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A MARKETING APPROACH FOR CREATING PATIENT ORIENTED PATHWAYS IN HOSPITAL SERVICES

ABSTRACT

Background: The patient's experience has become an important tool in health services management, reflecting a new habit in using marketing tools able to change the focus towards patient-oriented health care services. It was observed that the patient that leaves the hospital with a positive perception increases his compliance with care and is less likely to complain against the health care organization.

Objectives: The study aims to identify the main factors that affect patient experience with hospital services and if there are differences depending on whether they are hospitalized in medical, surgical or obstetrical, gynecological and pediatric hospital wards.

Methods: A random sample of patients was surveyed from Tuscan public hospitals by means of Computer Aided Telephone Interviews. A structured questionnaire was used to collect information related to patient experience with doctors, nurses, communication and discharge process. Two regression models were performed using as dependent variables the overall satisfaction with hospital experience and the willingness to recommend the hospital to friends or family's members.

Results: Patient satisfaction is consistently predicted by patients' perceptions across a variety of care domains, such as the physicians and nurses' attitudes, the ability of the hospital staff to work as a team and the communication process. Moreover, statistically significant differences were observed among patients in charge by medical, surgical and obstetrical, gynecological and pediatric hospital wards.

Conclusions: Results provide valuable information in order to improve the quality of hospital services and to make them more effective and patient centered. The study points out that doctors have a strategic role in patient experience with hospital services and that the collaboration between nurses and doctors is a crucial aspect to ensure the best possible care.

KEY WORDS: evaluation of health services, patient oriented health services, patient experience, team work.

INTRODUCTION AND OBJECTIVES

In the years health systems have changed the way of thinking and delivering care: patient became the centre of the overall process and new organizational models were applied in order to provide patient-oriented services. The mission of health systems expanded to meet the population's health needs and expectations regarding how patient should be treated by providers. Strategies focused on responsiveness started to be developed (WHO, 2000). They were based on respect for patients as persons (respect for dignity, confidentiality, autonomy) and on more objective elements as prompt attention, quality of amenities, access to social support networks, choice of the provider.

In this context patient's feedbacks become an important source to evaluate the capability of health systems to respond to patients' needs. Since 1990s health systems adopted multidimensional systems to evaluate the results achieved including also indicators related to patient experience and satisfaction (Veillard et al., 2005) (Arah et al., 2006) (Nutti, 2008).

In fact, despite the debate about the opportunity to consider patients as customers (Shackly and Ryan, 1994; Hudak et al., 2003), it cannot be denied that patients are the main actors of their care pathway. Then, the quality and the effectiveness of care have to be evaluated also through the patient's eyes.

Using the results of a survey on inpatient experience, this study aims at identifying those factors that influence more the patient perception of quality in hospital services considering elements related to care experience such as the relationship with nurses and doctors or the communication. These elements were also observed considering the ward of hospitalization (medical, surgical or obstetrical, gynecological and pediatric) in order to investigate if any significant differences were present. To achieve these results a statistical analysis (multiple regression models) was used.

