



CONTINUOUS QUALITY IMPROVEMENT OF A DEDICATED COVID 19 HOSPITAL BASED ON PATIENT'S PERSPECTIVE

Nursing

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ABSTRACT

INTRODUCTION: Patient satisfaction is an important outcome indicator for health care system. The present study presents the level of satisfaction of COVID 19 patients with facilities provided and effect of subsequent corrective measures that were done based on the feedback taken from the admitted patients. **METHODOLOGY:** This is an observational study conducted on admitted COVID 19 patients through telephonic interviews. The enrolled patients were interviewed between 2nd to 4th day of the patients' stay with the help of a questionnaire. After the phase I of feedback collection, certain changes/ improvements were done based on the feedback of the patients. Then phase II of the feedback collection was done. The results were compared and statistical significance calculated. **RESULTS:** The satisfaction level with respect to cleanliness improved significantly from Phase I (70.5%) to Phase II (97.6%). There was significant improvement in level of satisfaction with the diet quality and quantity from Phase I (82.1%) to Phase II (99.2%). The mean satisfaction level was higher in phase II as compared to phase I. There was significant change (t value= 47.810) in level of satisfaction among the patients in phase II after the implementation of improvement steps. **CONCLUSION:** The study shows that the actions and policies implemented after taking the patients' perspective into account helped the hospital to improve its services during these testing times of COVID 19 pandemic.

KEYWORDS

Continuous Quality Improvement, Covid-19, Patient Feedback, Patient Satisfaction

INTRODUCTION

The world has been dealing with the unprecedented challenges posed by COVID 19 pandemic since December, 2019. It has taken its toll across all sectors worldwide but the health care sector is at its epicentre. COVID 19 has led the whole world towards revisiting the health care delivery system in order to control the pandemic in most efficient manner. Today, pandemic preparedness plan has been put on top priority list.[1,2] 9,979,447 cases have been reported in our nation till 18th December, 2020; 9,520,827 (99%) recovered completely and a total number of 144,829 (1%) succumbed to the pandemic.[3] Newer facilities like dedicated COVID 19 hospitals and COVID 19 care centers have been set up as a make shift arrangement.

Patient satisfaction is an important outcome indicator for health care system. It provides valuable inputs especially on various aspects of the health care delivery system. Patient satisfaction has been reported to have a direct impact on quality of care. It also has an impact on patient's understanding. The various components like efficiency of hospital staff, patient's compliance to the treatment and follow up are inseparable aspects of quality of a hospital.[4-10] Besides improving the patients experience, it provides an opportunity to hospital administrators to enhance strategic decision making, frame strategies for effective management, and provide benchmarking across the healthcare institutions.[11-14] Patient satisfaction surveys has gained importance over the past few years for identifying gaps and developing an effective corrective action plan for quality improvement in healthcare organizations. There are few published studies wherein patient satisfaction surveys have been performed and the feedback used for quality improvement.[4] Most of the studies of patient satisfaction pertain to non COVID 19 times. Since the expectations of the patients during COVID 19 pandemic would be different due to the panic and fear of the disease, the outcome of the studies done during the COVID 19 times may be different from non COVID 19 times.

Patient feedback was collected in a periodic manner in a 100 bedded COVID 19 hospital of a tertiary care hospital. The feedback was collected with the aim of improving the services to the best satisfaction of the patients. Based on this feedback, prompt corrective measures were taken as far as possible. The present study presents the level of satisfaction of COVID 19 patients with facilities provided and effect of subsequent corrective measures that were done based on the feedback taken from the admitted patients.

METHODOLOGY: The present study is an observational study

conducted on admitted COVID 19 patients through telephonic interviews. The telephonic survey was conducted only on those patients who had a hospital stay of at least two days and who carried a mobile phone. A total of 326 patients were admitted in COVID 19 hospital over a period of 3 months (from 14th July, 2020 to 10th October, 2020). Out of the 229 patients carrying a mobile phone, only 202 could be enrolled in the study. 27 patients either refused to participate in the survey or were too sick to participate in the survey. The proforma was developed consisting of demographic data and questions related to the facilities provided to COVID 19 patients during their hospital stay. The questionnaire was developed in English language after testing its intra and inter observer validity on a small group of four experts. Further the proforma was translated in Hindi after testing its validity by another group of four experts by translation and reverse translation. The enrolled patients were interviewed based on a questionnaire in the proforma. The interviews were taken between 2nd to 4th day of the patients' stay through telephone calls on the registered contact numbers provided by the patients at the time of admission.

The data collection was done in two phases i.e. Phase I (14th July to 25th August, 2020) from 78 patients and Phase II (31st August to 10th October, 2020) from another group of 124 patients with the same set of questions. After the phase I of feedback collection, the responses were analyzed using SPSS software. The satisfaction level with respect to individual parameters was recorded as satisfied or unsatisfied recorded as one for satisfied and zero for unsatisfied. The overall satisfaction level was based on cumulative score and the score was categorized as per the Likert scale. Based on the suggestions given by the patients, certain changes/ improvements were done in the infrastructure and processes.

After the implementation of these changes, phase II (n=124) of the feedback collection was done to see the impact of the quality improvement steps on the patient satisfaction level. The data was analyzed in the same manner as was done for phase I. The results were compared and statistical significance calculated using z test. The mean of the overall satisfaction levels of both the groups were compared and statistical significance was calculated by calculating the t value.

RESULTS

A total of 202 patients (133 males and 69 females) were included in the survey. Table 1 shows age-wise and gender-wise distribution of patients in phase I and phase II.

Table 1 Age-wise and gender-wise frequency distribution.

