Research Article

Critical care: Are we customer friendly?

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Abstract

Objective: Assessing and enhancing family satisfaction are imperative for the provision of comprehensive intensive care. There is a paucity of Indian data exploring family's perception of Intensive Care Unit (ICU) patients. We wanted to explore family satisfaction and whether it differed in families of patients admitted under intensivists and nonintensivists in our semi-open ICU. **Methodology:** We surveyed family members of 200 consecutive patients, between March and September 2009 who were in ICU for >3 days. An internationally validated family satisfaction survey was adapted and was administered to a family member, on day 4 of the patient's stay. The survey consisted of 15 questions in five categories - patient care, medical counseling, staff interaction, visiting hours, and facilities and was set to a Likert scale of 1–4. Mean, median, and proportions were computed to describe answers for each question and category. **Results:** A total of 515 patients were admitted during the study period, of which 200 patients stayed in the ICU >3 days. One family member each of the 200 patients completed the survey with 100% response rate. Families reported the greatest satisfaction with patient care (94.5%) and least satisfaction with visiting hours (60.5%). Chi-square tests performed for each of the five categories revealed no significant difference between satisfaction scores of intensivists and nonintensivists' patients. **Conclusion:** Family members of ICU patients were satisfied with current care and communication, irrespective of whether they were admitted under intensivists or nonintensivists. Family members preferred open visiting hours policy than a time limited one.

Keywords: Family satisfaction, intensive care, intensivist, nonintensivist

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Introduction

Each year, around 5 million patients are admitted to Intensive Care Units (ICUs) in India.

Considering that the average family size of Indian families is 4.6,[1] 23 million people have to deal with the illness of a family member in the ICU each year. Family members of patients in ICU face an unfamiliar stressful environment at a time they are often least prepared for it. Family members of critically ill patients have been shown to experience stress, anxiety, depression, and posttraumatic stress disorder during and after their loved one is cared for in an ICU.[2-5]

High-quality medical care should be both patient and family centered. In our society, family support carries abundant significance. However, in reality, families' expectations and needs from healthcare providers become secondary to the patient's medical care.[6] Understanding and meeting the needs of the

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family members of the critically ill are an important responsibility of the ICU team. In the ICU, where the majority of patients are critically ill and are unable to participate in decision making about treatments, the family's perspectives become central to understanding and measuring the satisfaction with the medical care provided.[7] Measurement of family satisfaction has, hence, been proposed as one of the several quality indicators of ICU care.[8]

In the critical care setting, studies on patients' family satisfaction are few in number and limited in scope.[7] Culturally and socially Indian families differ significantly as compared to those in the west; their expectations, needs, and factors contributing to their stress are likely to be different than those of the western families. This study aims to further our understanding so as to create a better experience for the families of patients under our care in the Indian setting.

We conducted this study in our multi-disciplinary ICU, to determine levels of satisfaction of family members with the care process and the actual care provided and to assess whether it differed in families of patients admitted directly under intensivists from those admitted under nonintensivists. We also sought to find out if family satisfaction changed when patients had prolonged ICU stay.

Methodology

This is a prospective, questionnaire-based study. We surveyed family members of 200 consecutive patients, from March to September 2009.

Setting

The study was conducted in a Tertiary Care Hospital in Chennai. The ICU is a 65 bedded, multi-disciplinary ICU, which admitted both medical and surgical patients. The ICU functions as a semi-open model unit. Physicians, who were not necessarily intensive care specialists, were also primarily responsible for the patient care; however, treatment decisions were often made after discussions with the ICU team.

The healthcare team included the primary team admitting the patient, an ICU team comprising an ICU consultant and shift duty doctors, bedside nurses and technicians with the average nurse-to-patient ratio 1:1.5. There were also 2 patient/family counselors. Families were counseled independently by both the admitting physician and the ICU team. Joint family meetings were held when deemed appropriate. Family visitation was restricted to 2 h a day – 1 h in the morning and one in the evening. Extra visitations were granted to families when requested or when more family participation in care was thought to be helpful. Families were allowed to be at the bedside when end-of-life care was being provided for terminally ill patients.

Inclusion and exclusion

Patients who stayed in the ICU for more than 3 days were included in the study. The minimum stay of 3 days in the ICU was chosen to ensure that the family member had adequate time and exposure to the ICU setting. Only one family member in each patient family - the key decision maker – was identified as spokesperson and was surveyed. Family members <18 years of age were excluded.

