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Service delivery planning in the ENT OPD using patient satisfaction as a quality metric

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Abstract

Introduction: Though patient satisfaction is a nebulous and controversial concept; more and more hospitals use this as a guide for improving their services. **Aim and objective:** The aim of this study is to evaluate the quality of health care services in the ENT outpatient department and the objective is to plan indices of service delivery and scope for improvement, using patient satisfaction as a metric. **Materials and method:** questionnaire-based survey. **Results:** The maximum satisfaction of patient care services is derived from the doctor-patient interaction, which cements the doctor-patient relationship. It may sometimes even override the other aspects of patient care. **Conclusion:** The best efforts of the medical professionals, or the doctor- patient relationship, may not be sufficient in order to provide patients and consumers with a feeling of satisfaction, or the belief that they have available good quality care.

Keywords: OPD, Patient satisfaction, Healthcare services, HIS (Hospital Information System).

INTRODUCTION AND RATIONALE

Health care delivery in the current era goes much beyond technical expertise, and includes social and administrative aspects as well. Health care services are increasingly coming under the scanner for the quality of delivery, apart from the traditional aspects of access and affordability. In addition, quality is being defined in terms of efficiency and effectiveness. Standards of healthcare delivery are established on these characteristics, and the patient or consumer is the one ultimately judging these standards. It is thus imperative that such considerations be incorporated into the day to day delivery of medical and health care across the board. Evaluation of these aspects of health service delivery is no easy task, but may be made simpler by studying the various spaces and areas where patient care is delivered directly, such as the outpatient department (OPD), wards, accident and emergency department (A & E) and the operation room (OR). The principles of Lean Thinking, though new to the health industry, may be used as a managerial guide to improve service delivery. Patient satisfaction being one of the indicators of efficient functioning and management has been used in this study in our hospital.

Aim and Objective

Though patient satisfaction is a nebulous and controversial concept, more and more hospitals use this as a guide for improving their services. The aim of this study is to evaluate the quality of health care services in the ENT outpatient department and the objective is to plan indices of service delivery and scope for improvement, using patient satisfaction as a metric.

MATERIALS AND METHOD

Study area: ENT OPD

Study design: cross-sectional descriptive analytic study

Method of data collection: Questionnaire based survey. A 20-point questionnaire was administered to 30 patients after obtaining oral consent, and the responses were recorded in Microsoft Excel and summarized.

Type of questionnaire: Semi structured. Many questions were open ended while others were based on a Likert type scale. It was pre-tested by randomly giving it to a few patients in the OPD.

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Study period: Starting from January 2017 and ending March 2017.

Study population: Patients visiting our OPD for various reasons. This included both new and review patients. Patients on whom minor OPD procedures were done were also included. Sample size: 30. On an average, 10 patients were interviewed per month over a span of 3 months. More numbers of responses were obtained in February.

Mode of sample selection: Random.

Patients were randomly selected from the OPD and interviewed. A simple 20-point questionnaire in English was presented to patients and their attendees in the ENT OPD of our hospital. All the attendees had been patients themselves at some point in time at the same hospital OPD and were thus considered appropriate for interview. The subjects were selected at random and the responses anonymously recorded by a staff member in the OPD, either a medical intern or a nurse. The questions were posed in the vernacular as and when applicable. The consultant or faculty doctor was not present in the vicinity at the time of interview so as to enable the respondents to provide as honest and unrestrained a feedback as possible. They were also informed that this exercise was being done as a means of improvement of hospital services and this information was received with approval and enthusiasm. The questionnaire included a mix and match of various and discrete aspects of hospital outpatient care, so as to minimize bias from recall and connecting one question from the previous one, and thus avoid repetition. At some places, however, questions followed the same aspect of care so as to enable the respondent to express his or her idea of care more clearly. The questionnaire was validated by a professional colleague for precision and accuracy, and pre-tested on a small group of patients in the OPD.

