

## DEGREE OF PATIENT SATISFACTION WITH HEALTH CARE PERFORMANCE ASSESSED BY MARKETING SURVEYS

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DEGREE OF PATIENT SATISFACTION WITH HEALTH CARE PERFORMANCE ASSESSED BY MARKETING SURVEYS (Abstract): **Aim.** Marketing surveys of the health system collect useful information to develop effective management strategies. The research aim consisted in measuring patient satisfaction with health care quality. **Material and methods.** The qualitative research was based on an online SurveyMonkey open-ended questionnaire. The analysis of patient satisfaction/dissatisfaction with healthcare professionals was performed in 1838 patients. Correlation analysis allowed the identification of some determinants associated with patient satisfaction. **Results.** The variable most commonly associated with satisfaction was "I got adequate information about procedures/treatment" according to 32.2% of respondents. The patients who were dissatisfied most commonly complained that they were "Not adequately informed about maneuvers and treatment", reported by 40.0% of respondents. **Conclusions.** This study provides a basis for building an original model for determining the variables of an efficient healthcare system which to ensure a high degree of patient satisfaction. **Keywords:** PERFORMANCE, HEALTH CARE, MARKETING.

In recent years the Romanian health system takes steps toward improving the quality of healthcare services while respecting the rules underlying the accession to the European Union (EU) (1). Even in the context of important variation in health service performance, the decision makers are committed to implementing a monitoring system which is considered essential in the development of quality improvement program (2). Patient satisfaction, or health care practitioner satisfaction, respectively is one of the key criteria in quality assurance. In recent years marketing surveys

have been used for assessing, among others, patient satisfaction with the quality on health care in health institutions. According to the modern marketing concept, any activity in the health system must be carried out with the knowledge of patients' needs. Thus, marketing surveys collect process and analyze information about the patients, providing evidence to support the marketing and management strategies (3).

The aim of this study was that by addressing issues of patient satisfaction to determine the necessary and useful direction in the development of management

process in health care system. The aim of this research objective was the measurement of patient satisfaction with health care performance within the context of: diagnostic characteristics, length of hospital stay, satisfaction factors and factors that could lead to dissatisfaction of patients included in the study.

## MATERIAL AND METHODS

The qualitative marketing survey was based on data collected with an online SurveyMonkey questionnaire (4). For the analysis of patient satisfaction with healthcare professionals a total of 1838 subjects from university hospitals in Bucharest, Iasi, Cluj Napoca, Târgu Mures, Timisoara and Craiova were included in the study. The questionnaires included open-ended questions aimed at identifying the degree of satisfaction with the result of treatment underwent during hospital stay from both professional and medical point of view and if the patient was allowed or not to stay in touch with next of kin during hospital stays. Thus, 10 important issues were addressed: care, humanism reflected in the treatment, absence of pain, prompt attention to patient requests. Respondents' opinions on the variables that have bothered them most were expressed as 30 possible factors that contribute to a degree of dissatisfaction during hospital stay. Also, a correlative analysis was performed to identify issues that might be associated with the assessment of patient satisfaction in this study. The rate of non-responders the all questions on the questionnaire was 0.1%, not significantly influencing the quality of results. Data were processed according to the studied qualitative variables the results being considered statistically significant within a confidence interval of 95%.

## RESULTS

**1. Demographic and medical characteristics of the study subjects.** The surveyed population was composed mostly of females (58.2%), age-group distribution showing that most subjects were in the 40-50 years (19.7%), 50-60 years (28.2%), and 60-70 years (29.5%) age-groups. Distribution of participants according to the variable "level of education", defined according to the following categories: elementary education, secondary education, post-secondary vocational education, higher education, and postgraduate education, revealed that of the surveyed population 40.6% had a higher education. The length of hospital stay was 3 days in 49.5% of the respondents, 7 days in 19.6%; 14 days in 20.0% and a maximum of 21 days in 10.7%.

**2. The results of questionnaire responses in hierarchical order of their frequency were classified as follows:** 1. *"I got adequate information about the procedures/treatment"* for 32.2% of respondents, but 39.1% of respondents ranked it 2nd; comparative and cumulative analysis of the results allowed the ranking of this item as 1st; 2. the variable *"I was looked after well"* according to 50.9% of respondents; 3. *"I was treated with consideration"* for 39.4% of respondents; 6. *"I was treated with warmth/kindness"*, 81.6%; 7. *"I had no pain"* according to 53% of respondents; 8. Shared by 3 variables: *"Prompt attention to all my requests"* for 38.3% of respondents, *"I had enough contact with my family"* for 33.8% of respondents and *"I had a good contact with the nursing and medical staff (they introduced themselves, joked, provided adequate psychological support)"* according to 26.6% of respondents; 9. *"I rested properly"*, 47% of respondents; 10. *"Sufficient, good quality food"* for 56.3% of

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respondents (tab. I).

