

Why don't the Dutch use quality information in their hospital choice? Results from a survey among 479 patients from a Dutch hospital

Christiaan Lako, Hans Dortant

Radboud University Nijmegen, Nijmegen, The Netherlands; c.lako@fm.ru.nl

Received 14 October 2013; revised 25 November 2013; accepted 18 December 2013

Copyright © 2014 Christiaan Lako, Hans Dortant. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. In accordance of the Creative Commons Attribution License all Copyrights © 2014 are reserved for SCIRP and the owner of the intellectual property Christiaan Lako, Hans Dortant. All Copyright © 2014 are guarded by law and by SCIRP as a guardian.

ABSTRACT

Information about the quality of hospitals is becoming increasingly available for patients in the Netherlands. Consequently, patients are able to make an informed hospital choice. However, previous research reveals that patients do not or barely use quality information in their hospital choice. This is puzzling from the perspective of the demand-driven health care system, which considers patients as rational health consumers, capable of making independent choices. This article is meant to study why the Dutch patients do not use quality information. In order to answer this question, patients with non-acute ailments visiting the hospital clinics of several departments of a Dutch hospital were asked to fill in a self-administered questionnaire about their hospital choice and use of quality information. A total of 479 patients were included in the sample. The response rate was 81.9%. The results show that 5.2% of the respondents had actually seen quality information and 4.0% had used it in their hospital choice. Logistic regression analysis was carried out in order to explain why some patients use quality information and some do not. This analysis shows that nonusers compared to users are more frequently females, were older, have relatively more trust in their GP's and distrust quality information more often.

KEYWORDS

Hospital Choice; Quality Information; Survey

1. INTRODUCTION

The development of relevant information about the quality of hospitals increases. As a result patients are increasingly able to utilize this information in their hospital choice [1-5] (Marshall *et al.*, 2000; Lugtenberg & Westert, 2007; Dijs-Elsinga *et al.*, 2010; Marangh-van de Mheen, 2011; Wolters & Lako, 2012).

In the Netherlands (2003-2006) the Health Insurance Act (Zorgverzekeringswet) is grounded on a demand-driven health care system model. The patient is considered as a rational consumer being able to make independent decisions. This also concerns their hospital choice.

Offering freedom of choice however is not sufficient. The public release of performance data in the form of quality and outcomes information about hospitals and providers is deemed necessary [6] (Lako & Rosenau, 2009).

It is suggested that freedom of choice and public release of performance data will contribute to a better quality of care. The supply of performance data is supposed to enable the patients to determine the best hospital and to choose that hospital. Hospitals therefore need to deliver excellent quality of care as patients might opt for another hospital.

The Dutch experience on hospital choice reflects on the extent to which individuals are critical consumers, and on the nature and motives behind their decisions. Dutch surveys into hospital choice however reveal that patients do not or barely use quality information in their hospital choice [3,5,7,8] (Dijs-Elzinga *et al.*, 2010; De Groot *et al.*, 2011; Dautzenberg *et al.*, 2012; Wolters & Lako, 2012). Similar studies in other countries show the same outcomes [1,9-12] (Schneider & Epstein, 1998; Marshall *et al.*, 2000; Schauffler & Mordavsky, 2001; Magee *et al.*, 2003; Fung *et al.*, 2008). This indicates that the theory about demand-driven care is not sufficiently

confirmed by empirical research. In this article we aim to contribute to the growing body of literature criticizing this theory. To this end, we argue for the benefits of an empirical test of the theory. To illustrate the benefits of this approach, we identify several assumptions underlying the theory about demand-driven care. We use them in a survey among 479 patients visiting the hospital clinics of departments of a Dutch hospital. We then present the outcomes of a statistical analysis designed to answer the question what variables are related to the barely use of quality information. The article concludes conclusions and recommendations for hospital choice.

There are several explanations for the lack of confirmation of the theory about demand-driven care. Several assumptions underlie this demand-driven model and research shows that these assumptions are not always valid or even seldom valid. Assumptions can be divided into assumptions about competition, variation in supply, quality of information, the exit option and the voice option [13] (Van't Hoog, 2013).

Assumptions about competition refer to questions about sufficient providers and sufficient incentives for market participation. A lack of competition decreases the freedom of choice among patients. The same applies for regulations limiting the access of new clinics to the hospital market.

It is assumed that a lack of variation in supply restricts the 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 about variation and response.

Even more important are assumptions about the quality of information.

First, it is often assumed that patients are aware of differences in quality of care. A systematic review [14] (Faber *et al.* 2009) shows that this assumption is not valid.

Secondly, it is generally assumed that patients favor quality information [15] (Kolstad & Chernew, 2009). Other studies however reveal that only a minority is interested in comparative data [3] (Dijks-Elsinga *et al.*, 2010).

Thirdly, it is assumed that quality information about health plans, hospitals, and physicians actually exists. Performance data about hospitals 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 in making health care choices. This is not true. Information is not free. Organization sometimes charges 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 cannot be simply read.

The sixth assumption is that the patient is qualified to

use the performance information that is available [6] (Lako & Rosenau, 2009). Patients however are not so sure and sometimes turn to others for advice instead of using performance data.

