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Patient switching in general practice☆

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ABSTRACT

Patients switching physicians involves costs to the patients because of less continuity of care. From a theoretical model we derive that inferior physician quality as perceived by patients, implies patient shortage for the physician and more patients switching physicians. By means of a unique panel data set covering the entire population of Norwegian general practitioners (GPs) and estimation methods that adjust for potential endogeneities, we find that the occurrence of patient shortage increases the proportion of patients switching physicians by 50%. A competing hypothesis that GPs with a shortage of patients experience less switching because of superior access is rejected by data. To assist patients in making informed decisions, we suggest that the number of switches a physician experiences should be made public.

1. Introduction

That continuity of care is shown to contribute positively to patients' outcomes from treatment (Hjortdahl and Lærum, 1992; Schers et al., 2004), is an important reason why continuity of care is stated as an important health policy goal. The fact that some physicians have a high turnover of their patient population implies that patients experience less continuity of care. Hence, patients switching physicians involve costs to the patients because of less continuity of care. This study researches physician characteristics that contribute to the proportion of patients switching physicians.

Data from the Norwegian regular general practitioner (GP) scheme (patient list system) introduced in 2001 are employed. The scheme implies that all residents are offered registration with a general practitioner, and every general practitioner is given a list of patients to serve. Among both residents and general practitioners, there is close to 100% participation in the system. Some GPs have considerably shorter lists than the maximum lists they state to the health authorities. These physicians experience a shortage or deficit of patients.

Patients may perceive deficient physician quality, and inferior quality is then the reason why some GPs have fewer patients listed than they would prefer. Since inferior quality is likely to encourage more patients to change physicians, there is also a positive relationship between patient shortage and patients switching physicians. However, a shortage of patients and spare capacity may also imply less waiting and better access when services are needed. Hence, patients may switch from GPs with a maximum patient list to GPs with a shortage of patients to obtain better accessibility. In this case patient shortage is unlikely to be a stable phenomenon.

From a survey of a representative sample of Norwegian citizens, Grytten and Sørensen (2009) find that patients listed with GPs who experience a shortage of patients are more satisfied with

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the waiting time they experience compared to patients who are listed with GPs with sufficient number of patients. This result is in accordance with Lurås (2007). However, she also finds that even if these patients are satisfied with the waiting time, being listed with GPs experiencing a deficit of patients adds to the probability of being dissatisfied with the physician's medical skills, interpersonal skills, referral practice, and consultation length. Hence, viewed together, it is not clear that satisfaction with accessibility can outweigh dissatisfaction with these other characteristics. Neither of the authors tests whether patient shortage has positive or negative consequences for the proportion of patients who are switching physicians. Hence, the contribution of the present paper is to take the research further by actually doing the empirical test on a comprehensive data set that contains the entire population of Norwegian GPs.

Even if patients are overall less satisfied with GPs who experience a shortage of patients, it is not clear that dissatisfaction expressed in a survey carries over to decisions to actually change physicians. According to Hirschman's (1970) terms, while dissatisfaction is the "voice," switching is the "exit" and requires an alternative provider that is considered better than the present one.

The literature on switching costs suggests that dissatisfaction may not result in an actual change of physicians. Klemperer (1995) summarizes some reasons. Of particular importance for our issues are the following:

- Transaction costs of switching suppliers: A person who considers switching must collect information about available physicians in his or her municipality and also perform the administrative work related to the actual switching.
- Costs of learning to use new brands: The present physician would possess much of the patients' medical history, while a new physician would need to acquire much of this information from the patient. Similarly, a relationship of mutual trust between the physician and patient requires investments from both sides.
- Psychological cost of switching or non-economic brand loyalty: Some patients would perhaps feel that they would disappoint their present physicians if they switch.
- Uncertainty of the quality of untested brands: Physician services are experience goods in the sense that the quality for the individual patient is not actually revealed before an episode of illness occurs. This means that even with an extensive market search before making a switch, there is always uncertainty about the quality of an untested physician.

In fact, there is only a small amount of empirically oriented literature regarding patients switching physicians. Harris (2003) surveys a random sample of US citizens between the ages of 21 and 64 with employer-related health benefits, drawn from a nationally representative panel of households. She concludes that despite predictions of the increasing importance of consumer choice in shaping the healthcare delivery system, patients are passive healthcare consumers of physician services (see also Salisbury, 1989). From Lurås (2007), we suspect that people's choice of switching their regular GP is related to dissatisfaction with the existing physician. This suspicion attains support in the medical literature (see for instance Gandhi et al., 1997; Wolinsky and Steiber, 1982), and is worth a more detailed investigation. Our approach offers hypotheses derived from a theoretical model with exogenous characteristics of physicians as perceived by patients, a unique nationwide panel data set at the physician practice level of patients switching physicians, and econometric methods that allow for endogeneities in the analysis of panel data.

For econometric analysis, the Norwegian GP system has several advantages. First, there is close to 100% participation in the system both among residents and GPs. Hence, we do not need to pay attention to possible self-selection in the system. Second, each GP's population of patients is known. Hence, we know whether a great number of services provided reflect many patients in the practice or the provision of many services to each patient. Third, fees (including the magnitude of co-payments) are negotiated between the state and the Norwegian Medical Association. Hence, fees are fixed for the individual GP. Fourth, GPs communicate their maximum list size to the health authorities, making it possible to calculate whether a GP experiences patient shortage or not. The fact that GPs determine the upper bound of their list size corrects for differences in patient morbidity among physicians.

Section 2 presents the theoretical model that derives how patient shortage is related to patients switching physicians. We distinguish between two types of physicians according to how they are perceived by patients. The popular type is assumed to have a smaller proportion of patients who want to switch physicians than the less popular type. We consider a steady state, i.e., the number of patients continuously admitted to a list is equal to the number of patients continuously switching out. We show that a high proportion of patients switching out of the list are positively related to experiencing patient shortage. We end the theory section by indicating that we also intend to study empirically whether or not an increased service provision works in the direction of a reduction in the proportion of patients switching away from physicians who experience a shortage of patients. One reason might be that additional services improve accessibility which may compensate for a physician's less favorable characteristics.

In this research we are not interested in exploring whether or not physicians who experience a shortage of patients in general provide more services to their patients than physicians with a sufficient number of patients. In the literature, conflicting results from studies of this issue have emerged (see for instance, Grytten and Sørensen, 2008; Iversen, 2005). We are only interested in studying whether or not the proportion of patients switching physicians depends on the volume of services they are offered given that they are listed with a physician who experiences patient shortage.

Section 3 presents data and some descriptive statistics. We have access to register data on patient switching, and we reveal patients' preferences by studying actual patient switching at the physician practice level. Section 4 presents empirical methods and results. In addition to studying the effect of GPs' characteristics, we explore the extent to which physicians experiencing a shortage of patients manage to compensate for patient switching by providing more health services to their patients. Our results show that patient shortage results in more patients switching physicians, and also that an increased service provision has a very small impact on the number of patients who decide to switch from a physician who experiences patient shortage. We reject the hypothesis that physicians with a shortage of patients experience less patients switching physician because they offer better access than physicians with full lists. In Section 5 we conclude that a higher level of service provision does not seem to compensate for characteristics of physicians that the patients dislike. Policy implications of the findings conclude this research.

2. Theoretical framework

We assume a regular general practitioner (GP) scheme with each GP having a list of patients. Patients are allowed to switch physicians at certain intervals. The probability that a patient switches GPs, $p(k, \theta)$, is assumed to depend on the physician's exogenous characteristics, θ, and on the number of services being provided at the GP's discretion, $k \geq 0$. Physicians' characteristics are observ-