Sample size

We decided to include 200 consecutive patients arbitrarily, as we did not have any previous studies showing us a response rate or prevalence of specific variables.

Data collection

The questionnaire was administered on day 4 of the patient's ICU stay. A research assistant recruited family members consecutively, using the inclusion criteria. The questionnaire was administered in the privacy of a counseling room. All participants were specifically assured that their results would be kept confidential. For patients who stayed more than 3 weeks, the same questionnaire was administered on 22nd day.

Survey questionnaire

An internationally validated family satisfaction survey[9] was adapted and modified to suit our setting. The questionnaire was administered as a semi-structured interview.

The questionnaire included the demographic details of patients such as age, gender, and date of admission, family members' relationship to patient (optional), physician under which the patient was admitted and satisfaction scale items, which included self-rated levels of satisfaction with five identified key aspects of care related to the overall ICU experience like how the patient and the family member were treated, communication by the ICU team, visiting hours, and the atmosphere in the waiting room.

The survey consisted of 15 questions in five categories, patient care, medical counseling of

families (communication to attendants), staff interaction, visiting hours policy, and facilities. The answers were set to a Likert scale of 1–4, scoring was based on the scale, 1 denoting excellent/completely satisfied and 4 very poor/very dissatisfied. The space was provided for suggestions and comments (optional).

As the study was part of an ongoing quality improvement effort, ethical committee approval was not sought. The respondents were informed that participation was voluntary, and consent was implied by the completion of the survey.

Data analysis

Collected data for all the parameters were coded and analyzed with the statistical software SPSS 17.0 (SPSS IBM, USA). Descriptive statistics were calculated to describe the distributions of individual items and the summary scores.

Means, medians, standard deviations, frequency tables, rates, and proportions were computed to describe the answers for each question and each category. Percentage of positive responses for each item was also computed. Answers that scored 3 and 4 were considered as a negative perception or not satisfactory.

The scores were also standardized using the standardization formula (Standardized Score = [Observed Score−MinimumScore]/[MaximumScore−MinimumScore]). The resultant scores in the scale of 0–100 were cut into halves using 50 as the midpoint. Chi-square tests were used to compare the satisfaction levels between families of patients admitted under intensivists and nonintensivists. *t*-tests were performed to compare the mean satisfaction before and after a long stay.

For all the statistical tests, a $P < 0.05$ was considered as statistically significant.

Results

A total of 515 patients were admitted during this period. Of these, 200 family members of patients who stayed in the ICU >3 days were interviewed. One family member each for 200 patients completed the survey with 100% response rate.

Of the 200 patients, 131 (65.5%) were males. 47 (23.5%) patients were admitted under intensivists and 153 (76.5%) were admitted under nonintensivists.

Answers to individual questions were assessed [Table 1], and proportions calculated, with higher scores indicating greater satisfaction [Figure 1]. The majority of respondents (189/200) were satisfied with overall care (95%). Families reported the greatest satisfaction with patient care (94.5%), staff interaction (90.5%), and medical counseling/communication to attendants (84.5.%). They were least satisfied with the visiting hours policy (60.5%) [Table 2].

Chi-square tests were performed for each of the five categories between satisfaction scores of intensivists and nonintensivists' patients. The results revealed no statistically significant differences between both the groups [Table 3 and Figure 2].

There were 7 patients who stayed in the ICU for more than 3 weeks during the study period. There was no statistical significance between their "before and after" satisfaction scores.

Table 1: Questions in the survey

Questions	Minimum	Maximum	Mean	SD	SE
Do you feel that best possible care is being given to your family member?	2	4	3.66	0.544	0.172
Do you feel that the hospital personnel care about your family member?	1	4	3.57	0.638	0.172
Do you feel you are being updated on a regular basis about your family member's condition and care?	1	4	3.39	0.737	0.173
Do you feel that the physicians are available to counsel you?	1	4	3.3	0.812	0.173
Have the explanations given to you about your family member's condition been in terms you can understand?	1	4	3.57	0.654	0.172
Do you feel that you have been given honest information about your family member?	1	4	3.63	0.596	0.172
Do you understand what is happening to your family member?	1	4	3.35	0.775	0.172
Have all the staff members shown interest in how you are doing?	1	4	3.45	0.695	0.173
Have all the staff members been courteous to you?	1	4	3.57	0.632	0.174
Do you believe that someone will call you at home, with any major or significant change in your family member's condition?	1	4	3.35	0.871	0.176
I am very satisfied with the medical care my family member receives	1	4	3.57	0.633	0.174
Has the hospital staff explained the equipment being used?	1	4	2.96	0.986	0.173
Do you feel that the visiting time is suitable for you?	1	4	2.9	0.979	0.173
Do you feel that the visiting time is adequate for you?	1	4	2.66	1.05	0.173
Do you feel that the waiting room is comfortable for you?	1	4	3.27	0.891	0.174