PATIENT QUESTIONNAIRE

- 1] On an average, how much time do you spend in the hospital OPD every time you visit?
- 2] In which part of the hospital does the delay usually occur?
- 3] Has the HIS made any difference to your waiting time?
- 4] Has the HIS made any difference to your OPD experience?
- 5] Do you like an electronic prescription given at the pharmacy? (N, A, S, M)
- 6] Do you return to your doctor for clarifications about dosage schedules? (N, A, S, M)
- 7] On an average, how long do you wait in line at the pharmacy?
- 8] On an average, how often do you get all your medications at the pharmacy? (N, A, S, M)
- 9] Do you ever have doubts about the cost-effectiveness of your medication? (N, A, S, M)
- 10] Do you take only the prescription printout and buy medications elsewhere? (N, A, S, M)
- 11] Would you feel better getting a paper prescription from the hands of your doctor? (N, A, S, M)
- 12] Do you feel that enough attention is being paid to you during the consultation? (N, A, S, M)
- 13] Do you feel computerization is affecting your relationship with your doctor? (N, A, S, M)
- 14] Do you trust the junior staff and resident doctors that attend to you in the OPD? (N, A, S, M)
- 15] Are you aware that you might be seen by a junior doctor first when visiting the hospital?
- 16] Do you ever insist on being seen by a senior doctor? (N, A, S, M)
- 17] Do you confirm availability of your preferred doctor when visiting the hospital?
- 18] Do you lose daily wages as a result of visiting the hospital?
- 19] Is your hospital OPD visit (time) covered by insurance or employee benefits?
- 20] Why did you choose this hospital (proximity, availability, affordability, reliability, all the above)?
(N, A, S, M= Never, Always, Sometimes, Most of the time)

Other: Name one thing in which you wish to see change within the hospital service delivery system.

The responses were entered into a Microsoft Excel Sheet in serial order as and when the respondents were interviewed, and following the serial numbers of the questions in the patient questionnaire given to the respondents while conducting the survey. At the time of analysis, the questionnaire was reorganized into four broad aspects of the OPD experience, namely access to doctor, doctor- patient interaction, time and cost. The reorganized questionnaire was grouped into the following:

- 1] Access to doctor: questions 11,13,14,15 and 16.
- 2] Doctor- patient interaction: questions 4, 5, 6, 12 and 20.
- 3] Time: questions 1, 2, 3, 7 and 17.
- 4] Cost: questions 8, 9, 10, 18 and 19.

Even though some degree of overlap may be seen to occur across the whole spectrum of the questionnaire, the grouping allowed for the predominant service aspect assessed by a particular question in the group.

The reorganized questionnaire is as follows:

A) Access to Doctor:

- 11] Would you feel better getting a paper prescription from the hands of your doctor?
- 13] Do you feel computerization is affecting your relationship with your doctor?
- 14] Do you trust the junior staff and resident doctors that attend to you in the OPD?
- 15] Are you aware that you might be seen by a junior doctor first when visiting the hospital?
- 16] Do you ever insist on being seen by a senior doctor?

B) Doctor-patient interaction:

- 4] Has the HIS made any difference to your OPD experience?
- 5] Do you like an electronic prescription given at the pharmacy?
- 6] Do you return to your doctor for clarifications about dosage schedules?
- 12] Do you feel that enough attention is being paid to you during the consultation?
- 20] Why did you choose this hospital (proximity, availability, affordability, reliability, all the above)?

C) Time:

- 1] On an average, how much time do you spend in the hospital OPD every time you visit?
- 2] In which part of the hospital does the delay usually occur?
- 3] Has the HIS made any difference to your waiting time?
- 7] On an average, how long do you wait in line at the pharmacy?
- 17] Do you confirm availability of your preferred doctor when visiting the hospital?

D) Cost:

- 8] On an average, how often do you get all your medications at the pharmacy?
- 9] Do you ever have doubts about the cost-effectiveness of your medication?
- 10] Do you take only the prescription printout and buy medications elsewhere?
- 18] Do you lose daily wages as a result of visiting the hospital?
- 19] Is your hospital OPD visit (time) covered by insurance or employee benefits?

Most of these questions were to be answered as a 'yes' or a 'no' (1=

yes, 2= no) while some were answered using a graduated Likert-type scale. This was further divided at one point so as to form one single categorical response, either yes or no. For example, question number 1 was rated on a scale comprising of 10- minute intervals up to 60 minutes, and then any time duration above 60 minutes. A cut-off was made at 20 minutes based on the example set by a nearby accredited hospital, which announces at the reception counter that files shall be available with the consulting doctor within 20 minutes, and so the patient is requested to wait for this duration of time. Similarly, question number 7 followed this scale.