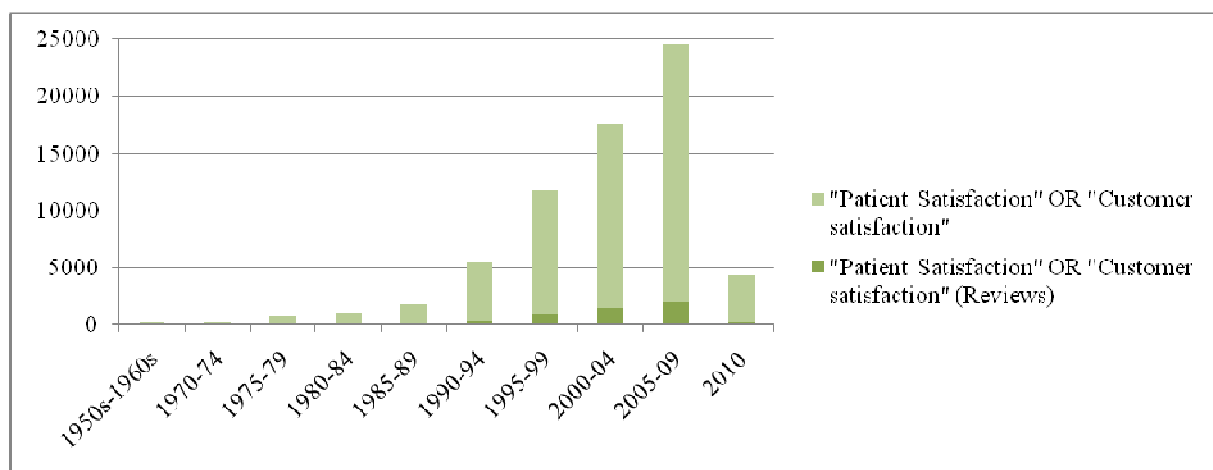
LITERATURE REVIEW

According to Stanton and Varaldo (1989) marketing contributes to create value for costumers, ensuring on one side the satisfaction of needs and desires and on the other enhancing profit for firms. After a twenty-years debate on the use of a marketing approach to non-profit based services (Kotler and Levy, 1969; Arndt, 1978), many authors offered several contributions on the utility of marketing for the health sector. Particularly, according to the business marketing approach population needs have to be identified in order to improve health policies and service quality; moreover, it considers necessary to investigate the relationship between providers and patients/users to strength the patient prospective (Gilligan and Lowe, 1995).

Patient's satisfaction is mainly important because a satisfied patient is more responsible of his care pathway and more willing to follow the physician prescriptions (Guldvog, 1999). Thus, assessing patient experience is even more crucial in health care than in the business sector because of satisfaction's impact on health outcomes. Moreover, the measurement of patient experience also provides process indicators on how promptly and comprehensively care is delivered. Consequently, a great effort was made to measure customer satisfaction also in the health sector.

Although several patient surveys were conducted from 1970s, the interest for patient satisfaction increased in 1990s (Figure 1), both in competitive and public health systems, mostly in US and UK (Crow et al., 2002).

Figure 1 - Results of a PubMed search for "Patient satisfaction" or "Customer satisfaction" concepts (1950 – 2010).



In the literature a large number of studies concerned the determinants of patient satisfaction in terms of expectations, health status, socioeconomic and demographic characteristics and also of service characteristics. Particularly, it was observed that expectations do not totally explain satisfaction with service but influence positively patients satisfaction (Abramovitz et al., 1987) and when the self reported health status is poor dissatisfaction with organizational quality of care increases (Westaway et al., 2003). Many studies highlight that a positive relationship between age and satisfaction exists (Bruster et al., 1994) while an high education negatively affects satisfaction rates (Pilpel, 1996). Furthermore, nurses and physicians assistance is a predictor of satisfaction more than the quality of food and the cleanliness of rooms (Cleary et al., 1989). Also, patients hospitalized in surgical wards tend to be less satisfied than patients in medical or gynecological wards (Alasad et al., 2003).

In the last years the measurement of the service' quality from the patient prospective is slightly changed. In fact, measures more closely related to patient experience were introduced asking patients to report in detail the episodes of care and not only to rate them (Cleary et al., 1992; Cleary 1999). These measures were mainly adopted because they help to better understand the multidimensional and subjective nature of satisfaction and allow to work on quality improvement using more objective information.

METHODOLOGY

Setting - This study concerned the patient's experience with the hospital service was conducted in the Tuscany Region (Italy) which counts on about 3.700.000 inhabitants. The Tuscan Health Care System (THCS) is universal, publicly funded and managed through a network of 12 local health authorities (LHAs) and five teaching hospitals (one of them is a pediatric hospital). LHAs are responsible for providing care services to the population living in their area throughout the entire continuum of care, from prevention to long-term care, including acute care; while the five teaching hospitals (THs) provide high-complexity care. In total, 35 public hospitals are available in Tuscany; 30 of them are managed by the 12 LHAs and the remaining 5 THs. In 2008, about 614.450 discharges were recorded in public Tuscan hospitals which respond to about 95% of the regional hospital care needs.