The seventh assumption is that the patient values the performance information. This is not always true. Studies of [16] 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. This is not always true. Data are distrusted, but also the sources of information.

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

Finally, it is assumed that patients will actually use performance data in making their health choice. Numerous studies however show that only a minority actually use the performance data in their hospital choice [17] (Werner & Asch, 2005).

The theory about an exit option suggests that patients should be able to terminate their relationship with a physician, to leave the hospital and to choose another hospital. That might further the quality of care. Procedures in hospitals however mostly decrease the exit option.

The same applies for the voice options. The theory suggests that the opportunity in a hospital for patients to put forward their complaints might further the quality of care as well. Actually, these patient rights are sometimes restricted in hospitals. This does not favor the quality of care [13] (Van't Hoog, 2013).

The article is meant to study why the Dutch patients don't use quality information. What factors can actually explain the differences between those using performance information and those not using this information?

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

2. METHODS

2.1. Sample

In May 2013, a sample was drawn from patients who were seeking outpatient care from hospital-based clinics in a Dutch hospital in the Eastern part of the Netherlands. Some sought screening or testing that was too complicated to be performed in a doctor's office. Others were at the hospital for outpatient procedures. It was a convenience sample.

A total of 479 patients visiting the specified hospital clinics were included in the sample and were questioned

as to hospital choice and use of quality information. The response rate was 81.9% (n = 479). The sample was representative of the Dutch population visiting a hospital in 2012 except for age; not surprisingly, those less than 20 years of age were under-represented.

2.2. Questionnaire

Patients with non-acute ailments visiting the hospital clinics of several departments of a Dutch hospital including ENT, orthopedics and surgery were asked to fill out a short, self-administered questionnaire about hospital choice.

Respondents were queried about the utilization of quality information and whether this information was decisive for their hospital choice.

They were also asked about the details of their decision making process, especially regarding sources consulted before coming to the hospital. Patients were surveyed about the importance they attached to different types of information.

Information about several socio-demographic variables was also included in the questionnaire. It concerns age, education level, etc.

2.3. Data-Analysis

Data were analyzed with SPSS. Logistic regression analysis was performed to detect differences between nonusers and users of quality information.

Logistic regression analysis is a multivariate technique. It is very appropriate for our design.

3. RESULTS

In **Table 1**, characteristics of the patients who participated in the study are given. The sample was representative of the Dutch population visiting a hospital in 2012 except for age; not surprisingly, those less than 20 years

Table 1. Characteristics of the patients (n = 479).

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

of age were under-represented.

A considerable portion of the patients (44%) reported that they were not aware of the existence of quality information whereas almost 50% had heard about it. The remaining 6% of the interviewees did not answer the question. Only somewhat more than 5% (n = 22) of the patients had actually seen the quality information and 4% (n = 17) had used it in their hospital choice.

Table 2 presents outcomes for the patients that did not use quality information in their hospital choice. It shows the factors that these patients report as decisive in their hospital choice. They sometimes listed more factors. In total 599 answers were given. Previous experience and opinion of the GP have been listed frequently.

Logistic regression analysis was subsequently performed to uncover which variables explain the differences between users and nonusers of quality information.

From **Table 3** it can be derived that nonusers compared to users have been shown to:

Table 2. Decisive factors in hospital choice listed 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

Table 3. Regression analysis on utilization of quality information.

Variable	B (S.E.)	Exp (B)
Gender	-1.150* (0.483)	0.317
Age	-0.044* (0.013)	0.957
Education level	-0.340 (0.242)	0.712
Health status	-0.193 (0.314)	0.825
Trust in GP	0.762* (0.377)	2.143
Perceived differences in quality	-0.222 (0.248)	0.801
Trust in reliability of information	0.970* (0.306)	2.639
Awareness of freedom of choice	0.326 (0.646)	1.386
Self-efficacy	0.015 (0.194)	0.985
Time	0.068 (0.202)	1.071
Constante	-4.281	
Chi ²	30.687	
Nagelkerke pseudo R ²	0.205	

- Be more frequently females;
- Be relatively older;
- Trust GP's relatively or distrust GP's somewhat;
- Distrust quality information more often.

No 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.

4. DISCUSSION

Every empirical study involves limitations as does this study.

Some caution with the results is needed. The sample does not represent all Dutch patients visiting a hospital since younger people are somewhat under-represented in this study. Data collection via a self-administered questionnaire is assumed to have resulted in less bias. The risk of social desirability in answering questions has been reduced by the utilization of this type of self-administered questionnaire. In person, one-on-one interviews with patients would probably have resulted in more social desirability effects. One might also ask whether or not patients 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.

It might be that the patients in our study in general 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 patients without any trust in their GP tend to use more quality information than other patients. Written information is more important for them than personal information. The utilization of quality information is also more prevalent among those patients trusting their GP's completely. The data cannot reveal why they do so. It might be that their GP's suggest them to use the quality information. A recent Dutch study shows that some GP's discuss the quality information with their patients seeking advice in hospital choice [18] (Ikkersheim & Koolman, 2013).