Thus, a waiting time of 20 minutes or less was defined as satisfaction and any time period exceeding this was defined as being 'not satisfied'. Question number 3 had a positive connotation, for instance 3] Has the HIS made any (positive) difference to your waiting time? Thus, a 'yes' response indicated satisfaction. Question number 13 had a negative connotation, for instance 13] Do you feel computerization is (negatively) affecting your relationship with your doctor? Thus, a 'no' response indicated satisfaction. Question number 2 had several options on the scale, such as registration, OPD, pharmacy, laboratory, and imaging. This was divided further as OPD and non-OPD areas. Some of the remaining questions (5, 6, 8, 9, 10, 11, 12, 13, 14, 16) had options such as never, always, sometimes, and most of the time. However, satisfaction was graded to be either the presence of absence of that particular service aspect, and therefore, a single response. For example, question numbers 6, 9, 10, 13, 16 and 18 required to be answered in the negative, that is, a 'no' response was considered to denote satisfaction. All the others which were not graded on a scale required to be answered as a 'yes' in order to denote satisfaction.

Question number 20 had several components, and the presence of any one 'choice' or all was meant to denote satisfaction; only patients who were 'forced' to come to the hospital, for example by virtue of being covered by insurance, or when the employer brought the patient, were considered as not being satisfied. Thus, it is seen that all the four aspects of OPD care examined in this study are equitably assessed on the basis of five questions each so as to define a balance among all the groups. All the questions were answered by all the respondents. Thus, each patient or attendee answered 20 questions each. Even though each question had two possible answers the total number of possible responses would be 20 per respondent. Therefore, the total number of responses for the sample of 30 respondents in this study is 600. The total number of responses in each group is 150. The total number of individual groups for each category of service is 4.

RESULTS

The total number of responses for satisfied patients was found to be 369, which out of the total number of patient responses (600) translates into 61.5%. Thus, the patient satisfaction rate in our OPD is 61.5% (Figure 1).

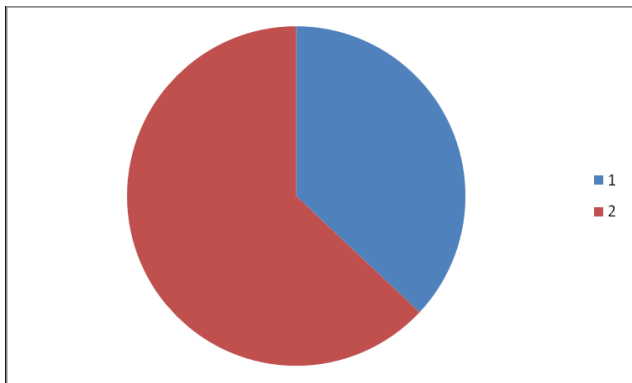


Figure 1: Pie chart of satisfied (red) and not satisfied (blue) patients

The figure below (Figure 2) depicts the proportions of satisfied patients in each individual group, doctor-patient interaction being the highest.

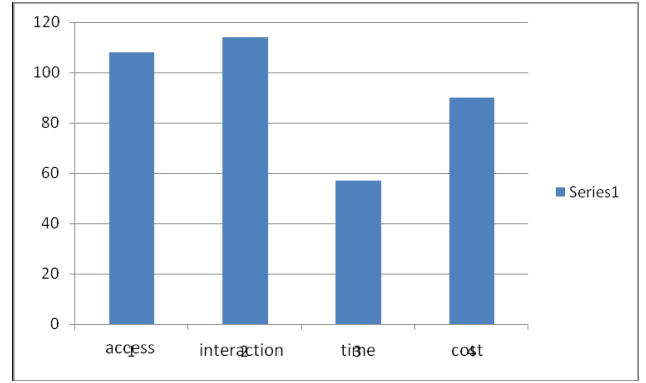


Figure 2: 'satisfied' patients according to group

The figure below (Figure 3) depicts the highest dissatisfaction with regard to waiting time, followed closely by cost of the services availed, especially medications.

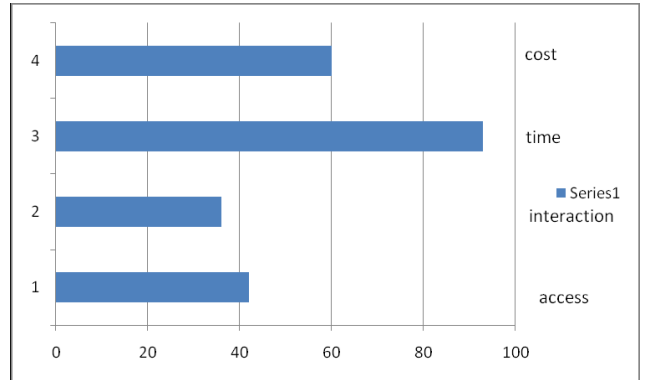


Figure 3: histogram of 'not satisfied' patients

Going one step further to see which aspect of care was being compromised, the time and cost (non-human or logistical) groups were separated from the doctor access and doctor- patient interaction groups (human), with 600 potential responses in each group. Thus the 2 X 2 table shows the numbers of satisfied and not satisfied patients as follows (Table 2). The chi-square test may now be applied to yield a statistical significance of 0.000003 at p<0.05, which is considered highly significant (Figure 4).