Since 2004 the THCS has adopted a multidimensional Performance Evaluation System (PES) to assess its 12 LHAs and 5 THs. The PES, developed by Laboratorio Management e Sanità of Scuola Superiore Sant'Anna, is based on 50 measures, made up of 130 indicators and organized into six dimensions: (a) Population health, (b) Regional policy targets, (c) Quality of care, (d) Patient satisfaction, (e) Staff satisfaction and (f) Efficiency and financial performance (Nutti, 2008; Nutti et al, 2009). Results achieved can be compared across the 17 Health Authorities (HAs) and influence the compensation of HAs' CEOs. The performance is assessed in five bands: 0-1 "very poor performance", 1-2 "poor performance", 2-3 "average performance", 3-4 "good performance", 4-5 "very good performance". The evaluations are displayed on a target chart and can be consulted by citizens on the web site www.valutazione-sanita-toscana.sssup.it. Furthermore Since 2008 other eight Italian Regions adopted PES.

Indicators on patient experience with General Practitioners, Emergency Department, Hospital, Community Care, Home Care and Maternal Care services are included in Patient satisfaction's dimension. Overall quality, accessibility, humanization, patient involvement, communication, trust in health providers, etc, are measured. All these indicators are calculated

using data collected with biennial sample surveys. From 2004 to 2009 more than 80.000 users were interviewed.

Survey - In 2009 a telephone survey was conducted in Tuscany Region to observe patient experience with hospital care services. A sample of about 17,145 patients was generated using a stratified random sampling approach in order to return representative results at three levels: HA, hospital and ward (medical, surgical and obstetrical, gynecological and pediatric).

All public hospitals were surveyed, 30 managed by LHAs and 5 Teaching Hospitals, but only patients discharged by medical, surgical or obstetrical, gynecological and pediatric (OGP) wards during the period September – December 2008 were considered eligible. When patient were less than 18 year-old patients parents were interviewed on their children hospitalization. The patients' list was extracted from administrative dataset managed by ICT systems of HAs and when patients had repeated accesses, only the last one was considered. In each hospital about 200 interviews were requested for each ward (medical, surgical, OGP), but this goal was not always achieved when patients' records were not complete with their telephone numbers.

Patients were interviewed about 1 month or more after their discharge using the Computer Assisted Telephone Interviewing (CATI) technique that was preferred to a postal or CAWI – based survey because it allows: to control data entry while conducting interviews, to obtain results quickly and to also contact low literacy groups (Coulter et al., 2009).

A structured questionnaire was used to capture patient experience with hospital services. The questions were defined by considering the current literature and previous surveys undertaken both at national and at international levels (Charles et al, 1994; Jenkinson et al, 2002; González et al., 2005). The resulting questionnaire had totally 28 questions, focusing on relationship of patients with health professionals (doctors and nurses) and on the communication process (during the hospitalization and at discharge). Moreover, 7 questions were about patient's characteristics: age, gender, educational level, self reported health status, job position, chronic disease, previous hospitalization. Three questions on overall experience with hospital service were used in order to analyze wards' organization, care and patient's willingness to recommend hospital to others (Table 1).

Items were measured using report style questions based on 3 points scales (e.g., 1 = “no”, 2 = “yes, sometimes”, 3 = “yes, always” or 1 = “no”, 2 = ”yes, to some extent”, 3 = “yes, completely”) and on 5 points rating scales (e.g., 1 = “very poor”, 2 = “poor”, 3 = “fair”, 4 = “good”, 5 = “excellent”). These scales allowed to ask patients to report in detail about their experiences with hospital service, focusing on specific episodes, as well as to rate doctors and

nurses care, how doctors and nurses work together, the overall evaluation of assistance and how well organized hospitals' wards were (Table 1). The scales were transformed into a 0 – 100 scale in order to consider them as continuous variables and to preserve the gradations of patient s' evaluation (Brown et al, 2008). For each variable Kendall's tau index confirmed the agreement between the ordinal and the continuous scales into which the first ones were transformed.