Based on the obtained responses the most disturbing 10 dissatisfaction factors during hospital stay in hierarchical order were the following: 1. "I did not get adequate information about the procedures/treatment" for 40.0% of respondents; 2. "The medical staff did not introduce themselves" according to 49.1% of respondents; 3. 45% of respondents selected the variable "I did not know when certain procedures were to be performed"; 4. "I

was aware of odors around me" for 44.8% of responders; 5. "Mixed wards (men and women)" according to 44.7% of respondents"; 6. "I was regarded as an object" for 44.7%; 7. "The medical staff uses words that I do not understand" according to 45% of respondents; 8. "In the room you are in is too cold or too hot" in the opinion of 44.8% of respondents; 9. "I am disturbed by the reactions of neighbor patients" for 44.7% of respondents; 10. "I was treated without consent" for 35.2% of respondents.

**TABLE I**  
**Respondents' opinion on satisfaction during hospital stay**

No	Treatment during hospital stay	Place/percentage of the variables that contributed to satisfaction during hospital stay									
		1	2	3	4	5	6	7	8	9	10
1.	I was looked after well	29.7	50.9	10	8.4		1.1				0.1
2.	I was treated with warmth/kindness	0.1	0.9	0.2	16.9	0.2	81.6		0.1	0.1	
3.	I had no pain	0.2	0.2	0.2	29.6	7.6	9.3	53			
4.	Prompt attention to all my requests	0.9	0.2	22.3	0.2	18.7	0.1	19.3	38.3		
5.	I had enough contact with my family	9.9			20.3	0.3	7.6	19.6	33.8	8.4	0.1
6.	I got adequate information about the procedures/treatment	32.2	39.1	27	0.1	0.2	0.2	0.1	0.9	0.1	0.1
7.	I was treated with consideration	18.7	8.5	39.4	0.1	0.1	0.1	7.7	0.3	25.1	
8.	I had a good contact with the nursing and medical staff (they introduced themselves, joked, provided adequate psychological support)	8.4	0.2	0.1		20.3	0.1	0.1	26.6	19.2	25.1
9.	I rested properly				9.8	24.6		0.1	0.1	47	18.4
10.	Sufficient, good quality food			0.9	14.6	28		0.1		0.1	56.3

3. Correlational analysis of the results regarding patient satisfaction with health care performance showed that: "Patient age" correlates with the variables: *Appropriate care* [r (1838) = - 0.76\*\*, p = 0.001]; *Satisfaction with how their requests were resolved* [r (1838) = 0.50\*, p <0.05]; *Respect for privacy* [r (1838) = 0.72\*\*, p <0.001] and *Fear of communicable diseases* [r (1838) = - 0.69\*\*, p <0.001]. "Educa-

tion level" was correlated with "*Perception of the level of pain experienced*" [r (1838) = 0.47\*, p <0.05], and "*Modality of importance assessment*" [r (1838) = 0.53\*\*, p <0.05].

The variable "Length of hospital stay" was strongly significantly correlated with the following variables: *Feeling that nurses are focusing more attention on devices than on patient*[r (1838) = - 0.65\*\*, p <0.001],

*Use by the medical staff of specific medical terms* [ $r(1838) = 0.6^{**}$ ,  $p < 0.001$ ], *Perception of ambient temperature adequacy* [ $r(1838) = 0.63^{**}$ ,  $p < 0.001$ ] and *Explanation of procedures/treatment* [ $r(1838) = -0.75^{**}$ ,  $p < 0.001$ ]. "The level of satisfaction with the level of care received" correlates directly and inversely with the following variables: *Perception of how the patients have been treated* [ $r(1838) = 0.67^{**}$ ,  $p < 0.001$ ]; *Level of promptness to patient requests* [ $r(1838) = -0.95^{**}$ ,  $p < 0.001$ ]; *Permission to have contact with the family* [ $r(1838) = 0.97^{**}$ ,  $p < 0.001$ ]; *The degree of explaining the procedures/drug treatment* [ $r(1838) = 0.42^{**}$ ,  $p < 0.001$ ]; *The degree of consideration with which the patient is treated* [ $r(1838) = 0.321^{**}$ ,  $p < 0.001$ ]; *Appropriate approach* ( $r(1838) = -0.315^{**}$ ,  $p < 0.001$ ); *Food quality* ( $r(1838) = -0.6^{**}$ ,  $p < 0.001$ ), *Disturbed sleep* [ $r(1838) = -0.5^{**}$ ,  $p < 0.001$ ], *Brightness* [ $r(1838) = -0.7^{**}$ ,  $p < 0.001$ ]; *Degree of privacy* [ $r(1838) = -0.33^{**}$ ,  $p < 0.001$ ]; *Care by unknown doctors* [ $r(1838) = -0.9^{**}$ ,  $p < 0.001$ ]; *Degree of discretion* [ $r(1838) = -0.32^{**}$ ,  $p < 0.001$ ] and *Fear of communicable diseases* [ $r(1838) = -0.9^{**}$ ,  $p < 0.001$ ].