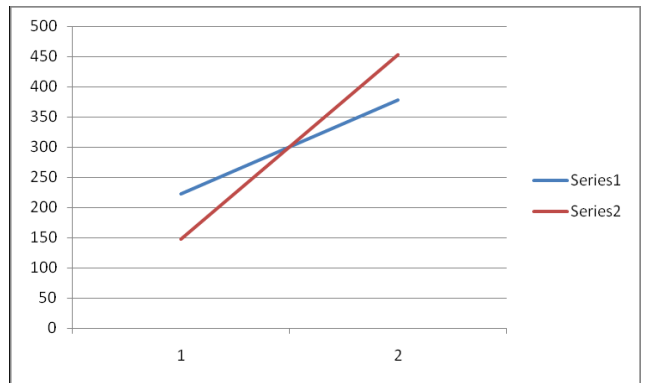


Figure 4: line diagram of human (red) and logistical (blue) factors

It is apparent from the above figure that the satisfaction rate continues to rise with respect to the human aspect but is dampened due to the logistical factors.

DISCUSSION

Patient satisfaction may be considered to be an index of the quality of health care. The quality of any product or commodity is measured by the consumer or end user, and the same holds true for the health care sector, where the consumer or end user is the patient.

While this may appear obvious in the case of private health and medical care, it is well worth remembering that even in the government or public sector, the cost of medical services is ultimately borne by the taxpayers or citizens of the country. Charitable or non-governmental organizations operate on goodwill and reputation and may thus be seen to sell their services, and be open to scrutiny as far as the quality of such services is concerned.

Over and above this remains the fact that health care services are accessed by those in need and suffering and distress, and the least that can be done to ensure quality is that no harm is done, in the manner of the Hippocratic Oath taken by all medical professionals. Thus, patient satisfaction at the most basic means that just enough has been done to alleviate suffering without causing harm, and at the best means that all the aspects of quality, include safety, accessibility and affordability, have been satisfied, leading to the wider concept of patient experience, and not just patient satisfaction.

The concept of patient satisfaction as a marker of health care quality has been extensively studied in the West, notable the Netherlands [1, 2]. Both these large-scale studies were carried out in busy academic public-sector hospitals. Questionnaires were used to gather data from patients. The data were then scrutinized and analyzed by sophisticated methods to formulate better strategies to improve health care service delivery. The veracity and validity of the data were also examined with regard to the appropriateness of the questionnaire used. Better methods of designing such questionnaires were also proposed. Also, it was recognized that health care quality and efficiency can be greatly improved by the adoption of Lean management principles, for which patient satisfaction may again prove useful as tool standardization and benchmarking. Though other countries of the West, especially North America and other European nations have inculcated patient satisfaction into their healthcare services, pockets of underserved populations still exist where this concept is not much in practice. This study provides a simple and straightforward means to incorporate patient satisfaction into the healthcare service delivery mechanism.

In India, the concept of patient satisfaction is rapidly gaining ground in recent times only, though it is not new to the developed nations of the Western world. This study was principally thus based on the above two resources. However, the questionnaire used was completely designed in-house by taking into account the obvious and not so obvious factors that are involved in patient turnover in our hospital. Every medical professional would like to see his or her numbers go up, with or without pressure from the administration, and this was the driving force behind the formulation of the questionnaire. It posed simple and straightforward queries to the patients and their accompanying families. The responses were unbiased and honest. This was ensured by the fact that no consultant or department faculty member or treating staff was present at the time the interview was taken.

Though the concept of patient satisfaction is new to our scenario, several researchers in the country have already begun to look into it. This study also closely resembles the study by Prasanna *et al* [3], who studied patient satisfaction at a private sector teaching hospital in southern India, very similar in set up to our own hospital. They also simplified the process of data collection by organizing their questionnaire to address the issues of doctor access, doctor-patient interaction, waiting time and cost. These parameters were also studied in a uniform and equitable manner in our project. It was seen that a lot

of inefficiency and undesirable waste occurs with respect to time and cost, which are important to the patient.