Table 1 – Questionnaire items and scales

Items	Scales
admission mode	descriptive scale*
doctor in charge of patient care	yes/no
clearness of doctors' answers	3 points scale
trust in doctors	3 points scale
doctors' respectful manners	3 points scale
doctors' courtesy	5 points scale
doctors' care	5 points scale
how doctors and nurses work together	5 points scale
nurse in charge of patient care	yes/no
clearness of nurses' answers	3 points scale
trust in nurses	3 points scale
nurses' respectful manners	3 points scale
nurses' courtesy	5 points scale
waiting time for nurses' response to the button call	3 points scale
information on health status and treatment	3 points scale
family members' difficulty to talk with doctors	3 points scale
respect for privacy during consultations	3 points scale
discordant information	3 points scale
communication among doctors and nurses	3 points scale
pain management	3 points scale
surgical treatment	yes/no
infection after the surgical treatment	yes/no
at discharge: written information on medicines	3 points scale
at discharge: information on side effects	3 points scale
GP informed about hospitalization	yes/no
GP asking for patient hospitalization	yes/no
overall evaluation of care	5 points scale
overall evaluation of organization	5 points scale

* planned, no planned (moving from emergency department), no planned (unexpectedly arriving to ward)

Statistical analysis - Data collected on experience of patients hospitalized in the pediatric TH was not taken in to account in this study because, unlike in other hospitals, all patients were less than 18 year-old.

An explanatory factor analysis tested the validity of all reporting and rating style questions measuring the patient experience with various aspects of hospital service. The items with a loading > 0.40 were considered in the following analysis.

Two multivariate linear regression models were performed in order to observe the effect of fourteen (valid) items related to patient experience on (i) the overall satisfaction score and (ii) the willingness to recommend the hospital to others (*dependent variables*). The regression diagnostics were performed and are available upon request to authors.

Models were applied dealing separately with the three samples of patients discharged by medical, surgical and OGP hospital wards, after having performed one-way ANOVA in order to test the presence of significant differences among the means of the three independent groups.

Stata statistical software (version 11.0) was used to realize the analysis.

RESULTS

Descriptive statistics - About 15.000 patients were interviewed: 5.327 from medical wards, 5.232 from surgical wards and 4.375 from OGP wards. The overall evaluation was in average 84.53 and the willingness to recommend measure was 92.63. Patients in charged in medical wards were more satisfied (90.23%) and more willing to recommend the hospital (91.05) than other patients.

Overall experience significantly differed in the three wards ($p < 0.001$). As a consequence, the three patient samples were analyzed separately.

The socio demographic characteristics by the three patients groups are listed in Table 2. Patients in charged in medical wards were older, less educated and had a lower self-reported health status than patients in surgical and OGP wards. Moreover their hospitalization was mostly no planned (73.17%).

Table2 – Patients characteristics (age, education, health status) by wards.

Variable	Wards	
Age, mean (SD)	Medical	65.24 (18.56)
	Surgical	57.73 (21.10)
	OGP	29.98 (16.02)
No compulsory education (primary school and secondary school), %	Medical	25.14
	Surgical	30.83
	OGP	61.51
Poor health status, %	Medical	82.82
	Surgical	68.71
	OGP	37.44

Multivariate linear regression model - Results of regression models are listed in Tables 3 and 4. It was observed that overall satisfaction is mostly predicted by how doctors and nurses work together. Also, the doctors' courtesy and care, the trust in nurses' work and information on treatment and care influenced overall satisfaction of the three patients' groups.

Overall evaluation of OGP wards was also positively explained by: clearness of nurses' answers and their timely response to the call button, no conflicting information and respect of privacy during communication; while when doctors talked in front of patient as if he wasn't there a negative effect was observed. In all three models, more than 70% of variance of overall satisfaction was explained.

