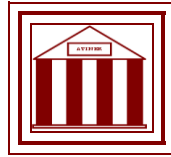


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Patients in a Dutch Hospital**

Christian Lako

Associate Professor

Radboud University Nijmegen

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Hans Dortant, M.Sc

Radboud University Nijmegen

The Netherlands

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Athens Institute for Education and Research
8 Valaoritou Street, Kolonaki, 10671 Athens, Greece
Tel: + 30 210 3634210 Fax: + 30 210 3634209 Email: info@atiner.gr
URL: www.atiner.gr

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**Do Patients use Quality Information in their Hospital Choice?
Results from a Survey among 479 patients in a Dutch Hospital**

Christian Lako
Associate Professor
Radboud University Nijmegen
The Netherlands

Hans Dortant, M.Sc
Radboud University Nijmegen
The Netherlands

Abstract

This paper describes the outcomes of a study into the use of quality information in hospital choice. The data used derives from a survey conducted among 479 patients in a Dutch hospital. Our study shows that hospital choice is not a decision-making process in which patients are the rational consumers. It indicates that 5.2% of the respondents had actually seen quality information but that only 4% had used it in their hospital choice. The role of the GP is much more important. The data analysis shows that compared to users non-users are more frequently female, older, have relatively more trust in their GPs and tend to more often distrust quality information. The conclusion is that hospital choice is a decision-making process that depends very much on general practitioners playing an important role in this same process.

Keywords: hospital choice, quality information, GP, survey

Introduction

It is often believed that if people are aware of the availability of useful information they will automatically make use of such information. It has, however, been shown that this is not always the case. In Western countries there is increasing support for demand-driven care. In health systems with demand-driven care patients are expected to make informed decisions and are given the required tools to do so. Evidence on the success or failure of demand-driven care is mixed (Lako & Rosenau, 2009). This also extends to hospital choice. It is not enough to offer freedom of choice. Quality information and outcomes should be made available to patients. It has been suggested that this would contribute to better quality of care (Berwick, 2003). Such a situation would require ready access to performance data so that patients can choose the best hospital. In turn, hospitals are encouraged to deliver excellent quality of care as patients might otherwise opt for other hospitals.

Dutch experience with hospital choice reflects the extent to which individuals are critical consumers. Dutch patients have not really displayed active use of quality information in their hospital choice (Dijks-Elzinga et al. 2010; De Groot et al. 2011; Dautzenberg et al. 2012; Wolters & Lako, 2012). Surveys in other countries reveal the same outcomes (Schneider & Epstein, 1998; Marshall et al. 2000; Schauflier & Mordavsky, 2001; Magee et al. 2003; Fung et al, 2008). Views on demand-driven care are not sufficiently supported by empirical research. We strive to contribute to the growing body of literature criticizing this theory. We therefore argue in favor of the benefits of an empirical test of the theory. To illustrate the benefits of this approach, several assumptions underlying the theory on demand-driven care will be described. These assumptions featured in the survey carried out among 479 patients attending hospital clinics within departments at a Dutch hospital. The outcomes presented in the statistical analysis are designed to establish precisely which variables are related to the minimal use of quality information. The article finishes with conclusions and recommendations concerning hospital choice.

There are several factors that may contribute to the lack of sufficient confirmation of the theory on demand-driven care. Important assumptions underlie this demand-driven model. From research it can be concluded that these assumptions are not always valid. The assumptions in question relate to competition, variation in supply, quality of information, the exit option and to the voice option (van 't Hoog, 2013).

Assumptions surrounding competition pertain to questions about the sufficiency of providers and the incentives for market participation. Lack of competition results in less freedom of choice for patients. The same applies to regulations limiting new clinic access to the hospital market.

It is presumed that lack of variation in supply restricts freedom of choice. Is there a real choice for patients and do providers really respond to the needs of patients coming to their hospitals? These are questions relating to variation and response.

Assumptions concerning the quality of information are even more important.

