with the latent class NegBin model and the standard hurdle model. Latent class specifications outperform the standard hurdle model and the latent class hurdle model reveals income effects that are masked in the NegBin model. For specialist visits, low users are more income elastic than high users and the probability of using care is more income elastic than the conditional number of visits. The effects of income on total use of GPs are mostly negative or insignificant but positive elasticities are found for Austria, Greece and, to a greater extent, Portugal. On the whole, richer individuals tend to use more specialist care, especially in Portugal, Ireland, Finland, Greece and Austria. Features of the health care systems of these countries may contribute to the observed inequities.

1. Introduction

European countries have over recent decades pursued a goal of universal coverage for physician services. In principle, appropriate health care should be available to all in need of it, either publicly provided at low or zero cost, or through private insurance plans for the better-off that are capable of affording such coverage. The goal of ensuring that utilisation of health care should depend only upon the need for such care has long been pursued in Europe. However, barriers to access still persist that may contribute to different levels of utilisation for individuals with equal need, depending on socioeconomic factors such as income or education. Health care systems in European countries differ substantially regarding aspects that may influence the extent to which health care utilisation is associated with socioeconomic characteristics, given the need for such care, such as: user charges in the public sector; the importance of the private sector; payment systems for doctors, which in some cases may create incentives to provide more extensive treatment to the better-off. For example, the existence of a large private sector where doctors are mainly paid fee-for-service may lead to large differences in utilisation by income because richer individuals are better able to afford private care and are also more likely to be insured against the costs of such care, and so they are more likely to opt for private care in order to side-step waiting lists. On the other hand, better-off patients will be more attractive to doctors who will have greater incentives to induce demand in the private sector. These effects may be exacerbated when doctors are allowed to work both in the public and the private sector, encouraging them further to transfer patients from the public to the private sector, when they are salaried in the former. Additionally,

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disparities in provision of services across regions may favour the better-off as these may not only be more likely to reside in better endowed regions but are also better able to afford the costs associated with covering the distances necessary to reach health care providers.

This paper models health care use – GP and specialist consultations – in Europe, paying special attention to associations with socioeconomic factors. Table 1 presents relevant features of the health care systems that may influence associations between health care use and socioeconomic factors, for the 10 countries under analysis. The differences in the characteristics of health systems are noticeable. First, despite the near universal coverage of the population for physician services, we can see that in some countries the type and degree of coverage differ substantially across groups of individuals. Large proportions of the Dutch and Irish populations, those with sufficiently high incomes, are privately rather than publicly insured,[1] while in most other countries public coverage is close to universal. In these cases, the degree of coverage can still vary if some individuals are also covered by private insurance plans purchased individually or provided by employers. High-income individuals are more likely to purchase private health insurance, while enjoying in some countries partial deductions of insurance premiums from taxable income (e.g., Portugal and Spain, Van Doorslaer et al., 2004b; Oliveira and Gouveia Pinto, 2005). Additionally, occupation-based insurance schemes like those existing in Spain (special regime for civil servants) and in Portugal (private and public sub-systems) provide more extensive coverage to some groups, which in Portugal have higher levels of education, income and self-assessed health (Oliveira and Gouveia Pinto, 2005). Regional disparities in the provision of health care services may also arise in most countries analysed here, whose regions enjoy some degree of autonomy in the organisation and or financing of health care (Van Doorslaer et al., 2004b). On the other hand, features such as free health care at the point of delivery or positive descrimination of deprived individuals in some countries are expected to promote more equitable use of health care services. Some public systems however charge copayments for doctor consultations, like Austria, Belgium, Finland, Italy (for specialists) and Portugal. The remuneration systems for doctors vary somewhat across these countries but, on the whole, they are mainly salaried in the public sector and paid fee-for-service in the private sector, except for Denmark, Italy and The Netherlands, where GPs are paid mainly by capitation, and Greece where it is common even for salaried doctors in the public sector to receive informal payments (Van Doorslaer et al., 2004b). There are therefore incentives for doctors to work privately instead of or in addition to their public employment, which is allowed in all countries but Belgium, although restrictions exist in some countries. Portuguese NHS doctors earned in 1993 less than half of the EU average, while private services were charged on average about 30% higher than in the EU, which has also encouraged doctors working in both sectors to transfer patients from the public to the private sector (Oliveira and Gouveia Pinto, 2005). Given substantial differences in their health systems, it is likely that these European countries differ in the degree to which utilisation of health care is determined by socioeconomic factors, over and above the need for such care. It is also to be expected that different groups of individuals are affected differently by these factors, and that these play different roles on the decision to seek medical care (mostly taken by the individual) and on the decision regarding the subsequent number of visits (taken jointly by the patient and the doctor).

We use a comparable panel data set across countries, the European Community Household Panel User Database (ECHP-UDB), covering the period 1994–2001. Jiménez-Martín et al. (2002) use the first three waves of the ECHP to model specialist and GP visits in 12 European countries, Van Doorslaer et al. (2002, 2004a) provide cross-country comparisons of socioeconomic inequality and inequity in the use of the same two types of doctor, using the third wave. These studies use cross-section econometric methods to model the number of visits. The major contributions of the present study arise from the fact that we are now able to use the full ECHP dataset. Furthermore, we exploit the panel feature of the data and so the possibility to control for individual unobserved heterogeneity. An extension of the latent class panel data hurdle model (Bago d'Uva, 2006) that allows for correlated individual effects is estimated for the number of GP and specialist consultations, using all waves of the ECHP for 10 countries. This approach enables the analysis of the determinants of health care in different parts of the distribution of the number visits, as well as for different types of individuals. We show that the new model performs better than standard models and is able to provide different insights into the determinants of health care use.

Many studies of health care use have been motivated by the aim to test for and to measure the extent of horizontal inequity. The effect of income on health care utilisation, conditional on need factors, is key to the analysis of socioeconomic inequity, either via the computation of income-related inequity indices (e.g., Van Doorslaer et al., 2004a; Van Ourti, 2004), or as a tool to test for inequity in the delivery of health care (this is the approach followed by Gerdtham, 1997; Abasolo et al., 2001, who interpret the significance of socioeconomic variables, conditional on need, as departures from the null hypothesis of no horizontal inequity). Using decomposition analysis, Van Doorslaer et al. (2004a) find that, besides income, education is the most important non-need factor contributing to pro-rich inequity in specialist visits, and that low levels of education provide an even greater contribution to pro-poor inequity in GP visits than income itself. In this study, we analyse the effects of income and education, conditional on morbidity indicators and other sociodemographic factors, on the decision to seek medical care and on the decision regarding the subsequent number of visits, for different types of individuals.

Riphahn et al. (2003) note the importance of accounting for individual unobserved heterogeneity, as unobserved individual-specific characteristics, such as attitudes towards health care, preferences, risk aversion, genetic frailty and morbidity, influence health care demand. Panel data methods have however seldom been used in empirical modelling of health

[1] Since January 2006, there is a new health insurance system in The Netherlands which mandates that all residents, and not just the ones with sufficiently high incomes, are privately insured.