Depending on ward, the main predictors of patient' willingness to recommend the hospital to others were: the clearness of doctors' answers (medical ward), the quality of doctors' care (surgical wards), how doctors and nurses work together and information on treatment and health status (OGP wards). Furthermore, increasing clarity of information on medicines and danger signals to manage at home had a positive effect on the willingness to recommend the hospital to others when patients were hospitalized in medical or surgical wards. More than 40% of variance of willingness to recommend hospital to others was explained by all three models.

Table 3 – Predictors of Overall care evaluation. By wards.

	Medical wards		Surgical wards		OGP wards	
	No Standardized Coef.	Standardized Coef.	No standardized Coef.	Standardized Coef.	No standardized Coef.	Standardized Coef.
doctors' courtesy	0.08*	0.07	0.13*	0.12	0.1*	0.09
doctors' care	0.16*	0.15	0.17*	0.17	0.25*	0.24
how doctors and nurses work together	0.63*	0.64	0.56*	0.57	0.42*	0.44
clearness of nurses' answers	-0.02	-0.02	0.01	0.02	0.06*	0.06
trust in nurses	0.04**	0.03	0.05*	0.05	0.05**	0.05
nurses' respectful manners	0.02	0.01	-0.01	-0.01	0.02	0.01
waiting time for nurses' response to the button call	0.01	0.01	0.01	0.01	0.03**	0.03
clearness of doctors' answers	0.06*	0.05	0.01	0.01	0.03	0.03
information on health status and treatment	0.04*	0.05	0.03**	0.03	0.04*	0.05
doctors' respectful manners	-0.02	-0.01	0	0	-0.05	-0.04
respect for privacy during consultations	-0.02	-0.02	-0.01	-0.01	0.07*	0.05
discordant information	0.02	0.01	0.02	0.02	0.03**	0.04
at discharge: written information on medicines	0.03**	0.03	0.02	0.02	0.04*	0.06
at discharge: information on side effects	0.01	0.01	0.03	0.02	0.03	0.02
_cons	-3.63	.	-1.72	.	-11.72	.

* p=0.000; **p<=0.05

Table 4 – Predictors of Willingness to recommend hospital. By wards.

	Medical wards		Surgical wards		OGP wards	
	No standardized Coef.	Standardized Coef.	No standardized Coef.	Standardized Coef.	No standardized Coef.	Standardized Coef.
doctors' courtesy	-0.02	-0.02	-0.01	-0.01	0.05	0.04
doctors' care	0.19*	0.16	0.17*	0.15	0.1**	0.07
how doctors and nurses work together	0.22*	0.20	0.14*	0.13	0.23*	0.20
clearness of nurses' answers	-0.04	-0.03	0.04	0.04	0.06**	0.05
trust in nurses	0.21*	0.15	0.16*	0.14	0.15*	0.13
nurses' respectful manners	0.04	0.03	0.06**	0.04	0.08*	0.05
waiting time for nurses' response to the button call	0.03	0.03	0.06*	0.06	0.02	0.02
clearness of doctors' answers	0.27*	0.21	0.18*	0.14	0.2*	0.16
information on health status and treatment	0.1*	0.10	0.13*	0.14	0.21*	0.20
doctors' respectful manners	0.00	0.00	0.01	0.01	-0.05	-0.03
respect for privacy during consultations	0.00	0.00	0.02	0.02	0.04	0.02
discordant information	0.15*	0.11	0.09*	0.07	0.07*	0.07
at discharge: written information on medicines	0.09*	0.09	0.05*	0.05	0.00	0.00
at discharge: information on side effects	0.08*	0.05	0.06**	0.04	0.04	0.02
_cons	-29.85	.	-13.84	.	-18.02	.