Often one assumes that patients are aware of differences in quality of care. According to one systematic review this assumption is not valid (Faber et al. 2009).

Secondly, it is generally assumed that patients favor quality information (Kolstad & Chernew, 2009). However, other studies reveal that only a minority is interested in comparative data (Dijks-Elsinga et al. 2010).

In the third place, there is the assumption that quality information on health plans, hospitals, and physicians actually exists whilst hospital performance data is simply not always available. The fourth assumption is that performance information, if it exists, will be made available to the patient for his or her use when making health care choices. This is not true. Information is not free. Organizations sometimes charge several euros for the release of performance information.

The fifth assumption is that the form in which that information is made available is understandable and can be applied to the health care choices that the patient is called upon to make. Research reveals that this is not always the case. Tables with information published in quality bulletins are not easy to interpret.

The sixth assumption is that the patient is qualified to use the performance information that is available (Lako & Rosenau, 2009). The reality is that patients are not always so sure of matters and so they sometimes turn to others for advice rather than studying the performance data.

The seventh assumption is that the patient values the performance information. This is not always true. Studies done by Schwartz (2005) have shown that increasing consumer choice by offering more information leads to stress and disappointment.

The eighth assumption is that patients trust performance information. Again, this is not always true. Data are distrusted, but so are sources of information.

The ninth assumption is that patients do not have criteria other than performance data. Evidence shows that they actually do have other criteria in mind. It has, for instance, been suggested that advice obtained from GPs is given greater weight in decision making than performance data.

Finally, it is assumed that patients will use performance data when making their health choice. Numerous studies show that only a minority actually use the performance data in their hospital choice (Werner & Asch, 2005).

Exit and voice theory suggests that patients should be able to terminate their relationship with a physician, to leave the hospital and to choose another hospital in order to possibly further the quality of care. The reality, though, is that procedures in hospitals tend to decrease the exit option.

Much the same applies to the voice options. It is often believed that the opportunity in a hospital for patients to put forward their complaints might simultaneously further the quality of care. In practice patient rights are

sometimes restricted in hospitals which does not contribute to better quality of care (Van 't Hoogt, 2013).

This paper is designed to study why Dutch patients do not use quality information. What factors can actually explain the differences between those using performance information and those not using such information?

Various factors including gender, age, education level, health status, trust in the GP, perceived differences in quality, trust in the reliability of information, awareness of freedom of choice, self-efficacy and time might explain the differences between these categories of patients.

The Data

The data material used for testing the hypotheses consists of a survey, the data for which was collected in 2013 by the second author. Out of the 585 patients approached 479 participated. This resulted in a response rate of almost 82%. Logistic regression analysis is multivariate analysis and that is very appropriate to this study design as it may help to detect factors related to the use of quality information. It has been used to reveal the factors that can explain the differences between users and non-users of quality information. Data was analyzed with SPSS.

Results

Table 1 presents the characteristics of the participating patients. A comparison with the national population visiting a hospital in 2012 shows that the sample is representative except for age. This is not surprising; those below 20 years of age were under-represented.

Table 1. *Characteristics of the Patients (n=479)*

Variable	%
<i>Gender</i>	
Male	41.1
Female	58.9
<i>Age</i>	53.2 (mean)
<i>Education level</i>	
1 (lowest)	10.6
2	45.5
3	20.9
4	15.0
5 (highest)	7.1
<i>Health status</i>	
Very poor	0.4
Poor	7.7
Reasonable	34.7
Good	48.8
Very good	7.7

Table 2. *The Patients and their Tendency to Look at Quality Information*

Tendency	Frequency	%
1. Weak	10	2.1
2.	46	9.6
3.	56	11.7
4.	62	13.0
5. Strong	84	17.5
6. Missing	221	46.1
Total	479	100.0

Table 2 reveals that only a minority of the patients tend to look at the quality information when it is presented to them.

Table 3 presents interesting outcomes for the patients who did not use quality information in their hospital choice. It presents the factors that these patients report as decisive in their hospital choice.