SD: Standard deviation; SE: Standard error

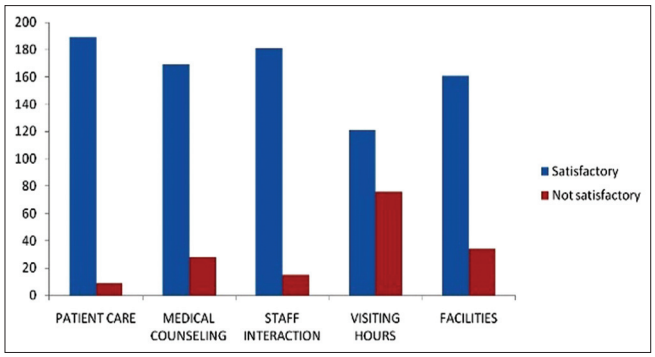

Figure 1: Response scores

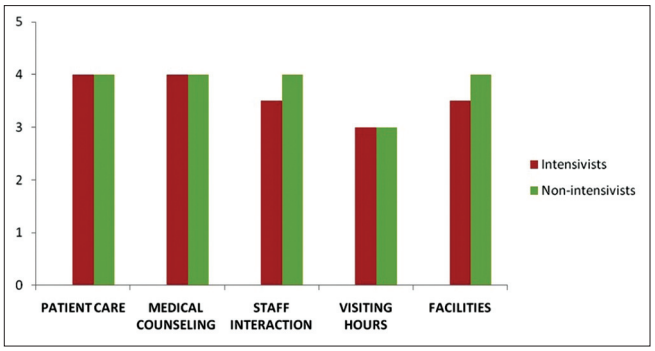

Figure 2: Comparison of median scores between intensivists and nonintensivists

Table 2: Overall positive response rates

Categories	Positive response percentage
Patient care	94.5
Staff interaction	90.5
Medical counseling	84.5
Facilities	80.5
Visiting hours	60.5

Table 3: Satisfaction scores of patients admitted under intensivists and nonintensivists

	>0.5 scores of		P*
	Intensivists	Non intensivists	
Patient care	43	146	0.301
Medical counseling	45	140	0.334
Staff interaction	43	144	0.523
Visiting hours	35	98	0.186
Facilities	38	121	0.793

*Chi-square tests were used to compare the satisfaction levels between families of patients admitted under intensivists and nonintensivists

Quantitative and qualitative data/written comments

We analyzed the written comments, as they may add important insights not captured by the scores.

More than half of respondents in our survey provided comments; there were totally 103 comments (51.5%). Most comments were relating to visiting hours, followed by communication to attendants, followed by facilities provided for the families (such as waiting room, rest rooms, etc.). 21 of the 103 comments (20.3%) were appreciations of overall care provided [Table 4].

The number of positive and negative comments seemed to be in concordance with category-specific and overall satisfaction scores [Table 5]. Most of the comments/suggestions were regarding visiting hours being inadequate and inconvenient.

Discussion

In our single center study, we found that the majority of family members were satisfied with the overall ICU care. This is in concordance with several western studies that describe families, in general being highly satisfied with the ICU care that their loved ones receive.[10-12] When examining individual item scores, "Patient care" scored the highest, "staff interaction" scored the second highest. Communication to attendants scored third in our study, while, in several studies, this had scored the least.[7,13] Malacrida *et al*.,[12] in a survey on family satisfaction of patients who died in the ICU found that a high percentage of respondents were satisfied with the care but primarily complained about the information received and the way it was communicated. A study on family satisfaction with end-of-life care emphasizes the need for better communication and greater access to physicians and suggests that these factors are strongly associated with satisfaction.[14] In contrast to these studies, our results reveal that 84.5% of patient families provided a positive response with regards to communication they received about their loved ones care. It is possible that Indian patient families' expectations differ from those in the west explaining our results. One study showed that families of ICU nonsurvivors were more satisfied than families of survivors.[15] However, we did not look at the differences in family satisfaction among ICU survivors and nonsurvivors.