## DISCUSSION

The results obtained allow us to state the level of satisfaction with the quality of hospital care decreases with the increasing age of patients who answered the questionnaire. We found that as the subjects were older they considered that the level of privacy was lower. Also noted was a highly significant relationship between ages and fear of communicable diseases, the older the patient the higher the fear. A relevant aspect concerns the fact that although they declared these attitudes, all subjects admitted the prompt attention to all their re-

quests, the relationship between these variables being statistically significant. Also an increase in the number of hospital stay days was a cause of patient dissatisfaction due to the fact that nurses were more focused on devices than on patient, the patients also becoming more aware of the fact that the medical staff uses specific medical terms that patients do not understand. Also, as the length of hospital stay increased the subjects deemed inappropriate the ambient temperature and believed that they did not get appropriate information about the procedures/treatment they underwent. We believe that as the level of satisfaction with the level of care received is higher, the level of satisfaction with how the patients were treated increases, the patients believe that the procedures/treatments underwent had been clearly explained, increase the satisfaction with the consideration given and permission to be in contact with family. It was found that between the level of satisfaction with the care received and the other above mentioned variables there is an inverse relationship. Thus, as the level of satisfaction with the level of care received is higher, the level of satisfaction with the prompt attention to patient requests, the quality of contact with the medical staff, food services, quality of sleep, brightness of hospital wards, the level of privacy, and the fear of communicable diseases decrease. Also, subjects were more satisfied with the level of care received when not cared for by unknown physicians, and their right to confidentiality is not violated (5, 6, 7).

## CONCLUSIONS

1. Quality of patient care largely depends on health system performance. To improve patient satisfaction a system with measurable performance goals for improved patient care should be developed.

2. A code of ethics which to take into account the results of this research is the first step in implementing a health care system. The code will be based on the above analyzed variables, complemented periodically with other variables, the re-

search being repeated every three months.

3. The study provides a basis for the creation of an original model for determining the variables of a performant health care system, which to ensure a high degree of patient satisfaction.

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## NEWS

### ISOQUINOLINE ALKALOIDS WITH ANTI-HEPATITIS B ACTIVITY

Hepatitis B virus (HBV) is the causative agent of B-type hepatitis in humans. Despite the fact that the disease is vaccine-preventable, about 350 million people worldwide are infected with HBV. Natural compounds are very promising for the treatment of B-type hepatitis. Eighteen isoquinoline alkaloids were isolated from sixteen *Fumaria* and six *Corydalis* species growing in Turkey. They were tested *in vitro* for anti-HBV activity using HBV-expressing cell line HepG2.2.15. Fifteen compounds showed potent anti-HBV activity in the initial screening and six of them (sibiricine acetate, berberine,  $\alpha$ -hydrastine, oxosarcocapnidine, fumarophycine, bicuculline) demonstrated consistent antiviral activity in subsequent tests with an efficacy similar to that of tenofovir, a HBV antiviral agent. Sibiricine acetate, fumarophycine and bicuculline were more than 90-, 250- and 150-fold more potent, respectively, than tenofovir in reducing the level of HbsAg. All six compounds targeted the secretion ability of the host cell and reduced the promoter gene pSEAP secretion in a dose-dependent manner. The antiviral activity was also associated with the induction of antiviral genes; berberine and  $\alpha$ -hydrastine induced the expression of TNF- $\alpha$  RNA (Aljofan M, Netter HJ, Aljarbou AN et al. Anti-hepatitis B activity of isoquinoline alkaloids of plant origin. *Arch Virol* 2014; 159: 1119-1128).

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