Thus, patient satisfaction was high with respect to the human component, that is doctor access and interaction and comparatively low in the case of time and cost. In our study, this difference was seen as highly significant. This implies that correction of these factors would greatly improve patient satisfaction. This is however easier said than done as it involves an organizational overhaul and major changes in the system and work culture.

Even though ours is a private hospital a lot of services are rendered free of cost, similar to government hospitals. In the study by Sodani *et al* [4], probably the largest so far conducted in the public-sector hospitals in India, it was observed that health care access and utilization are reliable indicators of quality and efficiency. Patient satisfaction in these hospitals is a good marker of access and utilization, and may be seen as the foundation by which service delivery can be improved. Thus, it was noticed in our study as well that patient satisfaction is important for efficient running of a free or concessional health care facility also.

Thus, it is not the presence or absence of free or concessional health care services that alone indicates quality in health care. In the study by Mohammed *et al* [5], structured questionnaires were given to different groups of patients accessing a virtually free hospital run by the defense establishment in the country. Many disparities were found among the level of patient satisfaction in the different groups studied, other factors remaining the same. Here, doctor access to junior staff and employees was found to be deficient. Our study looked at a mix and match of patient demographics and preferential treatment has never been practiced in our hospital, it being a postgraduate teaching and training hospital rooted in secular philosophy. However, time and cost were found to be deterrents to certain individuals such as those who lost daily wages as a result of visiting our hospital or those who hesitated to purchase the relatively costlier medicines in the hospital pharmacy. This indirectly makes an impact on the access to and utilization of our services even though our overall patient satisfaction rate has been found to be higher than average.

Many corporate hospitals in India now include not just patient satisfaction but patient experience as a watchword in their mission statements. They are of the belief that surgical outcomes and the outcomes of medical and health intervention are directly linked to patient experience. Many others, notably organizations such as Aravind Hospitals, Pondicherry, have integrated patient comfort, patient satisfaction and patient experience in their organizational and work culture, without even making an overt mention in their mission statements. Their vision is to rid the nation of the scourge of blindness and provide each and every individual access to good quality ophthalmic care. It is obvious from their numbers and turnover that patient satisfaction is extremely high or pervasive in their practice. The OPDs are airconditioned and comfortable, large seating areas are present, good signage exists, there is a seamless and smooth flow of staff and patients, and above all, all of this is achieved at a reasonable cost to the patient by ensuring a massive turnover. Lean management is very much in evidence even though a large volume of employees can be seen at any given time.

In a similar manner, Ruby Hospital, Kolkata, is the first hospital in Eastern India to adopt the DMAIC (define, measure, analyze, improve and control) Six Sigma and Lean Management philosophy and be certified an ISO 9001 health care facility. This elaborate exercise was undertaken to guarantee patient satisfaction and their entire strategy including the Value Stream Map is available in the public domain for others to emulate.

The data analysis in our study revealed an overall satisfaction rate of about 60%, but on further scrutiny it was observed that most of the deficiencies are in the logistical aspects of care such as time and cost, both of which may be made to yield efficiency by the adoption of Lean and Six Sigma.

Thus, the concept of patient satisfaction is surely and strongly emerging in most of the leading health care institutions in India and abroad. However, the penetration of this culture is still largely missing from many public and private sector academic or non-academic hospitals or health care facilities in the country.

CONCLUSION

Patient satisfaction, though an imprecise term, is helpful for the identification of deficiencies and lapses in the delivery of medical and health care to the community. The best efforts of the medical professionals, or the doctor- patient relationship, may not be sufficient in order to provide patients and consumers with a feeling of satisfaction, or the belief that they have available good quality care. The usual place where patient satisfaction can be best assessed in a simple and straightforward manner is the hospital OPD, and an average level of patient satisfaction has been identified in our OPD, mainly due to logistical factors. This has implications for patient compliance and health care outcomes in our hospital. A large scale study of similar design may be undertaken across the board, in other words different OPDs and specialty areas of the hospital. Wards, ICUs and ORs may also be added in the future as study areas. This would lead to awareness of patient satisfaction and patient experience as important indicators of good quality medical care in our hospital. Similar studies could be introduced and replicated in nearby hospitals as a method for standardization and benchmarking of the services of our health care institution.

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