Age in yrs	Male		Female		Total		Male		Female	
	Fr	Fr	Fr	%	Fr	Fr	Fr	%	Fr	%
17-40	12	6	18	23.1	13	10	23	18.5		
41-60	28	16	44	56.4	47	19	66	53.2		
61-80	8	7	15	19.2	22	10	32	25.8		
81-above	01	Nil	01	1.3	02	01	03	2.4		
TOTAL	49	29	78		84	40	124			
%	62.8%	37.2%			67.7%	32.3%				

A total of 202 patients (133 males and 69 females) were included in the survey. Table 1 shows age-wise and gender-wise distribution of patients in phase I and phase II.

Table 2 shows that the satisfaction level with respect to cleanliness improved significantly (p value=< .00001) from Phase I (70.5%) to Phase II (97.6%). The level of satisfaction with behavior was 97.6% in Phase I and 96% in Phase II. Level of satisfaction increased in Phase II with regards to treatment and diet timing. There was significant improvement (p value=< .00001) in level of satisfaction with the diet quality and quantity from Phase I (82.1%) to Phase II (99.2%)

TABLE 2 : LEVEL OF SATISFACTION WITH INDIVIDUAL PARAMETERS IN PHASE I and II						
SATISFACTION COMPONENTS	SATISFIED				Z value	P value
	BEFORE (N=78)		AFTER (N=124)			
	Fr	%	Fr	%		
Cleaning	55	70.5	121	97.6	5.593	< .00001*
Staff hospitality	76	97.4	119	96	0.5554	.57548
Treatment	75	96.2	122	98.4	0.9946	.32218
Diet time	71	91	118	94.4	1.1662	.242
Diet hygiene	64	82.1	123	99.2	4.5241	< .00001*

*significant

Table 3 shows the overall satisfaction level based on cumulative score and mean score of both the phases. It was observed that the mean satisfaction level (mean score) was higher in phase II as compared to phase I.

There was significant change (t value= 47.810) in level of satisfaction among the patients in phase II after the implementation of improvement steps.

DISCUSSION

Table 3: Overall Satisfaction and mean satisfaction level				
LEVEL OF SATISFACTION (Cumulative score)	PHASE I (N=78)	PHASE II (N=124)	PHASE I (N=78)	PHASE II (N=124)
	%	%	Mean±SD	
Very good (5)	55.1	87.9	4.3±0.80	4.8±0.38
Good (4)	29.5	10.5	't' VALUE= 47.810	
Average (3)	12.8	1.6	INFERENCE = SIGNIFICANT CHANGE IN LEVEL OF SATISFACTION	
Below average (2)	2.6	0		
Poor (0-1)	0	0		

Introspection of health services is important so that the health care delivery system can be improved in a dynamic manner. Patient centered care is prerequisite of high quality health care facility and patient satisfaction is one of the most important outcome indicators in health care.[14, 15] Information on patient's perception of their hospital experience provides valuable inputs, on various aspects, for further strengthening health care delivery.

The determinants of patient satisfaction related to health care include cleanliness, behavior of the doctors and staff, treatment being provided, quality and timings of the diet services are important ones.[4, 16-21]

Our study reported 97.4% of the patients were satisfied with the behavior and conduct of staff in phase I. The satisfaction level was 96% in phase II, however, this fall was found to be statistically insignificant. The reason for this decline was thought to be change in staff with varying counselling and communication skills or may be due to high demanding patients. Contrary to this, Thamer A. Bin Traiki et al [2] reported that 77.6% and 93% of the patients admitted during COVID 19 pandemic were always treated with courtesy and respect by the

nursing staff and doctors respectively. The high level of satisfaction in both the phases could also be attributed to steps taken by the hospital administration and deputing a dedicated nurse and a dedicated help line number for improving communication between the patient, patient's relatives and the staff.

The study observed that the patients were largely not content with the timings of the diet and quantity and quality of diet provided in phase I (satisfaction level was 91% and 82.1% respectively). The diet was designed by the hospitals dietetics department which was scientifically prepared keeping in view various factors like age and co-morbidities of the patients. The feedbacks given by the patients were considered as far as possible and seasonal fruit was added to supplement the diet and also liberty was given to ask for more food. Senior dietician was appointed and also round the clock on call dietician was made available to deal with exigencies. Thus, in phase II, the satisfaction level increased significantly with respect to both parameters i.e. timings of the diet and quality and quantity of diet (94.4% and 99.2% respectively). The study carried out by Smriti Naithani et al observed that only 60.5% patients were satisfied with the timing of diet and only 45.8% patients (non-COVID 19) were satisfied with the quality of diet.[22]

The literature shows that there is an impact of measuring patient satisfaction on quality improvement of care.[3] According to our study, the overall satisfaction level among 84.6% of the patients was observed to be very good and good in phase I which reached to exceptional level i.e. 98.4% in phase II. The difference in mean of overall satisfaction levels and t value was found to be significant between two phases. This rise indicates that the measures implemented by the hospital worked successfully.

In the present study, the patient satisfaction was not associated with patient related determinants like age, gender of the patient unlike other studies conducted in different settings.[14]

To the best of our knowledge, no study has been conducted so far to assess the satisfaction levels among the admitted COVID 19 patients' before and after the implementation of measures suggested by the patients to improve the system, so we could not compare our findings favorably with other studies in literature which have been conducted on non-COVID 19 patients and before the COVID 19 pandemic.

CONCLUSION

The study shows that the actions and policies implemented after taking the patients' perspective into account helped the hospital to improve its services and fulfil patients' demands during these testing times of COVID 19 pandemic. Therefore, patient satisfaction surveys should be used more effectively to augment the quality of health care delivery even after the pandemic is over. Such measures of continuous quality improvement and taking account of feedback will repose trust of the public in public health care delivery system.

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