* p=0.000; **p<=0.05

DISCUSSION

The study identifies the main factors that influence patient experience with hospital services. The doctor's role in the patient assistance affects largely the overall evaluation of hospital service regardless of the three patients' groups: particularly, patients evaluation is explained by how doctors and nurses work together and by doctors' care. Team work is a fundamental element of new organizational models for all health services: it could have positive effects both on patient experience, as confirmed also by Seghieri et al. (2009), and on the doctors' satisfaction. Particularly, it was observed that doctors satisfaction could be mostly improved when all professions work together towards the same goals for the patient (Krogstad et al., 2004).

Instead, when patients are asked if they would recommend hospitals to others, their answers were influenced by different aspects depending on hospitalization ward. While team work is still the main predictors for OGP patients, clearness of doctors' answers and doctors' care mostly explain the medical and surgical patients' intent to recommend the hospital. The latter result is consistent with previous studies according to which doctors' technical competence and interpersonal skills are strong predictors for recommendation of hospital both among medical and surgical patients (Cheng et al., 2003).

Communication process also influences the patient experience so much to affect the patient's willing to recommend hospital to friends or family members. As it was also observed in others studies, communication is a crucial predictor of a good relationship between patient and doctor and, generally, of the overall patient satisfaction (Sitzia and Wood, 1997). A survey conducted in 2002 among eight European countries (Germany, Italy, Poland, Slovenia, Spain, Sweden, Switzerland and the UK) pointed out that the patient's need to get more information increased as well as the desire to be more involved in his care pathway (Coulter and Jenkinson, 2005). An appropriate and focused communication strategy should be useful to respond to these needs and to promote the patient's empowerment and participation. In this way, the patient could have an active role in the decision-making process and become responsible for his care pathway.

MANAGERIAL IMPLICATIONS

Data on patient experience, collected using survey tools, can be considered a valid source for performance indicators from patient perspective. While administrative data on patient behaviors (such as patient who leaves hospital against medical advice, or patients using Emergency Department for no serious problem instead of coming to General Practitioner,

etc.) return an indirect measure of patient evaluation of services' quality, sample surveys allow to know patient experience directly through his eyes.

If health policies have to be patient centered, managers and public officers need to monitor patient experience and to consider the results obtained to plan services and to evaluate performance. Too often strategies are designed considering only the professionals needs with a poor attention to patient experience (Calnan, 1988). Promoting surveys regarding patient experience and considering them as a systematic tool to detect patient needs help to give more importance to the role of patient in health care.

In particular, it seems a significant finding that a good relationship between doctors and nurses is relevant to the patient's eyes. In fact, an hospital environment characterized by trust and respect among professional actors has a relevant influence on patient's anxious feelings. Moreover, the behavior of doctors and nurses can have a great impact on emotional well-being of patient. Consequently, all health providers, managers as well as health professionals have to know the patient evaluation on these aspects in order to remember how they are important for patients. The service performance may be improved only if each professional is made accountable for the quality of assistance he delivers. For the above reasons, the results of this study were returned to wards' directors in order to use the wards' evaluations to identify the weakness of delivered services and to promote actions able to improve the quality of care.

LIMITATIONS AND FURTHER RESEARCH

Results show which are the predictors of patient satisfaction with hospital services and also consider differences among wards. The fourteen items introduced in the models mostly explained the variance in overall evaluation, while they less influence the willingness to recommend the hospital to the members of family or to friends. Thus, further items related to patient experience have to be investigated in order to better understand which are the aspects that more affect the will of patients to recommend the hospitals to others.

Moreover, this study refers to data collected across three types of wards (medical, surgical and OGP) but does not consider the hospitalization reasons and that patients hospitalized in surgical wards include patients with orthopedic or cardiovascular problems.

Future researches could identify the patient's profile for each ward in order to create specific clusters, taking into account also differences in terms of clinical needs. Thus, considering clusters characteristics, HAs and hospitals' managers may design specific strategies for single target of assistance.

Furthermore, since data on inpatient's satisfaction and experience collected in Tuscany Region are used to create indicators of the regional PES, further researches will also be focused on the analysis of possible and significant correlations between inpatient's evaluations and other indicators adopted to measure HAs performance. Particularly, the relationship between patient experience and employees satisfaction could be investigated.

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