Our study revealed lower scores regarding facilities provided for families and ICU visitation hours. Other studies have shown similar results with family satisfaction scores consistently low regarding ICU atmosphere and waiting room.[7,11]

Lowest satisfaction scores in our survey were seen with the visiting hours policy. Influence of visiting hours policy on patient satisfaction has been unclear, and data have been conflicting. Perceptions of ICU caregivers and patient families seem to differ. Fumis *et al*. have shown that family members in an open visit ICU reported high satisfaction.[16] However, in a study by Stricker *et al*., fewer visiting hours per day were not associated with lower

Table 4: Details of written comments

Categories	Number of comments
Visiting hours	23
Appreciation	21
Communication to attendants	11
Facilities	10
Patient care	9
Satisfactory	7
Attendant care	7
Cost	6
Others	9
Total	103

Table 5: Positive and negative comments

Issues	Number of suggestions	Positive (%)	Negative (%)
Visiting hours	23/103	34	66
Communication to attendants	11/103	88	12
Facilities	10/103	80	20

satisfaction in their study.[11] Some authors are of the opinion that restricted visitation policy in the ICU may be less compassionate and not necessary.[18] Moreover, relatives' presence at the bedside of ICU patients has also been shown to be beneficial to the patients, without resulting in significant adverse events.[18,19] In a study on perceptions of an open visitation policy by ICU workers, majority of ICU workers answered that an open visitation policy impairs the organization of the care given to the patient and interferes with their work, though they thought that an open visitation policy might help the patient's recovery by decreasing anxiety and stress.[2]

In one study, the restricted visiting policies were preferred by the staff, especially by the nurses because they were concerned that opening an ICU to visitors could interfere with their care process.[20] An Open Visitng Policy may be common in the pediatric ICU setting but is still uncommon in an adult ICU[21,22] and the impact of visitation policies on family satisfaction, and its effect on care process and its influence on ICU staff performance are all debatable.

In their study, Schwarzkopf *et al*.[23] integrated quantitative and qualitative analyses showing that while families may overall be highly satisfied, they still have suggestions for improvement. Similarly, although we received higher scores for most of the questions, more than half of the respondents provided written comments with appreciations, suggestions, and negative feedbacks, which implied that there is still room for overall improvement.

Our study shows that there was no difference in satisfaction scores between patients who were admitted under intensivists and nonintensivists. It is likely that we were underpowered to show any differences between groups considering the relatively small proportion of patients directly admitted under intensivist. Moreover, counseling for all patients were done by both the admitting physician and ICU team equalizing any disparity in the quality of counseling. There also seemed no difference in scores before and after a long stay, however, the number of patients in this group was not significantly high to derive any inference from this.

This study is, to our knowledge, the first survey to explore family satisfaction in Indian ICUs. The 100% response rate of consecutive patients (who stayed more than 3 days in the ICU) has ensured that there was no bias excluding patients based on sickness, socioeconomic status, level of literacy, or any other constraint. We have explored the overall family satisfaction and reported key insights in areas that need improvement.

We recognize that there may be limitations in our study. The questionnaire was not a formally validated one but was an adapted version based on an international questionnaire. Second, respondent details and their relation to the patient were mentioned optional and so were not available for the majority of the responses. Third, patients' diagnosis, the severity of sickness or ventilation status were not analyzed against satisfaction scores. Similarly, satisfaction scores of ICU survivors, nonsurvivors, and impact of end-of-life decisions, if any, on family satisfaction were not analyzed separately. Finally, these findings were from a single center and cannot be generalized to all systems considering wide variability in the care process provided.

Conclusion

Family members of ICU patients overall seem to be satisfied with our current services. There were no differences in family satisfaction whether the patients were admitted under intensivists or nonintensivists. Family members prefer a more open visiting hour policy than a time limited one. Domains of low satisfaction provide a target to improve the quality of care both for the patients and their families.

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Conflicts of interest

There are no conflicts of interest.

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