It has been shown that the reliability of the quality information is actually important. Some patients do not trust this information and they have proven to use less quality information than those trusting the quality information. The use of quality information is finally less prevalent among female and elderly patients as these patients generally trust their GP's more.

REFERENCES

- [1] Marshall, M.N., Schelleke, P.G., Leatherman, S. and Brook, R.H. (2000) The public release of performance data: What do we expect to gain? A review of the evidence. *The Journal of the American Medical Association*, **283**, 1866-1874.
<http://dx.doi.org/10.1001/jama.283.14.1866>
- [2] Lugtenberg, M. and Westert, G.P. (2007) *Kwaliteit van de gezondheidszorg en keuze-informatie voor burgers*. Universiteitsdrukkerij, Tilburg.
- [3] Dijs-Elsinga, J., Otten, W., Versluijs, M.M., Smeets, H.J., Kievit, J., Vree, R., Made van der, W.J. and Marang-van der Mheen, P.J. (2010) Choosing a hospital for surgery: The importance of information on quality of care. *Medical Decision Making*, **30**, 544-555.
<http://dx.doi.org/10.1177/0272989X09357474>
- [4] Marang-van de Mheen, P.J., Dijs-Elsinga, J., Otten, W., Versluijs, M., Smeets, J., Vree, R., van der Made, W.J. and Kievit, J. (2011) The relative importance of quality of care information when choosing a hospital for surgical treatment: A hospital choice experiment. *Medical Decision Making*, **31**, 816-827.
- [5] Wolters, P.J. and Lako, C.J. (2012) Hoe kiezen patiënten een ziekenhuis? Een enquête bij twee poliklinieken. *Tijdschrift voor Gezondheidswetenschappen*, **90**, 45-50.
<http://dx.doi.org/10.1007/s12508-012-0024-x>
- [6] Lako, C.J. and Rosenau, P. (2009) Demand-driven care and hospital choice. Dutch health policy toward demand-driven care: Results from a survey into hospital choice. *Health Care Analysis*, **17**, 20-35.
<http://dx.doi.org/10.1007/s10728-008-0093-9>
- [7] de Groot, I.B., Otten, W., Smeets, H.J. and Marang-van der Mheen, P.J. (2011) Is the impact of hospital performance data greater in patients who have compared hospitals? *BMC Health Services Review*, **11**, 214-224.
<http://dx.doi.org/10.1186/1472-6963-11-214>
- [8] Dautzenberg, M., Weenink, J., Faber, M. and Ouwens, M. (2012) Kiezen borstkankerpatiënten voor kwaliteit? Borstkankerpatiënten over vergelijkende kwaliteitsinformatie borstkankerzorg. IQ Healthcare, Nijmegen.
- [9] Schneider, E.C. and Epstein, A.M. (1998) Use of public performance reports. A survey of patients undergoing cardiac surgery. *The Journal of the American Medical Association*, **279**, 1638-1642.
<http://dx.doi.org/10.1001/jama.279.20.1638>
- [10] Schaufli, H.H. and Mordavsky, J.K. (2001) Consumer reports in health care: Do they make a difference? *Annual Review of Public Health*, **22**, 69-89.
<http://dx.doi.org/10.1146/annurev.publhealth.22.1.69>
- [11] Magee, H., Davis, L. and Coulter, A. (2003) Public views on healthcare performance indicators and patient choice. *Journal of the Royal Society of Medicine*, **96**, 338-342.
<http://dx.doi.org/10.1258/jrsm.96.7.338>
- [12] Fung, C.H., Lim, Y., Matke, S., Damberg, C. and Schelleke, P.G. (2008) Systematic review: The evidence that publishing patient care performance data improves quality of care. *Annals of Internal Medicine*, **148**, 111-123.
<http://dx.doi.org/10.7326/0003-4819-148-2-200801150-00006>
- [13] Van't Hoogt, L. (2013) Onderwijs (education) on demand. MA Thesis, Nijmegen.
- [14] Faber, M., Bosch, M., Wollersheim, H., Leatherman, S. and Grol, R. (2009) Public reporting in health care: How

- do consumers use quality-of-care information? A systematic review. *Medical Care*, **47**, 1-8.
<http://dx.doi.org/10.1097/MLR.0b013e3181808bb5>
- [15] Kolstad, J. and Chernew, M. (2009) Quality and consumer decision making in the market for health insurance and health care services. *Medical Care Research and Review*, **66**, 28S-52S.
<http://dx.doi.org/10.1177/1077558708325887>
- [16] Schwartz, B. (2005) *The paradox of choice: Why more is less*. Harper Collins, New York.
- [17] Werner, R.M. and Asch, D.A. (2005) The unintended consequences of publicly reporting quality information. *The Journal of the American Medical Association*, **293**, 1239-1244. <http://dx.doi.org/10.1186/1471-2296-14-95>
- [18] Ikkersheim, D. and Koolman, X. (2013) The use of quality information by general practitioners: Does it alter choices? A randomized cluster study. *BMC Family Practice*, **14**, 95-101.
<http://dx.doi.org/10.1186/1471-2296-14-95>