They sometimes listed additional factors. In total 599 answers were given. Previous experience and the opinions of people's GP were frequently mentioned. The reputation of the hospital as derived from quality information was less frequently given as a factor. Somewhat more than 5% listed other factors. It might be quality information although we have no confirmation on that.

Logistic regression analysis was finally performed to uncover which variables explain the differences between users and non-users of quality information.

From Table 4 it can be seen that compared to users non-users have been shown:

- to be more frequently female
- to be relatively older
- to trust GPs relatively more
- to distrust more often quality information

Table 3. *Decisive Factors in Hospital Choice Presented by Patients not Using Quality Information*

Factor	%
Opinion of the GP	20.9
Previous experience	32.2
Short distance	12.2
Opinion of friends	3.8
Reputation of the hospital	6.2
Waiting list	4.3
Small scale	2.3
Reimbursement	4.3
Trust in personnel	7.3
Not a university hospital	1.0
Other	5.5

No definite relationships between the patient's education level, health status, perceived differences in quality, awareness of freedom of choice, self-efficacy, time and the utilization of quality information could be established.

Table 4 shows how the impact of four factors in a multivariate analysis remains significant and continues to affect the utilization of quality information even when controlled for the impact of the other factors. Twenty percent of the variation in the use of quality information (Nagelkerke pseudo R²) can be explained by these factors.

Table 4. *Regression Analysis on the Utilization of Quality Information*

Variable	B (S.E.)	Exp (B)
Gender	-1.150* (0.483)	
Age	-0.044* (0.013)	0.317
Education level	-0.340 (0.242)	0.957
Health status	-0.193 (0.314)	0.712
Trust in GP	0.762* (0.377)	0.825
Perceived differences in quality	-0.222 (0.248)	2.143
Trust in reliability of information	0.970* (0.306)	0.801
Awareness of freedom of choice	0.326 (0.646)	2.639
Self-efficacy	0.015 (0.194)	1.386
Time	0.068 (0.202)	0.985
Constant	-4.281	1.071
Chi2	30.687	
Nagelkerke pseudo R2	0.205	

*= significant, p<0.05

Discussion

Every empirical study involves limitations and this study is no exception. Certain caution is thus required when interpreting the results. The sample does not represent all Dutch patients visiting a hospital since younger people are somewhat underrepresented in this study. Data collection via a self-administered questionnaire is assumed to have resulted in less bias. The risk of the social desirability of answering questions was reduced by utilizing this type of self-administered questionnaire. In person, one-to-one interviews with patients would probably have resulted in greater social desirability effects. One might also question whether or not the patients included in our study were likely to have been referred by a clinician from another hospital, but we sampled patients with non-acute ailments to reduce this bias (Lako & Rosenau, 2009). It might well be that in general the patients in our study did not behave as rational consumers since their perception of quality and the awareness of freedom of choice were not related to the utilization of quality information.

The findings suggest that the use of quality information in hospital choice is restricted among patients. Possessing more trust in the GP seems to be related to making less use of quality information. A recent Dutch study shows that some GPs discuss quality information with patients who seek hospital choice advice (Ikkersheim & Koolman, 2013). This might stimulate the use of quality information among patients in the near future. It has been shown that the reliability of quality information is actually important. Some patients do not trust such information and that group has proven to make less use of quality information than those trusting the quality information. Quality information use is finally less prevalent among female and elderly patients as they generally tend to trust their GPs more.

Our study suggests that the role played by the GP in the process of hospital choice is much more important than quality information.

It may be concluded that hospital choice is a decision-making process that is heavily dependent on general practitioners playing an important role in this process (Lako & Rosenau, 2009). An important factor in the restriction of the use of quality information alongside the role of the GP might eventually be the development of a greater role for health insurers in this process. In the Netherlands health insurers are not required to have contracts with all providers offering a health service. They may, however, encourage patients to adhere to a list of preferred hospitals in the future.

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